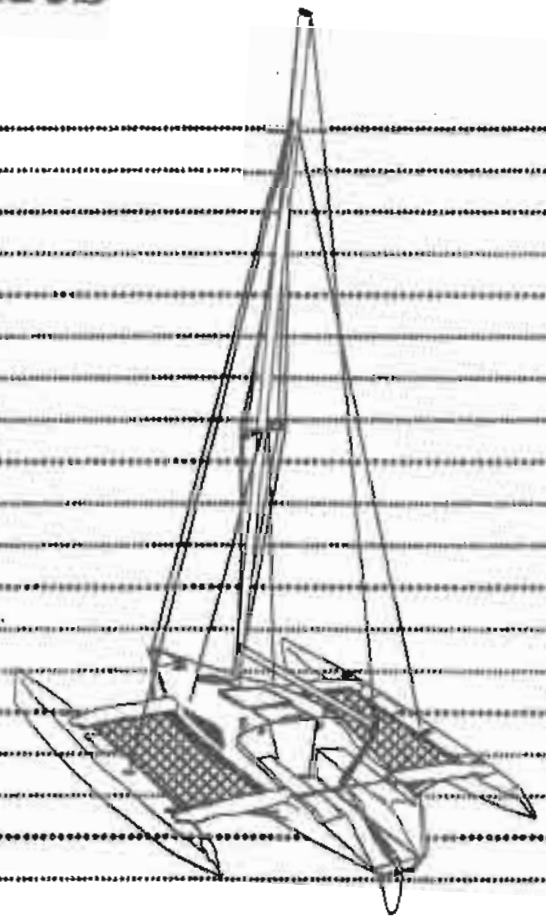
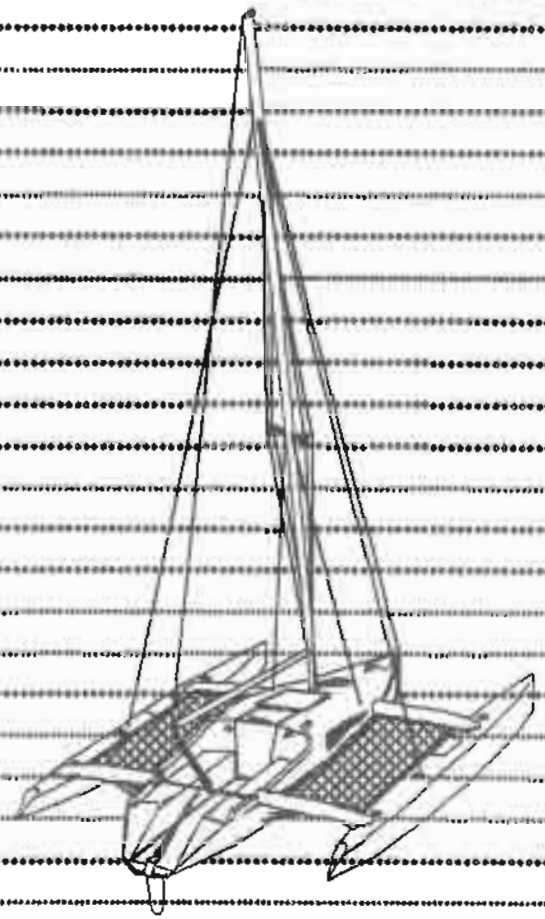
# OWNER'S INSTRUCTION MANUAL

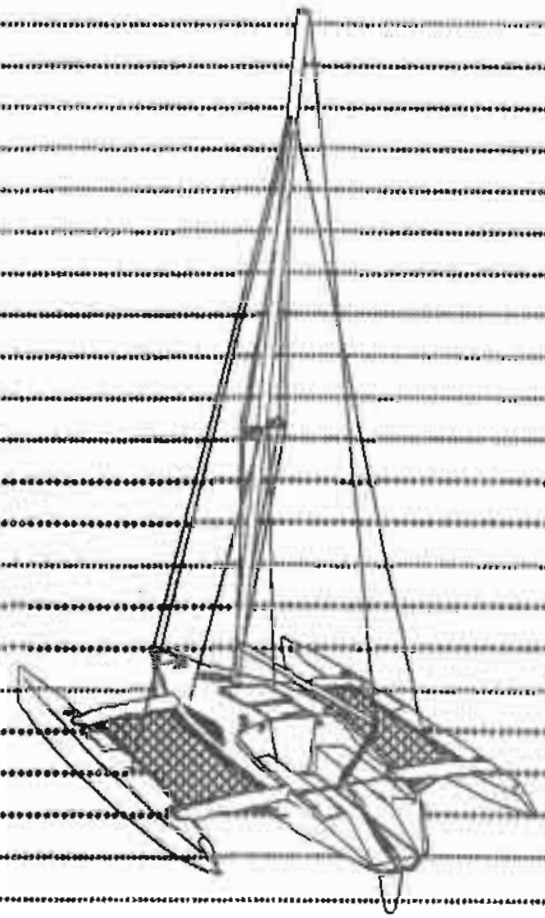

CORSAIR

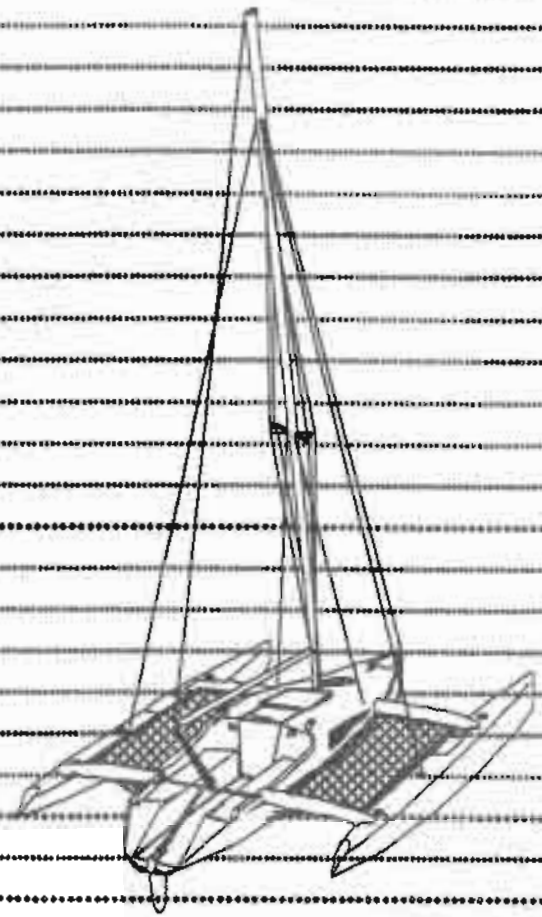
# Contents

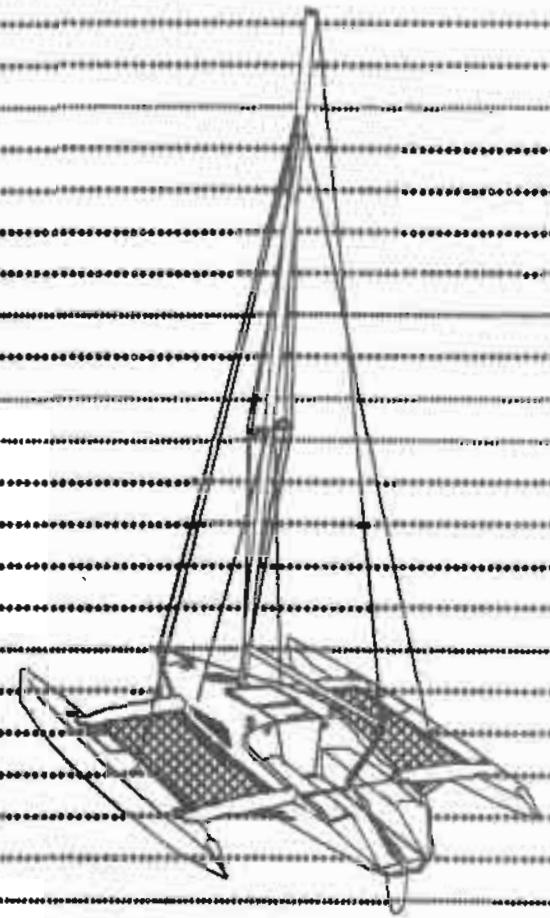


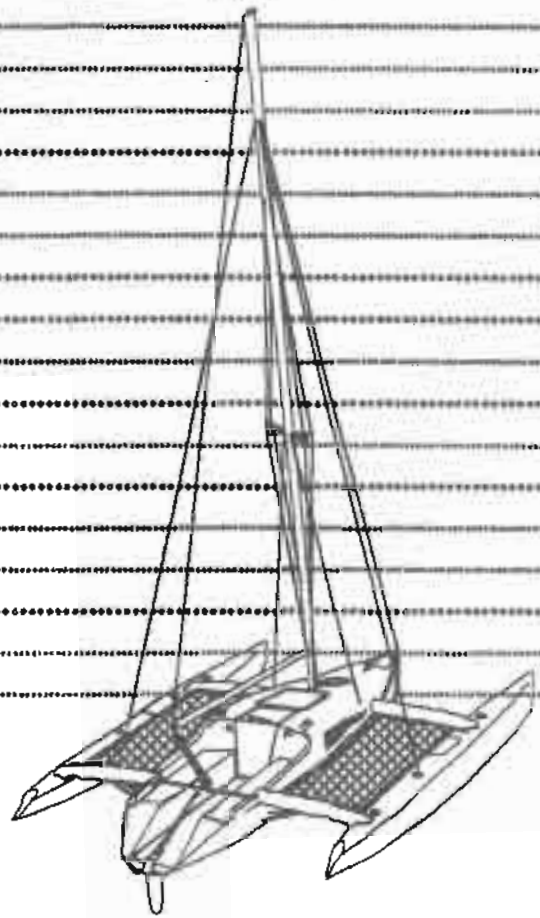












## WELCOME

We at Corsair Marine would like to congratulate you on your purchase of an F-24. We believe the F-24 to be one of the most versatile sailboats available. Speed, handling, stability, trailerability, and quality all add up to the best sailboat value possible. Corsair has gone to great lengths to provide a high quality boat using the latest in technology.

The Corsair F-24 encompasses many aspects of sailing, including coastal cruising, racing and daysailing. Corsair and the dealers that represent our boats are dedicated to helping you, the consumer, whatever your interest. We are constantly organizing and supporting regattas and cruising rendezvous, as well as exploring techniques and gear to make the F-24 "state of the art".

Corsair has organized a one design organization for F-24 owners that we invite you to become active with. This organization can be a primary source of information for events and sailing suggestions. There is also a free monthly newsletter, the "TRIbune", with articles, profiles, ideas, news and information.

Corsair is always eager to hear from the owners of our boats. If you have questions or suggestions, contact your dealer, our customer service department, or me directly.

We hope that this Owner's Instruction Manual will provide an easy reference guide for the use of your Corsair F-24. Some specification updates may be provided in addition to the manual if any changes do occur. We will make every effort to keep you updated on Corsair F-24 developments.

Thank You For Choosing An F-24!

Sincerely,

Bob Stevens
President, Corsair Marine

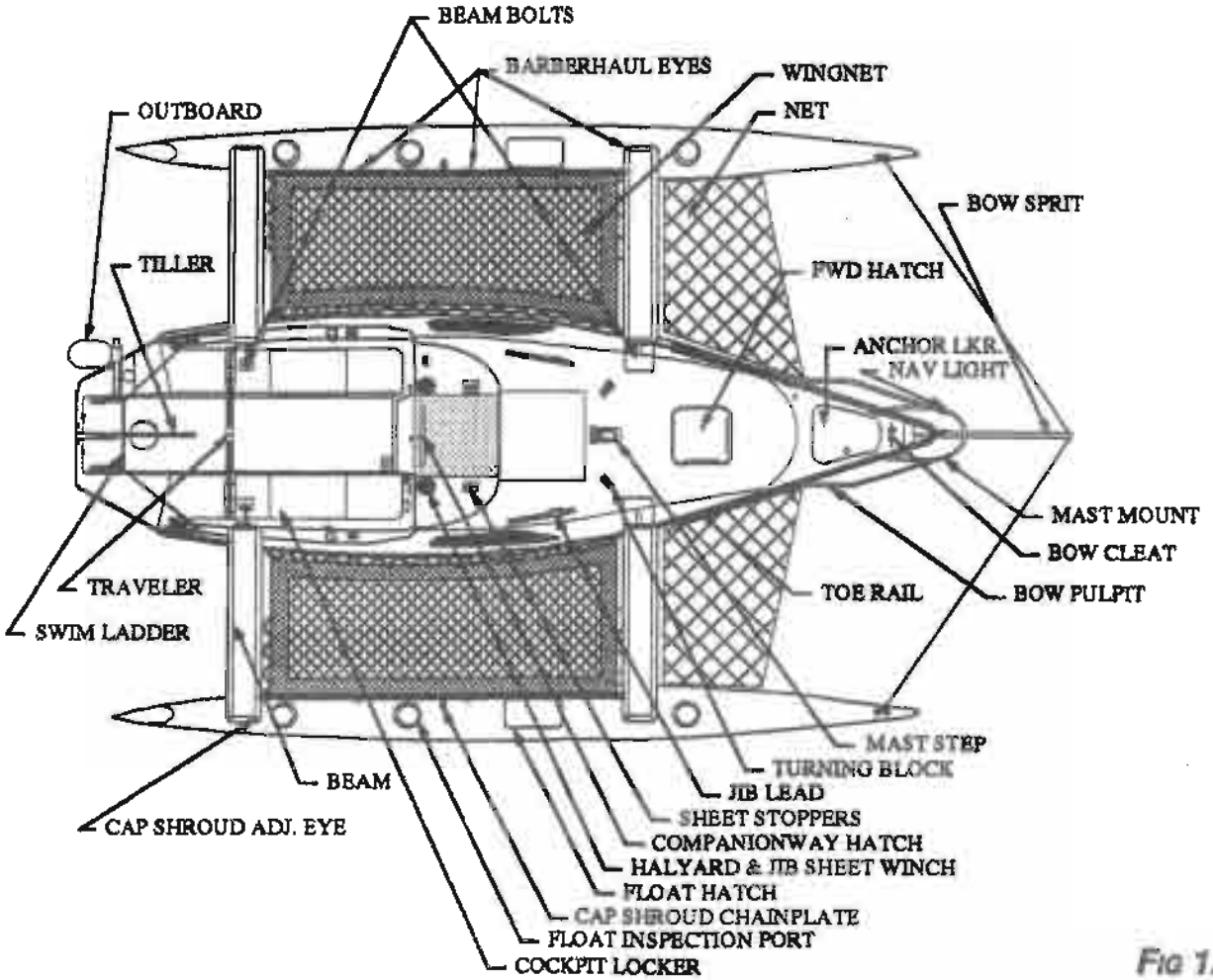



*Fig 1.1 F-24 Topsides*

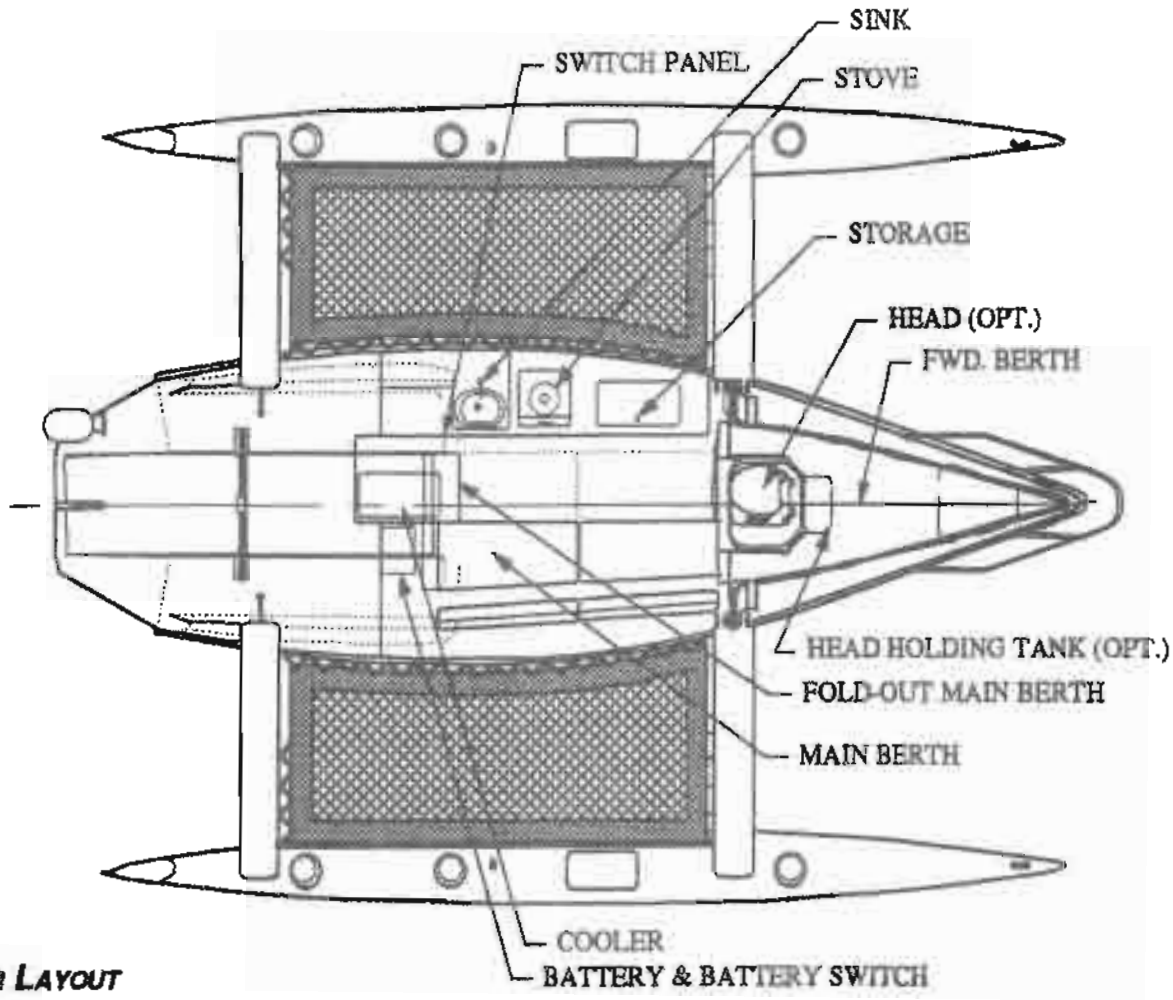



*FIG 1.2 F-24 INTERIOR LAYOUT*

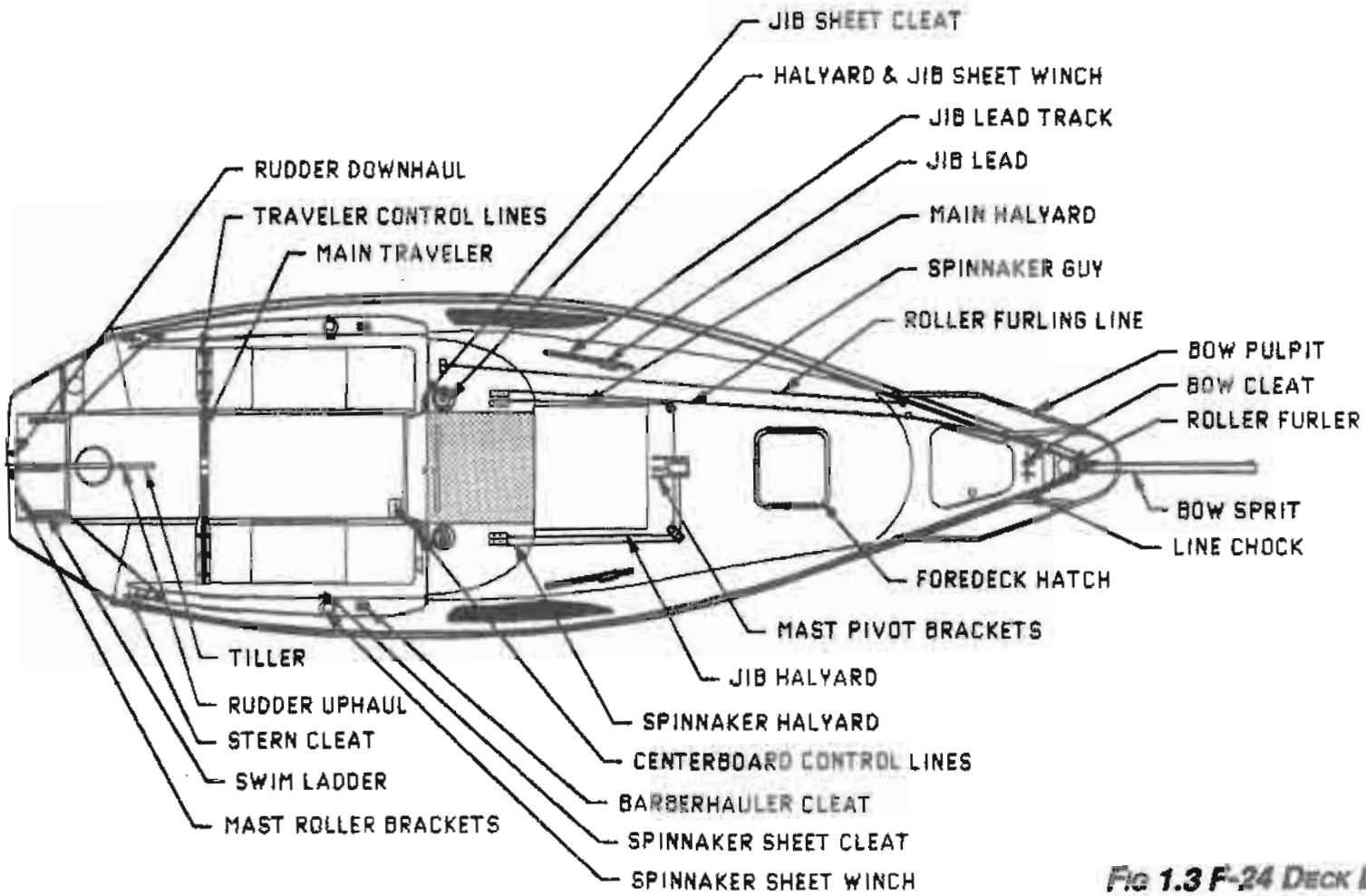



*Fig 1.3 F-24 Deck Layout*

## IMPORTANT PRELIMINARY INFORMATION

### WARRANTY

Seller warrants, for the period of one year from the date of delivery, to the original purchaser, that the Corsair F-24 will be free of defects in material and workmanship. Seller's sole obligation under this warranty shall be limited to replacing, correcting or repairing any part manufactured by Seller which is determined by Seller to be defective by reason of faulty workmanship or material. This warranty shall not apply to:

**a.** Defects caused by accident, misuse, neglect, improper repair, lack of proper maintenance, normal wear and tear, negligent operation, or improper modification by persons other than Seller's employees.

b. All parts or accessories not supplied by Seller and any part not manufactured by Seller. Any warranty on such parts, if possible, will be passed on to Purchaser, and Seller will agree to act as Purchaser's agent in any warranty claims on these parts.

