NEWPORT FLEET OWNER'S MANUAL

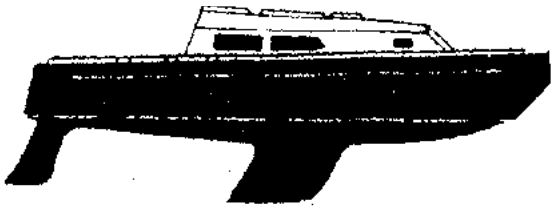
Newport - 30 II Hull Number 0509-05-74

Name of Boat ~~Hodo Too~~ TERN

Owner ~~H. Fisher~~ C. F. FADELEY OCT 1980
K. Darling
H. Nygren 1998

Top Antenna to WL - 47" 3" (Nominal 48')
Top Anchor Lite to WL - 43' 7"
Antenna Length - 4' 2"
Top Anchor Lite to Top, Mast 0' 6"

CAPITAL YACHTS, INC.
25914 President Ave.
Harbor City, Calif. 90710
(213) 530-1311



ALL MODELS ARE OF HAND LAY UP FIBERGLASS WITH CORE CONSTRUCTION IN DECK

LOA	30'0"
LWL	25'0"
BEAM	10'6+"
DRAFT	4'9"
SHOAL DRAFT	3'11"
DISP.	8000 lbs.
BALLAST (LEAD	2600 lbs.

SPECIFICATIONS

DESIGNED BY GARY MULL,	N.A.
SAIL AREA	419 sq. ft.
IOR RATING	24.5 (3/4 Ton)
I	39'6"
J	12'1½"
MAIN	174 sq. ft.
FORETRIANGLE	245 sq. ft.
HEADROOM	6'3"

REVISED STANDARD EQUIPMENT

DELUXE LAMINATED WOOD TILLER
BOW PULPIT - Mid Rail
LIFELINES & STANCHIONS
SPECIAL BOOM & MAST W/AIR FOIL SPREADER
MID BOOM HEAVY DUTY MAIN SHEET W/TRAVELER & WINCH
FWD. LUCITE HATCH W/TEAK FRAME
STAINLESS STEEL RUDDER POST
BOOT TOP & COVE STRIPE (CHOICE OF COLOR)
OPENING FORWARD PORTS

STAINLESS ADJUSTABLE BACKSTAY
40 GAL. WATER TANK
25 GAL. FUEL TANK

12" SAILING PROP. W/ZINC COLLAR
UNIVERSAL ATOMIC 4 WITH COMPLETE VENTILATION WITH BLOWER
ENGINE SAFETY HORN FOR OIL PRESSURE & WATER TEMP.
COCKPIT ENGINE CONTROLS
ALL THRU-HULLS W/ANTI-CORROSIVE VALVES
ELEVEN FOOT TEAK HANDRAILS (TWO)
EXTERIOR WOOD TRIM - ALL TEAK
LARGE COCKPIT SAIL LOCKER
EIGHT STAINLESS TURNBUCKLES
DOUBLE LOWER SHROUDS
INTERIOR INSTRUMENT PANEL W/COMPASS OUTLET & GAUGES
NAVIGATIONAL LIGHTS

STANDARD INTERIOR

SLEEPS 7 in 6' 3" + (BERTHS: 3 SINGLES & 2 DOUBLES, INCLUD. LARGE QUARTERBERTH
AFT. QUARTER GALLEY WITH SERVING ISLAND & DRAWERS AND TEAK TURNED POST
3" INTERIOR CUSHIONS W/DINETTE BACKREST
THREE BURNER GIMBALLED ALCOHOL STOVE WITH OVEN
3-WAY DINETTE TABLE (CONVERTS TO U-SHAPE SETTEE)
CHART TABLE WITH LARGE DRAWERS BELOW
STORAGE UNDER ALL BERTHS W/FWD. CHAINLOCKER
2 HANGING LOCKERS
4 INTERIOR LIGHTS (6 OVERHEAD & NAVIGATORS LT.)
TEAK CABINETS & DRAWERS ACCENTED W/PIN RAIL TRIM THROUGHOUT
INTERIOR WOOD TRIM - ALL TEAK
HEAD DOOR WITH TEAK FRAME AND FULL LENGTH PIANO HINGE
TEAK FOLDING MODESTY DOOR UP FORWARD W/TWO FULL LENGTH PIANO HINGES
SOFT OVERHEAD PADDED HEADLINER
LARGE HEAD COMPARTMENT W/STAINLESS SINK & WATER PUMP W/THRU-HULL & VALVE
VANITY STORAGE OUTBOARD OF SINK W/SHELF STORAGE UNDERNEATH
PERKO SAFETY MAIN SWITCH W/12 VOLT 70 AMP BATTERY
TEAK BULKHEAD & FACINGS

newport

CAPITAL YACHTS, INC.
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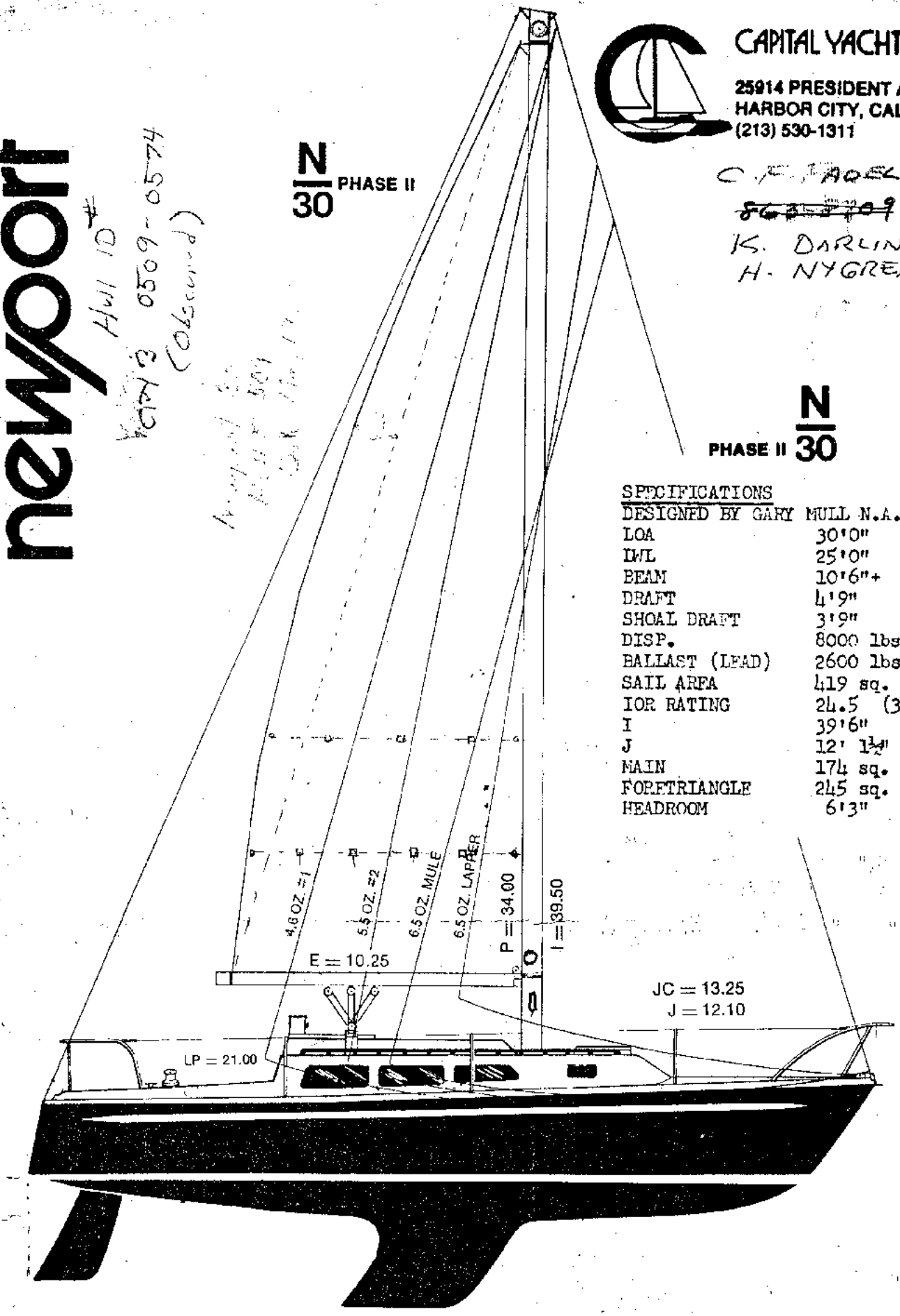
C. F. RADLEY
~~SC 2709~~
K. DARLING
H. NYGREN

newport

Hull ID #
KAN 3 0509-0574
(Obscured)

N/30 PHASE II



PHASE II N/30

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LOA	30'0"
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TABLE OF CONTENTS

Please note that only the sections checked will be included in this manual or pertain to your boat.

4-0 ELECTRICAL SYSTEMS

X 4-1 Basic Electrical System

- 4-1.1 Battery Condition Indicator
- 4-1.2 Use of Two Batteries
- 4-1.3 Operation of Electrical System

X 4-2 Optional Electrical Accessories

- 4-2.1 Lightning Ground
- 4-2.2 Masthead Light
- 4-2.3 110 Volt A.C. Shore Power
- 4-2.4 Spreader Lights
- 4-2.5 Combination Spreader Light
- 4-2.6 Battery Charger

X 4-3 Deck Wiring Diagram

5-0 ENGINE OPERATIONS

X 5-1 Safe Fueling Practices
5-2 Outboard Motor Instructions
X 5-3 Inboard Engines - General Information

- 5-3.1 Propeller Shaft Alignment
- 5-3.2 Propeller Shaft Packing Gland
- 5-3.3 Fuel Tanks & Electrical Gauge
- 5-3.4 Starting the Engine
- 5-3.5 Running the Engine
- 5-3.6 Securing the Engine
- 5-3.7 Winterization
- 5-3.8 Ventilation

X 5-4 Universal Atomic 4
__ 5-5 Palmer M-60
__ 5-6 Perkins 4-107 or 4-236
__ 5-7 Petters ABI WM Diesel

6-0 PLUMBING SYSTEM

X 6-1 Thru-Hulls and Thru-Hull Valves
X 6-2 Fresh Water Tanks
X 6-3 Galley

- 6-3.1 Fresh Water Hand Pump & Sink
- 6-3.2 Salt Water Hand Pump
- 6-3.3 Ice Box

X 6-4 Head

- 6-4.1 Head Sink
- 6-4.2 Marine Toilet
- 6-4.3 Holding Tank Toilet (Handi Head)
- 6-4.4 Holding Tank Head System (Kracor)
- 6-4.5 Discharge Instructions

X 6-5 Bilge Pumps
X 6-6 Pressure Water System with Shower
X 6-7 Plumbing Diagram

7-0 INTERIOR APPOINTMENTS

X 7-1 Interior Arrangement
X 7-2 Alcohol Stove
__ 7-3 LPG Stove
__ 7-4 Mechanical Refrigeration & Freezer
__ 7-5 Electric Refrigeration

8-0 ADDITIONAL MAINTENANCE TIPS

X 8-1 Rudders, Keels, & Bottom Paints
X 8-2 Spars, Rigging, and Hardware
X 8-3 Fiberglass Surfaces
X 8-4 Sails
X 8-5 Woodwork

9-0 SAILING TIPS

X 9-1 Basic Keelboat Sailor's Library
X 9-2 Federal Requirements for Pleasure Craft

- 9-2.1 Coast Guard Auxiliary Courtesy Exam
- 9-2.2 Basic Facts About Marine Fire Extinguishers
- 9-2.3 Basic Facts About Life Preservers

X 9-3 Navigation and Piloting

- 9-3.1 Rules of the Road
- 9-3.2 Nautical Charts
- 9-3.3 Marine Aids to Navigation

X 9-4 Coast Guard Assistance

- 9-4.1 Emergency Repairs Afloat

X 9-5 Underway - AT LAST!

- 9-5.1 Preparation and Casting Off
- 9-5.2 Bending on and Hoisting Sails
- 9-5.3 Reaching and Steering
- 9-5.4 Tacking and Gybing
- 9-5.5 Beating
- 9-5.6 Running
- 9-5.7 Docking and Securing
- 9-5.8 International Offshore Rule (I.O.R.)

__ 9-6 Sailing Centers

Dear Newport Owner:

Welcome to the Newport Fleet!

Owners of the Capital built yachts comprise one of the fastest growing groups of racing and cruising fleets in the nation, and we wish to welcome you as members of this group.

We at Capital Yachts have attempted to build into our boats the greatest possible value in terms of any sailing yacht on the market.

The purpose of this owner's manual is to insure that you obtain the maximum use and pleasure from your Newport Sailboat. Any questions that have been left unanswered will gladly be answered by your dealer, or in response to a letter directed to Capital Yachts, c/o Customer Satisfaction, Harbor City California.

Welcome to the Newport Fleet. We wish you many years of happy sailing.

CAPITAL YACHTS, INC.

Dear Newport Owner:

Your new Newport Yacht has been thoroughly factory tested for water leaks at the deck-to-hull joint, windows, hatches, handrails, and all deck fittings, and has been found to be tight.

It has been noted, however, that - in some instances- after truck shipment and/or after sailing a new yacht a few times, some of the various fastenings, fittings, and windows require resealing, and/or retightening. Boat Sealant is available at most marine hardware stores, should it be necessary.

We wish you many years of happy sailing.

CAPITAL YACHTS, INC.

JW/jev

HISTORY OF CAPITAL YACHTS CORPORATION

Capital Yacht Corporation had it's origin in 1971, when its current owners Jon Williams and Bill Smith bought only the tooling of the Newport Fleet from Elgin National Industries,(a New York based firm). Together, with the aid of two top Naval architects, Gary Mull and Cuthbertson and Cassian(C&C), they formed a new and updated Fleet of Newport Sailboats, presently manufactured at their privately owned plant in Harbor City, California.

Prior to this, Bill and Jon had an excellent foundation for manufacturing sailboats, both had been selling sailboats as retail dealers for the past nine years in the Greater Santa Monica Bay area. They were well versed in their field. Each did his own racing, commissioning and warranty repair in his last year as a retail dealer. They were both sailing and selling Newport Sailboats.

Elgin National Industries elected to withdraw from sailboat manufacturing, for reasons of their own. Jon and Bill saw a real need for a quality line of sailboats with hand laid hulls and decks, lead keels, heavy duty rigging and hardware, and interior designs for extended blue water sailing. At this point the odds were heavily against them, but due to their great desire and experience and with the aid of their banker Sandy Greenberg, they entered into the Sailboat manufacturing business, to produce a quality sailboat at a fair price. As it turned out, all of their production is presold, with a large backlog.

The Newport Fleets impressive record of race wins and it's sizeable and enthusiastic owners tells the rest of Capital Yachts' history.

2-2 STANDARD AND SHOAL DRAFT KEELS see drawing 7-1

The STANDARD KEEL is designed for maximum performance and is recommended for competition. With this keel the boat has the lowest possible center of gravity and minimum form drag. Maximum stability is also obtained with the least amount of weight.

The SHOAL DRAFT KEEL offers the minimum draft which is necessary for cruising in many areas. A slight bit of weight has been added to compensate for the higher center of gravity and thus gives the boat approximately the same stablility as the standard keel model.

After careful analysis and in-the-water testing, we have determined that the shoal draft boat's performance is superior to that of a centerboard. It is also less expensive, has no mechanical complications, eliminates the leaking and rattling of the board, while still offering a good answer to the shallow draft need.

