



## SEA-LECT Designs Truecourse™Rudder System

Congratulations! Installing the SEA-LECT Designs Truecourse™Rudder and SEA-LECT Kayak Adjustable Foot Brace w/ Rudder Control means you are outfitting your kayak with the most innovating steering system on the market, designed to meet your evolving needs!

These illustrated instructions will serve as a reference for the installation of this system; however, keep in mind variations may be needed to fit your individual boat.

**Please read ALL instructions prior to beginning the process in order to decide which steps are applicable to YOUR individual kayak.**

**CAUTION:** Every effort has been made to ensure these instructions will help you successfully install your new rudder system, however, the process may require permanent alteration to your kayak. Be safe and measure twice before proceeding with any step requiring drilling into your hull. If you are uncomfortable with any part of this process, we suggest contacting your local dealer for support and advice; they may also be able to undertake this installation for you at a minimal cost.

### Parts List

Below are the parts included in the SEA-LECT Designs Truecourse™Rudder System:

- SEA-LECT Designs Truecourse™Rudder (*hardware included*)
- SEA-LECT Kayak Adjustable Foot Brace w/ Rudder Control (*hardware included*)
- Rudder Cable (*swages pre installed*)
- Rudder Cable Tubing
- Hex (Allen) Wrenches x4
- Lift Line Assembly (Clamcleat®, Pad Eyes and *hardware included*)

### Additional Tools & Materials Required

Depending on the model of kayak being worked on, not all tools below may be required. You can determine specific tools necessary by reviewing the following instructions:

- Phillips Head Screwdriver
- Cable Cutters
- Electrical Tape
- Scissors
- Drill with 1/4" (7 mm) and 5/32" (4mm) drill bit
- Measuring Tape or Ruler
- Non-Permanent Marker
- Gudgeon (i.e. metal casting for mounting)
- Silicone Sealant



Rudder installation should begin with the foot braces and by placing the kayak on a bench, table or sawhorses, securing the kayak so it cannot rock.

## SEA-LECT KAYAK ADJUSTABLE FOOT BRACE W/ RUDDER CONTROL

**Step 1:** Gather needed materials; including your SEA-LECT Kayak Adjustable Foot Brace w/ Rudder Control, two lengths of rudder cable with swages pre-installed, electrical tape, Phillips head screwdriver, non-permanent marker, rudder cable tubing (if needed), and drill with ¼" (7 mm) drill bit (drilling only necessary if kayak doesn't have existing mounting holes).

**Step 2:** Start assembly of the SEA-LECT Kayak Adjustable Foot Brace w/ Rudder Control by rotating the foot peg so it is at a 90° angle from the track. The smallest hex wrench (provided) can be used to hold the foot peg in a "neutral" position while adjusting the cables; look for the small hole on the center face of the foot peg where it attaches to the pin. Insert hex wrenches in each foot peg, making sure to remove them at the end of installation.

Unravel the cable to verify it's long enough to reach from the foot braces to the rudder housing when installed. Feed non-swaged end of cable, from back to front, through the bottom hole on the forward-most part of the foot brace (the side opposite the red adjusting "flag"). Continue rudder cable back through the opening at the bottom of the foot peg, around the pivot point and up and over the silver semi-circle. The remaining length of cable will extend from this point to the back of the boat where it will attach to the rudder (see instructions on this process in Step 3 for installing the rudder on the next page).



**Step 3:** Locate the foot brace position for your boat. The most common center-to-center spacing between mounting holes is 14½"; if available, use existing holes, or measure and mark the hole position. Double check measurements before drilling into your kayak, also making sure there is sufficient foot peg clearance on the inside of the boat. Since the foot peg extends vertically above the track, the top of the peg may impact the underside of the deck. If this is the case, you may need to move your foot brace down to provide clearance.

Mount foot braces to your boat using provided bolts making sure the rubber washer is against the outside of the hull to act as a water seal. The red adjusting bars should be pointing toward the seat, and the right foot brace is marked on the red adjustment flag with an "R", the left foot brace with an "L". The SEA-LECT Kayak Adjustable Foot Brace has a built-in insert for the lock washers so they don't turn as they are tightened.

**Step 4:** Route cable towards rudder using gentle bends and avoiding any sharp turns and/or kinks.

Tubing is provided to act as a guide for the rudder cable to move through ensuring smooth operation, and is especially useful when passing through cargo holds where cable strands may become caught on gear. Installation differs depending on individual boat design, and additional drilling may be needed if the tubing passes through bulkheads and/or out onto the deck. Be sure to repair/fill any holes you may need to make with silicone sealant to prevent water from entering the kayak.



## INSTALLING THE SEA-LECT DESIGNS TRUOURCE™RUDDER

**Step 1:** Gather needed materials; including SEA-LECT Designs Truecourse™Rudder System, lift line assembly, Hex (Allen) Wrenches, cable cutters, and mounting material (if needed).



**Step 2:** Mount rudder to boat. The Truecourse™Rudder System can be installed on a variety of kayaks, but the easiest application is on boats which already have an extension at the rear of the kayak with a 3/8" vertical hole all the way through. In lieu of a pre-existing hole molded into the kayak, a variety of metal brackets (known as gudgeons) can be purchased through aftermarket sources and attached for this purpose (visit <http://www.sealectdesigns.com/blog> for more information about gudgeons, as well as additional mounting instructions).

