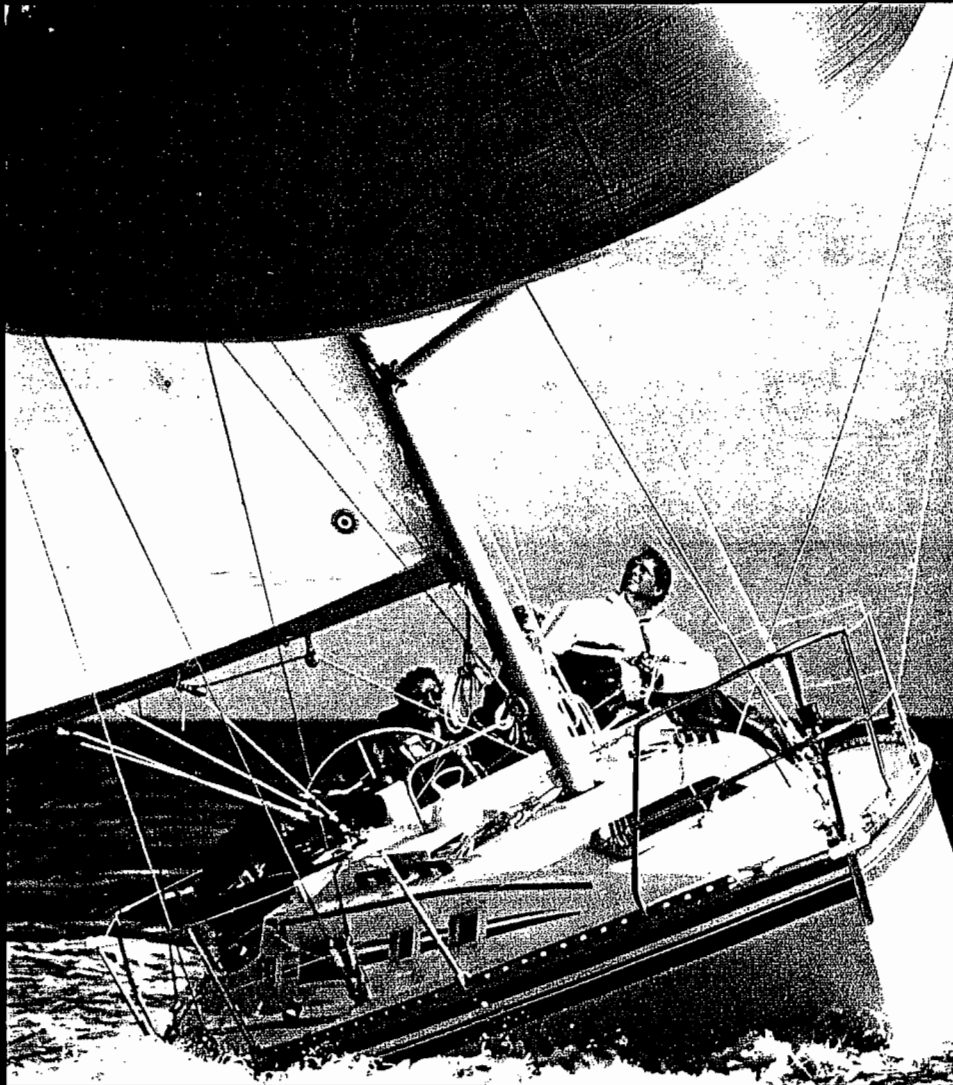
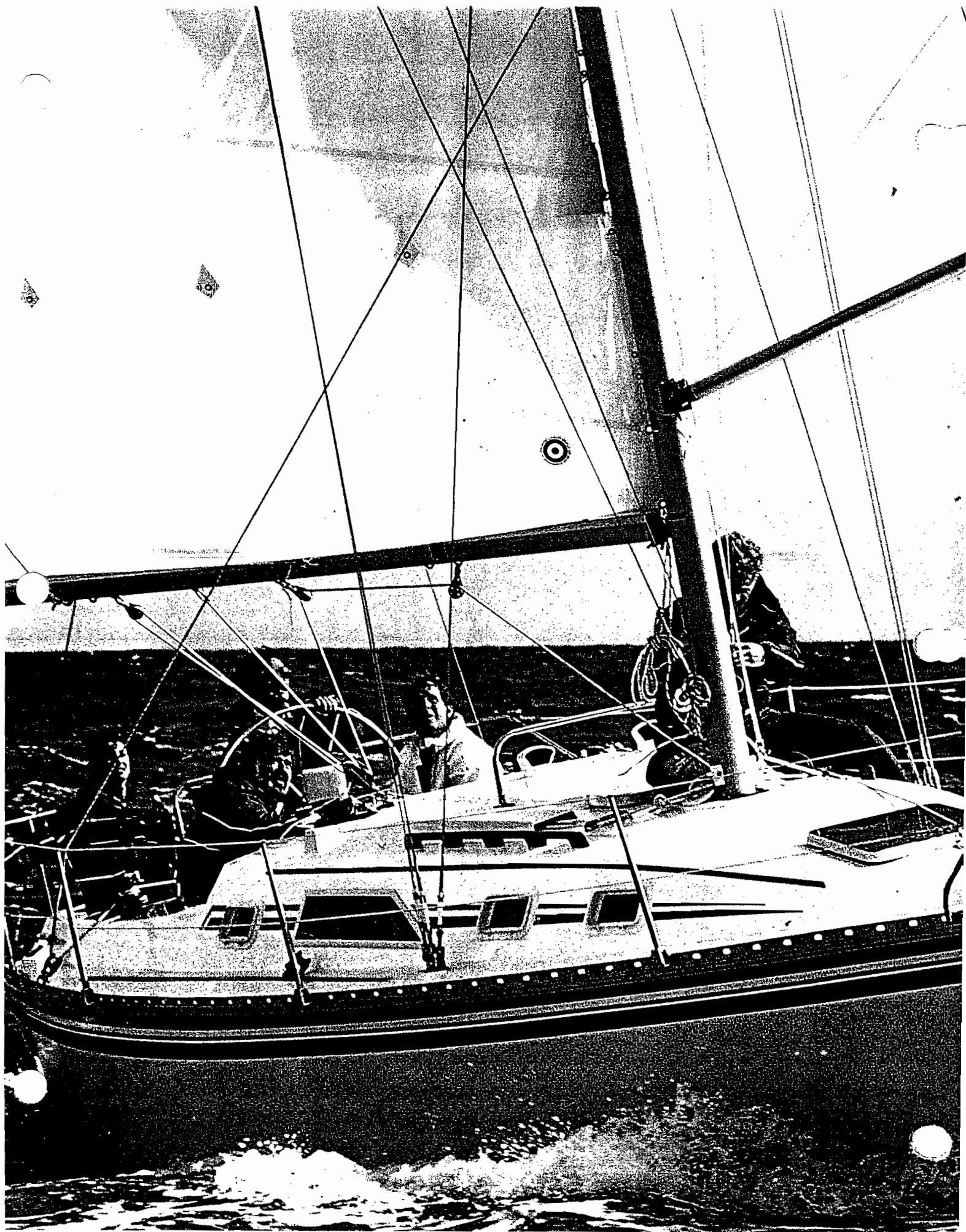
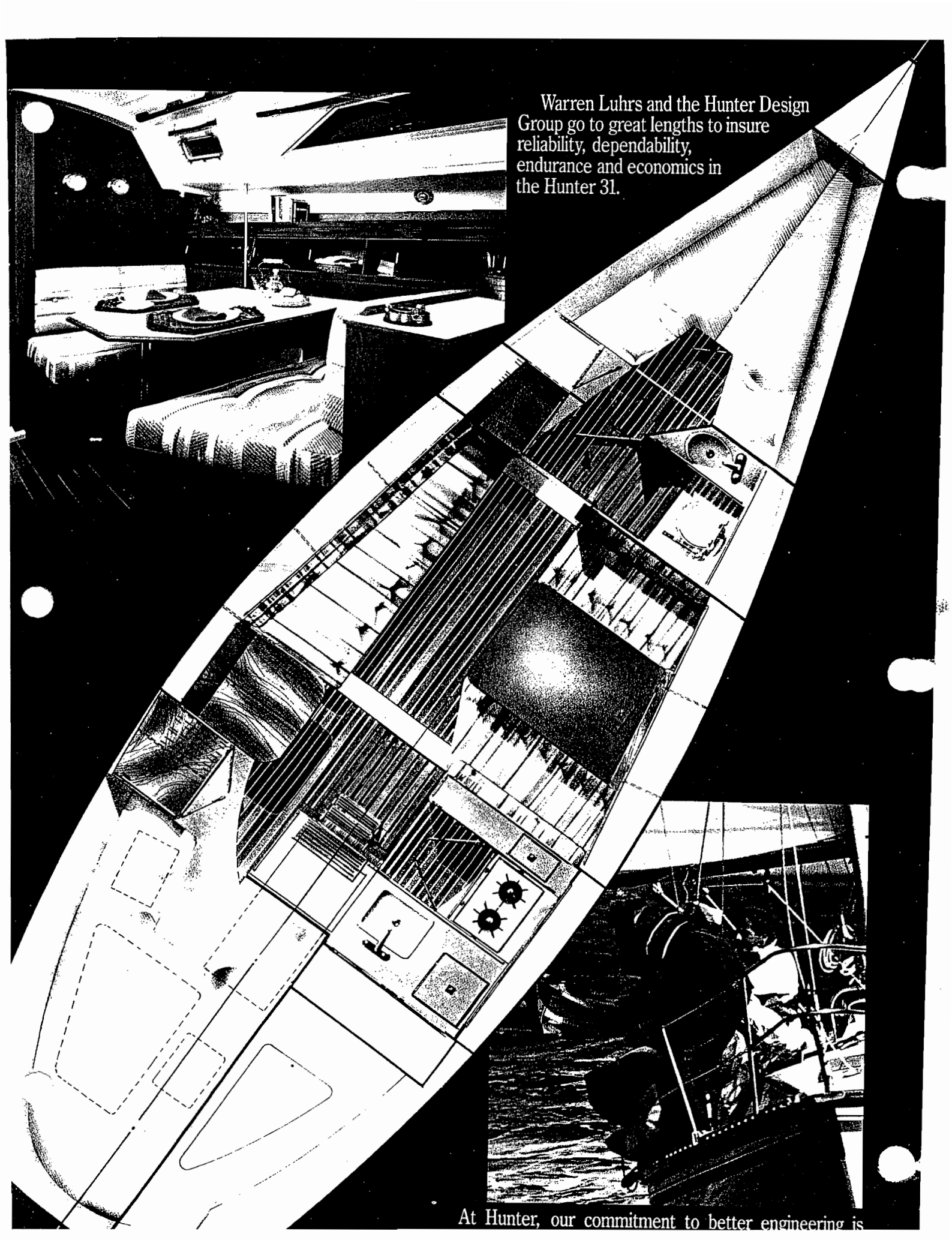


