

Comfortable Kayaks - How to create comfortable kayak seating with:

BACKRESTS, KNEE STRAPS & PADDLE LEASHES by Tom Holtey - all images by author or provided by manufacturer

Your sit-on-top kayak is naked without the basic accessories. Yes, everyone wants a backrest, the bare essential, the loincloth of kayakers, but many paddlers will want to also utilize knee straps, a.k.a. thigh braces and a paddle leash as well. Presented here are the reasons for the use of these essential accessories and how to outfit your sit-on-top kayak to properly accommodate them.

For details on installing hardware on your kayak see:

*The Basics Of Strap Eyes, Rivets & Well Nuts For Customization & Repair of Your Sit-on-top Kayak.

For Tips on choosing the right backrest, kneestraps or paddle leash for you see the companion article:

*Sit-on-top Kayak Accessory Selection

- Backrests
- Fitting A Backrest To Your Kayak
- Thigh Braces or Knee Straps
- Fitting Thigh Braces To Your Kayak - *VIDEO PRESENTATION*
- Paddle Leashes
- Entanglement
- Attaching A Leash To Your Kayak
- Putting It All Together
- Important Notice: Ocean Kayak Brand Changes In Backrest Fittings



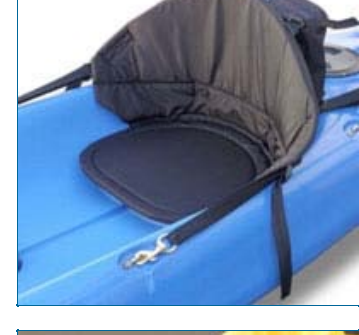
BACKRESTS

The Backrest or Back Band will support the rider's back. Without it you will have no support at all, in most sit-on-tops. It would be like sitting on the floor, when you could be sitting in a chair. These now come in a wide variety of styles from the comfort of the GTS Expedition to a simple surfer's back band or just a self-adhesive seat pad. Once you know what you are looking for, explore the many selections available here at **The TopKayaker Shop-Kayak Seats**.

The main feature of a backrest is the back support. This is accomplished by using a soft yet rigid material to make the "seat back" with two supporting straps leading to the gunwales, (right and left) forward of the hips.

In many cases there is an additional flap, or continuation of the back, down into the seat area to sit on. This can provide addition comfort by padding your posterior. Most backrests also attach behind the seat to keep the seat in place.

Backrests come in a multitude of styles and features; with or without butt pads or cargo pockets. Some are thick and plush, others more modest. Some backrests have water bottle holders and reservoirs, fishing rod holders and even lumbar pillows. They come tall, short, wide and narrow. There is a perfect backrest for every paddler and kayak. It is enough to stagger the mind.



FITTING A BACKREST TO YOUR KAYAK

Other than the many claims and features that backrest makers expound, there is a bit of knowledge you must have before you obtain and snap one on to your kayak. You need to know what kayak you are planning to put this backrest on and how it attaches.

Almost all backrests utilize a pair of brass clips or snaps for the two forward attachments, one right, one left. These snap into strap eyes, also known as pad eyes or inchworms that are installed on your kayak's gunwales. These straps provide the support, and can be adjusted in length to fit to the individual, and to allow for a more forward posture or a more reclining posture.



Most backrests also have a pair of rear attachment straps. Without rear attachments the backrest could end up in the footwells prior to reentry, causing a lot of fumbling and struggling to get it back into the seat. In the early days of the sport, this was a common style of backrest, until someone invented the rear straps. But this is where it gets tricky! Now days, most kayaks are factory outfitted to accommodate a backrest and knee straps. The only problem is not all companies use the same fastening system.

Early Ocean Kayak brand seats used brass clips for the forward attachments like most all kayak companies do today. These clips are fastened to strap eyes mounted on the kayak. Unlike modern manufacturers, however, for the back attachment straps they used a 1 1/2 inch, side release plastic buckle, one female and one male, mounted on straps behind the seat to fasten the backrest to the kayak. The backrest had the corresponding mates sewn onto it's back. *(For more on Ocean Kayak brand kayaks manufactured before 2005 see end-note special notice)*

This system worked quite effectively, and in most cases the backrest straps mounted on the kayak are the same, and in the same place as cargo straps or hatch straps and were utilized as spares in a pinch to sacrifice the backrest attachment for a cargo strap or vice versa.