2-2.1 KEEL INSTALLATION

The ballast on Newport boats is a solid lead and alloy keel. The ~~galvanized iron~~ keel bolts are permanently locked in place by positioning them in the keel at the time it is poured. An epoxy adhesive is applied to the top of the keel before it is bolted to the keel recess in the hull. A fiberglass cloth is bonded over the entire joined area to further seal it. A resin and asbestos mixture is poured into the keel recess and allowed to harden. The covered keel bolts and their nuts are now permanently locked and insured of never having water come in contact with them.

The area of the hull to keel joint and the entire keel is now coated with micro-balloons, a resin based fairing agent. The whole area is then ground smooth and more micro-balloons are applied to any hollow spots. This process is repeated until the entire installation is smooth and uniform. It is then sanded and is ready for bottom paint.

We recommend the use of a hard vinyl based bottom paint such as "Bottomkote", "Vinyl-Lux", or a Woolsey hard vinyl based bottom paint.

2-3 HULL AND DECK CONSTRUCTION

Before production, the molds are polished to a high luster and mold wax is applied. Then the boot stripe and sheer stripe areas are masked off and are color gelcoated. The masking is then removed and the hull color gelcoat applied. A gray back-up gelcoat is applied next to make the laminate opaque and improve the impact resistance of the color coat. Next a layer of multi-directional mat is applied. This layer is hand rolled to a constant thickness and a smooth seamless finish. After this layer of mat is laid a layer of 24 oz. woven roving is applied and hand rolled and squeegeed to a smooth air free finish. Depending upon the size of the boat, up to seven successive layers of mat and woven roving are applied in this manner.

The interiors are built as a unitized one-piece molded structure. Before production starts, the plug is polished and mold wax is applied. The interior color is applied followed by a gray back-up gelcoat. Next a series of continuous layers of multi-directional mat are applied to the entire interior and hand rolled to a constant thickness similar to the hull lay-up. A layer of 24 oz. woven roving is then applied to all high stress areas including water and fuel tank areas, motor mounts, etc. Plywood is then bonded to all horizontal surfaces such as cabin soles, counter tops, etc. to produce the required stiffness. The interior is then placed in the hull located accurately with a fixture and bonded with mat and 24 oz. woven roving to the hull at all bulkheads and certain other high stress locations.

The deck mold is polished and mold wax is applied. The deck non-skid areas are masked off and the non-skid color gelcoat is applied. Then the masking is removed, the deck color gelcoat is applied, followed by a coat of gray back-up gelcoat. Next a series of layers of multi-directional mat are applied to the entire interior. When the appropriate number of layers for the particular deck are developed, a layer of Glasspak stiffening material is fitted and bonded to the deck. Marine plywood is placed instead of Glasspak at all locations requiring both sheer and compressive strength. In parallel with this operation, the deck headliner is molded in a separate mold in the same manner as the deck. When it is cured, it is bonded onto the deck and lead weights are applied to insure a complete continuous bond over the entire surface.

2-3 HULL AND DECK CONSTRUCTION (continued)

Capital utilizes a stage-by-stage assembly technique. This technique produces high efficiency and high quality by bringing the material to be assembled on the hull to the station when needed so the assembly personnel can efficiently perform the required assembly steps without running back and forth to the stockroom for material. Kits are delivered to the assembly line that include the parts to be assembled and all hardware, sealants, etc. that are required to perform each assembly operation. Shortages are handled by the line foreman. All assembly operations that are practical such as engine installation, plumbing and electrical systems, and prefabricated wood work are assembled into the hull prior to assembling the deck on the hull.

In parallel with the hull assembly operation, the deck has all wood parts, deck hardware, electrical systems, and engine controls that are practical assembled to it on a stage-to-stage basis. The hull and the deck are then assembled utilizing a proprietary hull-to-deck joint. This hull-to-deck joint utilizes both aircraft rivets and a resin and fiberglass mat which provides an extremely strong and ductile joint as well as an extremely efficient bumper rail.

In the last two assembly stages, the specialists in wiring, plumbing, joiner work, electrical systems, etc. complete the interior and exterior assembly operations. Prior to shipment, a final inspection is made which includes an engine operation test, an electrical system test, a water system test, a bilge pump test, and many other detailed inspections such as door and drawer fits, cleanliness of bilge and locker areas, etc.

3-0 SPARS, RIGGING, AND HARDWARE

One of the most rewarding activities connected with sailing is tinkering with your boat's rigging and hardware. The best skippers always seem to be looking aloft at the sails and then thinking about new fittings, or new ways of improving old ones. In this way a person acquires a thorough understanding of how and why every piece of sailing equipment works, plus how to repair and maintain it. As sailors, we too are constantly trying to achieve better and easier boat performance, thus the gear that we install is constantly being improved. What we hope to accomplish in this section is to give you the background information for setting up your boat in the beginning for normal sailing conditions.

When you need more help and information, please consult your local dealer. He is prepared to assist you in obtaining the best type of sailing hardware for your needs in your local area. One may also refer to the annual "Lands End Yachtman's Equipment Guide". This book should prove invaluable to you and your dealer in the selection of the best additional equipment for your boat. The latest issue may be obtained for a minimal amount (approximately $2.50) from Lands' End Publishing Corp., 2241 North Elston Ave., Chicago, Illinois 60614, and will be an excellent addition to any sailor's library.

-CAUTION-

When placing hardware in any position other than that specified on the Deck Hardware Layout Drawing 3-11, ALWAYS consult the Deck Wiring Diagram 4-3 to avoid cutting any wires or striking electrical fixtures.

3-1 MAST TUNE

UNDER NO CIRCUMSTANCES SHOULD ANY OF THE RIGGING BE SET UP "BAR TIGHT". FOR ALL SAILING CONDITIONS WE RECOMMEND THAT THE MAST BE VERTICAL AND IN COLUMN WITH THE RIGGING "FIRM". IT IS VERY IMPORTANT THAT A KNOWLEDGEABLE PERSON WHO UNDERSTANDS THIS CONCEPT OVERSEES THE INITIAL TUNING OF THE MAST AND RIGGING.

You should be able to stand facing the mast, reach out and pull on any stay and see the mast move in that direction. With a light pull or push by hand at chest height, this dockside starting point will have both stays of equal tension with about 1" to 2" of play in the uppers and 2" to 3" of play in the lowers.

3-1 MAST TUNE (continued)

The backstay and jib stay should be of equal tension and have about 1" of play. If the mast is stepped on deck the rigging will be tighter than a mast stepped on the keel. With double lowers the after lowers will be looser than the forward lowers by about 1" of play. Some of the newer tall rigs have intermediate shrouds, the tension of which should be between that of the uppers and lowers.

The final tuning of the mast should take place while sailing to windward in a medium breeze of 8 to 10 knots. Sighting along the backside of the mast from deck level will indicate what further turnbuckle adjustment needs to be made to the windward side of the mast. The top of the mast should not "hook" to windward. In a medium breeze the mast should be straight and this is normally accomplished by taking up on the lower shrouds. Always tack, and then make the turnbuckle adjustments on the now windward side, for further corrections. After a few tacks, the mast should be straight. Secure the rigging by inserting cotter keys into the turnbuckles, spread them open and cover with tape to prevent any snags.

Special attention should be given to the initial stretch of the rigging especially after the first sail in a strong breeze. In windy conditions it is actually desirable to have the mast head "fall-off" slightly to leeward, giving the mast a smooth, even curve from head to deck. In a tall rig the intermediates play an important part in controlling the upper mast section and this will be especially noticeable in stronger wind conditions. After a few more sails in strong breezes, the rigging should be checked again for tune as additional stretch will occur.

Please pay special attention to the fact that Capital Yachts does not drill holes for the barrel bolts, or any wood doors, as the boat changes position once in the water. This is the responsibility of the dealer during commissioning after the mast is stepped, tuned, and the boat has been sailed a few times.

3-2 BACKSTAYS

When racing, the backstay may be tightened to compensate for the extra forward loading applied by the Genoa. At the conclusion of the race it is very important to "slack-off" the amount you "took-up" on the backstay turnbuckle, as this avoids setting up unnecessary strains on the hull and rig. Since you want to keep the mast straight while racing, you will probably tighten up on the jib stay first so when the backstay is slacked off the mast head will hook slightly forward. When the backstay is tightened up, this "hook" will disappear and the mast will be straight.

Too much tension on the backstay is probably the prime reason for mast and rigging failures. It has been found that tension in the backstay can increase 150% to 200% due to the wind load on the headsail and dynamic loading due to heavy seas. With the optional hydraulic type adjusters tension can easily be applied far beyond that which is necessary or safe. The tension on a shroud or stay should not exceed 25% to 30% of the cable's breaking strength at the outside limit. Below are the breaking strengths, in pounds, for 1 x 19 stainless steel wire cable as supplied by the factory:

3/32" =1,200	3/16" =4,700	9/32" =10,300
1/8" =2,100	7/32" =6,300	5/16" =12,500
5/32" =3,300	1/4" =8,200	3/8" =17,500

On insulated backstays, unless otherwise specified, the upper insulator is located 18" down from the top swage eye, while the lower insulator is 7'6" up from the bottom swage eye.

3-3 GENOA GEAR

The trend in modern yacht design has been to smaller main sails and larger jibs or "Genoas". Usually any sail that overlaps the mast is considered a Genoa and is identified by the amount of this overlap. Thus, if the distance from rhe face of the mast to the bow ("J" on the Sail plan) is 10 feet and a line 15 feet distant (LP) was drawn parallel to the headstay, then any Genoa with a CLEW on that line would be a "150% Genoa". What is extremely important to realize is that these large sails can concentrate very high loads over a very small area, hence the gear must have high safe working loads. For example: in 25 knots of wind, a Genoa is subjected to a pressure of about 4 pounds per square foot, or one ton for a 500 square foot Genoa.

3-3 GENOA GEAR (continued)

Since the above load could easily be transmitted to one spot at any given time, all of the Genoa Gear has been designed and prepared to accept these extreme loads. The track is thru bolted and all blocks are oversize. All other fittings are of the best possible design and strength for the job intended. Most fitting failures occur from improper usage, usually by trying to use a light or cheap fitting instead of the proper factory recommended one. If loads are expected to come close to the safe working load of the block, then the next size larger must be used. Please remember that if a line turns back on itself, like all halyards, spinnaker sheets, guys, and jib top sheets, then the load on that block is almost doubled.

3-4 SPINNAKER GEAR

With the trend to larger Genoas, the spinnakers also get larger and need larger and stronger gear to handle them. As with the Genoa Gear, our Spinnaker Gear has been designed and fabricated to meet the extreme loads that this beautiful, but sometimes frustrating sail can produce. While not included in the Spinnaker Gear, the optional Reach Strut is a necessity on the boats over 30' and could well be used on smaller ones. In beam reaching conditions when the pole is up against the headstay, an unnatural load is put on the mast, stay, and pole. The reaching strut allows for a better angle of pull for the after guy, pulling the pole off the headstay and thus reducing the loads to a safer point. This also eliminateschafe of the after guy on the upper shroud To save wear and tear, read up on spinnakers and then have a couple of experienced friencs join you for the first couple of spinnaker drills.

3-5 REEFING GEAR

Two methods of mainsail reefing, roller and cringle (Jiffy reefing) see Drawing 3-12, are in common use and their pros and cons could be discussed forever. On the boats that have their mainsheet on the end of the boom, there may be a roller reefing mechanism contained in the gooseneck fitting. An optional GEARED ROLLER REEFING GOOSENECK may be installed in which a handle cranks the boom around and the sail is rolled down around the boom.

With mid-boom sheeting, most people will use the optional "Cringle Reef System". This system is quitefast, provides better "sail shape control"

3-5 REEFING GEAR (continued)

than does roller reefing and is definitely recommended for the racing skipper. It is really up to you to figure out if you want to go to roller reefing or cringle reef. After having consulted your own local experts you will know enough so anything we can add would be superfluous.

3-5.1 JIB ROLLER FURLING

This optional item has been included here to draw your attention to the fact that the Dealer installed Jib Roller Furling IS NOT DESIGNED FOR REEFING THE JIB. Experience has shown that the jib will have a poor shape and can be badly stretched out of shape and torn if an attempt is made to use it partially furled. What we have here is a convenient way to quickly furl ANY HEADSAIL from the cockpit. It is extremely important that when the jib is hoisted IT SHOULD NOT BE HANKED ONTO THE STAY. Only the roller or strap on the crane attached to the proper swivel should be around the headstay. This prevents the halyard from twisting and also gives a fair lead into the jib halyard block.

3-6 SELF-TENDING JIB

Two types of optional, dealer installed, arrangements may be used. The simplest, and more common on smaller boats, has the club boom lashed directly to the foot of the jib. A becket block is mounted in the middle while blocks are placed at the base of the forward stanchions. The jib sheet is then led from the becket block to the port stanchion block, back through the becket block to the starboard stanchion, and aft to the starboard cockpit winch.

A second method, which is used on larger boats, calls for the club boom to be attached to a special longer headstay turnbuckle with a gooseneck. This means that the headstay will be shorter than normal to accomodate this fitting. A boom topping lift block is also attached to the mast at the spreaders while deck blocks will be mounted port and starboard in line with the double block on the boom end. The sheet is led from the starboard becket deck block to the boom, to the port deck block, back to the boom, the starboard deck block, and through a deck fairlead to the starboard cockpit winch. With this rig it will be necessary for the lower jib hanks to be on a lacing line to allow the jib to be lowered without the boom being topped up or the outhaul being slacked.

3-7 BOOM VANG AND MAST HEAD FLY

These two dissimilar but extremely important optional items should be on every sailboat. It's pretty hard to sail if you don't know the wind direction and a mast head fly will always be pointing in the direction the wind is coming FROM. A quick glance aloft will instantly tell you the proper trim for your sails or course change, especially when going downwind when you don't want to gybe.

This brings up the boom vang which will hold the boom horizontal when off the wind, thus keeping the mainsail flat and from bouncing around in light winds and/or a chop. The Dealer installed boom vang would most likely be rigged from the boom to a bail at the base of the mast so it does not have to be down rigged when gybing. This is an added safety feature, since if an accidental gybe were to take place the boom would swing over without lifting up and allowing the leech of the mainsail to catch on the old, leeward spreader. Keep the boom vang slack when going to weather and, when off the wind, set it up tight enough to flatten the main sail without allowing the leech to "cup" or "hook" inwards.

3-8 PEDESTAL STEERING see drawing no. 3-11

The pedestal on the optional factory installed Pedestal Steering unit is cast from a corrosion resistant aluminum which is then anodized, primed, and painted with a gloss white polyurethane enamel. All other metal parts are stainless steel or manganese bronze (exterior ones have a marine chrome finish), thus removing any magnetic attraction from around the binnacle mounted compass, which should be adjusted by a professional. Know which are the adjusting screws and then DON'T move them after they have been set.

Aluminum steering wheels are coated with white nylon, while the larger stainless steel steering wheels are polished and may be partially coated with white nylon.

