



SEA-LECT Designs TruCourse™ Rudder Kit

Congratulations! Installing the SEA-LECT Designs TruCourse™ Rudder Kit (with optional SEA-LECT Designs Rudder Control Footbraces) means you're outfitting your kayak with the most innovating steering system on the market, designed to meet your evolving needs!

These instructions will serve as a reference for installation; 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 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 reasonable cost.

Parts List

Below are the parts included with your SEA-LECT Designs TruCourse™ Rudder Kit (w/ optional Rudder Control Footbraces):

- SEA-LECT Designs TruCourse™ Rudder (*hardware included*)
- Rudder Hex Keys (1/16" x 2, 3/32" x 1 & 9/64" x 1)
- (Optional) SEA-LECT Designs Rudder Control Footbraces (*hardware included*)
- (Optional) SEA-LECT Designs Rudder Rigging Kit (*hardware included*)

Additional Tools & Materials Required

Depending on the model of kayak being worked on, not all tools below may be required:

- Gudgeon (Rudder Mounting Bracket)
- Rudder Cable (Pair) w/ Cable Guide Tubing
- Cable Cutters
- Electrical Tape
- Drill with 1/4" (7 mm) & 5/32" (5mm) Drill Bits
- Phillips Head Screwdriver
- Measuring Tape or Ruler
- Non-Permanent Marker
- Silicone Sealant

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

SEA-LECT Designs TruCourse™ Rudder Kit - Installation Instructions

Video Installation Instructions Available at www.youtube.com/sealectdesigns

Step 1: Gather needed materials; including your SEA-LECT Designs TruCourse™ Rudder, rudder hex keys, cable cutters, electrical tape and mounting material (which could include a gudgeon, Rudder Rigging Kit and/or Rudder Control Footbraces. Installation of the SEA-LECT Designs Rudder Control Footbraces will be covered in a separate section below).

Step 2: The TruCourse™ Rudder Kit 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 which accepts a 3/8" diameter vertical pin mount (3" long). In lieu of a pre-existing mount, we offer a variety of aftermarket metal mounting brackets (or gudgeons) which have been designed specifically for the TruCourse™ Rudder. A list of these gudgeons is available at www.sealectdesigns.com, and they are available for purchase (or order) thorough any of our dealers.

After installing a gudgeon specifically designed for the SEA-LECT Designs TruCourse™ Rudder (or adapting your current mount to accept the new rudder pin), simply remove the split ring from the mounting pin of the rudder. The TruCourse™ Rudder should slide into place where the split ring can be replaced to keep the rudder in place.

Step 3: To connect the existing rudder cables on boats with previously installed rudders, first remove the plastic covers on the rudder base by unscrewing the two hex screws which hold on each side using the 3/32" hex key. When opening, take note of the placement of the washer that covers the spring - don't remove the spring from the assembly.

Inside you'll see a clamping plate bolted to the base. With the cable entering through the outside-most opening on the rudder, loosen the hex screw using the 9/64" hex key and run the cable behind the screw and up through the hole on top of the plate. Pull the cable taut on each side making sure the rudder blade is centered. Retighten the clamping plates and test the rudder before continuing. When satisfied, trim excess cable and return the plastic cover to its place (making sure the washer that covers the outside of the spring is also in place).

NOTE: When using the SEA-LECT Designs Rudder Control Footbraces, the 1/16" hex keys (provided) can be used to hold the foot peg in a 'neutral' position while adjusting the rudder cables; look for the small hole on the center face of the foot pegs where they attach to the pin; when it's in its neutral position, an opening will appear through the foot peg. Insert hex key in the hole on each foot peg, making sure to remove them at the end of installation. 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 on the water. Start by attaching the rudder pull rope to pre-drilled hole at 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 to keep the rudder retracted. If drilling is required to mount the pad eyes and/or the Clamcleat®, measure and mark hole locations before using your drill with 5/32" (5mm) bit to create the mounting holes - always double check measurements before drilling. 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 other end of the life line to prevent it from pulling back through the Clamcleat®; it also serves as a grab point.