Committed to  
Better Engineering.  
**HUNTER**



31





Warren Luhrs and the Hunter Design Group go to great lengths to insure reliability, dependability, endurance and economics in the Hunter 31.

At Hunter, our commitment to better engineering is



## Specifications:

L.O.A.	31'4"	9.55m.
L.W.L.	26'3"	8.00m.
Beam	10'11"	3.33m.
Draft:		
Shoal	4'0"	1.22m.
Deep	5'6"	1.68m.
Displacement:		
Shoal	9900 lbs.	4494.6 kg.
Deep	9700 lbs.	4403.8 kg.
Ballast:		
Shoal	4200 lbs.	1906.8 kg.
Deep	4000 lbs.	1816 kg.
Mast height		
From Waterline	47'4"	14.43m.
Headroom	6'3"	1.90m.
Sail area	458 sq.ft.	42.55 sq.m.
E (Mainsail foot)	11' 0"	3.35m.
J (Foretriangle base)	12' 0"	3.66m.
P (Mainsail luff)	37'5"	11.40m.
I (Foretriangle ht.)	42'0"	12.80m.

## What Makes Hunter Your Best Buy Today.

The Hunter 31 is a proven blue water boat. Sailors from Maine to Florida, Texas, California and North have been making the Hunter 31 their choice.

She's been engineered for those long cruises or your favorite races.

One look below decks and you'll see all the amenities you could ask for. She's been designed for ease of movement as well as maximum utilization of the 6' 3" headroom and the 10'



shower and vanity, a large chart table with light, berths for seven, loads of stowage space and all is color coordinated.

Above decks, you'll find a well designed and engineered boat. Molded-in non-skid on the deck allows your crew to move with ease and safety. The cockpit is large and contains pedestal steering with complete engine controls and a lighted compass. The cockpit seats contain lockers for convenient stowage of lines and other deck gear. You and your crew can



# CRUISE PAC

While everyone else was complaining about the high cost of marine hardware and accessories. Hunter was doing something about it.

By making all the accessories and hardware you standard equipment. We buy top quality gear in very large quantities. The result? Equally large savings.

Cruise-Pac® isn't just sails, winches, and running rigging—it's things like anchors, fire extinguishers, running lights, life jackets—even a copy of *Chapman's Piloting, Seamanship, and Small Boat Handling*.

We invite you to compare the Standard Equipment list below with that of any other manufacturer.

You'll discover that Hunter offers more—and better—gear. For less.

## RIGGING

Dacron sails: main and 110% genoa

Jiffy reefing, main

Sheets

Two, two-speed sheet winches (self-tailing)

Mainsheet winch

Halyard winch

Double standing sheet stopper

Double line organizer

Internal halyards, pre-stretched dacron

Mainsheet stopper

Midboom sheeting

Mainsheet traveler

Inboard recessed genoa tracks with cars

Aluminum mast and boom

Windex®

## DECK

Bow pulpit, stainless steel

Stern rail, stainless steel

Stainless steel swim ladder

Double lifelines

Mooring cleats

Teak handrails

On-deck anchor well

Cockpit seat lockers

Molded-in non-skid deck

## COCKPIT

T-shaped cockpit

Pedestal steering, w/engine controls and lighted compass

Wraparound coamings

## ELECTRICAL

Dual 12 volt battery w/switch

European running lights

Bilge pump, automatic

110 volt dockside power w/ 50' (15.2m) cord

Multiple AC outlets in cabin

Mast steaming light & anchor light

Cabin lights

## CABIN

Selected hardwood trim

Teak and holly cabin sole

Opening ports

Tinted forward hatch

Tinted Lexan® slider hatch

Tinted mid-cabin vent hatch

Dinette table

2 full hanging lockers

Fully enclosed head with mirror

Pressure water in lavatory

Shower

Vanity in head

Navigator's station

Chart table light

Fabric cushions

## GALLEY

Stainless steel sink

Hot and cold pressure water system

2 burner stove w/oven

Formica® countertops

Icebox

Fresh water tank

Gallons 35.0

Liters 132.5

## AUXILIARY POWER

Diesel engine, freshwater cooled

Fuel tank

Gallons 18.0

Liters 68.1

## GENERAL SAFETY GROUP

Anchor and line

Life jackets

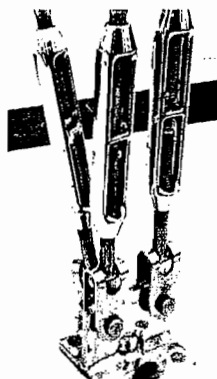
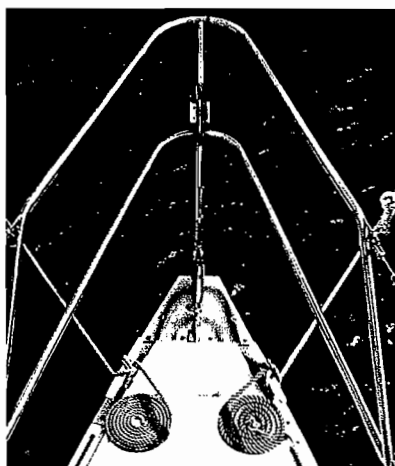
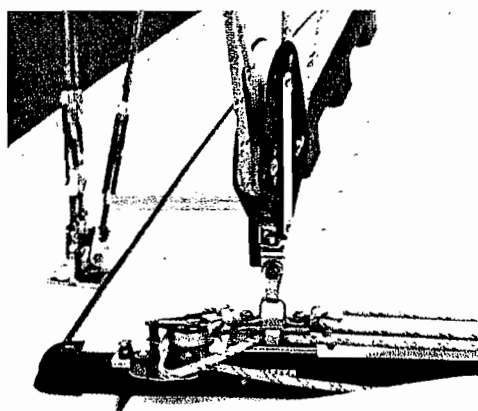
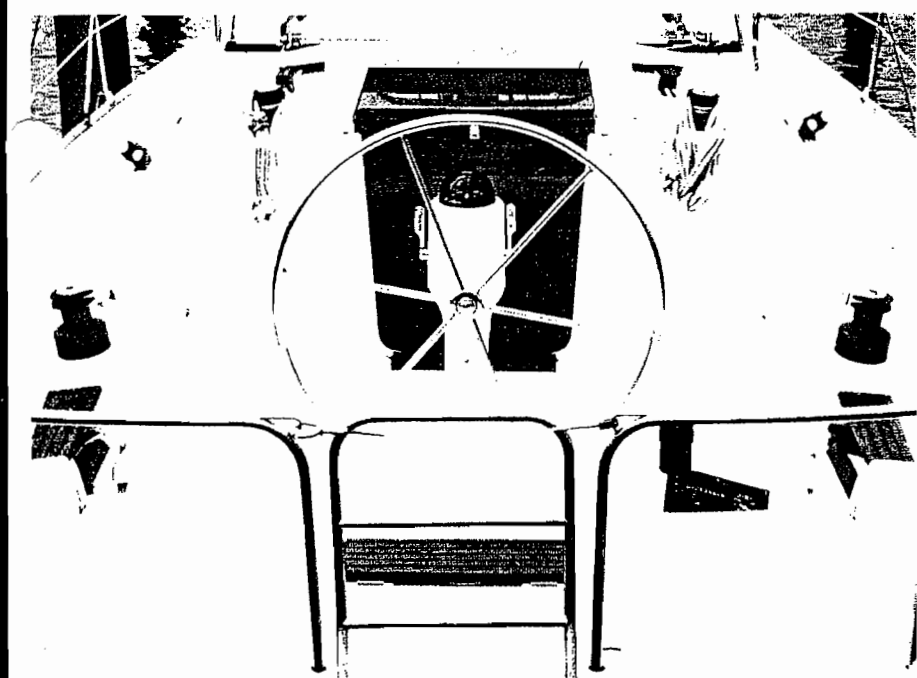
Signal horn

Throwable device

2 fire extinguishers

Emergency tiller

*Chapman's Piloting, Seamanship and Small Boat Handling*



Spinnaker Gear shown in some of the photographs is not of the standard CRUISE-PAC® equipment.

