

Hunter 23

Owner's Manual



Text, photos, and drawings taken from original manual provided with new Hunter/Legend vessels in the 1980s. In addition to minor formatting, spelling, and grammar changes, sections from the original manual pertaining to systems on larger vessels have been removed. It is the intention of the author to expand this document to include additional information pertaining specifically to the Hunter 23.

HUNTER/LEGEND

Owner's Manual

Table of Contents

I. Introduction

Welcome To The Hunter Marine Family	5
OWNER INFORMATION CARD	5
PRE-DEPARTURE CHECKLIST.....	8
FLOAT PLAN	9
CLOSING UP YOUR	10
BOAT AFTER SAILING	10
FOR SAFE BOATING	11
BRIEF GLOSSARY OF SAILING TERMS.....	13
II. General Handling & Operation	15
A. Electrical System	15
B. Water System.....	15
C. Stove.....	15
D. Pumps.....	15
E. Docking.....	15
F. Anchoring.....	16
III. Sails & Rigging.....	17
A. Tuning the Conventional Fractional Rig (Hunter 23, Hunter 26.5, Hunter 333, Legend 35, Legend 37).....	17
B. Roller Furling.....	18
C. Reefing the Mainsail.....	18
D. Sail Care and Storage	19
E. Care of Standing Rigging.....	20
F. Care of Running Rigging	20
G. Stepping the Mast on the Hunter 23	20

IV. Maintenance.....	30
A. Electrical Systems.....	30
B. Plumbing Systems	30
C. Fuel System.....	30
D. General Care	30
V. Storage/Winterization	33
A. Sails	33
B. Electrical	33
C. Cushions.....	33
D. Hatches	33
E. Outboard Engine	33
VI. Specifications & Technical Information.....	27

Welcome To THE HUNTER MARINE FAMILY

Congratulations on your new sailing yacht manufactured by Hunter Marine. We have engineered and constructed your boat to be as fine a yacht as any afloat. In order to get the best performance and most enjoyment from your boat you should be familiar with its various elements and functions. Please take the time to study this manual and its recommendations for trouble-free sailing pleasure.

We stand behind the quality of your boat with a warranty which you should also review. *To ensure your warranty is valid, please fill out the attached card and send it to us within ten (10) days of the purchase date.* Section 15 of the Federal Boat Safety Act requires first owners to be registered. The warranty data should also be recorded in the space below for your own reference.

You also need to fill out and mail the warranty cards on your diesel auxiliary, battery, stove, head, electric water pump, and other accessories. These are enclosed in the manufacturers' manuals which are included in your owner's pouch.

OWNER INFORMATION CARD

HULL IDENTIFICATION NUMBER IS ON THE OUTSIDE OF THE TRANSOM-STARBOARD SIDE,
UPPER CORNER, THIS NUMBER MUST BE GIVEN IN ALL NECESSARY COMMUNICATIONS.

HULL NUMBER		DATE DELIVERED TO OWNER	
YACHT NAME			
OWNER NAME			
STREET ADDRESS			
CITY	STATE	ZIP CODE	
HOME PORT			
MODEL	SIZE	HULL#/SAIL#	
ENGINE MODEL	SERIAL NUMBER	PROPELLER SIZE	
DEALER			
STREET ADDRESS			
CITY	STATE	ZIP CODE	
DEALER SIGNATURE			
OWNER SIGNATURE			

A copy of Chapman's ***Piloting, Seamanship, and Small Boat Handling*** is provided with your Hunter Marine boat as part of the standard equipment. Any questions regarding the meaning of terminology used in this manual may be referenced in your Chapman's.

HUNTER MARINE

LIMITED WARRANTY

Hunter Marine warrants to the first-use purchaser for a period of twelve (12) Months from the date of sale any part manufactured by Hunter to be free of defects caused by faulty workmanship or materials under normal use and service.

During this period Hunter Marine will replace any part judged to be defective by Hunter Marine free of charge at its plant or at the option of Hunter, by an authorized Hunter Marine dealer. Transportation costs are the responsibility of the first-use purchaser. The labor cost reimbursement will be based on a labor allowance schedule established by Hunter Marine and, where not applicable, on a reasonable number of hours as determined by Hunter Marine. All repairs and replacements must be approved in advance by an authorized Hunter Marine representative.

The warranty does not cover:

- (1) Paint, window glass, gel coat, upholstery damage, plastic finishes, engines, engine parts, propellers, shafts, controls, instruments and equipment not manufactured by Hunter Marine.
- (2) Boats or parts which have been altered or subjected to negligence or misuse.
- (3) Commercially used boats.

This warranty is expressly in lieu of any and all other remedies and expressed warranties. Any implied warranties, including the warranties of merchantability and fitness are limited to the duration of this limited warranty.

Some states do not allow limitations on how long an implied warranty lasts, so that the above limitation may not apply to you.

Any consequential damages which may be incurred are excluded and the liability of Hunter Marine and the purchaser's remedy shall be limited to repair or replacement of any part or party defective by Hunter Marine.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation exclusion may apply to you.

The purchaser acknowledges that no other representations were made to him with respect to the quality and function of the boat.

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

This warranty shall not be effective unless the Hunter Marine warranty card and pre-delivery service record are completed and returned to Hunter Marine within ten (10) days after the date of sale to the first-use purchaser.

PRE-DEPARTURE CHECKLIST

- Check bilge for excess water
- Check weather conditions and tides**
- Check food supply
- Foul weather gear
- Linen, sleeping bags
- Fuel
- Water
- Sunscreen and sunglasses
- Tools
- Docking and anchor gear
- Check radio operations
- Navigation charts and instruments
- Float plans to a friend of coast guard (*See next page*)**
- Fuel for stove
- Cooking and eating utensils
- Check battery water level
- Oil level, tighten V-belts
- Check for loose electrical connections in the engine room
- Secure tools or any loose equipment in the engine room so as not to get fouled in engine
- AC systems off; electrical cord stowed
- Doors and drawers secured
- Check steering lock to lock
- Check mast for rigging irregularities or tightness
- Halyards and sheets are clear and ready to run
- No lines or other obstructions near the propeller or bow
- Anchor ready to run
- Check lifelines for tightness
- Turn on fuel and water lines
- Stow all loose gear
- Open engine cooling water intake thru-hull valve

FLOAT PLAN

1. Name of person reporting and telephone number:

2. Description of boat

NAME _____ TYPE _____

MAKE _____ LENGTH _____ REGISTRATION # _____

HULL COLOR _____ STRIPE COLOR _____ DECK COLOR _____

OTHER DISTINGUISHING MARKS _____

3. Persons aboard:

NUMBER _____

NAME _____ AGE _____ PHONE # _____

ADDRESS _____

NAME _____ AGE _____ PHONE # _____

ADDRESS _____

NAME _____ AGE _____ PHONE # _____

ADDRESS _____

4. Engine:

TYPE _____ HORSE POWER _____ FUEL CAPACITY _____

5. Safety equipment:

PFDs Flares Mirror Flashlight
 Food Water EPIRB Raft/Dinghy

6. Radio:

TYPE _____ FREQUENCIES _____

7. Trip expectations:

DEPARTING AT (APPROX. TIME) _____ ON (DATE) _____ FROM (LOCATION) _____

GOING TO (LOCATION) _____ RETURNING (DATE) _____ IN NO EVENT LATER THAN (DATE & TIME) _____

8. Automobile:

LICENSE # _____ STATE _____

MAKE _____ COLOR _____ PARKED AT _____

9. If not returned by _____, call the Coast Guard or:

at: _____

CLOSING UP YOUR BOAT AFTER SAILING

When leaving your Hunter Legend at the dock for more than a short time, it is a good idea to review the following check list to make sure everything is in order. This will help protect the various parts of your boat and add considerably to their attractiveness and useable life.

