



AdvancedTrak™ Rudder Kit AE4005

Assembly and Installation Instructions

Thank you for your purchase of the Advanced Elements AdvancedTrak™ Rudder Kit! A Kayak Rudder is a great way to enhance the tracking ability and steerability of your kayak, especially longer models! Developed specifically for our AdvancedFrame® line of kayaks, this complete kit includes adjustable rudder control pedals, a rudder that is quick to install and remove, our AdvancedTrak™ Rudder Mount, and a rudder rigging kit. Just follow these detailed instructions to get your new rudder kit set up on your kayak and enjoy!

Before reading through these instructions, you should note that the installation process of this kit is rated at a **Moderate DIY level**. It requires basic knowledge of how to use a few different tools and you should be comfortable with permanently modifying your kayak.

The installation of this Rudder Kit will take some time and there are a number of stages required to complete the install. The following gives a quick breakdown of the stages involved and how much time they should take (*Times will vary from person to person and are just an estimate based off of our own experience*).

- Stage 1: Gluing the Rudder Mount to your kayak: 30 min (8-12 hours cure time once glued onto the kayak).
- Stage 2: Sheathing the Rudder Cables: 20 min.
- Stage 3: Adding adjustable webbing straps to the footbrace assemblies: 10 min.
- Stage 4 (Optional): Adding bungees to the foot pedals: 5 min.
- Stage 5: Connecting the Rudder Cables to the Rudder Control Pedals: 20 min.
- Stage 6: Running the Rudder Cables and connecting them to the Rudder: 30 min.

Total approximated time to complete install (minus glue drying time): 1.5 to 2 hours.

If, for any reason, you need help or extra tips on installation, please feel free to contact us at info@advancedelements.com, or Toll-free at 1-866-262-9076.

For visual tutorials on how to install the AdvancedTrak™ Rudder Kit visit our YouTube site @ www.youtube.com/advancedelements

Model Fitment:

The AdvancedTrak™ Rudder Kit is intended for use on the following models. Any attempt to adapt this kit to other Advanced Elements models, or other inflatable kayaks, is at the user's discretion.

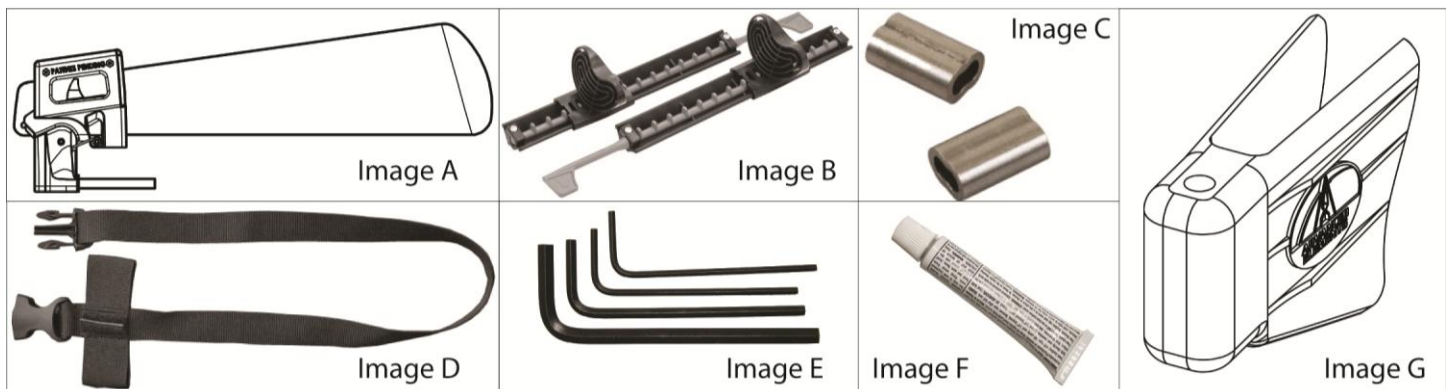
- AE1017 AdvancedFrame® Sport
- AE1012 AdvancedFrame®
- AE1009 AdvancedFrame® Expedition
- AE1007 AdvancedFrame® Convertible
- AE3033 AdvancedFrame® Scout
- AE1044 AdvancedFrame® XL and AdvancedFrame® XLC

Additional Tools & Materials Required:

- Masking Tape
- Small Artist's Paint Brush or Hobby Brush
- Disposable Gloves: i.e. Latex
- Phillips Head Screwdriver
- Pliers/Crimping Tool
- Cable Cutters
- Pencil
- Measuring Tape
- A book, block of wood, OR something similar with measurements of 8"h x 5"w x 0.75"d
- Shop towel or Paper Towels for any glue cleanup/touchup
- Weighted objects such as a set of heavy books, workout weights, ect. OR if available, Shop Clamps

Parts List: This box includes the following items.

- Kayak Rudder with Split Ring: **Image A**
- Adjustable Rudder Control Footbraces: **Image B**
- Rudder Rebound Bungees: QTY 2 short lengths of black bungee cord (not pictured)
- Rudder Cables and Cable Sheathing: QTY of 2 each. Long steel cabling and black tubing (not pictured)
- Cable Crimps: **Image C**
- Rudder Pull Cord/Lift Line: Black Nylon Cord (not pictured)
- Adjustable Webbing Straps: QTY. 4, **Image D**
- Rudder Hex Keys: QTY. 4, **Image E**
- Tube of application glue: QTY 1, **Image F**
- AdvancedTrak™ Rudder Mount, **Image G**



SETUP AND INSTALLATION INSTRUCTIONS

Section 1: Initial set up procedures

The following sections will detail the initial procedures needed towards the full setup of your rudder kit.

Section 1.1: Gluing the AdvancedTrak™ Rudder Mount

NOTE: Before starting this step, please review the safety information located on the tube of Aquaseal glue located in your kit. Make sure that you use this glue in a well ventilated area!

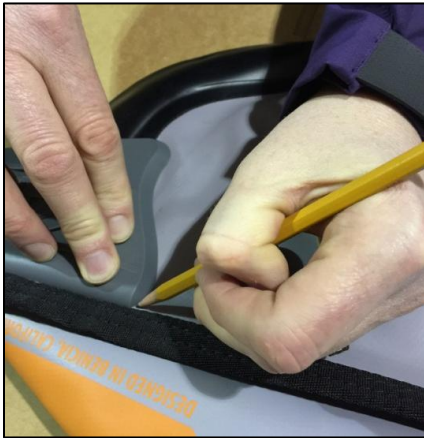
Materials Needed:

- AdvancedTrak™ Rudder Mount (this is the grey plastic end cap with the Advanced Elements logo on it.)
 - Masking Tape
 - Small Artist's Paint Brush or Hobby Brush
 - Disposable Gloves: i.e. Latex
 - Pencil
 - A book , block of wood, OR something similar with measurements of 8"h x 5"w x 0.75"d
 - Shop towel or Paper Towels for any glue cleanup/touchup
 - Weighted objects such as a set of heavy books, workout weights, ect. OR if available, Shop Clamps
1. Finding a well ventilated area, and a flat surface to work on, lay your deflated kayak out and unfold it. Begin by removing your kayak's inner tube from the stern end of its outer cover. Make sure that you remove the aluminum rib as well. **Note:** Please refer to your kayak's Owner's Manual if you are not already familiar with this process. Finish this step by folding the kayak in half length wise.