# HUNTER

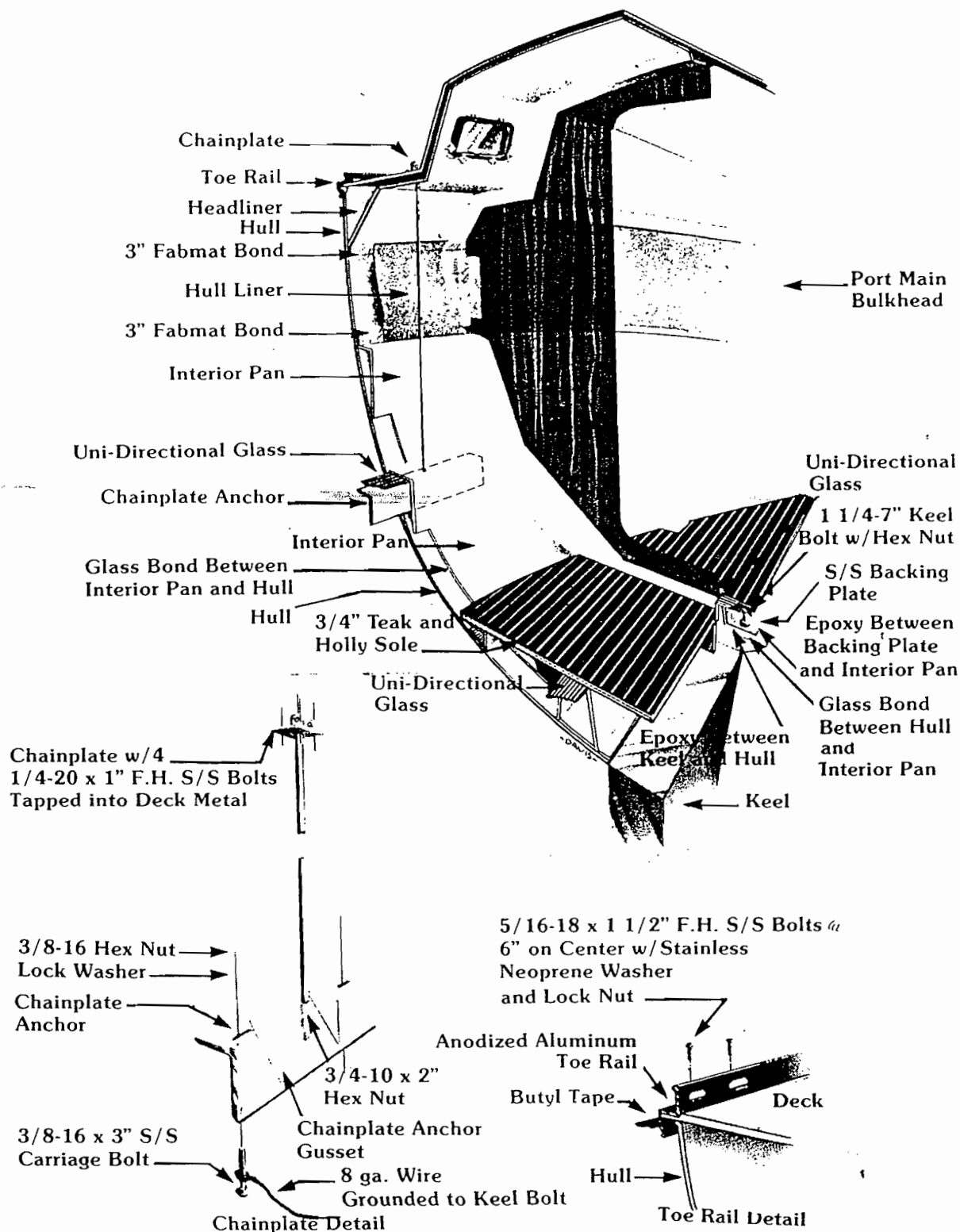
Hunter Marine Corporation  
P.O. Box 1030 • Route 441  
Alachua, Florida 32615



Racing suits provided by RUKKA, USA Inc.

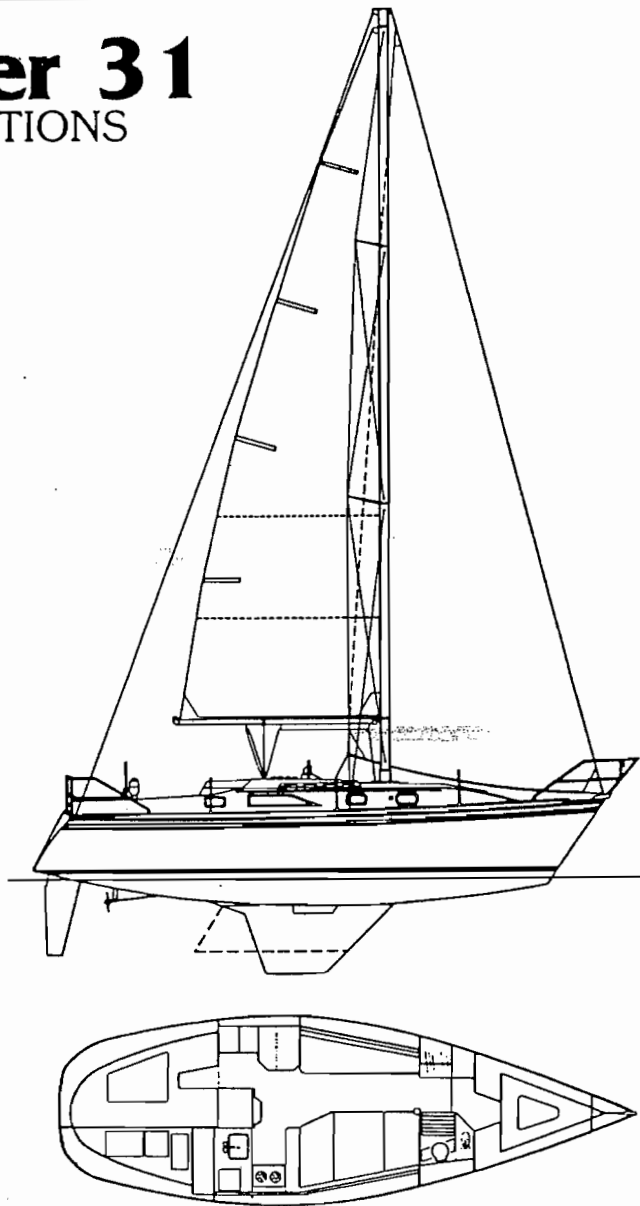
# Hunter

## CONSTRUCTION DETAIL



# Hunter 31

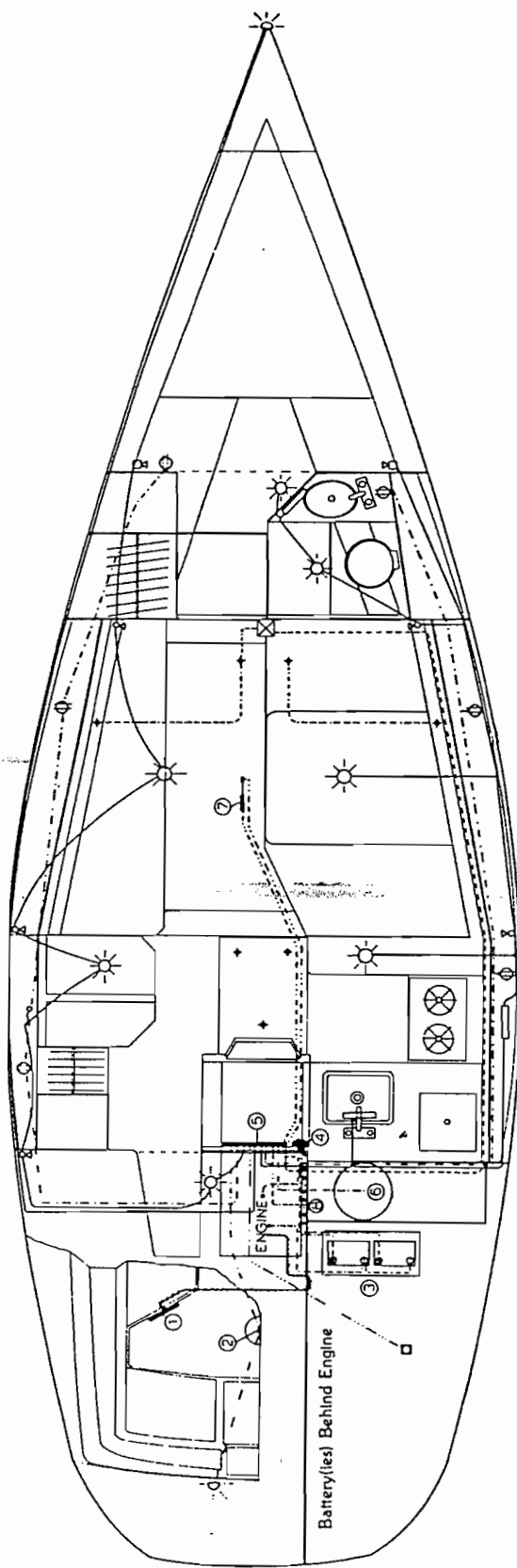
## SPECIFICATIONS



L.O.A.	31'4"	9.55m.
L.W.L.	26'3"	8.00m.
Beam	10'11"	3.33m.
Draft: Shoal	4'0"	1.22m.
Deep	5'6"	1.68m.
Displacement: Shoal	9,900 lbs.	4,494.6 kg.
Deep	9,700 lbs.	4,403.8kg.
Ballast: Shoal	4,200 lbs.	1,906.8 kg.
Deep	4,000 lbs.	1,816 kg.
Mast height	41'5"	12.62m.
from waterline	47'4"	14.43m.
Headroom	6'3"	1.90m.
Sail area	458 sq.ft.	42.55 sq.m.
E (Mainsail foot)	11'0"	3.35 sq.m.
J (Foretriangle base)	12'0"	3.66m.
P (Mainsail luff)	37'5"	11.40m.
I (Foretriangle ht.)	42'0"	12.80m.

