



Pakboats PakCanoe Assembly Instructions

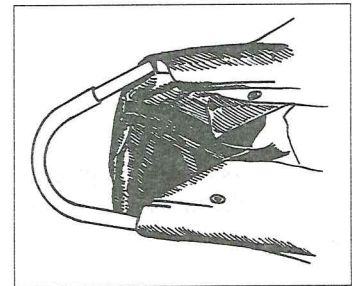
Note: Please read these assembly instructions carefully before assembling the canoe.

A. Assembling the canoe

Note: Don't be afraid to get into the canoe while you are putting it together. Most of the assembly is much easier if you are inside the canoe.

1. Unpack the canoe and put like color coded parts together. Assemble the straight (shock corded) rods. Put aside the two rods with the black plastic end caps (you will need them when you get to step #10). Place the straight rods next to each other, lining up one end so the rods can be sorted by length.
2. The two longest rods are gunwales (identified by the red sticker). Starting from one end, insert a gunwale into a sleeve in the canoe skin (along the top on each side). It helps to fold the tip of the skin out of the way and make the gunwale channel as straight as possible. Repeat the process with the other gunwale rod.

3. Locate two small horseshoe shaped parts marked with a red sticker. These are "gunwale terminators". Insert one end of a gunwale terminator into the end of a gunwale. Put the other end into the other gunwale (it will barely go in at all). See Fig Spread the gunwales apart until the tube end aligns with the gunwale terminator, slip the terminator into place (make sure it is all the way in). You may find it is simplest to align the gunwales by pushing them apart with your thighs from inside the canoe. Pull the canoe skin up around the gunwale terminator. The gunwale terminator must be centered between the gunwale channels. If this does not happen, the assembled canoe may be warped and the end caps will not fit properly. Repeat the process at the other end of the canoe.



Note: Both gunwale ends must be inside the canoe skin before you go on to step 4.

4. The shortest straight rod is the keel. The curved parts with metal forks are stems. Place the keel in the canoe. Insert the keel rod end into a stem. Lift the gunwales and clip the center of the gunwale terminator onto the top of the stem. Repeat the process with the other stem at the other end of the canoe.

Note: You must have the gunwale terminators in place on top of the stems before proceeding to the next step.

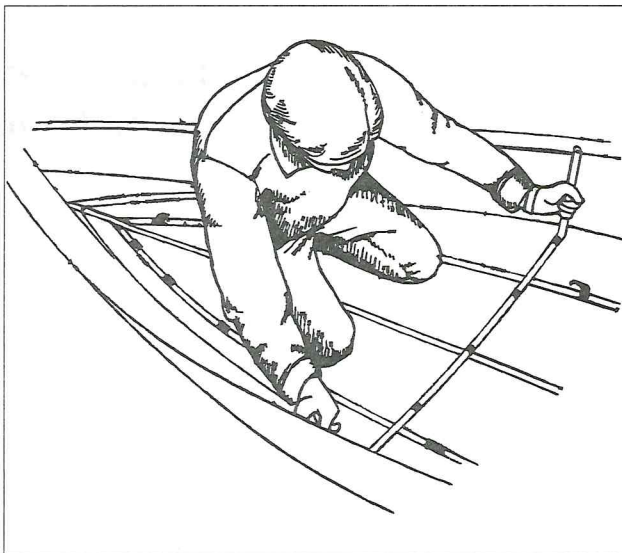
5. The two longest remaining rods are chine rods identified by yellow stickers. The ends of the chine rods fit onto the forks (also marked with yellow stickers) attached to the stems nearest each end of the canoe (the fork prongs fit into the ends of the rods). With the rod attached at one end, make the rod form an even arc and attach to the corresponding fork at the other end. Push the center of the rod down and to the side so it rests inside the canoe skin. Repeat the process with the other rod of the same length. Repeat step 5 with the latch rods identified by the blue sticker fitting onto the forks designated by the blue sticker. Make sure the latches at the center of the latch rods point in the same direction on both rods. The latches should be on top of the rod.

Note: When the longitudinal rods are installed, the stems are pushed into the ends of the canoe skin. If the joints of the keel rod start separating, pull the keel rod away from the stems enough to close the keel joints.

6. Inflate the air tubes loosely with the pump or by mouth (this gives the right amount of pressure to help assembly).

7. Lay out the cross ribs next to the canoe with the narrow ones closest to the ends and the widest ones at the center. Installation will begin with the widest cross rib at the center of the canoe.