**c.** Any discoloration, crazing or cracking on all exterior finishes (including paint, gelcoat and anodizing). Only the best gelcoat and paints are used on the Corsair F-24 but they cannot be warranted as they might be affected by climate or other factors beyond the control of the seller.

d. Any damage caused by improperly rigging, trailering, or launching.

Seller further warrants, for a period of seven (7) years, that the hulls, beams, and folding system of the Corsair F-24 shall be free of any structural failure during normal operation. Seller's obligation under this warranty shall be limited to replacing, correcting or repairing any part which, in the judgement of the Seller, by its failure, has impaired the structural integrity of the Corsair F-24. This structural failure warranty shall be void if Seller should determine that said components have been subjected to any abuse, including but not limited to collision with other vessels, structures or objects.

Seller further warrants, for a period of five (5) years, that the hull, deck, floats, beams, and other fiberglass parts manufactured by seller will be free of voids and blisters. Seller's obligation under this warranty shall be limited to repairing the void or blister.

Purchaser shall be responsible for returning the Corsair F-24, or any defective part, to the Sellers plant, for any warranty repairs, with all transportation charges paid by Purchaser.

Seller, may at its option, direct Purchaser to transport the Corsair F-24 to an independent repair facility for any needed replacements, corrections, or repairs. Purchaser agrees to promptly notify Seller of any condition or part which Purchaser believes to be defective.

Purchaser and Seller agree that THE FOREGOING WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL OTHER REPRESENTATIONS, WARRANTIES OR CONDITIONS EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IS IN LIEU OF ANY OBLIGATIONS OR LIABILITIES OF SELLER TO PURCHASER. WHETHER FOR LOSS OF USE OF THE CORSAIR F-24 , LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, OR FOR DIRECT SPECIAL OR CONSEQUENTIAL DAMAGES OR OTHERWISE ARISING OUT OF THE USE OF THE CORSAIR F-24. THE PURCHASER SPECIFICALLY ACKNOWLEDGES AND AGREES THAT THE FOREGOING SHALL SURVIVE ANY FUNDAMENTAL BREACH OF THIS AGREEMENT.

Thank you for choosing the Corsair F-24! To validate your warranty and be updated on any changes, additions, or deletions to the above warranty, refer to and complete the Corsair F-24 Warranty And Limitation Of Liability form enclosed with your ship's papers. Mail the Corsair F-24 Warranty And Limitations Of Liability form back to Corsair within 30 days of taking delivery of your boat.

## DEALER LIST

A separate dealer list has been provided with your ship's papers

## PREPARATION

An F-24 delivered direct from the factory is ready to sail. A complete description of the set-up process is covered later in this manual.

### SECURITY

Three locks are required to lock the F-24, one for the main hatch, one for the motor, and another for the trailer. Also remember to lock the forward hatch from the inside by moving the locking switch on both handles. Be aware that it is not possible to lock the hatches on the floats.

## LOADING CAPACITY

Multihulls should be treated like small planes with regards to loading capacity. The F-24 has a very narrow waterline and does not have an unlimited loading capacity. Overloading can affect performance, handling and safety.

The maximum carrying capacity of the F-24 including the motor and payload is 1000 pounds or 450 kilograms. This payload could translate to a maximum capacity of 4-5 adults for general day sailing, or 2-3 adults plus payload for limited coastal cruising.

Example:

| | | |
|---|---|---|
| maximum capacity = | | 1000 lbs |
| 4 adults = | 4 x 150 = | 600 lbs |
| motor = | | - 20 lbs |
| additional payload capacity = | | 380 lbs |

When storing supplies, try to keep all heavy objects located as low as possible and in the forward berth area. Avoid loading more than 50 pounds or 22 kilograms in the each float (outer hull). The floats should be used to store lighter items such as sails, fenders and docklines.

Heavy weights in the ends (bow or stern) of any boat can adversely affect the general motion of the yacht. To maintain a light, performance oriented yacht, we recommend that you go through all storage lockers several times a year and remove any unused items.

## ACCOMMODATIONS AND EQUIPMENT

### STANDARD ACCOMMODATIONS

#### MAIN BERTH

The main berth can be made into a double berth by pulling the two folding berth panels from underneath the cockpit and positioning them in the center area of the cabin. While being stored, the boards of the folding berth serve as the temporary companionway step.

To use the folding berth, lift the leading edge of the two panels on the port side to separate the velcro connection to the permanent companionway step (see Fig 1.4). Pull the panels forward until they are clear of the companionway. Each panel has a combing located along one of the long edges. Separate the two panels and position them such that the long edge with the combing is positioned to starboard and faces downward. Lay the panels end to end such that they are supported by the ledge on either side above the cabin sole. The decision of which panel is positioned forward and aft is arbitrary. Use the backrest cushion from the main berth as the berth cushion for the folding berth.

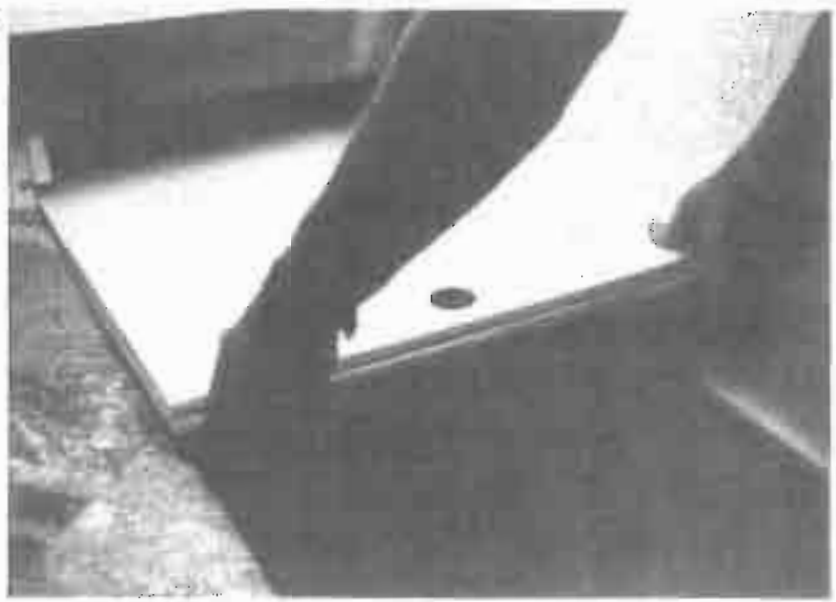


*FIG 1.4 MAIN BERTH OPERATION*

## Forward Berth

The forward berth is the most convenient sleeping accommodation for two people. The forward berth can be separated from the rest of the cabin for privacy by pulling the curtain across the middle of the cabin area. Remember that access to the head will be restricted when the forward berth is in use.

## Fresh Water

### Fresh Water Tank

The fresh water tank is a removable plastic container. To fill the water tank, separate the hose connection and remove the water tank from the cabin.

The breathing valve on the water tank must be open while the faucet is being used and closed when not in use. For prolonged storage, empty the water tank and leave the breathing valve open to prevent stagnation inside the tank.

### Water Faucet

The fresh water faucet is a hand operated pump. After the water tank is filled and the hose is connected, open the water tank breathing valve and pump the handle on the faucet back and forth until water comes out. The pump is self priming and it will take a few pumps to get water flowing.

### Sink & Drain

For safety, the sink and drain are located above the waterline, therefore water can not come in through the sink drain. Do not clean the sink with abrasive cleansers.

## Cooler

A removable cooler is located underneath the cockpit and fold out berth boards. The capacity of the cooler is 48 quarts.

Be sure to empty and clean the cooler and leave the top off when not in use in order to prevent a stale smell from accumulating.

## Settee Table

A settee table folds up from the side of the port counter top. To open the table, lift the bottom edge until the table is in a horizontal position. At this point, two angled arms will lock in place on two tracks underneath (see Fig 1.5).

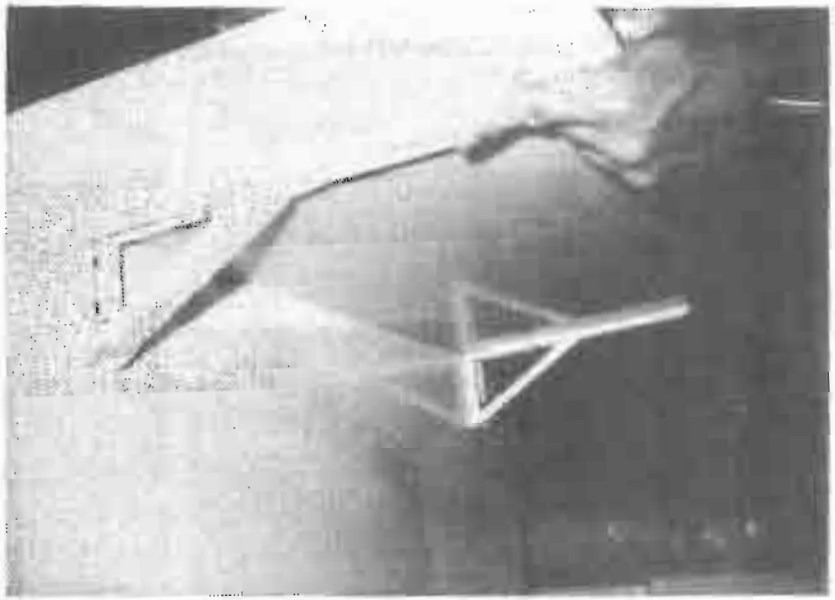


FIG 1.5 SETTEE TABLE

CAUTION: Check that both arms are locked in place before setting anything on the table.

To close the table, depress the release levers located near the front edge, lift the table and lower it into the proper resting position.

### Boarding Ladder

A boarding ladder has been mounted on the open transom of the F-24. To use the ladder, disconnect the lifeline hooks and lower the ladder into the water.

### Companionway Hatch

The companionway hatch is equipped with a sliding thermoplastic hatch and two hatchboards. Do not clean the sliding hatch with abrasives or petroleum based cleaners, use soapy water.

### Cockpit Lockers

The F-24 is equipped with two cockpit lockers, one on each side of the cockpit. The gas tank is stored in the port cockpit locker.

### Foredeck Hatch

The foredeck hatch increases ventilation and light in the cabin area. Be certain to lock this hatch in addition to the companionway hatch when leaving the boat unattended. An optional screen is available for the foredeck hatch.

### Anchor Locker

The F-24 has a self draining anchor locker on the foredeck. The head holding tank pumpout fitting is inside of this locker. The eyestrap on the forward side of the anchor locker is installed for securing the bitter end of the anchor line.

CAUTION: Do not use this eye strap to secure the anchor, use the foredeck cleat.

### Float Inspection Ports And Hatch

The inspection ports installed on the floats provide access to the float compartments. The floats have three bulkheads separating the float into four compartments. The float compartments should be periodically checked for water accumulation. The center float compartment can be accessed through the hatch and may be used for storage (not to exceed 50 lbs. of gear). This compartment is useful for

storing light items such as fenders, lifejackets and docklines. Remember that these compartments cannot be locked and nothing of value should be stored in them permanently.

NOTE: Water may accumulate in the floats due to condensation.

### Windows

The windows are made of a thermoplastic material. Do not use abrasive or petroleum based cleaners to clean the windows, use soapy water.

### Optional Accommodations

### Marine Head

The marine head is located underneath the aft edge of the forward berth. Remove the aft cushion from the forward berth and lift the hinged head compartment cover to access the head. The head area can be separated from the rest of the cabin for privacy by pulling the curtain across the middle of the cabin area. A head paper roller is located on the port side, forward of the counter top.

#### Head Operation

There are three configurations for the optional head on the F-24. The first is strictly for ocean cruising with an overboard discharge. The second is equipped with only a holding tank for lake use. The third has both overboard discharge and a holding tank where the method of disposal is determined with an in line Y-valve. Please check the local laws in your cruising area to determine the correct method of disposal.

A thru-hull for water intake to flush the head is standard for all head configurations. This thru-hull has a sea cock to open and shut the line. When the handle to the sea cock handle is parallel to the line and perpendicular to the hull, the intake is open. When the sea cock handle is parallel to the hull and perpendicular to the line the intake is closed. To flush the head using the intake, open the sea cock, flip the lever on the side of the head to the flush (horizontal) position and pump the flush handle up and down. After the waste has been evacuated from the bowl, flip the lever on the side of the head to the dry bowl position (vertical) and pump the handle until most of the water is out of the bowl. Close the through hull sea cocks when the head is not in use. Check the marine head owner's manual enclosed with your ship's papers for further information.

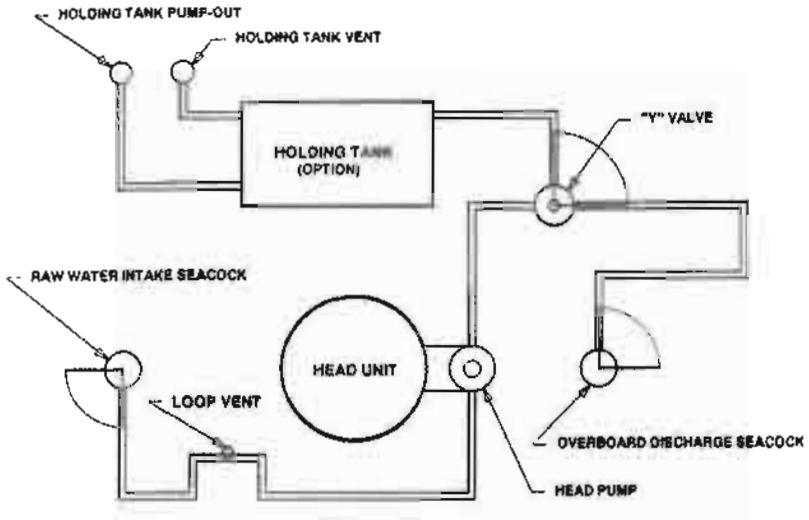



***FIG 1.6 PLUMBING***
Y-Valve configuration for holding tank discharge

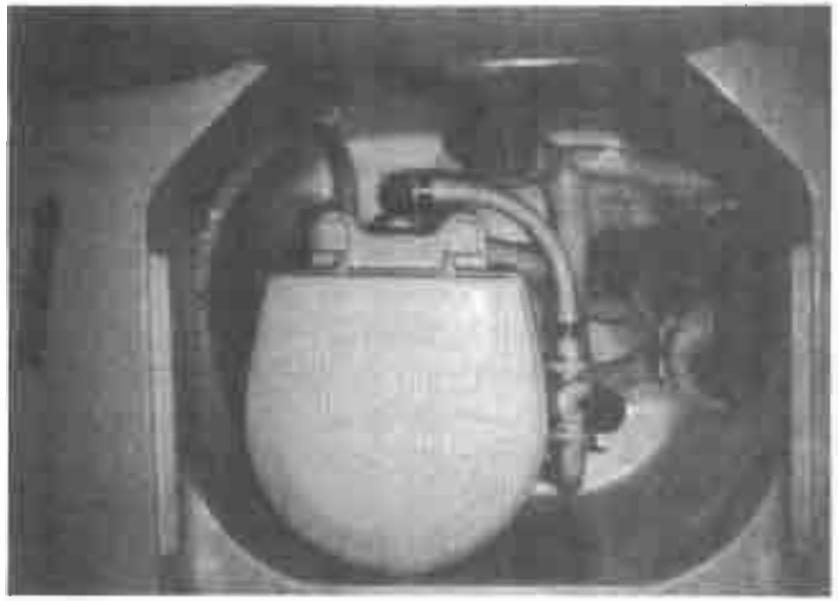


***FIG 1.7 MARINE HEAD***

For holding tank configurations, the holding tank pumpout thru-deck fitting is located in the anchor locker. For overboard discharge configurations, a thru-hull fitting, like that for water intake, has been installed and will need to be open in order to flush the head. If the combination holding tank / overboard discharge configuration has been installed, the method of disposal is determined by placing the Y-valve handle in line (parallel) with the line leading overboard for overboard disposal or to the holding tank for holding tank disposal. See Fig 1.6.

### Single Burner Alcohol Stove

The stove is a non-pressurized alcohol single burner unit. For complete safety, maintenance, and operation instructions, refer to the stove owners manual enclosed with your ship's papers.

The warranty for the alcohol stove is separate from the F-24 warranty. Consult the alcohol stove owners manual enclosed with your ship's papers for warranty registration and limitation information.

**WARNINGS**

- Water or a Class A fire extinguisher will put out an alcohol fire.
- Safety precautions are required as always when working with an exposed flame.

## Equipment

### Installed Gear

#### Outboard Motor

The F-24 is equipped with a 5 h.p. outboard along with a 3 gallon gas tank. The outboard bracket is located on the port side of the transom. The recommended size outboard for the F-24 is 5 to 6 h.p. weighing no more than 65 pounds or 30 kilograms. This size outboard with an alternator should give adequate handling for most situations and provide some battery charging capability.

For complete safety, maintenance, and operation instructions, refer to the outboard motor owners manual enclosed with your ship's papers.
The warranty for the outboard is separate from the F-24 warranty. Consult the outboard owners manual enclosed with your ship's papers for warranty registration and limitation information.

CAUTIONS:
Remove the outboard from the outboard bracket during long road trips to prevent vibration damage.
Check and tighten the outboard motor clamps frequently.

### Gas Tank

There is a storage area for the gas tank underneath the port cockpit locker. The gas tank can be removed after disconnecting the gas line from the tank. To disconnect the gas line, pull the slide on the connection fitting and the line will release. Be careful of any gas dripping from the line or tank. Remove the tank from the locker to fill the tank. The gas tank breathing valve needs to be open when the outboard is in use and should be closed after the outboard is shut off.

### Marine Compass

The F-24 is equipped with an analog marine compass mounted on the forward bulkhead in the cockpit. For complete warranty, maintenance, and operation instructions, refer to the compass owners manual enclosed with your ship's papers.

If you are navigating at night, the compass is equipped with a light activated by the instrument switch on the switch panel.

CAUTION: Compass readings may be erroneous if compensator is not adjusted properly. Always make a deviation table and use it when navigating by compass

### Running Gear

Self tailing winches have been placed on the cabintop of all the F-24s. The cabintop winches are used for halyard and jib sheet adjustment. Spinnaker sheet winches are mounted on the cockpit combings if the optional spinnaker package is installed. Cam cleats are positioned near each winch at the correct angle for securing lines. Be careful not to run lines at angles that will intersect the corners of the fiberglass and rub the gelcoat.

### Sheet Stoppers

Sheet stoppers have been installed on the cabin top for control lines lead aft to the cockpit from the mast and foredeck. With sheet stoppers, lines can be pulled through the stopping mechanism while closed but will not release until the clutch is opened.

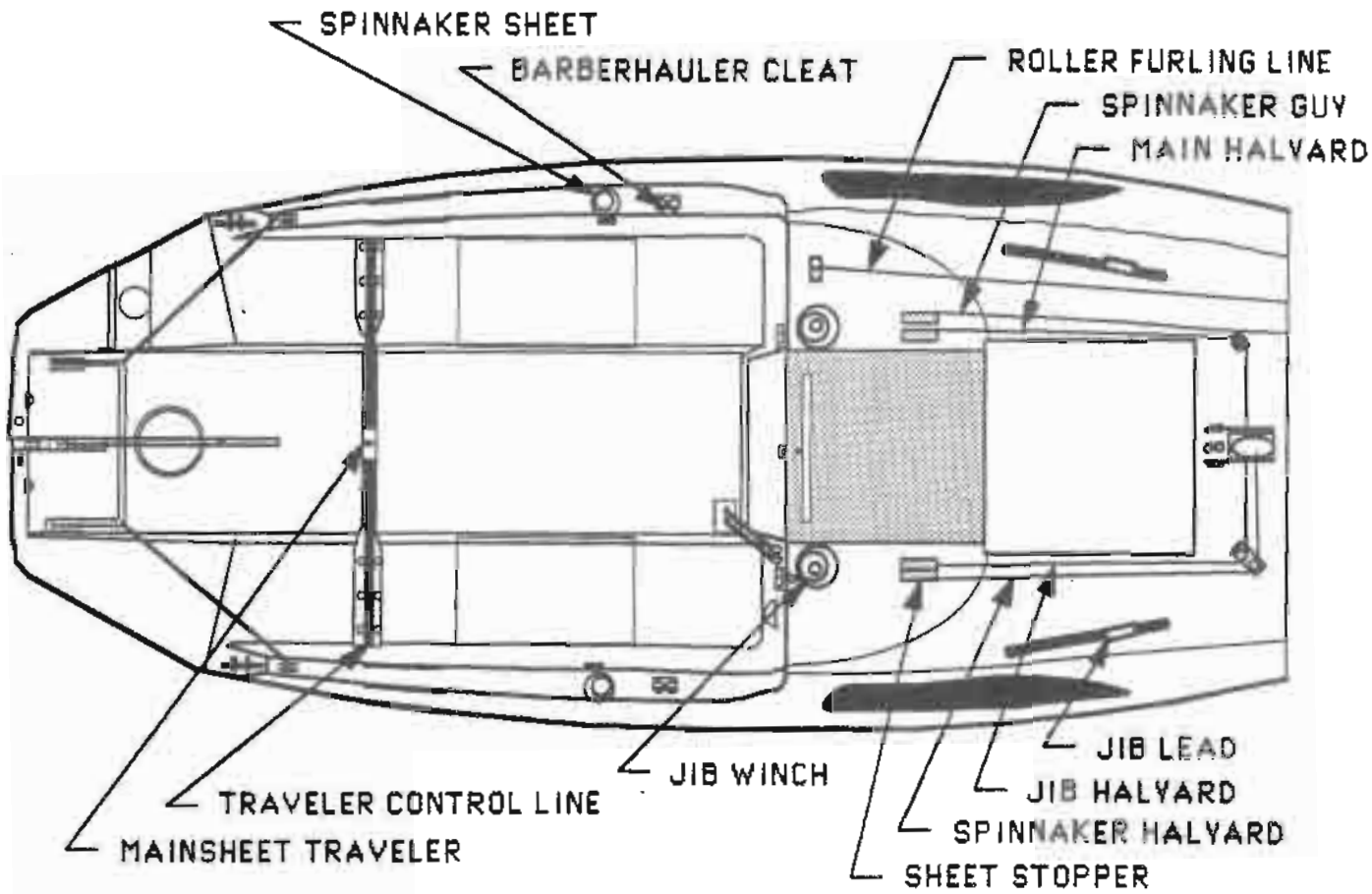



*FIG 1.8 SHEET & HALYARD ARRANGEMENT*

### Foredeck Toerail

The foredeck toerail is convenient for tying down sails and securing the spinnaker bag during launching.