NOTE: When placing pad eyes, it's important to mount one roughly 14-18" from the rudder mount at the back of the kayak; this will ensure the rudder has a smooth transition between the up/down positions. It is possible to pull the rudder too far forward preventing deployment.

SEA-LECT Designs Rudder Control Footbraces - Installation Instructions

Video Installation Instructions Available at www.youtube.com/sealectdesigns

Step 1: Gather needed materials; including your SEA-LECT Designs Rudder Control Footbraces, two lengths of rudder cable with tubing, cable cutters, electrical tape, measuring tape, marker, sealant, Phillips head screwdriver and drill with 1/4" (7 mm) drill bit - drilling may only be necessary in a kayak that don't have existing mounting holes.

Step 2: Start installation of your footbraces by locating the footbrace position for your kayak. When mounting the footbrace, you should be sure the placement will fit a variety of paddlers.

Our footbrace system has a center-to-center spacing between mounting holes of 14-1/2"; this is the most common distance on the market, and if your kayak has an existing footbrace system with these measurements, you just need to unscrew the old ones and replace.

If the footbraces on your kayak have mounting holes outside these measurements, you can still use one of the existing through holes, leaving only one additional hole to drill on each side. Fill-in any unused holes to prevent water from entering your kayak. Check with your kayak's manufacturer on the best way to accomplish this step, but the process could include using a fiberglass patch, plastic weld, or even by simply using a bolt with oversized head to cover the opening.

If no previous footbraces were installed on your boat, measure and mark both hole positions on each side. Always double check measurements before drilling into your kayak. In addition, since the foot peg extends vertically above the track, make sure there's sufficient clearance on the inside of the boat so the top of the peg does not impact the underside of the deck. If this is the case, you may need to move your footbrace position down to provide clearance. Use your drill with 1/4" (7 mm) drill bit to create the mounting holes.

Step 3: Mount the footbraces to your boat using the provided bolts. The bolts will push through from the outside of the kayak exposing the thread inside the hull; make sure the rubber washer is against the outside of the hull to act as a water seal (a drop of silicone sealant can also be used for added waterproofing). Slide the track over the exposed thread (the top of the track can be identified using the patent number on the back; it should never be upside down when mounted. In addition, it will be on the side closest to the paddler when the track is installed on the left, farther away when mounted on the right). The red adjusting bars (or black bars in limited cases) should be positioned toward the paddler with the "L" or "R" pointing toward the inside of the kayak; the right rod is marked with an "R" on the adjustment flag, the left with an "L" on the adjustment flag. The top of the foot peg can be identified as the side with the silver semi-circle (the tab being the silver semi-circle should be facing away from the paddler, this will be used in the rebound bungee installation outlined below). Tighten the unit into place using the clamps; these clamps have a built-in recess for the lock nut to prevent them from turning as you tighten.

NOTE: If you're installing stud mount footbraces, no drilling is required, but you'll need to install mounting threads in your kayak such as those in the SEA-LECT Designs Stud Mount Kit (included with stud mount footbrace kits). Attach the studs via the same steps as above, except by using fiberglass resin and/or high-strength epoxy (check with your kayak's manufacturer on the best way to accomplish this step). If you are transferring from standard footbraces to stud mount footbraces, an aftermarket kit is available from SEA-LECT Designs which includes mounting studs plus replacement 'stud mount' clamps. Since you'll not longer be able to turn the screw head to tighten to footbraces into place, these replacements 'stud mount' clamps do not have the recess for the lock nut so you can tightening the nuts from inside the cockpit.

Step 4: Once mounted to your boat, adjust the foot pegs to they are on the same setting (i.e. so they are the same distance away from the front/back) and rotate the peg so it's at a 'neutral' 90° angle to the track.

