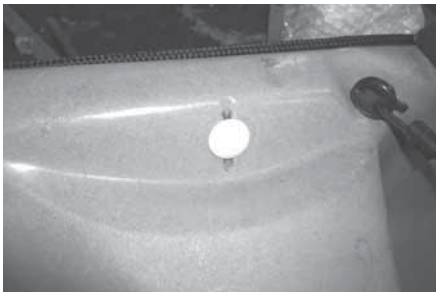
2007 Adventure Island Rudder “T” Handle Kit

As you start sailing your Hobie Mirage Adventure Island in more challenging conditions, you may require more force to keep the rudder locked in the down position. This rudder lock upgrade kit will allow you to apply more holding power for the rudder. To install this new system you will be removing the up/down handle that you are currently using. Follow the instructions below for the kit installation.

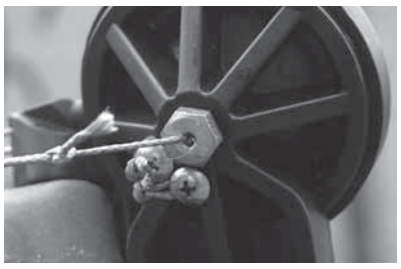
1. Using an Allen key wrench, unscrew the bolt that is passing through that handle and pull the handle off of the control arm shaft.

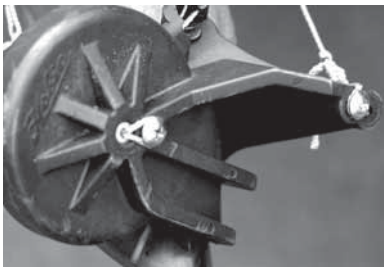
2. Push the control arm shaft in so that it falls in the hull. Reach inside the hull and grab the control arm to take both of the lines off of it. This part is to be removed from the hull as it won’t be needed anymore. Also, untie the bungee cord and loop of line from the small spectra lines.

3. Plug the hole that is created with the push in cap that is included with this kit.

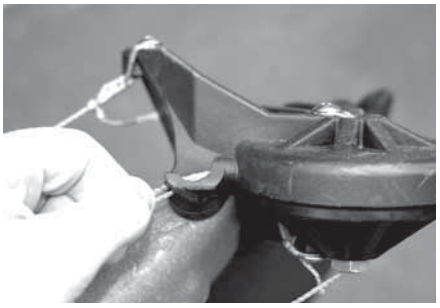


4. To install the new tubes and lines, you will need to partially disassembly the rudder housing. Start by loosening the screws and unwrapping the lines completely from the two screws on the underside of the rudder and the one screw on top of the rudder near the main bolt.

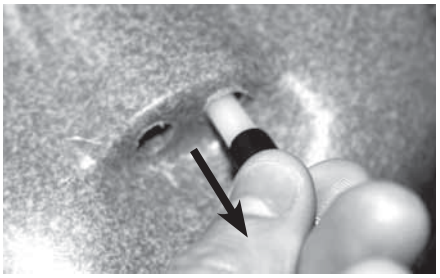




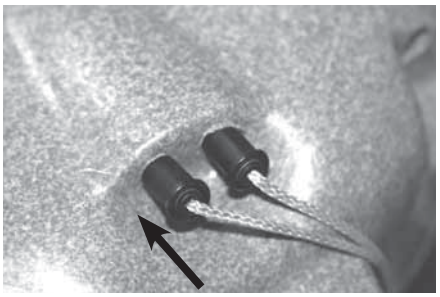
5. Pull on the lines that exit the hull so that they completely pull out of the rudder housing.



6. With the up and down control lines loose, pull on them and remove them from the hull with the tubes. If they get hung up inside the hull, you can cut whatever is preventing you from taking out the lines. You will no longer need these lines and tubes with this kit.

