

Panhandle Yacht Club

Unofficial Guide for Using the Haul Out

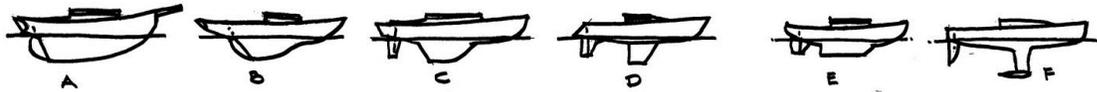


About this guide: The contents were written based on informal training delivered by Neil Stephens and other informal input. This guide has not been professionally examined for correctness and, like the haul out, is used at your own risk.

Warning: Sailboats are big and heavy. If used improperly a sailboat can fall off of the haul out cradle at great physical risk to people and property. Great care and patience should be used at the haul out at all times. Other than the two people controlling the winch and minding the cable, nobody should be near the cable or around the cradle while it is moving. Nobody. Ever.

How the haul out works: The boat is floated over the cradle and as the cradle is winched up the inclined rail track the cradle platform will lift your boat by supporting the entire weight of the boat on its keel. Additionally there are two pairs of side stanchions with adjustable pads that prevent the boat from leaning to either side or to the front or back. The stanchions and pads are not capable of supporting the weight of a boat and great care must be used to insure the keel is carrying the weight of the boat.

Know your boat: Your boat must weigh less than 18,000 pounds (8165 kg). Your boat must fit on the cradle between the pads on the stanchions. The keel must be able to support the weight of your boat and temporarily balance the boat while the pads are adjusted. There must be adequate clearance between the rudder and the keel for the keel to be centered on the cradle without damaging the rudder. Not all keel types will work on this style of haul out. Make certain you know the shape of your keel and rudder.



If your boat is not suited to rest on its keel, and be stable and safe on the cradle, you may need to find an alternate method to haul your boat. Method shown below not recommended.



Plan the hauling of your boat: The haul out cannot be used for launching or retrieving a boat if the wind or waves are too high. A moving or bouncing boat can knock the cradle wheels off of the tracks. Watch for large wakes approaching. This requires a service crane to correct (\$\$\$). The haul out cannot be used if the lake level is too high (because the winch and motor may need to be moved to higher ground) or too low (because your boat cannot float over the cradle). Particularly in the fall, you should know what the lake level will be when you haul and when you will launch your boat. A boat could be stranded on the cradle for extended time. Like, until spring.

Gather a team for the haul out: You should have five people to retrieve and to launch your boat:

- One person on shore who is in charge of and controls the entire procedure – this cannot be done from onboard the boat. For lack of a better name, this person is called the shore captain. The shore captain has full control and authority and should be somebody with experience using the haul out with the size and style of boat to be retrieved or launched. During launch and retrieval the haul out area should be quiet and calm and nobody should talk except the shore captain. Confusion is the first stage of an accident.
- Two people on the boat to control the boat around and on the cradle. The people on the boat should only be acting at the instruction of the shore captain.
- One person to run the winch controls. This person should only engage the winch controls at the command of the shore captain.
- One person to be the cable minder. Our winch is not quite straight. This requires the cable to be minded any time the winch is retrieving the cradle. Since launching is likely to involve at least some amount of retrieving a minder should always be present. See the section on cable minding.

Any other people near the haul out should remain quiet and well out of the way at all times. The only exception is if they observe a problem or unsafe condition, then they should notify the shore captain. Do not interject confusion or interfere with the shore captain's duties.

Minding the cable: As the cable is wound onto the spool each winding must be held tight to the previous one. "Tight" means less than one eighth inch gap to the previous wrap. If larger gaps are allowed, succeeding layers of cable will fall into these gaps making tight wraps on succeeding layers impossible. As layers build the condition gets progressively worse and wraps may avalanche into gaps causing the cradle and boat to jerk. Ultimately this condition can result in damage or injury. If it starts to go wrong it will not get better. You must lower the cradle to unwrap the offending wrap and try again. Really. The cable minder should use a board, as shown, to position the cable at all times when the winch is raising the cradle. This is (hopefully) boring work. So be prepared and stay focused.



