

How To Rig a Hudson Rowing Shell



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1 Introduction

1.1

Purpose of this Instruction Set

This guide, written for a novice rower, gives instructions on how to rig a Hudson rowing shell. Hudson is regarded as one of the top brands of rowing shells worldwide. While all brands of rowing shells are rigged in a similar fashion, they all have their own unique parts. As a result, the rigging process is altered slightly for different brands. When shells arrive at a training course (or race course) on a trailer, they are completely disassembled. Rigging a shell is not an overly difficult task, but must be performed carefully and correctly to ensure no damage to the shells (they can cost upwards of \$30,000!). The instruction set is aimed at rigging a 4-person shell, but a 2-person or 8-person shell can be rigged in the same fashion.

1.2

Terminology

There will be rowing terminology in this guide that you may not be familiar with. These terms will be used in the instruction set, and you may need to refer back to this section to understand what is being described.

- 1) Slings – the shell must be placed in slings (**Figure 1**) to rig, in order to prevent damage to the hull which is susceptible to cracking.



Figure 1: Sling

- 2) **Rigger** – the rigger is made up of 3 parts, as shown in **Figure 2**.

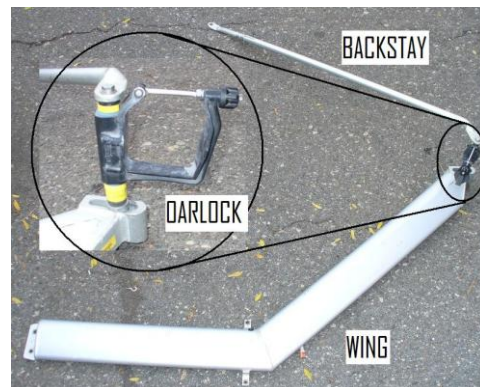


Figure 2: Rigger

- 3) **Skeg**- steering mechanism of the shell, located underneath the bottom center of the hull at the stern of the shell.



Figure 3: Skeg

- 4) **Footstops**- shoe assembly that the rower ties their feet into the shell with.



Figure 4: Footstops

1.3

Necessary equipment and tools

Depending on the size of the shell (2, 4, or 8 person), you will need the following equipment (and quantities):

Equipment	Nuts/Bolts	Tools
<ul style="list-style-type: none">➤ Shell➤ Riggers* (1 per person)➤ Seats (1 per person)➤ Footstops (1 per person)➤ 2 slings	<ul style="list-style-type: none">➤ Four 7/16" Hex Head bolts per rigger➤ Eight washers per rigger➤ Four locknuts per rigger	<ul style="list-style-type: none">➤ At least two adjustable wrenches➤ Screwdriver

***Note:** Half of the riggers will be port riggers, the other half will be starboard riggers.

2 Instructions

2.1

Pre-rigging Recommendations and Comments

- Rigging should be performed in a large open space (8-person shells are over 60 feet long)
- **WARNING: The shells are very rigid and you can easily crack them or put a hole in it if you hit them on something.**
- You should have one person per seat in the shell to move the shell from the trailer to the slings

2.2

Step-by-Step Instructions

- 1) Position two slings near the trailer, at a spacing of about half the length of the shell.
- 2) Have four people remove the shell from the trailer, and place it carefully into the slings.
 - a) **WARNING:** Make sure the shell is positioned so the skag will not land in the sling. **This will bend and/or break the skag.**
 - b) For stability purposes, make sure the shell is centered between the two slings.

3) Position the footstops into place.

- a) The shoes on the footstops should be pointed towards the stern of the shell. To locate the stern, look for the skeg. The shoes should be pointed towards the skeg.