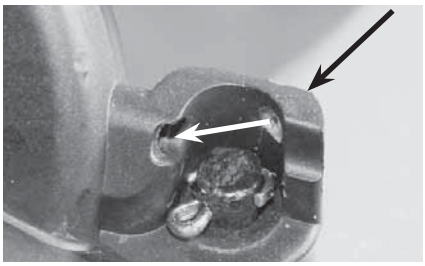


7. With the old tubes and lines removed, install the new tubes with lines that are in this kit into the holes that you just removed the old tubes from. Getting the end fittings into the holes will be a tight squeeze, so you may need a small hammer to tap them into the holes so that they are fully installed. ***IMPORTANT: When these lines are installed, the right line will be for the DOWN control and the left line will be for the UP control.***

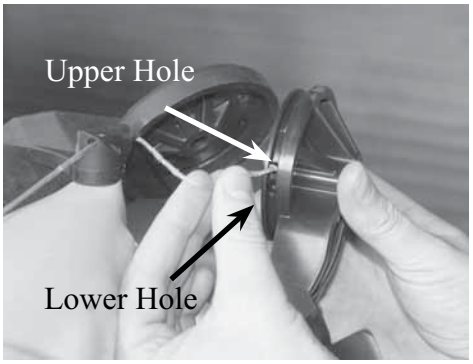


8. Use a socket or a wrench and unthread the bolt that passes through the center of the rudder housing. This will allow the rudder to come apart.

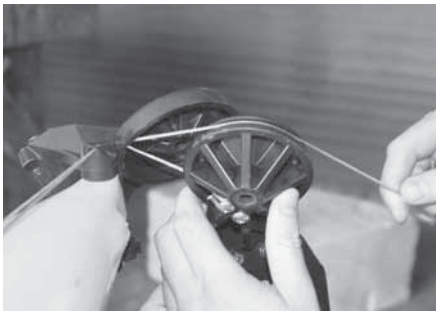
9. Feed the DOWN control line through the two holes that are just above the rudder pin. When installed, the line will come on the inside of the rudder housing.



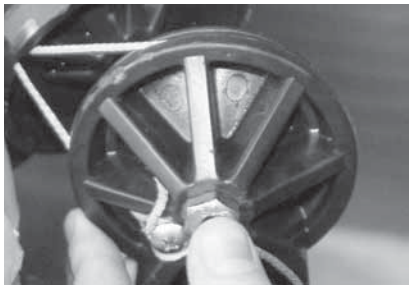
10. Feed the DOWN control line into the upper hole on the rudder part of the assembly and tie a knot in the end of the line to keep it from pulling through.

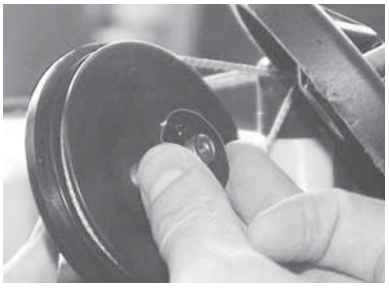


11. Now feed the UP control line through the same two holes above the rudder pin to the inside of the rudder housing. Wrap the line so that it goes over top and around the drum. Insert the end of the line into the lower hole indicated in step 10 and tie a knot at the end of the line.

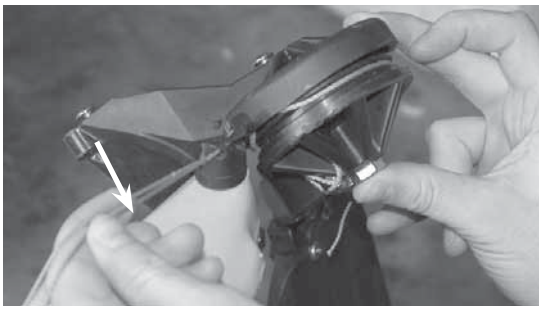


12. Slide the bolt through the rudder portion of the assembly and place the plastic washer over the threaded end. Insert then end of the bolt into the housing and bolt the rudder assembly back together.



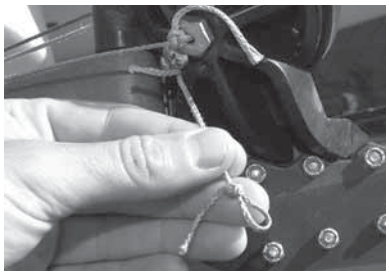


As you insert the rudder half into the housing, you have to be careful to not allow the rudder lines fall off the track around the circular rudder drum. To prevent this, pull up on the up/down control lines that are exposed on the deck to remove the slack and keep the lines tight around the drum.