### Cleats

The F-24 has been equipped with a bow cleat along with a chock on either side of the bow for dock lines. Always run bow docklines through the chocks. See Fig 1.9. Two cleats are fastened to the stern transom.

## Loose Gear

### Sails

The F-24 is equipped with a fully battened mylar/dacron mainsail with Corsair's proven on-the-boom reefing and furling system. The mainsail is controlled with a 5:1 mainsheet system. The 125% jib uses a standard roller furling system. Covers are provided for both the jib and mainsail.

The optional asymmetrical spinnaker and spinnaker control kit includes the bow sprit assembly, sheets, guys, blocks and winches. Refer to the "Sailing The F-24" section of this manual for more information on the options and specifications of F-24 sails.

*Fig 1.9 Bow Cleat And Chock*

**Other Loose Gear**

| Quantity. | Name |
|---|---|
| (1) | Main Sail and Jib Package. (includes covers and battens) |
| (1) | Mast raising bar |
| (1) | Mast light assembly - tri color |
| (1) | Beam bolt speed wrench |
| (1) | Socket 3/4" deep |
| (1) | Block 2.25" double with becket (main sheet) |
| (1) | Snap Shackle |
| (1) | Hexacat Block 5:1 (main sheet) |
| (1) | Rope: 7/16" White 64' long (main sheet) |
| (2) | Rope: 7/16" White with Blue fleck 25' long (jib sheet) |
| (1) | Rope: 5/16" Green 30' long (roller furling line) |
| (2) | Rope: 7/16" White 29' long (shroud adjuster) |
| (2) | Fiddle block (shroud adjuster) |
| (1) | Shock cord |
| (1) | 8" Handle winch |
| (1) | Rig tension gauge |
| (1) | Outboard cover and tool case (comes with outboard) |
| (1) | Ice chest 48 Quart |

**Toolkit**

| | |
|---|---|
| (1) | Toolbox |
| (1) | Wrench (10") |
| (1) | Channel Lock Pliers (8") |
| (1) | Phillips Screwdriver (8") |
| (1) | Flat Head Screwdriver (8") |
| (1) | Wrench 3/4" box end / open end ( spare beam bolt) |
| (1) | Rigging Knife #1550 |
| (2) | Retaining pins |
| (2) | Clevis pin 7/16" X 1" |
| (1) | Shackle 3/16 D |
| (1) | Shackle |
| (1) | Detent pin 1/4" X 1" Fast pin |
| (4) | Cotter Ring (turnbuckles) |
| (1) | Rope: Black 1/4" X 6' long (Spare) |
| (4) | Retaining Ring 5/8" (LFS. spares) |
| (6) | Washer 1/2" X 7/8" Flat (beam bolt washers) |
| (6) | Bolt Hex 1/2" X 1-1/2" (beam bolts) |
| (1) | Quick pin 5/16" X 1.25" (Avibank) |
| (1) | Traveler Loading Bar (comes with traveler) |
| (1) | Deluxe pin |

# ELECTRONICS

## STANDARD INTERIOR ELECTRONICS

### BATTERY

The 12 Volt 70 amp hour marine battery is located on the starboard side of the companionway entry, aft of the main berth. The battery is inside a battery container and strapped in place.

WARNING: Check that the battery is secure before leaving the dock.

The warranty for the 12 V marine battery is separate from the F-24 warranty. Consult the battery owners manual enclosed with your ship's papers for warranty registration and limitation along with safety information.

### MAIN BATTERY SWITCH

The main battery switch is located above the battery on the starboard side of the companionway entry aft of the main berth. Turn this switch on along with the required switch panel breakers to enable the use of the boat's electronic systems.

Turn the main battery switch off when the boat is not in use.

### SWITCH PANEL

The switch panel is located to the port side of the companionway entry. The top switch on the breaker panel is the 12 Volt Main switch. Both the main battery switch and the 12 Volt Main switch must be in the "on" position to enable the other switch panel breakers.

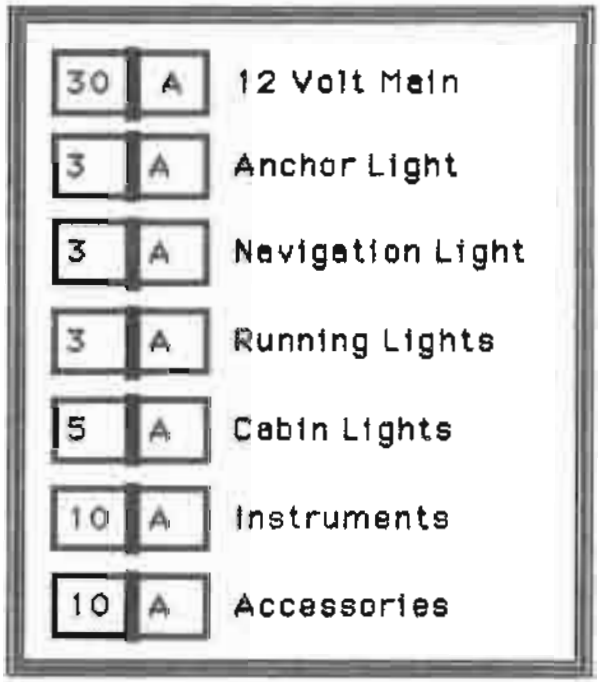



*FIG 1.10 SWITCH PANEL*

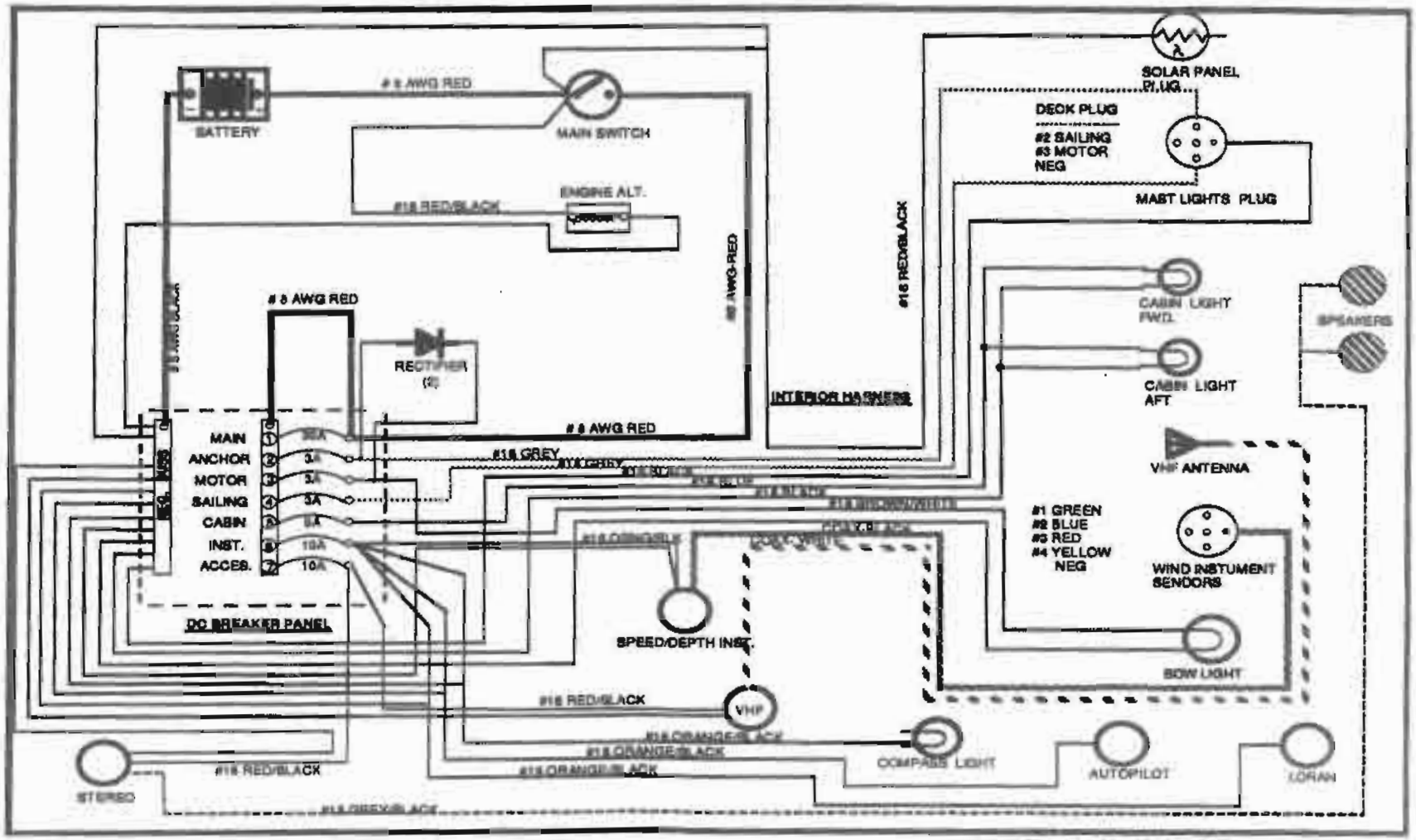



FIG 1.11 F-24 WIRING SCHEMATIC

## Optional Exterior Electronics

For complete safety, maintenance, and operation instructions on optional exterior electronics, refer to the individual owner's manuals enclosed with your ship's papers. The warranty for the all optional exterior electronics is separate from the F-24 warranty. Consult each separate owner's manual for warranty registration and limitation information.

### Tridata Instrument

The tridata provides information on speed, depth, water temperature, elapsed distance and time on an LCD digital display. The tridata instrument is activated by the instrument breaker on the switch panel. Access to the knotmeter paddlewheel is gained through the inspection port facing aft on the forward bulkhead above the cabin sole. The paddlewheel is approximately six inches to starboard of the centerline of the boat. The depth transducer is located underneath the forward berth with access through the inspection port forward of the head compartment.

### 11 Watt Solar Panel

The solar panel should be mounted on the cabintop with velcro behind the mast and connected to a deck plug at the mast step. The solar panel will charge the battery when the battery switch is off. The solar panel should be kept clean and free of debris.

### Wind Instrument

The wind instrument provides an analog display of apparent wind direction and a digital display of apparent wind speed. The wind direction and speed sensor should be installed at the mast head prior to raising the mast and connected to the deck plug at the mast step. The wind instrument is activated by the instrument breaker on the switch panel.

### Tillerpilot

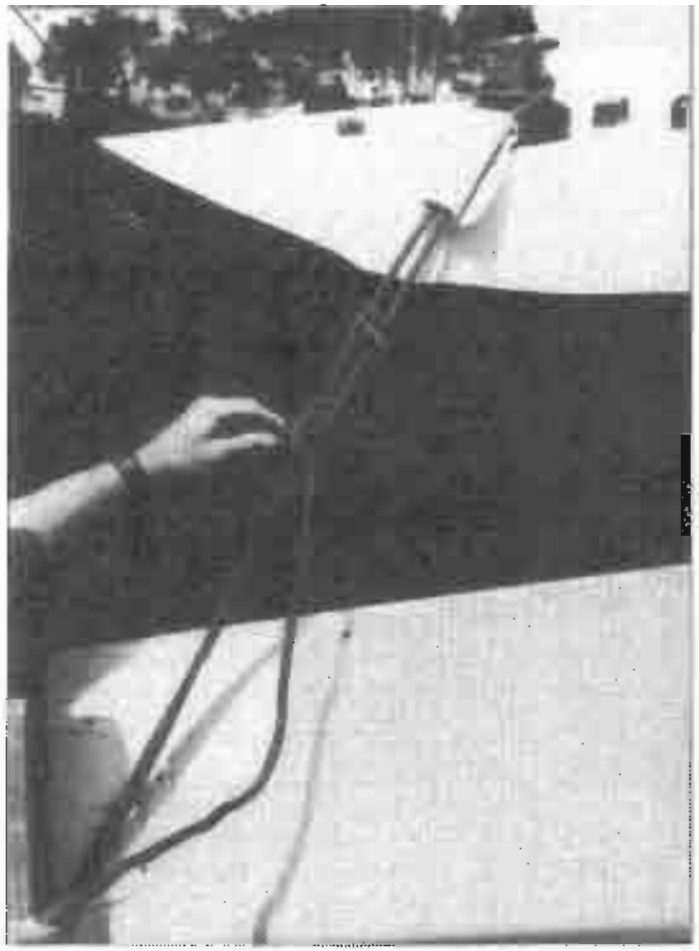
The tillerpilot is a self contained autopilot designed for tiller driven boats. The autopilot actuator is installed on the starboard aft seat and connects to a bracket on the tiller. The power and data plug is on the transom. There is also an optional remote for the tillerpilot. The tillerpilot is activated by the instrument breaker on the switch panel. The tillerpilot can also be linked to the optional wind instruments for self steering - see instructions.

fastened to the bow eye and tightened. For long road trips it is also a good idea to secure both a safety line from the trailer post to the bow eye and an extra mast tie down to the stern cleats.

Two knots should be used for securing the boat to the trailer, the bowline and the truckers' hitch. Make a bowline and place it over the winch on the side of the cockpit. Then make a truckers' hitch (see Fig 1.16) in the line. Take the bitter end through the hook on the trailer and back through the loop on the truckers' hitch. Now you have a purchase to really tighten down the boat. Finish securing the tie-down with a double half hitch below the loop.

To secure the mast in the proper trailering position, place the gooseneck hole in the mast over the mast knob on the bow pulpit and rest the top portion of the mast on the aft mast support on the stern. Tie the mast down in the following areas: around the bow pulpit, around the bow cleat, around the aft mast support on the stern, and tie the spreaders positioned closest to the deck to the jib lead cars. Also tie the roller furling to the mast just above the mast step. You may want to support the rollerfurling unit along its full length for long road trips.

*Fig 1.13 Trailer Lights*



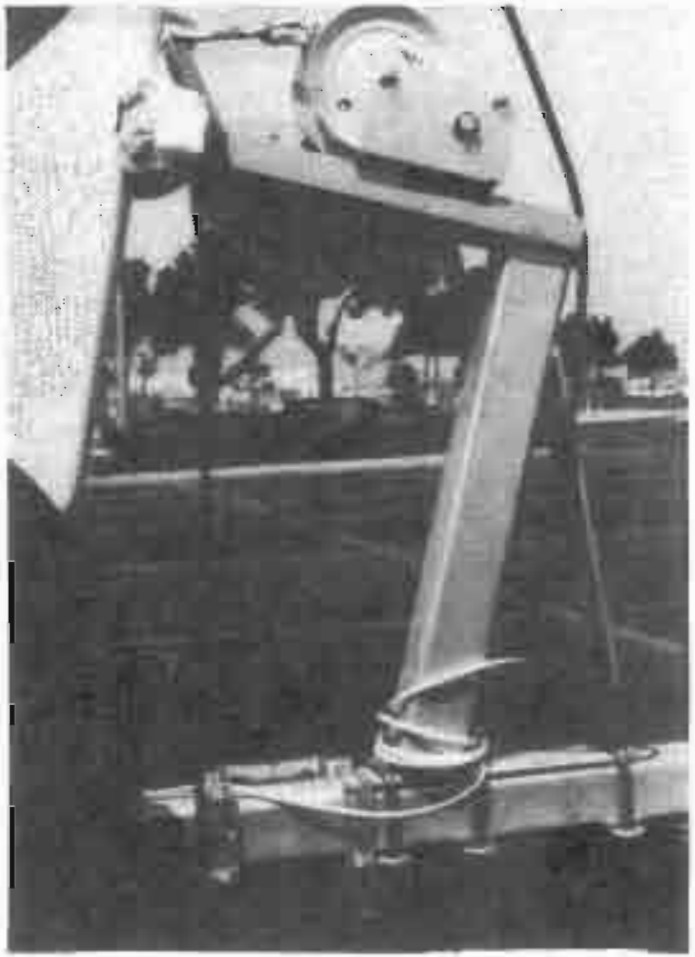


*FIG 1.14 TRAILER TIE DOWNS*

CAUTION: When trailering, be sure the trailer jockey wheel underneath the trailer tongue us pivoted into the up position and that the trailer hitch is locked on to the vehicle's 2" diameter towing ball.

### Towing Tips

If you experience "fish tailing" by the trailer, increase the tongue weight by moving some gear further forward in the boat.

Should the mast extend back past the trailer lights by more than the legal amount, the appropriate warning flag should be tied on the back. Check your local laws to find out maximum overhang information.

When trailering, remember to allow extra distance for stopping.

The common denominator in trailering lightweight boats like the F-27 and the F-24 is that the vibration and bouncing the trailered boat goes through stresses all the fittings and fasteners. This means that the more highway miles you travel, the more often you should take the time to check the tightness of all your boats fasteners.

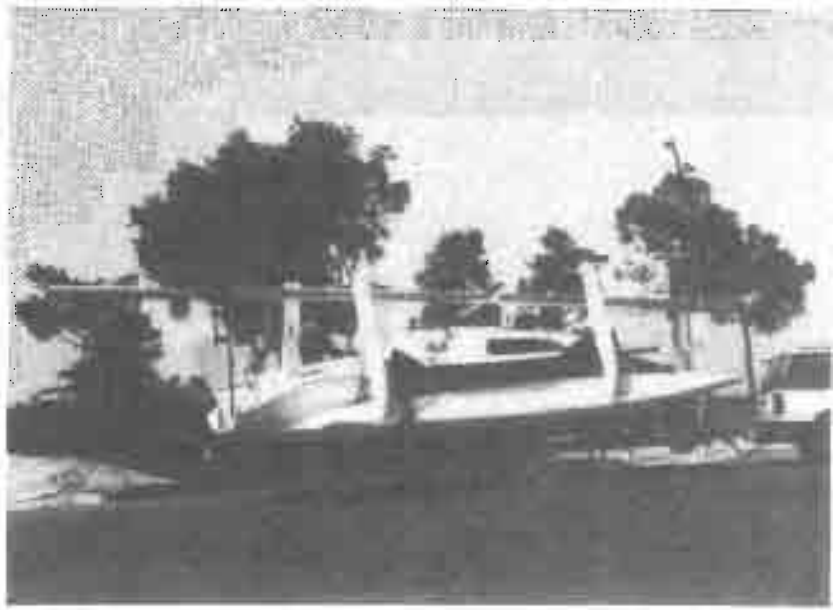


*Fig 1.15 F-24 On The Trailer*

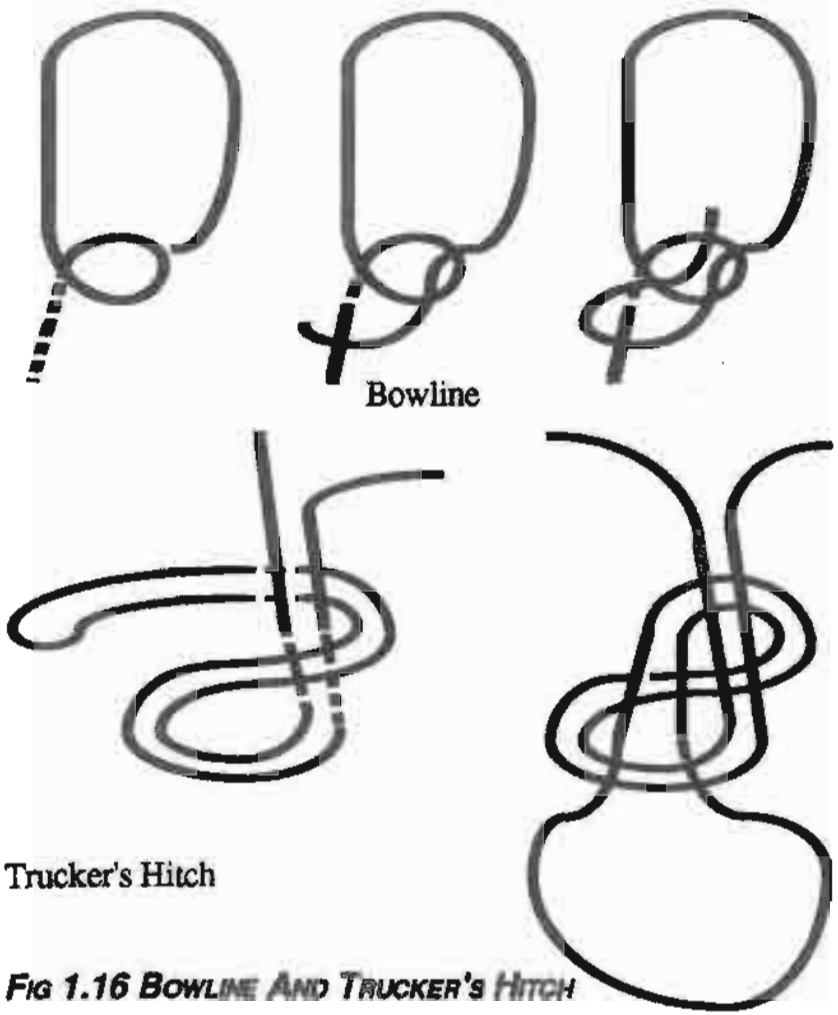



*FIG 1.16 BOWLINE AND TRUCKER'S HITCH*

## SET UP

WARNING: The float bows can sometimes be slippery. Use caution when climbing on and off the boat. Always use the non-skid areas on the float bows as stepping areas.

## STEPPING THE MAST

NOTE: Some of the following steps only need to be performed during the first set up. After that some of the rigging (such as the lower shrouds, cap shrouds and lines) may be left lead to their proper position. All of the steps that will be performed only in the first set up are designated with a "(1st set up)" after the instruction.

1) Check all trailer lights for proper function, then unhook them from the trailer.
   - This will prevent salt water damage and bulb burn out.

2) Remove all tiedowns holding the mast and rigging in place.

3) Release all sheet stopper clutches and the roller furling line so that the lines may run freely.