- Fold and bag headsails and stow below
- Furl mainsail and cover, or remove and also bag
- Remove and stow all portable deck hardware such as snatch blocks, winch handles, etc.
- Secure the boom to the topping lift and set it firmly amidships with the mainsheet purchase. (It is also a good idea to rig a line from the steering wheel or tiller to a convenient cleat to keep the rudder from swinging back and forth with the motion of the water.)
- Attach the shackle ends of all halyards to convenient fittings and take up slack
- Cleat and coil halyard tails and permanent sheets, hanging them off the deck to promote drying
- Coil and stow all other lines
- Cover the winches and steering pedestal when leaving for several days or more
- Close all fuel lines and gate valves
- Turn off the electrical system
- Pump the bilge
- Check air vents, secure ports and hatches, swab the deck, particularly if you have operated in saltwater
- Make a final check of mooring lines, chafing gear, fenders, etc.

FOR SAFE BOATING

BE PREPARED

Take a safe boating course from the Coast Guard. You can call 800-336-BOAT for information on courses in your area.

Carry all safety equipment required by federal and state law. Federal requirements are discussed in "Federal Requirements for Recreational Boats" which can be acquired from U.S. Coast Guard Office of Boating, Public, and Consumer Affairs. Washington, D.C. 20593. State requirements will come from your local State Boating Administration. The Coast Guard also recommends a first-aid kit, a pump or bailer, a transistor or weather radio, extra fuel, a paddle, anchor and line, and extra drinking water, also, if not a requirement, flares.

Get a Coast Guard Auxiliary Courtesy Examination. This is a free, confidential safety inspection. Call your local Coast Guard Auxiliary for details. Be familiar with the use of distress signals and PFDs.

AVOID FIRES

Handle fuels carefully,

Read the engine owner's manual for proper fuel-system maintenance and inspect your engine's fuel system periodically.

Heed fire extinguisher regulations and keep them in good condition.

While refueling:

- a. Fill the portable tanks on the dock.
- b. Tie the boat securely.
- c. Extinguish cigarettes and all flames on the boat. Turn off all engines and electrical equipment.
- d. Keep the hose nozzle in contact with the fuel can or fill.
- e. Wipe up all fuel spillage.
- f. Ventilate the engine and fuel compartment.
- g. Check boat for fumes.

BEFORE GETTING UNDERWAY

Leave a float plan.

Perform pre-departure check list.

Check the weather; do not venture out if the weather is threatening.

WHILE UNDERWAY

PFDs should be worn by children and non-swimmers **at all times**. *Everyone should wear them if conditions become hazardous.*

Do not operate a boat if intoxicated, fatigued or stressed. These human factors cause 50 percent of all boating accidents.

Keep a good lookout. This is especially true of sailboats. Keep a watch to leeward under the headsail. Keep away from swimmers, divers and skiers.

Obey state and federal laws. Know your local laws and "rules of the road."

Respect bad weather: Try to get to shore if the weather turns bad. Get and carry a radio with a NOAA "weather band" on FM 162.40-162.55 MHZ.

FOR SAFE BOATING *(Continued)*

IF TROUBLE OCCURS

Radio for help. Use the emergency VHF channel (i.e., 156.8MHZ).

Put on PFDs immediately.

Stay with the boat. In cold water, huddle together to prevent hypothermia.

FLOAT PLAN

Make copies of the example on page 1-5 and use one before each trip. Fill it out and leave it with a reliable person who will notify the Coast Guard or other rescue organization if you fail to return on time. Do not forget to cancel the float plan upon your return.

BRIEF GLOSSARY OF SAILING TERMS

- BATTEN:** A thin wooden or plastic strip placed in a pocket in the leech of a sail to help hold its form.
- BLOCK:** Pulley consisting of a frame in which to set one or more sheaves or rollers. Ropes are run over these rollers.
- BOOM:** Spar at the foot of the mainsail.
- BOOM VANG:** Tackle secured to the bottom of the boom about three feet aft of the gooseneck. The other block attaches to an eye at the base of the mast. The vang's purpose is to keep the boom steady and horizontal while sailing.
- CHAINPLATES:** Strips of metal fastened to the boat's hull or deck designed to take the stress of stays.
- CLEVIS PIN:** A small stainless steel pin that has a hole in one end for a cotter pin and is used to secure stays to chainplates and mast fittings.
- CLEW:** The aft-most lower corner of a sail.
- COTTER PIN:** A straight or circular split metal pin used to hold a clevis pin in place.
- DOWNHAUL:** A device used to tighten the luff of a sail.
- FAIRLEAD:** An eye used to lead line in the direction desired.
- FOOT:** The lower edge of a sail.
- GOOSENECK:** A metal device that secures the boom to the mast.
- GUDGEON:** A metal socket attached to the transom to receive the pintle of the rudder.
- GUNWALES:** The upper edge of a boat's side where it meets the deck.
- HALYARD:** A line for hoisting (or raising) the sails.
- HEAD:** The upper corner of a sail.
- HEADBOARD:** The fitting at the head of a sail with a hole in it to receive the main halyard
- HEADSTAY:** The foremost stay on a sailboat. A jib is set on a headstay.
- JIB SNAPS:** Small fittings that are attached to the luff of a jib which secure the jib to the headstay.
- JIBE:** The action of the mainsail when shifting from one side of the boat to the other when heading downwind.
- JIFFY REEFING:** (see "*reefing*") A quick method of reefing the mainsail, sometimes with one line.
- LEECH:** The aft edge of a sail.
- LUFF:** The forward edge of a sail.
- MAINSHEET:** The line used to trim a mainsail.
- MASTHEAD FITTING:** The fitting at the top of a mast.

BRIEF GLOSSARY (*Continued*)

MAST STEP: A metal fitting that holds the base of the mast in position.

OUTHHAUL: A line used to haul the clew of a sail out to the edge of the boom.

PINTLES: Pins on the forward side of a boat's rudder, designed to rest in and pivot on the gudgeons secured to the transom.

REEFING: To reduce a sail by rolling or folding up part of it.

RIGGING: The wire supporting the spars is called standing rigging (stays or shrouds), and the ropes used in setting and trimming sails are known as running rigging (halyards and sheets).

ROLLER FURLING: A method of reducing sail on a main or jib by rolling the sail around a rod or wire.

SHACKLE: A U-shaped piece of metal with a pin across the open ends.

SHEET: A rope used to trim a sail.

SHROUD: A length of wire used to support a spar (same as a "stay").

SLACK: The opposite of taut (i.e., *slack away or off*-to pay out).

SPREADERS: Aluminum tubes that project from a mast in a traverse direction in order to keep a stay at proper tension and to help hold the mast erect.

STAY: A length of wire used to support a spar (same as a "shroud").

STEMHEAD FITTING: The fitting nearest the bow on the deck where the headstay attaches.

STEP: To step a mast is to set it in position.

TACK: The lower forward corner of a sail.

TILLER: A piece of wood connected with the rudder head. By this the rudder is moved as desired.

TOPPING LIFT: A wire and/or rope that attaches to the top of the mast and fastens to the end of the boom. Its purpose is to hold the end of the boom up when the mainsail is lowered.

TRIM: To trim sails. To put them in correct relation to the wind by means of sheets.

TURNBUCKLE: A device used to maintain correct tension on rigging.

II. General Handling & Operation

A. Electrical System

Your Hunter is fitted with a DC electrical system.