The steps in brief – this page can be printed to have with you as you operate the haul out.

Retrieving your boat:

1. Measure your boat
2. Make needed adjustments to the cradle pads and stanchions
3. Collect your crew of five
4. Check and clear the haul out rails
5. Lower the cradle – mind the cable
6. Move your boat over the cradle and secure spring lines
7. Adjust upper pads
8. Raise the cradle until keel settles onto pad while adjusting spring lines – mind the cable
9. Adjust lower pads
10. Cross strap forward and aft cradle stanchions
11. Raise cradle to desired point – mind the cable
12. Block wheels, ease the cradle into the blocks

Launching your boat:

1. Collect your crew of five
2. Check and clear the haul out rails
3. Raise cradle enough to remove blocks – mind the cable
4. Lower cradle until boat just begins to float – mind the cable
5. Adjust aft pads to clear the boat at its widest and deepest points
6. Remove cross straps
7. Lower cradle until boat is floating free – mind the cable
8. Remove spring lines
9. Back the boat out of cradle
10. Return cradle to upper pad and block wheels – mind the cable

The steps in detail

Retrieving your boat

1. Measure your boat
 - a. Measure, or somehow determine the depth of your keel ----- _____ inches
 - b. Measure the width at the mast ----- _____ inches
 - c. Measure the freeboard even with the mast ----- _____ inches
 - d. Add the depth of the keel to the freeboard even with the mast (a + c)- _____ inches
 - e. Measure the beam (the widest part) of your boat ----- _____ inches
 - f. Measure the width 12 feet aft of the mast ----- _____ inches
 - g. Measure the freeboard 12 feet aft of the mast ----- _____ inches
 - h. Add the depth of the keel to the aft freeboard (a + g) ----- _____ inches
2. Make needed adjustments to the cradle pads and stanchions. Upper pads are adjusted by removing screw drivers from locating holes, then, sliding, lifting or lowering to position, and inserting the screwdrivers to secure the position. The lower pads are adjusted up or down by using the strap winches on the top of each stanchion.
 - a. Adjust the forward and aft stanchions to be about between two feet (one foot per side) and four feet wider than the beam of your boat. In order for the pads to reach to your boat, the aft stanchions should not be more than 5 feet wider than the width of your boat at the point 12 feet aft of the mast ("f" above). Make sure the stanchions are centered on the cradle by checking that the distance from the edge of the cradle deck to the stanchion is the same on starboard and port. The aft stanchions were previously damaged by improper use and may need convincing to be moved, as demonstrated below.



- b. Adjust the forward upper pads (up or down) so the distance from the top of the pad to the deck of the cradle is about 12 inches less than the distance from the bottom of your keel to the top of your hull even with the mast (dimension "d" above minus 12 inches).
- c. Adjust the forward upper pads (in or out) so they are centered side-to-side and they are about six inches wider than your boat even with the mast (dimension "b" above).
- d. Adjust the forward lower pads (up or down) so you are certain your hull will clear these pads as you enter the cradle.

- e. Adjust the aft upper pads (up or down) so the distance from the top of the pad to the deck of the cradle is about 12 inches less than the distance from the bottom of your keel to the top of your hull 12 feet aft of the mast (dimension “h” above minus 12 inches).
- f. Adjust the aft upper pads (in or out) so they are centered side-to-side and they are about six inches wider than the beam of your boat.
- g. Adjust the aft lower pads (up or down) so you are certain your hull will clear these pads as you enter the cradle.
- h. Adjust the lower pads in or out to fit your boat only if needed. Most boats will not need these adjusted. Confer with your team if you are not sure.
- i. If you do not get the pads set correctly you can adjust them later as shown, below.



- j. Get all of the pads into the desired position. If they hang down they may not float up when they enter the water and they will need repositioning. It may be best to set them to the correct angle and snug the bolts to hold them in place.



- k. You will need to plan how far you will lower the cradle into the water. Find or place a mark on the forward surface of one of the forward stanchions that is the depth of your keel (dimension “a” above). Make sure you will be able to see this mark from shore.
- l. Make sure the rubber pad on the cradle deck is properly positioned for your keel. Damage may result if the keel misses the pad.