4) Roll mast aft (See Fig 2.2) or forward and attach mast-head instruments and masthead tri-light in their proper positions.
   - You may connect the instruments by balancing the mast off the stern and reaching the mast head from the ground or by bringing the mast head forward to the aft mast support and connecting the instruments while standing in the cockpit.
   - The windex, VHF antenna, and wind instrument are optional equipment that should be installed at this time.
   - It is a good idea to have a safe storage place for instrument caps

WARNING: If the trailer is not connected to a vehicle, do not stand on the F-24 aft of the trailer axle while the mast is rolled aft.

5) Install the forestay into the mast. (1st set up)
   - Check that the roller furler wrap-stop is tight. See Fig 2.3.

6) Place the mast step in the mast pivot brackets and install fast pins. See Fig 2.4.

7) Connect mast wire plugs to the deck fittings.

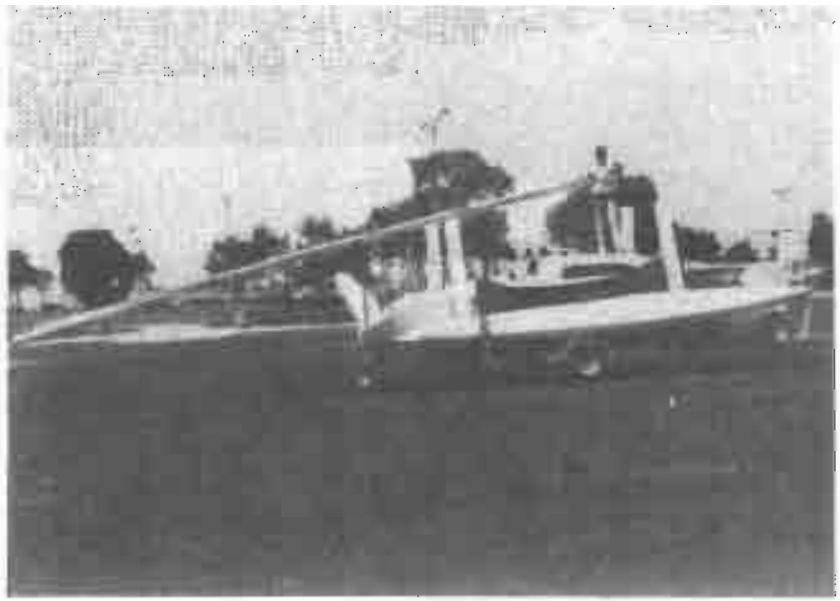


***FIG. 2.2 ATTACHING MASTHEAD INSTRUMENTS***

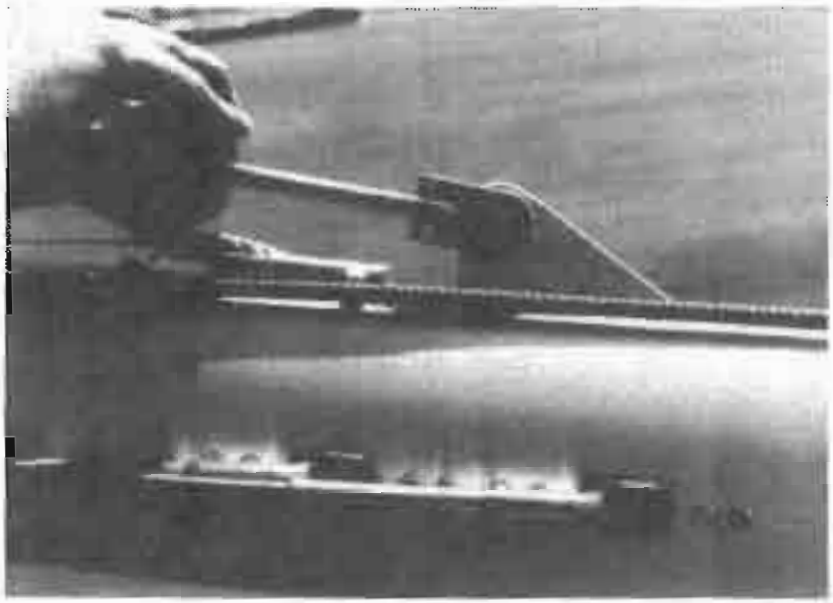


FIG 2.3 ROLLER FURLER WRAP STOP

FIG 2.4 MAST STEP

8) Turn the lower shroud turnbuckles counterclockwise and hand-tighten them evenly.
- The shrouds have been adjusted at the factory, however adjustment will become necessary.
- Attach lower shrouds to the U-Bolts on the main hull deck (1st set up).
- Do not tighten lower shrouds beyond hand tightening.
- Secure turnbuckles with cotter rings.

9) Center the mast on the mast roller located on the stern.

10) Turn the battery switch and main circuit breaker on.
- Turn on all exterior light switches in order to check them later.

11) Prepare cap shrouds for stepping mast.
- If not already connected to the float, connect the cap shroud toggles to the cap shroud chain plates on the float decks.
- Position cap shrouds inboard of aft beams

12) Check all exterior lights:
- Anchor light (white 360° light on top of the mast.)
- Navigation Light (Tri-color masthead light)
- Running lights (white 360° light on top of the mast and red/green light on bow)

13) Attach cap shroud adjusters at the intersection of the aft beam and float using the forward of the two U-Bolts. (1st set up)
- If the cap shroud adjusters are connected to the cap shrouds, loosen the cap shroud adjusters.

14) Put the mast raising bar on the foredeck.

15) Attach a retaining line between the bow eye and the tongue of the trailer.

16) Detach trailer winch line from the bow eye and unroll the winch line to the pre-determined length.
- If you have not determined this length yet, get a permanent marker and mark it later.

17) Pass the trailer winch line through the bow roller and lay it on the foredeck. See Fig 2.5.

18) Connect the spinnaker halyard shackle to the eye strap on the end of the mast raising bar.

19) Connect the trailer winch line to the shackle on the end of the mast raising bar. See Fig 2.6

20) Insert the mast raising bar gooseneck fitting into the mast gooseneck hole.See Fig 2.7

21) Tighten the spinnaker halyard such that the mast raising bar tilts approximately 5° aft of vertical leaning toward the masthead. (See Fig 2.10) Secure the halyard to the mast cleat with a cleat hitch. (See Fig 2.8) Mark this position.

FIG 2.5 RUNNING TRAILER WINCH LINE

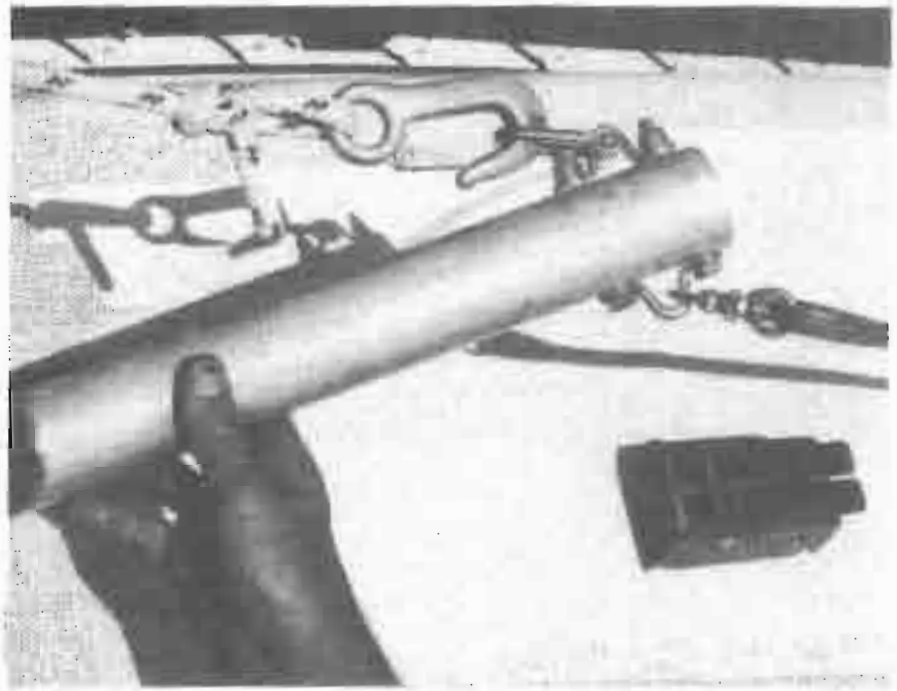


FIG 2.6 MAST RAISING BAR CONNECTIONS

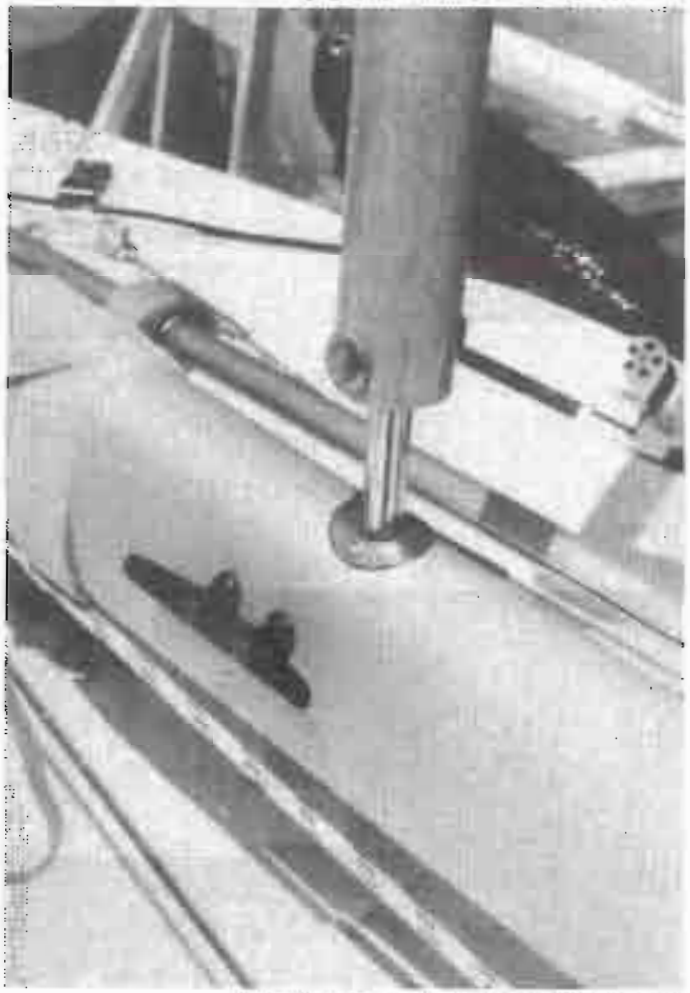


FIG 2.7 INSTALL MAST RAISING BAR

FIG 2.8 CLEAT HITCH FOR SPINNAKER HALYARD

22) Loosely wrap a velcro tie around the trailer winch line and forestay just above the furler drum. (See Fig 2.9) This will move the forestay into position as the mast is raised.

- Take up the slack in the trailer winch line and mark this position if not already done.

DANGERS:

- Check once again to be certain that there are no powerlines in the area.
- Double check that all shroud clevis pins are installed.

23). Crank the trailer winch to raise mast.

*Fig 2.9 Attach Forestay To Trailer Winch Line*

*Fig 2.10 Mast Raising Bar Set Up*

WARNINGS:
• If the mast becomes difficult to raise, STOP! Check to be certain that all rigging is clear and nothing is caught or still tied down to the boat.
• Do not allow persons to stand underneath the mast directly behind the boat.
• While raising the mast, do not stand directly behind the trailer winch - stand on the winch handle side of the trailer.
• Check that the cap shroud and lower shroud toggles are not caught at an angle or kinked underneath their U-Bolts.
• Check the trailer winch line periodically for signs of fray - replace immediately when necessary.

24). When mast is nearly vertical:
- Position furler drum above the forestay well.
- Remove clevis pin from the forestay toggle.
- Remove velcro tie connecting roller furler and winch line.

25). Winch the mast into final position and place the forestay toggle over forestay eye.
26). Install the clevis pin to connect the forestay toggle and forestay eye and secure the clevis pin with a cotter ring.

WARNINGS: Check that forestay and shrouds are secure before releasing trailer winch line. Check that the forestay clevis pin and cotter ring are completely installed.

27). Crank the trailer winch handle counterclockwise to slacken the winch line.
28). Remove and stow the mast raising bar and aft mast support.
- Connect the spinnaker halyard to the normal storage position.
- Run halyards back to the sheet stoppers. See Figures 1.3, 1.8, 3.3 (1st set up)

29). Connect the trailer winch line to the boat's bow and tighten.
30). Check that the cap shrouds are at least evenly hand tight on both sides and the lower shrouds are somewhat slack (handtight maximum).
31). Check that the mast is tuned as outlined in the rigging guide later in this manual.
32) Attach the boom to the mast. Refer to the "Boom Installation" section of this manual for further instruction.

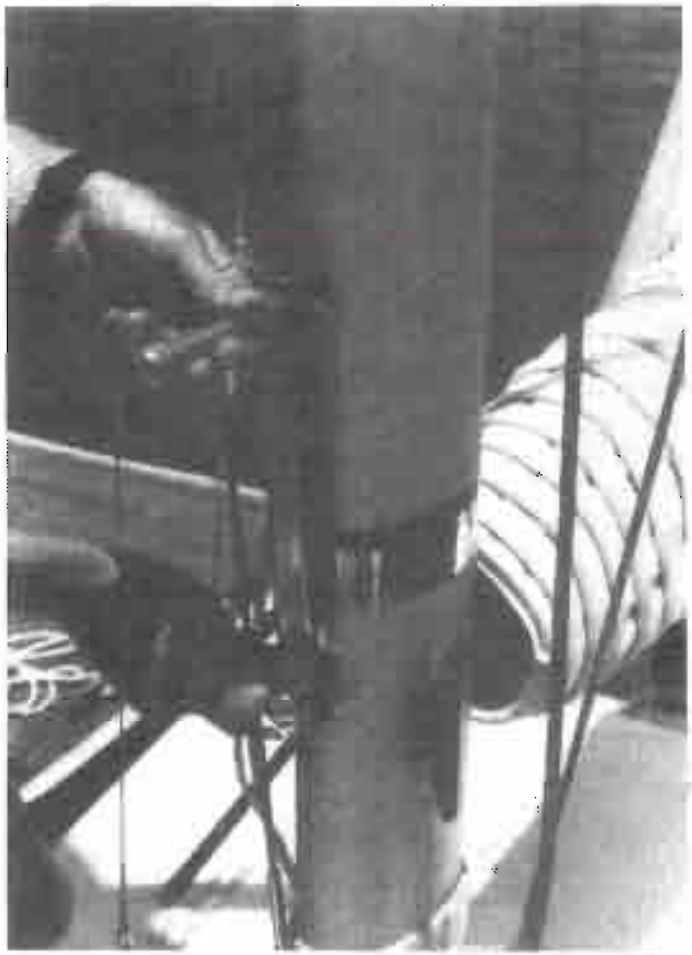


*FIG 2.11 INSTALLING BOOM*

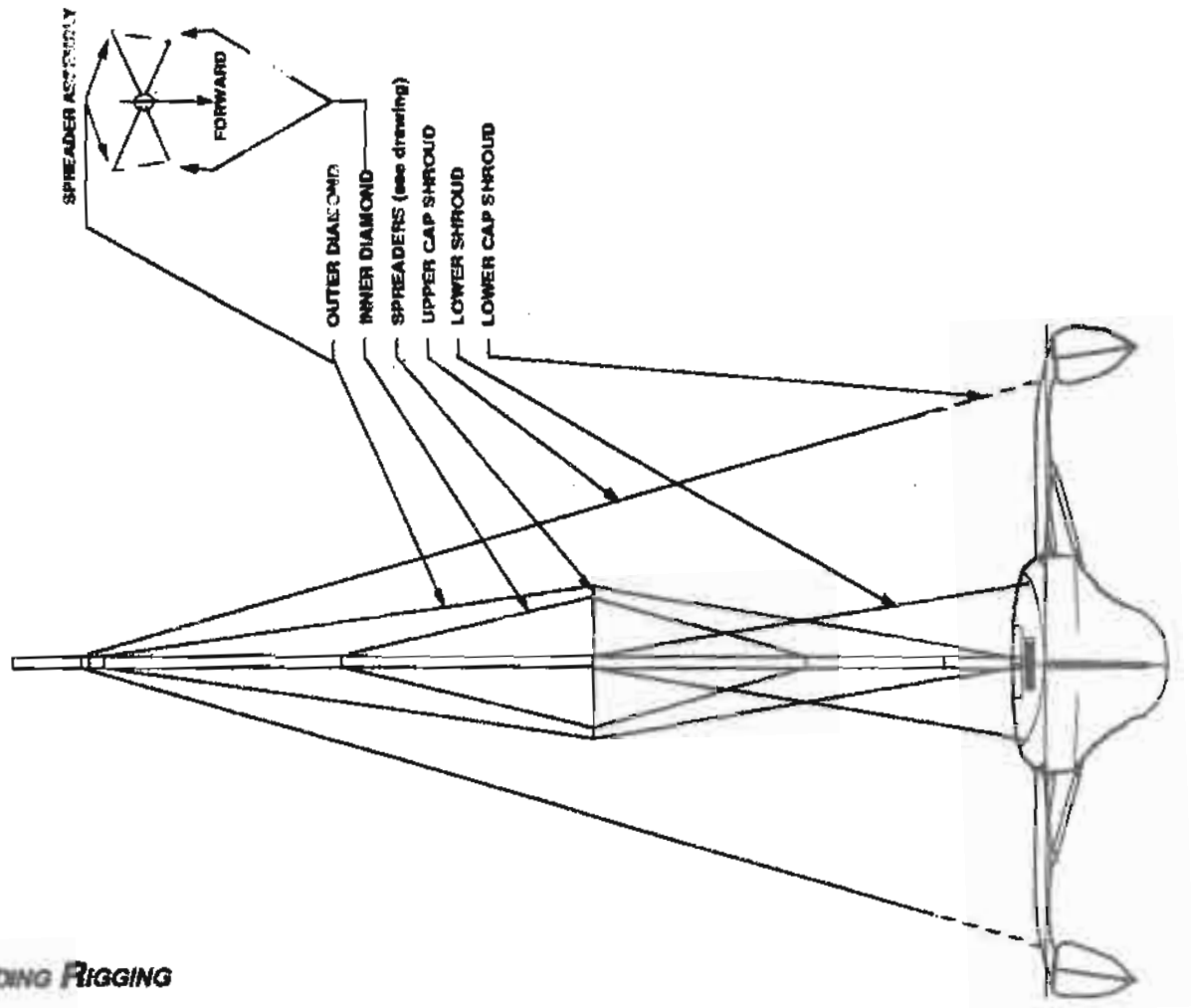



*FIG 2.12 STANDING RIGGING*

## TUNING THE MAST

The mast has been adjusted at the factory, however wire rigging does stretch with use, especially when it is new. Therefore, use the following instructions to maintain safe and proper tuning. You should expect to retune your rigging after the first 4-6 sails and every 3-4 months thereafter (or as needed).

To help understand the terminology used with the unique F-24 mast please refer to Figure 2.12 in this manual and read the following descriptions.

Inner Diamond Shrouds: The inner diamond shrouds are the 3/16" diameter innermost shrouds that enter the mast above and terminate below the spreaders with a turnbuckle. They are lead through the forward spreaders.

Outer Diamond Shrouds: The outer diamond shrouds are the 1/4" diameter intermediate shrouds that enter the mast close to the top and terminate at the base of the mast with a turnbuckle. They are lead through the aft spreaders.

Lower Shrouds: The lower shrouds are 1/8" in diameter and come out of the mast at the spreader and mast intersection. The turnbuckle end of the lower shrouds get connected to the deck at the U-bolts on the deck.

Cap Shrouds: The cap shrouds come out of the mast in the highest position of any of the shrouds. The other end of the cap shrouds have a turnbuckle and are connected to the floats. The cap shrouds are a two part shroud with upper and lower portions joined four feet above the float deck with a shackle.

Cap Shroud Adjusters: Cap shroud adjusters are a block and tackle system that are connected to the cap shrouds at the upper and lower cap shroud intersection where a shackle has been installed. The other end on the cap shroud adjuster should be connected to the U-bolt on the aft float.

NOTES: After removing retaining rings,
- To tension a turnbuckle, secure the wire end of the turnbuckle above the threads with a crescent wrench or vice grip and turn the turnbuckle body counterclockwise.
- To slacken a turnbuckle, secure the wire end of the turnbuckle above the threads with a crescent wrench or vice grip and turn the turnbuckle body clockwise.

CAUTION: Replace all retaining rings in turnbuckles when complete.

WARNING: Lower shrouds are for mast support during mast raising and lowering only. Do not use them for mast tuning. Lower shrouds should be somewhat slack when the mast is vertical.

Proper tuning consists of three separate adjustment sequences: side to side tuning, checking if the mast is in column, and fore and aft tuning. Each of these steps are described in the following text.

### Side To Side Tuning

Side to side tuning is the first step to check if the mast is positioned square to the base. Side to side tuning should be done at the dock or on the trailer. Measure the side to side position of the mast by locating a reference point on the toe rail or beam recess and adjusting the red spinnaker halyard to this point (see Fig 2.13). Move the halyard over to the corresponding point on the opposite side of the boat with the same halyard tension. If the halyard shows a shorter distance to one side than the other, then the mast must be leaning toward that side.

To alleviate this problem, loosen the cap shroud turnbuckle (clockwise) one turn on the side the mast is leaning toward and tighten the cap shroud turnbuckle (counterclockwise) one half turn on the other side. Once this is done, check side to side alignment again. You may need further adjustment.

### Checking If The Mast Is In Column

To make certain that the mast is in column (it doesn't curve side to side in an "S" or "C" shape), sight up the mast from directly behind looking up the mainsail track and check for straightness. If the mast is not straight, use the following guidelines for adjustment.

NOTES:
- Major adjustments in column adjustment (over 1" in either direction) will involve completely slackening the inner diamond turnbuckles to be sure that they are not affecting outer diamond adjustments.
- Be certain that the cap shroud adjusters have been slackened when checking to see if the mast is in column.

If the middle of the mast bows to port in relation to the base, tighten the port outer diamond turnbuckle one turn and slacken the starboard turnbuckles one turn.

### Induce Pre-Bend

To induce pre-bend, slacken (clockwise) inner diamond turnbuckles (both starboard and port) evenly. Also tighten the outer diamond turnbuckles accordingly.

### Remove Pre-Bend

To remove pre-bend, tighten (counterclockwise) inner diamond turnbuckles (both starboard and port) evenly. Also slacken the outer diamond turnbuckles accordingly.

WARNINGS:
- Do not exceed 500 pounds of tension (Number 22 on tension gauge) in the 3/16" diameter inner diamond shroud.
- Do not exceed 1500 pounds of tension (Number 42 on tension gauge) in the 1/4" diameter outer diamond shroud.