Almost all other kayak manufactures have always used brass clips on front and back attachment straps of the backrest to strap eyes mounted to the kayak, one pair forward of the seat and the other aft of the seat.

Only a few kayaks, Heritage particularly, have the forward straps threaded into slots and cinched with ladder locks.

In most cases a backrest can be adapted to fit these unique kayaks by removing the unnecessary brass clips.

Take a look at your kayak and find the attachment points. If you see NO strap eyes or even plastic buckles then you must install (or have a shop install) a pair of strap eyes forward (16 to 18 inches from back of seat) and a pair of strap eyes aft (6 to 8 inches from back of seat) so you can use a backrest with BRASS CLIPS front and back. This is easier than it sounds. For details on installing hardware on your kayak see: **The Basics Of Strap Eyes, Rivets & Well Nuts For Customization & Repair of Your Sit-on-top Kayak**. Some kayaks were made plain like this as economy models. Strap eyes and rivets/well nuts and other hardware can be obtained from **The TopKayaker Shop**.

If you see a pair of strap eyes forward of the seat and a pair of strap eyes aft of the seat then you must use a backrest with BRASS CLIPS front and back. Cobra, Islander, Hobie, Competition and Wilderness are a few of the makes that typically utilize brass clips front and back.

If you see a pair of strap eyes forward of the seat and a pair of plastic buckles aft of the seat then you must use a backrest with brass clips on the front straps and PLASTIC BUCKLES on the rear straps. This would typically be an Ocean Kayak. Special notes concerning plastic buckles: Ocean Kayak boats have a male buckle on the right (starboard) side and a female on the left (port) side installed on the rear deck. Backrests are opposite: male on left, female on right (While facing forward). The overwhelming majority of backrests and kayaks are outfitted with plastic buckles this way. So much so, that you need not think too much about it.

There may be some odd kayaks outfitted backward, or with same sex buckles mounted on deck, but this would be rare. A reinstatement on the kayak or reconfiguration of the backrest would be necessary. In some rare cases the plastic buckles are of a different size or shape and a careful comparison must be made to ensure that a certain backrest will attach to a certain kayak. Also of note for all kayakers: Outfitters, kayak shops, and individuals with other than the "non-stock" backrest parts, intended by the manufacturer, have retrofitted some kayaks. This poses no problem generally, but you may find a Cobra kayak that needs an Ocean Kayak style (plastic) backrest, or an Ocean Kayak that needs a Cobra style (brass) backrest.



FIT KITS

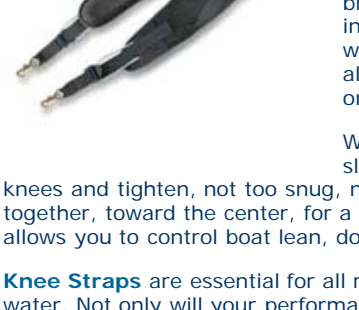
A handy gizmo called a "FIT KIT" or "JUMP SEAT CLIP" was developed to allow placement of a backrest, with plastic buckles on the back, in the center seat of many tandem kayaks for solo paddling. This fit kit consists of two short straps with brass clips at one end and male/female buckles at the other end. They are often displayed buckled together, to keep the mates from getting lost.

The center seat of a Malibu Two, for example, has only strap eyes forward and aft to support the backrest. Since Ocean Kayak style backrests have buckles in the back, the fit kit is needed to adapt it to act more like a Cobra style backrest. Thus the owner of an Ocean Kayak tandem can switch from double to solo using the same backrest.

As a matter of fact a Cobra style backrest can be placed in the center seat of a Malibu without the use of a jump seat clip. Consequently the fit kit can be used to convert any backrest with plastic buckles into a backrest with brass clips, no matter if you have a solo or a tandem kayak.

The fit kit can also be used as a cargo strap with strategically placed strap eyes. Old Ocean Kayak unpadded knee straps can be used as jump seat clips, cargo straps and as uncomfortable thigh straps.