The unit is virtually maintenance free, but prior to your first sail climb down below and check out the entire installation. With someone turning the wheel from stop to stop, make sure the cables are leading properly and EVERYTHING is tightened down. Next, sea trials are in order. Now look for

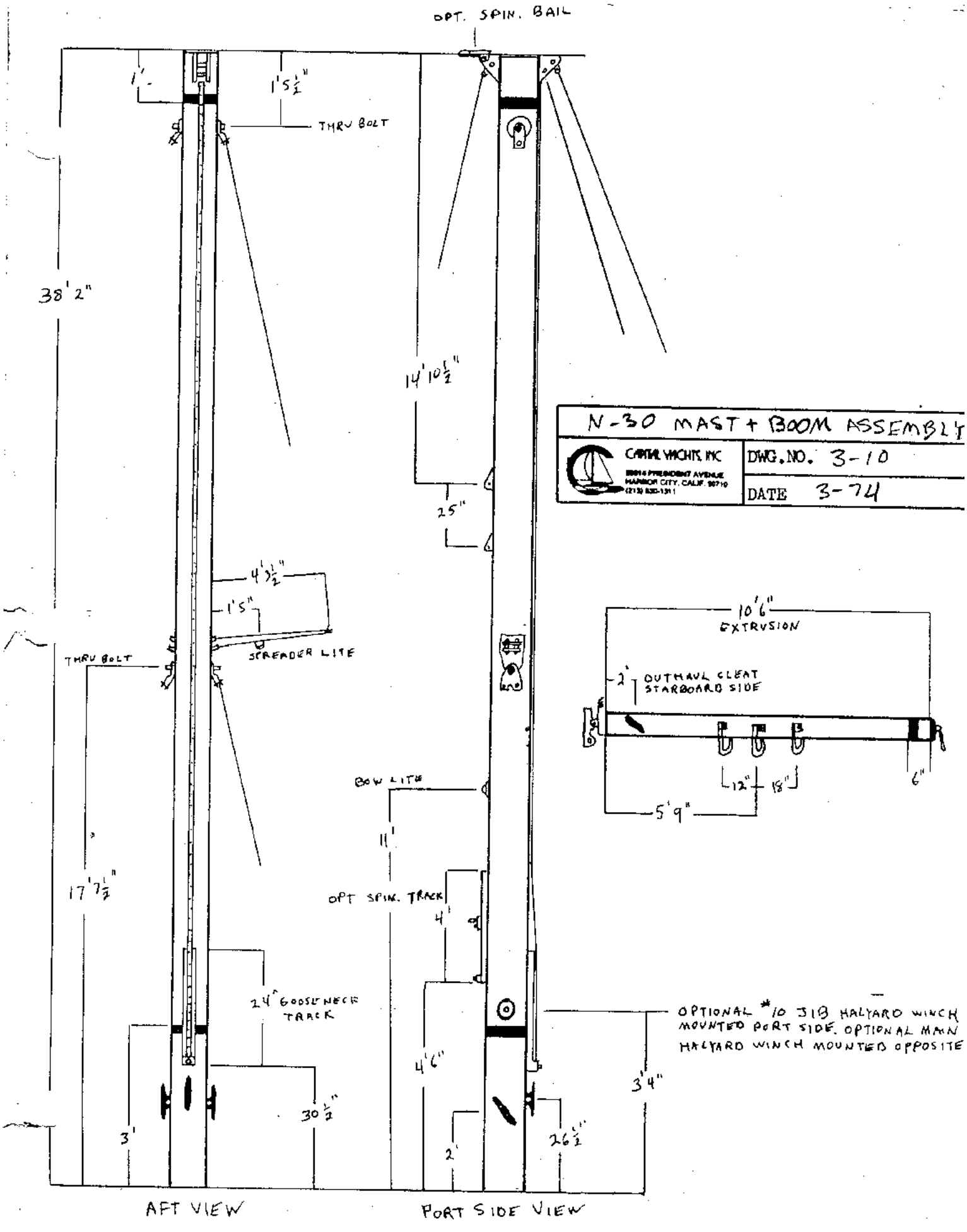
3-8 PEDESTAL STEERING (continued)

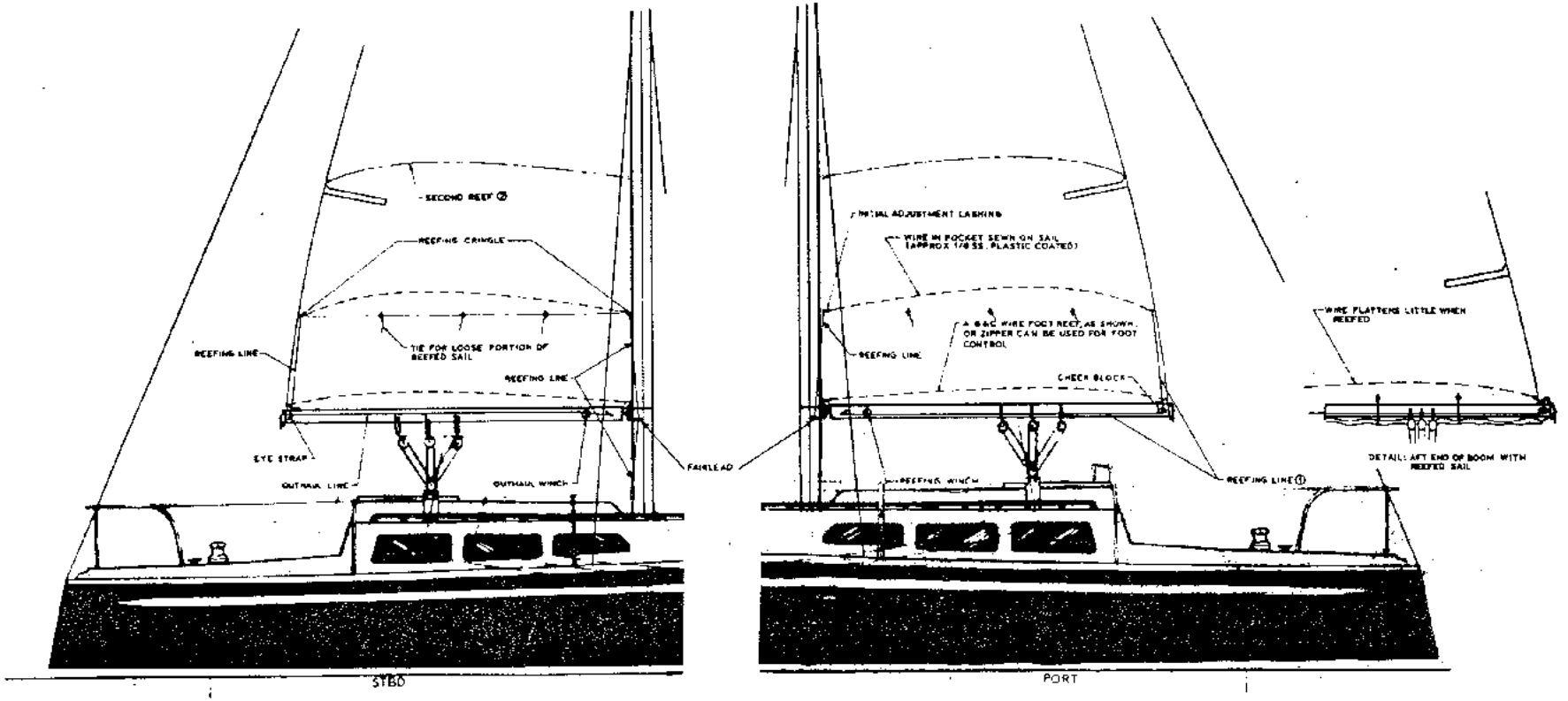
freedom of travel in the system and the cable tension. A MODERATE amount, enough to eliminate "backlash" or "play", is recommended, as excessive tension creates added friction and makes for harder steering.

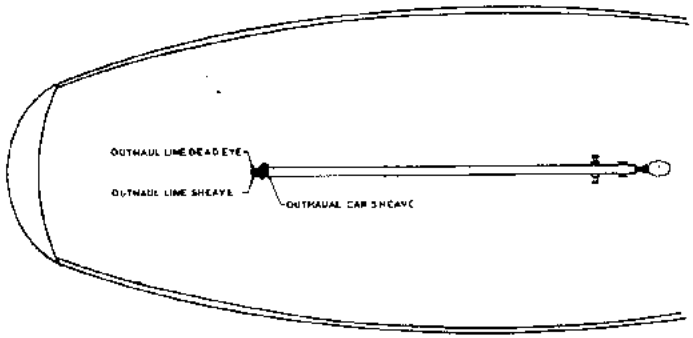
Periodically check for loosened bolts and cable tension, especially after the first few sails. They usually need tightening as the roller chain seats in. Look for signs of wear or "fish" hooks on the cable and replace as necessary. Three or four times a year, depending upon the frequency of use of the boat, lightly oil the chain, pedestal shaft bearings, and sheave bearings with 3-in-one oil to complete your maintenance routine.

3-9 N/30 RUNNING & STANDING RIGGING

LENGTH	DIAM.	RUNNING RIGGING
65'	3/8"	MAIN SHEET LINE - YACHT BRAID
50'ea.	7/16"	JIB SHEET LINES (2) - YACHT BRAID
39'	3/8"	MAIN HALYARD LINE - YACHT BRAID
37'	1/8"	MAIN HALYARD WIRE - 7 x 19 WIRE
39'	3/8"	JIB HALYARD LINE - YACHT BRAID
39'	5/32"	JIB HALYARD WIRE - 7 X 19 WIRE
8'	¼"	DOWNHAUL LINE - YACHT BRAID
15'	¼"	OUT HAUL LINE - YACHT BRAID
12'	¼"	MAINSHEET TRAVELER LINES (2) - YACHT BRAID
13'	5/16"	TOPPING LIFT LINE - YACHT BRAID
34' 10"	3/32"	TOPPING LIFT WIRE - 7 x 19 VINYL COATED WIRE
		STANDING RIGGING - MEASUREMENTS TAKEN EYE TO EYE WITH TURNBUCKLES
		TURNED HALF WAY OUT
40' 5"	7/32"	HEAD STAY 1 x 19 WIRE
42' 9½"	3/16"	BACKSTAY 1 x 19 WIRE
38' 1½"	7/32"	UPPER (2) 1x 19 WIRE
19' 1½"	3/16"	FORWARD LOWERS (2) 7 x 19 WIRE
19' 2½"	3/16"	AFT LOWERS (2) 7 x 19 WIRE


OPT. SPIN. BAIL
1'
1'5½"
THRU BOLT
38'2"
14'10½"
25"
4'3½"
1'5"
SPREADER LITE
THRU BOLT
BOW LITE
11'
17'7½"
OPT SPIN. TRACK
4'
24" GOOSENECK TRACK
4'6"
3'4"
30½"
3'
2'
26½"
AFT VIEW
PORT SIDE VIEW
10'6" EXTRUSION
2" OUTHAUL CLEAT STARBOARD SIDE
12"
18"
6"
5'9"
OPTIONAL #10 318 HALYARD WINCH MOUNTED PORT SIDE. OPTIONAL MAIN HALYARD WINCH MOUNTED OPPOSITE
N-30 MAST + BOOM ASSEMBLY
CAPITAL YACHTS, INC
DWG. NO. 3-10
DATE 3-74





NOTE:

① STRING IS LEFT IN SAIL IN PLACE OF HEAVY REEFING LINE AND IS USED TO PULL REEFING LINE THROUGH WHEN NEEDED

② A SECOND REEF POINT CAN BE ADDED. POSITION OF THE ADDITIONAL EYE STRAP AND CHEEK BLOCK IS DETERMINED BY THE POSITION OF THE ADDITIONAL REEFING CRINGLE. THE OUTHAUL WINCH IS USED FOR THE SECOND REEF POINT.

3. CRINGLE REEFING IS QUICK AND MAINTAINS AN OUTHAUL AND SAIL SHAPE WHILE REEFED.

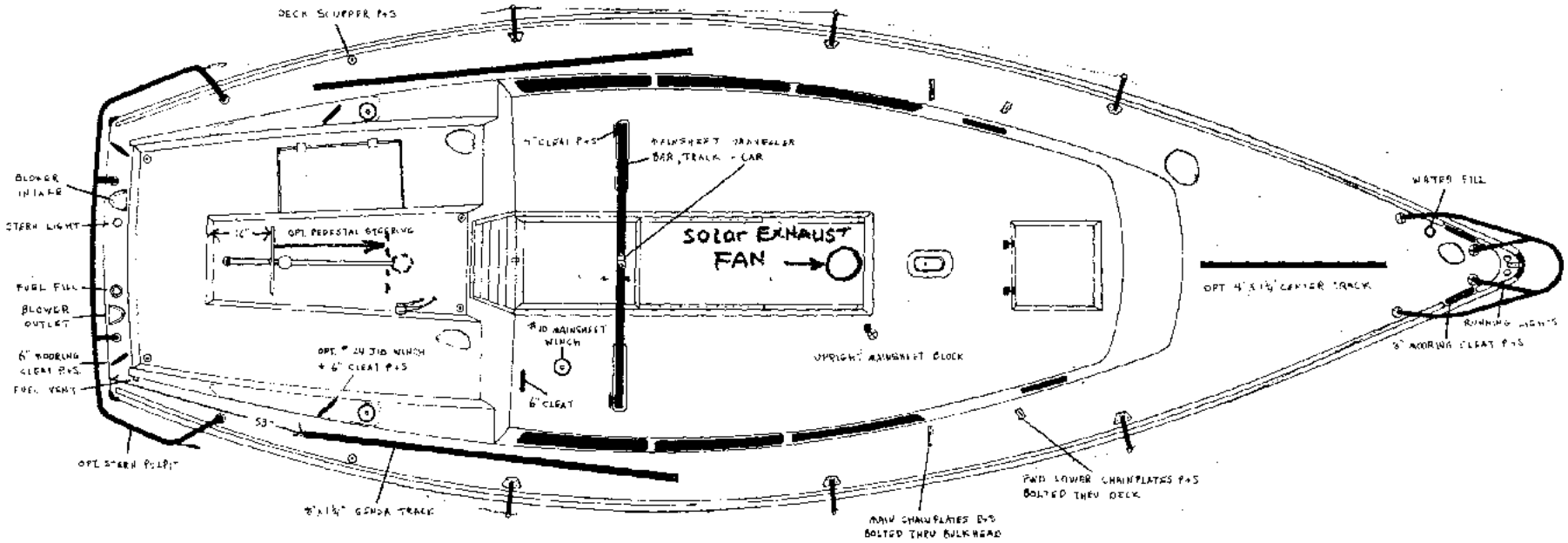
4. CHECK THE OPTIONAL EQUIPMENT LIST FOR HARDWARE INCLUDED IN THE CRINGLE REEFING OPTION.

CRINGLE REEF SYSTEM

CAPRI YACHTS, INC.
[illegible] PRESIDENT AVENUE
HARBOR CITY, CALIF. 90710
(213) 530-1311

DWG. NO. 3-12

DATE 6-74



N-30 DECK HARDWARE LAYOUT

CAPITAL YACHTS, INC.

DWG. NO. 3-11

DATE 5-74

4-0 ELECTRICAL SYSTEMS

It is important to remember that your BASIC CIRCUIT BREAKER ELECTRICAL SYSTEM may be altered to conform to the electrical requirements of your engine and additional optional accessories. The description of any special optional electrical accessory (i.e. electric bilge pump) will be found in another, more appropriate section (plumbing) yet may appear in this section's wiring diagram or the engine wiring diagram. In the event you make any electrical modifications to your boat be sure that you follow the WIRING DIAGRAM or consult a competent MARINE ELECTRICIAN. Boat wiring is considerably different from house wiring due to the marine environment and other conditions not associated with houses.

4-1 BASIC CIRCUIT BREAKER ELECTRICAL SYSTEM

The Master Power Control Panel features integrated, simplified controls and circuit breaker protection to permit safe and efficient operation of your boat's electrical equipment. All panel components have been carefully selected for their proven performance in marine applications. The basic panel is of a fiberglass material which is inherently corrosion resistant and is doubly protected to optimize resistance to the effects of the marine environment.

Electrical current is directed from a 12 volt, 60-9-AMP battery or batteries through the Master Power Control Panel for engine starting, battery charging, and accessory loads.