### Tuning The Cap Shrouds

Once the mast is tuned, the cap shrouds should be tuned with the cap shroud adjusters. The stronger the wind, the more tension should be put on the cap shroud adjusters. The cap shroud adjusters should be tensioned to the appropriate setting before raising sail.

WARNING: Cap shroud adjusters should not be used like running backstays! The starboard and port cap shroud adjusters should have the same amount of tension on them before sailing and should be changed evenly while sailing if needed.

If you need to further adjust the cap shrouds while sailing, tighten or slacken both sides evenly. The cap shroud adjusters will also effect the amount of forestay sag in the rig. When the adjusters are slackened, it will add more sag to the forestay. Sag in the forestay will give more power to the jib for light wind conditions. More cap shroud tension will reduce forestay sag and move the sail draft forward for heavier wind conditions by bending the mast.

Tuning Tip: When you have tensioned the cap shroud adjusters for various conditions, mark these positions on the adjuster as follows: Put a piece of tape on the segment of line that does not move between the becket and top block. Mark positions for light, medium, and heavy air by adjusting to the appropriate setting and attaching tape to one of the moving segments of line next to your permanent mark. Fee Fig 2.14.

CAUTIONS:
- Never let the cap shroud have less than 250 pounds of tension (Number 24 on the tension gauge).
- The maximum cap shroud tension with use of the cap shroud adjusters is 1500 pounds (Number 42 on the tension gauge).

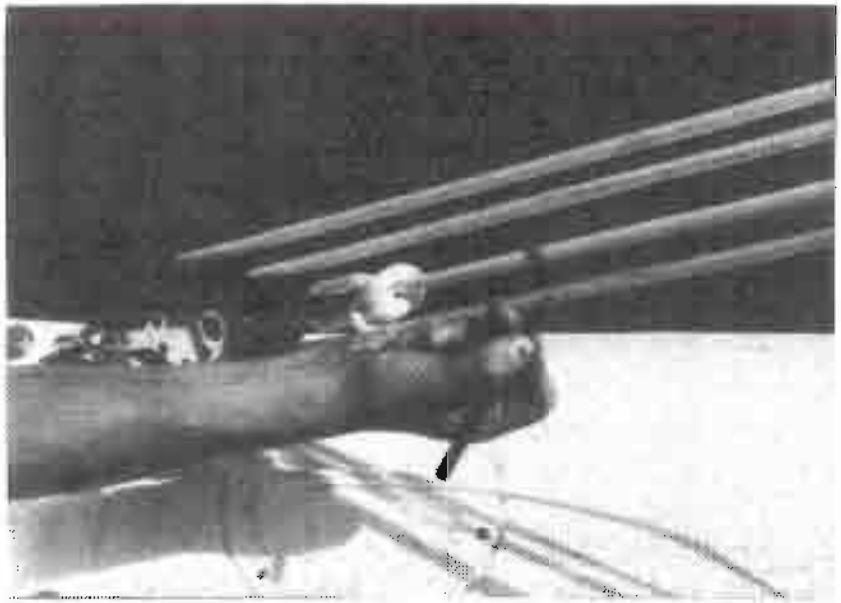


*Fig 2.14 Marking Cap Shroud Adjuster*

### On The Water

Additional mast tuning can be done while sailing. At least 10 knots of wind is needed to tune while sailing. If the middle of the mast bows to windward in relation to the base, tighten the windward outer diamond turnbuckle one turn. Tack the boat and repeat the adjustment to the opposite outer diamond. Adjustments should be made in incremental steps each time you tack with one turn maximum, and never exceed the recommended tensions.

For more information on tuning the mast while sailing, read the "Sailing The F-24" section of this manual.

### Tension Gauge Settings

Outer Diamond Shrouds: The outer diamond shrouds on the F-24 should be set to 1500 pounds or Number 42 on the tension gauge. Do not exceed 1500 pounds of tension in the 1/4" diameter outer diamond shroud.

Inner Diamond Shrouds: The inner diamond shrouds on the F-24 should be set to 500 pounds or Number 22 on the tension gauge. Do not exceed 500 pounds of tension in the 3/16" diameter inner diamond shroud.

Cap Shrouds: The cap shrouds on the F-24 should be set to 250 pounds or Number 24 on the tension gauge. The maximum cap shroud tension with use of the cap shroud adjusters is 1500 pounds or Number 42 on the tension gauge.

## BEFORE SAILING THE F-24

### MAINSAIL SET-UP

During normal use there is no reason to remove the mainsail from the boom. However, if you did remove the main, it is easiest to bend it on after the boom has been attached to the mast. See Fig 3.1.

To install the mainsail:

1). Leading with the mainsail clew, place the mainsail bolt rope in the track on the boom and slide the foot of the main aft on the boom.

2). The two lines that exit the can both be used as the outhaul. Attach the outhaul lines to the mainsail clew. The line that exits the starboard side of the boom should be passed through the mainsail clew grommet and tied off on the port eye strap at the end of the boom. The line that exits the port side of the boom should be passed through the mainsail clew grommet and tied off on the starboard eye strap at the end of the boom. One of the lines could be used as a flattening reef instead of an outhaul. The flattening reef grommet is positioned just above the outhaul grommet on the leech of the mainsail.

FIG 3.1 MAINSAIL SET UP

3). Attach the mainsail tack to the shackle on the forward end of the boom.
4). Using the crank at the forward end of the mast, roll up the mainsail around the boom.

There are six full battens in an F-24 main. The restraints holding the battens in place should be checked periodically for signs of fatigue. You may need to tighten the battens to achieve proper sail shape. However, if the battens are too tight the mainsail will be difficult to raise and lower. After the mainsail has been hoisted, vertical wrinkles along the batten pockets will indicate that the battens are too loose.

If the mainsail is rolled tightly around the boom after lowering the sail, back off the crank two to four turns to release some of the tension to avoid permanent set in the battens.

## ROLLER FURLING JIB SET-UP

To rig the roller furling jib (See Fig 3.2):
1). The roller furling line is pre-installed on the roller furling drum. Lead the roller furling line back through the pad eyes leading back to the cockpit.
2). Pull the roller furling line an additional amount so the forestay rolls around approximately two to three full turns.
3). Attach the jib tack to the shackle on top of the lower roller furling barrel.
4). Attach jib sheets to the jib and lead them outside of the lower shrouds, then through the jib lead cars on the cabintop. Tie a stopper knot in the end of the sheets, but do not cleat the lines or wrap them around a winch.
5). Connect the jib halyard to the top shackle on the upper roller furling drum.
6). Connect the head of the jib to the lower shackle on the upper roller furling drum.
7). Pass the top of the jib luff tape through the track pre-feeder and into either of the tracks in the forestay.
8). Point the boat into the wind.
9). Pull the jib halyard and raise the jib

CAUTION: If the jib becomes difficult to raise, STOP!

- Check for snags where the jib may be caught in the rigging.
- Check to see if the jib luff tape has separated from the forestay track. Lower the sail and re-feed if necessary.

10). Tighten the jib halyard with the winch until the horizontal wrinkles on the luff (forward edge) of the jib disappear.

11). Furl up the roller furling jib around the forestay by pulling the roller furling line.

- If the jib is difficult to roll up, your halyard probably needs adjustment. Look up the forestay at the halyard between the upper roller furling drum and the mast. If the halyard wraps around the forestay when you roll up the jib, the jib halyard is probably too loose. Unfurl the jib and tighten the halyard a little, then try again. If the halyard is not wrapping around the forestay and the sail is still difficult to furl, the halyard is probably too tight. Unfurl the jib and loosen the halyard a little, then try again.

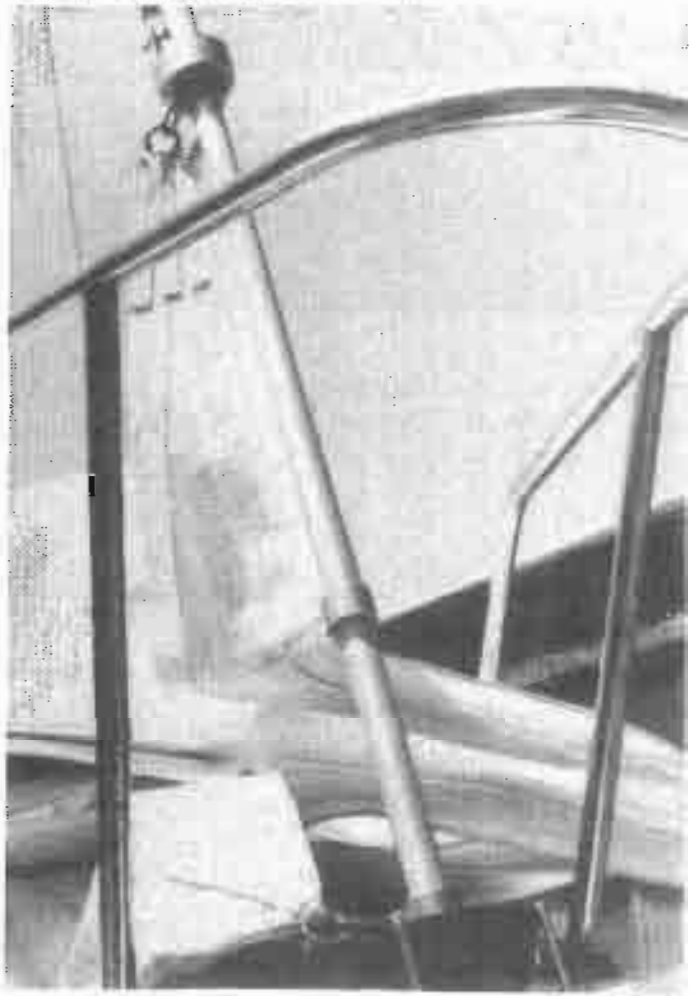


*FIG 3.2 JIB SET UP*

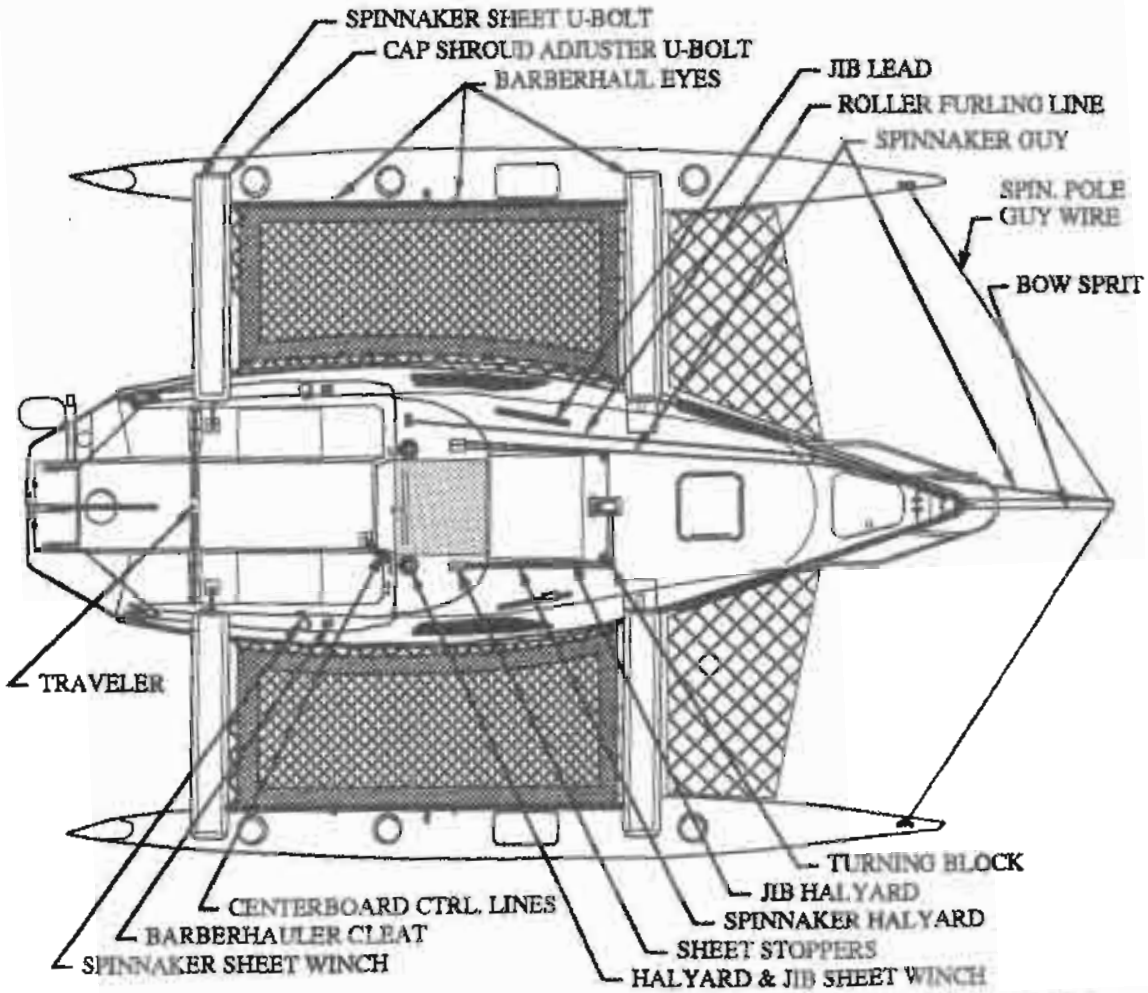



FIG 3.3 RUNNING RIGGING PLACEMENT

## RUNNING RIGGING SET UP

For a complete description on the function of all the running rigging, refer to the Sailing The F-24 section of this manual.

Mainsheet: The mainsheet block and tackle is attached to the end of the boom and the end with the cleat is attached to the traveler car.

Traveler: The side to side position of the traveler car is controlled with the blue control lines.

Jib Sheet: The jib sheet is attached to the clew of the jib, runs outside of the lower shroud, through the jib lead, and is lead back to the jib sheet winch.

Jib Halyard: The jib halyard comes out of the side of the mast and is lead through the inside turning block, closest to the center of the boat, and back through the inside sheet stopper.

Roller Furling Line: The roller furling line is lead from the roller furling drum, back through two fairleads and then to the cam cleat mounted on the port cabintop.

Spinnaker Halyard: The red spinnaker halyard comes out of the side of the mast and is lead through the outside turning block, furthest from the center of the boat, and back through the outside sheet stopper.

Main Halyard: The main halyard comes out of the side of the mast and is lead through the turning block and back to the inside sheet stopper.

Cap Shroud Adjuster: The cap shroud adjuster is attached to the cap shroud at the upper to lower cap shroud intersection where a shackle has been installed. The cam cleat end of the cap shroud adjuster is connected to the forward U-Bolt on the float to aft beam intersection.

Barberhauler: There are three positions that the barberhauler block can be mounted on the float. Which position is chosen depends upon how far out the jib is furled and the angle of the wind to the boat. The forward position is the U-Bolt on the forward beam to float intersection. The other two positions are the eye straps on the net side of the float.

Centerboard Control Lines: The centerboard control lines come out of the cockpit sole and are lead to cleats mounted to starboard of the companionway. The red line raises the centerboard and the blue line lowers the centerboard. The centerboard lines should be marked with a permanent marker to indicate full up and full down positions.

CAUTION: Do not use a winch on the centerboard control lines.

Spinnaker Guy: The spinnaker guy is lead from the outside port sheet stopper, to a fairlead on the foredeck, then to a block at the end of the bowsprit. The fairlead for the spinnaker guy is inside of the roller furling line fairlead.
Spinnaker Sheet: The spinnaker sheet is lead from the spinnaker winch, to the aft U-Bolt on the float to aft beam intersection, then up to the spinnaker or bow pulpit or toe rail for temporary storage. If it has not already been done, a shackle from the tool box will need to be installed in the middle of the spinnaker sheet.
Bow Sprit: The bow sprit is attached to the boat at three points. One guy wire is run to either float and the bob stay connects to the trailer winch line U-Bolt on the bow.

## LAUNCHING

The overall height of the F-24 with the mast up in the water is 37 feet or 11.28 meters. When the mast is down, the height is 6 feet 6 inches or 2 meters above the water with the floats folded up and 9 feet 6 inches or 2.9 meters above the water with the floats folded out. Be certain that your launching area and sailing waters will not be restricted with these dimensions.

If not already done, remove the trailer tie downs, trailer lights and the extra safety line holding the rudder. Connect bow and stem docklines and fenders. You may want to use the trailer tie down lines as docking lines. The F-24 is always launched folded up! Unfolding can take place once the boat is afloat and clear of any obstructions.

WARNING: Before moving the boat, check to see that there are no powerlines in the vicinity that could touch the mast

Back the trailer down the ramp until the boat begins to float off the trailer. At this point the trailer will probably be submerged up to the side frame members ( 6 feet back from winch post). You should now be able to access the trailer winch without getting your feet wet. Open the gas tank breather valve and lower the outboard and rudder at this time.

CAUTIONS:
- Do not back your vehicle up to the point that the exhaust tailpipe is submerged.
- Engage the vehicle's emergency brake.

Loosen the trailer winch line and disconnect the trailer winch hook from the bow. Hold on to the bow line and push the boat off the trailer.

CAUTION: Be aware of the affect that the prevailing wind will have on the boat as you push it off the trailer. A wind blowing from the water toward the launching site may make the launching sequence tricky. Plan ahead and anticipate the boat's reaction to the wind!

Remember, with a shallow draft the F-24 will slide sideways quickly when the centerboard is not down! Therefore, lower the centerboard as soon as you have enough depth underneath the boat.

If there is a dock at the launching site, secure the boat, stow the trailer and get ready to go sailing. If there is not a dock, you will need to start the outboard before the boat is off the trailer. With two people, a motor launch is divided into two jobs - one person operates the boat after the person on shore pushes the boat off the trailer.

Single-handed motor launching is a little more difficult. After the trailer is backed into the water, lower the rudder and outboard then start the outboard. Go back to the trailer and disconnect the trailer winch hook. As you push the boat off, climb aboard the folded float. Carefully work your way back to the cockpit and gain control of the boat. Remember to lower the centerboard as soon as possible for better control.

## CRANE LAUNCHING

NOTE: You may want to leave the boom off until you are in the water so that it does not get in the way during launching.

In order to crane launch the F-24 you will need the optional Lifting Bridle Chainplates installed in the forward beam to main hull recess. The lifting bridle is a three point connection. Lead the short straps forward inside of all shrouds and connect them to the lifting chainplates. After moving the main sheet traveler car over to one side, secure the long strap to the traveler by looping the line around the traveler as near the centerline as possible and connecting the link shackle back to the strap. Be certain that the bridle attachment is in the correct order with the two chainplate straps on the outside and the traveler strap in the middle. See figure 3.4.

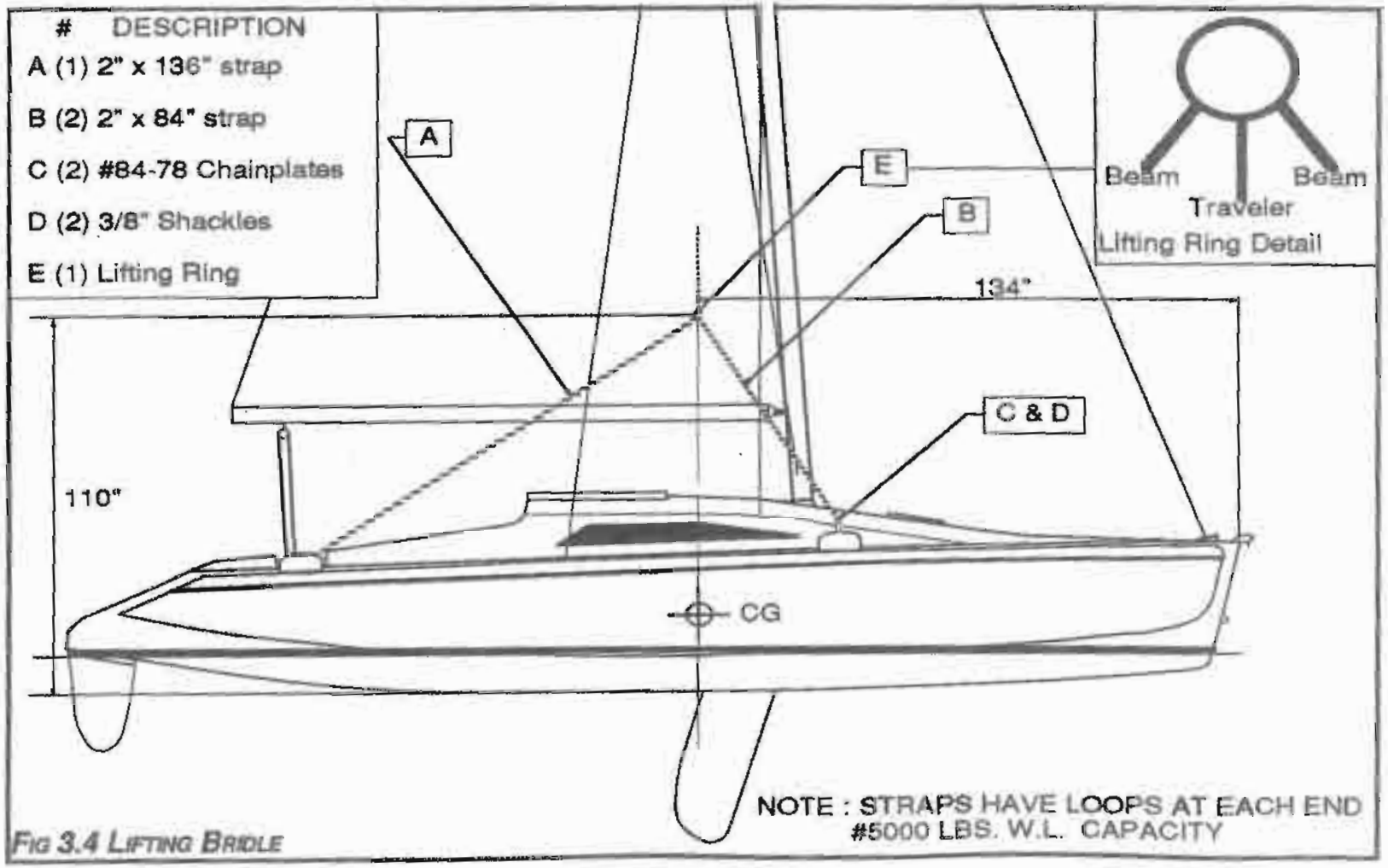



*Fig 3.4 Lifting Bridle*

## MOTORING

The motor can be used while the floats are folded or extended. Maneuverability is limited when just starting out, as the rudder will not start turning the boat until the boat is moving with water flowing past the rudder. Always allow for turning radius and wind effect while maneuvering.

