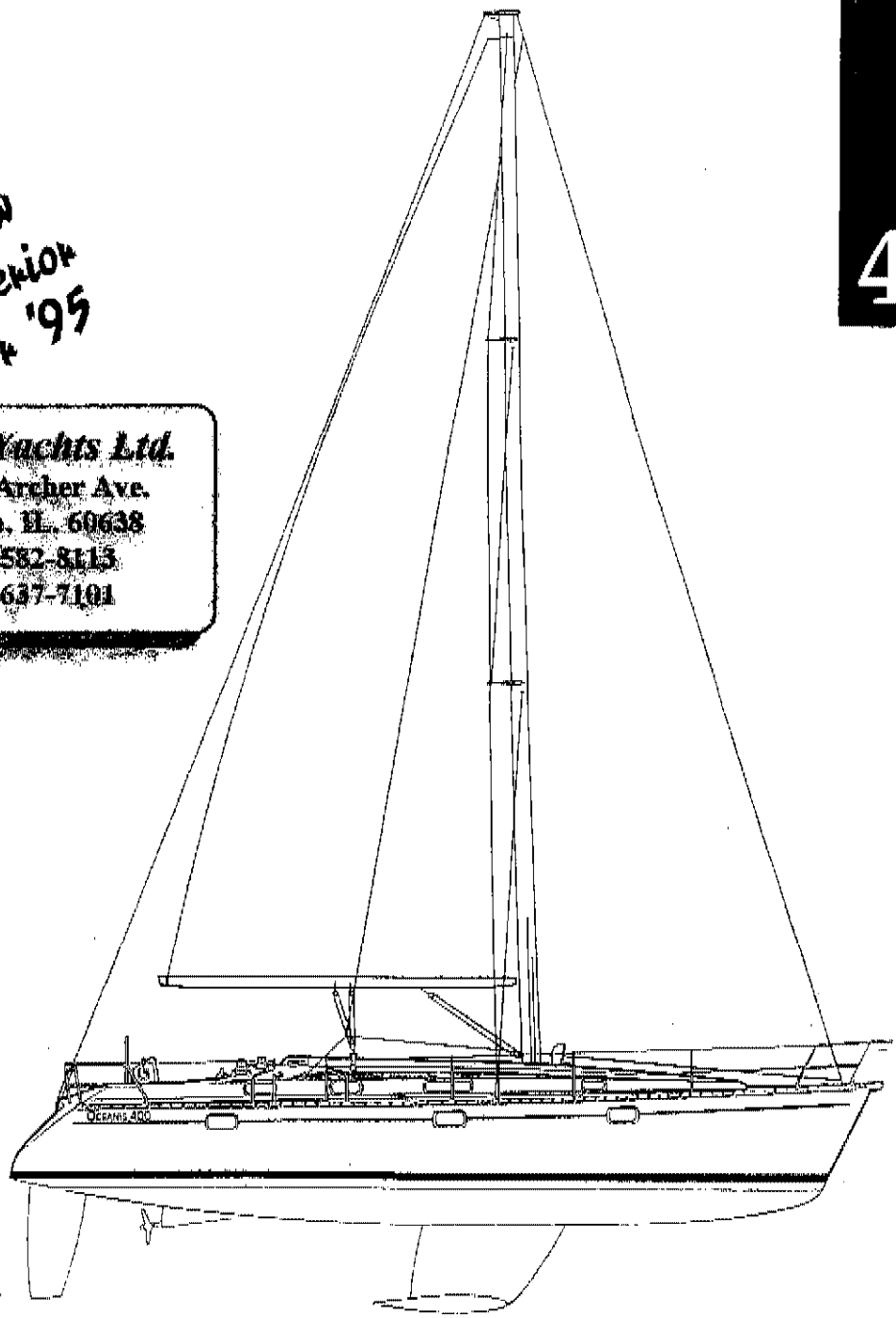
BENETEAU

OCEANIS

400

New Interior for '95



RIG DIMENSIONS

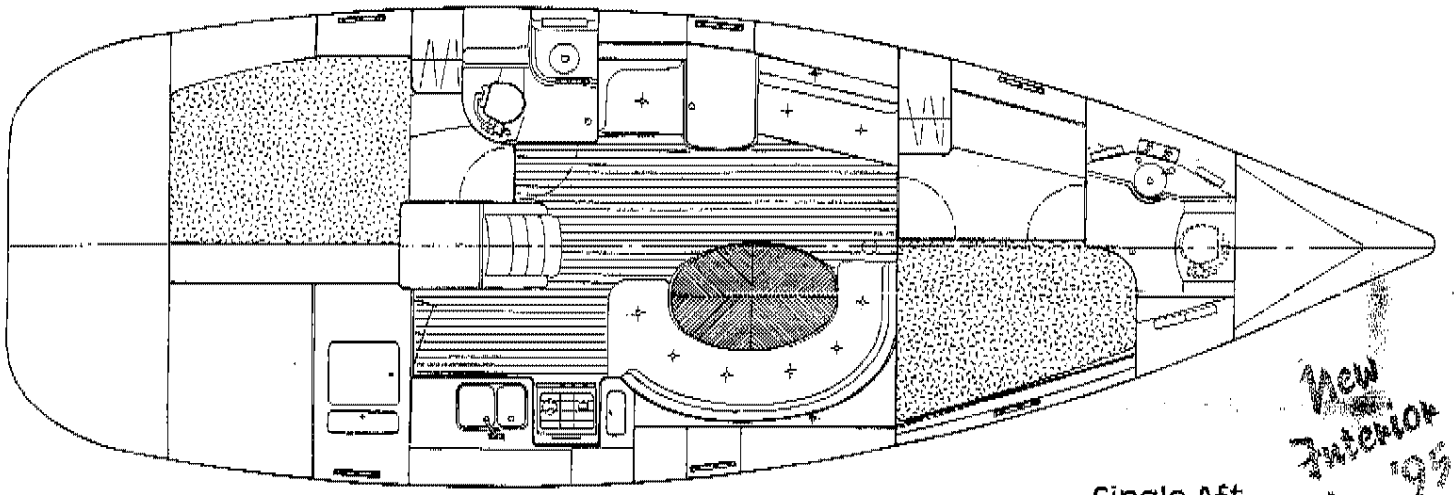
I	48.23′
J	13.50′
P	42.30′
E	15.70′
Sail Area (with 100% △)	670 sq. ft.

SPECIFICATIONS

L.O.A.	39′9″
L.W.L.	34′11″
Beam	12′10″
Draft (Bulb/Wing)	5′6″
Draft (Shoal/Bulb)	4′8″
Displacement	16,000 lbs. approx.
Ballast	5,600 lbs. approx.

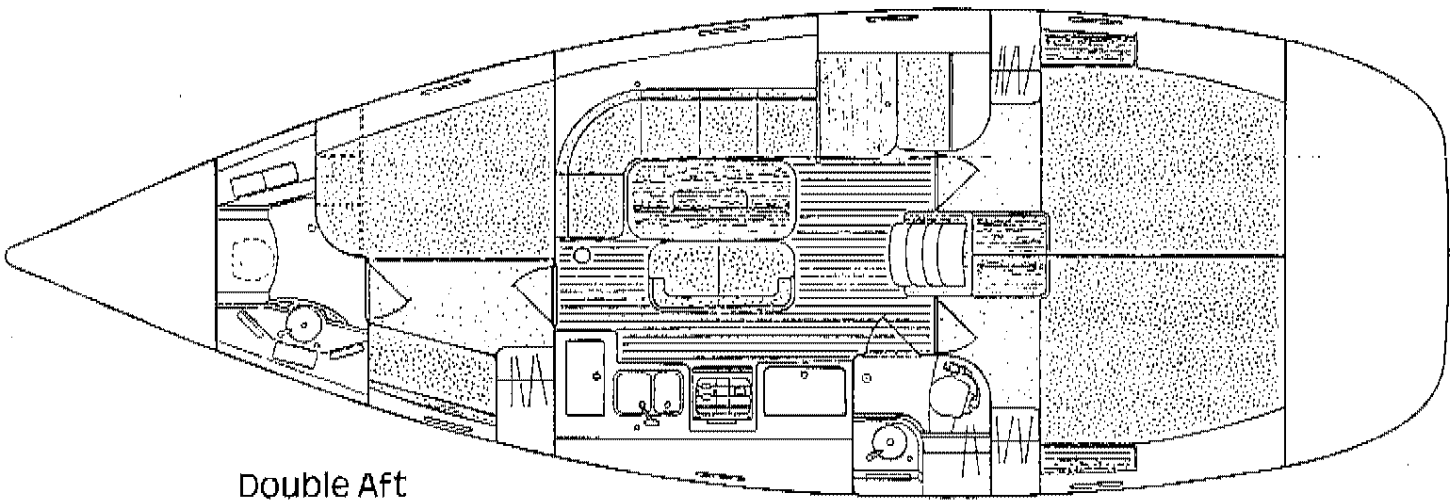
BENETEAU OCEANIS 400

INTERIOR LAYOUTS



New Interior for '95

Single Aft
Version #1



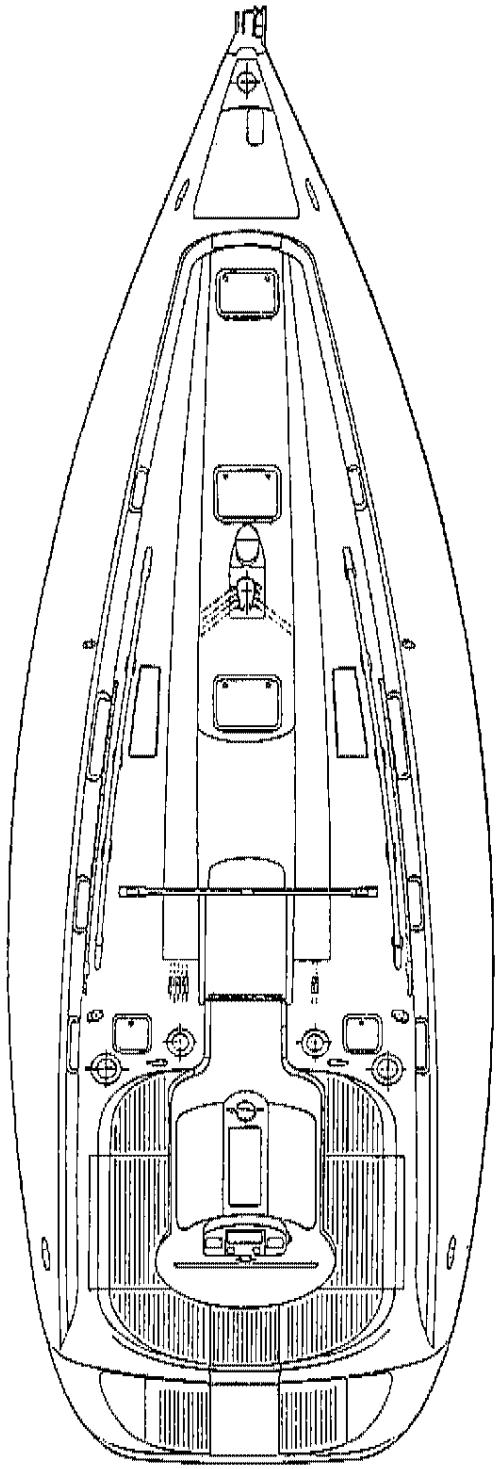
Double Aft
Version #2

BENETEAU USA INC. 8720 RED OAK BOULEVARD SUITE 102 CHARLOTTE, NC 28217 FAX (704) 527-0760 PHONE (704) 527-8244

OCEANIS 400

Designer Groupe Finot
Berths 6/7 persons

DECK LAYOUT



SPECIFICATIONS OCEANIS 400

Includes all standard equipment listed below, F.O.B. Marion, S.C.

