Ranger 22
The Owner's Manual

On behalf of Ranger Yachts, we would like to thank you for selecting a Ranger 22. We have taken great care to build a yacht that will give you a great deal of sailing fun and excitement at a reasonable cost.

This manual is designed to familiarize you with your boat. The basic procedures you will need are outlined here and will form a guide to the maintenance and safe operation of your boat.

Ranger Yachts reserves the right to change specifications without notice and this manual may not reflect all such changes. Since we are always striving to improve our product, modifications are constantly in process and, therefore, you may become aware of differences between this manual and your boat. It is our policy to make improvements whenever it is appropriate without waiting for corresponding updates to our manual.

Full information on optional equipment may not be contained herein. Contact the option's manufacturer or your Ranger Yachts dealer for more information.

Please read and understand this manual and all others included with your boat before operating any of the boat's systems.

In addition to information contained in this manual, there is certain Federal, State, and local regulations pertaining to the safe and legal operation of pleasure craft that you should familiarize yourself with. Local government agencies and boating groups can help you become aware of these regulations.

The Ranger 22 is designed to be a class racing 22' sailboat. Ranger Yachts would like to encourage participation by owners in class activities. Class racing in a boat as evenly matched as a Ranger 22 is truly a test of even the best helmsman and crew. Ranger Yachts has developed a set of Ranger 22 class rules and specifications. These rules may be obtained through Ranger Yachts, your dealer, or through the Class Association.

The Ranger 22 will also rate 16' (mini-ton) under IOR MKIII without modification. This allows you to compete with the hottest mini-ton boats around the world on a "boat for boat" basis. Ranger Yachts has coordinated with the U.S.Y.R.U. to obtain a standard set of hull dimensions. This will save you a great deal of time and money if you should decide to have your boat measured for IOR racing.

SPARS AND RIGGING

Your new boat will come with the mast unrigged. Your dealer may rig the boat as part of the commissioning process, or you may do the work yourself. The following is a description of the process that should be followed to rig a boat equipped with spinnaker gear.

1. Tools needed:

1 pair pliers
1 crescent wrench
1 screwdriver
1 roll of rigging or chafe tape
1 roll of electrical tape
Several feet of stainless steel seizing wire

2. Loose equipment and parts from rigging box:

1 main halyard (wire and rope)
1 jib halyard (wire and rope)
1 spinnaker halyard (all rope) (optional)
1 spinnaker topping lift (all rope) (optional)
1 pair of spreaders
1 pair of upper shrouds
1 pair of lower shrouds
1 forestay
1 backstay

3. Rigging procedure with mast horizontal on padded sawhorses:

Halyards All the halyards on the R22 are internal and, therefore, are a bit difficult to install. To simplify the procedure, the mast has been equipped with "messenger" cords. To install these halyards you must use these messenger cords to pull the halyards DOWN the mast. Wrap electrical tape firmly around the bottom end of the halyard and the top end of the messenger cord for a distance of 4-6", joining the two firmly together. Feed the taped section into the mast and begin to pull on the lower end of the messenger cord. The halyard should move quite easily down the mast. There is a chance that the halyard may foul a rivet or screw on the inside of the mast. If this should happen, turn the mast over and try again.

The halyard and the messenger may separate if you pull too hard or if the halyard fouls a rivet. If this happens, it will be necessary to replace the messenger cord. To do this, follow the following procedures:

REPLACING THE MESSENGER CORD

Step 1: Use some 1/8 1 X 19 cable as a snake. Run it down the mast from the appropriate halyard entrance box.

Step 2: When the 1/8" cable has been snaked down the mast, it should be pulled out through the appropriate exit slot.

Step 3: Tape the messenger cord to the cable. Then pull the cable up the mast until the messenger cord is exposed at the upper end.

Step 4: Tape the upper end of the of the messenger cord to the halyard and proceed as outlined in the previous section.

SHROUDS AND STAYS The shrouds and stays should be installed after the halyards. All should be laid out and cleared from other rigging.

FORESTAY AND UPPER SHROUDS These should be installed together as they use a common bolt. You may find it helpful to watch the alignment of the forestay toggle through the spinnaker halyard sheave box.

LOWER SHROUDS These are attached by removing the 1/4 inch bolt, aligning the shrouds, and replacing the bolt.