WARNING: To prevent side slipping, the centerboard should be down whenever possible while motoring. If the centerboard is not in the down position, a hovercraft like motion will result with wide skidding turns.

The outboard will have the best gas mileage at two thirds throttle, which is equivalent to 6 knots in flat water. The outboard is equipped with an alternator to charge the battery. Always tilt the outboard up and close the gas tank breather valve while sailing.

CAUTIONS:

- Do not operate the motor while people are in the water.
- Avoid high speed turns while the floats are folded in. The F-24 has less stability in this configuration.

If the outboard quits, check the gas level in the tank. Other possible causes include a kink or clog in the gas line or gas line connections, the gas tank vent being closed, and the dead man switch on the engine being removed.

## RUDDER OPERATION

To lower the rudder, release the black rudder uphaul line cleated to the tiller and pull the green line on the transom. Once the rudder is all of the way down, cleat the green line in the cam cleat on the stern. Adjust the tiller to an angle that you feel comfortable sailing with and cleat the black line on the tiller.

To raise the rudder, pivot the tiller upwards, take up the slack in the uphaul line and cleat it in the new position. Push the tiller downwards and the rudder will begin to pivot upwards. Place your foot on the tiller and rudder intersection and push downwards (See Fig 3.5). This will move the rudder even higher. From here, put the rudder into the full up position by hand. By tightening the black line on the tiller and cleating it, you will lock both tiller and rudder into position. For trailering, you may want to put a safety line around the rudder and connect it to the aft mast support.

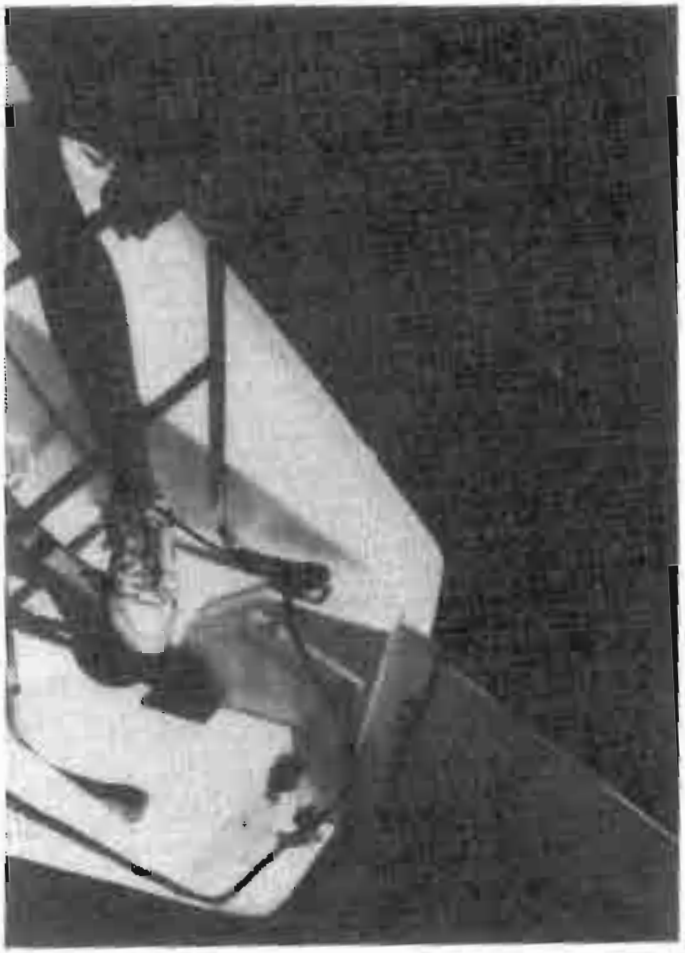


*FIG 3.5 RUDDER OPERATION*

CAUTION: In shallow water areas (10 ft. or less), uncleat the rudder and centerboard "down" line to prevent damage.

## CENTERBOARD OPERATION

The centerboard trunk is located underneath the main berth just to starboard of the centerline of the boat. The centerboard control lines are lead aft to the cockpit. The lines are cleated just to starboard of the companionway entry.

The centerboard is lowered with the blue control line and raised with the red control line. When lowering the board, release the red line and pull the blue. When raising the board, release the blue line and pull the red. For increased purchase in raising and lowering the centerboard, leave the control line cleated and pull the line in the area in between the cleat and cockpit sole. See Fig 3.6.

CAUTION: Never run centerboard control lines to a winch. If the centerboard is difficult to raise or lower, check the centerboard slot for debris.

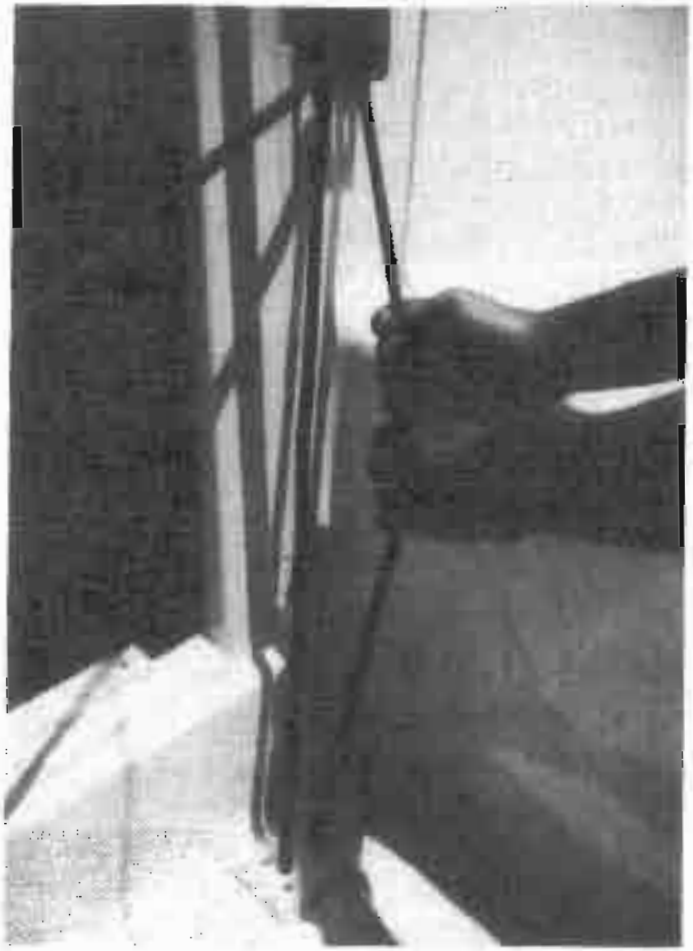


*FIG 3.6 CENTERBOARD OPERATION*

Using the centerboard correctly will give you more speed and make sailing the F-24 easier. The purpose of the centerboard is to prevent side slip and provide the boat with a pivot point on which to tack or gibe. There are times when the centerboard will perform best either full up, or full down, or somewhere in between.

The centerboard should always be down while sailing upwind. In this position it provides lift to windward and prevents lateral leeway (side slipping).

While sailing downwind, the centerboard should be all the way up except when you feel the need for more directional control. In the later case, experiment with various depths to achieve optimum handling and performance.

It is difficult to gauge where the centerboard should be while reaching. If the centerboard is not down far enough, there will be a load on the rudder that can cause cavitation or spin out. When the centerboard is not down far enough, the boat will also be sliding to leeward. This will not show on the compass, but will put you to leeward of the destination.

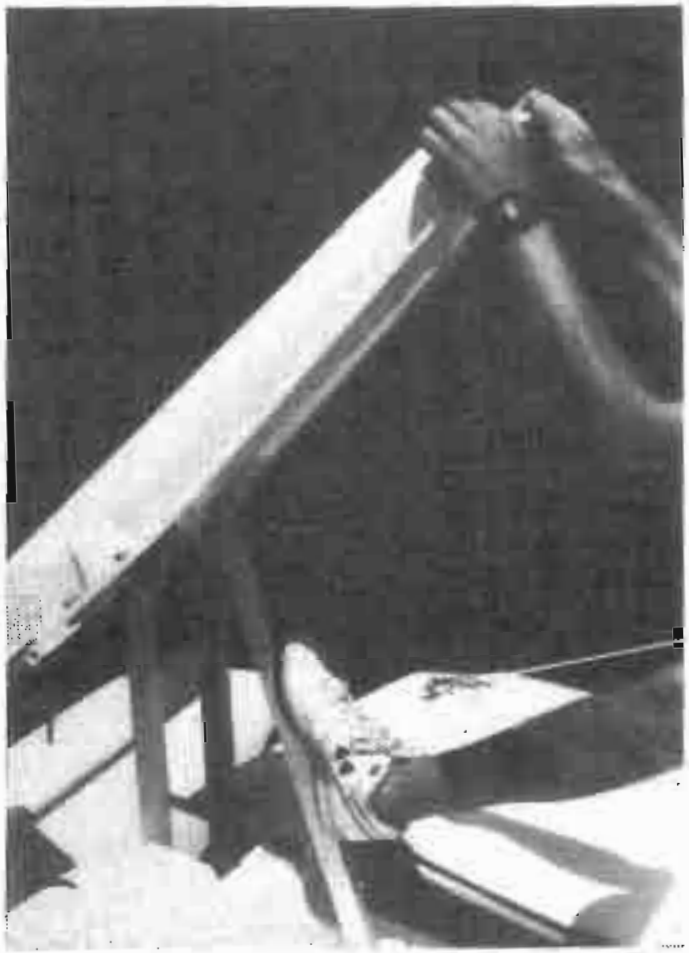


*Fig 3.7 Unfolding The Floats*

Marking the centerboard downhaul for various positions will give a quick reference as to the position of the centerboard. For maximum performance, it will help to experiment with various centerboard depths in different conditions. You will always want both lines cleated so that the lines do not fall into the centerboard trunk.

## UNFOLDING THE FLOATS

The cap shrouds should not be detached from the floats to fold or unfold the F-24. To unfold, first check that there are no lines across the beam recesses. Remove the beam locking pin from the aft edge of the aft beam and place your foot at the top of the folding strut. Grasp the top of the beam and pull downwards while pushing with your foot (See Fig 3.7).

CAUTIONS:
- Check that no one has their foot/hands/fingers in or near the float or folding struts.
- Watch that the lines connecting the optional bow sprit and the floats do not get caught during the unfolding procedure.

As the float unfolds, it may pick up some speed, therefore help guide the beam as it settles into place. Hold the beam down and tighten the bolts. The bolts should be tightened firmly but not excessively.

If it is difficult to hold the beams down, most likely either the nets are lashed too tightly or the cap shroud adjusters are too tight or caught on something. Slacken the net's support line slightly to help alleviate this problem.

It is not necessary to hold both the forward and aft beams when folding or unfolding. One person performing this operation is all that is needed. The nets will extend and automatically tighten themselves.

If is has not been done already, attach the cap shroud adjusters to the floats and cap shrouds.

CAUTION: Always keep cap shrouds attached while the mast is up

## SAFETY & EMERGENCY

The modern trimaran with its incredible stability and unsinkability is a very safe craft, and has now established an excellent safety record. However, this safety is dependent on the operator and how the craft is operated.

## PROPER SAFETY EQUIPMENT LIST

**The following items should always be accessible when offshore. Additional items will be required.**

| | | |
|---|---|---|
| EPIRB unit | Flares | Ropes |
| Cutting Tools | Pliers | Spare Beam |
| Bolt Wrench | Bolt Cutters | Wrenches |
| Hand Bilge Pump | Horseshoe Buoy | |
| Throwable Flotation | | |

Hand held VHF radio (in a waterproof pouch)
Also carry all Coast Guard required and recommended equipment! Make certain that all crew is aware of the safety equipment locations!

## CAPSIZE PREVENTION

Capsize is a potential hazard on a multihull. However, if a few simple rules are followed, capsize is almost impossible. The important factor is that the degree of risk is up to the operator. If you are pushing the boat hard, the degree of risk is greater. Remember that there is no need to push the boat so hard that capsize is a possibility. By sailing conservatively, and reefing sails, the F-24 will be able to handle a wide variety of conditions. A good rule of thumb is: If in doubt, reef (especially downwind in waves)!

In general, watch the leeward float to see when the F-24 is being pushed hard with too much sail up. If the hull to deck seam on the float is staying submerged, you have too much sail up. Refer to the Reefing and Roller Furling section of this manual for instructions on reefing the main and jib. Never leave sheets unattended while sailing in high winds. If a sheet is cleated during a strong gust, there is no way to depower the boat and you may capsize!

## IN EVENT OF COLLISION

In the event of a collision, there is no possibility of the F-24 sinking while the flotation compartments are in tact. There are four separate compartments on each float separated with bulkheads. Also, the structure of the whole hull is reinforced with the folding mechanism.

## STORMS & LIGHTNING

Always listen to the latest weather forecast before you go sailing. If you are caught in a severe storm, head for shore and shelter. If you are out at sea, one possibility is to drop all sail and simply let the boat drift with a sea anchor. You will be positioned with the waves coming at your side which is safe unless waves are over 13 feet. In this case, steer the boat downwind. Another possibility is to drop an anchor. During a thunderstorm, avoid contact with metal fittings. In particular avoid the shrouds and mast. The mast provides a relative "cone" of protection for occupants

## REEFING

The reefing system on the F-24 is Corsair's proven roller reefing boom which is fast and easy to operate. To reef, first disconnect the boom vang and cunningham eye tackle if they are being used. Use the topping lift to lift the aft end of the boom a couple of inches above horizontal. Point the boat into the wind. Wrap the main halyard around the winch and release the main halyard clutch. With the halyard in hand, go to the forward side of the mast and pull the roller reefing handle shaft out of the mast hole so that the boom can rotate. While gradually releasing the main halyard, turn the roller

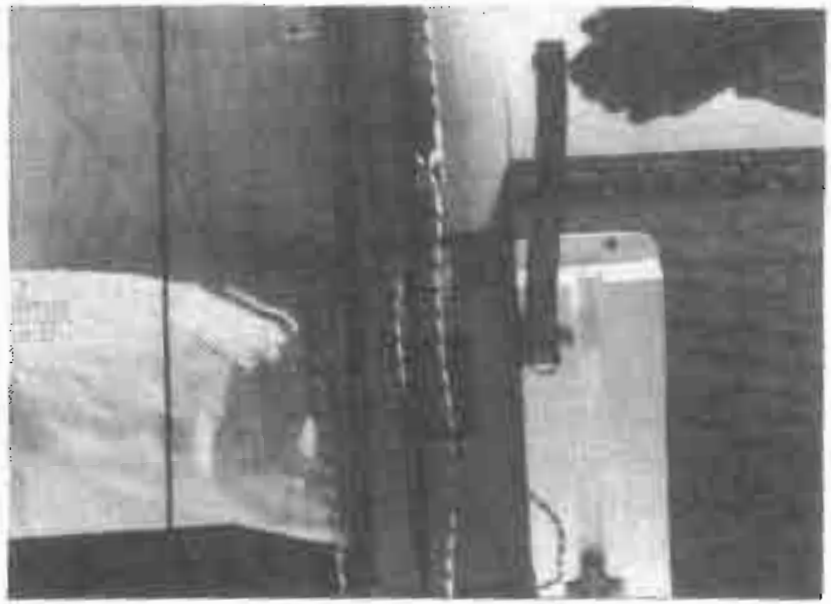


FIG 4.1 REEFING

reefing handle and roll the mainsail around the boom. When the main is reefed sufficiently, lock the furling handle by inserting the shaft back into the mast. Loosen the topping lift so that it is no longer supporting the boom, then use the winch to tension the main halyard.

If you have reefed to one of the pre-determined reefing points, designated by the grommets in the luff and leach of sail, use the cunningham and outhaul lead through these grommets to help disburse the load on the sail. Run the outhaul through the grommet on the leech and run the cunningham through the grommet on the luff, then tighten both of them. This will also help your sail shape in higher wind conditions.

NOTE: If the luff of the main is binding up on the forward end of the boom and causing interference with the mast while rolling the boom, lift the end of the boom a little further with the topping lift.

## SAILING THE F-24

### HOISTING SAIL

#### UNFURLING THE MAINSAIL

Once in open water, the mainsail can be hoisted.

1). Pull the roller furling handle shaft out from the mast so that the handle is free to rotate.

2). Attach the main sail halyard to the head of the main then Insert the mainsail luff tape into the pre-feeder and main sail track on the mast. You may want to take up the slack from the main sail halyard once attached.

3). Check that the topping lift is set such that the end of the boom is approximately two inches above horizontal and the mainsheet is taunt.

4). Turn the boat directly into the wind and hoist the mainsail by pulling on the main halyard.

5). As the main becomes difficult to raise, a winch may be necessary.

6). Winch the halyard until the horizontal wrinkles in the luff of the mainsail disappear.

7). Lock the furling handle by inserting the furling handle shaft into the mast.

8) Remember to slacken the topping lift immediately after the mainsail is raised.

CAUTION: If raising the main becomes difficult STOP!

- Check to see that the main is not caught on any rigging. Especially check that the battens are not caught on the cap shrouds or topping lift.
- Check that the roller furling handle shaft has not gone back toward the mast and prevented further rotation.
- Check that the mainsail luff tape has not separated from the pre-feeder.

#### UNFURLING THE JIB

After raising and furling the jib as described earlier in this manual, unfurling becomes easy. To unfurl the jib, once again head up into the wind, although this time angle off the wind in either direction by about five degrees. Release the jib furling line from the cleat and pull on the leeward jib sheet. The jib will begin to unfurl.

CAUTIONS: If unfurling the jib becomes difficult, STOP!

- A winch handle should never be necessary on the jib sheet during unfurling!
- Check that the jib and the sheets have not gotten caught in the rigging.
- Check that the roller furling line has not bound on any of the pad eyes or gotten lodged in the rigging.

Do not allow the jib to unfurl too quickly. You can control the unfurling by using both the jib furling line and the jib sheet.

You may stop the jib from unfurling and sail with the jib reefed. Once you have determined how much jib to use, secure the jib furling line to that position then trim the jib sheets accordingly.

WARNINGS: If sailing under jib alone, make certain that there is adequate tension on the cap shrouds and tension the topping lift to prevent the mast from inverting.

To reef the jib, release the tension on the jib sheet and pull the roller furling line. Once you have achieved the desired amount of sail area, cleat the furling line and trim the jib sheet.

Never sail with the jib rolled up more than 50%. Anything more than this will put undue stress on a small portion of the forestay. Instead, furl up the jib and go under mainsail alone.

## SAIL TRIM

### Mainsail Controls

Main Halyard: The basic function of the main halyard is to raise the main up the mast. However, proper main halyard tension will help sailing performance. A rough guide to halyard tension is to tighten the halyard when there are horizontal wrinkles in the luff of the sail and to loosen the halyard when there are vertical wrinkles in the luff.

Main Sheet: The function of the main sheet is to trim the main. The basic rule for sail trim (especially when the telltales are just laying there) is: "If in doubt, Let It Out". The mainsail should be brought in when the sail is luffing.

Cunningham: The cunningham is used to adjust the luff tension on the main and helps flatten the main. As stated earlier, a flat main will help in higher winds and while going upwind. A full main will help when sailing off the wind and in light wind conditions.

Outhaul: The outhaul is used to control the draft (depth) of the main. A flat main will help in higher winds and while going upwind. A full main will help when sailing off the wind and in light wind conditions.

Boom Vang: The boom vang prevents the boom from moving up and down. It connects to the aft side of the mast near the mast step and to the bottom side of the boom about 2.5 feet back from the gooseneck.

Leech Line: The leech line runs along the trailing edge of the main sail. If this line is too tight, the back end of the sail will cup with odd looking scallops. If the line is too loose, the trailing edge will flutter.

### Mainsail Trim

The F-24 sails very well and tacks easily under mainsail alone. If you must perform a lot of tacks to clear a channel, it may be much easier with just the main. The correct technique for sailing by mainsail alone is to foot off to avoid choking the boat. The traveler can be locked on the centerline and the mainsheet slackened off such that the boom is approximately 12" off the centerline. If you feel like the boat is stalling, you are either pointing too high or sheeting the main too tight. The secret to sailing by mainsail only is to ease the main, particularly after a tack, until boatspeed has built up. After the boat is moving well, sheet in a little and point up in to the wind a bit further.

When the mainsheet is eased, the top of the sail falls off to leeward, thus causing the mainsail to twist. To set proper twist to the sail, the aft end of the top batten should be parallel to the boom. You may want to set the boom vang to this position. As you sheet in, the twist will decrease. You do not want to overtrim the main to the point that the ends of the battens are pointing to windward. The F-24 mainsail has been equipped with telltales fastened at the end of each batten pocket. The mainsail is trimmed correctly when the upper batten telltales are streaming aft and occasionally falling to leeward. Never trim the main to the point that the boom is to windward of the centerline of the boat.

The draft of the main is adjusted by using the outhaul and mast bend. By using the cap shrouds to bend the mast, the main will become flatter. Remember not to exceed or go below the recommended cap shroud tension settings. The best way to control draft in the bottom of the main is with the outhaul. A deeper draft is needed in light wind or in heavy seas. A flat main is needed in strong wind or flat water. Basically a full sail will give the boat power - power to move in light air and power to move through waves.

Tightening the main halyard and cunningham will move the mainsail draft forward. Usually the best position of the maximum draft is halfway back on the sail. In light air you may need to ease the halyard to the point that there are some horizontal wrinkles on the luff in order to move the draft back into the proper position.

Another control for positioning the main is the main traveler. This controls the main's angle of attack. When going upwind, the main should be positioned along the centerline. In order to accomplish this, the traveler will need to be slightly to weather of the centerline. When reaching the traveler can be the quickest mainsail control. With the large purchase of the mainsheet, it takes quite a bit of line to adjust the main once it is eased out. The traveler does not have as much purchase and can easily be used to maintain trim and helm balance while reaching. If you have weather helm (the tiller is positioned to windward in order to steer straight), ease the traveler. If you need a more responsive helm, bring the traveler more to windward.

FIG 5.1 MAINSAIL TRIM

### Upwind Mainsail Trim

#### Heavy Air

While going upwind in heavy air, the main should be flat. By tightening the outhaul, boom vang, halyard, and cunningham, the main will flatten. One of the outhaul lines may be run to the flattening reef grommet just above the outhaul grommet on the leech of the mainsail. Tightening the flattening reef in addition to the other controls will greatly reduce the mainsail draft. To get significant tension on the boom vang, sheet in the mainsheet and tighten the vang. When the boom vang is tight, you can ease the main out with the main sheet or traveler and maintain a tight leech at forestay tension. By removing some of the boom vang tension, the top of the main will twist off and depower. If the boat begins to feel slow and the float is burying into the water, reef and the boat will be quicker and easier to control.