While the standard installation is one battery, many owners do considerable cruising and "living aboard" so a second battery may be added to meet these additional electrical requirements. Panel selection of "BAT 1" or "BAT 2" determines which of the two batteries will be utilized for the electrical system, use the optional Battery Condition Indicator to ascertain the condition of your batteries.

4-1.1 BATTERY CONDITION INDICATOR (Newport 41 only)

This type of "indicator" or "meter" is technically referred to as a "Suppressed Zero Voltmeter". Note that calibrations do not start at zero but provide a full scale reading from 8 or 10 to 16 volts, depending on the meter. Below 8 or 10 volts the battery charge is so low that terminal voltage readings are meaningless. Approximate voltage range interpretations are given on the next page.

Engine Not Running or at Idle	)	Below 11-----Very low battery charge 11 - 12------Low battery charge 12 - 13------Well charged battery
Engine Running Above Idle	)	13 - 13½--------Low charge rate 13½ - 15½--------Alternator & Voltage Regulator OK 15½ or above----Voltage Regulator Out of Adjustment

It is important for you to understand that the reading on the Battery Condition Indicator Dial is indexed from the TOGGLE TEST SWITCH POSITION REGARDLESS OF THE MASTER SWITCH POSITION unless it is the "BOTH" position. When the Master Switch is in the "BOTH" position then the Battery Condition Indicator Dial will indicate BOTH BATTERY CONDITIONS NO MATTER WHICH WAY THE TOGGLE TEST SWITCH IS INDEXED. When the Master Switch is in either the "OFF", "BAT 1" or "BAT 2" positions, the meter will read the condition of the battery TOWARDS which you index the TOGGLE TEST SWITCH. Note that panel and meter illunination is also provided by this same Toggle Test Switch.

Apparently not connected

4-1.2 USE OF TWO BATTERIES

Before activating the electrical system, check the condition of both batteries and then select the STRONGEST BATTERY FOR ENGINE STARTING. Index the Master Switch to the strong battery, operate the BLOWER FOR FIVE MINUTES, and then start your engine. It will usually require about 15 to 30 minutes of engine running time to bring the starting battery back up to charge. Check the AMP-Meter to assure that charging is normal and when the selected starting battery has been restored it is placed on reserve by switching to the other battery so subsequent charging and accessory loads will be confined to this second battery. IT IS A GOOD PRACTICE TO BRING THE FIRST SELECTED BATTERY UP TO FULL CHARGE BEFORE PUTTING IT ON RESERVE AND CHANGING TO THE SECOND BATTERY.

Use the Master Switch in "BOTH" position ONLY for emergency starting when both batteries are low, or for "top off" charging when both batteries are near full charge. When both batteries are completely charged, transfer to either battery, keeping one battery always in reserve. This is especially important when you realize that there is no way to start your inboard engine with a dead battery like pushing a car when you're in the same predicament.

4-1.2 USE OF TWO BATTERIES (continued)

NEVER MOVE THE MASTER SWITCH TO "OFF" WHILE THE ENGINE IS RUNNING OR THE ALTERNATOR DIODES MAY BE BURNED OUT!

IMPORTANT

4-1.3 OPERATION OF FUSED SWITCH PANEL ELECTRICAL SYSTEM

The RUNNING LIGHTS switch activates the recessed red and green lensed lights forward and the white, 12 point stern light aft. The COMPASS LIGHT connection for the cockpit is also on this switch. When under sail at night, these are the only lights that should be shown, except for the shining of a white light on the sails if you feel there is a real need for greater recognition.

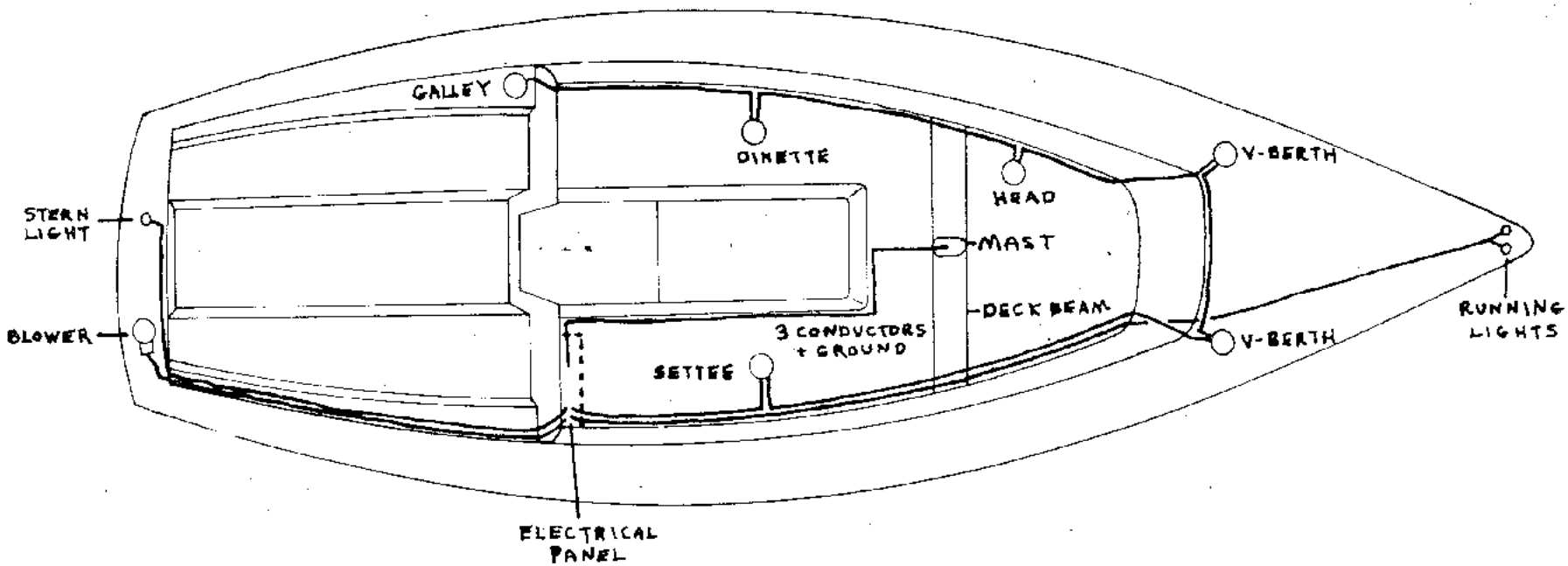
GE-68 - Stern lite
Bow lite
Masthead
GE-90 - Port lite
94. Stbd lite

The White Stern Light takes a GE-68 type bulb while a GE-90 bulb should be used for the Red Port Light and a GE-94 bulb for the Green Starboard Light. It is important that a stronger bulb be used with the darker lenses or visibility of the lights will be considerably less than the required one mile.

The BOW LIGHT switch is for the 20 point white light on the mast and is to be used in conjunction with the running lights WHEN UNDER POWER OR WHEN MOTOR SAILING. It also serves as a quick way of illuminating the jib at night to check its trim and in emergency cases when recognition is important. This light will use a GE-68 bulb if replacement is necessary.

The cabin lights have their own individual switches, but must be activated by the CABIN LIGHT switch on the Master Power Control Panel. The bulb for these round dome lights is a W-1141. If the cabin lights start getting dim, this is fair warning that the battery needs a charge or is getting old. Remember that you have an automotive type battery whose charge and water level must be checked at least once a month. If your boat is to be unused or stored for extended periods of time it is advisable to remove the battery(s) and store in a warm, dry location.

Periodically check all wires, connections, and terminals for loose connections which may cause electric sparks or power loss.
This is especially important with the engine wires.
When leaving the boat, FIRST TURN OFF THE ENGINE, THEN INDEX THE MASTER SWITCH TO OFF.

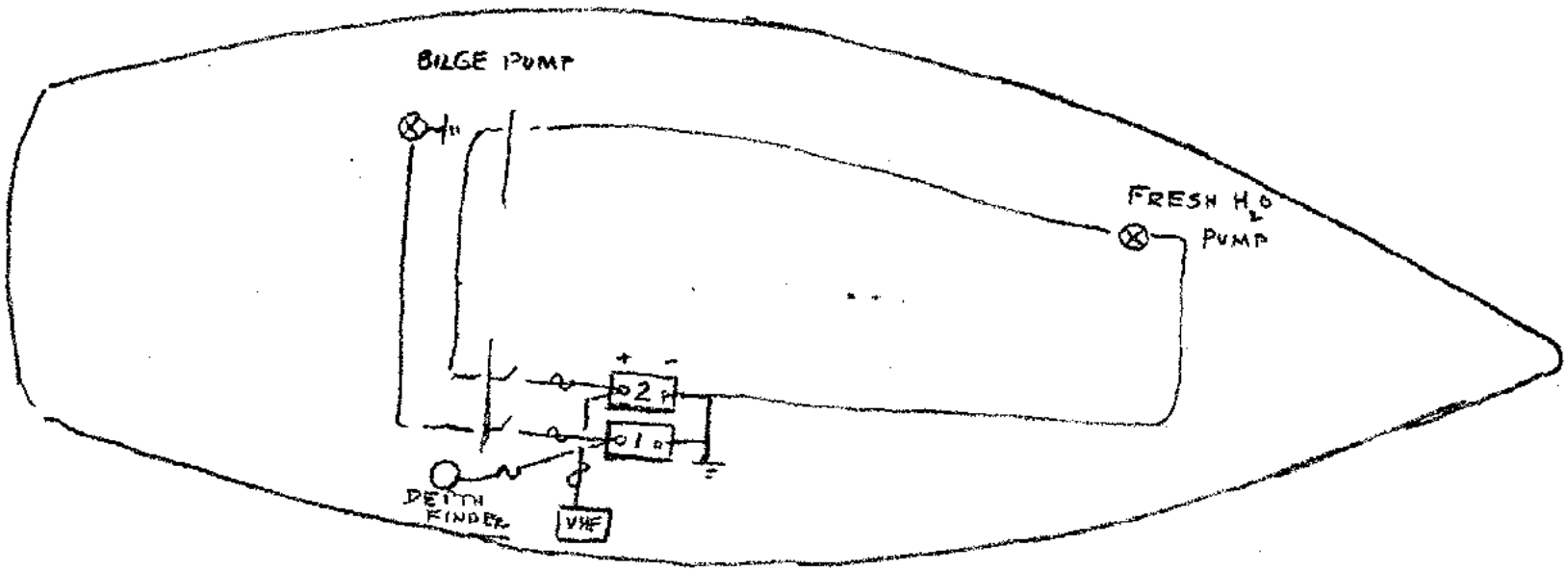


N-30 DECK WIRING DIAGRAM

CAMAL YACHTS, INC.

DWG. NO. 4-3

DATE 5-74



DIRECT WIRING

2001

Radio, Depth Finder & Water wired directly to #1 battery.

4-2 OPTIONAL ELECTRICAL ACCESSORIES

4-2.1 LIGHTNING GROUND

If optional lightning protection has been provided it will consist of a bare copper wire connecting the uppers, headstay, or backstay chainplates to a common point on one of the keel bolts.

4-2.2 MAST HEAD LIGHT

This 32 point white light meets the international and inland rules for a light to be used when at anchor. It has a GE-68 bulb and would be activated by the masthead light switch.

4-2.3 110 VOLT SHORE POWER see drawing no. 6-7

When the optional shore power cord is plugged in, a Circuit Breaker Switch brings 110 volt AC current to the AC outlets and is located on the Accessory Control Panel. If there is any short or improper connection in the system the Circuit Breaker Switch will "trip", i.e., the breaker will automatically open the circuit and its handle will flip to the "OFF" position. After correction of the fault, the breaker may be manually indexed "ON" and your 110 volt A.C. appliances will work again. Be sure that all 110 volt A.C. appliances, other than lamps, have adequate grounds or the moist atmosphere and wet feet can really increase the shock potential.

4-2.4 SPREADER LIGHTS

When optional spreader lights are installed at the factory, if they are mounted on tubular aluminum spreaders, you will note that the wires run OUTSIDE the spreaders and the lights are mounted to the spreaders. This is done so that NO HOLES will be drilled in the spreaders to subsequently weaken them. The light is activated by the SPREADER LIGHT switch on the Master Control Panel.

4-2.5 COMBINATION SPREADER LIGHT-Newport 41 only

A second type of "Spreader Light" may also be mounted that is really a single FOREDECK LIGHT and is mounted on the forward side of the mast with the BOW LIGHT on top and the single Foredeck Light shining downward and forward. In many respects this is a better way of illuminating the foredeck without getting light into the skipper's eyes, is cleaner than lights hanging down from the spreaders and is one less fitting aloft to mess with! The light is activated by the Spreader Light Switch on the Master Control Panel.

5-1 SAFE FUELING PRACTICES

1. Avoid fueling a boat at night or in rough water except in an emergency.

2. Calculate the desired amount of fuel before reaching the fuel dock and order only that amount. Fuel tanks should not be filled to more than 90% of capacity to permit thermal expansion without overflow from vent.

3. Before opening the fuel filling pipe inlet:

   A. Extinguish all open flames aboard, including galley equipment.

   B. Forbid all smoking on board or on the fuel dock. Drown all butts.

   C. Turn OFF the main switch and all branch circuit switches to be sure there is no live electrical circuit on board during fueling. (Do not turn OFF the main switch until the engine is stopped, to avoid damage to the alternator).

   D. Tightly close all hatches, windows, doors, and ports.

4. Watch the fueling closely. Be sure that only a nonautomatic, latch-open type of nozzle is used, compelling the operator's continuous hand pressure to keep fuel flowing, and that only the ordered quantity of fuel is put aboard. Insure that the operator maintains constant contact of nozzle to fill pipe.

5. When the desired quantity of fuel has been put aboard, make sure that the cap closing the inlet is tightly closed. Wash down any spills. Check vent opening to be sure that no fuel is being discharged at this point.

6. Open wide all hatches, doors, windows, and ports.

7. If the boat is equipped with electrically operated bilge blower (or gas detector), turn ON the branch circuit switches which control the circuits to these devices and then turn ON the main switch. Permit blower to operate for at least five minutes and check the ventilation cowls for odor or gasoline vapors being discharged.

8. If the boat is not blower equipped, wait at least ten minutes and check for gasoline odors in all low spaces of the boat. Remember to open cockpit hatches before starting.

9. When your personal inspection and observation assure you that there are no gasoline fumes remaining in the boat the engine may be started and full electric services restored as desired.

IF IN DOUBT, WAIT!

5-2 OUTBOARD MOTOR INSTRUCTIONS

1. Secure outboard motor to port mooring cleat using lanyard provided.

2. Run fuel line through port ventilator before connecting to engine.

3. Keep engine in fore and aft position at all times when steering boat with rudder. Remove rudder or keep rudder in fore and aft position at all times when steering boat with out-board motor.

4. Store outboard in cockpit locker with head of engine higher than prop. Store fuel tank on level surface and secure with straps.

5-3 INBOARD ENGINES GENERAL INFORMATION

After you read this section please be cognizant of the contents of your specific engine manual and the final part of Section 5 relating to your specific engine. What we want to cover here are some general operational instructions that pertain to the actual engine installation in your boat.

5-3.1 PROPELLER SHAFT ALIGNMENT

It is most important that shaft alignment be carefully checked at the time of launching by the selling dealer. The shaft and engine were carefully aligned at the factory but loading, trucking, and off loading can spoil this work, as well as the different set the hull may take in the water. This misalignment may also occur later andthe following method is used to check and realign an engine and its propeller shaft.

1. Remove bolts holding the shaft coupling flange to the engine transmission flang and any flexible couplings.

2. Press coupling flanges together and check all around with feeler gauges for gaps between them. Zero to nine thousandths (.009) of an inch is tolerable.