2. Next, take your book, wood block, or other object shaped 8"h x 5"w x 0.75"d and insert it into the outer cover at the absolute rear/stern of the kayak. Firmly position the book inside the kayak so that it is square against the very end of the kayak cover and positioned at the top. The goal of this is to provide a solid surface for the Rudder Mount to sandwich onto when gluing.
3. Seat the Rudder Mount onto the stern of the outer cover and align the top edge of the Rudder Mount with the black binding of the outer cover. Feel free to adjust the Rudder Mount as needed to make sure that it appears level and has good even contact with the black curved section of the stern.



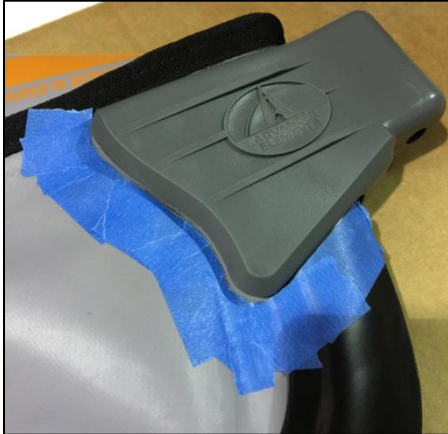
4. Use a pencil to stencil the edges of the Rudder Mount onto the outer cover to mark placement.



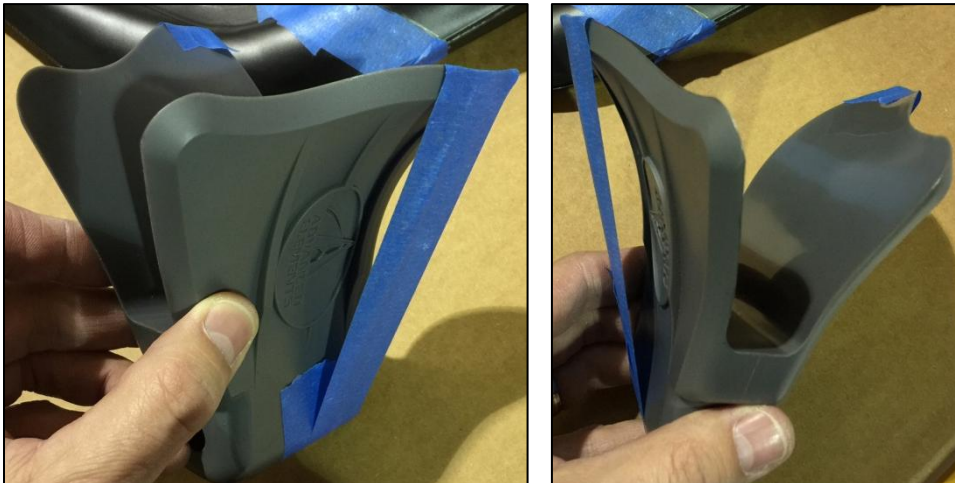
5. Remove the Rudder Mount and use masking tape to mark out your stencil lines. This will help prevent glue from running onto your kayak hull and will provide a clean finish.



6. At this point, check to make sure that the book, or other object, that you placed inside of the kayak is still in the proper position within the outer cover. Re-seat the Rudder Mount and line it back up with your stenciled outline just to confirm that the Rudder Mount is placed as mentioned in step 3 OR, if you have decided to make adjustments, that it is placed where you want.

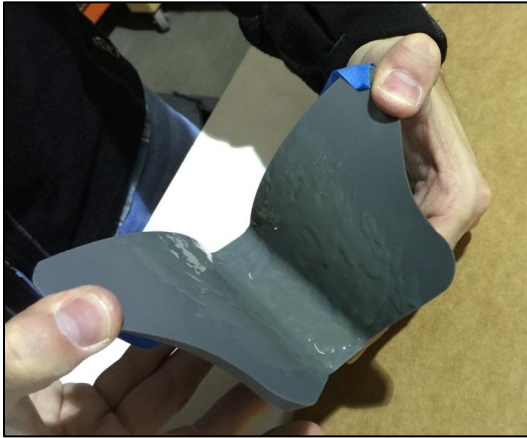
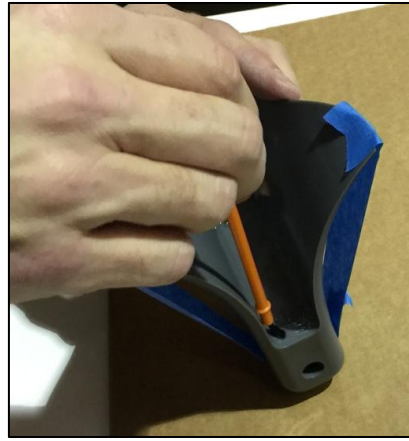
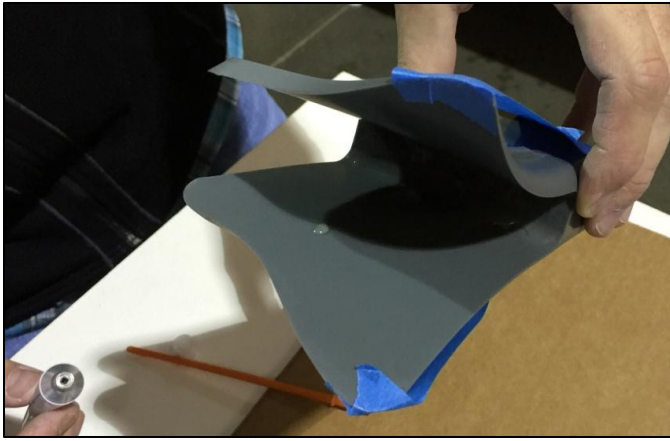


7. Remove the Rudder Mount from the end of the kayak and use some masking tape to pull back and open the Rudder Mount “butterfly” style to prep it for applying the glue.



8. Using the supplied glue and your paint brush, begin to apply a relatively liberal amount of glue onto the inside walls of the Rudder Mount and spread it around with your paint brush. When spreading the glue, make sure to keep it approximately 1 to 1.5 inches from the front edges of the Rudder Mount.