Figure 5: Grooves for footstops

- b) There are 2 grooves on the deck of the shell, and 1 groove on the hull of the shell (see **Figure 5**) and three screw assemblies on the footstops. Slide the screw assemblies into the grooves. (**Figure 6**)

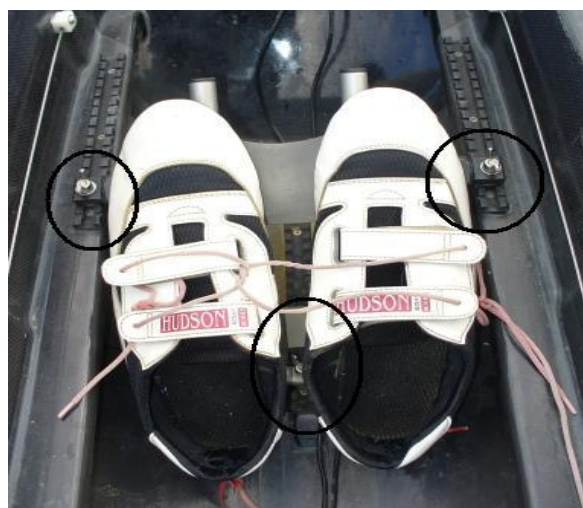


Figure 6: Slide the footstops into place.

- c) Secure the footstops by tightening the wing nuts.

4) Fit the seat onto the tracks. The seats will lock onto the tracks to ensure the wheels remain in contact with the track.

a) Orient the seat as shown in **Figure 7**, with the curved part facing away from the footstops.

b) Place the rear two wheels on the stern end of the tracks



Figure 7: Orientation of seat on tracks

c) Push down on the seat, and at the same time, push the seat towards the bow so all four wheels are on the tracks.

i. On the bottom of the seats, between each set of wheels, there are hooks.

ii. There is a lip on the inside of the tracks that the hooks should be fitted under. (See **Figure 8**)



Figure 8: Seat Properly hooked into the tracks

d) The seat should now move back and forth freely on the tracks.

i. Pull up on the seat to make sure that it is properly locked into the tracks.

ii. When you pull on the seat, the wheels should not lose contact with the tracks.

5) Now its time to put the riggers on the shell. The shell will be rigged from stern to bow, that is, we will put the riggers on starting from the seat closest to the stern.

- a) Place a rigger (either port or starboard) over the footstops and align them with bolt holes on the gunnels of the shell (**See Figure 9**).



Figure 9: Mounting the rigger

- b) Attach the first wing to the shell by hand-tightening four hex-head bolts in this fashion:

- i. Place a washer onto the bolt, and push the bolt through the bolt hole in the wing and gunnel. The bolt should be pushed through the gunnel from top to bottom.
- ii. Place a washer onto the end of the bolt and slide it up to the bottom of the gunnel.
- iii. Hand-tighten a locknut to the bottom of the bolt. See **Figure 10** for a finished representation of a bolt assembly.



Figure 10: Bolt assembly

- iv. **Leave all bolts hand-tightened until all riggers are attached.**

- c) When attaching the next rigger (and all subsequent riggers), make sure to attach the backstay of the preceding rigger by aligning it as shown in **Figure 11**.
 - i. You may need to adjust the backstay with a screwdriver in order to align with the bolt hole of the wing.



Figure 11: Attaching the backstay

- d) Tighten all bolts using two adjustable wrenches.
 - i. Bolts should be “two-finger-tight”. This means that the pressure you apply to the wrenches with two fingers is sufficient to hold riggers in place
 - ii. **Over-Tightening the bolts can damage the gunnels.**
- e) Tighten the top nut (**See Figure 12**) on each oarlock. (two-finger-tight, once again)



Figure 12: Top nut on the Oarlock

Congratulations! You have now successfully rigged a Hudson rowing shell.

3 Post Rigging

3.1

What's next?

Now that you have rigged your shell, you are ready to row. Bring the shell to the dock and place it in the water. Open the oarlock gate shown in **Figure 12** and place the correct oar (port or starboard) into the oarlock. Now it's time to take a seat in the shell, lace your feet into the footstops, and push off the dock!

3.2

Maintenance

In order to enjoy your Hudson rowing shell for a long time to come, it must be properly maintained. Here are some tips to help you keep your shell well maintained:

- Check bolts and top nuts every time you finish rowing
- Always bring an adjustable wrench with you when you row
 - Bolts and Top nuts may come loose while rowing!
- Keep the shell sheltered when not being used
 - Store the shell where it won't be subjected to direct sunlight, hail, snow, etc.

3.3

Troubleshooting

If you are having any trouble at all with your Hudson rowing shell, you should contact Hudson directly. Their website and service number are listed below:

Website: <http://www.hudsonboatworks.com/>

Phone: (519) 473 9864