Keep in mind that your DC power source is a 12-volt battery and, just as with your automobile, it must be charged regularly by operating the motor. Unless a state of charge is maintained, there may not be enough power to operate the starter motor. Dangerous situations can result if the motor cannot be started when needed. Supplemental systems, such as solar chargers, may be used to maintain a charge on the battery (ies).

Make a regular visual check of battery (ies) to insure proper water level and inspect terminals for signs of corrosion. If your boat sits for long periods without use, it is often a good idea to remove the battery (ies) and attach them to a trickle charger to keep them fully charged and ready to use.

B. Water System

Your Hunter 23 is equipped with a 5 gallon non-pressurized water tank, located in the lazarette. The water is pulled from the tank by the hand operated pump/faucet mounted on the sliding sink/stove unit. Water from the sink is directly discharged into the environment. Follow all applicable regulations regarding discharge of substances into bodies of water.

C. Stove

Follow the operating instructions supplied with the unit installed with your boat. *See appendix.*

D. Pumps

All pumps should be checked frequently to insure proper operation.

This is an especially important regular maintenance item since functioning of a pump could save your boat from serious damage at some future time.

Inspect all hoses for chafing and dry rot. See that hose clamps are tight. Check that pump impeller area is clean and free of obstructions.

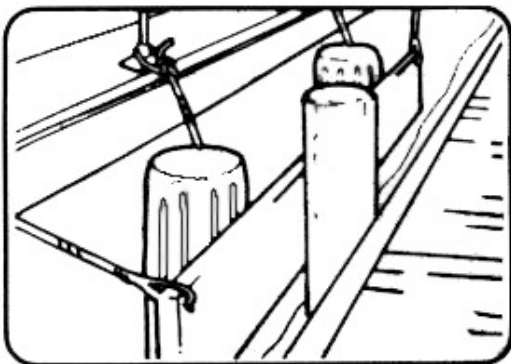
Inspect electrical wiring for corrosion.

Make sure float switch moves freely and is making an electrical connection.

E. Docking

Docking your boat should be handled carefully to avoid potential damage.

Under normal wind and water conditions, the following considerations should be made:

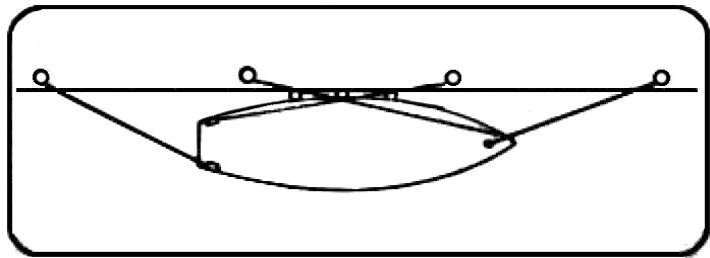


1. Whenever possible, your approach should be made against the prevailing wind and current to assist in stopping the boat. Where these conditions are contrary, the strongest should be used to determine approach.

1. Approaching the dock-dock lines and fenders should be at ready, loose gear stowed and decks cleared. Determine the direction of wind and current, and, once you decide which side of the boat will be against the dock, rig dock lines and fenders on the appropriate side. One dock

line should be attached to the bow cleat, another to the stem cleat opposite the

side that will lie against the dock. *NOTE:* If the boat is to lie against a piling, rig a fender board across two or more fenders. Tying up—attach bow and stern lines to dock, hauling boat in with fenders against dock.



Rig crossing spring lines to limit motion forward and aft. Be sure to allow some slack in all lines to compensate for tidal activity if present. Never use bow rail, stern rail or stanchions to secure the vessel, even for brief periods.

2. For other types of moorings, or for abnormal wind or water conditions, consult your *Chapman's* or other approved boating guide.

F. Anchoring

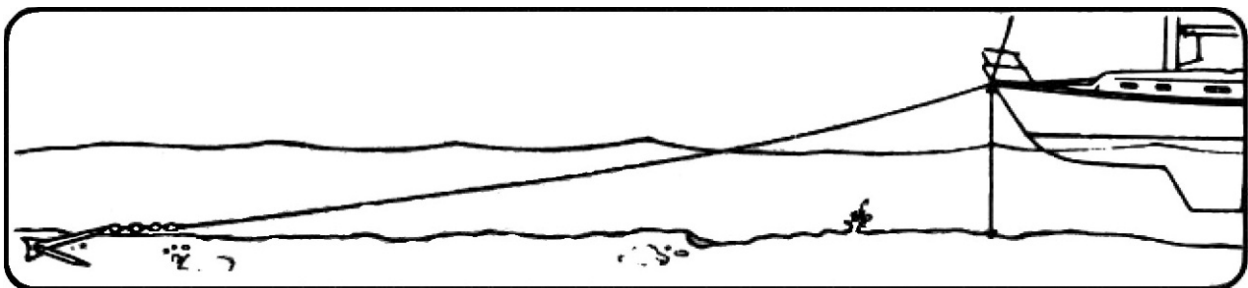
Your Hunter comes with an on-deck anchor well and a burying-type anchor as standard equipment. The anchor is selected to suit the size and weight of your boat under normal anchoring conditions, and provides its best holding characteristic in muddy or sandy bottoms.

When anchoring, pay particular attention to the scope of your anchor rode (i.e., the relationship between the depth of the water and the length of the rode). A good rule of thumb is to allow a scope of about 7:1 (a rode seven times as long as the vertical distance from the bow to the bottom). A helpful aid is to mark the rode every 20 feet or so with knots or other types of indicators. Before dropping anchor, make sure the bitter end is secured to the cleat in the anchor well.

Also, be sure to consider wind direction, currents, mean low tide depths and other local conditions when anchoring, as well as the positions of any boats already anchored nearby.

CAUTION: Anchoring in unusual water and/or weather conditions will require additional precautions. Consult your *Chapman's* or other approved guide for suggestions.

To weigh anchor, motor or sail (under main only) slowly forward. When at a point directly above the anchor, a quick tug should free it from the bottom. Take care not to damage the topsides when hauling the anchor aboard. It is good practice to thoroughly clean the anchor prior to placing it in the anchor well.