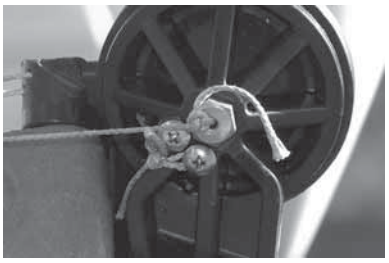
Thread in the bolt to hold the two halves together. IMPORTANT NOTE: DO NOT SCREW DOWN THE BOLT SO THAT IT IS TIGHT. YOU ACTUALLY WANT IT TO BE A FAIRLY LOOSE CONNECTION ALLOWING AN 1/8”-1/4” OF MOVEMENT. IF IT IS TOO TIGHT, THE RUDDER WILL NOT GO UP PROPERLY.

13. Take the ends of the lines that you fed through the rudder and make the loop so that it is small enough to pass a screw head through. The size of the loop isn’t that critical, but do not make it any more that 3/4” big. See the pictures below on how to tie the knot needed for this loop



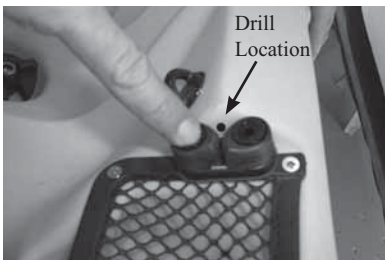
14a. Place the loop around the screw and thread the screw back into the rudder.

14b. Follow the sample procedure with other screw and control line.



14c. Once the loops are held down with the screw, leave these lines alone for a bit and finish up the instructions below.

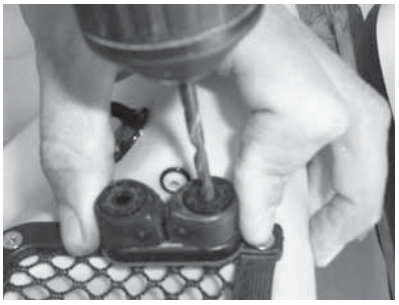
15. Locate the cleat in the kit and place it on the right side of the kayak along the forward edge of the map pocket. Center the middle of the cleat to the point of the corner of the rails. Draw a small dot on the kayak to locate a drilling location. The hole location should be slightly below the top of the cleat jaws.



16. Drill a hole in the dotted location with a 5/16” drill bit

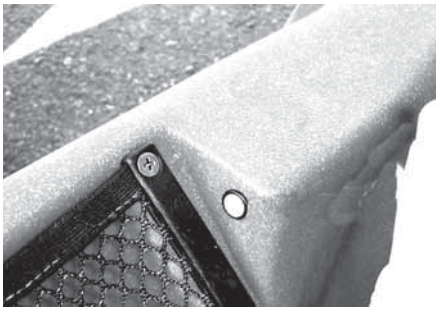
17. Insert one of the two the small length of rigid tube into the hole and press the black fitting at the end of the tube into the hole. It will be a tight fit, so you may need to give it a couple taps with a hammer to get it into the hole.

18. Locate the cleat on the right side map pocket just like in step 7 and use the holes in the cleat as a guide to drill two 11/64” holes through the map pocket frame and kayak hull material underneath it. Make sure to center the cleat along the width of the map pocket frame so that it rests on a nice flat surface.



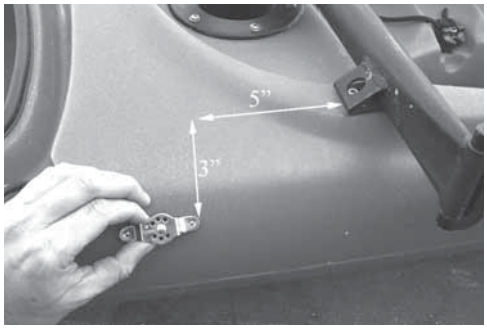
19. Place the padeye fitting over the cleat. Using the provided hardware, through bolt the cleat to the kayak. You will need to reach inside of the middle hatch to put on the washers and nuts on the inside of the kayak.