DECK FITTINGS
Anodized aluminum stemhead fitting with (2) rollers, one tilting
Anodized aluminum toerails
(4) anodized aluminum mooring cleats
(4) roller fairleads, aft and amidships
Aft anchor roller to port
SS bow pulpit with red/green navigation light
SS two part stern pushpit with removable lifeline, horseshoe buoy support and flagstaff holder
24" stainless steel stanchions
Double SS lifelines with gates port and starboard
Self draining anchor locker with anchor rode eyestrap
Manual windlass recessed in anchor locker
(2) handrails on coachroof
Halyards and maneuvering lines led aft to cockpit under a deck cowling
(7) spinlock stoppers for halyards and maneuvering lines
(4) 6" aluminum anodized cleats
(2) 30CST maneuvering winches
(2) 48CST genoa sheet winches
Mainsheet traveller on coachroof with adjusting lines
Coachhouse mounted genoa tracks with cars
(2) genoa sheet turning blocks on coachhouse
(2) sail and liferaft storage lockers in cockpit
Lazarette locker with access to steering quadrant
Teak slats on cockpit seating
Aft swim platform access door in transom
SS swim ladder with teak steps and hand hold
(2) equipment lockers in swim platform
Stern light on transom
Transom fender
Cockpit table/steering pedestal with:
(2) folding leaves
Table light
Insulated icebox with drain
Hand hold
Leather covered wheel
Glassholder on pedestal
Compass
Engine instrument panel
Single lever engine control
Panel for electronics
Stern pulpit seat

MAST AND RIGGING
Anodized aluminum mast and boom
Double aft swept spreaders
In-mast mainsail furler
Genoa furler with drum recessed below deck
Mast step with halyard turning blocks
Anchor light
Steaming light

Standing Rigging:
Stainless steel discontinuous rigging
Forestay
(2) backstays
(2) upper shrouds
(2) forward lower shrouds
(2) aft lower shrouds

Running Rigging:
Main halyard
Genoa halyard
Genoa sheets
Mainsheet
Main topping lift
Traveller control lines
Furler control line
Mainsail furling control lines

SAILS
Furling mainsail
153% furling genoa with UV strip

INTERIOR ACCOMMODATIONS
Forward head:
One piece molded head compartment
USCG approved marine head and holding tank
Sink with stainless towel bar
Hot and cold pressure water
Hand held shower
Electric shower sump pump
Storage cupboards
Mirror
Lewmar trimline opening hatch 18" x12"
Roller blind
Fixed portlight
Opening port in coachhouse
Halogen lighting

OWNER'S CABIN FORWARD
Double pullman berth to starboard
Shelves along hull side
(2) large drawers under berth
Settee to port
Hanging locker
Lewmar trimline opening hatch 20" x15"
Roller blind
(2) Lewmar opening ports in coachroof with blinds
(2) fixed ports in hull
Dorade ventilator
Halogen lighting
Reading light

MAIN SALON
U-shaped settee with water system access under aft end
Salon table with storage in center
Table folds down to form double berth
Lockers and bottle storage along hull side
Handrail along coaming
Fixed hull port
Lewmar opening port 23" x5"
Lewmar trimline opening hatch overhead 20" x15"
Roller blinds
Halogen lighting overhead
Reading lamps

GALLEY
3 burner propane stove with oven and ss protection bar
Double ss sinks with hot and cold pressure water
Carving board fillers for sinks
Sea water foot pump with ice box drain system plumbed
Dish drainage locker
Insulated icebox with two baskets (6 cubic foot)
12 volt refrigerator in front loading compartment
12 volt freezer in top loading compartment
Roll out grocery storage compartment
Trash can
Dust collection pan built into cockpit sole
Handrail on coaming
Fixed hull port
Lewmar opening port 12" x5"
Lewmar trimline opening hatch 10" x10"
Roller blind
Halogen lighting
Neon light over working space
Curved portlight to cockpit

NAVIGATION STATION AND SALON
Large hanging locker
Aft facing chart table
Drawer and locker under table
Locker in chart table seat
Book rack and shelf
Hinged panel for electronics installation
Hinged multi function 12 volt electrical control panel
Fixed port in hull
Lewmar opening port 23" x5"
Red/white night light
Handrail on coaming
Large storage cabinet

COMPANIONWAY
Plexiglass sliding hatch
Plexiglass hatch boards with vent
Aluminum hatch board frame
Fiberglass engine cover with molded wood steps and non-skid on treads
Engine access
(2) handrails

AFT HEAD TO PORT
One piece molded head compartment
USCG approved marine head and holding tank
Electric shower sump pump
Sink with stainless steel towel bar
Hot and cold pressure water
Hand held shower
Storage cupboards
Mirror
Lewmar 12" x5" opening port with blind
Halogen lighting

AFT CABIN(S)
Double berth
Hanging locker
Storage lockers
Engine access panel
Lewmar trimline opening hatch 10" x10"
(2) Lewmar opening ports 12" x5"
One fixed portlight to cockpit
Blinds on hatches and ports
Halogen lighting

PLUMBING
Pressure water pump
Accumulator on pressure water system
Rigid water tanks 140 gallons
Shower at transom

ELECTRICAL
24 function 12 volt electrical panel
Pressure water pump
Electric bilge pump
Accumulator tank on pressure water system
Water heater 12 gallons

ENGINE EQUIPMENT
Perkins 50 Prima engine
Engine compartment insulation
Fuel capacity 41 gallons
Fue gauge
Hourmeter
Tachometer
Engine alarms
1 x 70 amp battery
1 x 135 amp battery
Battery charger 110v/40 amps

MISCELLANEOUS
Winch handles
Owner's manual
Spare parts kit

The manufacturer reserves the right to change price and specifications without notice.

BENETEAU

Dear Beneteau Owner,

It is with great pleasure that we welcome you aboard!

We sincerely hope that your new Beneteau will offer you, your family, and your guests many hours of pleasant and safe sailing.

Your support of our product is greatly appreciated, and we are confident that your new yacht will fulfill all your expectations of a finely crafted vessel.

Our dealer network, supported by our Consumer Services Department, will gladly answer any questions and will provide advice on any problems you may have, no matter how small.

Once again, thank you, and we wish you as much pleasure sailing your boat as we had in building it for you.

Sincerely,
Annette Roux
Chief Executive Officer
Chantiers Beneteau, S.A., France

8720 RED OAK BLVD., SUITE 102, CHARLOTTE, NC 28217. TELEPHONE: (704) 527-8244. FAX: (704) 527-0760

BENETEAU

BENETEAU HISTORY

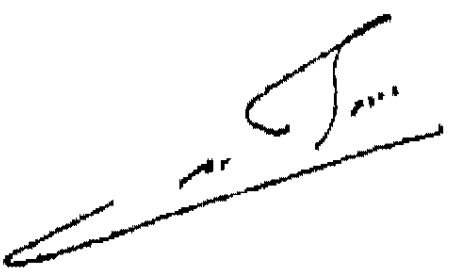
For more than a century, the Beneteau family has been building boats. In the beginning, commercial fishing boats as robust as the fisherman who sailed on them. Boats that ventured out to sea no matter what the weather because their owners relied on them for their livelihood. Boats built to last; like today's Beneteau's.

At Beneteau the sea is at the roots of our family tree. This is a story of love, commitment and long standing tradition. From my grandfather to his descendants who operate the company today, we have always been innovative. Yet despite this constant quest for innovation, we have always built boats that are strong. Times have changed and composites have replaced oak, sailing has become a sport, but the sea has remained unchanged and the sea will always demand the best.

I have always remained true to my family's philosophy of building strength into our products. I want to keep the edge that my ancestors gained on the rest of our industry. By giving free rein to innovative talents, in constantly improving building techniques, in testing every idea in the most severe conditions, our boats will continue to evolve and to improve.

When you are a leader you must show the way. As the world leader in sailboat building, Beneteau today leads the way to pleasure boating of the future.

Annette Roux



8720 RED OAK BLVD., SUITE 102, CHARLOTTE, NC 28217, TELEPHONE: (704) 527-8244, FAX: (704) 527-0760

6. LIMITED WARRANTY

Beneteau USA Inc. ("Beneteau USA") warrants to the original purchaser or any subsequent buyer during the time of this Limited Warranty (the "Owner"), that the boat, excluding parts or accessories not manufactured by Beneteau USA or Chantiers Beneteau, S.A., will be free from defects in material and workmanship for a period of ONE year from the date of the delivery to the original purchaser.

In addition, Beneteau USA warrants to the Owner, except for the prototypes and boats from the California series, that the hull and deck structure of the boat will be free from defects in material and workmanship for a period of FIVE years from the earliest of the following events: delivery of the boat to the original purchaser, first date of utilization, last day of the boat model year.

Beneteau USA's obligation under this warranty shall be limited to the repairing or replacing (or causing to be repaired or replaced), at Beneteau USA's option, the part or parts which are recognized defective by it in material or workmanship within the applicable warranty period to the exclusion of all other remedies. This Warranty shall apply only provided that the Owner presents the boat's Certificate of Origin and gives the selling dealer written notice of any claimed defect within 15 days after such defect is first discovered and satisfactory proof thereof. Warranty repairs do not result in a renewal or extension of the original Warranty for the boat or a part thereof. Transportation charges and duties shall be borne by the Owner.

This Warranty does not extend to: (1) any losses due to misuse, accident, disaster, abuse, neglect, normal wear and tear or improper maintenance; (2) boats or any part thereof which have been repaired or altered without Beneteau USA's prior written approval; (3) accessories or parts not supplied by Beneteau USA or Chantiers Beneteau, S.A., or, parts or accessories installed during the process of manufacturing that were not manufactured by Beneteau USA or Chantiers Beneteau, S.A, for which the Warranty will be the one provided by the supplier of the part or accessory; (4) damages resulting from any modification made to the boat; (5) boats for rental, lease, or charter; (6) splits, discoloration, or cracks in the gel-coat (hull, rudder, and deck); (7) disorders in the hull, or deck such as, without limitation, blisterings, which are caused by use of improper maintenance products or by improper sanding of the gel-coat; (8) anti fouling, varnishes, paints, acrylon, naugahyde, fabrics, headliners, chrome, anodized coatings, keel coatings, sails, cushions, or running rigging, as these items are subject to deterioration caused by climate, erosion, normal use conditions, or wear and tear; (9) reasonable and necessary maintenance, including, but not limited to, periodic re-bedding of chain plates, stanchion bases, windows and/or window frames, and winches; (10) damages or deterioration due to the non-observance of maintenance recommendations as described in the owner's manual or non-compliance with the normal rules of boat maintenance; (11) failure to take reasonable measures necessary to protect the boat; (12) any damage or deterioration to the boat resulting from participation in a competitive sporting event.

In addition, if (1) any structural damage to the boat is suffered as a result of any cause other than a defect in material or workmanship (whether or not such damage requires or results in any repairs to the hull or deck), or (2) any repairs or alterations to the boat of any nature whatsoever are made at a shipyard not approved in writing by Beneteau USA, then the five-year hull/deck Warranty set forth above will immediately thereupon terminate and be of no further force or effect.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER LIABILITIES ON BENETEAU USA's PART, AND BENETEAU USA NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON, INCLUDING THE DEALER, TO ASSUME FOR IT, ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF BENETEAU USA's BOATS.

Beneteau shall in no event be liable to the Owner or any other person or entity for damages of any kind, including but not limited to direct, indirect, special or consequential damages, arising from the sale or in connection with the use or inability to use the boat for any purpose whatsoever, irrespective of whether the claims or actions for such damages are based upon contract, tort, negligence, strict liability, warranty, or otherwise.

For the purpose of compliance with the Federal Boat Safety Act of 1971 and all notification procedures set forth therein, Beneteau USA requests that you complete the information requested below concerning your current address, which shall be returned to Beneteau USA by your Dealer.