BACKSTAY The backstay has a "fork" swage at both ends. One end fits into the hole in the masthead fitting. The other end fits into a triangular shaped stainless steel plate. Two other items are attached to the triangular plate:

1. The backstay adjuster tackle (fiddle block with cleat at top end).
2. A safety backstay wire (with fork swage at the triangular plate).

The final procedure before stepping is to bolt spreaders into bases, wire upper shrouds to spreader tips, and cover sharp corners with chafe tap.

4. STEPPING THE MAST

CAUTION!!!

It is necessary to have at least two other people as helpers to make sure this procedure is executed safely and smoothly.

STEP 1 Lay the mast on the boat with the flat face down and the masthead out past the transom.

STEP 2 Connect upper shrouds to chainplates. Also, connect backstay gear to transom plate. Make sure all wires are clear.

STEP 3 With two people on the transom and one at the base of the mast, move the mast aft until the base can be secured in the mast step with the hinge bolt. Rest the aft end of the mast in the crutch provided for this purpose.

STEP 4 Once the base of the mast is secured, the two people on the transom can begin to lift and walk forward, raising the mast to a vertical position.

STEP 5 When the mast is erect, the forestay and lower shrouds may be secured.

5. Tuning the Rig:

The 3/4 rig is a bit more difficult to "tune" than is a conventional masthead rig. The addition of swept-back spreaders complicates the situation to some degree. This rig was developed to give you good control of sail shape through a very flexible mast. The rig, however, should not be over-bent as you may cause a permanent bend in the mast. The following should serve as a general guide to initial rig adjustment. We suggest that you consult with your sailmaker or an expert local sailor for the fine points of rig tuning.

Starting at the dock, the first step is to make sure the rig is straight athwartships. This can be sighted with relative ease by walking a distance down the dock and sighting the boat from the bow or stern.

Adjustment should be made to the upper shrouds to adjust the athwartship alignment. The uppers should not be tight, in fact, may be quite slack.

The lowers, on the other hand, should be set firm as this is the best method of controlling fore and aft mast bend, as well as, allowing the forestay to be tensioned.

The backstay should be set as sail shape and wind conditions dictate. Generally, the more wind, the more back stay tension as this bends the mast and straightens the forestay, thus, flattening the sails.

MAINTENANCE

The spars fitted for your vessel are a lightweight extruded aluminum alloy. The finish of aluminum is protected against corrosion by a thin, transparent film of aluminum oxide. Dust, Dirt, and salt will adhere to this film, making the surface appear dull. Coating the clean surface with a good paste wax will help protect the finish of your spars and make cleaning easier.

If the surface has become tarnished, any high-grade cleaner/wax will restore the original sheen. If your spars are black anodized or painted, hose off the salt spray after each sail to preserve the finish appearance.

Inspect swaged fittings and chain-plates for hairline cracks that may have resulted from stress. Replace any such fittings or hardware. Periodic inspection is your best insurance against rigging or hardware failure. Occasional lubrication of the turnbuckles with WD-40 or equivalent will ensure easy adjustment.

Salt water will gradually stiffen dacron line. Frequent fresh water wash-downs or soaking in warm soapy water will keep the line soft and flexible. Keep your line coiled and stowed in a dry place below decks.

LIFT SLING

The lifting sling consists of a heavy stainless steel cable that attaches to a stainless steel floor plate. At the upper end of the sling cable, there is a large "pear shaped" ring. This ring has two 10' control lines attached to it. These lines must be tied off to the sheet winches port and starboard.

When the lifting sling is properly secured, you may lift the boat. The boat should assume a slight "bow down" position. This is desirable in order to keep the mast and rigging away from the crane arm and cables.

CAUTION Never ride on the boat as it is being hoisted. Never attempt to work under the boat until it is secured in a cradle or trailer.

PLUMBING

The plumbing system is an option. If your boat is so equipped, the following section will be a guide to the care and maintenance of the system.

The water system is composed of a five gallon collapsible vinyl fresh water tank, a manual pump, sink, and a five gallon collapsible water collection tank.

Fresh Water Tank. This is located under the starboard side of the V-Berth. It has a five gallon capacity and should be rinsed out before each use.