3. If a greater gap exists between the top or bottom of the couplings, adjustment can be made by raising or lowering the front or back end of the engine using the abjustable motor mounts.

4. If a greater gap exists between the sides of the couplings, adjustment must be made by slacking off the engine mount lag bolts and prying the engine to one side or the other to close the gap.

5. When tolerance is satisfactory, re-tighten anything that has been slacked off and recheck for excessive gap, if it is still satisfactory, replace bolts in shaft coupling and tighten.

5-3.2 PROPELLER SHAFT PACKING GLAND

The Propeller Shaft Packing Gland Nut has been left loose at the factory so that water could thoroughly soak the packing at the time of launching. The Packing Nut was tightened by your dealer during launching to eliminate any excessive dripping and the Lock Nut tightened. When the engine is running and in gear there should be some drops of water coming out of the gland or else the packing nut is too tight and will burn up. If the packing needs to be replaced, be sure you get SQUARE CUT WAX IMPREGNATED FLAX PACKING and that it is NOT WOUND AROUND THE SHAFT but cut to form three single rings which are "stacked" on the shaft so that the cuts are staggered.

5-3.3 FUEL TANKS AND ELECTRIC GAUGE

Our steel fuel tanks are mounted in their supports with their fill caps and vents on deck. All fuel tanks bear an attached label which states the following:

1. Manufacturer's name or trademark.
2. Date of manufacture - month and year.
3. Capacity in gallons.
4. Material of construction and thickness.
5. Fuel for which tank is approved and manufactured.
6. Maximum hydrostatic test pressure.

Each fuel tank has one FUEL CUT-OFF VALVE, located directly on the fuel tank. When the valve handle is at RIGHT ANGLES it is CLOSED. When not operating the engine this VALVE SHOULD REMAIN CLOSED.

If you have DUAL FUEL TANKS, follow the instructions below, which are the same as those on a metal plate mounted near your Master Control Panel.

DUAL FUEL TANK CONTROL PROCEDURE

1. Use main fuel tank first, before auxiliary tank, by opening lever valve marked "MAIN" and CLOSING lever valve marked "AUXILIARY".

2. Diesel fuel return line connects to the main tank only so, when using the auxiliary tank, fuel return line empties into main tank, providing a small emergency fuel supply after auxiliary tank is empty.

3. When switching from main to auxiliary tank while underway, open auxiliary lever valve for three minutes before closing main tank lever valve.

4. When a diesel engine is allowed to run out of fuel air gets into the lines and injectors, which makes it impossible to restart without bleeding. To restart, switch from empty tank to full tank and bleed pump and injectors in accordance with the manufacturer's instructions. Then restart the engine. If it runs rough after a few minutes stop engine and bleed again.

5. CLOSE LEVER VALVES ON BOTH TANKS WHEN LEAVING YOUR BOAT.

The Electric Fuel Tank Gauge has been adjusted to read EMPTY with THREE gallons of fuel in the tank. This has been done by bending the float arm on the sensor so that the float sits on top of the fuel when the electric fuel gauge is at the empty mark. You should never let a tank get this low for the obvious safety reasons. Also, a partially filled gas tank can result in water condensation, which is a major cause of sticky valves in a gasoline engine.

5-3.4 STARTING THE ENGINE

When STARTING A GASOLINE INBOARD ENGINE, double check the specific engine manual, then:

1. Index the Master Power Switch to the strongest or starting BATTERY.

2. Run the BLOWER for five minutes prior to starting the engine.

3. OPEN THE ENGINE WATER INTAKE VALVE.

4. Check oil and fuel levels.

5. SHIFT LEVER IN NEUTRAL POSTION.

5-3.4 STARTING THE ENGINE (continued)

6. THROTTLE advance about ¼ and CHOKE OUT.

7. Turn on ignition switch and turn starter switch on.
   Hold Sensor Horn switch (DON'T HAVE) down while starting engine. This Horn is connected to the oil pressure Sensor & Water Temp. Sensor in place of gauges.

When engine starts:

8. Gradually PUSH IN CHOKE and ADJUST THROTTLE TO IDLE.

9. Check OIL PRESSURE by Listening for Horn Device. IF Pressure is low, ~~Horn will sound indicating low~~ oil pressure or excessive water temperature. Stop Engine and check Oil Level, Water Intake Valve & Water Pump. (Activates Horn. Electric Fuel Pump won't work)

10. If water does not begin to flow out of the TRANSOM OUTLET in 2 to 3 minutes, STOP the engine and check WATER INTAKE VALVE.

11. TURN OFF BLOWER.

The above procedure should be followed when STARTING A DIESEL ENGINE - except that you won't have the BLOWER and CHOKE to contend with, but may have a "cold weather starting" technique explained in the specific engine manual.

5-3.5 RUNNING THE ENGINE

When shifting into forward or reverse run the engine at idle. If you are equipped with the optional MARTEC FOLDING PROP, (← NO) please follow these instructions:

Boat Stopped:	Engage at Idling RPM'S ONLY. Damage could result if engaged at much over 800 RPM.
Shifting Forward:	BOAT MOVING FORWARD: Engage at RPM corresponding to boat's forward speed. If the blades still remain folded, or if only one flips out and vibrates, try shifting into reverse and then shift DIRECTLY INTO FORWARD BUT NOT OVER 800 RPM.
Shifting Forward:	BOAT MOVING AFT: Engage at IDLE and gradually increase throttle to stop the boat or move forward. Since the boat is moving aft the water pressure will easily open out the blades.
Shifting Into Reverse:	Regardless of the boat's movement the blades will open at idle and/ or the increased throttle used to slow headway.

TO INSURE THAT THE BLADES REMAIN OPEN WHEN SHIFTING, LOWER THE RPM TO IDLE AND SHIFT DIRECTLY THROUGH NEUTRAL TO THE DESIRED GEAR.

You will find your best cruising speed between half and three-quarters throttle. In smooth water, higher speeds can be obtained with higher RPM's but fuel consumption will increase accordingly.

5-3.6 SECURING THE ENGINE

1. Reduce RPM to IDLE and shift into NEUTRAL and turn OFF the ignition switch.

2. CLOSE the fuel shut-off valves and water intake valve.

3. To reduce the drag of a propeller while sailing, the standard, two blade solid prop should have its blades vertical while the folding prop will have its blades horizontal. You should mark and align the propeller shaft for its proper sailing position and then shift into forward to lock.

4. On a diesel engine with a hydraulic shift an optional shaft lock should be installed to keep the shaft from rotating. The engine and shaft must be stopped before engaging the propeller lock. Any additional information should be obtained from the manufacturer of the stop.

5-3.7 WINTERIZATION

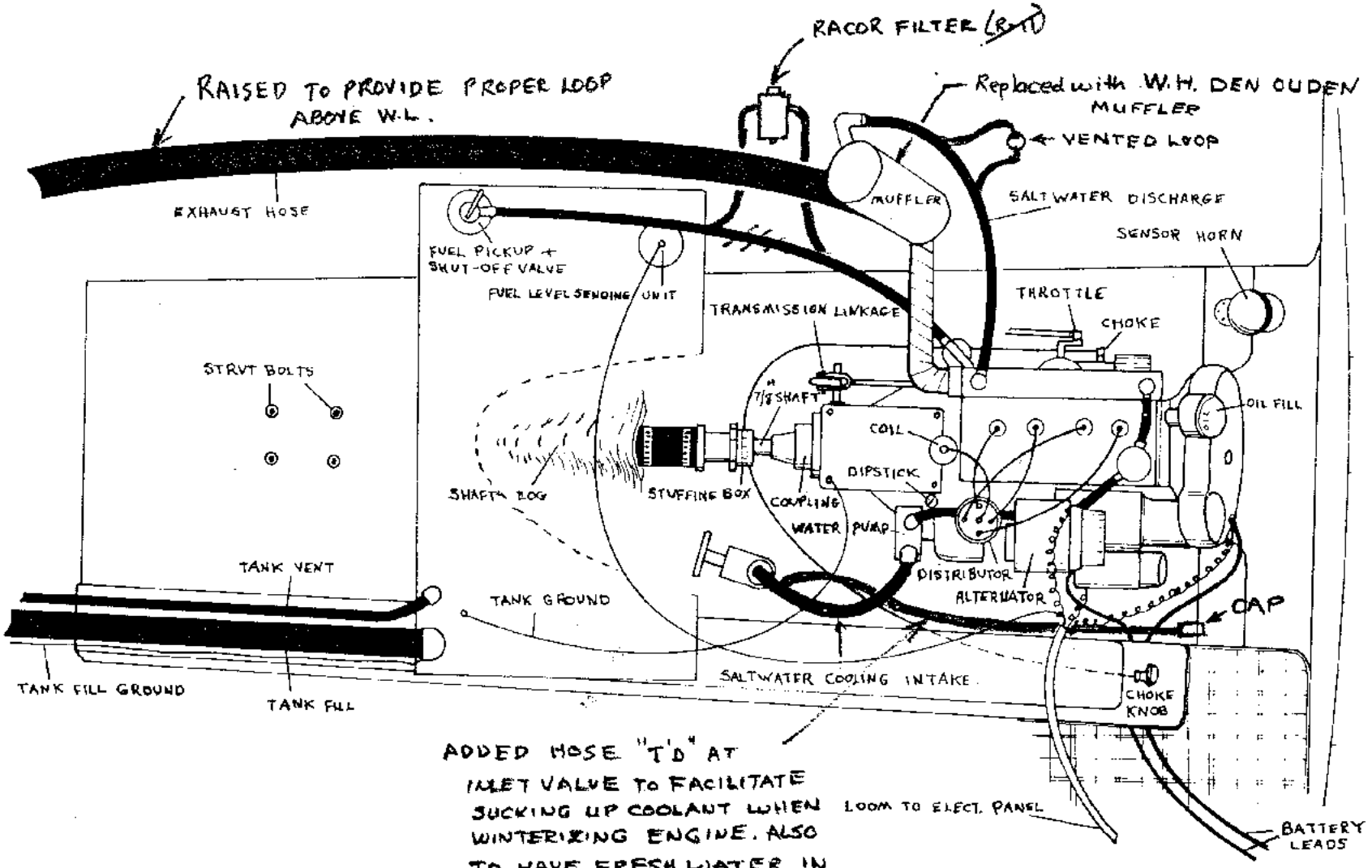
In all boats with inboard engines that are shipped to areas that have below freezing temperatures, the cooling system has been winterized by utilizing an approved anti-freeze. There have been some cases of the water pump impellers being damaged by certain coolants so we recommend the following brands:

Dowguard	Perma-Sta	Smith Blue Co.
Hubbard Hall	Permaguard	Telar
Peak	Zerex	Pryo-Permanent

Also, remember that the water tanks, head, and water lines must be drained of water if below freezing temperatures are anticipated.

5-3.8 VENTILATION

At the present time major changes in the concepts and requirements for ventilation are being formulated. In order to meet existing safety standards as established by the Motorboat Act of 1940, two 3" ventilator ducts with cowls and an exhaust blower have been fitted "for the purpose of properly and efficiently ventilating the bilges of every engine and fuel tank compartment".



ADDED HOSE "T'D" AT INLET VALVE TO FACILITATE SUCKING UP COOLANT WHEN WINTERIZING ENGINE. ALSO TO HAVE FRESH WATER IN BLOCK DURING LONG PERIODS OF NON USE

N-30 ATOMIC-4 INSTALLATION	
CAPITAL YACHTS INC. 22814 PRESIDENT AVENUE HARBOR CITY, CALIF. 90710 (213) 830-1311	DWG. NO. 5-4
	DATE 4-74

6-0 PLUMBING SYSTEMS

We have attempted to keep your plumbing system as simple as possible, especially where thru-hull fittings are concerned. Wherever possible water discharge is above the waterline and where two items can use a common below waterline thru-hull this is accomplished. What follows then is a general description of the plumbing system, followed by a detailed Plumbing Diagram of your boat. You should become quite familiar with this system and constantly check it over to keep fresh water in your tanks and sea water ouside of your hull.

In areas where below freezing temperatures are anticipated, the ENTIRE PLUMBING SYSTEM MUST BE DRAINED. It is extremely important to circulate a quart of a "permanent type" anti-freeze through the system until it starts to run out the thru-hull opening. The thru-hull is now closed, the intake hose reattached and your marine toilet has been "winterized" until a recommissioning. The addition of anti-freeze would be a good practice with other accessories where water may sit or collect during a freeze.

6-1 THRU-HULLS AND THRU-HULL VALVES

All below the waterline thru-hull fittings are equipped with gate valves. These valves turn clockwise to close and counter clockwise to open. When leaving your boat for extended periods of time, safe practice dictates closing all of the valves EXCEPT those for the cockpit scuppers. Periodically open and close these valves to make sure they are working properly. At this time also check all valves for seepage or leaks, tighten any hose clamps that might be getting loose and replace any defective hoses. It is a good idea to open any gate valve all the way and then close the valve a quarter turn. In this manner, anyone can immediately tell if a valve is open or not. Open valves are sometimes broken by people trying to pry them further open, thinking they are closed.

We cannot over emphasize the importance of these fittings, as fiberglass hulls with heavy keels don't float too well when filled with sea water.

6-2 FRESH WATER TANKS

A standard, fresh water tank is located in the bow, of your boat. Care must be taken so that the air vent hole in the filler cap or the vent tube (whichever is fitted) is not plugged or it will be impossible to pump water from this tank.

6-2 FRESH WATER TANKS (continued)

When the optional additional fresh water tank is installed it will have the same type fill-cap as the standard tank and with its own vent. Where the discharge lines for the two tanks come together there will be a "T" with a labeled lever type cut-off valve for each tank. Normally the secondary tank would be kept empty except when fitted for periods of extended living aboard. In this case, use the secondary tank FIRST, and then switch to the standard tank. Be sure to keep only the valve controlling the tank you are using OPEN and the other closed.

6-3 GALLEY

6-3.1 FRESH WATER HAND PUMP AND SINK

This high-out-put, lever-type pump has a ball check valve to hold the vacuum on the return stroke. If the pump fails to operate after three or four strokes, first check the water tank and the air vent hole in the filler cap. Is the tank FULL and the vent CLEAR? If difficulty is still experienced, disconnect the intake hose at the pump and blow through to the tank to clear any possible blockage. Also check the hose as it could be kinked or have some heavy object squashing it closed. If the hose is clear and the pump still does not deliver water, disassemble the pump and look for particles blocking the internal check valve.

The stainless steel sink drains to a thru-hull directly below with its gate valve. In hard sailing conditions, when the boat is well heeled over and the sink is on Lee Side, keep this valve closed or the sink may fill and water could be splashed into the interior.

6-3.2 SALT WATER HAND PUMP

This optional pump operates the same way as the fresh water pump, but there are two schools of thought as to where the intake should be located. A serious racing skipper wants fewer holes in the bottom so he'll tie it into the sink drain while the more practical cruising man will have it on its own thru-hull. Since it's your option, you'll know where it is. DON'T tie into the engine cooling system and cause air to come into the engine overheating it.

6-3.3 ICE BOX

Your icebox is insulated with a one to three inch, foamed-in-place, layer of polyurethane foam and should retain low temperatures over extended periods of time. Since the ice box drains into the bilge, it is advisable to check the bilge before and after all outings.

In order to get the ice box as large as possible, the lower portion, and the drain are below the waterline. Thus it is not possible to drain to a thru hull. Please remember that when a 25 pound block of ice melts you end up with about three gallons of water in the bilge!

6-4 HEAD

6-4.1 HEAD SINK

The situation here is the same as the GALLEY SINK (6-3.1), except that both the lever valve and the Marine Toilet intake valve must be open for drainage if your sink drain is tied into the toilet intake.