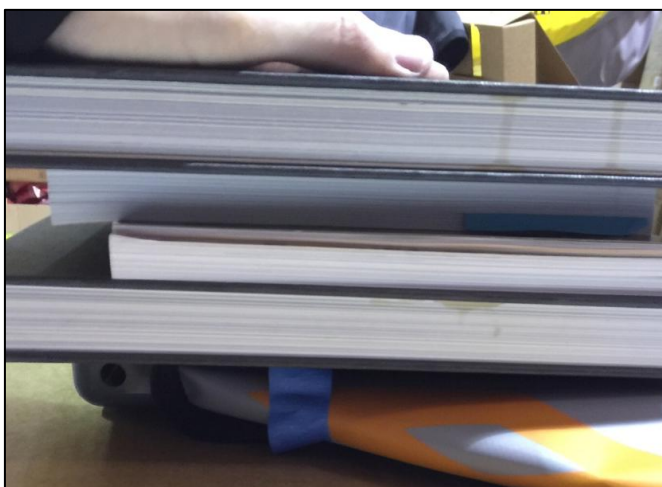
Note: A little of this glue goes a long way, so you do not need to use a huge amount at a time. Start with small amounts and spread around with the paint brush until you have coated all of the interior side walls with a thin but even layer of glue. Also, this glue can get a bit sticky if it gets on your hands; you may want to use some disposable gloves while applying it. **SEE IMAGES ON NEXT PAGE.**



9. Once the glue is applied, allow it to cure for 10 minutes before moving to the next step. Make sure to check on the part from time to time during the 10 minutes as some of the glue may run.
10. Once the glue has had a little time to cure and build up a little tack, slide the Rudder Mount into place on the kayak and remove the masking tape that is holding the Rudder Mount open.
11. Press the Rudder Mount sides down onto the kayak and hold them into place on the kayak cover for a few minutes.
12. Use masking tape to wrap around the ends of the Rudder Mount and tape off on the kayak in order to help hold the Rudder Mount in place on the kayak while the glue dries. Make sure that the tape is pulled tight and applying pressure to the Rudder Mount.



13. If using Shop Clamps, place your clamps onto the Rudder Mount to apply pressure for the drying process.



If using heavy books, weights, or something else with a good amount of weight, place your weighted object(s) on top of the Rudder Mount and make sure that enough pressure is being applied to the Rudder Mount sides to make good contact with the kayak sidewalls as shown in the image on the right above.

14. Allow the glue to dry for 8-12 hours to ensure a full curing of the glue.
15. While waiting 8-12 hours for the glue to cure, you can proceed to [Section 1.2](#) and then to [Section 1.3](#). Once finished with Sections 1.2 and 1.3, return to **step 16** of this section (in 8-12 hours) and resume the steps to complete the gluing of the Rudder Mount.

Note: Approaching the instructions in this manner will save you time and give you something to do with those 8+ hours of cure time!

16. After allowing the glue to cure the full 8-12 hours, remove the shop clamps or weight from the Rudder Mount. Then, remove the masking tape that was applied to hold the Rudder Mount in place. **Note:** Leave the perimeter masking tape in place.
17. At this step, the Rudder Mount is fully bonded to your kayak and ready for use but, if you wish to have the side edges of the Rudder Mount glued down for a clean and fully integrated look, continue to the next steps.

Note: If you are fine with the edges of the Rudder Mount not being glued down all of the way, you may remove the masking tape from around the perimeter of the Rudder Mount and proceed to [Section 2](#).

18. If you have chosen to glue the edges of the Rudder Mount down for a clean and finished look, you can proceed by lifting up the edges of the Rudder Mount and applying a small amount of glue to the un-glued areas with your paint brush. Remember a little of this glue goes a long way!
19. Once you are done applying the glue, re-clamp the edges OR re-apply weight and allow the glue to cure for 8-12 hours. Once the glue has cured, remove the clamps or weight and remove the masking tape from around the perimeter of the Rudder Mount.
20. After completing the full gluing process, along with sections 1.2 and 1.3, proceed to [Section 2](#) of this manual.

Section 1.2: Setting up the Rudder Cables for Installation

Materials Needed:

- Rudder Cables and Cable Sheathing
- Masking Tape OR Electrical Tape

1. Feed the two lengths of Rudder Cabling through the supplied Cable Sheathing.

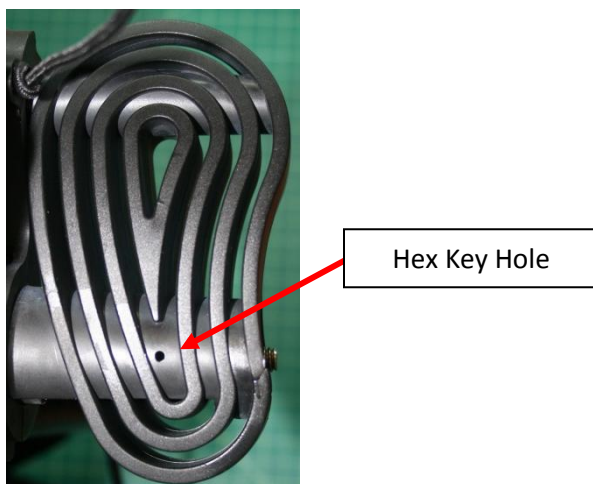
TIP 1: The straighter you can keep the Cable Sheathing, the easier it will be to feed the Rudder Cabling through.

Tip 2: Putting some masking tape or electrical tape on the ends of the cabling will help the cables pass through the sheathing easier.

Section 1.3: Attaching the Webbing Straps to the Footbraces

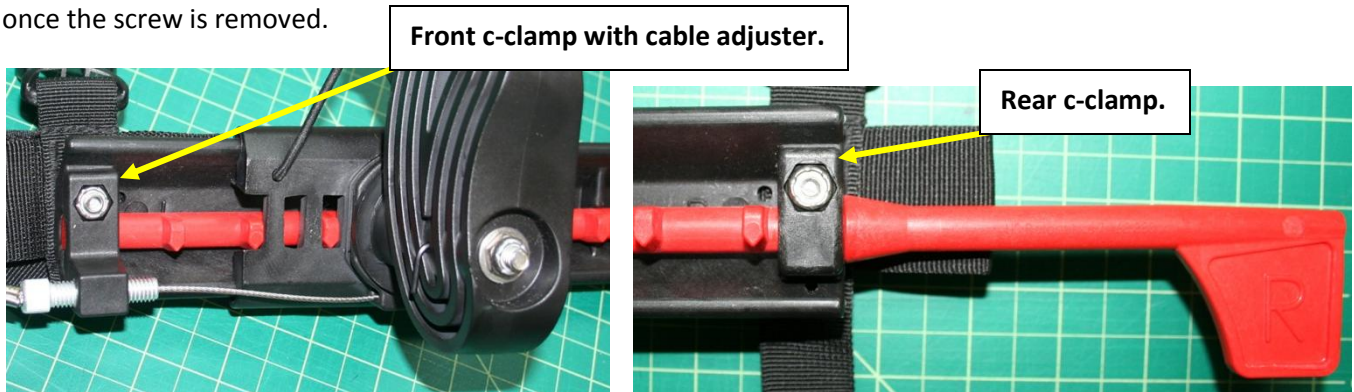
Materials Needed:

