

PYGMY KAYAK CO.

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Rudder Installation

The following instructions will enable you to install a Smart Track rudder assembly on your Pygmy Kayak. This particular rudder will stick up when at rest.

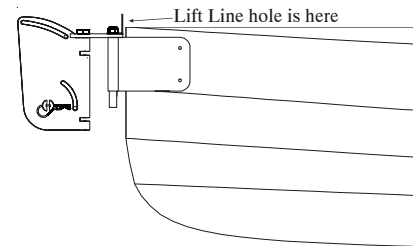


Mount the Rudder Bracket:

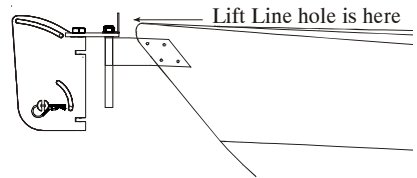
The rudder is mounted on the boat by the means of a special bracket which is bolted to the end of the kayak.

Slip the rudder post into the rudder bracket and hold the rudder and bracket up against the stern of the boat. Position it so that the lift line hole is just above the height of the deck ridge. Mark the hull where the holes in the rudder bracket touch the hull.

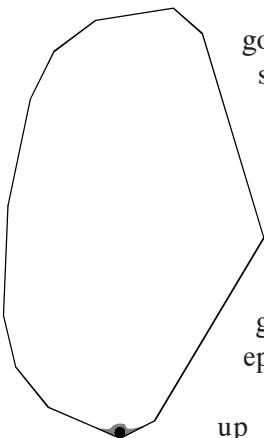
If you are mounting a plumb stern bracket, (top diagram) drill through first one side of the hull and then the other side of the hull. Don't try to drill all the way through the hull from just one side. Saturate the drilled holes with epoxy and allow it to cure. Attach the bracket with the 2 1/4" machine screw and lock nuts. The bracket will conform to the shape of the hull when the bolts are tightened.



If you are mounting a raked stern bracket, (lower diagram) first drill one side of the hull and then the other side of the hull. Screw the self tapping #6 SS sheet metal screws through the bracket into the hull. The short ones are for the rear holes; the longer ones are for the forward holes. Remove the screws and bracket. Fill the holes with epoxy and saturate the end grain exposed by drilling the holes. Re-attach the bracket. Threading the screws into the wet epoxy.



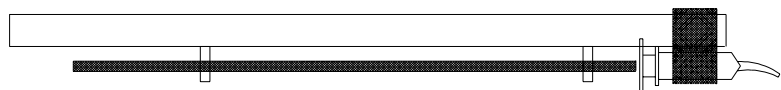
Install Cable Tubing:



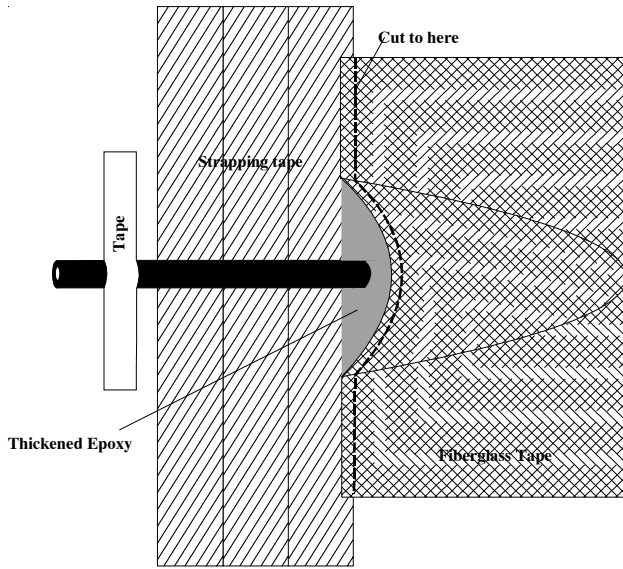
The rudder assembly is connected to the foot pedals via stainless steel cables. The cables go through a plastic tube that is glued to the underside of the deck where the deck meets the sides. This keeps the rudder cables out of the way and protected from hanging up on camping gear you have stuffed in the boat. First drill a 1/4" hole on either side of the boat that is 14" in front of the stern stem and 1/2" down from the sheer. Angle the drill bit parallel to the deck and towards the front of the boat. Insert the 1/4" plastic tubing that comes with the rudder through the hole and feed it through the hole until you have 3" sticking out.

One inch of tubing is left sticking out so that as the tubing expands and contracts with temperature the tubing end will not be pulled through the hole and into the boat. Now you are going to push the tubing up into the corner on the deck and squeeze a little puddle of thickened epoxy over the tubing every 1 ft. distance to hold it up and out of the way.

Tip the boat
up on its sheer
edge and prop it up



so that it will stay there. Then take a dental syringe and tape it to the end of a 4' piece of scrap 1"x2". Then buy two 5 cent eye screws from the local hardware store. Screw one of them just behind the plunger and the other one at the other end of the stick. Take a piece of 1/4" wooden dowel and insert it through the two eye screws until one end of the dowel butts up against the plunger on the syringe. Then fill the syringe with thickened epoxy and reach the stick up into the boat and squeeze a little puddle of epoxy over the tube every foot of the way along the sheer line. Let one side harden and then do the other side.



When you are all done, go back to the outside of the boat and glue a small piece of glass tape over 1" of the 3" end of the tubing that is sticking out of the boat. First lay some strapping tape or other plastic tape under the tube on the boat about one inch from the tube hole. Then tape the end of the tube to the boat to hold it positioned facing your rudder bracket. Thicken some epoxy to the consistency of peanut butter. Spread this under and around the tubing near the tube hole. Then press a piece of glass tape

over it and wet it out. When this has hardened cut the end of the tubing and glass tape off at the line of strapping tape and remove the excess material and tape. This will leave a nice flush end.

On the inside of the tubing, angle it down the side of the boat from the sheer towards the foot pedals and glue this end to the inside of the boat with some thickened epoxy and glass tape. Secure the tube with strapping tape to help hold it in place while you do the epoxy work.

Smart Track Installation

Refer to the Smart Track rudder supplemental installation sheet.

Parts List

- 1 Rudder assembly with lift lines and hardware (see supplemental instructions)
- 2 Toe Pilot Foot Controls with cables (see supplemental instructions)
- 2 Vertical adjustment plates (see supplemental instructions)
- 1 Rudder bracket
- 2 2 1/4" 10-32 SS screws *or* 8 SS machine screws for bracket mount
- 2 10/32 nylock nuts for bracket mount for Plumb stern mount
- 2 Poly rudder cable tubing