#### Light Air

In light air, the main should have a deeper draft. By loosening the outhaul, boom vang, halyard, and cunningham, the draft in the main will increase to make a full and powerful sail. However, the boom vang should be tight enough to prevent the boom from bouncing up and down. In very light wind, start to flatten the main again so that what little wind there is will not separate from the sail.

### Downwind Mainsail Trim

#### Heavy Air

Once again you will want to flatten out the main in windy conditions. By sheeting in the main more than normal for that sailing angle, you will de-power the main a little. If the boat is still overpowered, reef the main. If you are sailing with a spinnaker and the floats are burying into the waves, reef the mainsail. Reefing to lower the force in the sails and will allow the boat to sail more "bow up", therefore it will not bury into the waves as much. If sailing with spinnaker alone, check that there is adequate tension in the cap shrouds and tension the main halyard to the end of the boom to prevent the mast from inverting.

#### Light Air

Downwind in light air always require a full main. Loosen the outhaul, boom vang, halyard, and cunningham, and the draft in the main will increase to create a full and powerful sail. However, the boom vang should be tight enough to prevent the boom vang from bouncing up and down. Using the optional barberhauler or boom vang run off to the side as a preventer to keep the boom in place in light conditions can be helpful.

## JIB CONTROLS

Jib Halyard: The basic function of the jib halyard is to raise the jib up the forestay. However, proper jib halyard tension will help sailing performance. A rough guide to halyard tension is to tighten the halyard when there are horizontal wrinkles in the luff (forward edge) of the sail and to loosen the halyard when there are vertical wrinkles.

Jib Halyard tension may also effect the way your roller furling system functions. If the halyard is too tight, the sail will be difficult to furl and unfurl. If the jib halyard is too loose, the halyard will wrap around the forestay above the sail and may cause problems. When furling, adjust the halyard tension such that neither of these problems occur.

Jib Sheet: The function of the jib sheet is to trim the jib. The basic rule for sail trim (especially when the telltales are just laying there) is: "If in doubt, Let It Out". The jib should be brought in when the sail is luffing (backwinding) on the leading edge. For fine tuning the jib, use the telltales positioned along the luff of the sail. Proper main sail trim will be achieved when both the windward and leeward telltales are flowing horizontally. If the leeward telltale is not horizontal, let the sail out or turn further into the wind. If the windward telltale is not horizontal, bring the sail in or turn further off the wind.

Jib Sheet Lead: The jib sheet lead consists of the track and car mounted on both sides of the cabintop. Each jib sheet should be lead through a car and back to a cabintop winch.

Barberhauler: (performance package option) By using a line called a barberhauler in addition to a jib sheet, the F-24 jib can be positioned anywhere in between the jib lead and leeward float. There are three positions that the barberhauler block can be mounted on the float. Which position is chosen depends upon how far out the jib is furled and the angle of the wind to the boat. If the jib is out all of the way, connect the block to the float eye strap midway between the aft beam and float hatch. If the jib is partly reefed, but still has some overlap with the main, the float eyestrap just aft of the hatch may be used. If the jib is reefed to the point that the clew is in front of the mast, connect the barberhauler block to the U-Bolt at the intersection of the float and forward beam. The barberhauler is lead from the barberhauler cleat mounted forward of the spinnaker winch on the cockpit combing, through the block mounted on the float, and then to the clew of the jib. While not in use, you may want to connect the

barberhauler hook to the lower shroud U-Bolt. Make certain that the barberhauler is lead underneath the jib sheet if this is done.

Leech Line: The leech line runs along the trailing edge of the jib. If this line is too tight, the back end of the sail will cup with odd looking scallops. If the line is too loose, the trailing edge will flutter.

### Jib Trim

The general rule for sailing upwind is to make the jib fuller in overall shape in light wind and flatter in heavy air. A second rule, that will often conflict with the first, is to have the jib flatter in flat water and fuller in sloppy or rough seas. Basically a full sail will give the boat power - power to move in light air and power to move through waves.

The jib sheet, sheet lead and halyard are the primary controls when sailing upwind. The jib sheet, more than any other control, is used to maintain proper trim. Basic trim was highlighted when describing the jib sheet, but the sheet does more than bringing in the jib or letting it out. As the sheet is tightened, it reduces twist and narrows the sheeting angle, flattening the sail. This combination is what allows the boat to point higher. Watch the distance between the spreaders and the sail to get a visual indication of sheet tension and never sheet in to the point that the jib is touching the spreaders. Letting the sheet out will have the reverse effect, giving you less pointing ability, but adding speed. This last point is crucial on a light trimaran where by cracking off 3° from your maximum pointing angle you will gain a significant amount of speed. This will make your velocity made good (VMG) toward your destination increase. In light wind you will want to have the jib sheets eased to give the boat speed and drive. As the wind increases, tighten the sheets and you will be able to point higher. If you find that the boat is not pointing high enough, tighten the sheet, but if your speed is low, let out the sheet. An inch or two in either direction can make a big difference.

The depth and twist of the jib can be adjusted with the position of the jib lead. The reason for wanting some twist in the sail is so that the jib will be in trim along the full height of the sail. The telltales at the top and bottom of the jib should move at the same time. If the top telltales move before the bottom ones, the jib lead is too far forward. If the bottom telltales move first or the top telltales are stalled while the bottom ones are in trim, the jib lead needs to be

moved aft. Moving the jib lead will also effect the depth of the sail. By moving the jib lead forward, the sail depth on the lower portion of the sail will increase. To help understand which way to move the car, think of an exaggerated pull; when you pull straight back from the clew, the foot is tight and the leech is loose. Conversely, when you pull straight down on the clew, the leech is tight and the foot is loose. With experience and experimentation, you will be able to determine the proper jib lead position for given wind conditions. The only time that you do not want the telltales to break evenly is when you are overpowered. By moving the jib lead further aft, you will dump some wind from the top of the sail and help depower the sails. This may cause the upper telltales to be flowing straight up while the lower ones are flowing at 45°. However, with roller furling it may be better to roller reef the jib to depower.

Mainsheet tension and cap shroud tension will effect forestay sag. Sag in the forestay increases the effect of a full sail, moving the leading edge to leeward and giving the jib more power. The F-24 is not designed to have a large amount of forestay sag. About three to five inches will be maximum. Remember not to exceed or go below the recommended cap shroud tensions.

Jib halyard adjustment directly affects the position of the draft (maximum depth). Tensioning the jib halyard will move the draft forward and loosening it will move the draft aft. The draft should be moved aft when trying to point upwind and moved forward for easier boat handling. Too tight a halyard will bring the draft too far forward and require heading too high into the wind to get the telltales to flow properly. Most often on a trimaran, the loosening the halyard will help performance because you will be further off the wind for the same sheet tension and will be going faster than if you were pointing higher. The best rule of thumb is to tension the halyard when there are *horizontal* wrinkles on the leading edge and loosening the halyard when there are vertical wrinkles. This will keep the sail draft close to the correct position. This will also show a direct connection to wind velocity. As wind speed increases, the halyard will need to be tightened. As the wind speed decreases, ease the halyard.

Another jib control that is very useful on a trimaran is a barberhauler. These are most often used for offwind sailing. The barberhaulers give an F-24 a very wide sheeting angle allowing you to position the jib clew anywhere in between the jib lead and barberhauler block on the float. The purpose is to keep the top and bottom of the jib in balance as you sail further off the wind. When running, the barberhauler block should be by the forward beam. Move the block further aft on the float when reaching at tighter angles to the wind. Also set the sheet and halyard for maximum fullness while reaching to give the F-24 power.

Remember, every adjustment to the jib will effect the main.

## F-24 ASYMMETRICAL SPINNAKER

### Set Up

The spinnaker head can be identified by the red and blue (or green) edges on either side. The clew can be identified by the red and white edges on either side. And the tack can be identified by the white and blue (or green) edges on either side. If not already marked, you may want to identify each corner with a permanent marker.

To pack the spinnaker, find one of the corners of the sail. Holding this corner, work your way along one edge until you reach the next corner. Now holding both corners, work your way along the next edge until you reach the final corner. While still keeping the three corners together, stuff the bulk of the spinnaker into the turtle (bag). You will want to leave the corners accessible at the top of the bag by separating them and securing each to one of the velcro strips inside of the bag or leaving the corners outside of the bag.

The bow sprit is attached to the boat at three points. One guy wire is run to either float and the bob stay connects to the bow eye.

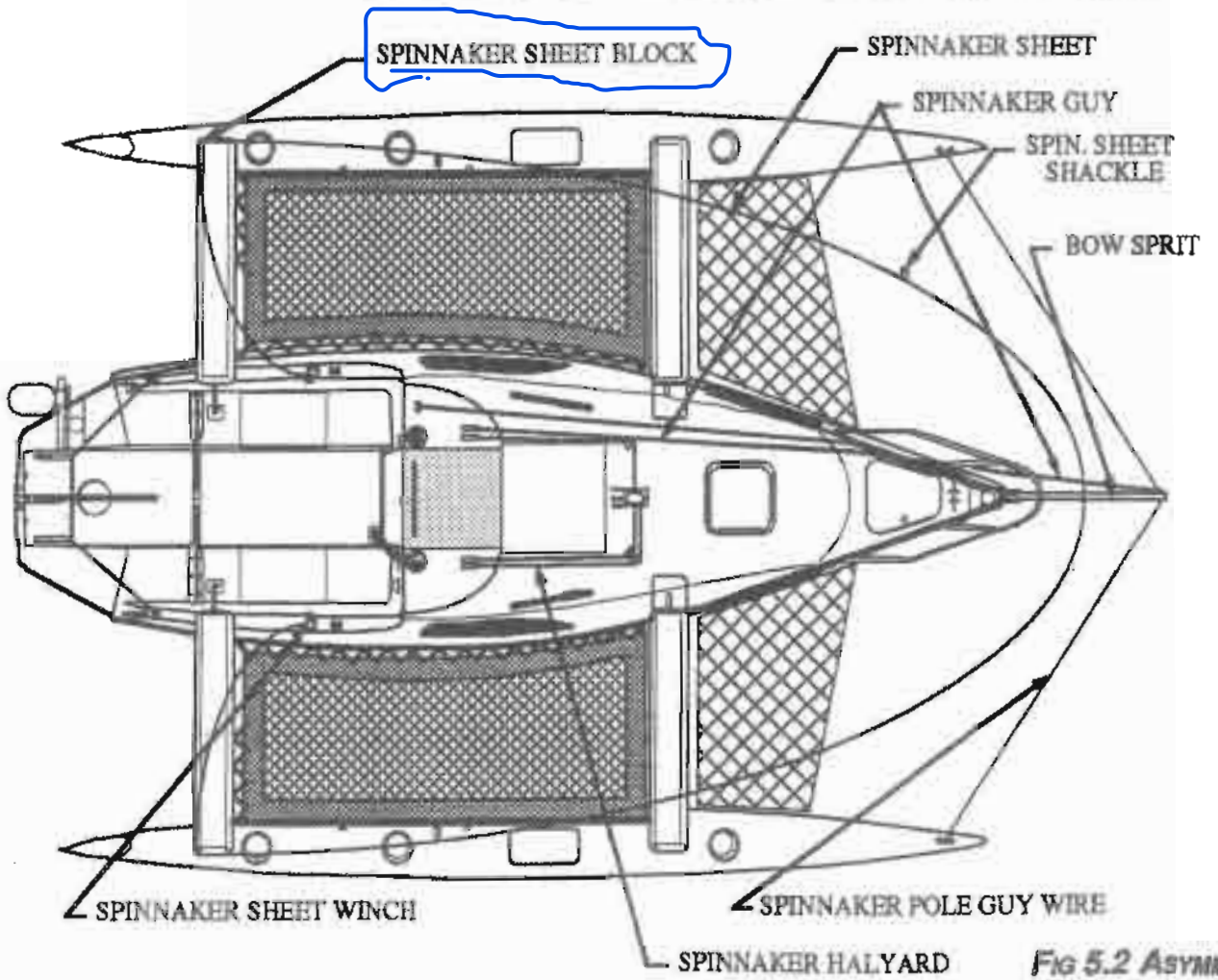



FIG 5.2 ASYMMETRICAL SPINNAKER SET UP

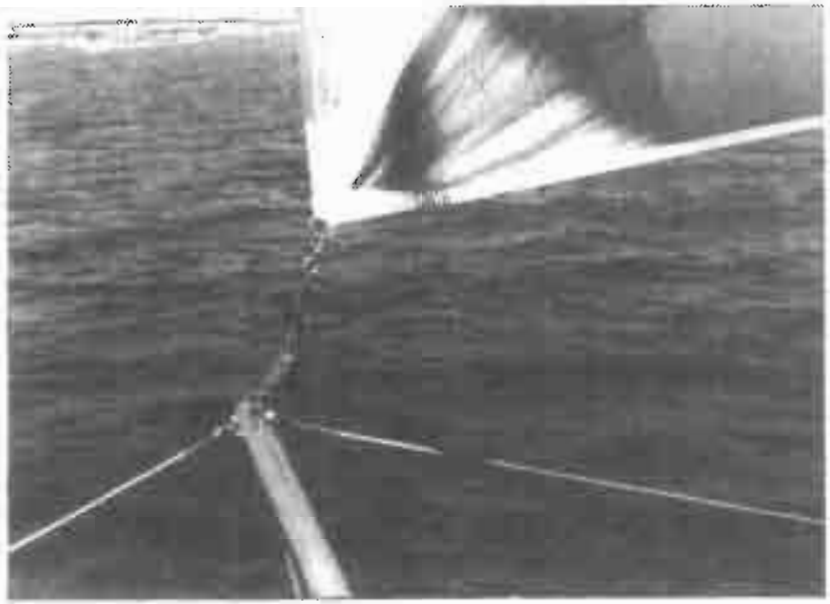


*FIG 5.3 SPINNAKER TACK*

The spinnaker clew is attached to the middle of a continuous 100 foot long sheet by a snap shackle. When connecting the spinnaker lines to the spinnaker set the sheet so that you will be able to jibe the spinnaker in front of the forestay and behind the spinnaker luff. The sheet will go around the outside of the boat from a block connected to the aft U-Bolt at the aft beam to float intersection, around the forestay, and back to the aft block on the opposite float. Check that the spinnaker sheet is led outside of the jib sheet, forestay, bow pulpit, cap shroud and cap shroud adjuster.

The spinnaker tack is attached to the spinnaker guy which runs through a block on the end of the bow sprit, through a fairlead on the foredeck and back to a sheet stopper on the port side of the companionway. Be certain that the shackle end of the guy runs outside of the bow pulpit after it is led through the block on the bow sprit so that the spinnaker will not set under the pulpit.

The spinnaker halyard attaches to the head of the spinnaker. Make certain that the halyard is not wrapped around the forestay, mast, jib halyard, cap shroud or spreaders and that the halyard will set the spinnaker outside of the jib.

Launching the spinnaker is easiest if set up on the leeward net. Clip the turtle to the toerail or the line connecting the wingnet to the forward beam. You may want to pre-set the guy by pulling the tack forward to the bow sprit. Leaving the jib furled out during launching will help prevent the spinnaker from prematurely filling and may make launching easier. Pull the halyard up and set the spinnaker guy to the end of the bow sprit, then trim the spinnaker sheet. Once the spinnaker is up, roll up the jib.

### Reaching

For reaching, the spinnaker tack should be led all of the way to the bow sprit and two to three inches of halyard should be between the spinnaker and mast. Trim the sheet such that there is a small oscillating curl on the leading edge of the spinnaker.

Pointing ability with the spinnaker will vary depending upon the wind conditions. When trying to reach up high, you may want to bring the halyard all of the way up.

CAUTION: If you are in high winds and the leeward float is buried up to the seam connecting the hull and deck, take the spinnaker down!

### Downwind

When trying to sail downwind at deeper angles (more than 110° apparent), set the guy such that one to two feet of line separate the bow sprit and spinnaker tack. Also set the spinnaker halyard such that two to three inches of halyard separate the mast and spinnaker head. This will make the sail fuller for downwind sailing. However, remember that the F-24 will make much better VMG (Velocity Made Good) toward a downwind destination by reaching up, going faster, and jibing more often. You will almost never want to sail the F-24 at a deeper sailing angle than a broad reach.

In higher wind conditions, handling can be improved by reefing the main which lowers the force in the sails so that the bows are not burying into the waves. You can flatten and depower the spinnaker a little by bringing the halyard up all of the way and bringing the spinnaker tack all of the way to the bow sprit.

CAUTION: If the bows are still burying into the waves after the main is reefed, take the spinnaker down!

### Jibing

The F-24 asymmetrical spinnaker is jibed in front of the forestay and behind the spinnaker luff such that the sheet will pass just in front of the forestay. The following steps should be followed to jibe the spinnaker:

1) Ready the lazy (unused) sheet on the windward side.
2) Bring in the mainsheet so that the main will not fly across the boat during the jibe.
3) Bear away and start running downwind.
4) Ease the leeward sheet until the clew is even with the forestay.
5) Jibe the main
6) Trim the new leeward sheet.

### Dousing

You may want to unfurl the jib to take some of the air away from the spinnaker. Leaving the guy at the end of the bow sprit, trim in the spinnaker sheet so that the clew is over the boat. Holding the clew, release the halyard and pull the trailing edge (leech) of the spinnaker to collect the spinnaker. After the halyard is down, release the guy and pull in the tack of the spinnaker.

## BOAT HANDLING TECHNIQUES

### Anchoring

There is an anchor locker located in the foredeck. Tie the bitter end of the anchor line to the eye strap installed on the forward side of the anchor locker.

WARNINGS:
- Do not use the anchor locker eye strap to secure the anchor, use the bow cleat.
- Trimarans have a lot of windage and do not have much draft, therefore more scope than a monohull may be required.

Trimarans tend to be lively at anchor due to their light weight and shallow draft. This causes the boat to swing from side to side. By rigging a bridle to either float, you will alleviate this annoyance. Lay an anchor as you normally would, over the main hull bow roller. Rig up the bridles running a line from a cockpit winch to a block on the eye straps of each float. Join the two lines and connect them to the anchor line. Let out the anchor line until the bridal lines are taking most of the load. Many anchoring conditions will require a second anchor for safety or condition changes.

### Man Over Board Procedure

The "quick stop procedure" is probably the quickest and easiest man overboard procedure for the F-24. If someone falls overboard, turn the boat around 180° by turning into the wind and executing a tack without touching any sheets. The only exception is if you have a spinnaker up in which case you should let the spinnaker sheet go. Once you are turned around, the backwinded jib will slow the boat down. If executed quickly and correctly, the boat will stop in roughly the same position as the person fell overboard. If you are still some distance away from the overboard victim, release the jib sheet and use the main to get back to them. Do not trim the jib unless you are a large distance from the person in the water since the jib may give you too much speed. Position the boat downwind of the person in the water and release the sheets so that the boat does not blow over the top of them while they are trying to get on board. The key to saving an overboard victim is to get back to them quickly. This can not be accomplished if time is taken to lower the sails or turn on the engine. If a flotation device is readily available, throw it to the person overboard as soon as possible, however the priority is to turn the boat around and get back to them. Remember to wear a lifejacket and harness in rough seas and high wind for safety!

### Heaving To

To heave to with the main only, furl the jib and center the main traveler. Pull in the mainsheet tight and cleat it then secure the helm. The boat will sail slightly to port, then starboard, luff in between, run a little on each tack, and fall back equally while luffing. The net result is that the vessel stays in one place (keep the possibility of carried by the current in mind).

### Stalling

If you are sitting dead in the water pointing into the wind, the easiest way to get started again is to go backwards. Back-winding the sails by sheeting the jib to one side or pushing the boom over to one side will start moving the boat in reverse. Once the boat is moving backwards, push the tiller to the side of the boat opposite that of the sails. After the boat has turned enough to be on a close hauled course, trim the sails to their normal position. Note that trimming the main hard will tend to point the boat back into the wind while sheeting the jib will help the boat bear away.

## AFTER SAILING

### FOLDING THE FLOATS

To fold up the F-24, loosen the cap shroud adjusters but leave the cap shrouds connected to the floats. After checking that everyone is clear of the beams and outer hulls, remove the beam bolts. By lifting the end of the beam, the float will begin to fold in. As the float folds up, apply pressure on the top side of the beam to prevent it from folding too quickly. Once folded, insert the beam locking pins in the brackets on the aft side of the aft beams.

CAUTIONS:
Do not let the float slam against the main hull.
If the hull does not fold in all of the way, STOP!

- Check that the nets and hulls are not caught on any of the rigging

### RETRIEVING

The F-24 trailer has been equipped with a side bar. If there is a cross wind at the ramp, position this bar vertically on the leeward side of the trailer to help guide the boat and prevent it from sliding off the trailer. Back the trailer down the ramp until the water reaches the point that the trailer frame begins to bend inward.

Fold up the bow sprit so that you do not hit your vehicle. If motoring on to the trailer, leave the centerboard down as long as possible. This will prevent sliding sideways as you are trying to position the boat to run on to the trailer. Gently guide the F-24 on to the trailer and manually pull it on as far as you can. The paddle wheel for the knotmeter is positioned such that it will not hit the trailer if brought on straight, however pulling the boat across the hull supports on the trailer may damage the paddlewheel. Once on the trailer connect the trailer winch line to the bow eye and crank the boat all of the way forward on the trailer then raise the rudder and outboard.

Once out of the water and in the parking lot, check that the boat is fully forward on the trailer. Attach the trailer lights and check that they are functioning properly. Attach tie downs from a winch on either side of the boat to the trailer. Attach a safety line connecting the bow eye to the tongue of the trailer. Please refer to the Trailering section of this manual for further information.

## JIB COVER INSTALLATION

To raise the jib cover on the roller furling jib, lead the main halyard forward of the mast on the outside of all standing rigging. Connect the main halyard to the shackle or grommet on the top of the jib cover. Bringing the bitter end of the halyard up to the foredeck, you can simultaneously raise and zip the jib cover on the forestay.

NOTE: Use the main rather than the spinnaker halyard so that you can use the spinnaker halyard while unstepping the mast.

## UNSTEPPING THE MAST

1) Check that cap shroud adjusters are loose.
   - The cap shrouds should remain attached during mast stepping and unstepping.