3. Collect your crew of five

- a. Identify and agree who the shore captain will be.
- b. Make sure everyone has read this guide and understands their role.
- c. Get two people on the boat.
- d. Get the boat. Onboard the boat you will also need:

- i. Ropes for the spring lines. Jib sheets may work.
 - ii. Straps for cross strapping the stanchions.
 - iii. Boat hook.
 - iv. Willingness to go in the water.
 - v. Patience.
- 4. Check and clear the haul out rails
 - a. Any debris, including sand or gravel, can cause the cradle to derail. If this happens a crane is required to reset the cradle.
 - b. Check and clear as much of the rails as you can see, including deep into the water. The wheels have flanges so the top and sides of the rails should be clear.
- 5. Lower the cradle
 - a. The winch controls are to the left as you face the winch. Move the lever toward the lake to move the cradle down (toward the lake), away from the lake for up. There is a built in automatic brake that sometimes sticks. Watch for smoke (where the screwdriver is pointing) which means it has stuck. Immediately stop and correct it if it sticks.



There are exposed gears that move when the winch is operated. Never allow anyone or anything to be near these gears unless the cradle is blocked and the breaker to the winch is off. Any objects or body parts pulled into the moving gears will be permanently lost.

- b. The cradle should be blocked, so use the winch to raise it enough to remove blocks. Check all four wheels.
 - c. Lower the cradle until the depth mark indicating the depth of the boat's keel (see 2,k above) is at the surface of the water.
 - d. There are stops at the end of the rails to prevent the cradle from running off the end. If the cable becomes slack the cradle has hit the stops and will go no further. Do not further unwind the spool as the cable will tangle – this is very bad.
- 6. Move your boat over the cradle and secure spring lines
 - a. Check for incoming wakes and wait until they are clear.
 - b. Keep you crew and weight balanced so the boat stays level side-to-side.

- c. Slowly and carefully, move the boat (bow first) between the stanchions. If the pads are set properly this should go smoothly. If the keel hits the cradle deck lower the cradle just until it clears.
- d. Stop the boat with the keel centered on the cradle deck. When you haul your boat you should make notes for future use. If you do not have notes then the following may be helpful.
 - i. For a 37 foot boat, when the mast is fully between the front stanchions.
 - ii. For a 33 foot boat, when the mast is just behind (1 inch) the front stanchions.
 - iii. For a 28 foot boat, when the mast is one foot behind the front stanchions.
 - iv. For a 24 foot boat, when the mast is two feet behind the front stanchions.
- e. Secure spring lines from your jib sheet winches to the forward stanchions of the cradle.
 - i. Tie to the stanchion but do not also tie to the strap on the outside of the stanchion as this will foul the strap.
 - ii. Wrap twice on the winch and secure to a cleat. You will need to adjust these spring lines as the boat settles on the cradle.



- iii. Move the forward upper pads inward to center and secure your boat. They should be snug to the hull on each side.

7. Adjust upper pads

- a. Move the forward upper pads in equally on each side to be snug to the boat. The spring lines and pads should work together to hold the boat in place.
 - b. Move the rear upper pads near where they will contact the boat as the cradle raise up to the boat. Make certain the pads are not under the boat and will not take any of the weight of the boat.
- #### 8. Raise the cradle until keel settles onto pad while adjusting spring lines – mind the cable
- a. When the shore captain has determined the boat is ready, the command is given to raise the cradle.
 - b. The cradle will begin to raise the boat by the bottom of the keel. The cradle is not level. However the bottoms of most keels are flat. This will cause the boat to rock back slightly as it is raised. To accommodate this backward rocking, and to prevent the boat from bending the forward stanchions, both spring lines must be eased as the boat settles onto the cradle. Keep some tension using the winches, but continue to ease the spring lines until the boat is fully settled on the cradle.
 - c. Make sure the upper pads are not taking any of the weight of the boat.
 - d. Temporarily stop raising the cradle once the boat is fully settled on the cradle.