- Adjustable Rudder Control Footbraces
 - Misc. parts for the Rudder Control Footbraces:
 - Rudder Rebound Bungees
 - Adjustable Webbing Straps: QTY. 4
 - Phillips Head Screwdriver
 - The 2 smallest sized Hex Keys that have been provided with this kit
1. Familiarize yourself with the Rudder Control Pedal Footbrace assemblies. Note that there is an **L** for Left and an **R** for Right marked on the part of the footbrace assembly that looks like a flag. When installing the footbraces on your kayak, the flag portion should be facing towards the cockpit, or the rear, of the kayak and also be facing downwards. The part of the footbrace assembly that has the flag is the rear of the footbrace, the other end is the front.
 2. Collect 2 of the adjustable webbing straps, 1 of the Rudder Rebound Bungee Cords, 1 footbrace assembly, and 1 of the small hex keys.
 3. Taking one of the small Hex Keys and one full footbrace assembly, rotate the Rudder Control Pedal to an upright 90° position and identify the small hole on the face of, and near the bottom of, the pedal. Insert the hex key through the hole until it comes out of the other side. This will hold the Rudder Control Pedal in a neutral position.



4. Remove the two screws and washers on the back side of the footbrace assembly (this is the side opposite of the Rudder Control Pedal).

Note: Keep your fingers on the small c-clamp part that the screw threads through. This small part will come free once the screw is removed.



5. Starting with one adjustable webbing strap at a time, put 1 screw with washer through the Velcro opening of each webbing strap. Make sure that the washer goes underneath the extra material of the Velcro closure so that the screw head lays flat.



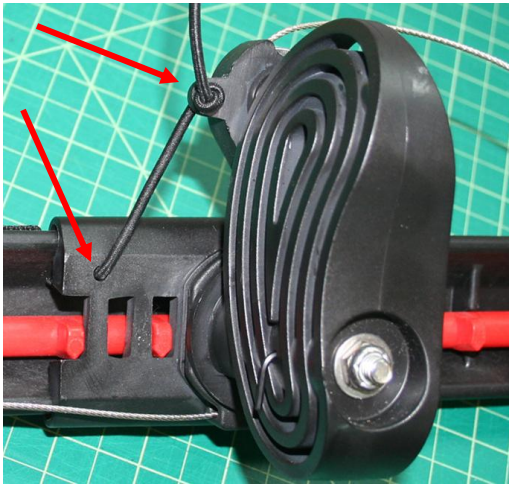
6. **Optional Step: Rudder Rebound Bungees:** The Rudder Rebound Bungees provide a nice “rebound” feature to the Rudder Control Pedals. With the Rebound Bungees in place, the control pedals will each “spring” back into an upright position during use. This feature is not necessary to the function of the control pedals, but it is a nice one to have. Follow the step below if you wish to install the Rebound Bungees. If you choose to pass on this step, proceed to Step 7.

Rebound Bungee Install: Identify and remove the c-clamp with the silver threaded cable adjuster. This c-clamp is the one at the front of the track that you just removed a screw from. Once removed, make sure that the adjuster flag is turned so that the control pedal slides freely on the track and slide the control pedal far enough forward so that the first half of the control pedal is extending off of the track.

At this point, you will notice that there is a small hole on the sliding base of the control pedal assembly. Tie a small knot at the end of one of the Rebound Bungees and then pass the bungee through the hole so that the knot will be on the backside of the sliding base. Slide the pedal assembly completely back onto the track.

Next, bring the bungee upwards to the top of the control pedal and pass it through the small hole that is located

near the silver semi-circle that is located at the side of the pedal. Pull the bungee tight and tie it off with a knot.



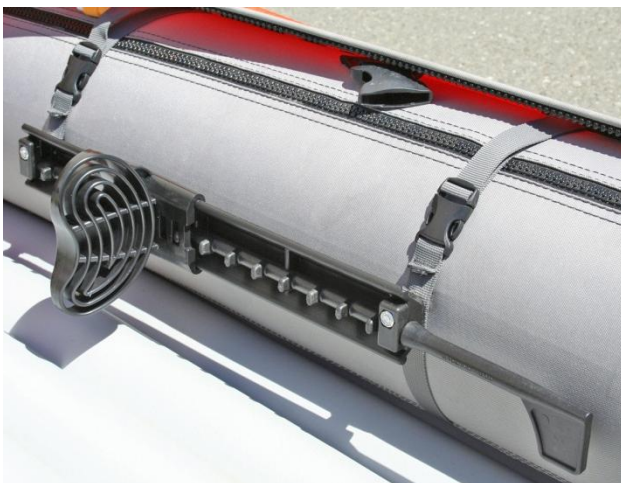
7. Re-assemble the footbrace assembly by placing the screws back through the holes on the back side of the track and threading the screws back into the hex-nuts on the c-clamps. Hand tighten with your screwdriver until snug.
8. Once re-assembled, the adjustable straps should be rotated/positioned perpendicular to the footbrace assembly.



Note: Leave the small Hex Key in the Rudder Control Pedal. This will be very important when running your rudder control cables.

9. Repeat **steps 2-8** with the other footbrace assembly and set of webbing straps.
10. Once complete with steps 2-8 on both footbrace assemblies, **return to Section 1.1, Step 16.**

Section 2: Setting up and adjusting the Rudder Control Pedals on your Kayak



Before installing the Rudder Control Pedals on your kayak, remember that there is an **L** for Left and an **R** for Right marked on the part of the footbrace assembly that looks like a flag. When installing the footbraces on your kayak, the flag portion should be facing towards the cockpit/seating position of the kayak and also be facing downwards.

Adjusting the rudder control pedals on the track: Rotate the flag shaped locking system to unlock the Rudder Control Pedals and slide each pedal to the desired position. Then rotate the locking system back into place to lock the pedals into place.

1. After identifying the left and right footbraces, partially inflate your kayak and then proceed to position each of the footbrace assemblies in the area of the kayak where you would like to brace your feet.

Note: When doing this step, you might want to keep in mind placing the footbraces for a variety of different sized paddlers. Additionally, if you are paddling the AE1007 AdvancedFrame® Convertible in tandem, you should set up the Rudder Control Pedals for use by the front paddler.