Sink and Pump. The pump is a self-priming manual unit that should require no maintenance. Both the sink and the pump can be cleaned with normal household cleaners.

Waste Water Tank. This tank is located under the starboard settee and should be washed out after each use. It has a five gallon capacity.

ELECTRICAL

The electrical system is an option on the Ranger 22. If your boat is so equipped, the following section will give you a guide to the care and maintenance of the system.

Distribution Panel. This panel is mounted on the port side locker. The electrical panel is composed of six switches with fuses. Three of the switches are spares and may be used for other electrical equipment. The other three switches are for:

1. Running lights, consisting of port and starboard and stern lights. These must be used for night sailing.

2. A bow light mounted on the mast. This must be used for night powering.

3. Interior lamp in the main cabin with a separate switch on the lamp.

Battery. The 65 amp hour battery is mounted on centerline under the V-Berth. The battery is encased in a plastic battery box. The battery will require periodic recharging, depending on use. We recommend that you remove the battery for charging as explosive hydrogen is produced. There are many inexpensive battery chargers on the market. Follow the manufacturer's directions. Local service stations will also charge your battery for a minimal charge.

Remember to check the water level and keep the battery terminals free of corrosion.

If you do not anticipate the use of the battery for extended periods of time, we recommend that you disconnect the terminals and/or remove the battery. Store it in a warm and dry place.

AUXILLARY ENGINE AND FUEL

Ranger Yachts recommend the use of a three to five horsepower "long-shaft" outboard with the use of our optional outboard bracket.

The outboard bracket may be removed by unbolting the 1/4" cross bolt and sliding the bracket aft.

Your outboard motor and tank may be stored under the cockpit sole while not in use.

STEERING GEAR

The Ranger 22 is equipped with tiller steering. While this equipment is designed to be virtually maintenance free, there are two items which may require your attention.

1. Loose Tiller Head. If the tiller becomes loose and fits poorly on the tiller head, the securing bolt on the tiller head is loose and should be tightened.

2. Excessive Rudder Shaft Friction. The stainless steel rudder shaft is contained within a fiberglass rudder tube, which serves as a bearing. Occasionally, the tube may require lubrication to assure easy rudder motion. This should be done with a heavy water resistant grease forced between the fiberglass rudder tube and the rudder shaft.

CARE OF FIBERGLASS

Your fiberglass boat requires periodic cleaning and waxing. The frequency of cleaning and waxing will depend upon the degree of care you exercise after each sail. Detergents remove wax. If you want to keep your fiberglass hull smooth and shiny with wax, do not use a detergent when you wash your boat down.

When the fiberglass takes on a dull appearance, the gelcoat surface is oxidized and requires rubbing out. Use a light rubbing compound or polish for this procedure. If you use a buffing machine, be careful not to power through the gelcoat.

After buffing or polishing, a coat of wax will preserve the shiny appearance of your gelcoat. Any good wax will do. Personal preference and ease of application may be your guide in the selection of waxes.

In the event of minor gelcoat damage, consult your local marine hardware store. For more extensive damage, contact a professional.

An occasional check of the keel bolts is a good idea. The bolts should not be rusty and should not leak. In the event you ever have trouble with the keel, you should arrange to have the boat hauled by a professional repair yard.

CARING FOR YOUR TOPSIDE TEAK

All woodwork topside is unfinished teak. When the teak becomes dirty or turns color, it may desirable to clean and refinish it with teak oil.

There are many two and three part products on the market that will satisfactorily clean and finish your teak. Most of them, however, will stain fiberglass or painted surfaces if allowed to stand. Follow the instructions on the package.

Any good quality teak oil may be used after the wood is completely clean. Most hardware stores and marine hardware stores will carry this product.

INTERIOR

Fabrics. Two types of fabrics are offered for the Ranger 22. The first is a Herculon upholstery fabric and the second is a vinyl. Both will require only minimal care.

The Herculon should be dry-cleaned if it becomes soiled. It is a good idea to occasionally protect these fabrics with Scotchguard or similar fabric sprays.

The vinyl will require less maintenance and is easier to clean. An occasional application of Armor-All or Tannery will help protect the vinyl from cracking.

It is a good idea to remove the cushions if the interior becomes excessively wet as they tend to harbor molds.