Beneteau USA reserves the right, at any time, to make changes in design or additions to or improvements in the boats without liability or obligation to incorporate such change, addition, or improvement in any boat manufactured prior thereto.

This Warranty gives you specific legal rights. You may also have other rights which vary from state to state.

I hereby acknowledge that Beneteau USA Inc. Limited Warranty was attached to Dealer's purchase order in its entirety at the time that I purchased my boat from said Dealer; that I have read such Limited Warranty in its entirety; and that I have a copy of such Limited Warranty, as attached to Dealer's purchase order, for future reference.

_____ Boat Model _____
Purchaser

_____ Hull # _____
Mailing Address of Purchaser

_____ Dealer _____
City State Zip

_____ Date _____
(Area Code) Telephone Number

6.1. WARRANTY/REGISTRATION PROCEDURES.

6.1.1. Warranty Procedure.

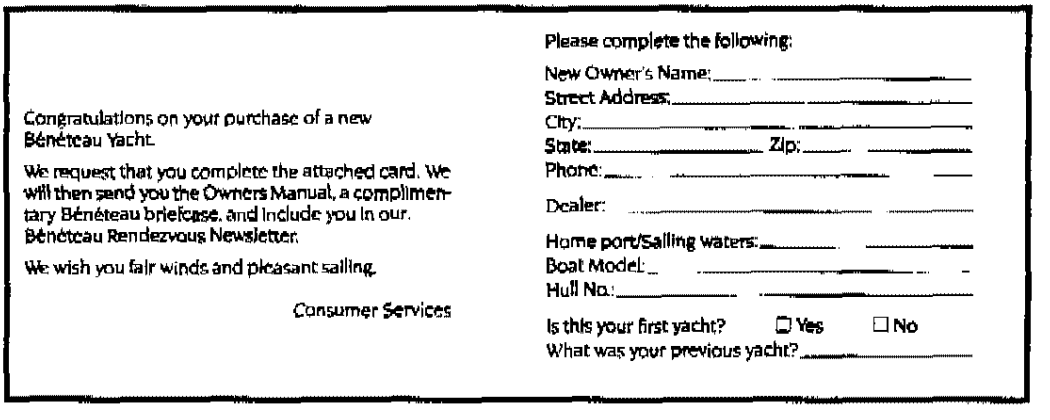
All Beneteau boats carry a one year limited warranty, as well as an extended hull and deck structural warranty (see warranty form for details). Your warranty only becomes valid upon receipt by Beneteau of the completed and signed warranty form. It is important that you were presented with this document at the time of your contract with your dealer and that both you and your dealer have signed this form. Your warranty will take effect upon delivery to you of your new Beneteau.

6.1.2. Warranty Transfer

As of Oct. 1, 1993 all new Beneteaus will have a 5 year, transferable, limited hull warranty and deck warranty. In the event of selling your Beneteau the new owner must be registered with Beneteau within 30 days of the date of sale for the warranty to be transferred. Please fill in the warranty transfer card at the back of the owners manual and mail it to our Charlotte office.

6.1.3. Registration Procedure.

As a new Beneteau owner you will automatically become a member of Club Beneteau. Club Beneteau will entitle you to many added benefits and advantages as well as providing you with a valuable line of communication with Beneteau. Please complete the registration card, (which is affixed to the mirror in the head compartment of your boat) and mail it to our Charlotte office. Upon receipt of your card we will forward a new owners package directly to you.



Congratulations on your purchase of a new Bénéteau Yacht.

We request that you complete the attached card. We will then send you the Owners Manual, a complimentary Bénéteau briefcase, and include you in our Bénéteau Rendezvous Newsletter.

We wish you fair winds and pleasant sailing.

Consumer Services

Please complete the following:

New Owner's Name: _____

Street Address: _____

City: _____

State: _____ Zip: _____

Phone: _____

Dealer: _____

Home port/Sailing waters: _____

Boat Model: _____

Hull No.: _____

Is this your first yacht? ☐ Yes ☐ No

What was your previous yacht? _____

Should this card be missing, please contact the Beneteau, Charlotte office at (704) 527-8244. A duplicate card will be sent on request. → Sue Holt.

In the event that you change your address please fill out the change of address card at the back of the manual so that you will not miss any of Club Beneteau's opportunities.

6.2. Hull Identification Numbers.

The hull identification or "BEY" number is a unique number given to your Beneteau alone. This number begins with "BEY" which has been assigned to Beneteau by the USCG followed by an alpha-numeric code which details the model, serial no., month of construction, year of construction and model year.

Please clearly identify your boat using your model and "BEY" number during any correspondence with Beneteau.

Your boat identification number appears in two places. On the aft starboard side, stamped into the hull, approximately 3 inches below the toerail, is your hull identification number.

In the aft section of the cockpit can be found the manufacturers plate. This plate gives boat model, identification number and passenger capacity.

7. DEALER'S RESPONSIBILITIES

Your Beneteau Dealer is part of a 28 country, worldwide dealership network As a Beneteau Dealer, he has certain obligations to you as our customer and to Beneteau as our representative. A Dealers responsibility does not end with the sale of your boat. Your Dealer is responsible to:

- Deliver your new Beneteau to you complete as ordered in your purchase agreement.
- Prepare your boat for commissioning by their personnel, another yard or by providing you with the correct commissioning procedures.
- Check all systems on the boat for fit, proper function and to familiarize you with the usage of each system.
- Sea trial your new Beneteau with you as a final verification that all systems are in good order.
- Provide customer support and parts after you take delivery and any warranty service under the terms of the limited warranty. All warranty questions, claims or processing should be directed through your dealer.

8. OWNER'S/OPERATOR'S RESPONSIBILITIES.

8.1. State Registration or Federal Documentation.

For State Registration please consult your Dealer or the State Marine Police, who can provide the correct governmental department handling registration in your State.

8.2. Safety and Maintenance.

For maximum enjoyment of your Beneteau, due respect should be given to proper safety and maintenance procedures.

Insure that your boat is operated according to the US. Coast Guard Regulations as outlined in the "Federal Requirements For Recreational Boats". Please familiarize yourself with all operating requirements.

Prepare yourself for any situation before going out on the water. Follow the instructions provided in the sections of this owner's manual, the individual supplier instruction manuals, and all applicable US. Coast Guard and other regulations. If you are not an experienced sailor, you should attend an accredited sailing school.

Before leaving the dock, be sure that all your equipment is in working order, that you are aware of the weather conditions, and that someone ashore is familiar with your destination or sailing activities.

8.3. Mandatory Coast Guard Safety Equipment.

Many safety items are required for compliance with the US. Coast Guard regulations. Note that these regulations are subject to change. It is the owner's responsibility to be aware of current regulations as outlined in the "Federal Requirements for Recreational Boats". For your convenience a copy is enclosed with this manual and additional copies may be obtained by calling the US. Coast Guard Boating Safety Hotline at (800) 368-5647.

Good safety equipment should be a priority of every sailor for the protection and comfort of his passengers. Passengers aboard should be made familiar with the safety equipment and operation of the boat in the event of an emergency.

Depending on the length, passenger capacity, and operating conditions, your boat must be equipped according to the current U.S.C.G.,. regulations. Be sure that you operate your boat with the necessary number of life preservers, fire extinguishers, signaling devices, distress signals, navigation lights, etc. as referred to in the "Federal Requirements for Recreational Boats."

8.4. Recommended Safety Equipment.

Preparation is the key to safety on the water. As a minimum guide, we recommend that you outfit your boat with the following equipment:

- Your new Beneteau has been fitted with a compass, be sure that it is properly calibrated to give the correct magnetic reading.
- A large capacity bilge pump.
- Up to date nautical charts covering your intended cruising area.
- Boat hook.

- Large waterproof flashlight with spare batteries.
- Fenders.
- Docking lines - a good rule of thumb to follow dictates that your bow, stern, and spring line be equal to the length of the boat.
- Life jackets, anchor, throwing line, flares, etc., etc.

8.5. Safety Courses.

It is recommended that owners and operators gain knowledge and experience in boat safety skills such as;

(a) navigation
(b) seamanship and boat handling
(c) rules of the road, international and inland waterway
(d) weather prediction
(e) safety at sea
(f) survival in bad weather
(g) respect for others on the water
(h) first aid
(i) radio communication
(j) distress signals
(k) pollution controls

To find out where one can attend these courses in your area, please call "The Boaters Educational Course Line" at (800) 336-2628.

8.6. Anchoring

Various sea and bottom conditions require different anchoring systems. Your dealer can help in choosing rode size and length, anchor chains, and working and storm anchors most appropriate for your boat and location.

In general a minimum of two anchors should be carried at all times and enough anchor rode and chain necessary for the depth of water to be navigated during storm conditions.

Certain anchors are useful for a variety of bottom conditions. Study the charts of the area to be navigated for information concerning bottom conditions and water depth.

The greatest hazard with a sound permanent mooring is the chafe which can occur to the rode at the bow chocks. This is the single most common site of failure. Care is advised in the selection and protection of the rode pennant with appropriate chafing gear. Continual inspection of moored boats on a regular basis is necessary to insure the boat's safety.

8.7. Additional Safety Equipment.

A number of additional safety items are worthy of your consideration. These range from safety harnesses to emergency beacons, life rafts, and survival suits. Their use depends upon the intended use of the yacht. We suggest you investigate the necessity of these items through discussion with your dealer or local chandler.

8.8. Medical Kit.

Every yacht should carry a first aid manual, and a medical kit tailored to the specific needs of the owner. Any ship's store should carry a standard type medical kit. Items in the kit should include but not be limited to the following:

- aspirin
- motion sickness pills
- adhesive strips and tape
- ammonia inhalants
- antiseptic wipes
- antiseptic germicide ointment
- gauze bandages
- zinc oxide ointment
- sunscreen first aid/burn cream
- insect/bee sting relief ointment/spray
- sterile pads
- cold packs for sprains
- ace bandages & splints
- scissors & tweezers

8.9. Tool Kit.

A basic kit should consist of:

- wrenches - adjustable, open end, box, socket
- hammers - large and small
- knife - with marlinespike
- screwdrivers - large and small, standard and Phillips
- pliers - regular, cutting and needle nose, vise grips
- wire cutter - capable of cutting standing rigging
- hacksaw - with spare blades

8.10. Spare Parts.

A basic kit should consist of:

- Standing rigging repair materials such as cotter pins, turnbuckles, stainless wire, clevis pins, blocks, extra line, sail slides, duct tape.
- Assortment of stainless steel screws, nuts, bolts, and washers
- hose clamps.
- Electrical tape, wire, crimp on lugs, spare navigation light bulbs.
- Lubricating supplies - WD-40, silicone grease.
- Check engine manual for spare parts, engine oil and transmission fluid recommendations.
- Sail repair kit, rigging tape - white vinyl.

9. SAFE OPERATION AND WARNING LABELS

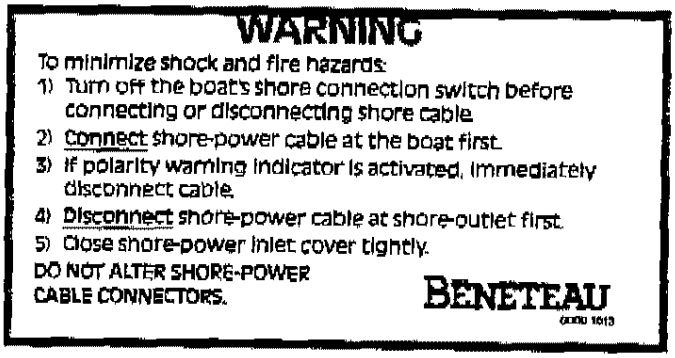
Ensure that the boat operator is not under the influence of drugs and/or alcohol.

Do not venture out in weather or sea conditions beyond the skill or experience of the operator.