# Hunter 31

## AC/DC ELECTRICAL DIAGRAM



### LEGEND:

- ① ENGINE IGNITION PANEL
- ② COMPASS LIGHT
- ③ BATTERIES
- ④ SAFETY MAIN SWITCH
- ⑤ SWITCH PANEL
- ⑥ WATER HEATER
- ⑦ BILGE PUMP W/AUTOMATIC FLOAT SWITCH
- ⑧ PRESSURIZED WATER PUMP

### SYMBOLS:








- ☒ MAST
- ☐ SHORE POWER INLET
- ⊕ 110v OUTLET
- ☀ ROUND CABIN LIGHTS (LG)
- ☀ ROUND CABIN LIGHTS (SM)
- ☀ WHITE CABIN LIGHTS
- ☀ SINGLE LIGHT (SILVER)

*Continued on next page*



# Hunter 31

## ELECTRICAL DIAGRAM CONTINUED

	BOW & STERN LIGHTS	-----	8 GA. WIRE (GRD)
	FLUORESCENT LIGHTS (SM)	-----	4 GA. BATTERY CABLE
	CHART LIGHT	-----	14/2 GREY MARINE POWER
	KEEL BOLTS	-----	14/3 MARINE POWER
	CHAINPLATES	-----	10/3 MARINE POWER
	16 GA. WIRE	#####	IGNITION WIRES
	12 GA. WIRE	-----	WIRE HARNESS (TO MAST)

### WIRING NOTES:

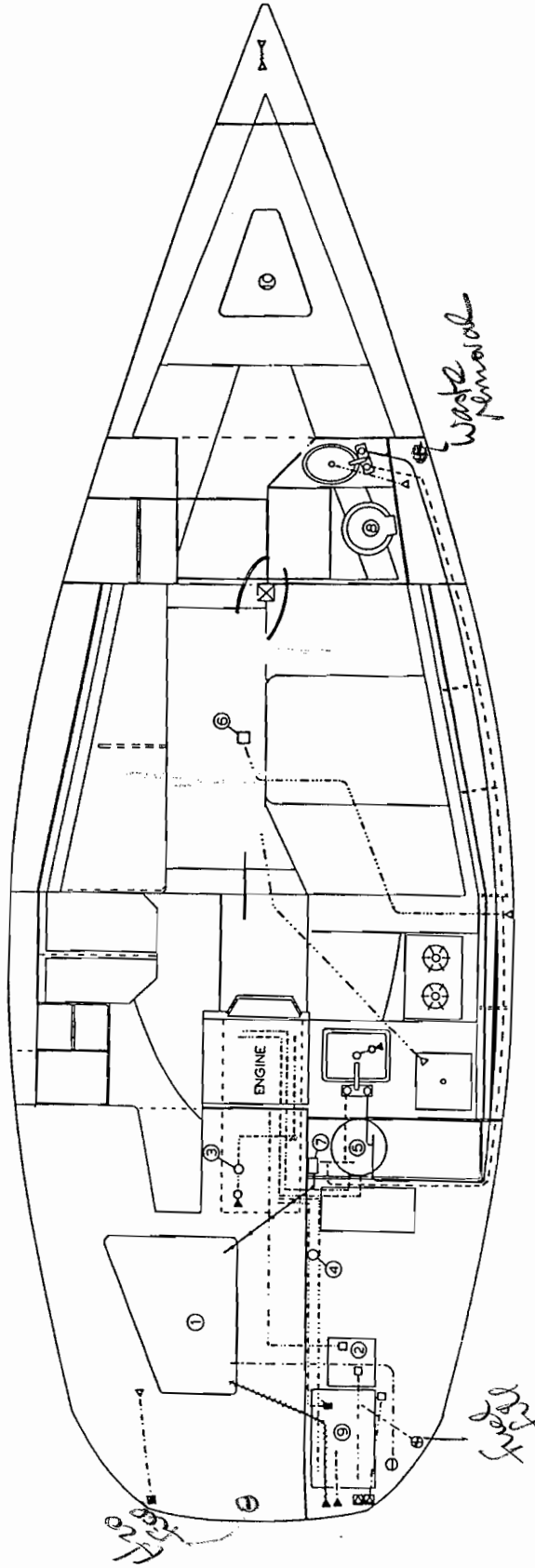
COLOR:	GAUGE:	APPLICATION:
RED	16	ANCHOR LIGHT
GREEN	16	STEAMING LIGHT
BLUE	16	CABIN LIGHTS
WHITE	16	BOW LIGHT
RED	12	PRESSURIZED WATER PUMP
BROWN	12	BILGE PUMP
BEIGE	12	SAFETY MAIN SWITCH TO INLINE FUSE AT PANEL, PANEL TO AUTOMATIC FLOAT SWITCH AT BILGE PUMP
RED	10	DC SUPPLY TO PANEL
BLACK	8	MAST AND CHAINPLATE GROUNDS
RED	4	BATTERY CABLES

ALL LEADS EXCEPT FLOAT SWITCH, MAST GROUND, AND CHAINPLATE GROUNDS ARE RUN WITH A BLACK WIRE OF EQUAL GAUGE. THESE ARE CONNECTED TO A COMMON GROUND AT THE SWITCH PANEL WHICH IS GROUNDED TO THE ENGINE WITH A 10 GAUGE BLACK WIRE.

WIRE HARNESS TO MAST CONSISTS OF ONE (1) RED (ANCHOR LIGHT) AND ONE (1) GREEN (STEAMING LIGHT) 16 GAUGE WIRE.

# Hunter 31

## PLUMBING DIAGRAM



### LEGEND:

- ① WATER TANK 33 gi
- ② WATERLOCK (MUFFLER)
- ③ SEA STRAINER
- ④ FUEL FILTER
- ⑤ WATER HEATER
- ⑥ ELECTRIC BILGE PUMP

- ⑦ PRESSURIZED WATER PUMP
- ⑧ HEAD
- ⑨ FUEL TANK 18 gi
- ⑩ HOLDING TANK 20 gi
- ⑪ VENTED LOOP
- ⑫ MANUAL WASTE PUMP

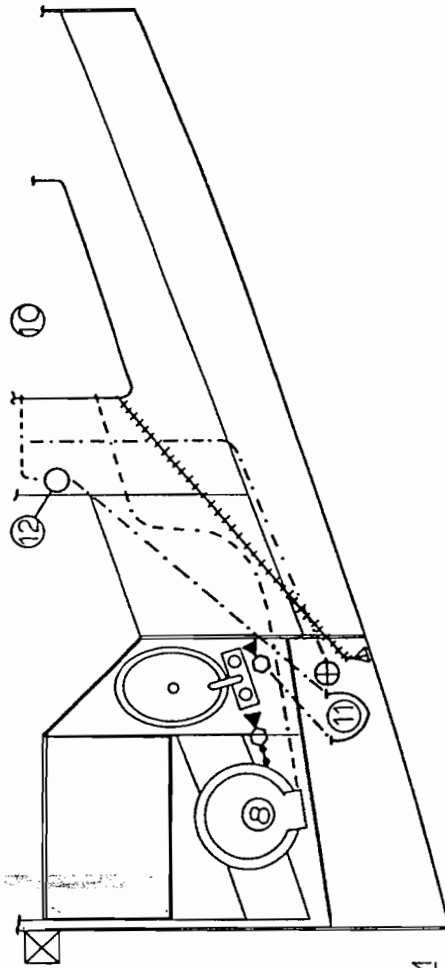
### SYMBOLS:

- ▲ THRU HULL (PLASTIC)
- ▲ THRU HULL (BRONZE)
- ▲ VENT
- GATE VALVE
- SCUPPER TUBE

Continued on next page

# Hunter 31

PLUMBING DIAGRAM CONTINUED



HEAD PLUMBING DIAGRAM

- ☒ THRU HULL SCUPPER TUBE
- ⊙ WATER FILL DECK PLATE
- ⊕ WASTE DECK PLATE
- ⊙ FUEL FILL DECK PLATE
- ☒ FUEL SHUTOFF VALVE
- ☒ MAST POST
- COLD WATER (POLYBUTYLENE TUBING 3/8" ID x 1/2" OD)
- HOT WATER (POLYBUTYLENE TUBING 3/8" ID x 1/2" OD)
- 1-1/2" FUEL FILL HOSE
- 2" SHIELDSAUST HOSE