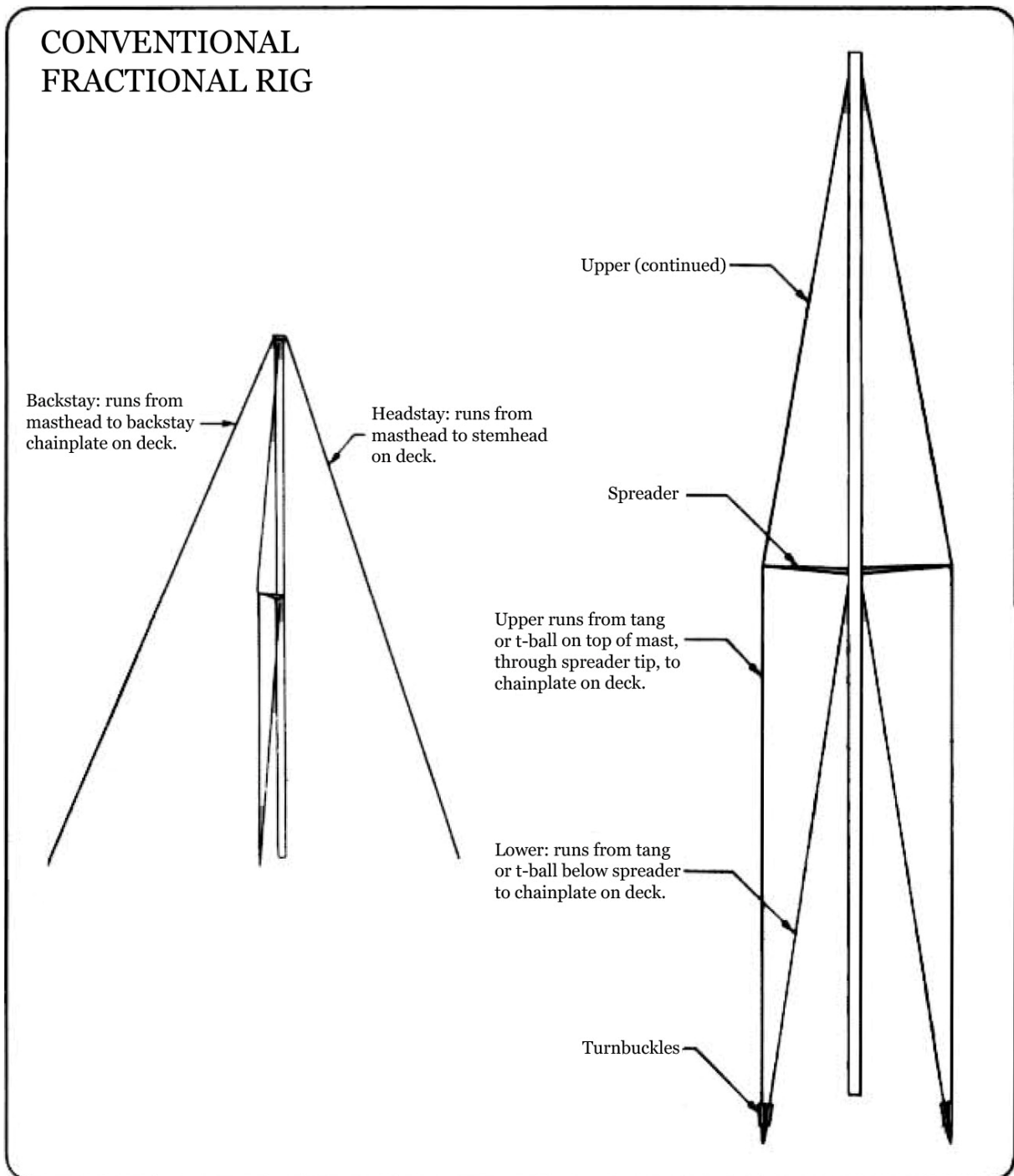
III. Sails & Rigging

A. Tuning the Conventional Fractional Rig (Hunter 23, Hunter 26.5, Hunter 333, Legend 35, Legend 37)

TUNING THE RIGGING:

After raising your mast, attach the headstay, backstay, upper shrouds and lower shrouds. Set the headstay turnbuckle at half open and then tighten back-stay turnbuckle to medium tension.

To center the mast athwartships, start with only slight tension on the upper and lower shrouds. Check that the mast is centered in the boat by measuring



from the masthead to the chainplates with a steel tape measure hoisted completely up the main halyard. Adjust the upper shroud until the measurements port and starboard are exactly the same. Now the spar is plumb athwartships, tension both uppers equally, counting turnbuckle revolutions as you go. Tighten uppers until you have approximately one inch of "prebend" fore and aft in the mast. This is achieved because the swept spreaders will push the middle part of the mast forward as you increase tension of the uppers.

Now tighten the lower shrouds evenly, making sure the mast remains straight athwartship. Sight up the luff groove to assure this straightness. Lowers should end up almost as tight as the uppers. (the uppers should always be the tightest.) Both the Legend 35 and Legend 37 are equipped with double spreaders. The three shrouds should be made progressively tighter toward the top of the rig; the uppers should be the tightest of all. Tighten backstay to a taut position: perhaps eight to ten turns past your original tension.

Check the mast tuning by sailing in medium winds (1-12 knots). Sometimes fine tuning the upper and lower shrouds is necessary when the spar is loaded in sailing conditions. Sail on both tacks, sighting up the luff groove to check athwartship straightness. Both upper and lower shrouds should be taut on the leeward side. When mast tuning is complete, install cotter pins in all turnbuckles and tape over sharp edges of the collar pins with chafe tape.

B. Roller Furling

OPERATING THE ROLLER FURLING:

1. To furl the sail, release the jib sheet and pull in on furling line from cockpit. Hand power is all that's needed; only special situations necessitate using a winch.
2. To roll the jib tightly around the headstay, it is advisable to keep some tension on the jib sheet. This can be done by holding the jib sheet and allowing it to slide through your fingers or by leaving two turns around a winch while furling. After jib has been completely furled, furling line should be cleated and jib sheet tensioned.
3. To unfurl, uncleat furling line, leaving one turn around the cleat for friction. This prevents snags on the drum. The jib sheet on leeward side of boat is then pulled to unfurl sail. It may be unrolled part way or all the way, depending on wind conditions.

REEFING THE ROLLER FURLING SAIL:

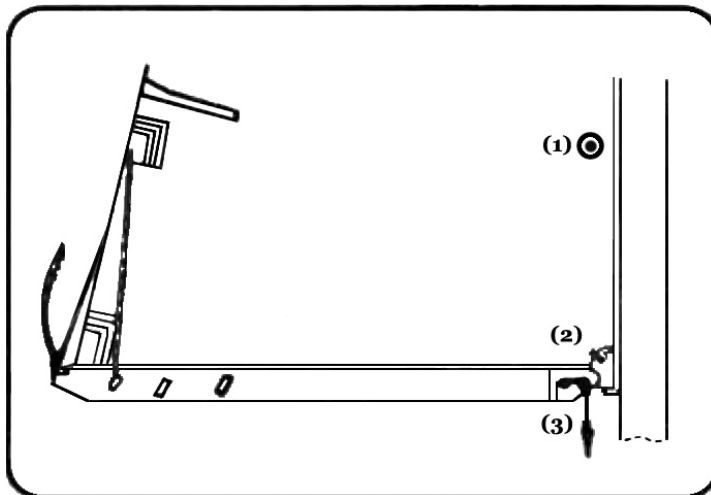
1. The sail should be tightly rolled to maintain optimum sail shape. Leave two turns around the sheet winch with the tail of the jib sheet held loosely in your hand. Then pull the furling line in against tension of jib sheet to achieve the tightest roll (and therefore the best sail shape).
2. You may reef the sail to any point. Most any sail may be reefed except a large genoa which is specifically cut very full and has a lightweight cloth that cannot withstand the strain of reefing. (Consult a sail maker if in doubt.)

C. Reefing the Mainsail

Your Hunter or Legend is equipped with an easy-to-use jiffy reefing system.

To reef the main:

1. Ease the mainsheet (boom vang if installed), making sure top-ping lift is secured in position.
2. Lower the main halyard so that tack reef cringle (1) can be placed on gooseneck reef hook (2). Re-tension main halyard when hooked in place.
3. Clew reef line (3) must now be tensioned so that clew reef cringle is brought down snugly against boom.
4. Readjust mainsheet and boom vang.
5. The reefed folds of cloth can be rolled up and secured with short lines through the reef points and around the folds and boom. **IMPORTANT:** Be sure to untie these first when shaking out the reef.
6. To unreef, reverse the procedure.



