

Sea Pearl 21 & Sea Pearl Tri-Sport

Owner's Manual

Dear Sailor,

Congratulations on your purchase of a Sea Pearl 21.

Your Sea Pearl is constructed with the finest material available for use in production operations. Exotic materials are used where needed and otherwise avoided to ensure dependability. It is constructed with proven methods by experienced craftsmen, and with proper care will last a lifetime.

As you get to know your pearl, you will find yourself possessed with a pride of ownership. The unique qualities of the Sea Pearl will always attract attention and will prompt questions from the gallery of onlookers at the launch ramp. The effortless setup and easy launching will usually turn a few heads.

This pride of ownership will be reinforced as you discover her unique sailing characteristics and what they can do for you. Her speed and responsiveness are complemented by her seaworthiness. The knowledge that you have a sure quick reefing system adds to your peace of mind.

It is wise to rig your boat at home and to familiarize yourself with the lines before your first launch. This could save you the embarrassment of a humorous mistake with something misunderstood or the disappointment of missing something essential to your sailing.

It is also wise to sail with good judgment on your first few times out. Choose good weather with wind conditions near the ideal range of 10 -12 knots. More or less than this could be a frustrating experience especially for an inexperienced sailor. Learning the sailing characteristics of an unfamiliar rig is difficult in light air and next to impossible in heavy air.

It is our intention to provide you with the basic knowledge to allow you to get off to a good start and feel confident in your knowledge of what to expect out of the boat.

Happy Sailing,

Jim Leet

President

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MAINTENANCE AND CARE OF YOUR BOAT, SAILS AND TRAILER

Boat:

1. A good coat of tough wax before the boat is used and scratched will insure your hull a longer lasting finish. (This is especially critical for the colored hulls.)
2. If you scratch your hull, don't despair, we can send you some touch up gel and instruction. (The gel's shelf life is only 3 months, longer if it's well sealed and kept cool, so it cannot be kept for long periods.) Small scratches can be sanded out of the gel coat with "fine" sand paper.
3. If you have teak rails, we are now using Sikken's Marine (Cetol), which is a teak sealer and final finish in three coats. The company says it will last a year, if we get six months that is better than most and it has very high UV protection. It can be easily touched up in any worn areas.
4. Deck stains can be scrubbed off with cleaner and scrub brush or removed with acetone. Acetone can also be used to clean road tar and grease off your hull. (It will also remove wax. It is powerful, so use it sparingly.)
5. Your bronze fittings will develop a green patina that looks great. But if you like that shiny look, a good brass cleaner and elbow grease will do the job. They can also be shined to a good gloss and then coated with a clear polyurethane for a long lasting shine.
6. Keep mast tube vacuumed out and lube with a dry silicone spray.
7. Clean black mast rings with acetone and spray with silicone.
8. Leeboard hinges can be taken apart and cleaned with a wire brush. Keep them lubed with Lanacote.

Sails:

1. If your sails get dirty, they can be spot cleaned with a clean acetone rag. For overall dinginess just throw them in a swimming pool that has chlorine in it. Spread them out and check in one hour. Don't leave them for 2 days, and then complain that they are no longer colored! The time will vary according to the amount of chlorine in the pool but a couple of hours should suffice.
2. Be sure if any stitching comes loose to attend to the matter ASAP as it will only worsen with use. Any local sail maker can re-stitch this or a sail maker's needle and nylon or cotton covered polyester thread will let you do the job.
3. After a windy day in salt water, the sails should be rinsed in fresh water and dried before storage.
4. Sheet lines can be scrubbed white with bleach added to the scrub water.

Trailer:

1. Hose down the trailer after putting it in salt water. Even though the trailer is galvanized the springs and some parts are not and will rust.
2. Check grease in your bearing buddies often. If you over fill, the bearings will spew the grease all over your wheels. When you are applying grease with a grease gun make sure the grease fitting is accepting the grease (it could be stopped up with dirt). To check for bad bearings, jack up the trailer and check for play in the wheels. A road noise will also indicate a bad bearing.
3. A little 3-in-One oil on your winch handle fittings will insure a smoother turning handle.
4. Check for frayed winch strap and replace if worn, as this could be a dangerous problem if it broke while loading the boat.
5. Turning the license plate holder to the up position will keep you from scraping, bending, and losing the plate.

TRAILERING

This subject is covered in a separate manual provided by the trailer manufacturer. The following points in trailing pertain to the Sea Pearl specifically.