There are "Warning" and "Caution" statements affixed to your Beneteau. These are detailed below with location:

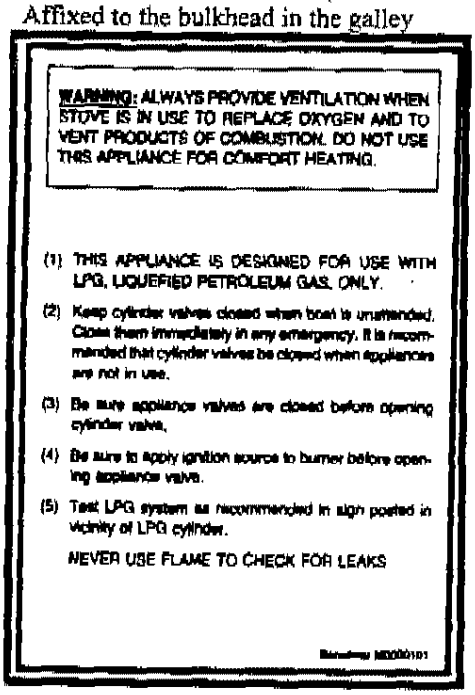
9.1. Fuel Warning Label. Affixed to the fuel tank. (Beneteau Part #00001012)

9.2. Shore-Power Label. At the 110V distribution panel (Beneteau Part #00001013)

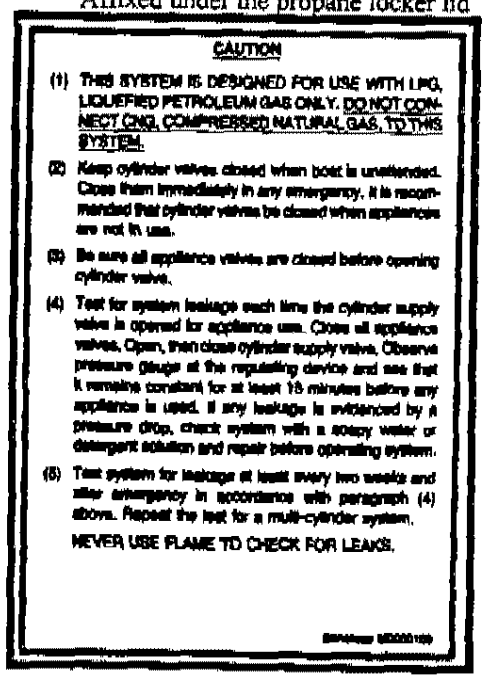


9.3. Propane Labels

Propane Stove
(Beneteau Part #00001011)
Affixed to the bulkhead in the galley



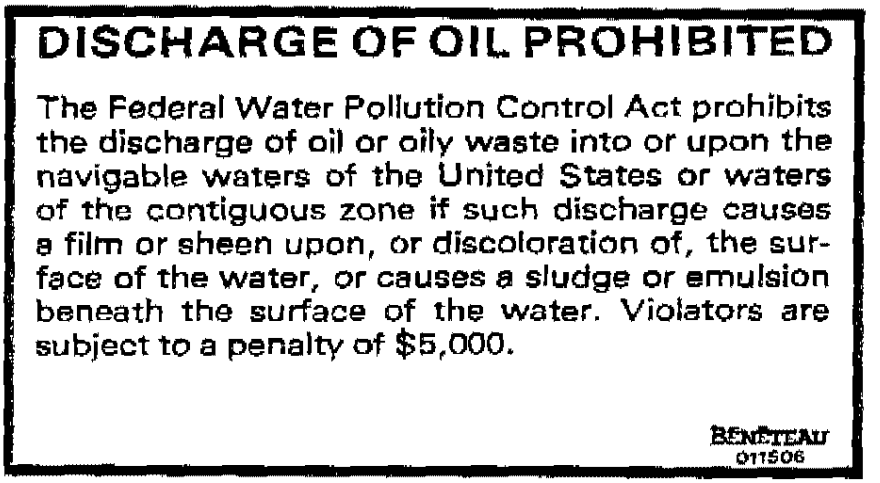
Propane Locker
(Beneteau Part #00001000)
Affixed under the propane locker lid



10. FEDERAL/STATE REGULATIONS

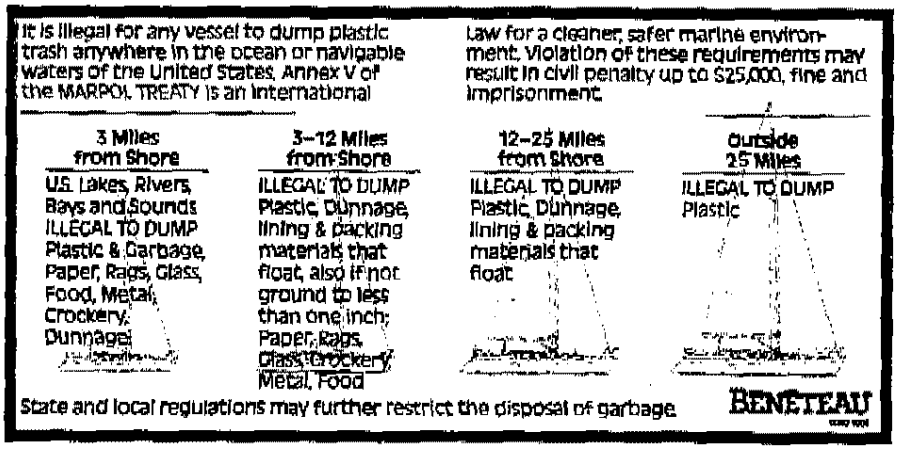
10.1. Discharge of Oil.

Placement of this decal: under sail locker lid. .(Beneteau Part #00001007)



10.2. Solid Waste Disposal.

Placement of this decal: under sail locker lid. .(Beneteau Part #00001003)



10.3. Marine Sanitation.

Your Beneteau is equipped with a USCG approved marine head and holding tank.

By law you must use a holding tank in all US waters, Check with local authorities for regional laws governing your area before selecting the overboard discharge option..

11. ACCIDENT REPORTING

Knowledge of accident reporting requirements. Please refer to the following list for a copy of the US. Coast Guard Boating Accident form. For further information on where to obtain more forms, please call the US. Coast Guard Boating Safety Hotline at (800) 368-5647

VESSEL DOCUMENTATION
455 COMMERCIAL STREET
BOSTON, MA 02109-1045
(617) 223-3030

CCGD9 (mvd)
VESSEL DOCUMENTATION
1240 E. NINTH ST., RM 2029
CLEVELAND, OH 44199-2060

VESSEL DOCUMENTATION
8876 GULF FREEWAY, STE 230
HOUSTON, TX 77017-6595
(713) 947-0314

VESSEL DOCUMENTATION
200 GRANBY HALL
NORFOLK, VA 23510-1888
(804) 441-3272

VESSEL DOCUMENTATION
2760 SHERWOODD LANE #2A
JUNEAU, AK 99801-8545
(907) 463-2460

VESSEL DOCUMENTATION
165 N. PICO AVENUE
LONG BEACH, CA 90802-1096
(310) 980-4433

VESSEL DOCUMENTATION
51 SW., 1ST AVE., 5TH FL.
MIAMI, FL 33130
(305) 536-4246

VESSEL DOCUMENTATION
1440 CANAL STREET
NEW ORLEANS, LA 70113-2711
(504) 589-2932

VESSEL DOCUMENTATION
BATTERY PARK BLDG.
NEW YORK, NY 10004-1466
(212) 668-7875

VESSEL DOCUMENTATION
1 WASHINGTON AVE., RM 201
PHILADELPHIA, PA 19147-4395
(215) 271-4876

VESSEL DOCUMENTATION
6767 N. BASIN AVE.
PORTLAND, OR 97217-3992
(503) 240-9345

VESSEL DOCUMENTATION
1222 SPRUCE ST., RM 1215
ST. LOUIS, MO 63103-2835
(314) 539-2497/2816

VESSEL DOCUMENTATION
BLDG. 14, RM 128
ALAMEDA, CA 94501-5100
(510) 437-3101

VESSEL DOCUMENTATION
1519 ALASKAN WAY S.
SEATTLE, WA 98134-1192
(206) 286-6500

12. RENDERING ASSISTANCE

United States Code, Title 46:

"The owner or operator of a vessel is required by law to render assistance to any individual or vessel in distress, so long as his vessel is not endangered in the process."

13. COMMISSIONING.

13.1. Commissioning Procedures.

The first commissioning of a yacht is essentially the start of the yacht's life, and the importance of proper commissioning procedures at this time cannot be overstated. The commissioning procedure will be performed by dealer personnel and requires no owner participation. Therefore, the owner need only concern himself with items such as safety equipment which is considered to be his responsibility. Items of owner responsibility are outlined in Section 8.

Complete lists of the pre-launch and post-launch checks employed during commissioning are provided in this section for those owners interested in understanding the decommissioning procedure, as well as for future use in any recommissionings that may be required after periods of wet or dry storage. The lists assume performance by persons knowledgeable of the procedures that are required, and do not attempt to provide step-by-step instructions. Details of your yachts systems are available in section 16 of this manual and other manufacturers' instructions that are provided with the yacht.

The factory installed equipment, and items of dealer responsibility that require attention during commissioning are included in the list with the items marked with an asterisk (*), and the items involving owner responsibility marked with a double asterisk (**).

13.2.* Pre-Launch Checks.

13.2.1. Hull Inspection.

- Check topsides, decks, and all interior spaces for cleanliness and proper finish. Make certain that all foreign matter has been removed from the bilge areas, and check the following specific items:
- All thru-hull valves lubricated and closed, all hose clamps tight.
- Propeller nut, retaining washer and zinc properly installed and tightened.
- Shaft zinc installed if applicable.
- Steering gear and rudder operational.
- Cutlass bearing in place and secured.
- Anti-fouling bottom paint applied.

13.2.2. Machinery Inspection.

- Make an overall inspection of the machinery spaces. Ensure that they are free of loose material that might interfere with machinery operation, and then check the following items:
- Engine oil, transmission fluid, and coolant levels satisfactory.

- All electrical switches OFF.
- Batteries fully charged, tied down, connected; electrolyte at proper level.
- Installation of all equipment completed.
- All fuel and propane valves CLOSED.
- Adequate amount of fuel in tank.
- Check to be sure the shaft coupler is attached to the transmission

13.2.3. Before Stepping Mast.

WARNING! MOVE YOUR BOAT TO A POSITION THAT IS CLEAR OF OVERHEAD WIRES OR OBSTRUCTIONS. ELECTROCUTION MAY RESULT FROM CONTACT WITH ANY OVERHEAD WIRES!!

- * Check the following items:
- Shrouds, stays, spreaders, installed and properly secured to mast.
- Check wire rigging for kinks or defects.
- Masthead lights, spreader lights, and mast-mounted instrument units operational.
- VHF antenna installed.
- All chafe points on mast properly taped.
- If the mast is keel stepped slide the mast boot onto mast and secure.

13.2.4. Equipment On Board.

Check the following items:

- ** Winch handles, emergency tiller, and bilge pump handles.
- ** Ground tackle.
- ** Dock lines and fenders.
- ** Safety equipment:
  1. life preservers
  2. throw able horseshoe or ring buoy
  3. horn
  4. emergency signals (flares, etc.)
  5. fire extinguishers, etc., etc.
- ** Medical kit.
- ** Spare parts and tool kit.

13.3.* Post-Launch Checks.