NOTE: The 1/16" hex keys (provided) can be used to hold the foot peg in a 'neutral' position while adjusting the rudder cables (see instruction on this process in rudder installation instructions above). Insert hex key in each foot peg, making sure to remove them at the end of installation.

Unravel the cable to verify it's long enough to connect the footbraces to the rudder housing when installed. At the end of the footbrace farthest from the paddler you'll find a small hole through the track just below the clamp. Attach the cable to this hole with a swage – or if your cable is pre-swaged, feed the opposite end through this hole so the swaged end acts as a stopper. This will be one terminus of your rudder cable. Feed the cable toward the pedal and into the opening just below the foot peg. From here the cable will make a reverse "S" pattern through the foot peg as it goes up and around the front of the pivot point, emerging from opening just above the silver semi-circle.

NOTE: The SEA-LECT Designs Cable Adjuster Kit (included) is a great addition to the kit and can be used to easily fine-tune cable length. To install, simply replace the cable clamp closest to the bow with the provided 'cable adjuster' clamp; screw-in the aluminum bracket so the head is facing toward the front of the kayak (away from the paddler). Instead of attaching the cable to the small hole in the track as mentioned above, run the cable through the inside of the cable adjuster screw. When it emerges on the other side, beyond the screws head, swage a loop into the cable to prevent it from pulling back through the system.

Continue the cable through your rudder cable tubing, from the front of the boat to the back; when it emerges at the rear of your kayak pull it taught to remove any excess length.

NOTE: If no rudder cable tubing is available, it's highly recommended to install before attaching the footbrace/rudder system since it acts 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. Route cable and cable tubing using gentle bends and avoiding any sharp turns and/or kinks. 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 getting where you don't want it.

Step 5: Using the provided Rudder Rebound Bungees, connect the foot peg to the grooved sliding base; this provides a 'rebound' feature. With the small hex key still inserted in the peg, attach one end of the bungee to the flag behind the silver semi-circle; the other connects to the small hole on the top of the sliding base.

Step 6: Back at the rudder end of your kayak, attach the cable to the rudder to serve as the other terminus. Remove any excess cable with cutters, and cover any frays at either end of the cable with electrical tape to prevent scratching. Remove the 1/16" hex keys.

Using & Adjusting Your TruCourse™ Rudder Kit & Rudder Control Footbraces

- Initial testing and adjusting of your footbraces is best done on dry land. Remove your kayak from any elevated surface you may have had it on while installing the footbraces. Find a place where the center of your boat is supported from underneath.
- To operate and adjust your footbrace flip the corresponding "R" and "L" levers from their locked position (pointing down) to their adjustable position (position toward the center of the kayak). When the levers are in their adjustable position, simply reach down and slide the foot peg either toward you, or away, to your desired position.
- For the best performance, you want to maximize contact with the boat – the more contact you have, the more control you have over the kayak. Both your knees and toes should be facing toward the outside of the kayak, with your knees bent and under any thigh braces (the space inside your legs should form a 'diamond' shape). Sitting upright, your heel will rest on the hull below the footbrace with the ball of your foot making contact with the foot peg. Adjust the footbrace position so your feet make a 90° angle at your ankles.
- 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. To steer your kayak, simply press on the top of your foot peg as you do when pressing on a gas pedal. Pressing the right toe will cause the kayak to go right, left toe will go left. When both toes are vertical and in the neutral position, the kayak will continue straight. Pulling the lift line forward and inserting it into the Clamcleat® will raise and lock rudder.
- To adjust rudder depth to meet conditions; use the 1/16" hex key to move the nock located next to the lift line tie up/down. To remove the blade, keep rudder in its lowered position; grab the top of the rudder housing with one hand and the blade with your other. Rotate the housing to the "up" position while keeping the rudder lowered.



Video Installation Instructions Available at

www.youtube.com/sealectdesigns

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