THIGH BRACES, ALSO KNOW AS KNEE STRAPS



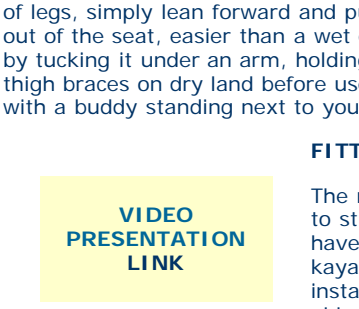
Thigh Straps are for true performance and control. Sit-in-side kayakers will often say that a sit-on-top is not really a kayak because we do not "wear" it, or can control lean and roll. Well THEY ARE REAL KAYAKS, regardless, and with the use of KNEE STRAPS you can ESKIMO roll, control boat lean, brace and "wear your kayak" with all the performance sit-insiders have. As a matter of fact some open-top kayakers won't paddle without them! Thigh Braces are simply a strap along the gunwale starting at the hip and ending at the ankle, one on the left and one on the right.

When seated in the cockpit, feet on the foot rest, knees slightly bent, (to individual preference) pull straps up and over knees and tighten, not too snug, not too loose (Also to individual preference). Pull kneecaps together, toward the center, for a grip on your kayak. Now you are wearing your boat! This allows you to control boat lean, do hip snaps, and brace with confidence and gusto.

Knee Straps are essential for all rough water activities like surfing, rock gardens, and white water. Not only will your performance be better, but you will be safer with the ability to hold onto your kayak after wipeouts with your legs instead of your paddle leash, and to be able to roll up (takes some education and practice) a recover quickly before you get out of control.

Even Scuba divers and snorkelers can use Thigh straps as equipment tethers during loading and unloading in deep water, by unsnapping one end and clipping it to underwater cameras, game bags, lights, spear guns, and treasures.

Will I get stuck in my upside-down kayak!? No. To escape simply straighten your legs and the straps fall off. Some kayaks with foot pegs and/or rudder peddles will prevent easy straightening of legs, simply lean forward and push off from the gunwales with your hands and you will roll right out of the seat, easier than a wet exit from a skirted decked boat. Maintain control of your paddle by tucking it under an arm, holding in one hand or use a paddle leash. Practice releasing from your thigh braces on dry land before use on the water. If necessary do a water trial in chest deep water with a buddy standing next to you just in case.



FITTING THIGH BRACES TO YOUR KAYAK

The majority of thigh braces have brass clips at each end that attach to strap eyes mounted along the gunwales of your kayak. Most kayakers have these strap eyes pre-installed at the factory. There are a few kayaks that do not already have them in place, and they must be installed before you can use knee straps. Some kayaks, particularly older Aquaterra/Perception models have a kind of flat strap eye that will not accommodate a brass clip.

The strap must be treaded through this slot and fastened with a tri-glide. Heritage kayakers have a similar strap eye at the forward knee strap attachment. This placement is too low in the cockpit and care should be taken to make sure the strap goes past the shin and not anywhere near the foot, or the possibility of entanglement can occur.

The back end of the knee strap attaches to the deck rigging at the hips. If you have these types of kayaks look for thigh braces that you can easily remove the brass clips with the tri-glides. If they are sewn on you will have cut or rip the stitches.

Thigh straps come in a variety of styles. Most are contoured to fit better, kind of like backpack straps. They have right and left sides that are sometimes marked L and R on the strap. In general the wide end contacts the thigh and the skinny end contacts the shin. The padded side goes against the leg. Economy and older style knee straps are just straight, with or without padding. These are so common in most cases that there is no right or left, front or back. If you are a serious rough water, Eskimo rolling paddler, look for straps with out the side release buckles. These buckles can and do break. I have, for many years, carried spare buckles in my hatch for just this reason.

PADDLE LEASHES



The paddle leash is simply a cord that keeps paddle and kayak together. In the advent of a tip over, a grip on your paddle shaft attaches you to your kayak. This can be very helpful in windy conditions on open water where the chance of a kayak getting away from a swimmer is almost certain and possibly a grave situation. Even if you let go of your paddle it will drag in the water like a sea anchor, attached to your kayak and slow the rate of speed of a drifting kayak in winds and waves.

In the surf zone a leash can help to keep a kayak under control after a wipe out. Without a leash, the waves will take your unattended boat to shore at a rapid speed, taking out other surfers and swimmers along the way, leaving you to a long swim to catch up. Divers and swimmers (on purpose or by accident) will find the leash a handy paddle holder while they are in the water and during reentry of their kayak. I recommend them for beginners particularly. DO NOT USE A PADDLE LEASH ON WHITE WATER RIVERS.