D. Sail Care and Storage

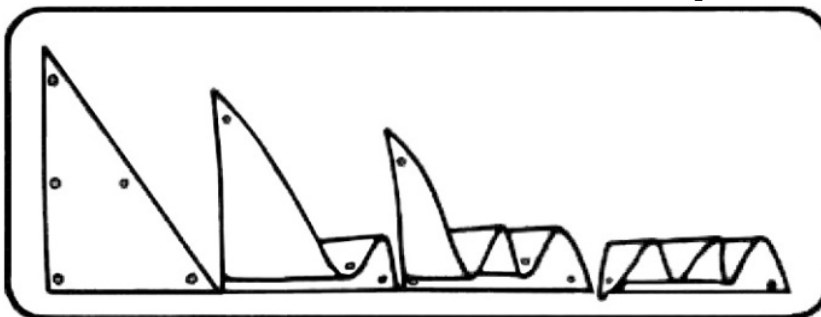
Your Hunter or Legend comes with Dacron mainsail and 110% genoa jib. To extend the life of your sails and maintain their best performance:

1. Never use them in wind ranges that exceed their capabilities.
2. Never let them luff for extended periods of time.
3. Rinse your sails in freshwater whenever possible if you sail in saltwater.
4. Tub wash them every few seasons to keep them bright and attractive. **CAUTION:** Do not machine wash. Use a mild detergent in warm water, and
5. *Remove all detergents completely with a thorough rinsing.*

For oil and grease stains, use commercial cleaning solvents. Should a yellow stain develop, bleach with oxalic acid and rinse thoroughly. Rust stains should be soaked in a warm solution of two parts hydrochloric acid per 100 parts water, rinsing thoroughly.

After rinsing your sails, spread them and allow drying thoroughly before bagging. This is a good time to inspect them for minor damage. When dry, fold according to diagram. First spread sail on flat surface, then fold in a smooth, accordion pleat from the foot to the heel. Next, roll the folded sail from the tack to the clew and slide carefully into bag.

At the end of each season, it is good practice to have your local sail maker inspect your sails for signs of wear and tear.



E. Care of Standing Rigging

The stays and shrouds on your Hunter or Legend are highly durable stainless steel to insure years of reliable service. To protect your standing rigging, keep it clean and, whenever possible, rinse thoroughly with freshwater. Check occasionally for "fish hooks," strands of wire that have broken and curled outward. These can snag sails and inflict painful cuts in bare hands. Broken strands indicate the wire is deteriorating and should be replaced.

Also inspect turnbuckles regularly and replace any missing cotter pins. Occasional lubricating improves both the life and the function of the turnbuckles.

F. Care of Running Rigging

To protect your running rigging (sheets, halyards) from damage, wash with cold water (and a mild detergent, if necessary), especially after exposure to saltwater. Rinse thoroughly and coil. Hang the tail ends of halyards off the deck to promote drying. Sheets should also be hung to dry.

Inspect all lines periodically for fraying and other damage. Lines showing substantial wear should be replaced.

G. Stepping the Mast on the Hunter 23

Hunter Marine recommends that you walk through the following seven steps and assign each person their respective task and positions during the stepping of the mast. Sailing is a fun and safe sport when the crew operates as a team. Good luck and smooth sailing.

STEP 1:

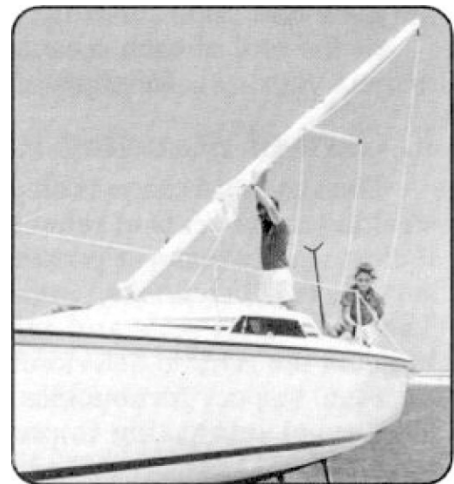
You will start off by raising the boom crutch to its highest position. Then walk the mast aft with the main-sail track down until the base of the mast lines up with the mast step. Position the mast correctly in the step and have the crew member designated push the pin through the aft hole connecting the two parts at the step to form a hinge.

Loosen all turnbuckles until there are four (4) full turns on each end and then attach the uppers, lowers and the backstay to the appropriate chainplates. Attach a swivel block, not included, to the mooring pin in the bow. Tie the jib sheet to the forestay turnbuckle with a bowline and lead the sheet through the swivel block and aft to one of the jib sheet winches. You are now ready to raise the mast. (We suggest that you double-check these procedures one more time before going to step two.)



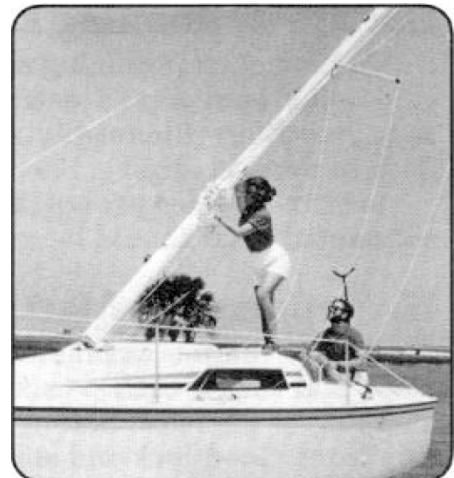
STEP 2:

The strongest of the crew members will be the one to raise the mast as far as possible while standing in the cockpit at the forward end while another crew member puts tension on the line attached to the headstay by cranking the jib sheet winch with the winch handle. Tighten this line as tight as you can.



STEP 3:

After making sure that the headstay line is fully supporting the mast and is now securely cleated, the crew members change positions; the crew member at the winch takes the place of the crew member at the mast and *vice versa*.





STEP 4:

The mast continues to be raised by a joint effort of cranking the winch while at the same time hoisting/guiding the mast easily, as the headstay line will carry the bulk of the weight. Team effort here pays off. Be sure it doesn't lean from side to side; keep it straight as it goes up.

STEP 5:

The crew member guiding the mast upward holds it in the upright position while the crew member at the winch goes forward. Disconnect the headstay line and attach the headstay to the chainplate.



STEP 6:

All you need to do now is insert the forward pin through the holes at the mast step, thereby securing the mast to the mast step and deck. The other crew member continues to hold the mast steady during this final procedure.

STEP 7:

Now all you have left to do is tighten and tune the rigging, attach the sails and give your Hunter 23 the "once over" before backing the trailer into the water and setting out to sea. Make sure all your gear is properly stowed, your car is locked and you have the keys, and then you're ready for any adventure waiting you and your crew.

HUNTER 23 MOTOR:

The Hunter 23 outboard motor should be operated in accordance with the instructions provided by the manufacturer.

As a precaution to insure that you do not lose the outboard if the clamp comes loose, *always have a safety line attached from the motor to the boat.*

HUNTER 23 TRAILER:

It is recommended that you maintain your trailer weight at approximately 225 pounds.

IV. Maintenance

A. Electrical Systems

The electrical system is a 12-volt negative ground installation. The owner should periodically inspect battery(ies) and cables for signs of corrosion, cracks, and electrolyte leakage.

B. Plumbing Systems

All pumps should be checked frequently to insure proper operation. **This is an especially important regular maintenance item since proper functioning of a pump could save your vessel from serious damage in the future.**

Inspect all hoses for chafing and dry rot. See that hose clamps are tight. Check that the pump Impeller area is clean and free of obstructions.

Inspect electrical wiring for corrosion. Make sure float switches move freely and are making an electrical connection.

The owner should become familiar with the layout of the water and waste systems by walking through the boat with the diagrams provided in this manual. It is especially important that the owner mows all thru-hull valve locations and inspects for leaks frequently.