9. Adjust lower pads
 - a. Move the aft upper pads inward until they are snug and the boat is centered between the stanchions
 - b. Using the strap winches, raise the aft lower pads until they are firmly snug to the hull. Do not over tighten or attempt to lift the boat.
 - c. Using the strap winches, raise the aft lower pads until they are firmly snug to the hull. Do not over tighten or attempt to lift the boat.
10. Cross strap forward and aft cradle stanchions
 - a. This step is required for safety and must be completed before the boat is lifted further.
 - b. Using the straps (ropes can be used here only for very light boats) tie the top of the starboard and port forward stanchions together and firmly tighten the strap.
 - c. Repeat this on the aft stanchions.
 - d. This will draw the pads more snugly to secure your boat. It also double the ability of the stanchions to prevent you boat from tipping to port or starboard. Most importantly, in increases the ability of the stanchions to prevent you boat from tipping forward and aft.
 - e. NOTE: the boat must be level side-to-side. If it is not level, it's a do over to get it level.
11. Raise cradle to desired point – mind the cable
 - a. The boat is now prepared to be hauled. While minding the cable raise the cradle until the bottom of the keel can be seen.
 - b. Note the position of the keel on the cradle deck as soon as it becomes visible. If the boat is too far forward of aft carefully measure how far is should be moved. Lower the boat, lower all lower pads and eases back all upper pads. Remove or loosen the cross straps. Adjust the spring lines to reposition the boat. Start over at step 6, d. Makes notes for next time.
 - c. Once confirmed the boat in in proper position, raise the cradle to the desired position. Mind the cable.
12. Block wheels
 - a. Block at least one aft wheel, both aft wheels is better.
 - b. Lower the cradle slightly to pinch the blocks, but keep tension on the cable as well.
 - c. For safety, turn off the breaker to the winch until its needed.

Some tips while working on your boat

You have done everything right, yet your boat can still fall. Too much weight aft is a concern. You can set tight lines from the forward cleats to something secure like a tree or the winch frame – NOT the cradle. Some people have tied halyards from the mast top over to trees on the hill when they were concerned about high winds – seems like a good idea. I suggest tying the top of the ladder to the boat so it won't slip away. I also suggest taking the ladder down when you're not using it just a good practice. Do not attempt to use the mast crane for anything on a boat that is on the haul out. It is not meant for that, it probably won't reach, and you are multiplying your risks.

Launching your boat:

1. Collect your crew of five
 - a. Identify and agree who the shore captain will be.
 - b. Make sure everyone has read this guide and understands their role.
 - c. Get two people on the boat.
 - d. Make sure the engine is prepared for starting or have a tow boat at the ready.
2. Check and clear the haul out rails
 - a. Check and clear as much of the rails as you can see, including deep into the water. The wheels have flanges so the top and sides of the rails should be clear.
 - b. Clear anything that should not be on the deck of the boat or around the boat and cradle, including the ladder. Items on the cradle that float may be lost.
 - c. Attach the spring lines as you had them when the boat was hauled. This helps you stay in the cradle until you intend to move.
3. Raise cradle enough to remove blocks from behind the wheels – mind the cable
4. Lower cradle until boat just begins to float – mind the cable
5. Adjust aft pads to clear the boat at its widest and deepest points
 - a. The lower aft pads should be let down to make sure the deepest part of your hull will clear.
 - b. The upper aft pads should be moved out to clear the widest part of your boat.
6. Remove cross straps
7. Lower cradle until boat is floating free – mind the cable
8. Remove spring lines just before you back out.
 - a. Have your crew at the ready, perhaps with a dock hook, to tend the stanchions.
9. Back the boat out of cradle
10. Return cradle to the upper pad and block wheels – mind the cable.
 - a. There is no need to return the stanchions to their previous positions since this may be different for the next boat anyway.
 - b. Notify the board if you suspect something is in need of repair,
 - c. Please make the work area clean and safe for the next people.

If corrections to this guide are needed please inform the board so changes can be made in time for the next users. A special thank you is owed to Neil, Shelly, and Beth, for the time, knowledge, and commitment to PYC and the information to create this guide.

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By: Pat Herron, Slip 97