

These instructions will guide you through the installation of the rigidly mounted steering option for the ProAngler. This installation will require you to drill holes in your kayak, so please be sure to read the instructions carefully and always double check before drilling any holes. All of the corresponding mounting hardware is loosely attached to the components they are used with.

## Kit Contents:

1. Steering Crank
2. Upright Support Tube and Hardware
3. Backing Plate
4. Compression Spring
5. (2) Pulleys with Hardware
6. (2) Steering Tubes
7. (2) Steering Line Assemblies
8. Steering Handle
9. Pin
10. Screw-in Padeye
11. Silicone



## Tools Required:

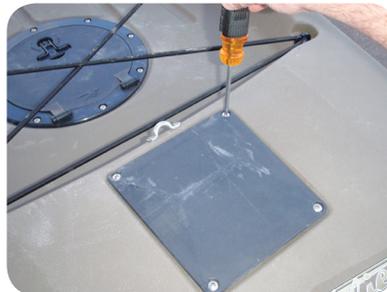
- Power drill
- Screwdriver
- Pliers,
- Drill Bits: (1/16", 5/8", 7/32")

## Removing the Old Steering System

Prior to installing the new steering system, you will have to remove the current system from the kayak. Please note: some of the original components will be used with the new system.

1. Take the steering handle off of the seat and remove the seat from the kayak.

2. Open up the rudder steering drum cover in the back of the kayak and loosen the screws that the lines wrap around so that they are completely free. If the lines are tied together or if there are knots tied at the ends of each line, untie them.



3. Pull the steering tube assembly off of the kayak and completely pull out the tubes and steering lines by cutting the tube that comes out of the wall behind the seat. You will not need any of these pieces, so you can set them aside.



4. Remove the steering attachment barb by turning it counterclockwise with a pair of pliers.



5. Install the screw-in padeye that is included with this kit into the hole you just removed the steering attachment barb from. Use a pair of pliers to tightly screw in the new part.



6. Go back to the rudder control drum area and remove the steering tube cover strips as shown here. With the cover strips gone, pull out the tube fittings and any pieces of tube that may follow. If there are any tube pieces inside the boat, remove them as well.



7. Thread the screws you just removed back into the holes so that they seal the hole. Make sure to lightly tighten the screws back into the holes so they don't strip out the plastic.

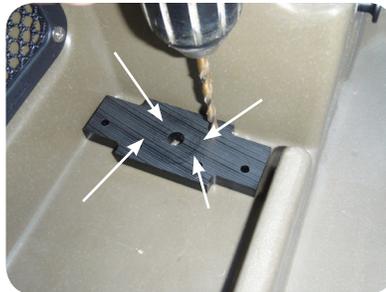


## Installing the New Steering System

With the old steering system removed, follow the instructions below. You can install the steering handle on either side of the kayak, but we recommend that you install it on the left side.

### Steering Handle Pre-installation Work

1. Place the backing plate in the tray area on the left side of the kayak so that it is behind the rod holder ridges. With the backing plate butted up against the rod holder wall, use the four holes as a guide to drill four 7/32" holes. Do not use the two outer holes.



2. Using a pen or marker, trace a circle onto the kayak using the larger center hole as a guide.



3. Find the center of the hole you just traced and drill a 5/8" hole.



4. We will get back to the handle installation after we complete some of the other steps in the install. Please continue with the next step in the instructions.

## Pulley Location and Installation

There are two pulleys in this kit which need to be installed. These help route the steering lines through the inside of the kayak and reduce friction. Use the pulleys themselves as drill guides to get the hole spacing correct

1. Two of the pulleys are located in the two aft corners of the cargo area. Review the diagram to the right for their location. You'll butt the edge of the pulley into the corner of the cargo floor radius and point the pulley in towards the middle of the boat at about a 45 degree angle. Using the holes in the pulley as a guide, drill two 1/16" holes.



2. Take the pulleys off the boat and re-drill the holes with a 7/32" drill bit to enlarge the holes.



3. Place the pulleys next to the holes that you just enlarged and lay them out like the pictures to the right. Take each steering line and run one through the left pulley and the other line through the right pulley. Note how the loop is oriented in the picture.



5. Open the hatch in the rear cargo area and install the pulleys on the inside of the kayak to correspond to the holes that are drilled. Make sure to install the pulley so that the line passes around the pulley in the orientation as shown above. The nuts are pre-pressed into the pulley which the screws will engage with. Note that there is a long and short screw to attach the pulley. The longer screw goes through the hole in the pulley that has the metal tube inserted inside. Use a hand screwdriver or a power screwdriver on a slow setting to tighten the pulleys to the hull.



## Running the lines

These instructions will guide you on how to run all of the lines for the new steering system. When feeding the lines, make sure that they do not twist around each other and that they aren't rubbing on any of the scuppers inside the hull.

1. Reach inside the rear hatch of the boat and feed the tail ends of the steering lines through the small hole near the steering drum. The right line goes through the right hole near the drum and the left line goes through the left hole near the drum. When bringing the line up to the hole, make sure it doesn't wrap around the pulley and cleanly goes around the pulley.