13.3.1. Hull Inspection.

- Make an overall inspection of the hull interior. Check bilge areas for evidence of major leaks near thru-hulls, and then make the following specific checks:
- Open all thru-hull seacocks. Check each valve and associated hoses, couplings, etc.
- Check propeller shaft packing gland for nominal adjustment.
- After the boat is rigged check and align the prop shaft

13.3.2. Electrical Inspection.

Make the following checks:

1. Check the 12 volt supply at the electrical panel with the battery switch in the #1, #2, and ALL positions.
2. Make an operational check of all DC circuits connected to the electrical panel.
3. Connect the shore power cable (follow shore power operation instructions in section 17), check the polarity indicator, close the main breaker, and make an operational check of the following items if installed:
   - Battery Charger
   - 110 volt outlets
   - Hot water heater
   - **BE SURE THE HEATER HAS FRESH WATER IN THE TANK**
   - Inverter (if installed)
   - Other AC equipment

13.3.3. Machinery Inspection.

The initial engine startup and check should be completed by the engine manufacturers authorized dealership or a marine diesel mechanic.

Secure the yacht to a pier or dock with bow, stern, and spring lines and operate the engine at low speeds in neutral, forward, and reverse. Check:

- throttle and shift controls
- engine operation
- alternator output
- water temperature (See engine owner's manual for operating temperature range).
- oil pressure (See engine manual).
- Check the fuel system for leakage.

- Re-check the stuffing box for proper adjustment. Adjust if necessary. (See Stuffing Box Manufactures Instructions)
- Install and check the operation of the emergency tiller.

13.3.4. Rigging and Sails.

Check the following after mast is in place:

1. All standing rigging complete and in place, dockside tuning completed. (See section 16.16.).
2. Mast boot installation completed.
3. All cotter pins in place and taped.
4. Running rigging in place.
5. Sails hoisted to check fit.

13.3.5. Fresh Water System.

Check the following:

1. 1.Water tanks full, no leaks at tank, fitting or vent hoses.
2. 2.Pressure water system operational.
3. 3.All faucets operational
4. 4.Sinks and drains operational.
5. 5.Hot water system operational.
6. 6.Shower operational.

13.3.6. Head System.

Check the following:

1. 1.Head, holding tank, or other Marine Sanitation Devices operational.
2. 2.Head intake and discharge hoses for leaks, Y-valve and discharge plumbing.

13.3.7. Galley.

Check the following:

1. Check all propane pipe & hose fittings for leaks before lighting the stove.

   DO NOT TEST FOR LEAKS WITH AN OPEN FLAME, WIPE EACH JOINT WITH A SOAPY SOLUTION AND LOOK FOR BUBBLES

2. Galley stove operational.
3. Galley sink drains correctly.
4. Ice box drains correctly
5. Check all water hoses, valves, connectors and thru-hulls for leaks

13.3.8. Bilge

Check the electric and manual bilge pump for operation.

Check the electric bilge pump filter frequently for debris, the filter will fill rapidly during the initial period of sailing your new boat.

Check the shower sump pumps and filters.

14. MAINTENANCE OF YOUR BOAT.

Your boat represents a sizable capital investment that, needs special and regular care. Safeguarding your investment and looking after your own safety - should persuade you of the importance of careful and regular upkeep of your boat. The hints given below, and the safety maintenance check list, under Personal Notes (at the back of this handbook), will help you.

14.1. BWS System and Anti fouling

With regard to the Beneteau Water Shield, Warranty, the following practices must be observed in order that the warranty is not negated.

Maintenance.

- To clean the anti-fouling, it is important to observe the following criteria when using a high pressure washer:
- Maximum water temperature to be 60 degrees F. (15 degrees C.) Maximum pressure to be 2175 lbs./sq. ft. (150 bars) at no closer than 4 inches.
- Dry boat.
- Apply anti-fouling according to manufacturer's directions.

NOTE: It is important to clean the bottom of your boat two or three times a year rather than only once.

General Hull Maintenance

- **DO NOT SAND THE HULL WITH COARSE SANDPAPER.**
- **DO NOT USE SOLVENTS TO CLEAN HULL.**
- **DO NOT WASH WITH PRESSURE MACHINE USING WATER WARMER THAN 60 DEGREES F. (15 degrees C.).**
- **DO NOT USE PRESSURE IN EXCESS OF 2175 LBS/SQ. FT. (150 BAR.) WHEN USING A HIGH PRESSURE SPRAY WASH.**
- **DO NOT HOLD NOZZLE CLOSER THAN 4 INCHES (10 CM) TO SURFACE OF HULL.**
- **DO NOT MACHINE SAND .**

We believe the above points to be pertinent for all FRP boats.

14.2. Gel coat.

The gel-coat is vulnerable to any dents and scratches it may get during maneuvering in harbor and on a mooring. The best way to avoid them is to undertake maneuvering calmly, after thinking out all the relevant factors (such as speed, current, wind, and the layout of the harbor). Always have one of the crew ready to put out a fender at the right place. When bringing in the anchor chain, back off or swing the boat round so as not to rub the chain against the hull. Hold the anchor well clear as you bring it aboard so that it does not scrape the stem: lay it on deck and lash it down at once, if only temporarily.

Never use dirty fenders.

Hose off the hull and deck as often as possible, with fresh water.

Before hosing down, remember to check that the hatch covers are not in the ventilating position; and it is wise not to take on diesel oil or fresh water supplies while you are cleaning off the hull.

After a few years, the gel coat may be repolished, either with a lambs wool buffer and polish, or by hand using a polish or similar product. Your yard will also be able to supply you with special cleaning products for getting rid of stubborn stains.

14.3. Minor Gel coat Repairs

To fill in a scratch or small dent, order a **Beneteau Gel coat Repair Kit** with instructions for use, from your dealer or obtain a small quantity of gel coat and catalyst.

Clean the affected area and rub it down with wet-and-dry sandpaper, then dry it off thoroughly (use a hair-dryer if necessary). Mix the components of the gel coat, and fill the scratch using a spatula so as to avoid any excess; cover with a sheet of cellophane. Once hardened remove cellophane and rub down with very fine wet-and-dry sandpaper (grade 600 or 800), and finish off by polishing the new surface.

14.4. The Deck and Deck Fittings.

Using a gentle liquid detergent, scrub all nonskid areas to keep them free of dirt.

Light-alloy sections (tracks, etc.) can be cleaned in the same manner.

The tiny spots of oxidation pitting that may appear on stainless steel parts are nothing to worry about. Polishing will remove them.

From time to time, lubricate pulley-blocks and sheaves, bottle screws, tracks and travelers with light grease or a water repellent lubricant such as WD 40.

After a certain time at sea, your winches will need cleaning inside. They must be cleaned out completely once a year. Follow the manufactures instructions carefully.

When dismantling deck fittings, have a bowl close at hand for putting the parts in, and circle the area with a rolled dishcloth, or the like, so that any screws or springs you drop do not roll overboard. Use the lubricant recommended by the manufacturer before reassembling.

Warning! Incorrect reassembly can cause accidents. Note down the order in which parts are dismantled, which will make it easier to put them together again later.

Acrylic plastic hatch covers and portholes should be rinsed off with fresh water and rubbed over with a soft cloth soaked in liquid paraffin.

14.5. The Rudder

Once a year, check steering gear. If necessary renew any part (bushes, glands, etc.) that are worn. Lubricate the steering chain and cable and or gears.

Never lubricate nylon, erlon or teflon bushes, with either oil or grease, use only WD 40.

If you have wheel steering, maintenance should be in accordance with the manufacturers recommendations.

Make regular checks on all the clamps, the condition of the quadrant, the cables or push rods, guide sheaves and the chain in the column to the wheel.

Make regular checks of the steering end stops to ensure they are adequately stopping the rotation of the rudder, this is especially important for direct drive push rod systems. Over rotation of the rudder could cause a steering lock up.

14.6. Interior Wood.

The internal woodwork used in most of our boats is varnished. This should be regularly rinsed off with fresh water with a little liquid detergent, and then polished with a chamois leather.

Should the woodwork become damaged, gently rub it down with very fine sandpaper and touch it with several coats of the varnish. Your dealer will be able to order Beneteau varnish. When this is dry, rub it down with a very fine wet-and-dry sand paper (grade 800 or 1000) and finish off with polish (or a silicone spray) or wax.

14.7. Electrical Systems.

The first essential for an electrical system to function well is a battery in sound condition;

- clean, with well-greased terminal posts
- electrolyte regularly topped up density
- kept fully charged.

If you have to leave your boat unused for more than a month it is best to leave your batteries with your yard so that they can be kept charged. Keep a suitable charger for your batteries on board if your boat is not equipped with standard A charger, so you can recharge them at dockside without having to turn on the engine.

If you have an inboard engine, check the condition and tension of the alternator drive belt. From time to time, spray a little WD 40 or something similar on all the connections to the control panel, terminal boxes and lamp sockets. Make sure that cable grommets are watertight; smear them with vaseline so that they do not dry out and perish.

14.7.1. Battery Maintenance.

Make sure that the level of the electrolyte is always at least 1/2" above the top of the plates. This level can change suddenly, due to evaporation in a overheated bilge, etc.

WARNING! THE ELECTROLYTE IN A BATTERY IS A SOLUTION OF SULFURIC ACID. IF ANY SHOULD ENTER THE EYES, RINSE IMMEDIATELY WITH LARGE AMOUNTS OF FRESH WATER, AND SEEK MEDICAL ATTENTION. ELECTROLYTE SPILLED ON SKIN SHOULD BE RINSED WELL WITH FRESH WATER. EVEN SMALL AMOUNTS OF ELECTROLYTE SPILLED ON CLOTHING WILL DESTROY THE CLOTHING.

If the level is low, top the battery up with distilled water and nothing else. The level of acidity (i.e. the relative density of the electrolyte) should also be checked from time to time.

CAUTION! USE ONLY PURE DISTILLED WATER TO REPLENISH ELECTROLYTE LEVELS. THE WATER FROM MANY CITY WATER SUPPLY SYSTEMS IS UNSATISFACTORY FOR BATTERY USE.

Keep battery connections clean and tight. A cup full of strong baking soda solution and a toothbrush will clean corrosion from the terminals and neutralize any spilled acid (do not allow any of the solution to enter the battery cells). A coating of petroleum jelly on the battery terminals will inhibit corrosion.

14.8. Water System.

Check all joints regularly for leaks. Keep the tank(s) topped up. If, however, you have to leave the boat unattended for several months, disconnect the water lines, purge them, and rinse them thoroughly with vinegar and water so that they do not form foul-smelling deposits.

Important: If an electric pump carries on running when all the taps are closed, switch off the power supply at once and check the water system to find and overcome the leak that is causing this.

Check the thru-hulls, sea-cocks, connectors and hose clamps regularly. Make sure the sea-cocks turn freely.

14.9. Marine Head

Maintenance consists of regularly pumping the system out with fresh water and leaving the holding tank empty whenever possible.

Check the thru-hulls, sea-cocks, connectors and hose clamps regularly. Make sure the sea-cocks turn freely.

14.10. Engine

Whether maintenance of the power system is to be performed by the owner or delegated to a mechanic, it is the owner who must first initiate any action that is to take place. He must either perform the maintenance or decide to call someone to do the job. A working knowledge of the power system is essential in the first case, and preventive maintenance desirable in the second. The engine manual is, of course, the prime source for engine information and should be consulted, preferably before the fact. The following paragraphs are included as a supplement to cover any required maintenance procedures that are not a part of the engine manual.

We have already stressed the points that are of importance for an engine to keep working properly. It might be added that the engine compartment should be kept scrupulously clean; check for any unusual oil or fuel leaks. Inspect all the electrical connections frequently.

Drain the bowl of the fuel/water separator at regular intervals to lessen the chance of water forming in the tanks due to condensation. Keep tanks topped-up.

Inspect the engine mounts and coupling for loose bolts regularly.

Check the alternator belt for the correct tension, keep a spare belt on hand.

Check all hoses and fuel lines for leaks regularly.

NOTE: Always have a spare set of sacrificial anodes on board, and regularly check those that are already fitted for deterioration; they should be replaced when their size has been reduced by half. The time this takes will vary with the waters in which the boat is moored. Water temperature, salinity, the presence of neighboring boats, the nature of the bottom and the materials in the dock will all affect the life of your boats anodes.