2. Pull the webbing strap adjustments out all of the way to ensure that you have enough length to wrap the webbing all the way around the main tube of the kayak.
3. Wrap the webbing straps around the tube of the kayak (making sure that the straps are not becoming twisted) and insert the male end buckle into the female end buckle. **Do not cinch down the webbing straps at this time.** Once you have secured the footbraces onto each side of the main tube, make sure that they are evenly placed across from each other.
4. Inflate your kayak to proper pressure and then cinch down the webbing straps on the footbraces until tight. **Do not tighten the webbing straps so tight that they squeeze or indent the main tube!**

Section 3: Running the Rudder Cables and Setting up the Rudder on your Kayak

Materials Needed:

- Kayak Rudder
- Adjustable Rudder Control Footbraces
- Rudder Cables (pre-sheathed) and Cable Crimps
- Rudder Pull Cord/Rope
- Rudder Hex Keys
- Pliers/Crimping Tool
- Cable Cutters

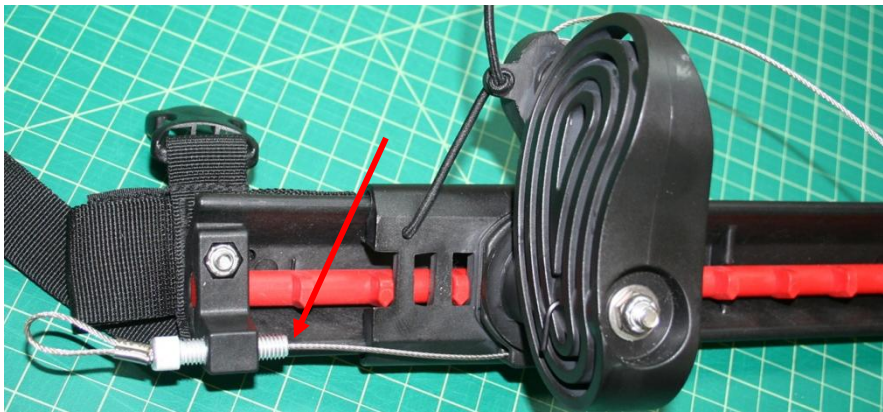
Section 3.1: Connecting the Rudder Cables to the Rudder Control Footbraces

Materials Needed:

- Rudder Cables (pre-sheathed) and Cable Crimps
 - Measuring Tape
 - Pliers/Crimping Tool
1. Starting with one length of rudder cabling, measure out 20-24 inches from one of the ends and score or mark the cable sheathing.
 2. Trim the sheathing off of the rudder cable from your scored mark out to the end so that 20-24 inches of cabling is exposed.
 3. Next, move to one of the Rudder Control Pedal footbrace assemblies and begin attaching the Rudder Cable to the control pedal. Take the exposed length of rudder cable and begin feeding it through the groove of the crescent shaped silver colored metal piece at the top of the control pedal. As you are feeding it through, you will notice that it will come out of the covered cable channel about half way down the pedal. Continue to feed the cable through and along the grooved cable channel down to the bottom of the pedal. At this point, feed the cable through the small grooved tunnel at the bottom of the pedal and out to the other side. The cabling will resemble an "S" shape once it is worked through the rudder cable channel on the control pedal. **SEE IMAGES ON NEXT PAGE.**



4. Once you have run the cabling through the control pedal, continue to feed it out to the front end of the footbrace track and feed the cabling through the small hole at the center of the silver threaded Cable Adjuster until you have about 2 or so inches of the cable coming out of the other side.



5. Next, slide one of the small Cable Crimps over the cable end and onto the rudder cable.
6. Form a loop at the end of the rudder cable and then pass the free end of the rudder cable back through the other available channel in the Cable Crimp as shown in the image below on the left.



7. Using your pliers or crimping tool, crimp the Cable Crimp down onto the cabling so that the cable end will not be able to pull back through the Cable Adjuster as shown in the image above on the right. Trim off any excess cable length that you might have sticking out from your crimped loop.
8. Repeat **Steps 1-7** on the other Rudder Control Pedal footbrace assembly.

Section 3.2: Running the Rudder Cable Lines for Your Specific Model

For all of the following models, you will be running the cables out to the rear/stern of the kayak where the AdvancedTrak™ Rudder Mount is located. Although not necessary, you may find that adding d-rings in strategic areas within the kayak will aid in running the rudder cables. Advanced Elements makes the AE2501 glue-on d-ring pack that would work great for this!

Note 1: You will want to have your kayak fully inflated with the Rudder Control Pedals installed for this stage of the installation process. Also, attach the kayak seat/s to the kayak and position in the seating area.

Note 2: The instructions below will periodically refer to the following images based on your specific kayak model.



IMAGE A (close-up detail of footbrace attached to kayak)

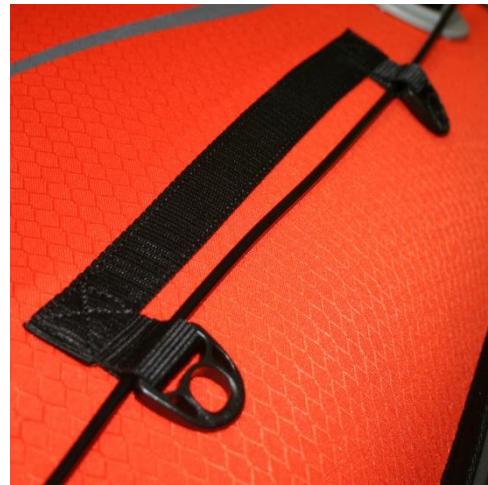


IMAGE B (detail of rear d-rings)

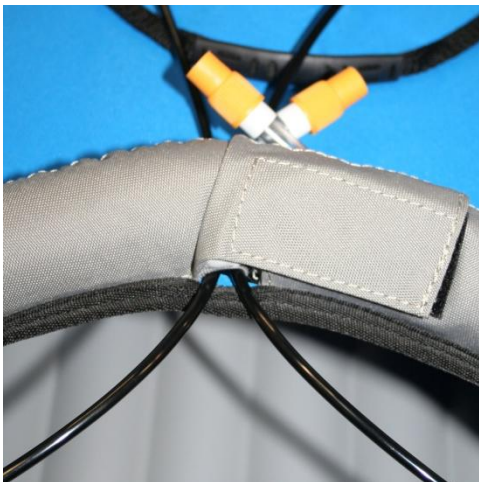


IMAGE C (close-up detail, rear of cockpit)



IMAGE D (close-up detail of kayak seat buckle)

AE1017 AdvancedFrame® Sport, Scout, and Similar Models:

1. To keep the rudder cables up along the side tubes of the kayak, and out of your way, start with one side of the kayak and run the rudder cabling behind the rear adjustable webbing strap of the footbrace assembly.

Note: Upon inspection of the rear webbing strap on the footbrace assembly, you will notice that there is a rather large space/gap between the deck lift and main tube of the kayak. This is the space that you want to utilize for running the rudder cables out of the way. **SEE IMAGE A**

2. Bring the rudder cable up along the edge of the side tube and run it along the outside edge of the kayak's seat buckle and webbing strap and then continue to run the cabling towards the rear of the kayak, stopping at the rear set of d-rings for the next step.
3. Now that you have the cabling at the rear d-rings of the kayak, you will notice that the webbing attaching the d-rings to the kayak form a small loop. Pass the rudder cable through both webbing loops and then bring the cable the rest of the way to the end of the kayak. **SEE IMAGE B**
4. Pull the cable tight so that there is no slack between the Rudder Control Pedal and the end of the kayak.
5. Repeat **Steps 1-4** on the other Rudder Control Pedal assembly and then proceed to **Section 3.3**.