20. Drill a hole and insert the other tube in the opposite side of the kayak as well. A cleat will not be installed on the left side of the boat, but using the same location on the map pocket corner as you drilled on the right side is a good reference.

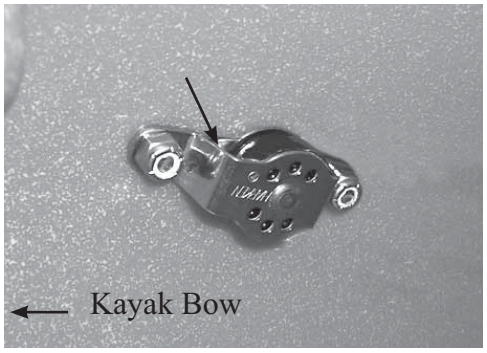


21. Remove the nuts that bolts on the block that routes the mainsheet back to the forward deck mounted bar. The screws themselves don’t need to be removed, so just take off the nuts.

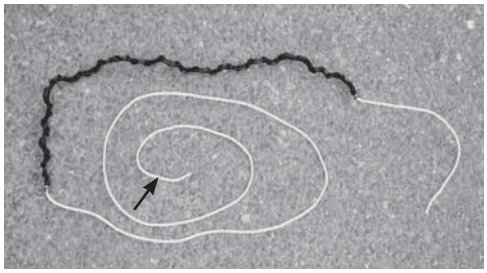
22. On the opposite side of the kayak where the mainsheet routing pulley is, you will need to drill two holes. Using a block in the kit as a drilling guide, drill two holes so that the rearmost hole is 5” in front of and 3” down from the brackets on the forward deck mounted bar so that the holes are symmetric with the holes on the other side of the kayak.



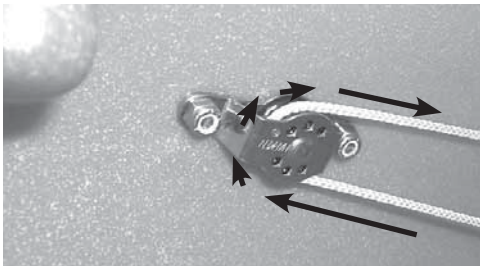
23. Through bolt the two pulleys on the inside of the kayak. On the RIGHT side of the kayak, use the existing screws that are being used to attach the mainsheet routing pulley line and place nuts on the outside of the new block to hold it in place. On the LEFT side of the kayak, use the new screws and nuts in the kit and bolt it through the holes that you drilled. When mounting the blocks make sure to take note that there is a larger gap on one side of the pulley which should be located toward the bow of the boat as shown in the pictures (see arrow).

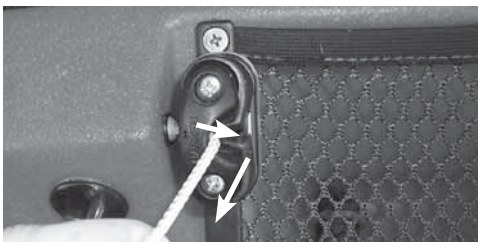


24. Locate the two line assemblies which have the webbing scrunched along the length of the line. Take note of the section of the line that has a longer length of line after the webbing attached to the line.



25. Take the end of the line that has a longer length after the webbing and feed it up through the bottom and around the pulley. Continue to feed that line back to the tubes that you pressed in on step 9 and 12 and feed it through the tube so that it exits the hull. Do this on both sides of the kayak so that both of the pulleys that you bolted to the kayak have lines wrapping around them and coming out through the tubes.