1. Some means of securing the bow tightly to the bow roller is needed. This can be either a separate line, or a loop through the bow eye and under the tongue with the bow line. This should be checked frequently on long trips.
2. The leeboards should be tied together with a slippery hitch. This prevents them dropping and also takes the strain off of the cam cleats. The line should be led over the mast in order to help hold them down.
3. The masts should be lashed to the forward mooring cleat.
4. A tie down line securing the boat to the trailer can be attached from the trailer frame to the trailer frame. This should go over the leeboards and should include some chafing gear. There are several ways this can be handled and you should take note of how it is done at delivery to you.
5. The tiller should be lashed firmly between the stern cleats. A clove hitch will hold it athwartship and then hitch to cleats. Leave it to one side so as to present the flat surface to a car following you. This gives greater visibility than the edge. For longer trips consider putting the entire rudder assembly in the forward cockpit, but tie or clamp on a red flag to the upper gudgeon after doing so.
6. Tow with the cockpit drain plug removed and the tonneau cover in place and you will survive a rainstorm.
7. To keep the mast from rubbing your gel during traveling, take a pair of heavy socks and put them over the mast ends. Also, on the boom ends to keep from scratching the interior of your boat.
8. Bungie in your oars and other loose articles to keep from scratching or otherwise damaging the interior.

RIGGING INSTRUCTIONS

Mast Assembly:

1. Each mast is packaged separately.
2. Main mast has the long bottom or heavy section and the short top or light section.
3. The mizzen mast has the shortest heavy section and the longest light section.
4. The main has the longest boom and the mizzen the shortest.
5. The top section simply fits into the bottom section. (no fasteners) However, it is good to tape the two sections together with a strong tape to eliminate movement between the two.
6. Both masts will be the same length when put together.
7. The booms are held into the gooseneck with a quick release pin. Some older models rely on pressure from the outhaul and vang.

Attachment of booms:

1. Attachment begins ideally with sails furled around the masts. To furl them, simply hold tension on the clew of the sail and turn the mast. Another hand or a gentle breeze is helpful here. We suggest that you do not try this in a heavy breeze the first time.
2. Position the sail slide near the center of the boom. (This is so the boom will be balanced after attachment.)
3. Fasten the clew of the sail to the boom sail slide with the snap shackle.
4. You are then ready to release the furled sail and roll it out by turning the mast. Let the sail support the boom, and slide the outhaul outward as more sail is unfurled, until it is all out or you have as much out as desired for the wind conditions. Caution: Keep the sail flat with tension against the clew with the outhaul line or boom while you are unfurling the sail. If you don't, it can have a violent whipping action in high winds and can cause serious injury when out of control. When done correctly, there is no strain or violent motion. Practice!
5. Insert the gooseneck pin into the hole in the boom end. (This step not necessary on newer reefing goosenecks, as their booms always stay attached while unfurling or furling the sail.)
6. Attach the sheet line to the boom bail at aft end of boom.

NOTE: *This procedure is for both main and mizzen. You will also note that this system allows you to reef very easily by releasing the tension on the outhaul and removing the vang at the mast. You may then release the slide lock on the gooseneck and roll up as much sail as you desire. Reset the slide lock, tighten the outhaul and then snap on the vang. Easy to do, but practice makes perfect.*

MISCELLANEOUS TIPS

1. If the top section of your mast is out of synchronization with the bottom section, merely twist it before you raise it. Check your downhaul to make sure it is tight. If you have already raised your mast and find the problem, loosen the down haul and move the bottom section while holding tension on the rolled out sail with the boom. A quick motion is best.
2. The cockpit drain will serve as a good tool to remove a stubborn water ballast drain plug. It will also open a beer bottle without twist on caps!

LAUNCHING YOUR SEA PEARL

You will find your Sea Pearl 21 easy to launch and recover if you will follow these simple steps.

1. Before launching you **MUST** consider the following:
 - a. Are there any electric wires near the ramp or beach?
 - b. Is there a suitable place to beach the boat nearby where rigging might be easier?
 - c. Will you have to rig at the dock or pier or in a congested area?
 - d. Will the wind direction let you rig sails on the trailer and if so would that be desirable?