AE1012 AdvancedFrame®, AE1009 AdvancedFrame® Expedition, AE1044 AdvancedFrame® XL/XLC and Similar Models:

1. To keep the rudder cables up along the side tubes of the kayak, and out of your way, start with one side of the kayak and run the rudder cabling behind the rear adjustable webbing strap of the footbrace assembly.

Note: Upon inspection of the rear webbing strap on the footbrace assembly, you will notice that there is a rather large space/gap between the deck lift and main tube of the kayak. This is the space that you want to utilize for running the rudder cables out of the way. **SEE IMAGE A**

2. Bring the rudder cable up along the edge of the side tube and run it along the outside edge of the kayak's seat buckle and webbing strap. Then, guide the cable up to the rear of the cockpit of the kayak. At the rear center of the cockpit you will notice that there is a small opening at the base of the inflatable coaming, right where the two coaming chambers meet and the valves are located. Pass the cable through this opening and then bring it out to the rear d-rings on the kayak. **SEE IMAGE C**

Note for AE1012 ONLY: Instead of bringing the rudder cables out the rear d-rings on the kayak, continue to run them all the way out to the end of the kayak and then move to **Step 4**.

3. Now that you have the cabling at the rear d-rings of the kayak, you will notice that the webbing attaching the d-rings to the kayak form a small loop. Pass the rudder cable through both webbing loops and then bring the cable the rest of the way to the end of the kayak. **SEE IMAGE B**
4. Pull the cable tight so that there is no slack between the Rudder Control Pedal and the end of the kayak.
5. Repeat **Steps 1-4** on the other Rudder Control Pedal assembly and then proceed to **Section 3.3**.

AE1007 AdvancedFrame® Convertible and Similar Models:

***Note:** Because rudder cable length and tightness is paramount to the function of the Kayak Rudder, you will only be able set up your rudder for use in Solo Paddler mode OR in Tandem Paddler mode with the set of Rudder Cables that are provided within this kit. So, you must determine in which way you will mainly be using your AdvancedFrame® Convertible: in Solo Paddler mode OR in Tandem Paddler mode.

If you want to set up your rudder for both Solo paddling and Tandem paddling, you will need to obtain a second set of rudder cables and cable sheathing from Sea-lect Designs on-line via **www.sealectdesigns.com**.

Running the Rudder Cables without the optional Conversion Decks Installed:

These instructions refer to using the kayak with the full seating area open. The kayak comes standard this way. If you have purchased either of the optional Deck Conversions, see the instructions in the next section below.

1. To keep the rudder cables up along the side tubes of the kayak, and out of your way, start with one side of the

kayak and run the rudder cabling behind the rear adjustable webbing strap of the footbrace assembly.

Note 1: Upon inspection of the rear webbing strap on the footbrace assembly, you will notice that there is a rather large space/gap between the deck lift and main tube of the kayak. This is the space that you want to utilize for running the rudder cables out of the way. **SEE IMAGE A**

Note 2; Setup for Tandem Paddling: If you are paddling the Convertible in tandem, the Rudder Control Pedals should set up for use by the front paddler. After guiding each cable behind the webbing strap, you will want to continue to run the cables up to the center seat buckles on the kayak and then pass the cables through the seat buckles as shown in **IMAGE D**.

2. Next, follow **Steps 2-5** in the model section above listed as: **AE1017 AdvancedFrame® Sport** and then proceed to **Section 3.3**.

Running the Rudder Cables with the optional Conversion Decks Installed:

These instructions refer to using the kayak with one of the optional Deck Conversions, with cockpit openings, installed on the kayak.

1. To keep the rudder cables up along the side tubes of the kayak, and out of your way, start with one side of the kayak and run the rudder cabling behind the rear adjustable webbing strap of the footbrace assembly.

Note 1: Upon inspection of the rear webbing strap on the footbrace assembly, you will notice that there is a rather large space/gap between the deck lift and main tube of the kayak. This is the space that you want to utilize for running the rudder cables out of the way. **SEE IMAGE A**.

Double Deck Conversion: If you are paddling tandem, using the Double Deck Conversion, you will want to continue to run the cables up to the center seat buckles on the kayak and then pass the cables through the seat buckles as shown in **IMAGE D**. Additionally, if you are paddling the Convertible in tandem, the Rudder Control Pedals should set up for use by the front paddler.

2. Bring the rudder cable up along the edge of the side tube and run it along the outside of the kayak's seat buckle and webbing strap. Then, guide the cable up to the rear of the cockpit of the kayak. At the rear center of the cockpit you will notice that there is a small opening at the base of the inflatable coaming, right where the two coaming chambers meet and the valves are located. Pass the cable through this opening and then bring it out to the rear d-rings on the kayak. **SEE IMAGE C**

For Double Deck Conversion ONLY: You will be passing the rudder cables through the small opening at the rear cockpit position. Instead of bringing the rudder cables out the rear d-rings on the kayak, continue to run them all the way out the end of the kayak then pull the cables tight so that there is no slack between the Rudder Control Pedals and the end of the kayak. Proceed to **Section 3.3**.

For Single Deck Conversion ONLY: Next, follow **Steps 3-5** in the model section above listed as: **AE1017 AdvancedFrame® Sport** and then proceed to **Section 3.3**.

Section 3.3: Installing the Rudder and Connecting the Rudder Cables

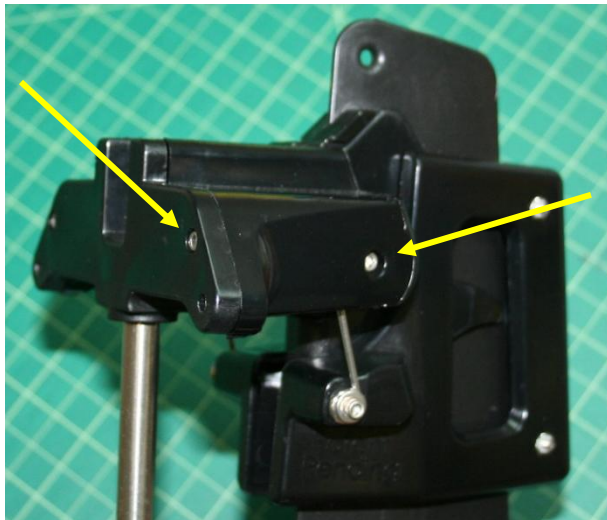
Having your kayak elevated, on a table or something similar, will be useful for this section. If you do not have an area where you can fully elevate the kayak, just elevate the stern of the kayak enough to make room for installing the Kayak Rudder.