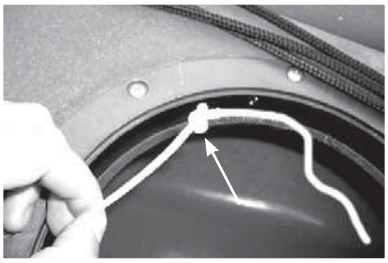




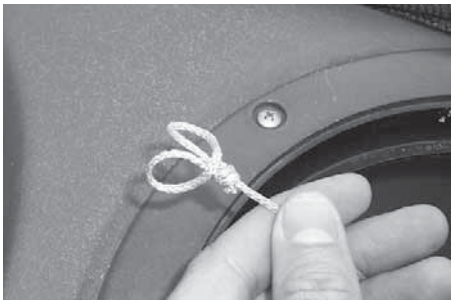
26. Take the ends of the line and feed them through the “T” handles. Tie a simple knot as close to the ends of the lines as possible and pull the knots into the handles.

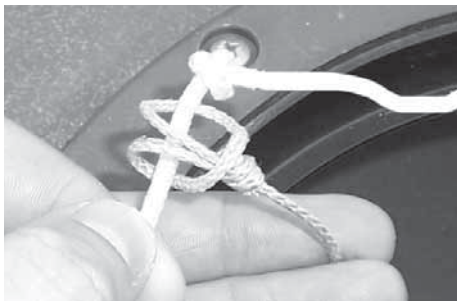
27. With the one end of the lines tied to the “T” handle, pass the other ends of the line along the side of the kayak so that it runs all the way to the stern. You will need to reach inside of the middle hatch to help pass them down the length of the kayak. It is important that the line is passing on the outside of any of the inside features like the mirage well, daggerboard well and cart scuppers.

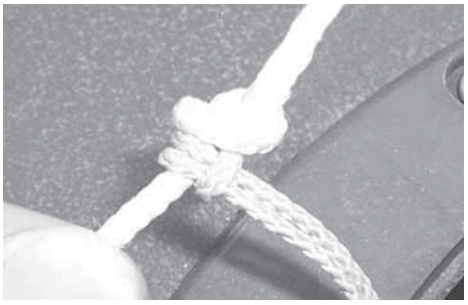
28. Pull the lines all the way back to the rear hatch and tie a simple knot approximately 4” from the end of the lines.



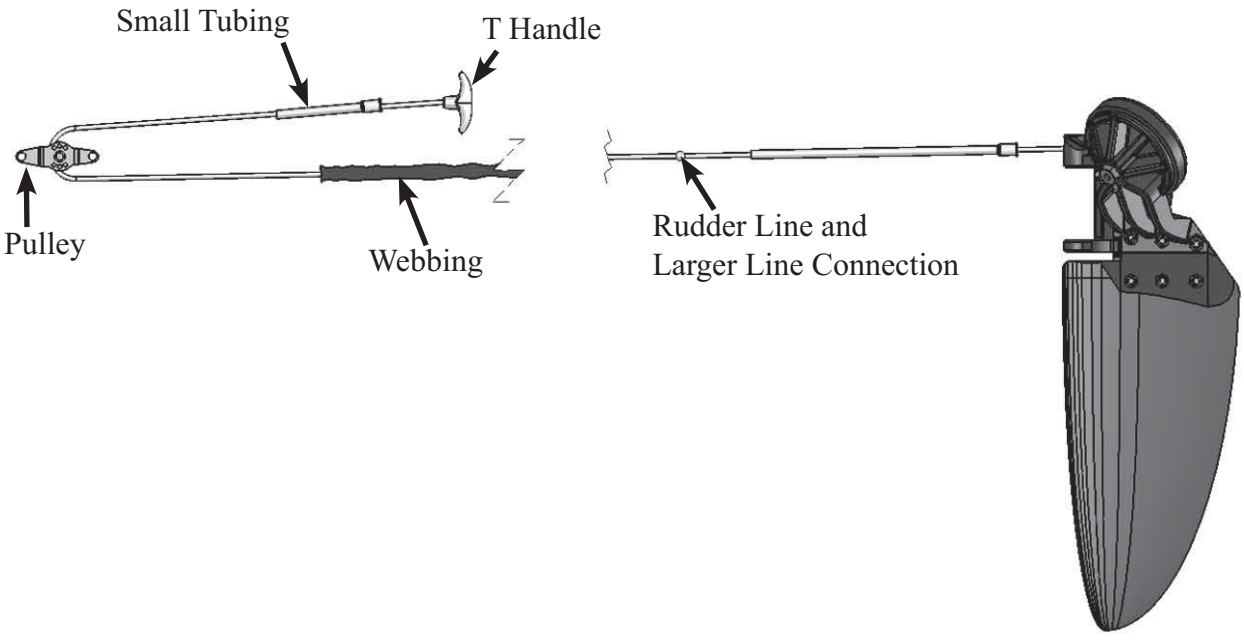
29. Now you are going to lock the small lines with loops at the end coming from the rudder to the knots that you just tied. To do this, follow the diagram below to form a cinch around the line up to the knot. **Make sure that you know what line is the up and which is the down line coming from the rudder. To do this pull on the rudder lines to see what one start to pull the rudder up. The line that makes the rudder go UP should be attached to the line running along the left side of the kayak.**