- 1-1/2" SHIELDVAC HOSE W/CUFFS
- 1-1/4" SHIELDVAC HOSE W/CUFFS
- 1" SHIELDVAC HOSE W/CUFFS
- #### 3/4" SHIELDVAC HOSE W/CUFFS
- 1-1/2" SHIELDVAC HOSE
- 5/8" SHIELDVAC HOSE
- 3/4" BLACK WATER HOSE
- 5/8" WHITE HOSE W/BLUE TRACER
- FUEL FEED & OVERFLOW HOSE
- POLYBUTYLENE TUBING DRAINS



## SOUTHEASTERN FOUNDRY

### BOATS

H-25.5

H-27

H-28.5

H-31

H-34

H-40

H-45

### SHAFTING

1" x 54" x 0A x Bronze SMT

1" x 46 1/2" x 0A x Bronze SMT

1" x 49" x 0A x Bronze SMT

1" x 48 1/4" x 0A x Bronze SMT

1" x 50 3/4" x 0A Bronze SMT

1" x 71" X 0A x Bronze SMT

1" x 72 x 0A x Bronze SMT



## GENERAL PROPELLER

### Boats

H 25.5  
H 27  
H 28.5  
H 31  
H 34  
H 36  
H 37  
H 40  
H 45  
H 54

### Propellers

14 x 7 x RH x 2 Blade x 1" Bore  
13 x 10 x RH x 2 Blade x 1" Bore  
14 x 12 x RH x 2 Blade x 1" Bore  
15 x 12 x RH x 2 Blade x 1" Bore  
15 x 15 x RH x 2 Blade x 1" Bore  
16 x 15 x RH x 2 Blade x 1" Bore  
15 x 16 x RH x 2 Blade x 1" Bore  
17 x 10 x RH x 2 Blade x 1" Bore  
18 x 15 x RH x 2 Blade x 1 1/4" Bore  
18 x 13 x RH x 2 Blade x 1 1/4" Bore

## HOLDING TANKS

HUNTER 28.5

12 GALLON HOLDING TANK

HUNTER 31

15 GALLON HOLDING TANK

HUNTER 34

15 GALLON HOLDING TANK

(INCA TANK)

HUNTER 40

20 GALLON HOLDING TANK

HUNTER 45

TWO 15 GALLON HOLDING TANKS



# PRE-DEPARTURE CHECK-LIST

---

- Check bilge for excess water.
- Check weather conditions and tides.
- Check food supply.
- Check foul weather gear.
- Check linen, sleeping bags.
- Check fuel.
- Check water.
- Check sunscreens and sunglasses.
- Check tools.
- Check locking and anchor gear.
- Check radio operations.
- Check navigation charts and instruments.
- Check plans to a friend or Coast Guard. *(See next page.)*
- Check fuel for stove.
- Check cooking and eating utensils.
- Check battery water level.
- Check oil level, tight V-belts.
- Check for loose electrical connections in engine room.
- Secure tools or any loose equipment in engine room so as not to get fouled in engine.
- Check systems off; electrical cord stowed.
- Check hatches and drawers secured.
- Check steering lock to lock.
- Check mast for rigging irregularities and tightness.
- Check halyards and sheets are clear and ready to run.
- Check for lines or other obstructions near the propeller or bow.
- Check anchor ready to run.
- Check lifelines for tightness.
- Turn on fuel and water lines.
- Check for 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 \_\_\_\_\_ HP \_\_\_\_\_ 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 (TIME & DATE) \_\_\_\_\_

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 or 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 usable 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 the boat 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, and swab the deck, particularly if you have operated on 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. (See example on page I-5.)

Perform pre-departure check list. (See check list on page I-4.)

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 162.40-162.55MHZ.

## **SAFE BOATING** *(Continued)*

---

### **IF A DISASTER OCCURS**

Call 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.

### **IF A PLAN**

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

# MAINTENANCE

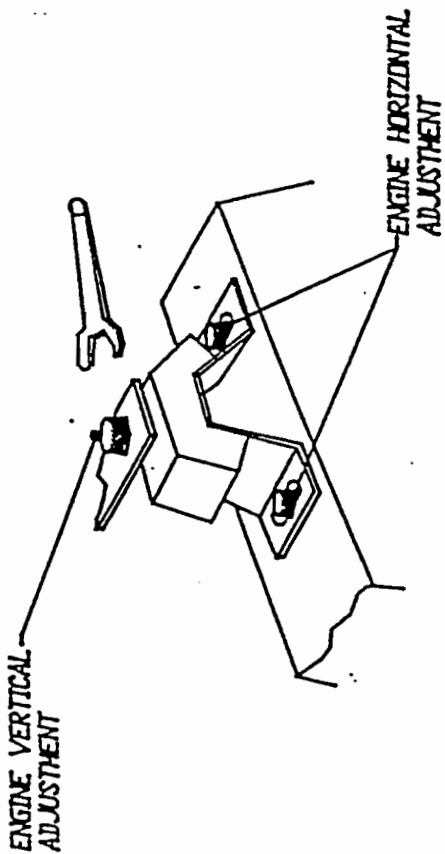
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## Alignment Procedure

1. Separate the coupling, move the shaft end back to clear the pilot in the center.
2. Establish the shaft in the center of the shaft log by raising the shaft until it touches the top of the log - note position - lower the shaft until it touches bottom of the log - note position - repeat sidewise and locate shaft in the center; block shaft in this position, using a block of wood under the shaft packing gland.
3. Now, adjust the engine mounts to allow the pilot on the coupling halves to slip together without moving shaft up, down, or sideways.
4. Adjust the engine mounts as necessary until a 0.004" feeler gauge will not enter anywhere along the edge of the flange between the faces.
5. Tighten the locks on the adjustable mounts.
6. Re-check coupling with feeler, re-adjust if necessary.
7. Check stuffing box (allow to drip slightly).

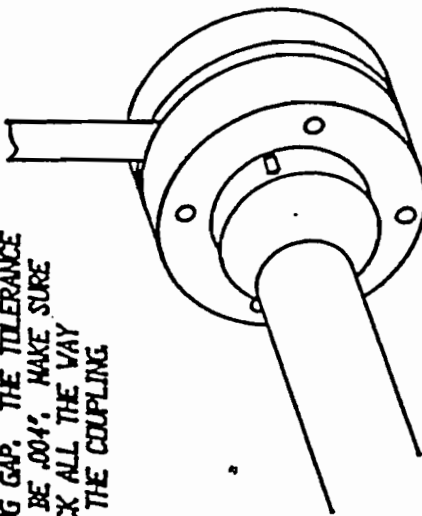


STEP 1



STEP 2

USE FEELER GAUGE TO CHECK COUPLING GAP. THE TOLERANCE SHOULD BE .004". MAKE SURE TO CHECK ALL THE WAY AROUND THE COUPLING



NOTE: CHECK COUPLING GAP WITHOUT COUPLING BOLTS IN PLACE.

# HUNTER

ALIGNMENT DIAGRAM GEN2619A

## II. General Handling & Operation

### A. Diesel Engine

An engine owner's manual is supplied with your boat and should be read thoroughly. The manual contains technical specifications, running instructions and maintenance schedule on lubricants and fluids. For long engine life, follow routine maintenance schedules.

You should check engine oil, transmission fluid and coolant levels. Water, rust, scale and dirt will cause serious damage to the injectors on diesel engines. You should check your filters frequently and change when necessary.

If you start your engine, run it a minimum of 15 minutes to bring it up to operating temperature. This insures that any condensation is evaporated. Your engine should "run-out" at  $\frac{3}{4}$  throttle at least once a month to clean out carbon build-up and moisture.

#### STARTING:

1. Visually check engine compartment to see that the throttle linkage, shifting controls, electrical connections and fuel lines are properly secured.
2. *Before each start* check oil in engine and transmission.
3. Insure that engine shut-off cable is properly secured and operating.
4. Place the shift lever in the neutral position.
5. Move the throttle or "fuel" lever forward to approximately the half-speed position.
6. Insert the starter key and turn to the "on" position.
7. Press the starter button and hold until engine starts, then release. The buzzer and/or light should then go off.
8. Back the throttle off to an idle position (700 to 800 rpm); allow cold engine to warm up a minimum of five minutes.
9. Check that the lube oil pressure warning light and the charge lamp go off. If any of the warning lamps do not go off above 1,000 rpm, the engine is malfunctioning and should be stopped immediately. Consult your nearest engine dealer.

**NOTE:** To stop engine at any time, pull "engine stop" lever all the way out. Before stopping, however, it is a good idea to idle the engine in neutral for about five minutes, then race it in the full-throttle position for a moment, then return to idle and stop the engine.

**CAUTION:** Do not turn safety main switch to "off" while engine is running. This can seriously damage the alternator.

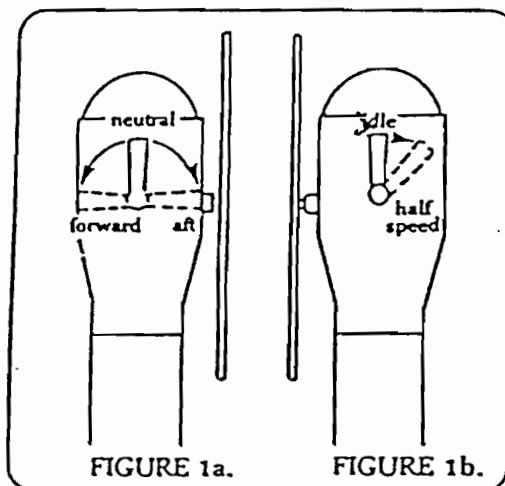


FIGURE 1a.