Order your spare anodes thru your dealer or from Beneteau Customer Service.

Refer to the Quick Reference Quide for the correct part no.

14.11. Sails.

Check the sails regularly, as the slightest wear in the stitching or at a reinforced part can very quickly have dramatic consequences. Keep a small sail repair kit on board and a book showing how to carry out minor work yourself until you can get the job done by a professional sail maker.

Keep a special eye on points where the sails can chafe on the rigging or fittings - turnbuckles, lifelines, shrouds, spreaders, etc.

Salt water and sunshine take their toll on sails. Whenever possible, rinse the sails in fresh water and leave them to dry stretched out - preferably on a lawn. Never dry a sail by hoisting it and letting it flog in the wind; this will very quickly cause the sail to deteriorate.

Never fold and store a sail damp.

15. WINTERIZING PROCEDURES.

The end of the season is a good time for a complete inspection of all of the boat's systems. Taking the time to put your boat away in good order will benefit an early launching in the spring.

The following sections are oriented towards hauling your boat for winter storage in a cold climate, but they are a good guideline as a lay-up procedure for your Beneteau in any climate.

At the end of the season it is easy to take shortcuts when decommissioning your boat but proper lay-up procedures will ensure trouble free recommissioning in the spring.

An improperly winterized boat will lead to costly repairs and extensive delays, we recommend winterization by a competent yard or your Beneteau Dealer. The owner must ensure that the boat is correctly winterized.

15.1. Hauling.

A good boatyard is seasoned in hauling and maneuvering boats on land. You may verify this by checking to see that the weight of the hull is resting firmly on the bottom of the keel and that even contact exists along the bottom of keel.

Jack stands, or cradle uprights, are meant to balance the boat and not to support its weight.

15.2. Bottom.

Clean the yacht's bottom of any growth as soon as the boat is hauled. It is generally preferred to wait until spring to paint the bottom.

MAXIMUM WATER TEMPERATURE TO BE 60° F. (15° C.)

MAXIMUM PRESSURE TO BE 2175 LBS./SQ FT (150) BARS AT NO CLOSER THAN 4"

15.3. Cutlass Bearing.

The shaft strut contains a rubber type cutlass bearing. At haul out, be sure the bearing slots are clear and apply silicone lubricant or castor oil to the bearing to preserve its suppleness. Replace the cutlass bearing if excessive wear is evident.

15.4. Zinc

Replace the sacrificial zinc before relaunching the boat.

15.5. Freshwater System.

This system is best winterized with one of the non-toxic antifreezes available for use in boat and recreational freshwater systems. It is an easy method which replaces fresh water with a non toxic antifreeze mixture.

Caution! Be sure to use correct non-toxic antifreeze.

1. Allow the hot heater water to cool, and open the pressure release valve on top. Disconnect the hot and cold water hoses and allow the tank to drain either in a bucket or into the bilge. Connect and clamp the hot and cold water hoses together using a short length of 1/2" pipe in order to bypass the heater.
2. Mix the appropriate amounts of antifreeze and water, as directed on the label, to deliver the degree of protection desired. Put 1-1/2 to 2 gallons of the solution into each water tank.
3. Open both tank selector valves on the manifold.
4. Turn on the pump and open all fixtures until antifreeze runs through. Be sure to open the hot water selector valve in order to supply antifreeze to the hot water hoses and through the bypass loop.

5. At this point, the freshwater system should be completely protected by antifreeze against freezing to a degree indicated by the strength of the solution placed into the supply tanks.

6. New boats delivered have their freshwater systems filled with antifreeze as described above, and are protected to -30 degrees F.

15.6. Head.

Several days before completing haul-out procedures, fresh water should be allowed to stand in the head unit to dissolve any salt accumulation in the hoses and pump. Remove all water from the head. Special lubricants for the pump's internal mechanism are available. Check with your marine hardware dealer for a recommended brand. Never put oil, gas, kerosene, or alcohol in the head or they will ruin the internal valve.

Completely pump out all waste from the holding tank and pour in a cleansing, deodorizing solution. Allow this to sit in the tank overnight, if possible, then completely pump out and drain the entire system. If antifreeze is used in the system, check in the manufacturer's literature for the recommended type.

15.7. Engine.

Winterization by a marine mechanic is highly recommended to ensure that your engine is properly protected.

Consult the Engine Owner's Manual for your specific engine's guidelines for winterizing. Follow the instructions carefully to ensure the engine is adequately protected.

The general procedure is to replace raw sea-water with an antifreeze solution mixed to protect the engine in your local area and to check the heat exchanger side to ensure that it contains an adequate antifreeze solution as well.

1. Prior to hauling the boat run the engine to achieve normal operating temperatures in order to open the thermostat.

2. Close the raw water intake thru hull and remove the hose from the valve hose barb.

3. Insert the intake hose in a bucket of antifreeze solution and run the engine briefly until all raw water is flushed thru the exhaust system and only the antifreeze solution is expelled from the exhaust.

4. Be sure the thru hull valve is opened after the boat is hauled.

15.8. Fuel System.

Consult your engine manual to clean any engine mounted fuel filters.

Drain any water from the bottom of the fuel/water separator.

The fuel tank should be kept full for winter storage with about 5% expansion room left at the top. Empty fuel tanks encourage the formation of condensation.

15.9. Batteries.

Clean battery terminals and cable ends thoroughly of any corrosion with a baking soda and water solution, and apply a light protective layer of petroleum jelly.

Batteries should be fully charged before storage, and the fluid level maintained. Store batteries in a warm, dry place. Do not store batteries directly on a stone or cement floor.

15.10. Seacocks.

Open and drain all seacocks after boat is hauled. Open all seacocks for winter storage.

15.11. Bilge.

Completely pump out bilge of any water and clean out any debris present. Bilge pumps should be pumped dry and hoses disconnected, to ensure that no water is left in the system.

15.12. Icebox.

Remove any remaining food from the icebox and wash down thoroughly with warm water and detergent solution.

Odors can be removed with a baking soda and water solution, and an open box of baking soda left in the icebox will continue to remove odors throughout storage.

Completely pump out any water from the bottom of the icebox and make sure pump is completely pumped dry of any water.

Leave icebox lid open during storage to allow ventilation.

15.13. Stove.

De pressurize system and close all valves. Clean stove thoroughly. Remove fuel tanks and clean to remove any salt accumulation from their surface. Wipe down stove and tanks with a rag while applying a light layer of WD-40 or other lightweight, protective oil.

15.14. Interior

Remove as much loose gear from the boat as possible and store in a clean dry place.

If cushions are left on board be sure they are dry and propped on edge to encourage ventilation.

Rinse and dry all floorboards and store them on their edge to encourage ventilation.

Leave all lockers clean and open for ventilation.

15.15. Covering the Boat.

Cover the boat adequately during storage to prevent excessive weathering. **BE SURE THE COVER DOES NOT CHAFE BOAT.**

Ventilation between the winter cover and the boat is required to avoid build up of humidity.

CAUTION! DO NOT USE BLACK POLYETHYLENE AND DO NOT SHRINK WRAP THE BOAT BY TAPING TO THE HULL. ALWAYS ASSURE GOOD VENTILATION.

15.16. Sails

Remove the sails, clean following the sail makers recommendations and store in a clean dry space.

15.17. Mast.

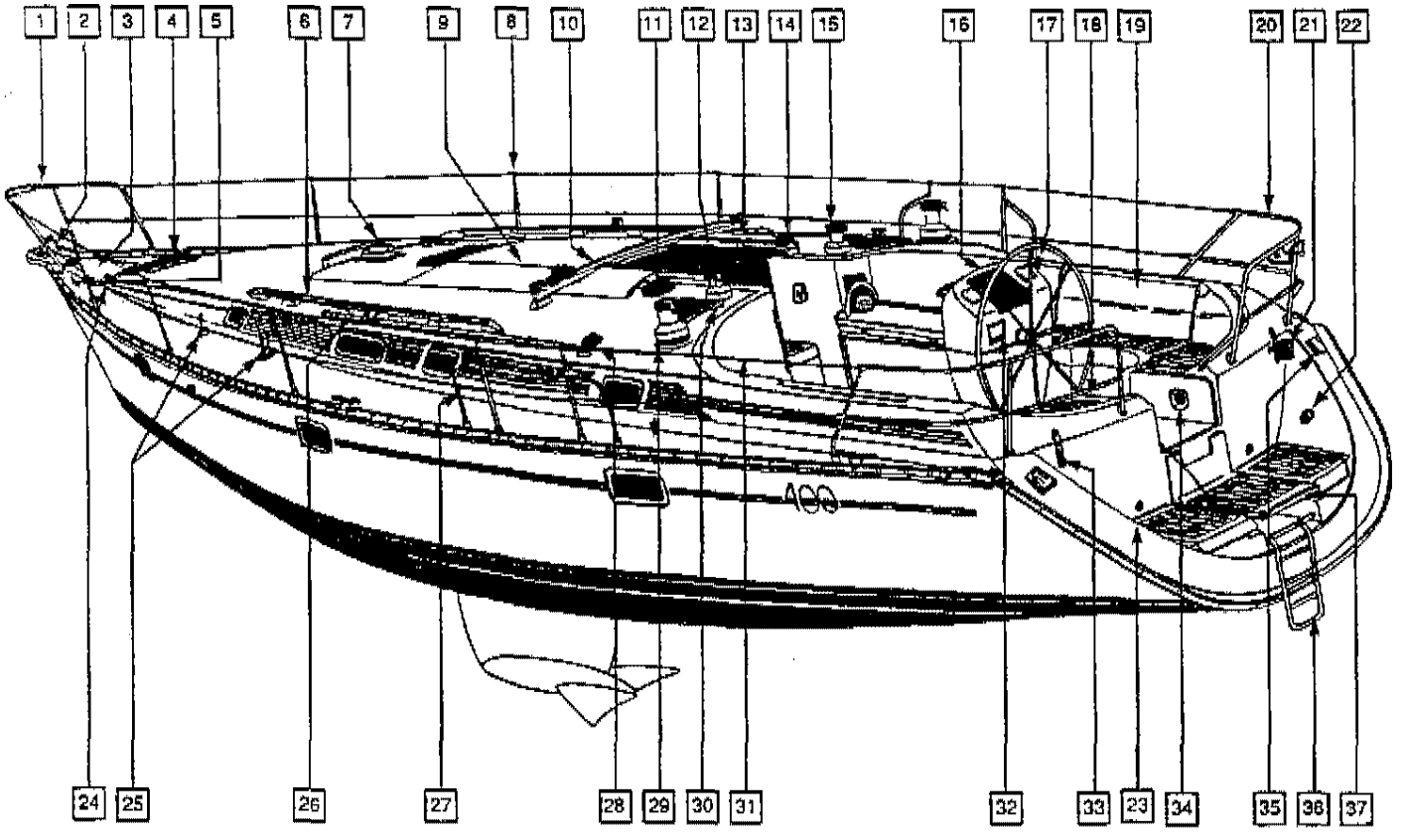
The aluminum mast requires a minimum of care and maintenance. At the end of each season it should be washed with a mild detergent and water solution, followed by a complete rinsing with fresh water. Tie off all halyards and lifts, and inspect the mast completely for scratches, cracks or stress marks. Paint, or a clear lacquer should be applied to any scratches found to prevent corrosion. Consult your dealer or a marine rigger if any cracking or stressing of the aluminum tube is found.

Check all hardware on mast carefully for signs of corrosion, and check the tightness of the fastenings. Masthead sheaves should show no signs of wear and should move freely. Lubricate if necessary.