Materials Needed:

- Kayak Rudder
 - Rudder Hex Keys:
 - The two remaining Hex Keys that are not already in place on the Control Pedals.
 - Rudder Pull Cord/Lift Line
 - Measuring Tape
 - Cable Cutters
1. Start by inserting the metal post on the main rudder assembly through the hole on the Rudder Mount at the stern of the kayak. Once the rudder is in place on the rudder mount, make sure to attach the key ring style “split ring” through the hole at the bottom of the metal post on the rudder. This hole will protrude slightly past the rudder mount at the bottom of the mount.
 2. Now that the Rudder is installed on your kayak, make sure that the Control Cables are at the rear of the kayak and pulled taught to remove any excess length in-between the Rudder Control Pedals and the Kayak Rudder.
 3. At this point, you will notice that you have a bit of extra length in the rudder cables. Holding the rudder cables taught, as described in Step 2 above, extend them out to the end of the Kayak Rudder assembly and then make a mark on the cable sheathing right where the cables meet the end of the Kayak Rudder assembly. Once the cables are marked, cut off the excess cabling beyond the Kayak Rudder assembly.

Note: Once done cutting off the excess cabling, both cables should extend out to the end of the Kayak Rudder assembly so that you have enough cable length to work with for the next steps.

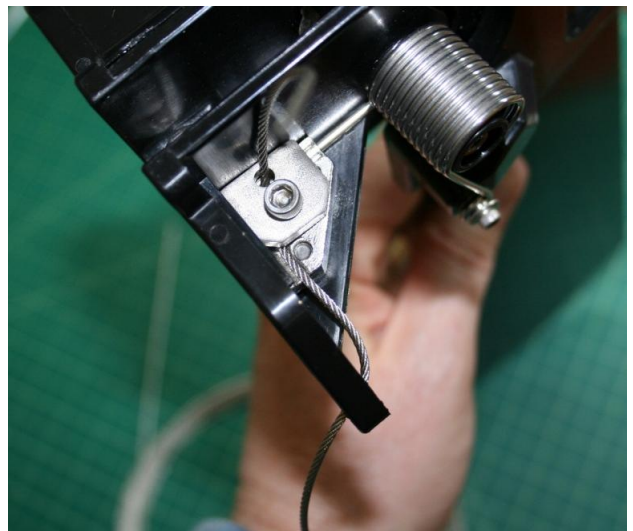
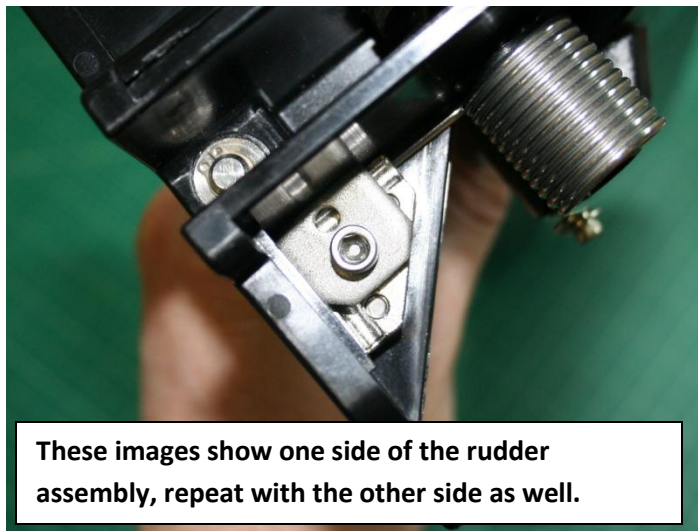
4. Using the smaller Hex Key, remove the plastic covers from the rudder base by unscrewing the hex screws on each cover. The hex screws are located on the sides of the plastic covers and at the front, flat part that is facing towards the front of the kayak.



This image shows one side of the rudder assembly, repeat with the other side as well.

Note: When removing the plastic covers, take note of the placement of the washer that covers the springs. DO NOT remove the springs from the assembly.

5. Inside of the rudder base you will find a clamping plate that is bolted down by another hex screw. Using the largest Hex Key, remove the screw and plate. **SEE IMAGE ON NEXT PAGE.**



6. Next, measure out 8 inches from the ends of both Rudder Cables and score or mark the cable sheathing. Trim the sheathing off of the rudder cables from your scored mark out to the ends so that 8 inches of cabling is exposed.
7. Starting with one cable at a time, feed each cable through the corresponding guide hole that is at the very outer edge of the front of the rudder base and then run the cable along the inner wall of the rudder base and under the clamping plate as show in the image on the left above.
8. Next, with the cable under the clamping plate, pass the cable through the hole on the clamping plate so that the cable is coming upwards towards you and then replace the screw that holds the clamping plate in place. **SEE IMAGE IN PREVIOUS STEP.**
9. Once both cables have been fed into the rudder base and passed through the mounting plates, pull each cable taught while making sure that the rudder blade is staying centered to the kayak.
10. Re-tighten the clamping plates and examine your cable lines to ensure that they are taught along the kayak and that the rudder blade is centered.
11. When satisfied with the setup and positioning of your rudder, and after confirming that the cable lines are taught from the Rudder Control Pedals through to the rudder, trim the excess cabling from the ends and replace the plastic covers on the rudder base. **Note:** Make sure that the washer is in-place on the spring in the inside of the cover.
12. The final step is to attach and run the Rudder Pull Cord/Lift Line. Simply tie the Pull Cord to the hole at the top of the rudder blade and then run the line up to the seating position of the kayak. To aid in running the Pull Cord, you can pass it through the rear d-ring webbing loops just like you have done with the Rudder Cables.



13. Remove the two small Hex Keys from the bottom center of the Rudder Control Pedals and confirm that the rudder operates properly.
14. As long as the rudder is functioning properly, you are now ready to hit the water!

Note: Just remember to use the pull cord to pull up the rudder blade before moving your kayak to flat ground.

Section 4: Using the Rudder and Making Adjustments for Various Conditions

Initial Testing and Adjustment: Initial testing and adjustment of your footbraces is best done on dry land. Remove your kayak from any elevated surface that you may have it on (remember to pull the rudder blade up) and place the kayak on a flat surface.

Adjusting the Rudder Control Pedals for Proper Foot Bracing: To adjust the Rudder Control Pedals for your desired foot bracing, rotate the flag shaped locking system to unlock the Rudder Control Pedals and slide each pedal to the desired position. Then rotate the locking system back into place to lock the pedals in place. While operating the rudder, make sure that you are sitting upright with the balls of your feet firmly planted on the foot pedals.

Fine Tuning the Rudder Cables: If you want to fine tune the tightness of the Rudder Cables, rotate the silver colored Cable Adjusters at the end of each footbrace track to achieve your desired results.

Operating the Rudder with the Lift Line: While not using the rudder, pull the Lift Line so that the rudder pulls up and out of the water.

Note: You can tie the Lift Line off where ever you like, just **make sure that it is tied off safely and out of the way** so that you do not become tangled in it if the kayak were to turn over!

When ready to deploy the rudder, simply release the Lift Line and the rudder should deploy from the “up” position and drop into the downward operating position.

CAUTION: It is best to raise the rudder blade in shallow waters or in waters that may have hidden objects, especially when backing up. Failure to do so may result in damage to the rudder!