FIGURE 1b.

#### MOTORING:

When engine is warm, you may move the "shift" lever either forward to

go ahead or aft to move in reverse.

**CAUTION:** Your rigging will conduct electricity. Always check for overhead high tension wires before proceeding. Once clear, you may increase your speed in a reasonable and safe manner as desired.

**IMPORTANT:** Do not shift from forward to reverse or back without first lowering engine rpm to idle. When sailing, it is best to start the engine before the sails are lowered. This way, it is still possible to maneuver if the engine should not start.

## B. Electrical System

Your Hunter is fitted with an electrical system designed for both AC (AC not available on the 26.5 and smaller) and DC. While in port, you can operate any tool, appliance or other device designed to function on regular house current (120V) simply by plugging your dockside power cord into a convenient outlet on shore and turning your AC main breaker on.

**CAUTION:** Do not allow your dockside power cord to come in contact with the water. Never operate any AC power tool or other electrical equipment while you or the device are in contact with the water.

When leaving port, disconnect the dockside power cord and turn the main DC breaker on. This allows you to use the ship's lights and other equipment designed to operate on direct current. 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 engine. Unless a state of charge is maintained, there may not be enough power to operate the starter motor. Dangerous situations can result if the engine cannot be started when needed.

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.

## C. Water System

The water heater operates either on 120 volts AC or when the engine is running. To obtain hot water from the engine, it must run a minimum of one-half hour.

**CAUTION:** Do not turn the water heater on until you are sure the tank is filled with water. To do so will destroy the heating element, which is not covered by the warranty.

Pressure water pumps are the demand type. Once the circuit breaker switch is on, opening the faucet will produce water flow.

**NOTE:** Intermittent operation of the freshwater pump while all faucets are closed usually indicates a leak somewhere in the lines. Trace the lines to locate the leak and repair.

## D. Stove

Follow the operating instructions supplied with the unit installed with your boat.

## E. Toilet

**IMPORTANT:** When not in use, lever must be left in the "dry" position to prevent flooding.

Before using, place the lever in the "wet" position and pump slowly to partly fill and wet the inside of the bowl. Return to "dry" position.

After using, return the lever to the "wet" position for flushing and pump until the bowl is thoroughly cleaned. Continue with several more full strokes to flush discharge lines. Return lever to the "dry" position and pump slowly until bowl is empty.

## F. Pumps

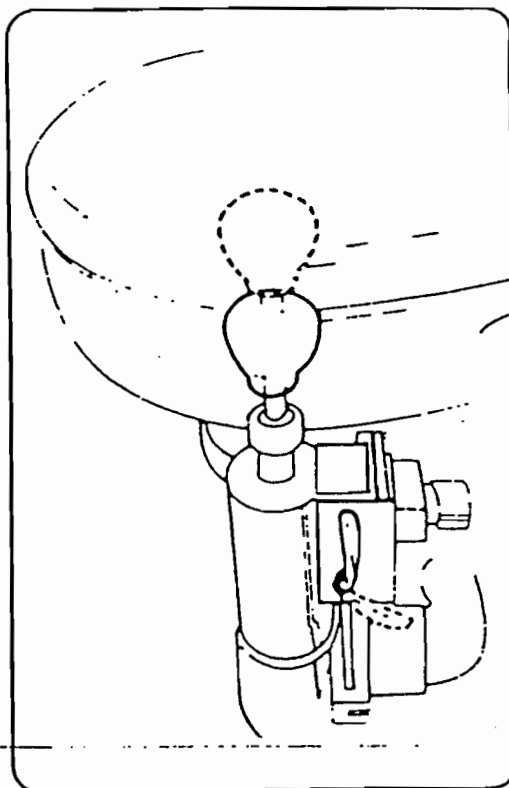
All pumps should be checked frequently to insure proper operation. *This is an especially important regular maintenance item since functioning of a pump could save your vessel from serious damage at some future time.*

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.

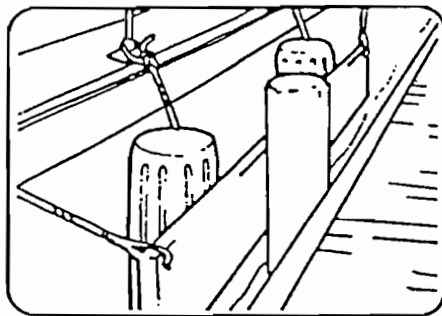
Inspect electrical wiring for corrosion.

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



## G. Docking

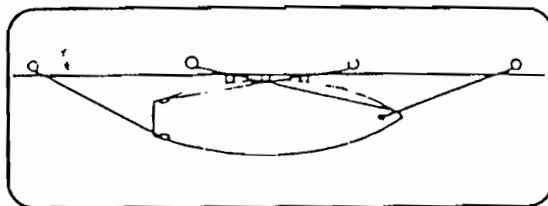
Docking your boat should be handled carefully to avoid potential damage. Under normal wind and water conditions, the following considerations should be made:



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.
2. 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 stern 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.

3. 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 vessel, even for brief periods.



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

## H. Anchoring

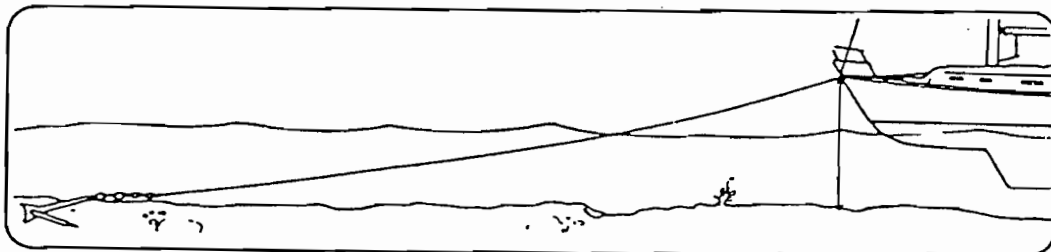
Your Hunter comes with an on-deck anchor well and a burying-type anchor as standard equipment. The anchor is selected to suit the size and weight of your boat under normal anchoring conditions, and provides its best holding characteristic in muddy or sandy bottoms.

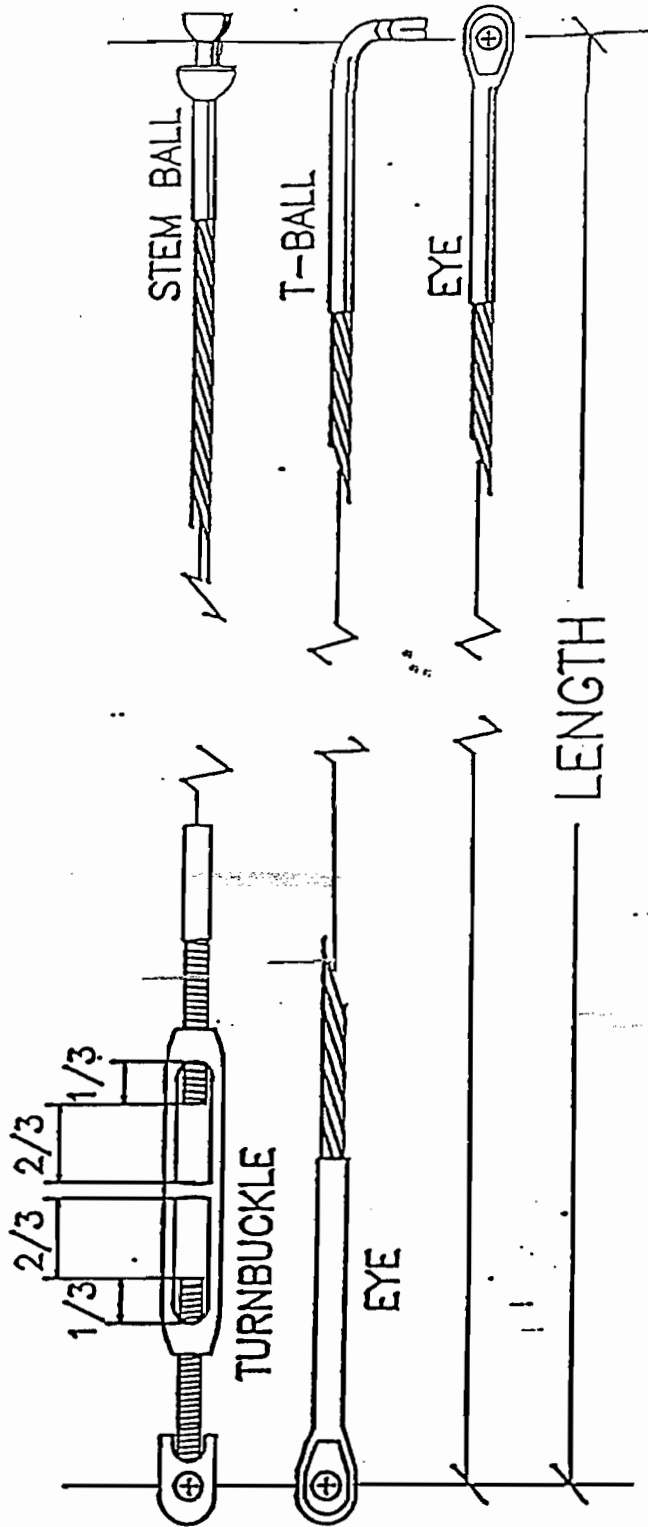
When anchoring, pay particular attention to the scope of your anchor rode (i.e., the relationship between the depth of the water and the length of the rode). A good rule of thumb is to allow a scope of about 7:1 (a rode seven times as long as the vertical distance from the bow to the bottom). A helpful 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.