8. Get into the canoe and position yourself so the open side of the latches that secure the center cross rib are towards you and about a foot away. Pick up the widest cross rib (there are two in the PakCanoe 140, 165 and 170 either will work) and turn it so the open sides of the spacer clips face the open latches. See Fig .



9. Make sure the clips at the ends of the cross rib are in the unlocked position (see panel on locking sleeve). Place the cross rib inside and across the canoe between you and the latches. Tilt the top ends of the cross rib away from you and insert one end into the opening in the gunwale channel. Press the end of the cross rib up against the gunwale so that the C-clip snaps around the gunwale and holds it. Repeat on the other side of the canoe. Pivot the bottom part of the cross rib toward the latch until you feel some tension in the canoe skin. Position the longitudinal rods in the positions defined by spacer clips on the cross rib. Pivot the cross rib all the way so the latches snap shut. Secure the latches with the elastic bands that are installed around the latch rod. Lock the C-clips that connect the cross rib to the gunwales (see panel on locking sleeve).

10. Pick up one of the airbag support rods with black plastic end caps and slide it behind the cross rib you installed, in the groove between the lower air chambers. Center the rod so it reaches equally into both ends of the canoe. The arc in the rod will keep it in place between the air chambers during assembly. Repeat the process with the rod on the other side of the canoe.

11. The rest of the cross ribs are much easier to install, but the process is the same.

12. Once all cross ribs are in place, the air tubes can be fully inflated. You can do this with the pump or by mouth. To use the pump, insert the tip of a valve into the hose on the pump, turn the tip (and pump) counter-clockwise to open the valve, pump to desired pressure, close the valve by turning tip clockwise, and remove the pump.

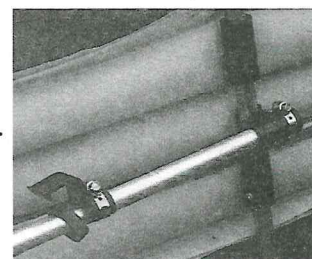
Note: The canoe will work well even if you just inflate the bags as hard as you can by mouth.

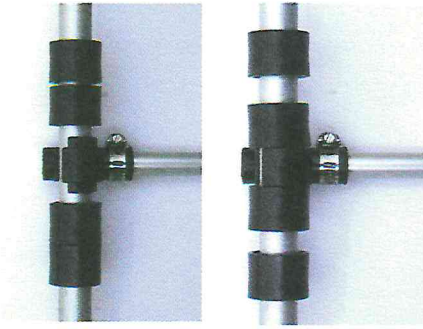
13. Install the fabric end caps on the canoe with matching Velcro on end caps and canoe skin.

B. Installing the seats.

1. Please locate the side rails (aluminum tubes with plastic fittings). The side rails connect to the cross ribs, and the seat connects to the side rails. Please note that the Latch clips on the rail should face up, and the screw on each steel clamp should face into the boat.

One end of each side rail has a bracket secured with a steel clamp (see picture). The bracket connects to the cross rib behind the seat, between two plastic rings. You can mount the seat higher or lower, depending on how many plastic rings are below the bracket.





2. Determine how high you want the rail, lift the plastic rings above where you want the rail, and press the bracket into place so it clamps around the cross rib. Press the rail down so its bottom inserts into the plastic ring. Push the upper rings down onto the bracket to lock the connection.

3. An identical bracket is near the other end of the rail, but is not secured with a steel clamp. Push this bracket into place around the cross rib at the front of the seat and lock it with the plastic rings as described above.