16. SYSTEMS

16.1. DECK HARDWARE

1. Bow Pulpit
2. Stem Head Fitting
3. Anchor Locker
4. Fwd Cabin Hatch
5. Mooring Cleat
6. Handrail
7. Mast Step
8. Single Stanchion
9. Sea Hood
10. Main Traveller Track
11. Port Line Stoppers
12. Port Cabin Top Winch
13. Companionway Handrail
14. Stb Line Stoppers
15. Stb Cabin Top Winch
16. Engine Instrument Panel
17. Throttle & Gear Lever
18. Propane Locker
19. Sail Locker
20. Stb Stern Pulpit
21. Stern Light
22. Aft Holding Tank Deck Plate
23. Cockpit Drain Tube
24. Deck Padeye
25. Shroud Chainplates
26. Genoa Tracks
27. Dbl Gate Stanchion
28. Genoa Sheet Block
29. Genoa Sheet Winch
30. Cleat
31. Lifeline
32. Table Cubby Hole
33. Backstay Chainplate
34. Manual Bilge Pump
35. Engine Air Vent
36. Swim Ladder
37. Swim Platform



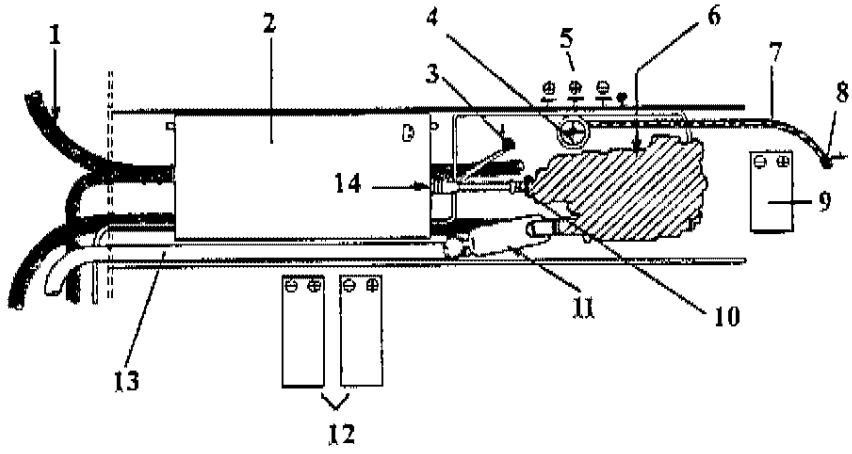
16.2. DIESEL ENGINE

General Description

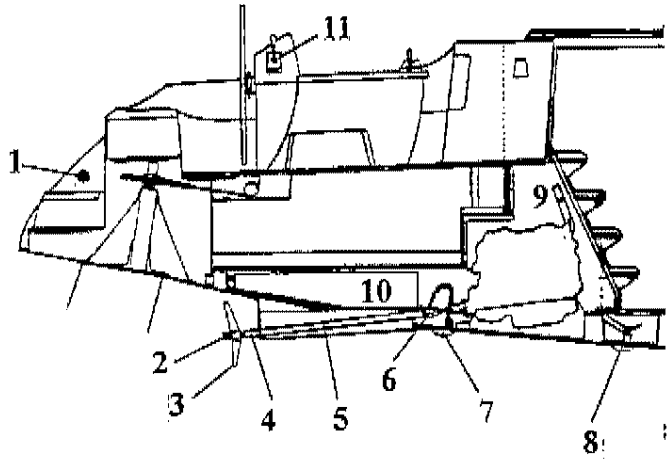
The power system installed on your Beneteau is a diesel engine. Detailed descriptions of the features of this engine, along with complete operating and maintenance procedures, are provided in the engine manual supplied with your boat

16.2.1. Engine Installation

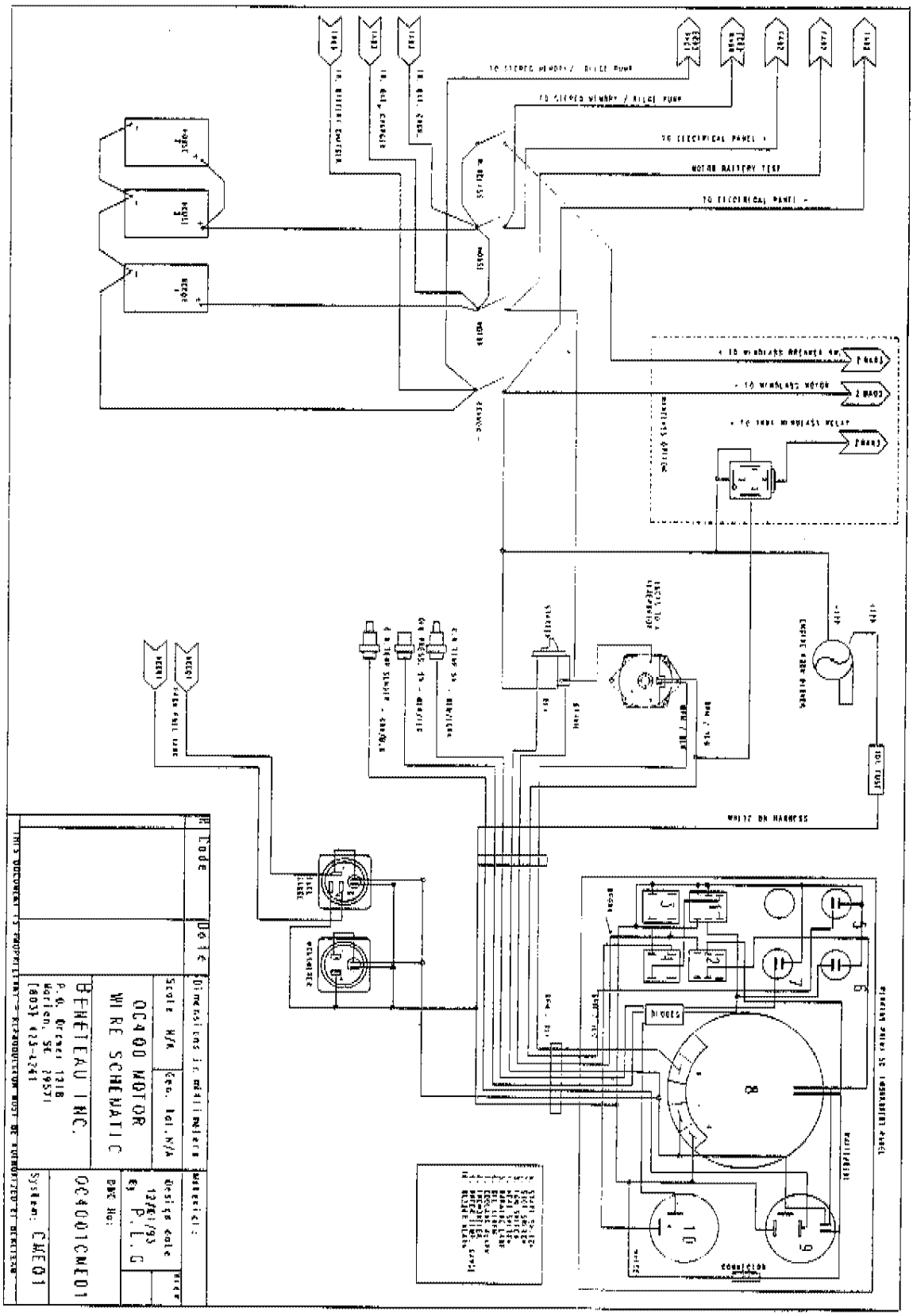
1 Engine Room Vent Hose
2 Fuel Tank
3.Stuffing Box Water Intake Thru Hull
4 Raw Water Filter
5.Battery Switches & Fuel Shut off
6 Engine
7 Raw Water Intake Hose
8 Raw Water Intake ThruHull
9 Engine Battery
10 Shaft Coupler
11 Water Muffler
12 House & Optional 3rd Battery (Sail Locker)
13 Exhaust Hose
14. Stuffing Box



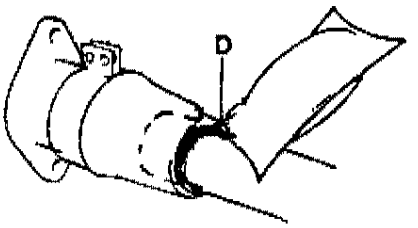
1. Fuel Fill
2. 30mm Prop Zinc (043500) & Nut (323900)
3. Blade 17 x 13 RH Prop (511110)
4. Cutlass Bearing 30x40x100 mm (059400)
5. Stern Tube
6.Stuffing Box
7. Stuffing Box Water Intake
8. Engine Raw Water Intake
9. Vented Loop
10. Fuel Tank
11. Engine Gear & Throttle Lever



16.2.2. ENGINE PANEL



16.2.3. Stuffing Box



The stuffing box is a rubber seal around the prop shaft which allows the shaft to exit the hull and keep water out.

Water is forced into the stuffing box via a thru hull and vent tube for lubrication.

Once a year or every 200 engine hours grease the seal at "D" according to the manufacturers directions.

16.2.4. Diesel Operation.

Operation of the diesel engine includes preparation for starting, running, stopping, and securing the power system after use. The following paragraphs are a general guide, with complete procedures being more thoroughly covered in the engine manual.

16.2.4.1. Additional Controls.

In addition to the control panel, the following controls are associated with engine operation.

1. Battery Switch - Although a part of the electrical system, this switch must be energized in the ON position to provide power to the engine starter motor.

DO NOT OPERATE BATTERY SWITCHES WHEN THE MOTOR IS RUNNING

2. Throttle and Shift Controls - Throttle and gear shift controls are located at the helm station.
3. Engine Stop Handle or Solenoid switch.

16.2.5. Before Starting the Engine.

1. Open the raw water intake thru hull valve.
2. Check to be sure the fuel shut-off valve is open.
3. Check the coolant level if the engine is fitted with a closed heat exchanger cooling system.
4. Check the oil in the sump and gearbox (this should be repeated after a few hours running).
5. Check the tension of the alternator drive belt.
6. Move the lever to neutral, and open the throttle a little (the mechanism will differ depending on the control box fitted).
7. Turn on the black negative battery handle and the red handle engine battery switch.
8. Always ventilate the engine compartment for 5 minutes.

16.2.6. Starting the Engine.

Insert the ignition key and turn it to "ON" (and then to the intermediate preheat position if your boat's engine has this system). A warning alarm will sound as you start up - the engine manual explains the meaning of this alarm and its operation.

Press the starter button or turn the key, as appropriate, and release the button or key, as soon as the engine is running **CHECK THE ENGINE EXHAUST FOR COOLING WATER DISCHARGE, IMMEDIATELY STOP THE ENGINE AND CHECK THE RAW WATER SYSTEM IF NO COOLING WATER IS DISCHARGED FROM THE EXHAUST** Let the engine run for a moment, and then bring the throttle lever back to the idle position. After you engage the clutch, increase the engine speed very gradually (it should take at least five minutes to reach cruising speed), because a diesel engine will warm up only when it is under load.

Do not operate the starter for more than 10 seconds at a time. If the engine does not start, wait at least 30 seconds before trying again.

Once engine has started, check that the warning lights for oil and coolant pressure have gone out, and that the batteries are charging properly.

Check that the coolant water is circulating correctly, water should be either venting through the exhaust or passing through the heat-exchanger return circuit, depending on the cooling system fitted.

NOTE: CAUTION. NEVER OPERATE THE BATTERY CIRCUIT SWITCH OR THE IGNITION KEY WHEN THE ENGINE IS RUNNING. THE RESULTING CURRENT SURGE WILL DAMAGE THE ALTERNATOR DIODES.

Engage the clutch firmly but not harshly. Do not rev the engine hard. When shifting from forward to reverse, or vice versa, the lever should be held in the neutral position for a moment before proceeding. Shifting should be performed with RPM reduced to idle.

Keep a regular watch to make sure that the coolant water is circulating properly.