General Thru-hull List (*varies from boat to boat-see diagrams in section VI*)

- 1) Engine cooling system
- 2) Galley sink
- 3) Head sink
- 4) Head toilet (water intake)
- 5) Holding tank discharge
- 6) Scupper drains

C. Fuel System

The owner should inspect the condition of fuel lines for cracks or leaks. A primary source of fuel-related problems is water in the system. The owner should seek out only well maintained fueling facilities and make sure fuel fill caps are tightly secured after filling. Check and maintain fuel filters periodically.

D. General Care

CLEANING FIBERGLASS SURFACES:

Fiberglass surfaces should be cleaned regularly. Normal accumulations of surface dirt can be removed simply by occasional rinsing with water. If your boat is operated in salt water, more frequent rinsing will be required. To remove stubborn dirt, grease or oil, use a mild detergent and a soft brush. Rinse with clean fresh water.

It is also a good idea to wax the fiberglass once or twice a year to maintain a deep, glossy appearance. Your local marine supply should be able to provide an appropriate wax.

FIBERGLASS REPAIRS:

Your Hunter or Legend dealer can supply you with the proper gel coat used to repair any hairline cracks or chips.

1. Using a mild detergent solution, clean repair area completely of wax, dirt or oil, and dry completely.
2. To patch "spider web" or hairline cracks, begin by widening the crack so that it will hold putty. This is most easily done with an electric drill or router equipped with a V-shaped grinding bit. Also, cut one-quarter inch or so beyond the end of each crack to relieve any stress.
3. Brush away all dust from the crack.
4. Mix gel coat with filler powder to form a creamy consistency. Mix more than enough patching compound to do the job and stir to a smooth blend.
5. Temperatures should be in the 60s or above, or a heat lamp should be used for application.
6. Using a putty knife, work the mixture firmly into the crack to eliminate air bubbles. Leave an excess of about one-sixteenth of an inch above the surface of the crack to allow for shrinkage. Wet sand and buff (with compound) the repaired area.

TEAK CARE:

Teak wood is an extremely durable wood with high oil content. To maintain that durable quality it should be given a coat of teak oil once a year or more in northern climates and twice a year or more in tropical climates.

Teak can be allowed to weather out, as seen on many boats, but this will eventually lead to cracking and splitting.

If you wish to maintain your teak with varnish, resin or urethane, a sealer should be applied after cleaning and sanding. Complete finishing procedures can be obtained from your marine finish products manufacturer or supplier.

FABRIC CARE:

Cushions should be removed and stored at home if possible. If not, prop them vertically to promote airflow around each cushion.

WINCH MAINTENANCE:

Follow the maintenance instructions prescribed by the winch manufacturer.

GENERAL HARDWARE MAINTENANCE:

Check all fittings regularly to be sure screws are tight. Occasionally lubricate all moving parts on such fittings as blocks, turnbuckles and cam cleats, as well as the locking pins of snatch blocks, track slides, spinnaker poles, etc.

Inspect chocks, cleats and fairleads for roughness and smooth with fine grained emery paper if necessary.

Also, replace any missing or damaged cotter pins in turnbuckles and shackles, and either tape them or use protective covers manufactured for that purpose.

V. Storage/Winterization

IMPORTANT: Winter storage is recommended to be done in one of the following three ways, either:

- 1) by blocking the boat via a cradle; or
- 2) with chained stands on level ground; or
- 3) by storing the boat in the water with a bubbler system to prevent icing.

Damage to your boat, including engine misalignment caused by twisting, is not covered by the warranty.

A. Sails

Sails and synthetic lines should be washed and dried thoroughly. Sails should be properly folded and stowed in a dry, well ventilated place. Many sailboat owners send their sails back to the sail manufacturer at the end of each season. The sail maker will check the stitching and sailcloth for wear and store the sails until the start of the next season.

B. Electrical

Remove battery from boat (Refer to Engine Manual).

C. Cushions

Cushions should be removed and stored at home if possible. If not, prop them vertically to promote airflow around each cushion.

D. Hatches

Hatches and floorboards should be left open a crack to provide ventilation for the whole boat. However, it is prudent to loosely cover any open hatches with a tarp or plastic sheeting.