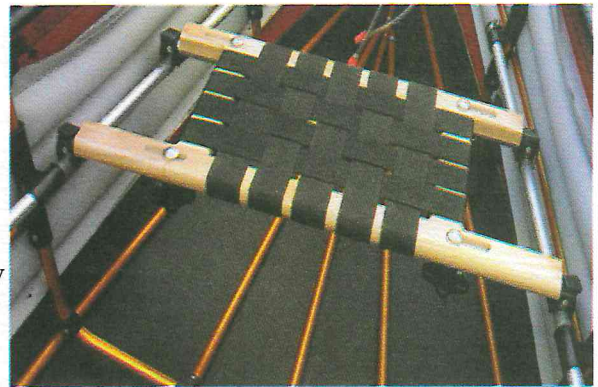


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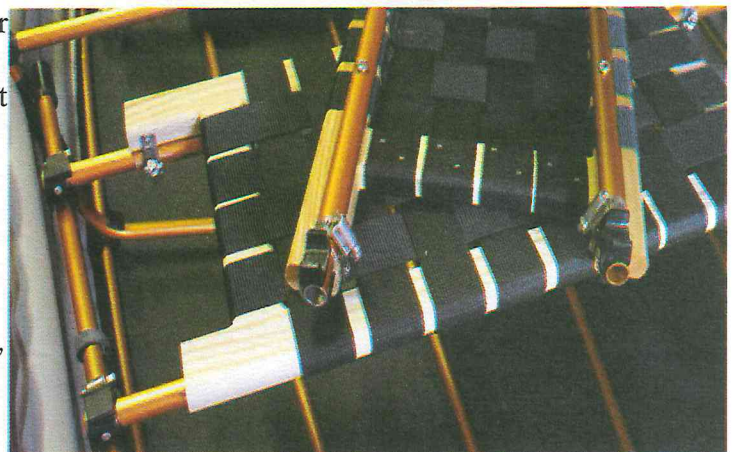
4. Install the rail on the other side of the canoe to match the placement of the rail you just installed.

5. Loosen the clamps on the latch clips with the screw driver, and loosen the knobs under the seat so the connecting parts can easily be moved.

6. Place the seat in the desired position with the sides resting on the rails and the latch clips securing the seat. Tighten the steel clamps and the knobs under the seat. Secure the rear latches with elastic bands. The seat is now secure.



7. A revised style of the PakCanoe seat offers a wider range of adjustment. The seat's adjustment is fixed with a screw driver by tightening stainless clamps that compress the tubular sleeves under the seat to prevent any side to side movement. The clamps are secured to the seat frame. No adjustments need to be disturbed when the canoe is disassembled, and no tool is needed to reassemble the canoe.



Note: The picture on the right shows the revised bow seat installed. The stern seat is shown upside down on the bow seat to illustrate the new structure.

Note: You can leave the latch clips and seat adjustment securely clamped in place until there is a reason to install the seat in a different position.

Disassembly, packing

1. Remove the seats from the side rails. To remove the seat side rails, push the locking rings away from the brackets that secure the rails to the cross ribs. Then, partly remove the cross rib at the front of the stern seat and at the rear of the bow seat (first unlock the ribs from the gunwales). Changing the angle of the rib from vertical will help release the seat rail brackets from the ribs. Remove the rails.
2. Remove fabric end caps from canoe.
3. Open valves on air tubes.
4. Remove cross ribs by first unlocking clips connecting cross ribs to gunwales, then slipping off elastic bands at the latch clip ends, then lift latch on locking clips and pivot bottom of cross rib away from locking clip. Release from gunwales.
Note: If the latch clip does not open easily, push the cross rib back into the locked position. Then lift the latch clip end and pull the cross rib out.
5. Remove longitudinal rods by forming an arc in the center.
6. Remove keel assembly. The narrow stem sections should slide into the keel to reduce the longitudinal tension in the skin. Step on the stem and lift the gunwale terminator to unclip it from the stem.
7. To remove gunwale terminators, push gunwales apart a couple of feet from the end to remove tension against the gunwale terminator and pull gunwale terminator out. Repeat at the opposite end of canoe.
8. Make the gunwales as straight as possible. Fold the canoe skin out of the way at one end and pull the gunwales out. If they do not slide out easily, it helps to use one of the other longitudinal rods to push the gunwale half way. Then pull both rods out. If the gunwales tend to pull apart, it helps to bind the connections by making the rod form a slight arc.
9. Fold up all longitudinal rods. Start by folding in the center and work towards the ends.
10. Lay out the canoe skin, bottom down. Fold the sides in towards the center to cover and protect the air tubes. **Do not fold the foam floor. Folding the floor causes permanent creases in the foam.** Place all longitudinal rods on the end of the canoe skin opposite the air tube valves. Roll up the skin with the rods in the center. Secure with a strap.
11. Place the roll in the canoe bag to the side with the strap. Pack the other pieces. (One piece at a time is easier than trying to fit one bundle into the bag.)

SOME GENERAL INFORMATION ABOUT YOUR PAKCANOE

Canoe Bottom Fabric

A unique feature of your PakCanoe is the foam layer on the inside of the canoe skin. This foam helps protect the canoe from abrasion and puncture by giving the skin some cushion and flex when it gets between a rock and a hard place.

Canoe Side Fabric

The fabric used in the canoe sides may shrink slightly as it ages. If it becomes so tight that the skin is hard to pull up over the gunwale terminators, the gunwales can be shortened slightly. Use a hacksaw and cut each gunwale 1/4" at a time. Use a file to smooth the cut ends.