6-4.2 MARINE TOILET

Please be sure to read the "HEAD OPERATING INSTRUCTIONS" mounted on the bulkhead. For your convenience we will repeat these instructions here:

HEAD OPERATING INSTRUCTIONS (Obsolete) Disregard.

Before Using

Make sure both thru-hull valves are open and that the lever valve below the sink is closed, if your boat uses the head sink drain as the water intake for the toilet. Raise lever forward of pump slowly to partly fill and wet inside of bowl. No 2001

After Using

Raise lever and pump until bowl is cleaned. Continue with at least 15 more full strokes to flush discharge anti-syphon loop. Depress lever and pump slowly until bowl is empty. Turn lever valve under sink to open position so sink can drain.

IMPORTANT

When not in use, lever on head forward of pump handle must be left in depressed position to

6-4.2 MARINE TOILET (continued)

prevent flooding of boat. When leaving boat for an extended period it is advisable to CLOSE both thru-hull valves. Do not put anything that hasn't been eaten or excessive toilet paper in the bowl as the valves can be easily plugged.

On some Newport boats, the smaller valve is the water INTAKE and head sink drain, while the larger serves for discharge. The lever valve installed in the head sink drain hose must be closed when operating the toilet to assure an adequate water supply for flushing. Thus, to drain the head sink, this valve, and the INTAKE gate valve must be open.

It is possible to leave the two gate valves open while sailing, provided the internal "Joker" rubber check valve is not held open by refuse, and not have any water siphon back into the bowl. In extremely heavy sailing conditions it would be prudent to keep these two valves closed.

Periodically add a small amount of liquid detergent and pump it through the system to lubricate the internal valve mechanism.

6-4.3 HOLDING TANK TOILET (Handihead)

If you have installed this optional Holding Tank Marine Toilet, please follow these instructions as presented by the manufacturer:

OPERATING INSTRUCTIONS (Disregard)

1. Pour 1 gallon fresh water into toilet thru bowl with trap open and lever on the right side depressed. Close trap and pour ½ gallon of water into bowl. The bowl will then be about 3/4 full of fresh water. To this water add one package of Monochem T-5. Depress the trap actuating lever and empty the bowl. Flush the toilet several times by actuating the plastic knob on the left side of the unit with an up and down motion. If the flushing action is weak or spatters, add a little more water. Your toilet is now ready for use.

2. The bowl trap is operated by the lever on the right side of the unit. To open, press down on lever release and it will close. Most people prefer to take advantage of this

built in home-like feature by stroking the pump a few times before using. However, leave the bowl dry while under way.

3. When the fluid level is within ½ inch of the bottom of the bowl opening, the unit is full and should be emptied.

LEVEL INDICATOR: When the liquid level reaches the bottom of the rubber flapper in an open position, the toilet is 3/4 full.

We offer one word of caution: Watch out for the blue dye--Don't just "Release the lever", you must let the lever down slowly so the flapper valve will close gently or you might get sprayed by the blue dye.

Any additional information should be obtained from the manufacturer: Monogram Industries, Inc. 6357 Arizona Circle, Los Angeles, Ca. 90045. Phone 213/776-6720.

6-4.4 HOLDING TANK TOILET (Kracor)

If you have installed the Kracor holding tank system, refer to the plumbing diagram 6-7 and to the manufacturer's instructions in the back pocket of the manual.

6-4.5 DISCHARGE INSTRUCTIONS

There are two basic methods of discharge for the holding tank sanitation system. These methods are:

DOCKSIDE DISCHARGE METHOD

a. Start dockside pump.
b. When empty, rinse the toilet with fresh water thru the opening in the bowl.
c. Shut off rinse water.
d. When unit empty of rinse water, turn off dockside pump.
e. Recharge with fresh water.

OVERBOARD DISCHARGE METHOD (UTILIZING HAND-O-PUMP)

a. Open seacock.
b. Empty toilet by operating Hand-O-Pump.
c. When empty, rinse the toilet thru the opening in the bowl and fill the toilet with fresh water.
d. Empty the toilet by operating Hand-O-Pump.
e. Close thru-hull seacock.
f. Recharge with fresh water.

IMPORTANT CLEANING PROCEDURE: Where facilities are available, it is best to fill the head with water well into the bowl, and add half cup of cleaner. Flush several times to automatically clean all internal parts. This solution may remain 30 minutes for effective cleaning.

CAUTION: When discharging unit, entire contents as well as rinse water must be emptied at one time. Partial discharge of head contents will cause clogging in discharge line.

6-5 BILGE PUMPS

Every boat should be equipped with at least one manual bilge pump, if for no other reason than to get rid of the melted ice water. If you have this optional pump it is normally mounted in the port cockpit seat locker with its discharge out the transom.

The pump cover on the side of the cockpit is opened for insertion of the pump handle. If offshore cruising and/or racing is planned, then a pump must be mounted that will meet the current requirements of the North American Yacht Racing Union's standards for offshore racing events. This pump is mounted "to be operable with all cockpit seats and hatches and all cabin hatches and companionways closed." The inference here is that the pump must be operable from the cockpit and this makes sense. With a boat load of water, and more expected at any moment, you don't want to be opening hatches or trying to get below to operate a bilge pump! Naturally the latter method is a more expensive installation, but really the only way to go, so this is how it would be mounted at the factory.

The factory installed optional electric bilge pump is connected to a switch on your Accessory Control Panel, which in turn is connected to its own ~~Float Switch~~. In order to have your Electric Bilge Pump operate automatically, the Master Switch and the Accessory "Bilge Pump" Switch must both be on and water in the bilge just be high enough to raise the float more than two inches. removed 2001

As with the manual bilge pump, it also discharges out the transom. This is probably the most important safety device you could have on board, for as long as the battery is charged excess bilge water will automatically be pumped overboard.

6-5 BILGE PUMPS (continued)

All factory installed bilge pumps have the pick-up hose placed in the bilge. There is an inspection plate above this pick-up for access, should it become clogged and need clearing. Also note that the pick-up line is reinforced hose to prevent collapsing caused by the suction action of the pump.

6-6 PRESSURE WATER SYSTEM WITH SHOWER

When filling the system for the first time or refilling an empty system, you will have to bleed the air out of all water lines. This is accomplished in the following manner:

1. Fill water tanks and turn on ship's electrical system.

2. Turn on the pressure pump by activating the switch on the Accessory Control Panel.

3. Starting at the galley sink, turn on the water faucet. Expect nothing but air for the first few minutes as the water tank must be filled before water will flow from the faucet.

4. As the water tank fills water will start to pop and spurt from the faucet. Turn the faucet off.

5. Now turn the faucet on and off slowly, with one hand under the spout. This will keep water from splashing about while the last bit of air is being removed from the water line.

6. When a solid stream of water is flowing from the spout turn the faucet off.

7. Now repeat this same procedure for sink in the head, and the shower.

8. The system is now completely primed so top off the water tanks to replace the water that is now in the system.

The pressure pump is a 12 volt D.C. unit that will start automatically when the pressure drops to 18 psi and will continue running until the pressure has been brought up to 25 psi. If the pump starts running wild:

1. Out of water ---------Fill system or switch tanks.
2. Leak in lines --------Check plumbing.
3. Air Lock ------------Bleed system.

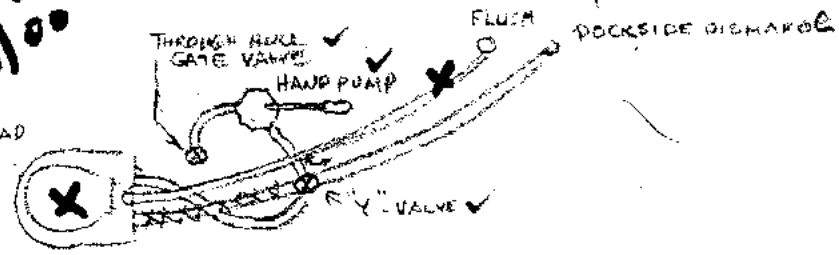
6-6 PRESSURE WATER SYSTEM WITH SHOWER (continued)

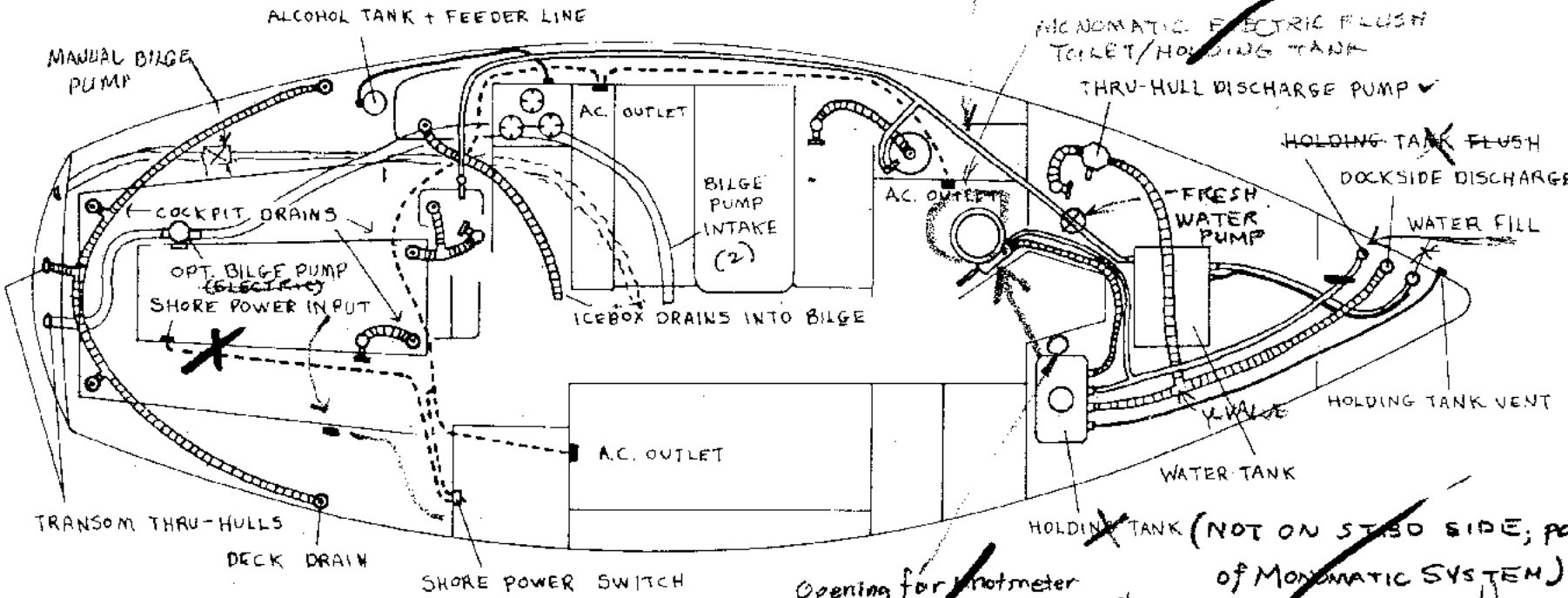
Note that the shower drains into the bilge and the automatic bilge pump will operate when the Master Switch and the accessory bilge pump switch are on. This will serve as the shower sump pump unless there is a special switch mounted adjacent to the shower for this purpose.

Head Replaced 3/00

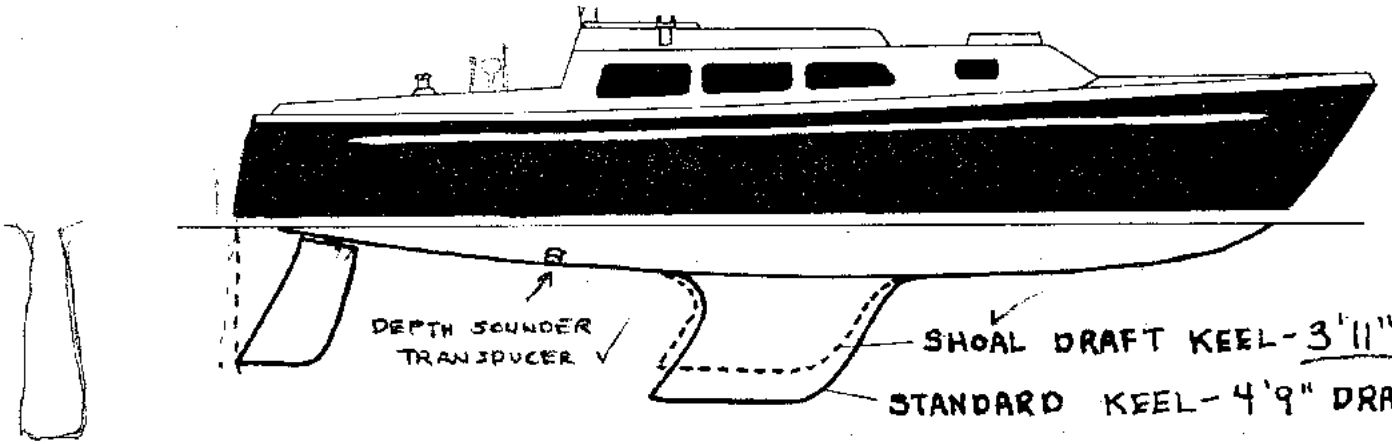
Removed 3/00

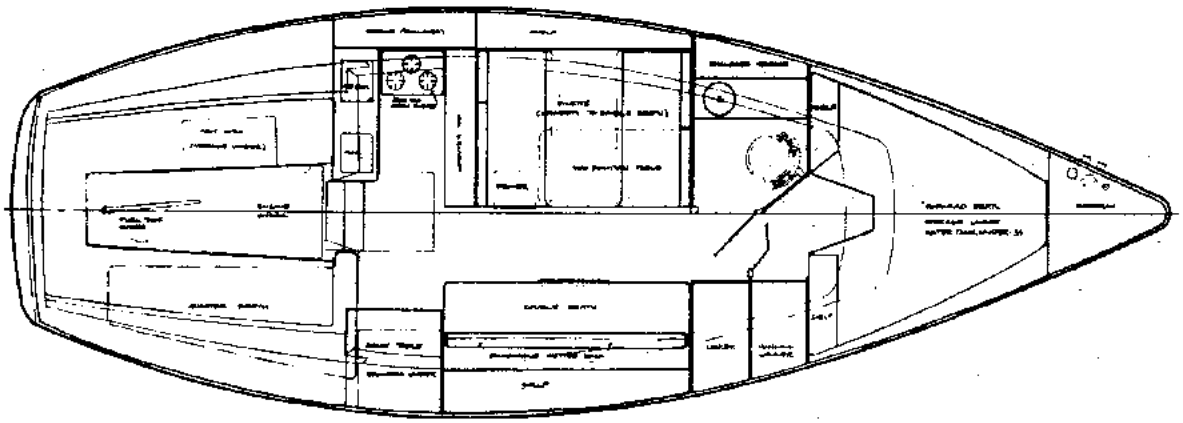
MONOMATIC HEAD





N-30 PLUMBING DIAGRAM	
CAPITAL YACHTS, INC. 33034 PRESIDENT AVENUE HARBOR CITY, CALIF. 90710 (310) 326-1311	DWG. NO. 6-7
	DATE 4-74





N-30 INT. LAYOUT + KEEL PROFILE	
CAPITAL YACHTS, INC 8851 PRESIDENT AVENUE HARBOR CITY, CALIF. 90710 (213) 530-1311	DWG. NO. 7-1
	DATE 2-74

7-0 INTERIOR APPOINTMENTS

You can treat everything below decks just like a home interior. Your interior teak should be oiled occasionally with a quality teak oil such as "Watco" to maintain its "yacht like" appearance. For a more permanent finish, the teak should be varnished with a semi-gloss or rubbed effect varnish. Keep the boat well ventilated, especially the bilges and lockers, and watch out for dampness. Leaving a couple of 100 watt light bulbs burning below will usually take care of any sweating and reduce that "clammy" feeling, especially during the winter months or during times of damp fog. It's a good idea to leave the bunk cushions on their sides and open up the lockers if you plan to be gone for awhile. It might not look very neat but it increases ventilation and allows everything to air out. Any time things get wet with salt water, rinse off with fresh water as soon as possible and let dry thoroughly. The salt crystals retain moisture and the material will always remain damp until cleaned with fresh water. Air and sunlight are wonderful cleaners--bring the vacuum cleaner aboard and get the carpet, cushions, blankets, sleeping bags, etc., up on deck in the sunshine while the vacuum picks up below. Spring cleaning should take place periodically, not annually, to keep the interior clean and bright.