E. Outboard Engine

1. Take it home and store it in a safe place. Be *very careful* storing the gas tank as the gasoline is very flammable.

VI. Specifications & Technical Information

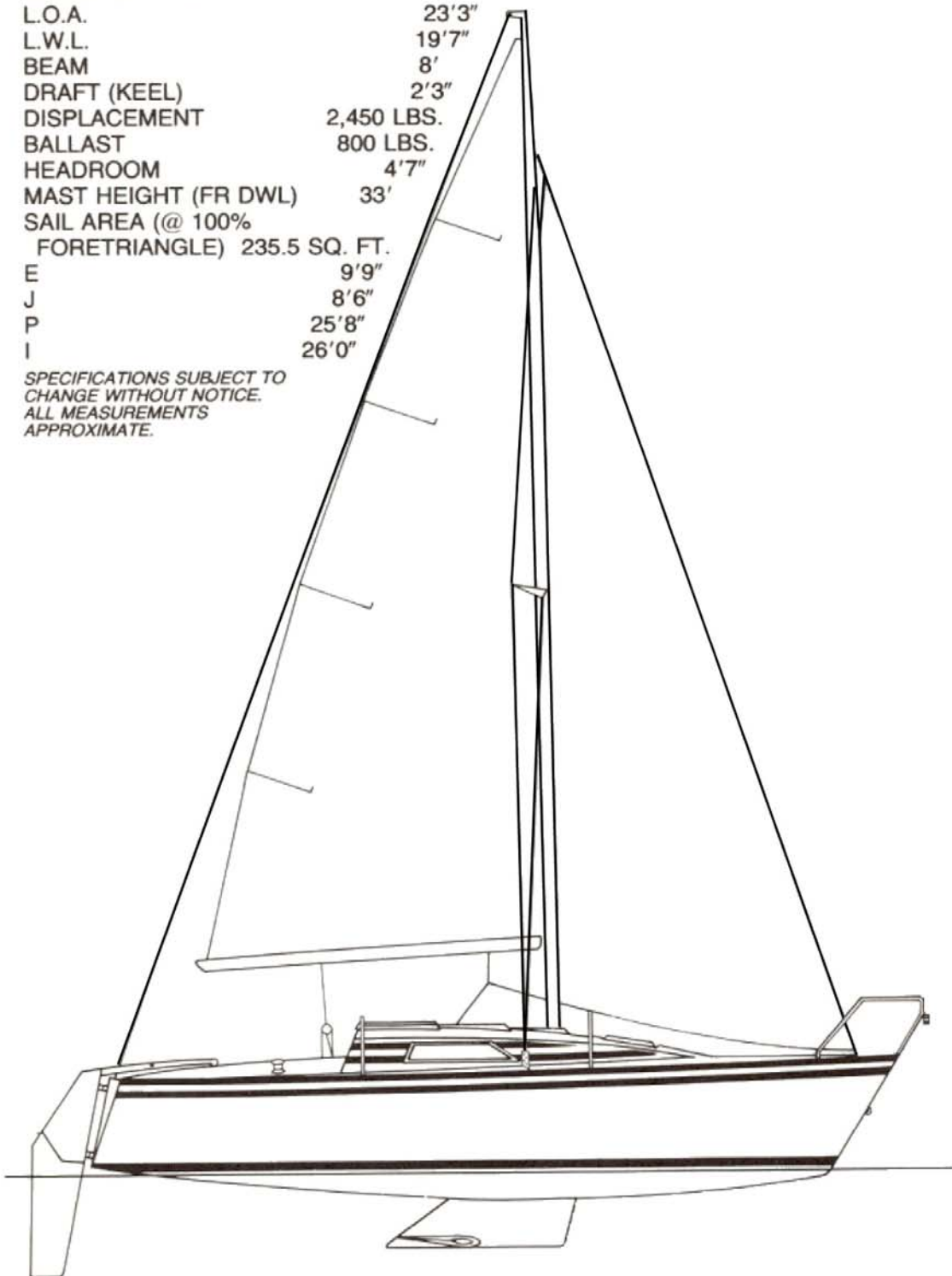
HUNTER 23

PROFILE

SPECIFICATIONS

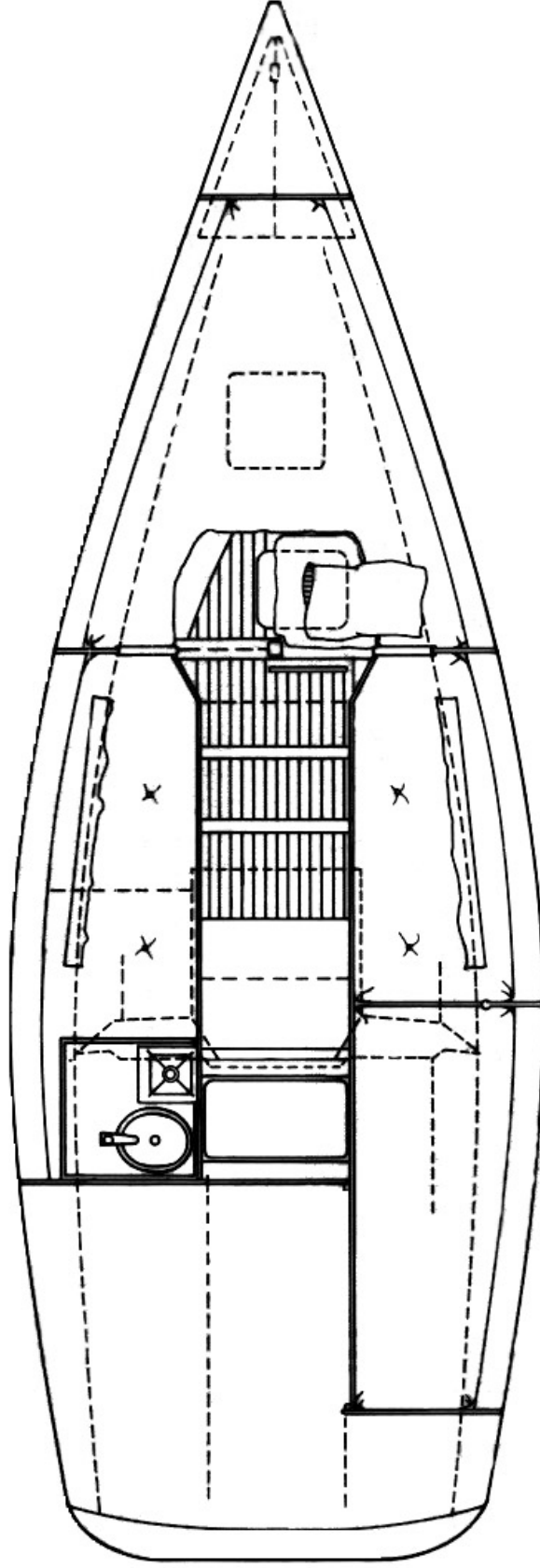
L.O.A.	23'3"
L.W.L.	19'7"
BEAM	8'
DRAFT (KEEL)	2'3"
DISPLACEMENT	2,450 LBS.
BALLAST	800 LBS.
HEADROOM	4'7"
MAST HEIGHT (FR DWL)	33'
SAIL AREA (@ 100% FORETRIANGLE)	235.5 SQ. FT.
E	9'9"
J	8'6"
P	25'8"
I	26'0"