**Step 3:** To attach rudder cables using the SEA-LECT Kayak Adjustable Foot Brace w/ Rudder Control, remove the cable clamp cover by unbolting the hex nuts from both the face, and side of the rudder bracket. When open, take note as to the placement of the washer that covers the spring, but don't remove the spring from the assembly.

Inside you'll see a clamping plate bolted to the base. With the rudder cable entering through the outside-most opening, loosen the clamping plate and run the cable behind the bolt and up through the hole. Pull the rudder cable until taut on each side making sure the rudder blade is centered. Retighten clamping plate and test rudder before continuing (covered on back page). If hex wrenches are still in place from Step 2 of foot brace installation, remove them before using or rudder will not work.



When satisfied, trim excess rudder cable and replace cable clamp cover by returning the hex nuts that hold the cover in place while restoring the washer that covers the outside of the spring.

**NOTE:** When using the foot braces from other manufacturers that can't be locked, make sure the foot pegs are at an appropriate length and in a neutral position before tightening rudder cable.



**Step 4:** The lift line assembly allows you to raise or lower your rudder while underway. Start by attaching the rudder pull rope to the base of the blade, run the line to the cockpit using pad eyes in route as guides; mount a Clamcleat® to serve as the locking mechanism. If drilling is needed to mount pad eyes and Clamcleat® (5/32" or 5mm drill bit), measure and mark hole locations and include rubber seal washer when attaching hardware.

The precise location of the forward terminus of the lift line (i.e. the Clamcleat®) varies depending on your kayak models and personal preference, but it should be an easy and convenient access point. Tie an overhand knot on the end of the line so the line doesn't fall back through the Clamcleat®; it also serves as a nice grab point.

**NOTE:** The SEA-LECT Designs Kayak Foot Brace Cable Adjuster Kit is a great addition to the kit and can be used to easily fine-tune cable length.

**NOTE:** When placing pad eyes, it is very important to mount one roughly 16-18" from the rudder mount at the back of the kayak; this will ensure the rudder has a quick and smooth transition between the up and down positions. If rudder pulls too far forward, it can possibly hang up.

## TESTING THE TRUECOURSE™RUDDER SYSTEM

- Initial testing is best done on dry land. Remove your kayak from any elevated surface you may have had it on while installing the rudder. For best results find a place where the center of your boat is supported from underneath, but the rear of your kayak can hang over an edge. This will let the rudder fully deploy without ground interference.
- Sit in the kayak and adjust the steering pedals for comfort. To move the foot pegs along the track, lift up on the red adjustment “flags”; locking the foot brace is done by returning the red flags to their original position (down). Feet should be positioned so your knees can flex to touch the outsides of the boat while still having contact to fully extend the rudder with your toe. In general, the more vertical your foot position is, the more likely you are to get numbness and/or cramping.
- Grasp the lift line and remove the rope from the clam cleat. When released, rudder should deploy from the resting “up” position and drop into working position smoothly.
- Test steering functionality of rudder by pushing the toe of one foot brace forward, followed by the other. Rudder should swing back and forth across the stern of the kayak free of catches.
- Return rudder to a centered position by balanced feet/toe position so they feel equal; a visual check should verify the rudder is aligned with the centerline of the kayak.
- Pulling the lift line forward and inserting it into the Clamcleat® will raise and lock rudder.
- Repeat testing process in shallow, protected water in calm conditions with help and assistance at hand before venturing into deeper water further from shore. Continue to test the rudder’s effect on handling in various conditions and with boat facing into, across, and away from wind/waves.

## USING AND ADJUSTING THE TRUECOURSE™RUDDER SYSTEM

- Multi-position injection molded blade enables kayakers to adjust rudder depth. On the top of the rudder blade, located next to the lift line tie, is the adjustments mechanism; by using the smallest of the hex wrenches the positioning nut can be moved higher and/or lower to suit conditions.
- Removing the rudder blade is quick and easy assisting in both blade replacements, as well as providing an option to paddle without the windage a rudder blade creates in the “up” position. To remove the blade, keep rudder in its lowered position; begin by grabbing the top of the rudder housing assembly with one hand and the blade with your other. Pull the assembly top back and rotate it into the “up” position while keeping the rudder lowered.

**Note:** When taking out the blade, the lift line should be untied to provide easy removal.

- The presence of a rudder on the stern of a kayak means you need to take extra care in handling the kayak. While extremely durable, it is possible to bend components of the rudder system if banged on the ground. Be careful! ... but replacement parts are available!
- Caring for you new rudder system. If over time either the foot braces or the rudder body become sticky, use fresh soapy water to fully clean the system. If needed, remove bolts and/or protective covers to clean areas that are not normally visible, but still accessible by salt and grime.
- **Questions/Concerns?** Contact us at [info@sealctdesigns.com](mailto:info@sealctdesigns.com), or (425) 252-2149.

Additional installation instructions available on our webpage, [www.sealctdesigns.com](http://www.sealctdesigns.com).



P.O. Box 67 • Everett, WA • 98206  
Phone (425) 252-2149 • Fax (425) 339-1345  
[info@sealctdesigns.com](mailto:info@sealctdesigns.com)