HUNTER  RIGGING LENGTHS GEN2614A



## IV. Maintenance

### A. Engine, Transmission and Drivetrain

#### ENGINE:

Follow the fuel and lubrication requirements in the Engine Manual. Check the engine oil level before and after operation and use quality motor oil (refer to Engine Manual). Be certain the proper amount of oil is in the crankcase at all times.

**Engine alignment:** The engine should be aligned by experienced marine service personnel. Final alignment should be done after launching, with all normal gear aboard. A description of the procedure follows:

The coupling flanges must come together evenly at all points, a feeler gauge is used to check the gap. If adjustment is necessary, the engine is tilted up or down and/or side to side until the flanges meet equally. Severe vibration will result from misalignment and can cause strut bearing and shaft damage.

Alignment should be checked again after several weeks of use. (Refer to this manual's alignment drawing.)

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#### TRANSMISSION:

Follow the lubrication requirements of the Engine Manual. The oil level should be checked immediately after operation.

#### DRIVETRAIN:

The shaft log (stuffing box) should be inspected periodically.

The stuffing box is held to the shaft log tube by a rubber tube secured by hose clamps. The clamps should be tight and no water should leak from this location. A slight drip from the stuffing box at the shaft exit is necessary (four drops a minute) and normal.

To adjust, loosen the lock nut, tighten gland nut one-quarter turn, and retighten lock nut. If excessive water flow persists after adjustment, replace the packing and then adjust as above.

### B. Steering

The manufacturer's instructions for maintaining pedestal steering system should be followed closely. Wires should be periodically inspected for proper tension. Lightly oil all wire.

### C. 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.

### D. 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 knows 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

## E. 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.

## F. General Care

### CLEANING FIBERGLASS SURFACES:

Fiberglass surfaces should be cleaned regularly. Normal accumulations of surface dirt can be removed simply by occasional rinsings 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 "spiderweb" 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.

Temperatures should be in the 60s or above, or a heat lamp should be used for application.

5. 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 a 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.

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#### **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 sailmaker 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. Water System—Water Heater

#### WATER SYSTEM:

Open a faucet and allow the pump to empty the tank. Then add approximately two gallons of *non-toxic* anti-freeze solution to the tank and repeat the pumping out procedure.

A second method is to disconnect the hoses at the pump, allowing them to drain. Find the lowest point in the system and disconnect the fitting. Open all faucets to allow the lines to drain. If possible, use a short piece of hose on the faucet to blow through the lines to clear all water.

#### WATER HEATER:

Open valve and drain fully. Leave valve open during lay-up time.

### F. Toilet and Holding Tank

Drain and flush toilet. Using automotive anti-freeze (ethyleneglycol) in a 50/50 mixture with water, pump through toilet and into holding tank.

## G. Engine

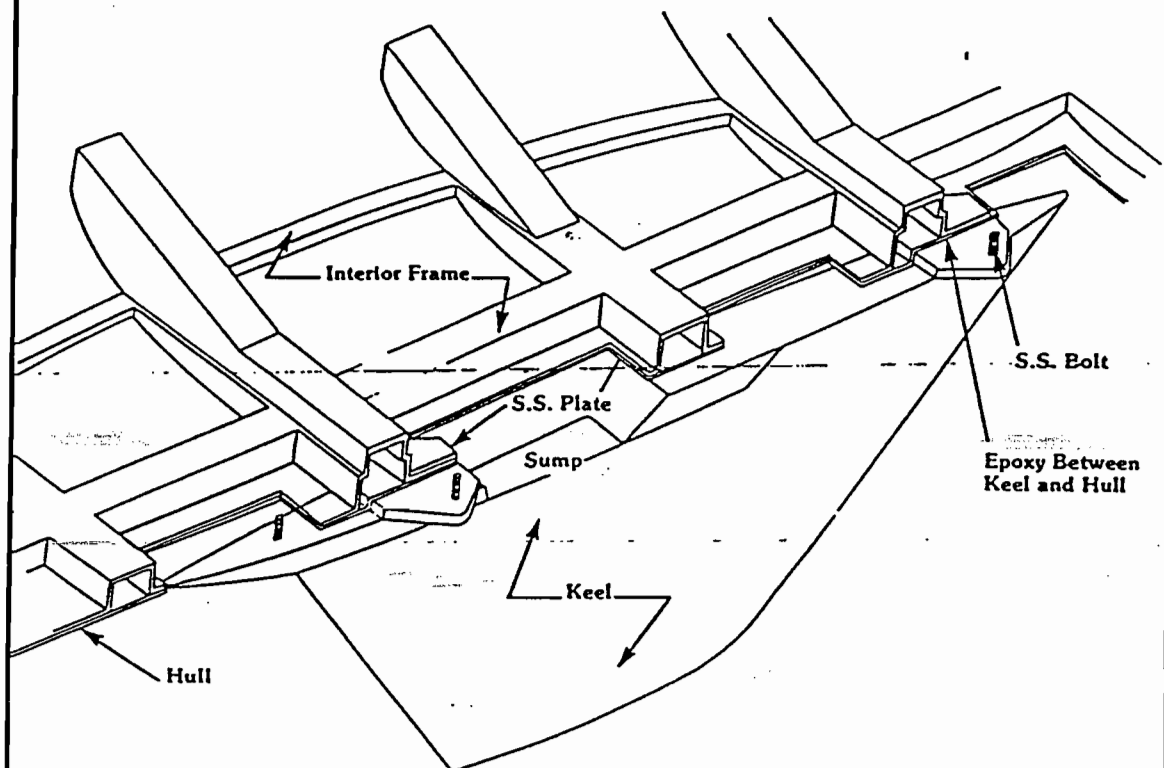
1. Drain the cooling water completely out of the engine and flush the line thoroughly with freshwater. Don't use high pressure through the line.
2. Remove the fuel completely from all fuel lines.
3. Disconnect the main battery cables from the battery terminals.
4. To prevent corrosion inside the cylinders, pour a little lubricating oil into the suction pipe while turning the engine. Enough oil to reach the intake/exhaust valve is sufficient.
5. Put the piston at top dead center of compression stroke so that the intake/exhaust valves are completely closed.
6. Apply a thin anti-corrosion treatment to the plating and exposed painted surfaces.
7. The engine should be in a well ventilated area, and protected from any kind of dampness.
8. Put a dust cover over the engine.
9. Check your operation manual for engine diagram and for "Manufacturer's Recommended Winterizing Procedures."

## H. 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.

# Hunter

## TYPICAL KEEL INSTALLATION



# Hunter

### TYPICAL STEERING SYSTEM



# HULL SPEEDS

Best Expected

22	5.5 Knots
23	5.75
25.5	6
28.5	6.25
31	6.5
34	6.75
37 Old	7
37 New	7.25
40	7.5
45	8.0

