Hybrid Foil Kayak Rudder
OEM Installation Instructions

Overview:

1. The Hybrid Foil Kayak Rudder is a traditional, twin line, rudder that may also be configured with a coil spring for assisted retraction or with a single line.
2. In the coil spring configuration, it is not similar to other SmartTrack rudders in that it is sprung up, not sprung down. It is not a “kick-up” rudder.
3. In the traditional, twin line style, it may be installed similar to an existing rudder with a downhaul line running from the pulley pivot on the rudder blade to a point behind or alongside the cockpit and then looping back as an uphaul line to connect again to the rudder blade.
4. In the twin line style configured with a coil spring, the set up is similar to above but the coil spring is added. With the coil spring inserted, place the rudder blade into the housing in the retracted position (on the kayak deck). The tension knob may now be inserted in to the housing and secured with the hitch pin. Do not twist the tension knob. There should be no tension on the coil spring when the blade is fully retracted and lying on the kayak deck.
5. In the single line style configured with a coil spring, the set up is similar to above. Do not twist the tension knob. There should be no tension on the coil spring when the blade is fully retracted and lying on the kayak deck.
6. The coil spring offers assistance in retracting the rudder blade. It is not sprung down as a “kick-up” rudder. In the twin line and single line versions with a single length rudder blade, simply uncleat the downhaul line to retract the rudder blade. The coil spring returns the rudder blade the kayak back deck. There is no need to identify the correct line to pull up the rudder blade.
7. For a tandem length rudder blade, the twin line version is recommended due the greater size and weight of the tandem blade. In the single line configuration, the coil spring alone may not be sufficient to adequately fully retract the rudder blade.
8. Again, the purpose of the coil spring in the Hybrid Foil only serves to gently retract or assist in retracting the rudder blade. It must always be installed in the fully retracted position with no tension on the coil spring when the tension knob is inserted.

General Installation Instructions: These general installation instructions concentrate on the rudder blade and blade housing set up, irrespective to mounting pin style. The running of downhaul/uphaul lines, fairleads, cleats, knots, etc may vary from one kayak manufacturer to another. We can work with you to supply all necessary parts to suit your preference.

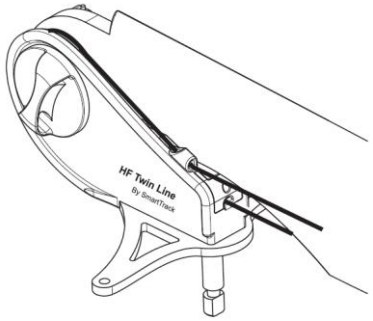
Twin Line Configuration:

1. Install the blade housing on the kayak with the tension knob removed.
2. Remove the three screws from the pulley on the side of the rudder blade and take off the pulley.
3. Tie a knot at the end of the rudder uphaul line and place the knot in the indentation under the pulley.
4. Align the pulley with the groove for the uphaul in place and re-install with three screws.
5. Hold the rudder blade horizontally in place over the blade housing. Wrap the rudder uphaul line under the pulley and then up and along the top edge of the rudder blade.
6. Insert the rudder blade into the blade housing and install the tension knob. (If a coil spring is to be used, do not twist the tension knob. There should be no tension on the coil spring when the blade is fully retracted and lying on the kayak deck.)
7. Insert the uphaul line into the guide on the top edge of the blade housing and pull it all the way through.
8. Run the uphaul line to the cockpit area and configure as desired, then return the same line towards the blade housing as the downhaul line.
9. Insert the downhaul line into the hole at the front of the blade housing and push it through until you see it come out the back side of the blade housing. From the back of the housing, continue to pull the downhaul line all the way through.
10. By hand, pull the rudder blade down to the fully deployed position and find the knotched groove in the rudder blade. Tie and overhand knot in the downhaul line at the point and slip the line and knot into the groove. Do not cut the excess line at this point.
11. The rudder may now be deployed by pulling the uphaul or downhaul lines. Check the tension on the line to see if it suits your desired fairlead, cleat, knot method. Some methods the utilize a shock cord near the deck cleat may require more tension in the lines. Other methods may find less tension in the lines to be more suitable.
12. After the desired line length found, cut off the excess and singe it to prevent fraying.