2) Tie a bow retainer line between the bow eye and the tongue of the trailer.
3) Put the mast raising bar on the foredeck.
4) Put the aft mast support in the cockpit.
5) Detach the trailer winch line from the bow eye and unroll it to the pre-determined position
   - If you have not determined this position yet, get a permanent marker and mark it later.

6) Pass the trailer winch line through the bow roller and lay it on the foredeck.
7) Install the mainsail cover on the boom.
8) Remove the main sheet from the end of the boom and attach it to the lower stanchion U-Bolt on the stern for storage.
9) Remove the boom roller handle shaft from the mast, pull out the pin connecting the handle to the boom gooseneck, and store the handle in the anchor locker.
10) Leaving the topping lift attached to help support the end of the boom, remove the boom from the gooseneck hole in the mast and lay the boom in between the mast and lower shroud (or in the cabin).
   - The mainsail may remain rolled around the boom for storage.

11) Detach the topping lift from the end of the boom and attach it to the boom vang fitting on the bottom aft side of the mast.
12) Install the aft mast support on the stern by inserting the legs in the transom and connecting the support arm to the traveler. See Fig 6.1
13) Unclutch all lines led to the sheet stoppers and uncleat the roller furler line.

FIG 6.1 AFT MAST SUPPORT INSTALLATION

14) Connect the spinnaker halyard shackle to the eye strap on the end of the mast raising bar then cleat the halyard on the mast at the pre-determined position

15) Connect the trailer winch line to the shackle on the end of the mast raising bar. See Fig 2.6

16) Insert Mast Raising Bar gooseneck fitting into the mast gooseneck hole. The spinnaker halyard should hold the mast raising bar angled 5° above horizontal. Mark the halyard for this position. See Fig 6.2

17) Fasten a velcro tie loosely around the trailer winch line and forestay just above the lower roller furling drum.

18) Crank up the slack in the trailer winch line and tighten one turn.

- Mark this position on the trailer winch line for future reference

19) Remove the pin from the roller furling shackle.

21) Crank the trailer winch counterclockwise one or two turns then put the pin and cotter ring back in the roller furling shackle.

FIG 6.2 MAST RAISING BAR INSTALLATION

22) Crank the trailer winch counterclockwise to lower mast.
- The combination of a wind coming in from behind the boat and the weight of the roller furling system may make the mast initially resist lowering.
- If the mast does not start to lower, let out a little slack and give the trailer winch line a quick tug.
- If the mast continues to resist lowering, tighten up the cap shroud adjusters on both sides of the boat.

CAUTIONS:
- Check rigging to be certain it runs freely.
- Check the toggles connecting the cap shrouds to the floats to make sure they don't bind (especially toward the end of decent).
- Make certain that the mast will land on the mast roller.
- If the trailer is not attached to a vehicle, do not stand on the boat aft of the trailer axle while the mast is rolled aft - the trailer tongue may lift up from the weight in the back of the boat.

25) Remove the mast raising bar.
- Run the spinnaker halyard its storage position.
- Connect the trailer winch line to the bow eye and tighten.

26) Detach the electrical connections located at the mast step.

- You may want to feed the extra wire back into the mast for storage.

27) Remove the fast pins connecting the mast step to the pivot brackets, lift the mast step out of the brackets, then put the pins back into the pivot brackets.

28) Pivot the mast head down so that the mast is balanced in position to remove the instruments from the masthead while standing on the ground. Another option is to roll the mast forward and remove the instruments from the masthead while standing in the cockpit.

29) Roll the mast in position to place the boom gooseneck hole over the mast mount on the starboard side of the bow pulpit.

- Be careful that the upper shrouds do not get caught on the mast roller on the stem.
- Check that all rigging runs free and doesn't catch on any gear.

30) Tie down the mast to the bow pulpit, foredeck cleat, and aft mast support. Tie the spreaders to the jib leads to help prevent the mast from rotating or bouncing.

31) Wrap tiedowns around the mast, jib and rigging all along the mast.

- If you tie a line between the U-Bolt on the forward beam and the cap shroud, then tie them to the mast, the cap shrouds will not bang on the boat.

32) Turn off the main circuit breaker switch and the battery switch.

## ADVANCED TECHNIQUES

### MAST STEPPING ON THE WATER

It may be necessary in some areas to launch with the mast down in order to clear powerlines or bridges. To raise the mast on the water, the mast raising bar must be carried on board and an additional block (such as a spinnaker block) will be needed. A line run through this block will be used in place of the trailer winch line described in the mast raising procedure earlier in this manual. Except for the changes listed below, the regular mast raising instructions with all the cautions and warnings should be followed.

Once clear of any obstructions, fasten the additional block to the foredeck cleat and run a line (such as the spinnaker guy) through this block and back to a cabintop winch. Connect the spinnaker halyard and the long line to the mast raising bar and, *using the cabintop winch as the trailer winch would* normally be used, step the mast.

If the mast ever needs to be lowered on the water, a similar set up can be used. If you foresee lowering the mast on the water, remember the aft mast support for the stern and the mast raising bar. However, the mast can be lowered to approximately 45° above horizontal without the use of the mast raising bar or the aft mast support.

### RUDDER CAVITATION

Rudder cavitation is caused when the water separates from the rudder causing it to vibrate and making it difficult to steer. This may be induced by weeds or debris on the rudder. If the rudder is fowled, clear the debris. If the rudder is clear, then try the three cures for rudder cavitation: put the centerboard down further, put up less sail area, or move the tiller quickly to attach the flow of water.

## CRUISING CONSIDERATIONS

While keeping the maximum loading capacity of 1000 pounds in mind, some extra things to remember while cruising include the following. Extra water and gas (stored in a well ventilated area such as lashed to the nets), charts of the area, and all safety equipment that may be needed (first aid, life harnesses, batteries for flashlights, etc.). To make cruising more comfortable, you may want some of the F-24 cruising options such as a dodger, cockpit cushions, tillerpilot, screens for hatchways, and loran or GPS.

## APPEARANCE CARE AND MAINTENANCE

### SCHEDULED MAINTENANCE

#### Owner Responsibilities

WARNING: Gear and lines should be replaced at the first sign of fatigue to prevent catastrophic failure!

Boat Inspection: Regularly check the bilges in the center hull and compartments in the floats for water accumulation.

Folding System: All folding system pivot pins should be occasionally checked for corrosion and to make certain that the circlips are still in place. The stainless steel beam bolts should have their threads lightly oiled periodically.

Mast: The mast should be checked for cracks, particularly at welds and connections.

Trailer: After every sail, the trailer should be washed thoroughly, particularly around the axle, brakes, and suspension area. The trailer has a built in washout system for the breaks. To use the system, hook a hose up the fitting on the trailer and turn on the water. The trailer winch and all trailer rollers should be regularly cleaned and oiled. The winch line should be checked regularly and replaced immediately if any wear is present.

Gelcoat: The best available gelcoat is used in the F-24, however even the best will eventually begin to fade. It is also possible to find hairline cracks in gelcoat. Gelcoat is a very hard brittle coating over a relatively flexible resin, and it is almost impossible to generate gelcoat that will be crack free during its lifetime. These are cosmetic defects and in no way threaten the safety of the boat. These cracks, normally caused by hull flexing, are almost impossible to repair. The F-24 with its stiff foam sandwich construction is one of the least likely boats to suffer from such cracks, but the possibility still exists and the F-24 cannot be guaranteed against such cracks.

Rudder: The rudder should be inspected for any cracks in the join seam, and horizontal cracks along its length. Anything more than hairline cracks should not be considered as cosmetic and the rudder should be replaced.

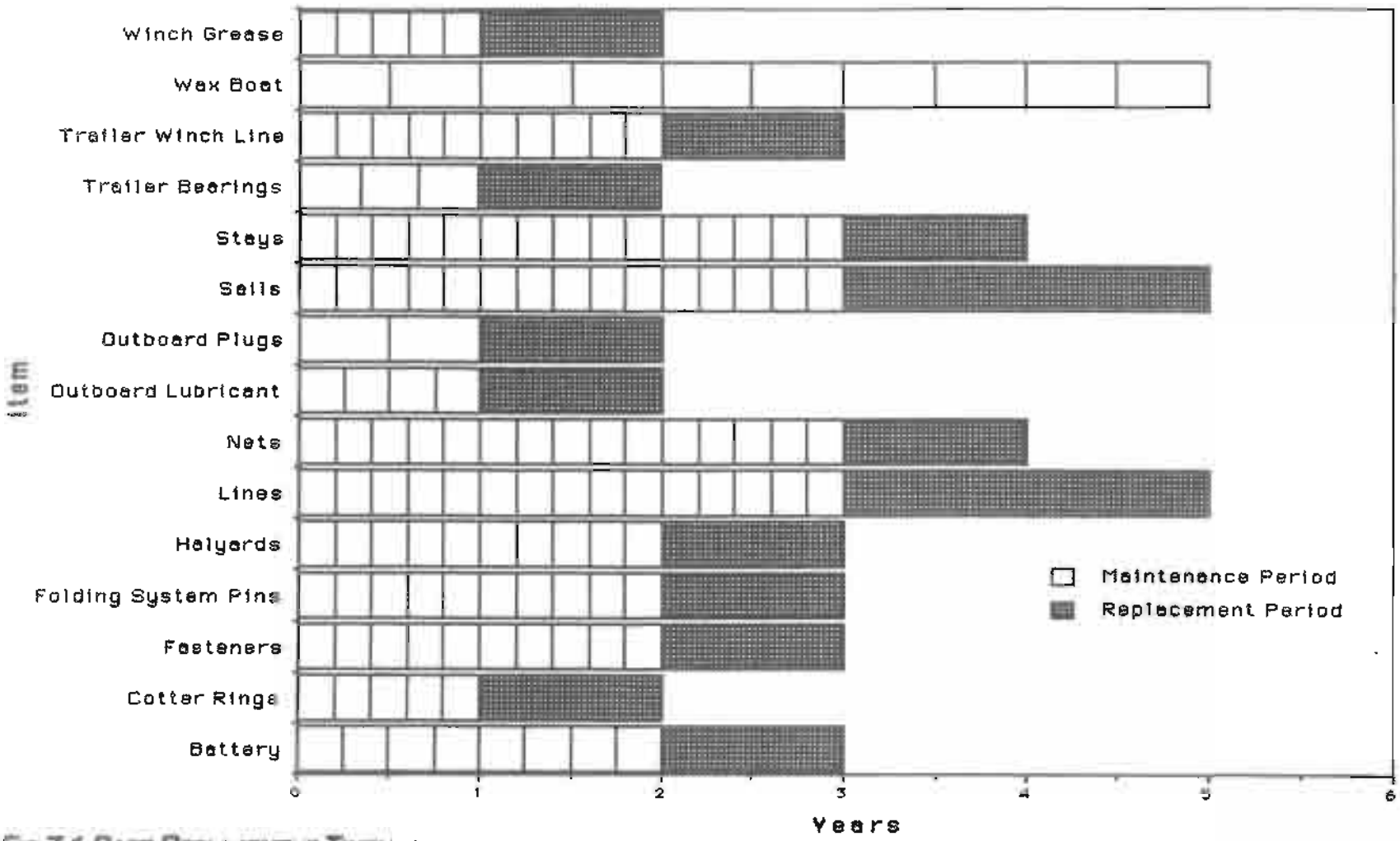



*FIG 7.1 PART REPLACEMENT TIMELINE*

Rigging Maintenance: Continuously inspect rigging and fittings for signs of fatigue. A rigging expert should be consulted at the beginning of each season.
Periodic tightening of fittings and rigging (as described in the tuning section of this manual) will be necessary. Check that the wire rigging has not bent, kinked or frayed. By carefully tying down rigging while trailering and being careful to watch rigging while stepping and unstepping the mast, rigging should stay in good shape.

Sail Care, Repair & Replacement: Keep the main rolled around the boom and the jib rolled around the headstay for storage. Always install the main and jib covers after sailing to prevent ultraviolet damage (the second worst cause of fatigue next to luffing sails). About once a year, have a sailmaker examine the sails for signs of fatigue. The useful life of a sail is about three to five years (depending on use). If you want to maintain proper sail shape, a new set should be purchased after this time.

Line Maintenance: Continuously inspect all lines for fraying and fatigue. If sailing in salt water, lines will become impregnated with salt and deteriorate more quickly.

Net Maintenance: Tighten the nets to the point that you feel comfortable with their support. However, if the nets are too tight, they will make unfolding difficult. Check the washers where the nets are tied to the hull and replace them if necessary. Check the nets for any sign of fatigue and replace them every three years.

Clevis Pins: If cotter rings, clevis pins, quick pins, or any other sort of connection pin becomes bent, gouged, or worn, replace it. These little connection and retaining pins are small parts with vital functions in your boat. If one of them fails, the mast could come down, a shroud could come loose, and a variety of other problems could occur.

Chain Plates: Check chain plates, where the lower shrouds connect to the deck and the cap shrouds and cap shroud adjusters connect to the floats, for any signs of fatigue. Hairline cracks in these areas could be signs of fatigue. If you encounter this problem, contact your dealer or Corsair Marine.

Outboard: If you are in salt water, run fresh water through the engine after use. Gear lubricant should be checked every three months or more often with frequent use and replaced every six months. Spark plugs should be replaced every year or as needed.
By the manufacturer's recommendation, the fuel hose should be replaced every two years and the fuel tank should be replaced every three years.

Winches: By the manufacturer's recommendation, winches should be lightly oiled and greased monthly, stripped, cleaned and lubricated every four months, and completely cleaned, checked and lubricated at the beginning of every season.

Refer to the owner's manuals located with your ship's papers for further periodic inspection and service information.

### Dealer Responsibilities

Contact your dealer to order replacement parts and to gain advice on recommended procedures. Your dealer has a wide body of knowledge about Corsair's boats in addition to general sailing and boat maintenance experience. Any problems or questions can be directed toward your dealer, or Corsair Marine customer service.

## CLEANING

Salt Water: If sailing in salt water, the F-24 should be hosed off after each sail or as often as possible.
Floats: The floats can be extended while on the trailer for cleaning. The trailer float supports must first be dropped down and the boat rocked over to one side so that the float will clear the trailer. You will need fore and aft support for the floats once extended.
Cushions: Treat interior cushions the same way that you would your fine sofa at home - do not wash or dry clean the cover material or foam core. The interior cushions will not react well to this treatment. They will clean well using steam cleaning and spot cleaning. You may also send them for professional cleaning.

## WINTERIZING

For those owners who experience ice in the winter, here are a few tasks that will need to be performed:

Trailer: You may want to block up the trailer to help preserve the trailer tires. Repack the wheel bearings and inflate the tires in the spring.

Water Tank: Empty your water tank and add a non-toxic antifreeze, or remove it from the boat and store in a heated area.

Marine Head: The head holding tank should be pumped out and anti freeze added. Be certain to pour some antifreeze into the head and pump it through the system. Open the thru hulls once the boat is out of the water.

Lines: Remove lines that are easy to reinstall and store them down below or indoors.

Outboard: Put a gas stabilizer into the gas tank and store the tank in a ventilated area. Check the lubricant level in the outboard in the spring and replace the spark plugs.

Sails: Check the sails for any signs of fatigue, or send them in to a sailmaker for inspection. Wash and dry the sails and roll them for storage. Never store a sail while it is still damp!

Compartments: The storage compartments and bilge access in the cabin should remain open while storing the boat. This will prevent condensation inside of the compartments. Check all compartments for water and dry them out completely.

On the other hand, you do own a F-24, a highly trailerable boat...Go South!

| F-24 SPECIFICATIONS | | |
|---|---|---|
| Length Overall (LOA) | 24' 10" | 7.57 m |
| Length At Waterline (LWL) | 22' 4" | 6.81 m |
| Beam, overall (B) | 18' 1" | 5.51 m |
| Beam, folded (F B) | 8' 0" | 2.44 m |
| Main Hull Beam (MH B) | 7' 3" | 2.21 m |
| Draft, board up (D) | 1' 0" | 0.30 m |
| Draft, board down (D CB) | 4' 6" | 1.37 m |
| Bridge Clearance (H WL) | 37' 0" | 11.28 m |
| Mast Length (ML) | 32' 6" | 9.91 m |
| Loaded Displacement | 3098 lbs | 1405 kg |
| Light Displacement | 2100 lbs | 952 kg |
| Sail Area | 401 sq. ft | 37.25 sq. m |

**Rigging Specifications**

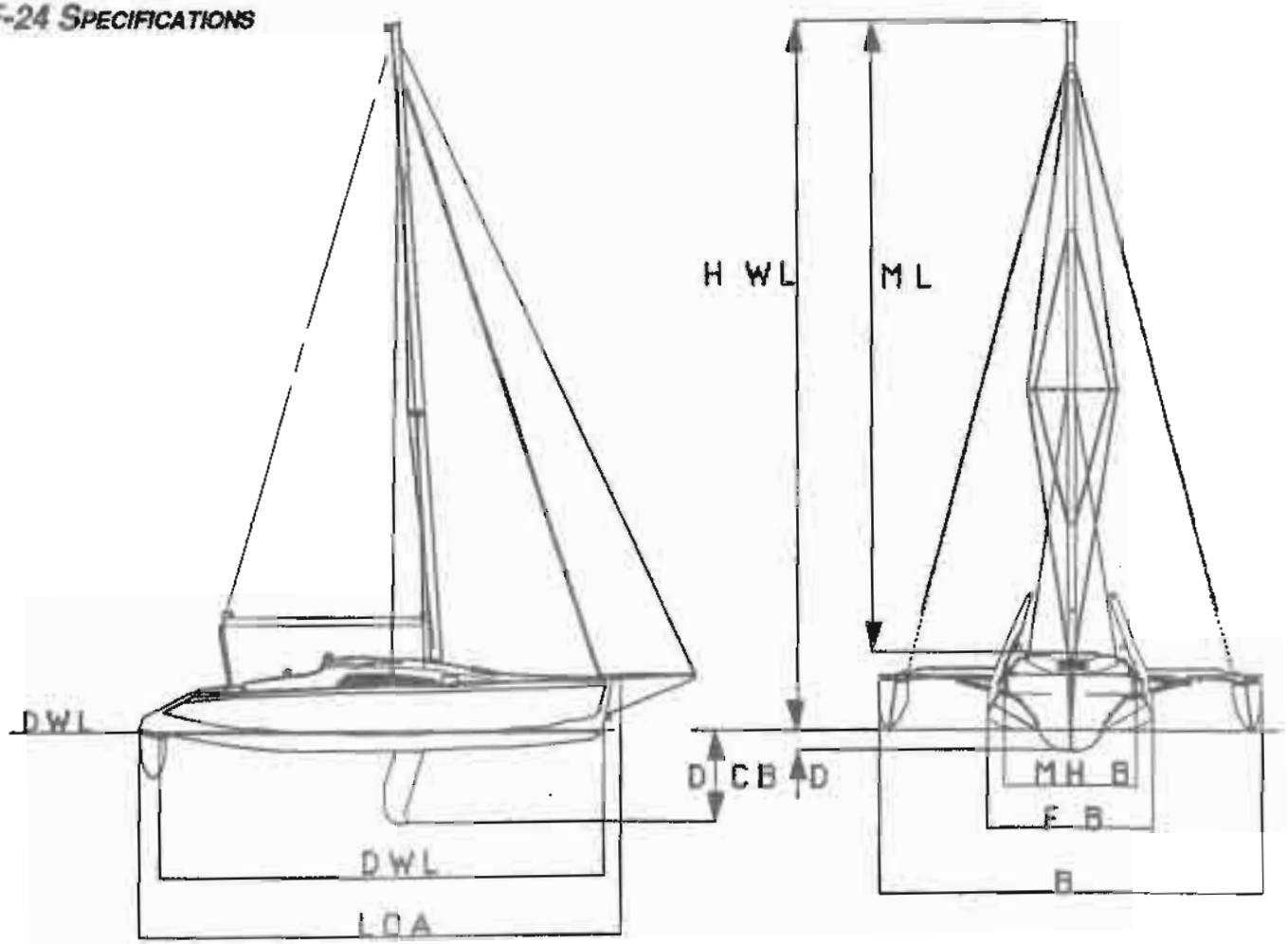
| Description | Diameter |
|---|---|
| Wire | 1 x 19 strand |
| Inner Diamond Shrouds | 3/16" (4.76 mm) |
| Outer Diamond Shrouds | 1/4" (6.35 mm) |
| Cap Shrouds | 1/4" (6.35 mm) |
| Lower Cap Shrouds | 1/4" (6.35 mm) |
| Lower Shrouds | 1/8" (3 mm) |
| Forestay | 1/4" (6.35 mm) |

BOW SPRIT
- Bobstay - 61" (1/4")
- SIDESTAY (2) - 115" (3/16")

| Description | Diameter | Length |
|---|---|---|
| **Line** | | |
| Main Halyard (kevlar) | 7/16" (11 mm) | 81' (24.69 m) |
| Jib Halyard | | 75' (22.86 m) |
| wire | 3/16" (4.76 mm) | 32' (9.75 m) |
| rope | 3/8" (9.53 mm) | 43' (13.11 m) |
| Spinnaker Halyard | 3/8" (9.53 mm) | 81' (24.69 m) |
| Mainsheet | 7/16" (11 mm) | 64' (19.51 m) |
| Jib Sheet | 7/16" (11 mm) | 25' (7.62 m) |
| Spinnaker Sheet | 3/8" (9.53 mm) | 100' (30.5 m) |
| Spinnaker Guy | 3/8" (9.53 mm) | 50' (15.25 m) |
| Barberhauler | 3/8" (9.53 mm) | 20' (6.1 m) |
| Roller Furling Line | 5/16" (8 mm) | 30' (9.14 m) |
| Cap Shroud Adj. | 7/16" (11 mm) | 19' (5.79 m) |
| Boom Vang | 7/16" (11 mm) | 16' (4.88 m) |
| Cunningham | 1/4" (6.53 mm) | 6' (1.83 m) |
| | 3/8" (9.53 mm) | 16' (4.88 m) |
| Traveler Line | 3/8" (9.53 mm) | 16' (4.88 m) |
| Anchor Line | 3/8" (9.53 mm) | 150' (46 m) |

| Engine Power | | |
|---|---|---|
| Outboard Engine | 5 hp | 4 kW |
| Fuel | Gasoline | |
| Gas Tank | 3 gal | 12 l |

*Fig 7.2 F-24 Specifications*



Detail Of F-24 Sail Logo

Red Logo And Letters With Gray Background

F 24

Corsair Will Provide Sailmaker A Template







*Fig 7.3 F-24 Class Sailplan*

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## H

## T



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## W

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