*SPECIFICATIONS SUBJECT TO
CHANGE WITHOUT NOTICE.
ALL MEASUREMENTS
APPROXIMATE.*



HUNTER 23

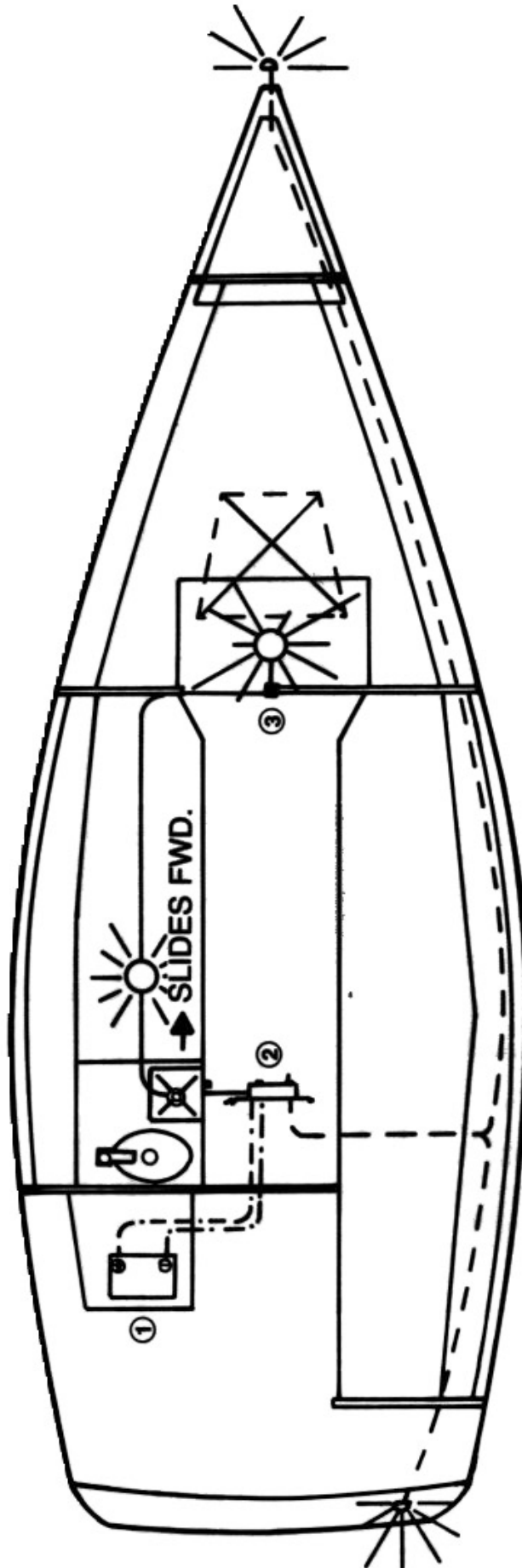
INTERIOR



HUNTER 23

ELECTRICAL DIAGRAM

NOTE: THE MAST IS GROUNDED TO THE FWD. KEEL BOLT WITH AN 8 GA. BLACK WIRE



LEGEND

- 1. 72 AMP BATTERY
- 2. SWITCH PANEL
- 3. MAST POST

SYMBOLS

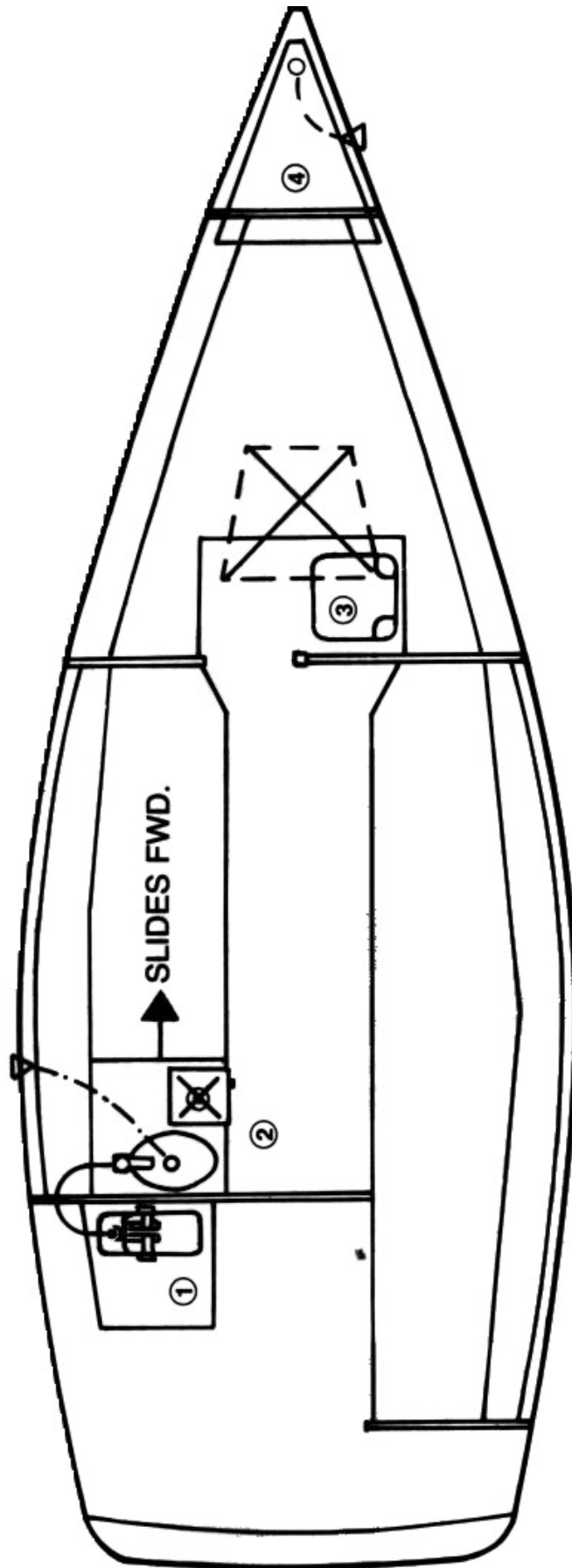
- 16 GA. RED, BLUE, WHITE, BLACK
- 16 GA. WHITE, BLACK
- · - 8 GA. BLACK
- · - 8 GA. RED
- ⊗ CABIN LIGHT ROUND
- ⊗ BOW & STERN

COLOR GAUGE APPLICATION

- | | | |
|-------|--------|----------------------------|
| RED | 16 GA. | MAST LIGHT |
| BLUE | 16 GA. | CABIN LIGHTS |
| WHITE | 16 GA. | BOW & STERN LIGHTS |
| BLACK | 16 GA. | COMMON |
| RED | 8 GA. | POS. BATTERY |
| BLACK | 8 GA. | NEG. BATTERY & MAST GROUND |

HUNTER 23

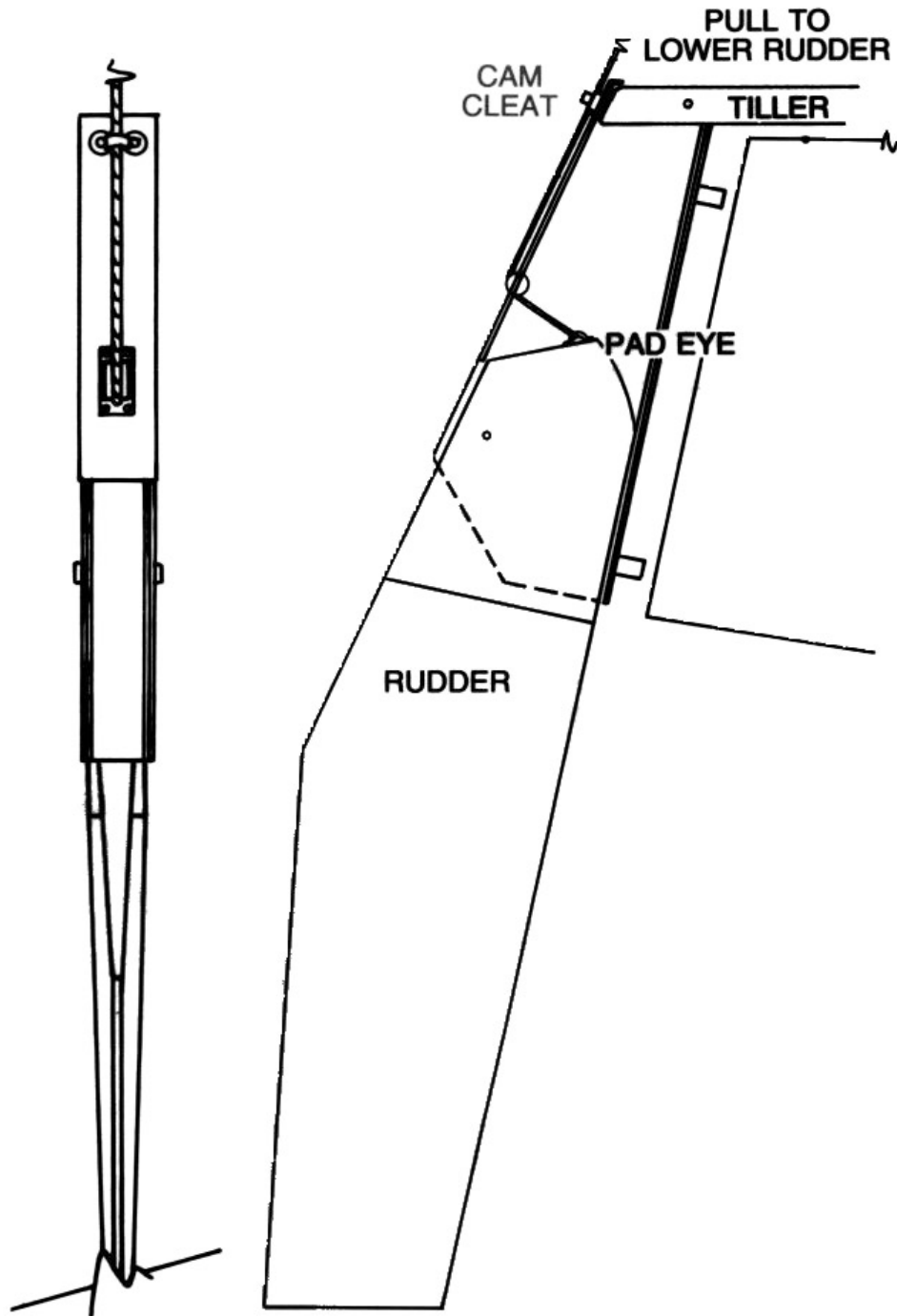
PLUMBING DIAGRAM



- | | |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. 5 GAL WATER TANK</p> <p>2. GALLEY</p> <p>3. HEAD</p> <p>4. ANCHOR WELL</p> | <p>LEGEND</p> <p>— 1/2" POLYBUTYLENE TUBING (FRESH WATER)</p> <p>- - 1" SHIELDVAC HOSE (ANCHOR WELL DRAIN)</p> <p>- · - 1-1/4" SHIELDVAC HOSE (GALLEY)</p> <p>▽ PLASTIC THRU-HULL FITTING</p> |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

HUNTER 23

RUDDER MECHANISM



HUNTER 23

ANCHOR WELL FORESTAY ATTACHMENT