1.25 x Water line  
length



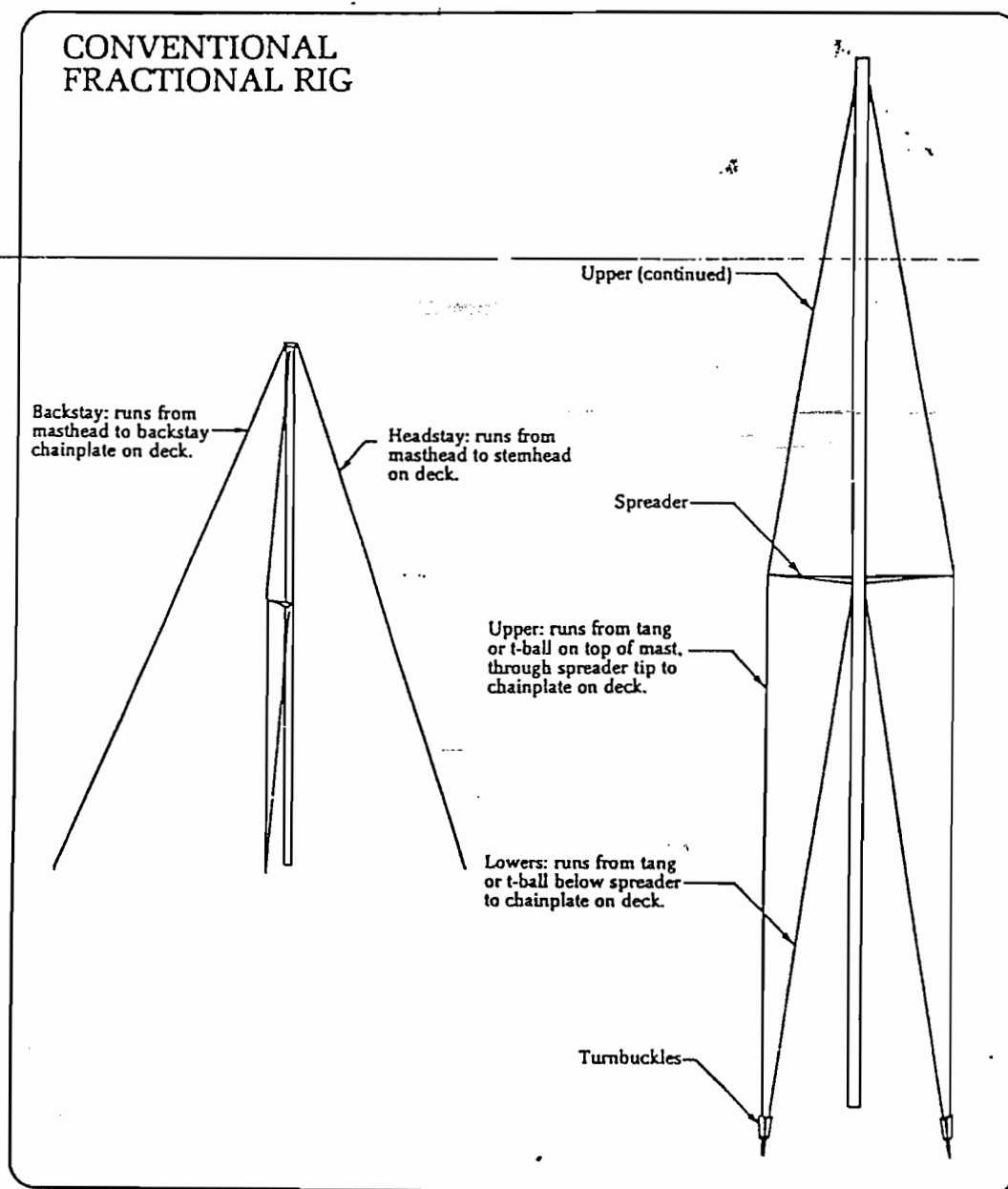
### III. Sails & Rigging

#### A. Tuning the Conventional Fractional Rig (Hunter 23,-30-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 backstay 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 (10-12 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 cotter pins with chafe tape.

## B. Tuning the B&R Rig (Hunter 28.5, Legend 40, Legend 45)

### NOMENCLATURE DESIGNATION:

upper-upper .....	D3*
lower-upper .....	V2
lower-intermediate .....	V1
lower .....	D1
upper-intermediate .....	D2*
lower-diamond .....	d1
upper-diamond .....	d2

\*D2 and D3 are cut to a fixed length (no turnbuckles).

Initial tuning is best accomplished before the mast is stepped.

Support the mast, forward side down, about one-quarter of its length from the end and at its center. Once the mast is supported, make certain that it has no bow in any direction. Attach a small string from the masthead, in line with the sail track groove, to the base of the mast, stretching it as tight as possible. Check to make sure it is a constant distance from the mast along the entire length.

You are now ready to "tune in" the desired mast bend, which is one percent of the mast height above the boom ( $.01 \times$  mast height above boom). On a 50' mast, this would be .5 feet at the mid-point of the mast.

Using the rigging diagram, locate d1 and d2. Before tuning, make sure the turnbuckles are adjusted back with equal thread showing. Carefully counting turns, adjust d1 port, d1 starboard, d2 port and d2 starboard evenly until the desired bend is induced. This is checked by measuring from the string down to the mast at the center of the mast.

It is important to make sure the mast is straight athwartships at this time.

You are now ready to step the mast.

Step the mast with all shrouds loosely attached.

Adjust the forestay and backstay to obtain the desired mast rake. The mast should be vertical or raked aft. The more rake, the greater the weather helm. The forestay and backstay should have a reasonable amount of tension on them.

Adjust V2 (port and starboard) evenly until they are tight. You should finish with approximately equal amounts of thread showing on each turnbuckle.

Using the jib halyard, check the mast for athwartship plumb. Pull the halyard out to the side of the boat and below the shear. Repeat the procedure on the opposite side. If you find a big difference (more than  $\frac{1}{2}$  inch), adjust turnbuckles an equal amount in opposite directions until the mast is straight.

Adjust V1 (port and starboard) using the above procedure.

Repeat the procedure for D1 (port and starboard).

Your mast should now have the original "pre-bend" and be straight athwartship.

Check the mast tuning by sailing in medium winds (10 to 12 knots). Sail on both tacks, sighting up the luff groove to check athwartship straightness. Shrouds should not be loose on the leeward side. (This is especially important with the B&R rig.) Follow the progressive shroud tightness routine described in the tuning instructions for the conventional rig. When mast tuning is complete, install cotter pins in all turnbuckles and tape over sharp edges of the cotter pins with chafe tape.

## B&R RIG

D3 upper upper:  
runs from upper tang  
to upper spreader tip.

Upper spreaders

V2 lower upper:  
runs from upper  
spreader tip through  
lower spreader tip to  
chainplate on deck.

D2 upper intermediate:  
runs from tang below  
upper spreaders to  
lower spreader tips.

d2 upper diamond:  
runs from upper  
spreader tip to tang  
above lower spreader.

Lower spreaders

V2 lower upper  
(continued)

V1 lower intermediate:  
runs from lower  
spreader tip to  
chainplate on deck.

d1 lower diamond:  
runs from lower  
spreader tip to tang  
above bottom end of  
mast extrusion.

D1 lower:  
runs from tang below  
lower spreader to  
chainplate on deck.

## C. 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.

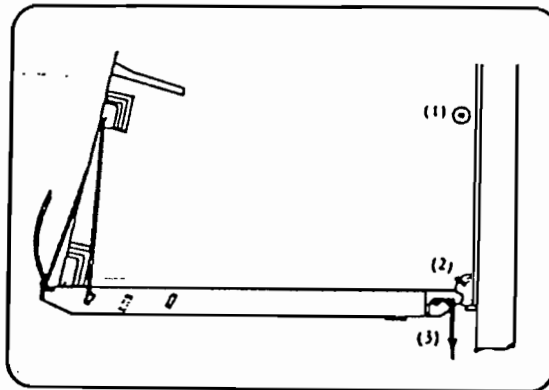
### REEFING THE ROLLER FURLING SAIL:

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 sailmaker if in doubt.)

## D. 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 topping lift is secured in position.
2. Lower the main halyard so that tack reef cringle can be placed on gooseneck reef hook. Re-tension main halyard when hooked in place.
3. Clew reef line 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.



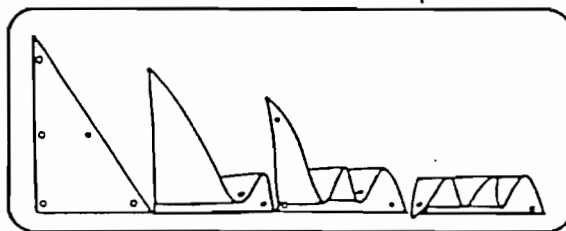
## E. Sail Care and Storage

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. 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 *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 to dry 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 head. 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 sailmaker inspect your sails for signs of wear and tear.

## F. 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.

## G. 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.

## H. 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.

# H-31 STANDING RIGGING

- 1 Headstay 9/32" 1x19 Wire Stemball to Turnbuckle  
Eye to Eye 44'1/4"
- 1 Backstay Upper Part w/3/8" Splitter Plate  
1/4" 1x19 Wire Toggle to Jaw  
Eye to Eye 31'5-5/8"
- 2 Backstay Lower Part  
7/32" 1x19 Wire Jaw to Turnbuckle  
Eye to Eye 15'1/2"
- 2 Upper Shrouds Upper Part  
1/4" 1x19 Wire Aircraft Eye to Stemball  
Eye to Eye 12'8-1/8"
- 2 Upper Shrouds Lower Part  
1/4" 1x19 Wire Aircraft Eye to Turnbuckle  
Eye to Eye 30'9-1/2"
- 2 Intermediate Uppers  
1/4" 1x19 Wire Aircraft Eye to Stemball  
Eye to Eye 13'11-3/4"
- 2 Intermediate Lowers  
1/4" 1x19 Wire Aircraft Eye to Turnbuckle  
Eye to Eye 16'9-1/2"
- 2 Upper Diamond Shrouds  
3/16" 1x19 Wire Marine Eye to Turnbuckle  
(CHANGED-MERRIMAN 7824-6-12-26)  
Eye to Eye 14'4-3/8"
- \* NOTE Checker 1@ B.G.7 Cup and 1@ Socket on each  
Stemball Turnbuckle  
  
Tape all cups to swaged Stemballs before rolling  
up
- 2 Lower Diamond Shrouds  
3/16" 1x19 Wire Marine Eye to Turnbuckle  
(CHANGED - MERRIMAN 7824-6-12-26)  
Eye to Eye 14'9-1/8"
- 2 Lower Shrouds 9/32" 1x19 Wire Stemball to Turnbuckle  
w/1-BC-7 Cup  
Eye to Eye 16'8-1/2"

ms

H-31 RUNNING RIGGING

1	Main Halyard	7/16" XLS w/Shackle	106'
1	Jib Halyard	7/16" XLS w/Shackle	106'
1	Main Sheet	3/8" B.B.E.	60'
2	Jib Sheets	7/16 B.B.E.	45'
1	Traveler Line	1/4" B.B.E.	40'
1	Top Lift Tail	1/4" w/Eye Splice	16'
1	Reef Line	3/8" Yacht Braid	40'

~~REEFING~~

→ 1.1.2.