There are two main types of paddle leash. The plastic coil type of paddle leash looks like a telephone cord and is almost the same as a boogie board leash. It is made out of a urethane material that is reasonably strong, but will break if enough force is applied to it. I feel that these leashes are the safest to use for serious surfing. They are quite common and readily accepted in Hawaii, Australia, Southern California, and most places with a surf oriented community.

The elastic and tubular webbing paddle strap is a popular accessory. It is constructed of a tubular webbing strap, with a shock cord running through the hollow center of the strap. Knots tied at each end allow for the shock cord to restrict the webbing strap, and to stretch to the full length of the strap will under tension.

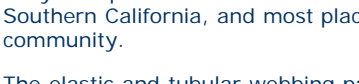
A leash may be 4 feet relaxed and able to stretch to 6 feet. Because the webbing is very strong (rock climbers use this material in their harnesses) it will not break. This can be a cause of concern to paddlers who may be subject to entanglement. It is so strong that this type of leash can double as a bowline or short tow rope. Other types of elastic leashes are simply no more than a bungee cord with fasteners. I am not a fan of these because they can snap a paddle back at you like those paddleball toys with the elastic string. Almost all leashes have a Velcro paddle shaft enclosure to attach one end to the paddle. The other end usually has a loop to fasten to a bow handle, bowline or strap eye.

ENTANGLEMENT

Many of us sit-on-top paddlers have a love hate relationship with our paddle leash concerning entanglement. We like the convenience and safety, but fear a tangling or stragling situation in rough waters. This can be minimized by following the attachment and use advice below. A good firm grip on your knee straps with your legs will keep you in your seat during all but the most violent surfing wipeouts. Yes, you do have to hold your breath and hang on until the turbulence has passed. But in the end, your boat will not be running away like a bad dog, nor will the leash be tangling you up. For those who surf a lot I do recommend a plastic coil paddle leash. It will break if necessary and resists tangling.

ATTACHING A LEASH TO YOUR KAYAK There are a few ways to attach paddle leashes to kayaks:

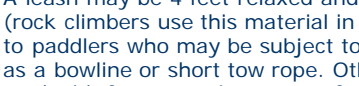
COCKPIT ATTACHMENT



For calm waters and the simply, the use of a paddle you can attach your leash to a strap eye often located in the cockpit. The use of a small brass or stainless steel clip to strap eye this a snap.

This is only acceptable for calm waters and light winds.

BOW ATTACHMENT



For surf conditions and windy open water you will want your paddle leash attached to the bow of your kayak. The more forward the better. In the event of a capsize, a paddle leash attached to the bow will cause the kayak to point into the wind and the waves, like a ship at anchor, while the swimmer is holding onto their paddle, or even if the paddle is dropped. If attached to the center of the kayak this effect cannot take place.

BOWLINE ATTACHMENT



Very few leashes are long enough to run from cockpit to bow, except on the shortest of kayaks, particularly wave skis. The use of a bowline, or longer rope, will enable the leash to extend to a comfortable length. Bear in mind that the longer the leash, the greater the chance of entanglement. There is a way to attach to the bow and use a shorter leash. Use your bowline, clipped from the bow handle to the strap eye installed on many kayaks in the center of cockpit. Re-clip one end of the bow line and run it through the loop of the paddle leash then re-clip your bowline. Now the paddle leash can slide freely from cockpit to bow.

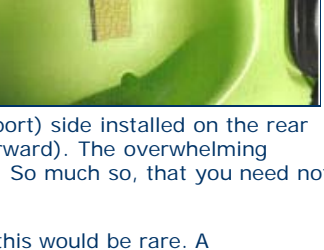
It may be necessary for you to measure and make or buy a bowline; few kayaks come with them these days. It may also be necessary for you to install a strap eye in the center of your cockpit.

PUTTING IT ALL TOGETHER


Things can get a bit messy without a layout plan for your backrest, thigh straps and leash. Firstly, if you use a leash, make sure your leash is centered and attached in a way to minimize entanglement. Avoid loops of slack line and leash, shorten them to be out of the way, and keep them away from feet and legs a much as possible.