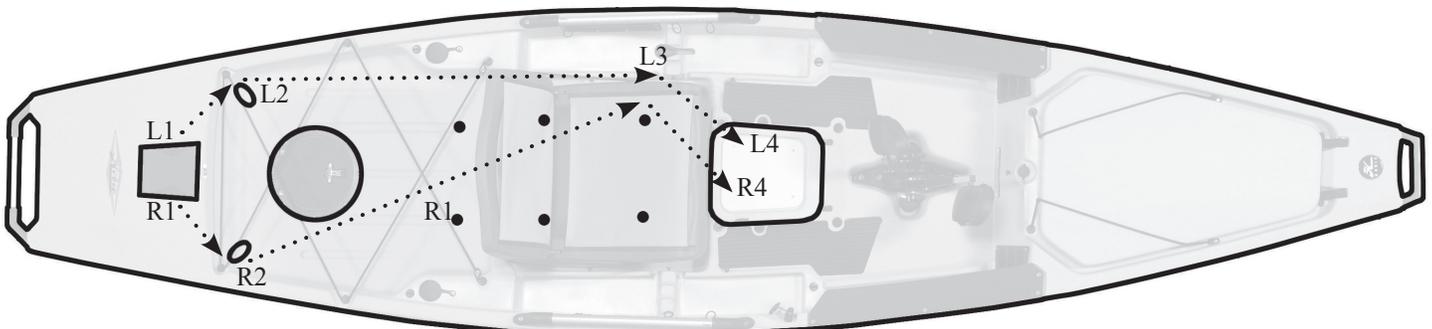
2. Take the ends of each line and run them through the small tube assemblies as shown to the right. Loosely tie the ends of the lines together to keep them from getting pulled back into the kayak.



3. Press the small tube assemblies into the holes. It will be a snug fit, so you may need a small hammer to tap the tubes completely in.



4. You will now feed the lines through the kayak up to the middle hatch. Follow the diagram to trace where the right (R) and left (L) lines need to pass. Be sure to note how the right lines pass through the cart and seat scuppers. This is the best way to route the lines to prevent any rubbing on the scuppers.



5. Bring the steering crank to the center hatch and loop the ends of the line over the rivet that is assembled to the crank. Note diagram to the right showing which line attaches to what side of the crank. Note the orientation of the "L" tab on the crank in the pictures.



## Final Handle Installation

Now that the rudder lines have been run through the boat, you can complete the handle installation you started earlier.

1. Place the spring over the steering crank shaft, then the backing plate over top of the spring.



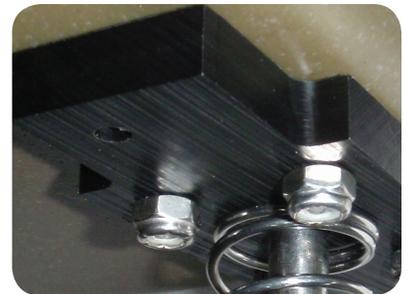
2. Feed the long shaft of the steering crank through the 5/8" hole you drilled into the boat. Be careful to bring the steering crank straight back and don't twist the lines. Inspect the lines and make sure they are following the path of the diagram on the previous page.



3. Slide the steering tube riser over the steering crank shaft and allow the plate on the riser assembly to sit flush on the hull. Place a small amount of silicone on the hull around all of the holes to provide a watertight seal.



4. Using the provided screws and nuts, reach inside the boat and bring the crank support block up to the inside surface of the kayak. Install the screws through the bottom plate on the riser tube assembly, through the hull and crank support block. Place a nut on the end of the screw and tighten. Follow this procedure on all four hole locations to securely bolt the plate to the kayak. Clean up any excess silicone that squeezes out.



5. Use a 7/32" drill bit to drill two more holes for the upper support on the tube riser. The strap that goes around the tube will be your guide for the holes. Be sure to drill the holes all the way through both sides of the scalloped rod holder on the kayak. Be sure to drill the holes as straight as possible.



6. Once the holes are drilled, pass the long screws through the holes on the strap, through the scalloped kayak section and through the other side. Use the provided washer and nut to tighten the assembly. Do not overtighten as they may distort the kayak. It only needs to be tight enough so that the parts are firmly held in place.



7. With the tube riser firmly in place, reach inside the kayak and press up the steering crank to compress the spring. Once the hole is above the top of the tube, press in the provided steering pin so it is evenly pressed through.



8. Place the handle on the steering crank shaft so that the pointier end of the handle faces forward and the pressed in-pin indexes to the pin profile on the bottom of the handle.



9. Once the handle is on the steering shaft, install the screw on the top of the handle to secure it in place.



## Adjusting Steering Lines

With everything installed, simply trim the steering lines and you are ready to hit the water.

1. Orient the steering handle so that it is pointing straight forward.
2. Rotate the rudder steering drum so it is straight forward. A trick to straightening the rudder is to pull the rudder up using the retraction line.
3. Pull the steering lines coming through both corners near the steering drum so that all the slack is pulled out of the hull.

4. Take the right steering line and wrap it around the front of the drum, cross to the left side, bring it up through the hole, and around the screw that is near the hole. Be sure that the drum and steering handle are straight forward and tighten down the line.



5. Follow the same procedure for the left steering line. The only difference is that it will wrap around the front of the drum and will come up through the hole on the right side of the drum.



6. With both lines tightened under the screw heads, try the steering and make sure it is adjusted to your liking. You can adjust the lines to remove excess slack as desired. Tie up the extra line to bunch up the slack.



7. Put the cover back over the steering drum and place the Hobie sticker over the screw on the handle. You may need to tighten the lines after some use.