NOTE: *The ideal situation is to launch at a beach where you can step the masts and rig sails at your leisure. On the other hand if you are launching alongside a dock, you may want to rig on the ramp as opposed to the water. You should at least step the masts first in this case.*

2. Remove all tie down lines and the tonneau cover. Install all drain plugs.
3. Free rudder, leeboard/centerboard pendants but leave them cleated in the up position.
4. Lay a bow line and stern line, cleat them off at the ready and lead them forward.
5. Step the masts and lay the booms on deck. Rig sails if you desire and the wind is favorable.
6. Remove the tilt pin from the trailer if the ramp or beach is shallow.
7. Back trailer in until the tires are just touching the water (if planning to tilt the trailer), or the stern of the boat goes into the water (if not planning to tilt the trailer).
8. Remove winch line at this point and pass the bow line forward through the chock. **NOTE:** If launching beside a dock or pier, the stern line should be handed to a bystander or some provision made to control the stern as she floats.
9. Push up and aft and she should slide easily into the water. If not, check the height of the aft roller and make sure it is high enough to take most of the weight. Also make sure you haven't backed **TOO FAR** into the water, thus preventing the trailer from tilting.

10. Assuming at this point that the masts are stepped and sails still furled, you are ready to step aboard, hoist sail, and sail away. Don't forget to park your car and trailer, of course... and don't forget to load that cooler on board, if you haven't already.

SAILING TIPS

1. One of the greatest features of the Sea Pearl 21 is the ability to heave to. For safety and ease of handling and personal comfort, this feature, above all others, is one you will use again and again.

TO HEAVE TO -pull the mizzen sheet in tight and release the main sheet. Let the tiller go (it will turn the rudder blade sideways) be sure NOT to hold on to the tiller handle. Your Sea Pearl will turn into the wind and stay. Now you can reef, fish, sleep, read, or fix lunch. She will sail backwards very slowly. In extremely rough seas with plenty of "sea room", and where the pressure on the rudder may be excessive, pull the rudder blade completely out of the water using the rudder lanyard. This will increase your speed in reverse, but ensure a safe backwards motion. Enjoy this unique Cat Ketch feature!

2. In heavy weather, reef the main first and then the mizzen. One or two turns at a time. This will keep her in balance. If things get tough quickly, furl the main altogether, and sail with the mizzen alone or lie "HOVE TO" with the mizzen reefed for the safest and most comfortable ride.

3. To tack with the mizzen alone:

- a. Fall off slightly to pick up speed.
- b. Tack sharply
- c. As soon as the bow comes through the wind and not before, release the mizzen. (Keep the tiller over).
- d. As she falls off on the other tack, haul in on the mizzen and harden up into the wind with the tiller.

NOTE: *The trick here is to NOT let her get into irons (HOVE TO).*

4. To get out of irons (HOVE TO), back wind the main and bring the tiller amidships, if you have the main unfurled. As the bow falls off, sheet in the main and loosen the mizzen slightly. If you are sailing with the mizzen alone and are in irons, she will be backing down on the rudder. Put the helm over towards the tack you prefer and release the mizzen. The stern will move the opposite way. As the bow falls off, pull in on the mizzen to gain forward speed.

5. Tacking in heavy air when reefed or in extreme light air, or without the rudder.

- a. Put the helm over if you have steerage.
- b. Release the main and tighten mizzen.
- c. As the bow comes into the wind release mizzen and tighten main, or backwind it if necessary.

d. As bow falls off, tighten mizzen and you're off on a new tack. It is easier with a rudder assist.

Try this sometime when you don't have to!!

6. When tacking is short distances, keep both boards down about 1/2 way. This will keep them from floating out and slowing the tack while the board catches up with the boat.

7. When sailing off the wind, keep your boards up.

8. When anchored, keep a small amount of mizzen up and sheeted in hard. The boat will point towards the wind all night, and will not sail around her anchor.

9. When sailing in extreme shallow water, it helps to heel the boat as much as possible so the leeboard can get a bite. And you should use the sails for control if the boat does not respond to the rudder.

10. When sailing in a heavy chop, keep the boat trim such that you have the maximum heel and that the bow is riding high. This will give you a dry, comfortable ride. The spray will be thrown more down and out and the nasty little curlers will not break over the windward gunnel.

REEFING -MARCONI RIG

This simple, fool proof, unlimited reefing system works by taking in sail around the mast, as follows:

1. Release the outhaul tension by removing the outhaul line from the clam cleat.
2. Release the vang snap shackle.
3. Release the flip lock on the new reefing gooseneck to allow the center ring to turn freely.
4. The mast can now be turned as many times as necessary to achieve proper reefing. The sleeved sail will roll up on the mast because the downhaul line will keep it secured to the mast.
5. When proper reefing is obtained, you may tighten the outhaul line and cleat it.
6. Reattach the vang and tighten.

NOTE: *With practice a single reef can be put in the mizzen from the helmsman's station in as little as 5 seconds.*

-happy sailing-

For parts, service, or brokerage:

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