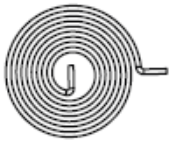
Single Line Configuration:

1. Install the blade housing on the kayak with the tension knob removed.
2. Insert the rudder blade into the blade housing and install the tension knob. Do not twist the tension knob. There should be no tension on the coil spring when the blade is fully retracted and lying on the kayak deck.
3. Insert the downhaul line into the hole at the front of the blade housing and push it through until you see it come out the back side of the blade housing. From the back of the housing, pull the downhaul line until it extends about 12 inches or 30 cm. Tie a knot in the end of the line.
4. By hand, pull the rudder blade down to the fully deployed position and find the knotched groove in the rudder blade. Slip the line and knot into the groove. From the front of the blade housing, pull the uphaul line tight until you can release your other hand from the rudder blade and gently let the coil spring retract the rudder blade on the kayak deck.
5. Run the uphaul line to the cockpit area and configure to be cleated as desired. Cut off and singe any excess line to prevent fraying
6. To retract the rudder blade, uncleat the line and the coil spring retracts the rudder on to the kayak deck.

Twin Line Configuration

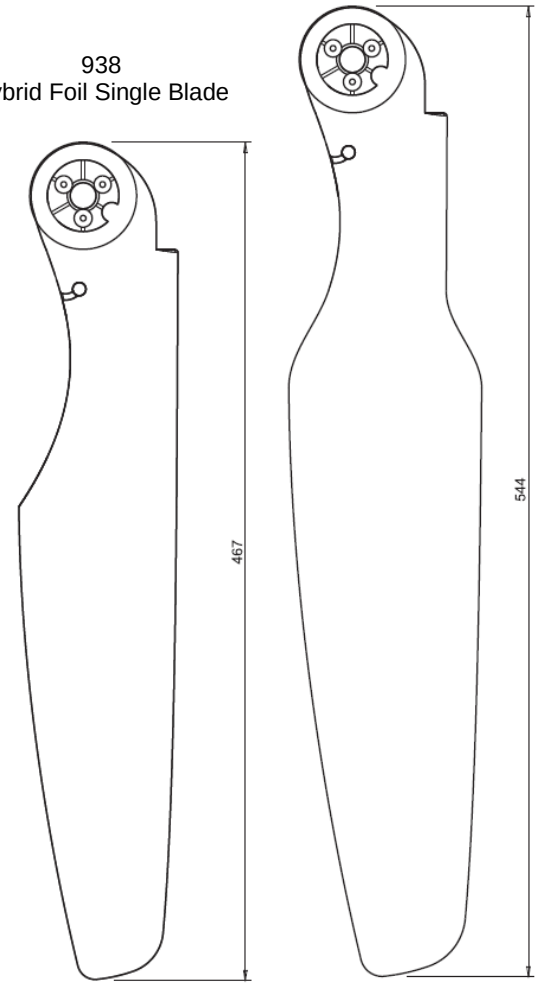


44-518
Coil Spring

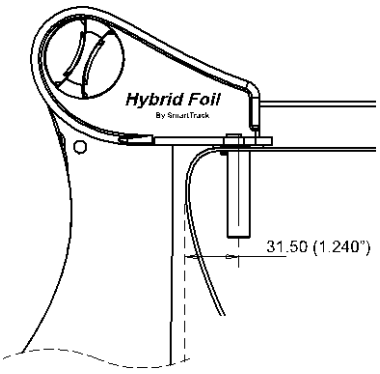


939
Hybrid Foil Tandem Blade

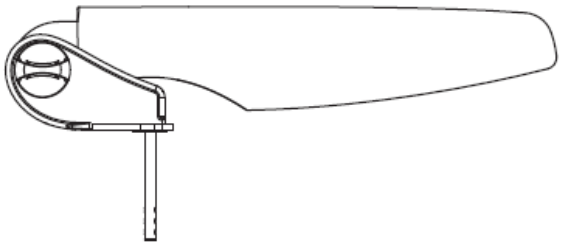
938
Hybrid Foil Single Blade



Single Line Configuration



Rudder in fully retracted position



Hybrid Foil
By SmartTrack