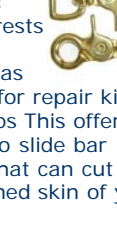
Next place your knee straps on each side and lay them into your cockpit and foot wells. Then attach backrest. This way the backrest straps will be on top of the knee straps. Your knee straps will help hold up your backrest and your backrest will help hold down your knee straps. This will work well on most kayakers and accessories. Try it reversed to determine what is right for you and your gear. You should be snugly attached to your kayak now for maximum performance. Adjust all straps carefully to customize your fit. No accessories are pre-sized to fit you and your kayak. A well-adjusted backrest will act like a knee strap for your butt and give you even more control and performance. There are those out there who will need to add all or some of the attachment points, and some paddlers will even want to carefully customize strap eye placements to fit their body and paddling style.



At The TopKayaker Shop:




Brass Swivel Clips Use as replacements for broken and corroded clips. Three Inches, 8cm.



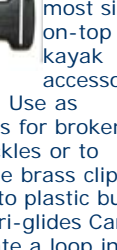
Can convert some plastic buckle backrests into clip backrests & as spare parts for repair kit. Trigger Snaps This offers an alternative to slide bar brass clips that can cut the water-softened skin of your fingers.

Strap Eyes

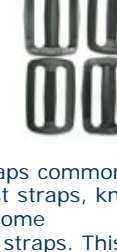


These strap eyes (pad eyes) are black nylon, chrome or stainless steel. Strong enough for all but the cruelest punishment.


The industry standard for kayak assembly, most commonly used for backrest and knee strap attachments, leash, shock cord, deck lines.



Buckles Plastic buckles used for most sit-on-top kayak accessory applications. Use as replacements for broken or jammed buckles or to convert some brass clip backrests into plastic buckle backrests. Tri-glides can be used to create a loop in inch & a half webbing straps common on rear backrest straps, knee straps and some cargo/hatch straps. This part can be used to customize or repair your SOT kayak accessories.



Tri-glides Sold in pairs. Can be used to create a loop in inch & a half webbing straps common on rear backrest straps, knee straps and some cargo/hatch straps. This part can be used to customize or repair your SOT kayak accessories.



Paddle Leashes Many varieties & types. Your grip on your paddle links you to your kayak after capsize. Use a paddle leash in surf & wind (not in whitewater) to control your kayak. Great for beginners. Handy for fishing and diving. Can also be used for Fishing Pole Leash!



IMPORTANT NOTICE: OCEAN KAYAK CHANGES BACKREST FITTINGS AS OF 2005

For years Ocean Kayak, the original leader in sit-on-top kayaking, has used Plastic Side Release Buckles to attach the rear straps of Kayak seats and backrests. But No More! As of 2005 Ocean Kayak has given in to the way that all other kayak makers attach backrests to kayaks. All kayaks made by Ocean Kayak in 2005, and after, will sport Strap Eyes behind the seating area to attach the backrest using Brass Clips, front and back. Kayaks made by Ocean Kayak in 2004, and before, will have 1 1/2 inch strap with 1 1/2 inch plastic buckles for attachment to backrests fitted with the mating plastic side release buckles. If your Ocean Kayak was made in, or before, 2004 you will most likely need Plastic Buckles on the back of your kayak seat.

If your Ocean Kayak was made in, or after, 2005 you will most likely need Brass Clips on the back of your kayak seat. Bear in mind that these dealers will have new kayakers that are old stock or may have older rental and demo kayaks. Some boats may be sold after 2005, but still be outfitted with the old hardware since they have been made before 2005. Please note: It has come to my attention that the Backrest Strap Adapter may NOT work on the new OK kayaks The Adapter is often used for the solo seat on tandem kayakers and to convert some Plastic Buckle seats to Brass Clip seats. As you can guess it will be increasingly hard to find backrests fitted with Plastic Buckles. This will only be a problem for folks with older Ocean Kayak boats seeking to replace their old seats. TopKayaker Adapter will make an effort to keep these old style seats in stock and available by special order. See the OK Kayak Seat Adapter Kit that can easily install on any old Ocean Kayak boat that needs to have the new Brass Clip style seats attached. Alternatively you can tie off some strong cord to the old strap to clip to.