Most of the equipment below deck is covered in other sections of the manual, with the exception of stoves, refrigeration, and any other optional accessories that you have installed. We have included the Interior Arrangement drawings for your boat in Section 7-1 followed by any related information.

7-2 ALCOHOL STOVE

An alcohol stove is the most common installation on boats because it burns clean, has minimal fumes, and an alcohol flame can be put out with water. The tag on your stove indicates that it has been factory tested prior to shipping in accordance with the Fire Protection Standards set down in the Boating Industry of America Manual. This type of stove is as safe as a gas stove but be sure to follow the instructions on the plaque mounted near the stove. For your convenience we will repeat those instructions here.

1. Close container valve immediately in any emergency.

2. Keep container valve closed whenever appliance is not in use and when leaving boat unattended.

3. Be certain that all appliance valves are closed before opening container valve.

4. To light burners: with fuel container valve closed and pressure at 15 lbs., make certain appliance valves are closed. Open container valve. Fill priming cup 3/4 full by opening one burner valve. Shut off burner. Light the priming alcohol and wait until consumed. Open the burner valve and light the burner. If burner will not burn like a gas burner repeat priming.

5. Do not leave burner with low flame unattended.

6. Test system for leakage at least twice a month and after any emergency in accordance with the following procedure:

   With appliance valves closed and with container valve open, note pressure reading on the gauge. Close container valve. The pressure should remain constant for at least 10 minutes. If pressure drops locate leakage by application of liquid detergent or soapy water solution at all connections. Repeat test for each container system. NEVER USE FLAME TO CHECK FOR LEAKS!

7. Burning alcohol is readily extinguished by water.

About 90% of all galley fires from alcohol stoves come from priming the stove. Fortunately alcohol

7-2 ALCOHOL STOVE (continued)

is the only fuel whose flame can be put out with water! The trouble is that if the stove is over primed - too much fuel in the pan at the beginning or under primed - turning on the stove before it is fully primed - fires can result.

If you will drill yourself, and others, right from the beginning as to the proper sequence of steps and timing involved, most of the potential troubles will be eliminated. The remaining problems come about from improper maintenance of the stove. Regular checks, following the manufacturer's instructions, should take care of this.

8-0 ADDITIONAL MAINTENANCE TIPS

Maintenance of today's fiberglass sailboats is extremely simple when compared with the upkeep necessary to keep boats of other materials in "Shipshape and Bristol Fashion". Nevertheless, certain basic maintenance practices must be followed if the bright, sparkling, original appearance of your boat at delivery is to be retained throughout the years. Much of the maintenance information has been found in the foregoing sections where it related to specific items. In this section we will try to pick up any "loose ends" and try to answer any remaining questions on keeping your boat in a yacht-like condition. You can also keep up on new ideas with the boating periodicals. "Yachting's" annual Spring Maintenance issue is a good one.

8-1 RUDDERS, KEEL, AND BOTTOM PAINTS

When your boat is not in use the tiller or wheel should be snugly secured to prevent the rudder from moving. This constant movement of the rudder shaft in the shaft bearings and packing box will result in unnecessary wear and, consequently in excessive play and "slop". Also, a tiller banging around in the cockpit from wave and water action on the rudder could cause considerable damage. If the rudder action is stiff, a light grease such as "Lubriplate" should be used. Each time the assembly is lubricated also check for play at the upper and lower ends. "Nylotron" shims easily remedy excessive play.

The keel is one area where drag producing slime and bottom growth can accumulate if proper care is not exercised. During regular haul-outs the keel should be thoroughly sanded before painting.

8-1 RUDDERS, KEEL, AND BOTTOM PAINTS (continued)

A new bottom must be well sanded to remove all gloss from the gelcoat. After sanding, the entire bottom must be washed with whatever is recommended by the paint manufacturer, BUT NOT ACETONE, as any residue of acetone may react with the bottom paint and cause severe blistering.

A used bottom must be well cleaned and sanded to remove growth, let dry and if no repairs are needed paint bottom with roller or brush using same brand of paint as was previously used for best results.
While two coats are normally recommended for a good bottom job, it is a good idea to run a third coat for a distance of about 8" to 10" below the boot top. This area collects all the harbor scum and tends to get brushed harder and more often than the rest of the bottom so it can stand the extra coat.

8-2 SPARS, RIGGING AND HARDWARE

The surface of your aluminum spars is protected from corrosion by a natural film of aluminum oxide. Unfortunately in time dirt, salt, and chemical contaminants will break through this natural protective film, causing it to appear grimy and unsightly. To prevent adherence of these materials, coat the surface of your spars with a good automotive paste wax or a commercial protective coating. Brolite Z-Spar Mono-Poxy is often used on painted spars. It consists of a prime coat, two undercoats, and a gloss coat. This product is compatible with other paints if touch up is required. A good hosing with fresh water helps, and always keep the halyards tied away from the mast. Besides protecting the aluminum oxide or painted surface it does away with the din created by halyards slapping against the mast, which makes any anchorage sound like a tin can factory.

Periodically take a trip aloft to check the entire rig. Look for signs of chafe and check all nuts, bolts, screws, cotter keys, blocks, and masthead sheaves. Make sure the spreader tips are well covered with tape or leather to protect the sails from chafe and tearing. Take along a rag and bucket of fresh water to clean the rigging and mast on your way up. A clean rig means clean sails. On your way down, re-apply whatever protective coating you have decided to use on the mast and your work aloft is done until the next time.

8-2 SPARS, RIGGING AND HARDWARE (continued)

The halyards, sheets, and guys, along with all rope and wire splices, should be carefully checked before and after each sail for wear. Wire rigging must be examined for broken strands and signs of frayed sections which rest on sheaves. When sails are lowered, be especially careful not to pull down hard on the wire halyard. What happens is that the Nicropress thimble, which forms the loop for the dacron halyard tail, is jammed into the masthead sheaves and sheave spacer plates, causing dangerous chafe on the wire and dacron tail. The lines supplied with your boat are Dacron, have little stretch, and wear very well if not abused. Sheets and vangs often lead where they will rub together or chafe on lifelines. By adjusting leads or by applying inexpensive chafing gear expensive damage may be prevented. When not in use, running rigging should be tied away from the mast or neatly coiled and hung in regular locations where it can be readily found. Frayed ends may be respliced following the instructions available from Samson Cordage Works, 470 Atlantic Ave., Boston, Mass. 02210.

All blocks, sheaves, turnbuckles and winches used in conjunction with running rigging should be lubricated periodically with a light grease such as "Lubriplate" or sprayed with a protective film such as "WD-40".

Why is my stainless steel rusting? Basically it is a galvanic action and you can prevent it with a cleaning rag! If you keep the stainless hardware on your boat free of marine growth and polished it will last longer and look better. Saltwater sailors must hose off with fresh water after a hard, wet sail, and a rub down with a chamois helps. For a complete explanation on stainless steel in non-technical language, consult most any welding shop.

8-2.1 MAST THRU THE DECK SEAL

On all boats whose masts are stepped on a keel and go through the deck, the following procedure was used for setting the mast collar and sealing the mast at the deck. If you un-step the mast, or for any reason this seal is broken, we recommend that you follow the same procedure using the same material, or materials of equal quality. Make sure you wait long enough for the sealants to properly cure before you start water testing with a high pressure hose!

8-2.1 MAST THRU THE DECK SEAL (continued)

1. After a thorough cleaning of the mast, mast collar, and deck, use a generous amount of either PRC-7000, Silastic 732, or Dupont Imron sealant between the mast collar and deck. Then screw the mast collar into position, using #14 x 1" ss flat head sheet metal screws.

2. After the mast is stepped, wedge or pull it into a position so that an equal space is left all the way around between the mast collar and the mast.

3. Inside the boat, close off the bottom of the gap with masking tape. Pour a generous amount of sealant all the way around between the mast and the mast collar to fill it to the top.

4. Using Minnesota Mining's #471 2" wide plastic vinyl tape, tape a boot over the mast collar to the mast at least three layers thick. After the sealant cures, remove the masking tape and fit the two piece interior mast trim using #14 x 1" SS oval head wood screws.

5. Check for leaks by using a high pressure hose to spray water around the mast collar.

8-3 FIBERGLASS SURFACES

The glossy outer surface of your laminated fiberglass boat is known as "gelcoat", a polyester resin into which coloring pigments and weathering retardants have been incorporated. It should be hosed with fresh water after every outing and routinely washed with a good detergent. Use a sponge on the smooth surfaces, followed by more fresh water to avoid streaking the topsides, a stiff deck brush will be helpful on the non-skid surfaces. Do not use abrasive cleaners as they will rapidly dull the gelcoat surface.

At <u>least</u> once a year the smooth gelcoat surfaces should be waxed and polished with a good automatic wax or a boat wax <u>like Meguiar's Mirror Glaze</u>, that is expecially formulated for fiberglass surfaces. A power buffer will make work on the large areas, like the hull, easier, but care must be taken not to cut through the gelcoat surface, particularly at corners and edges. Color in gelcoat, as in any material exposed to direct sunlight, tends to fade, dull, or chalk, and will

8-3 FIBERGLASS SURFACES (continued)

require heavier buffing to bring back the original luster. For power cleaning use a light abrasive cleaner, such as Mirro Glaze #1, while a heavier rubbing compound such as Dupont #7 may be used when polishing by hand. After buffing, wax and polish all surfaces EXCEPT THE NON-SKID AREAS.

Regardless of the amount of care lavished on your boat occasional scratches, cracks, small gouges, along with badly crushed sections or even a large hole, are bound to appear. It is best to discuss the proper course of action with your local dealer or professional who is skilled in the repair of fiberglass sailboats. Two excellent books are presently available that will give you the background information necessary to be knowledgeable in this area. "How to Repair Fiberglass Boats" is published by Ferro Corp., One Erieview Plaza, Cleveland, Ohio 44114 for $3.00. Another more definitive book "Fiberglass Boats: Construction and Maintenance" by Boughton Cobb, Jr. is available through Yachting Publishing Corp., 50 West 44th St. New York, N.Y. 10036 at $3.00. Minor gelcoat touch-up and patching is not difficult. It takes a little study, practice, and, if possible, help from a knowledgeable person.

8-4 SAILS

Sails should be folded for storage whenever possible. This means always on small,keel boats, and almost always on larger keel boats. If you leave the mainsail on the boom always remove the battens and then flake it down carefully, with one person at each end of the sail so that the flakes are smooth and wrinkle free, before putting on the sail cover. Proper folding will help keep wrinkles out of sails and will prolong the life of the chemical fillers in the cloth which hold stretch to a minimum. Windows should always lie entirely within one fold to eliminate creases.

In a long race it is sometimes difficult to fold large headsails, so just stuff them loosely into their sail bags. After the race one of the first jobs is to wash off any salt water, dry, and then fold these headsails by flaking them down in alternate folds, starting with the foot, with increases running parallel to the foot. If you remove the mainsail from the boom, fold the first flake so that the bolt rope is on the outside. The sail can thus be put back on the boom more easily next time you sail.

8-4 SAILS (continued)

Hosing down sails with fresh water to remove salt is a good idea. Also, perhaps once each year, spread the sail on a soft surface, such as a good lawn, and go over it lightly with a very mild detergent and a very soft brush. Both practices comprise good maintenance. Pay attention to your sails and if any tears, rips, or worn spots appear on the corners, slides, or headboard, or stitching begins to chafe or has been caught and pulled to pucker the sail, make a note of the damage and its location. Many small tears and worn spots can be covered with tape until it is convenient to take the sail to a sailmaker for a professional repair job. (non-porous white Johnson's adhesive tape is good). Any rip at the edge of the sail, such as at the leech or foot of a genoa, must be fixed immediately. Tears here can spread quickly through the entire sail. Small holes in spinnakers can be covered with "Ripstop" and sewn until it is convenient to deliver to the sailmaker for a proper repair.

Quite a lot is written about sails in any book on sailing but three FREE publications should be especially valuable to you. "Modern Sail Handling" may be obtained from Ratsey & Lapthorn Inc., East Schofield St., City Island, New York, 10464. The quarterly journal "The Sailmaker" from the Hood Loft, Marblehead, Mass. 01945 is a good way of keeping up-to-date. McKibbin Sails, 1821 Reynolds Ave., Irvine Industrial Complex, Santa Ana, Calif., 92705 has "The Illustrated Sloop" which is a sail chart that will guide you to what sails to hoist for practically any point of sailing or wind velocity. In addition, Schoonamaker Campbell Sailmakers, 6400 Marina Dr., Long Beach, Calif. 90803 has several well published articles on sails and sail handling.

8-5 WOODWORK

The exterior and interior trim is teak, one of the most durable and decorative of all hardwood but it must be maintained to keep it from splitting and discoloring. Teak may be maintained in three ways:

Leaving the teak untreated and allowing it to weather naturally can cause splitting and a poor appearance. Bronze wool or fine sandpaper should be used periodically to clean the surface and a commercially available preparation such as Teak-Brite should be applied to combat the dull gray

8-5 WOODWORK (continued)

appearance of naturally weathered wood and help eliminate splitting.

A second way is to help teak maintain its natural color and life longer by treating regularly with a preparation such as Weldwood's "Wood Life".

-CAUTION-

NEVER use steel wool instead of bronze wool or sandpaper. Small filaments of steel break off and cause rust spots, they are very difficult to remove.

The third alternative for maintaining your exterior teak - varnishing - imparts the last word in a yacht finish but requires the most maintenance. However, for those who wish a "Bristol" condition yacht it is the only way to go. If you decide to varnish be prepared to add at least one additional coat approximately every four months. If the teak has been "oiled" it must be cleaned by scraping and/or heavy sanding with #80 or #100 paper before sealing and varnishing.

While the teak still has its original color and texture, smooth with medium grit sand paper #120, dust the surface carefully and seal with a good sealer such as Brolite S-94 Clear Acrylic Sealer. Make sure you select a dry warm day, and do not seal or varnish much after noon as afternoon dampness will prevent proper drying and cause your varnish job to look discolored and uneven. Allow the sealer to dry at least overnight, then smooth the raised grain with #120 paper, dust carefully, and apply the first coat of a good quality spar varnish. The second and third coats are applied with at least a day's wait in between and sanding with #120 or #180, depending upon the roughness of the grain, will provide a minimum varnish covering for your exterior wood trim. Four or five coats are better, now sanding in between with #180 sandpaper, and several thin coats always result in a far superior finish to a lesser number of thicker coats. A good rub with a chamois after hosing down will keep the gloss and also lengthen varnish life.