Operating the Rudder: To steer your kayak, simply press on the top of the foot pedal as you would when pressing on the gas pedal in a car. Pressing the Right Toe will cause the kayak to go Right, pressing the Left Toe will cause the kayak to go Left. When both toes are vertical, in the neutral position, the kayak will go straight.

Adjusting the Rudder Blade for Varying Depths: Depending on your specific paddling conditions, you can adjust how deep your rudder drops down into the water. To do this, pull the rudder blade upwards a few inches out of the rudder base and take note of the plastic piece on the rudder blade that is located just below the Lift Line. Using one of the smallest Hex Keys, remove the two hex screws from this plastic piece and then move it down to the holes that correspond to the depth that you would like to limit the rudder blade to. Once you have made the adjustment, re-insert the two hex screws and tighten.

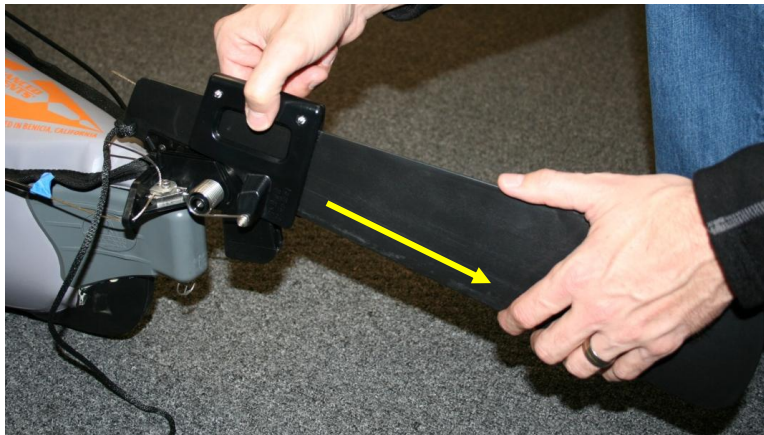
Section 5: Breaking down the Rudder Kit with Your Kayak

The best way to maintain your AdvancedTrak™ Rudder kit during long term storage or travel is to fully remove it from the kayak before packing your kayak away. Because this is not always convenient in situations such as packing up to head home from the lake, or for daily use, ect, we have included instructions for removing the rudder for both long-term and short-term storage.

Section 5.1: Quick Break Down for Short-term Storage:

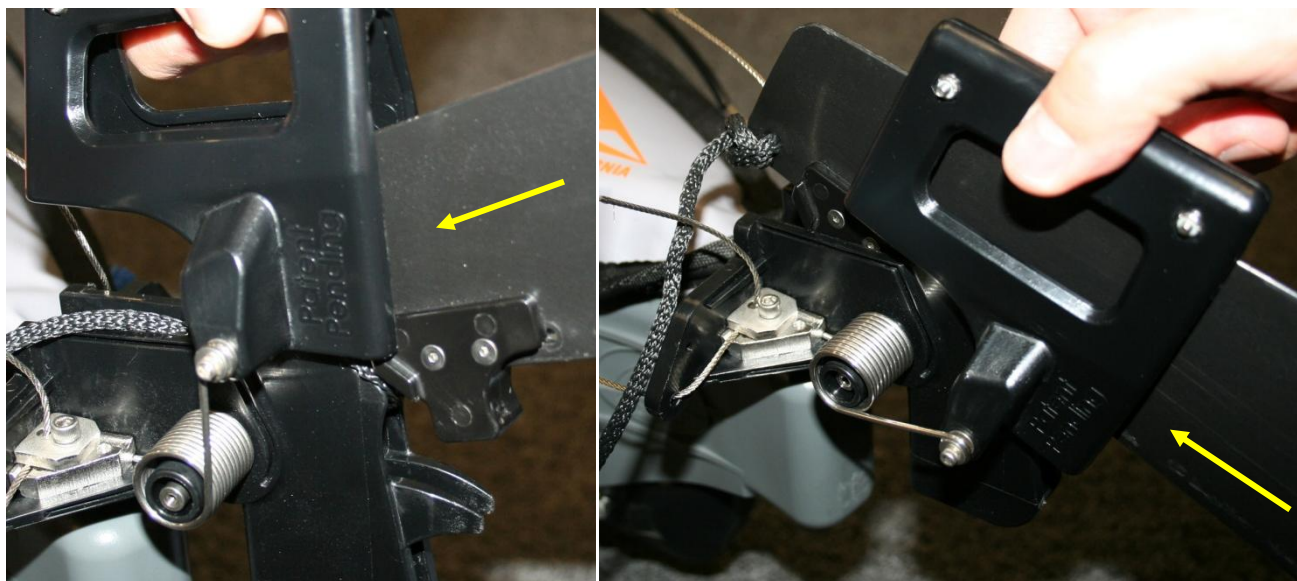
This breakdown method is only for short-term storage and transportation! For long-term storage, always refer to section 5.2.

1. With the Kayak Rudder still mounted to the AdvancedTrak™ Rudder Mount at the stern of your kayak, rotate the rudder blade upwards 90° so that it is perpendicular with the rudder base.
2. Next, Lift the spring loaded housing and pull the rudder blade away from the kayak and out of the spring loaded housing that holds it in place. Although unnecessary, untying and removing the Lift Line from the blade will aid with this.



Note: To put the rudder blade back in, rotate the spring loaded housing upward so that it is perpendicular with the rudder base and feed the rudder blade back into place in reverse of how you removed it. Although

unnecessary, removing the Lift Line from the blade will make this process easier. If you leave the Lift Line on the blade, make sure to guide it thorough the housing as well. You will experience some resistance as you pass the rudder blade through the housing track, but continue to guide it through the housing until it “pops” into place.



3. Once the rudder blade is removed from the rudder base, deflate your kayak and fold it up with the Rudder Controls still installed on the kayak.

Note: You can fold your kayak as instructed in the kayak’s owner’s manual but please take note that, while folding, make sure that you do not bend the rudder cables so hard that they kink. Detaching the Rudder Control footbraces will aid in a better fold because you can position them within the folds of the kayak.

Section 5.2: Breaking Down and Packing Away for Long-term Storage

1. Using the provided Hex Keys, remove the two plastic covers from the rudder base.
2. Inside of the rudder base, loosen the hex screws that are holding down the rudder cable clamping plates.
3. Once the clamping plates have been loosened enough to release the rudder cables, pull the rudder cables out of the rudder base.
4. Remove the Kayak Rudder from the Rudder Mount on the kayak.
5. Move to the Rudder Control Footbraces and detach them from the kayak.
6. Pull the rudder cables out of the d-ring webbing loops at the rear of the kayak and then through the rest of the kayak.
7. Leaving the rudder cables attached to the Rudder Control Footbraces, simply coil the rudder cables in a hoop/circle, and store them away with the Rudder Controls.
8. Deflate your kayak and pack away as normal.