Canoe Storage Bag

The canoe storage bag was designed for your convenience - and the canoe's protection. It was kept simple to prevent damage when you travel. And the bag's bottom is lined with foam to protect the shock cords in the longitudinal rods. When you handle folded-up longitudinal rods, it is a good idea to avoid hitting the ends against hard objects. Shock cord is fairly rugged, but it is more easily damaged than metal tubing.

Patches and Reinforcements

Punctures and abrasions to the canoe skin are easily repaired with the enclosed repair kit. Cut a patch to cover the damaged area plus 3/4" around it. Round the corners of the patch. Clean the patch and the area to be covered, and apply a thin coat of adhesive to both surfaces. Wait until the adhesive feels dry and apply the patch. Make sure the surfaces are pressed together well. Note: The smooth side of the patch should face out. Apply adhesive to the side that appears embossed. The canoe can be used immediately after the repair, but the bond will get stronger for several hours as the adhesive cures.

For harder use and longer trips, you can add reinforcement to wear areas. The keel line is the most exposed to wear, and we have reinforced it with a keel strip. Additional reinforcement may become necessary after extended use. Simply install patches of same color fabric or contact us for a keel strip kit.

Punctures of the air tubes can be repaired with the adhesive in the repair kit and a patch. Ample patch material can be cut from the hem along the top where the tubes are attached to the canoe skin. Follow the procedure described above. It is important to clean the surfaces well before applying the adhesive.

Note: Adhesives work best on rough surfaces. We recommend using fine sandpaper before adhesives are applied.

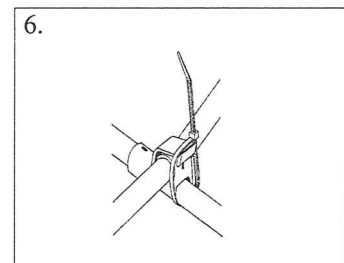
The foam floor can be repaired with a patch of the same type of foam (order from ScanSport, Inc.). Place the patch where it will go. Pull up one side and blow hot air on the surfaces to be fused together. Press the surfaces together when they start melting. Let cool and test the bond. (Use a hot air paint stripper gun and heat a small area at a time.)

Note: 303 Protectant and other similar products will protect canoe skins and air tubes from harmful UV rays and help extend the life of your PakCanoe, but we never use protectants on our own boats. Nor do we recommend that you do for serious trips. The reason is that you can not apply a patch without completely removing the protectant from the area to be patched, and the protectant has to be removed with a chemical solvent. Also, the PakCanoe skin's PVC coating has very good UV resistance without any protection and should last for many years. We recommend that you store your PakCanoe in the shade whenever practical.

FINE TUNING YOUR PAKCANOE

Securing Cross Ribs

You can reinforce the latching of the cross ribs with plastic wire ties (cable ties). See Fig 6. This is especially helpful with securing the ribs holding the seats. 8" ones work well. Make a loop under the latch rod and over the top of the latching clip.



Creating Additional Rocker

In a folding canoe, the keel shape is influenced by the load distribution. The flexible hull lets you tune the handling characteristics to your specific paddling use.

In rapids where you want a rockered, highly maneuverable canoe, just concentrate the load (including paddlers) near the center of the canoe and leave the ends light. This gives more rocker (leaving the bow lightly loaded also improves your ability to rise up over waves).

On flatwater a straight keel line helps both tracking and speed. Distribute the load more evenly along the length of the canoe. You will be amazed how well the canoe tracks.

On a typical river with a mixture of flatwater and rapids you can tune your canoe by loading the gear in the midsection. Then sit close to the ends on flatwater for a straight keel line and improved tracking. Kneel next to the thwarts for more rocker and improved control in whitewater.

Portage Yoke

Our yoke can be installed when you assemble the boat and be left in place while you are under way. It will even fit under a spray cover. In big water with a heavy load the yoke adds support to the canoe frame.

Spray Cover

We recommend a spray cover for wilderness trips in cold areas. You are much more comfortable on a rainy and windy day, and the canoe is less affected by wind. Please note that the cover does not turn the PakCanoe into a decked boat, and the cover may not hold the weight of a big wave breaking over the boat.

Knee Pads

A kneeling position gives much better control and stability. Insert each pad under the cross rib in front of your knees and under the one behind you. Wrap the front half of the pad back over the cross ribs and attach the two ends to each other with straps. Both cross ribs will be padded and your knees will rest on more than 1" of foam.

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