9-0 SAILING TIPS

With the large number of books about sailing readily available it may seem strange that we would also want to venture into this area. We would like to recommend those books that deal primarily with the handling of the keel type sailboat you now own. We would also like to recommend that each owner attend the United States Power Squadron Courses given in his community. Don't let the title fool you - there is a lot on sailing and remember that when you are using the engine you BECOME A POWER BOAT! Even the experienced boatman can learn something new, but even more important is the opportunity to teach. Take this opportunity to learn or pass your knowledge on to others. Make a free phone call to 800-243-6000, and the operator will give you the address of the nearest USPS unit. Or write to U.S. Power Squadrons, Box 345, Montvale, New Jersey 07645. This could add a whole new dimension to your enjoyment of the water.

There appears to be no ready reference to the myriad of laws, regulations, requirements, and other pertinent items that affect the owner of a large sailboat. In order to partially fill this gap, or at least make you aware of this potentially useful material, we have included a recommended "Basic Keelboat Sailor's Library", followed by a listing of pamphlets and thoughts for your perusal.

9-1 BASIC KEELBOAT SAILOR'S LIBRARY

If you cannot obtain any of these books locally you may send a mail order to Sailing Book Dept., 38 Commercial Wharf, Boston Mass. 02110. Please add 40¢ for postage and handling per book.

The Adventure of Sail, MacIntyre	$25.00
American Practical Navigator, Bowditch	7.00
Around the World in Wanderer III, Hiscock	6.75
Celestial Navigation for Yachtsmen, Blewitt	4.95
Cruising Under Sail, 2nd Ed., Hiscock	12.75
Deep Sea Sailing, Bruce	10.00
Dutton's Navigation & Piloting 12th Ed., Dutton	15.00
Elvstrom Speaks on Yacht Racing, Elvstrom	8.95
Encyclopedia of Nautical Knowledge, McEwen & Lewis	15.00
Further Offshore, Illingworth	20.00
The Giants of Sail, Beken & Cowes	15.00
Hand, Reef & Steer, Henderson	5.95
Handbook of Knots, Graumont	3.00
Handbook of Knots & Splices, Gibson	4.95
Heavy Weather Sailing, Coles	12.50
History of American Sailing Ships, Chapelle	4.95
The Illustrated History of Ships & Boats, Casson	7.95
An Introduction to Yachting, Herreshoff	15.00
My Lively Lady, Rose	4.95
Navigation the Easy Way, Lane & Montgomery	6.50
The New Cruising Cookbook, Jones & Norton	5.95
The New Yacht Racing Rules, 1969, Bavier	5.95

9-1 BASIC KEELBOAT SAILOR'S LIBRARY (continued)

Ocean Racing & Offshore Yachts, Johnson	$12.50
Piloting, Seamanship & Small Boat Handling, Chapman	11.50
Practical Sailing, Gibbs	3.95
Racing Cruiser, Henderson	12.50
Sailing Illustrated, Royce	4.00
Sailing to Win, Bavier	7.95
A Short Course in Navigation, Gardner	3.95
Simplified Rules of the Road, Will	3.50
Story of American Yachting, Rosenfeld	12.50
A View From the Cockpit, Bavier	12.50
Voyaging Under Sail, Hiscock	10.00
Weather, Water & Boating, Whelpley	4.00
Wind & Sailing Boats, Watts	10.00
A Woman's Guide to Boating & Cooking, Morgan	5.95
Your Boat & The Law, Norris	9.95

9-2 "FEDERAL REQUIREMENTS FOR PLEASURE CRAFT"

CG-290, January 1970, deals mainly with requirements for a motor boat, but when under power a sailboat becomes a "Motor boat". Numbering Requirements, Coast Guard Approved Equipment, Required Lights and Safety Suggestions form the major part of this leaflet.

9-2.1 "COAST GUARD AUXILIARY COURTESY EXAM" AUX-204

January 1971, leaflet covers most of the above, but also explains one of the several services performed by members of the Coast Guard Auxiliary. It contains a directory of the Auxiliary so you may communicate with the Flotilla nearest you.

9-2.2 "BASIC FACTS ABOUT MARINE FIRE EXTINGUISHERS" DNOD-2 is printed by the State of California, but the information will apply to any area in the United States.

9-2.3 "BASIC FACTS ABOUT LIFE PRESERVERS" DNOD-5-70 is the same idea as 9-2.2. You should also check your local state agency about regulations that might be different for your own area. The Department of Navigation and Ocean Development takes care of boaters in California and publishes an excellent pamphlet, "ABC's of California Boating Law" DNOD-3A-7C, along with a series of "Safe Boating Hints" covering selected boating areas of California.

9-3 NAVIGATION AND PILOTING

9-3.1 "RULES OF THE ROAD", CG-169 contains the International and Inland Rules and Regulations for the primary purpose of preventing collisions between vessels. To insure the safety of your boat and passengers it is imperative that ALL PERSONS operating your boat be familiar with them and conform strictly to them at all times.

9-3 NAVIGATION AND PILOTING (continued)

9-3.2 In order to obtain accurate marine information the United States Coast and Geodetic Survey has been supplying nautical charts and books on U.S. coastal waters since 1839. Three major areas are covered: Atlantic and Gulf Coast; Pacific Coast and Hawaii; and Hawaii. A free catalog for each may be obtained from Distribution Division (c44), Coast and Geodetic Survey, 4200 Connecticut Ave. N. W., Washington, D. C. 20235.

9-3.3 "MARINE AIDS TO NAVIGATION" CG-193 is a publication dealing with the basic principles underlying the marking of coasts and waterways of the U.S. with lights, day beacons, fog signals, radio beacons, loran and buoys.

9-4 "COAST GUARD ASSISTANCE" is a form that must be obtained from your local Coast Guard District Office and contains important information explaining "How you can help us to help you". The material contained on this form could really get you out of a serious situation and its importance to you cannot be overlooked.

9-4.1 "EMERGENCY REPAIRS AFLOAT", CG-151, deals mainly with engine trouble shooting, but also contains some good tips on emergency repairs and staying afloat, along with basic tools and parts to have onboard.

9-5 UNDERWAY - AT LAST!!

WELL, ALMOST!! There are still a few things to do before we are actually sailing, and these will be covered immediately.

9-5.1 PREPARATION AND CASTING OFF

To minimize confusion after leaving the slip, and to avoid leaving the sails or something of equal importance ashore, it is a good idea to have ALL the sailing gear rigged before casting off. Unless you will be under power for some time, sails should be bent on and ready for hoisting, or at least be stowed in their order of need.

The only items on deck should be those that are absolutely necessary for sailing. Anything else should be properly stowed below or, in the case of a dinghy, well secured on deck or in its davits or towed astern. Loose deck gear such as winch handles, spinnaker poles, flashlights, spare line, etc., MUST be secured to keep them from going overboard EVEN when under power. The wake of some power boats is enough to toss even the largest sailboat about and could do considerable damage. Naturally all items stowed below should always be in the same place to simplify the job of locating them when they are needed.

9-5.1 PREPARATION AND CASTING OFF (continued)

If you have an inboard engine, remember to let the BLOWER run for at least 5 minutes prior to starting the engine. During this time check over what we have just been discussing, along with the engine check-list, and if all is in order start up the engine, cast-off, and LET'S GO SAILING!!

P.S. Don't forget to pull in the fenders and dock lines.

9-5.2 BENDING ON AND HOISTING SAILS

Normally the mainsail is left on the boom, so just insert the battens, thin ends first, into their proper pockets, and attach the main halyard. But first look aloft to make sure it is clear. With the mainsheet and downhaul slack, head into the wind and hoist to the BOTTOM of the black band at the mast head. Loosen or cast off the topping lift and adjust the outhaul and downhaul tension for the anticipated wind strength - light winds, light tension - heavy winds, heavier tension.

While still powering head-to-wind, hoist the jib and apply halyard tension in relation to the expected wind strength. There must be at least enough tension so that the luff of the jib is straight without the "scalloped" effect between the jib hanks. As helmsman, position yourself so you will be on the windward side, turn 90° so the wind is abeam, secure the engine, align the prop as recommended in Section 5-36, and let's SAIL!

9-5.3 REACHING AND STEERING

You will probably be able to learn more about sail trim and steering on this point of sailing than any other. It also will be the fastest and probably the most fun! When the wind is at right angles (90°) to the boat, you are BEAM REACHING and the sails should be let out as far as possible so they present the maximum area to the wind. You will also note that when the sails are properly trimmed there should be little pressure on the helm. ?

The trick in getting this proper trim is to balance the pull between the sails and usually the JIB is trimmed first. In order to properly trim the jib, the lead block will normally be set so that the sheet will bisect the clew angle. As the jib is gradually let out it should "break" or luff evenly along the headstay. If the lead is too far forward the jib will break down low; if too far aft it will break up high. It is usually better to set the leads too far back than too far forward, especially on a reach.

9-5.3 REACHING AND STEERING (continued)

Next we want to tape a couple 6" to 8" lengths of light yarn as "Tell Tales" about 6 to 7' up on both sides of the jib and 6 to 8" back from the luff. The jib is now trimmed so that BOTH yarns are flowing aft. If the jib is in too tight (over Trimmed) the windward yarn will stall, and visa versa. This also is a great help in steering, as once the sails are set, if you steer too HIGH the WINDWARD yarn will stall, and visa versa. You will find that by following the advice of these pieces of yarn you will NOT be steering a straight course, but a course that follows the slight shifts and velocity changes of the wind. This is the FASTEST and PROPER course to steer as the sails are always at their proper angle to the wind without having someone constantly trimming sheets.

The mainsail is now eased out until it is backwinded or caused to luff slightly by the jib, and then trimmed in just enough to remove this "bubble" from the luff. At this time the BOOM VANG should be rigged to control the leech tension, thus getting the optimum shape and drive from the main. Keeping weight on the windward side (except in drifting conditions) and aft, will also help reaching performance, while keeping everybody dry and happy!

You will also notice that with a balanced (spade) rudder, the boat reacts very quickly to the slightest movement of the helm. The balanced rudder is somewhat like a high aspect airplane wing and can also "stall out" if moved too quickly or turned too far beyond 30° in either direction. By now it is also apparent that steering with a TILLER is different than with a WHEEL. Wheel steering is common to many boats over 35', as it allows for more power to be applied to the larger rudder. Naturally wheel steering is just like your car! With the TILLER, everything is opposite and there is greater "feel", since the action of the rudder is transferred directly to your hand. By keeping a light touch on the tiller you can easily tell which way the boat wants to go and make the necessary steering corrections. Usually a slight weather helm is preferred. In other words, if you let the tiller, or wheel, loose, the boat will gradually turn into the wind. The best control is found by using steady pressure on the helm and this feeling will become more apparent with the following manuvers. We can't keep on reaching in one direction forever, so we better turn around and try the other tack.

9-5.4 TACKING AND GYBING

If the boat is turned INTO and ACROSS the wind we have tacked. If we turn AWAY FROM THE WIND, we GYBE. Tacking is the safer, especially in strong winds, as there is better control over the mainsail. When gybing, the trick is to trim in the main as fast as possible and let the sheet run out quickly when the main boom swings over to the other side.

9-5.4 TACKING AND GYBING (continued)

Before you tack or gybe, let go the BOOM VANG, unless it is led to the base of the mast, and set it up on the new, lee side. Trim sails for the return course, and then tack and gybe a few more times. The advantage of tacking and gybing from a reach to a reach is you have more time for the turning manuvers and it gives the crew a chance to figure out where to move and who does what without rushing. It also is excellent practice for the helmsman as he can get the feel of the balanced rudder and how much, or little, rudder angle is needed to turn.

9-5.5 BEATING

Probably the most difficult point of sailing is going to windward or BEATING. From a REACH, gradually trim in the sails while coming up to about 45° to the TRUE WIND. This point will be reached when the jib is trimmed in so it ALMOST touches the spreader tip and the main is sheeted in hard. By watching the yarns on the jib a course is steered that will keep BOTH yarns flowing aft all the time.

Now the fine tuning takes place, and it will require many hours of concentration and unlimited patience. A compromise must be reached between pointing and boat speed. The closer you head into the wind the slower you will go, but will "point" closer to the windward mark. As you bear off you pick up speed, but lose distance to windward. This compromise is also affected by wind and sea conditions; you can point highter in smooth water but must fall-off more in a chop. The sails must be trimmed in harder and flatter as the wind increases, and eased out in light spots. The adage that "races are won or lost on the windward leg" will soon become apparent!

Since a boat cannot sail directly into the wind, changing course by 90° through the eye of the wind is tacking. The main will take care of itself, but the jib must be changed each time; which can be a hard job unless the helmsman helps out. A large keel boat has enough weight so that it can "forereach" a few boat lengths while pointed directly into the wind without losing headway. This gives the jib time to swing over to the new leeward side and your crew time to trim it in BEFORE it fills with wind! Nice smooth tacks keep your winch grinders happier and results in a better, more efficient tack. Prior to tacking BE SURE EVERY-BODY IS READY!! The command "stand by to come about", gives ample warning in case somebody or something isn't ready for the actual "helm's a-lee!" Don't forget to be sure and check that the new sheet is led CLOCKWISE around the winch with no more than three turns. Once the sheet has been pulled in as far as possible by hand, throw on a couple more turns, put in the handle and grind in the rest, but WATCH THE SPREADER TIP!

9-5.6 RUNNING

After beating to windward long enough to make everybody tired and hungry, turn "down hill" and RELAX!

This is the easiest point of sailing, as the main is let all the way out until it just rests on the lee spreader and shrouds. By keeping the wind just off the windward corner of the transom the jib will also slightly fill on the lee side, or it can be winged out to windward with a pole. By not sailing directly "dead-downwind" there is less chance of an accidental gybe and steering is easier. Setting up the vang will also keep the main from accidentally gybing if you do happen to sail by the lee momentarily. Of course this is the point of sailing where the spinnaker is used. This is really a racing sail, and we're just out for fun. We will refer you to a local expert for help with this beautiful, yet extremely frustrating, sail.

9-5.7 DOCKING AND SECURING

Since all good things must end, the blower is again turned on and let run for 5 minutes, or the outboard is dropped into its well. After checking the engine it is started and the boat is headed into the wind to lower sails. The jib is dropped directly on deck, un-hanked from the stay, the sheets removed and gently stuffed below to be later folded on the dock. Hook up the topping lift to the main boom and then lower the mainsail. Remove the battens, slack the outhaul and flake down the sail smoothly on the boom and put on the cover.

All halyards should be led away from the mast and secured to the rail. This saves the mast finish and also does away with the annoying clatter of halyards against an aluminum mast when at anchor.

When leaving the boat be sure the master Electrical Switch has been turned off and close all thru-hull valves EXCEPT the cockpit drain, if it is so fitted.

Care should be taken to tie the boat in the slip or the mooring to weather any conditions which might develop prior to using the boat again. Nylon mooring lines are recommended as they are durable, strong, and have sufficient "give" in the event of sharp jolts or rolls of the boat. Bear in mind that boats are often left un-attended longer than anticipated.

9-5.8 INTERNATIONAL OFFSHORE RULE (I.O.R.)

The International Offshore Rule is an international handicap rating. It was designed to standardize handicap sailing throughout the U.S.A. and the world, thus, where ever you race under I.O.R. your rating will remain the same. Other handicap systems change throughout the country depending upon what part of the United States you race in and wnder what particular system your boat was rated under. The Newport Fleet of sailboats are manufactured to meet all I.O.R. specifications as well as the local handicap systems used in your area.

The Newport-20 qualifies under this rule as a ¼ ton boat. The Newport-27 and Newport-28 qualify as ½ ton boats. The Newport-30 rates as a 3/4 ton and the Newport-41 as a 2 ton racer. If you intend on racing your boat contact your local sailmaker or call Capital Yachts (213) 530-1311 and ask for Jon Williams or Bill Smith, we'll be happy to discuss your sailing needs.