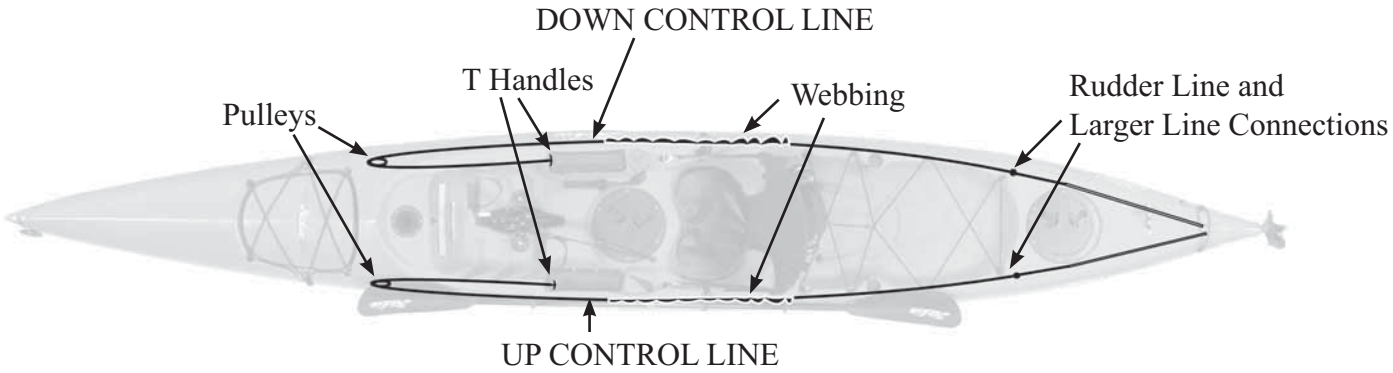




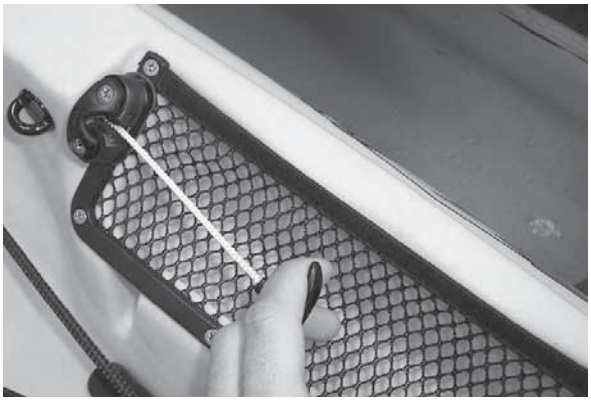


The system should look like the diagrams below.





29. Your up/ down rudder system is now ready to go
a. Pull on the right “T” handle to lower the rudder. Pull the line tight and cleat off to hold it in the down position.
b. To raise the rudder, uncleat the lock down line and pull the “T” handle on the left side of the boat. **IMPORTANT! When the rudder is in the locked down position, it will have some flexibility in the system due to stretch in the rope, but it should be uncleated and raised prior to beaching.**



30. Place the stickers on the “T” handles to label which one does what. The “UP” sticker should go on the left handle and the “DOWN” sticker should go on the right handle. To ensure a good adhesion, make sure that the handles are clean of any water or debris.