16.2.7. Stopping the Engine.

To stop the engine:

1. Place throttle/transmission lever in the idle/neutral position.
2. Let engine idle for one (1) minute to allow it to cool down.
3. Engage the engine kill button until the engine stops.
4. Turn the key to the "OFF" position.

CAUTION! DO NOT SWITCH BATTERY SELECTOR UNTIL THE ENGINE HAS COME TO A COMPLETE STOP! THIS WILL PREVENT ALTERNATOR DIODE DAMAGE.

CAUTION! IF YOU CLOSE THE FUEL AND SEA WATER VALVES AFTER STOPPING THE ENGINE, BE SURE TO RE-OPEN THEM BEFORE RESTARTING. FAILURE TO DO SO COULD CAUSE ENGINE TO OVER-HEAT AND CAUSE DAMAGE TO THE PUMP IMPELLER OR CAUSE FUEL LINES TO BECOME AIR LOCKED.

16.3. FUELING

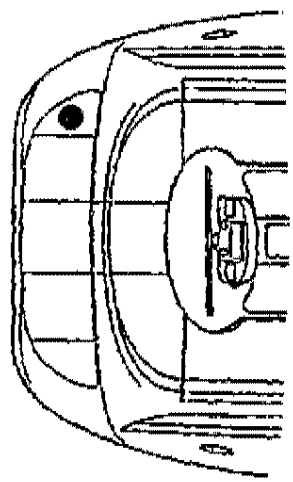
While employment of a diesel engine results in a greatly reduced fire hazard when compared to gasoline, it should be remembered that diesel fuel is flammable, and that the employment of good fueling practices are necessary. The following steps are provided as guidelines.

16.3.1. Before Fueling.

1. Extinguishing all smoking materials and check the fueling area for other sources of spark or flame. Remove if found.
2. Shut off the engine, and the electrical generator if one is aboard.
3. De-energize all electrical equipment.
4. Close all hatches and ports.
5. Ensure that a fire extinguisher is readily available.
6. Ensure that the proper (diesel, not gasoline) hose is about to be used.

WARNING! DO NOT FUEL DURING AN ELECTRICAL STORM. BESIDES THE OBVIOUS HAZARD OF LIGHTNING, THE POSSIBILITY OF STATIC DISCHARGE IS GREATLY INCREASED AT THE TIME.

16.3.2. Fueling



The diesel tank is filled thru a deck filler plate located on the port side of the transom platform (red ringed deck filler). The plug on the deck filler plate is opened by using the supplied tool (alum. winch handle #015975).

The tank is filled for the first time with the cock closed to calibrate the fuel gauge. During filling, put a funnel with a filter in the deck filler hole, and watch the fuel overflow outlet. Useful tip: to avoid staining teak on the deck with diesel oil, wash the deck with water beforehand - this will stop the oil from penetrating the wood. While filling, note how much fuel corresponds to the markings on the gauge (remembering that a small amount of fuel not consumed during the factory engine tests may remain in the tanks);

Gauge markings:	1/4	1/2	3/4	F
Note: (number of gallons per mark)	X	X	X	X

Always sail with your tanks as full as possible, both to avoid any contamination of the diesel oil with water (due to condensation in the tank), and to prevent the injector pump running dry and needing repriming.

16.3.3. After Fueling.

Replace cover, clean up any spilled fuel. If any rags, etc. were used for this purpose, dispose of them ashore.

Check below decks for presence of fumes or fuel leakage. Check bilge, engine space, and main cabin.

WARNING! IF FUMES OR EVIDENCE OF LEAKAGE IS FOUND, DETERMINE THE CAUSE, CORRECT IT, AND CLEAN UP ANY SPILLAGE BEFORE PROCEEDING.

Open all hatches and ports to ventilate the boat.

Switch on battery.

The engine should be started only when it is certain that no potentially hazardous condition exists.

16.3.4. Fuel Sanitation.

The fact that a diesel engine does not require an ignition system can, and usually does, result in an engine that is far superior to a gasoline engine with regard to dependability. Whether this is actually the case depends greatly on cleanliness of the fuel that is supplied to the engine since the close tolerances required by the engine's fuel delivery system make it extremely intolerant of any form of dirt or water contamination. The engine is supplied with filters that prevent contaminants from reaching the engine where they could cause damage, but a clogged filter, although providing this protection, can also stop an engine. Keeping the filters free of dirt and water is an obvious answer to this problem, and the cleaning schedules set forth in the engine manual will in most cases keep filters clean enough to prevent stoppage.

16.3.5. Bacterial Contamination.

A factor that can cause additinal problems is bacterial contamination of the diesel fuel. The bacteria involved need both water and fuel to exist, and if present, will thrive in a fuel tank. As they multiply, they form a filter-choking brown slime. Often their presence will not be known until rough weather churns up the fuel tank causing clogged filters at a most inopportune time.

Keeping water out of the fuel will, of course, prevent the problem entirely, and while every effort should be made towards this, such as obtaining fuel from reputable dealers, it must be remembered that a certain amount of water due to normal condensation in the tank is to be expected.

16.3.6. Fuel Additives.

Fuel additives or conditioners provide means of combating this problem. These additives break the water down to a molecular level, dispersing it throughout the fuel and allowing it to pass harmlessly through the fuel system. Various brands of this product are available at marine supply stores. As with all products of this nature, the directions on the container should be carefully followed.

16.4. STEERING SYSTEM

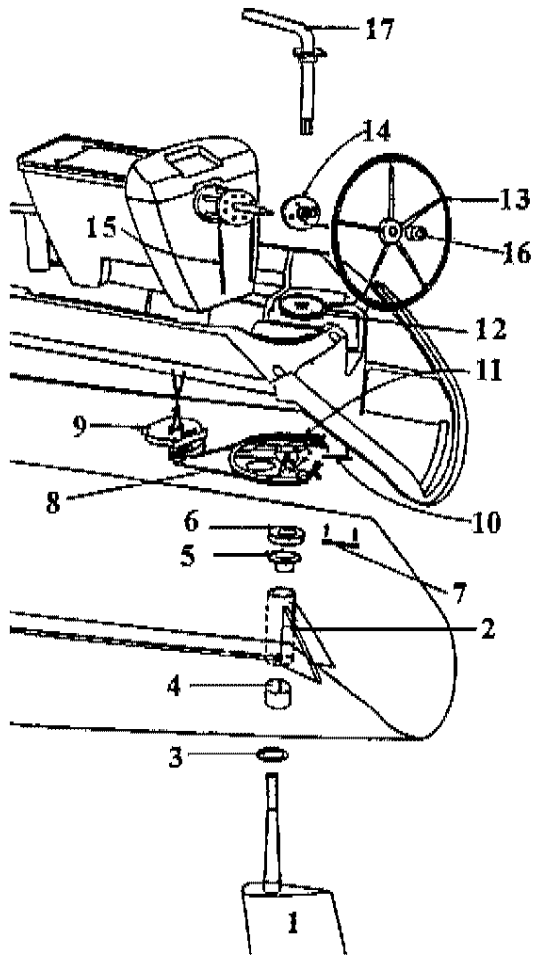
Wheel steering has become increasingly popular over the years in lieu of a tiller. Reasons for this preference include more cockpit space, and ease of steering over a long cruise.

16.4.1. Wheel Steering.

Wheel steering remotely turns the rudder on your boat using a quadrant bolted to the rudder post and connected to the wheel through a chain and cable system. A stop assembly allows approximately 90 degrees of travel, and prevents rudder over-travel which could damage the cable and chain assemble.

16.4.2. Wheel steering installation

1. Rudder
2. Rudder Tube
3. Equilibream Ring
4. Lower Rudder Bearing
5. Upper Rudder Bearing
6. Locking Ring
7. Locking Pin
8. Steering Cable
9. Lower Sheave Assembly
10. Quadrent Pin
11. Quadrant
12. Emergency Tiller Cover Plate
13. Wheel
14. Wheel Hub
15. Chain
16. Wheel Brake
17. Emergency Tiller



16.4.3. Wheel Steering Operation.

Wheel steering requires use in order to obtain familiarity with it. A feel for your boat will develop and a sensitivity to conditions will increase your control.

NOTE: When backing under auxiliary power in reverse gear, it is necessary to maintain a hold on the steering wheel the entire time. The rudder and steering wheel have a tendency to rotate with force if left un-attended while backing. This is due to the normally large area aft of the rudder post becoming the forward area, thus creating an imbalance.

The rudder stop system is designed to produce a positive stop to prevent over-turning the mechanisms of the steering system. It is not designed to absorb the potentially tremendous load of a rudder turning freely while backing. INSPECT the rudder stops on a regular basis to ensure they limit rudder travel to the correct amount, failure to limit rudder play may result in steering failure!

ALLOWING THE RUDDER AND WHEEL TO SPIN OUT OF CONTROL WHEN BACKING MAY CAUSE SERIOUS DAMAGE TO THE STEERING SYSTEM, POSSIBLY RESULTING IN A DANGEROUS LOSS OF STEERING CONTROL.

When leaving the boat at a mooring or slip, make sure the wheel brake is properly tightened. Do not allow the system to free wheel as excessive wear or damage may result.

16.4.4. Emergency Tiller.

As a safety precaution on your Beneteau, an emergency tiller has been provided as a backup to the wheel steering system. Remove the deck plate with a winch handle and slip emergency tiller into top of rudder post.

PRACTICE USING THE EMERGENCY TILLER AND BE SURE ALL CREW MEMBERS KNOW THE LOCATION AND OPERATION OF THE EMERGENCY TILLER

16.5. FRESH WATER SYSTEM.

16.5.1. General Description.

The deck plug to fill the tanks is opened by using a supplied tool (black plastic winch handle #231400) included as part of the boat's tool kit or with a standard winch handle.

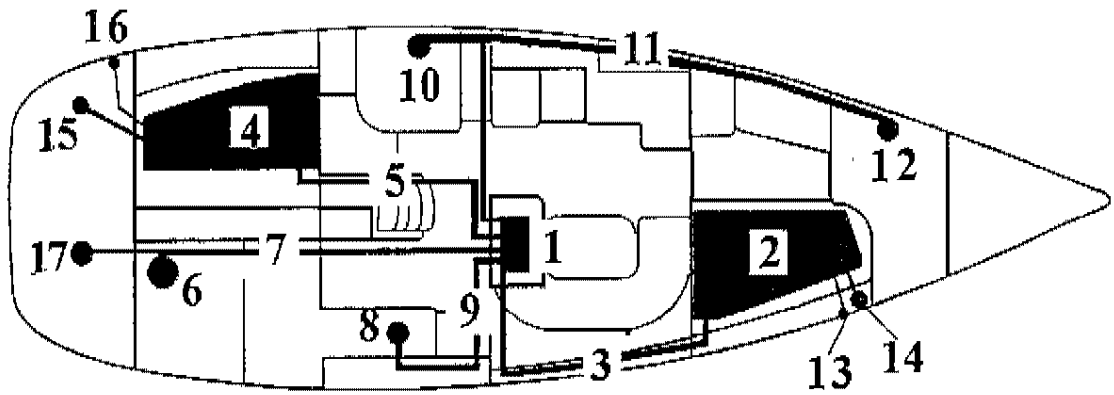
The fresh water system supplies the galley sink, head wash-basins, head showers and the transom shower The water is drawn from the tanks via an electric pump (take care not to run an electric pump with an empty tank, as this will ruin it beyond repair). and distributed to the hot and cold water syatems thru tank selector switches and a manifold.

16.5.2. Operation.

1. Fill the water tanks.
2. Select the tank for use at the valves on the manifold.
3. Turn on the fresh water pump at the panel.
4. Open all taps and bleed off any trapped air in the lines until the water runs clear with no sputtering.
5. Close all taps and the pump will turn off when it reaches operating pressure. If the pump continues to cycle check all fittings for leaks.

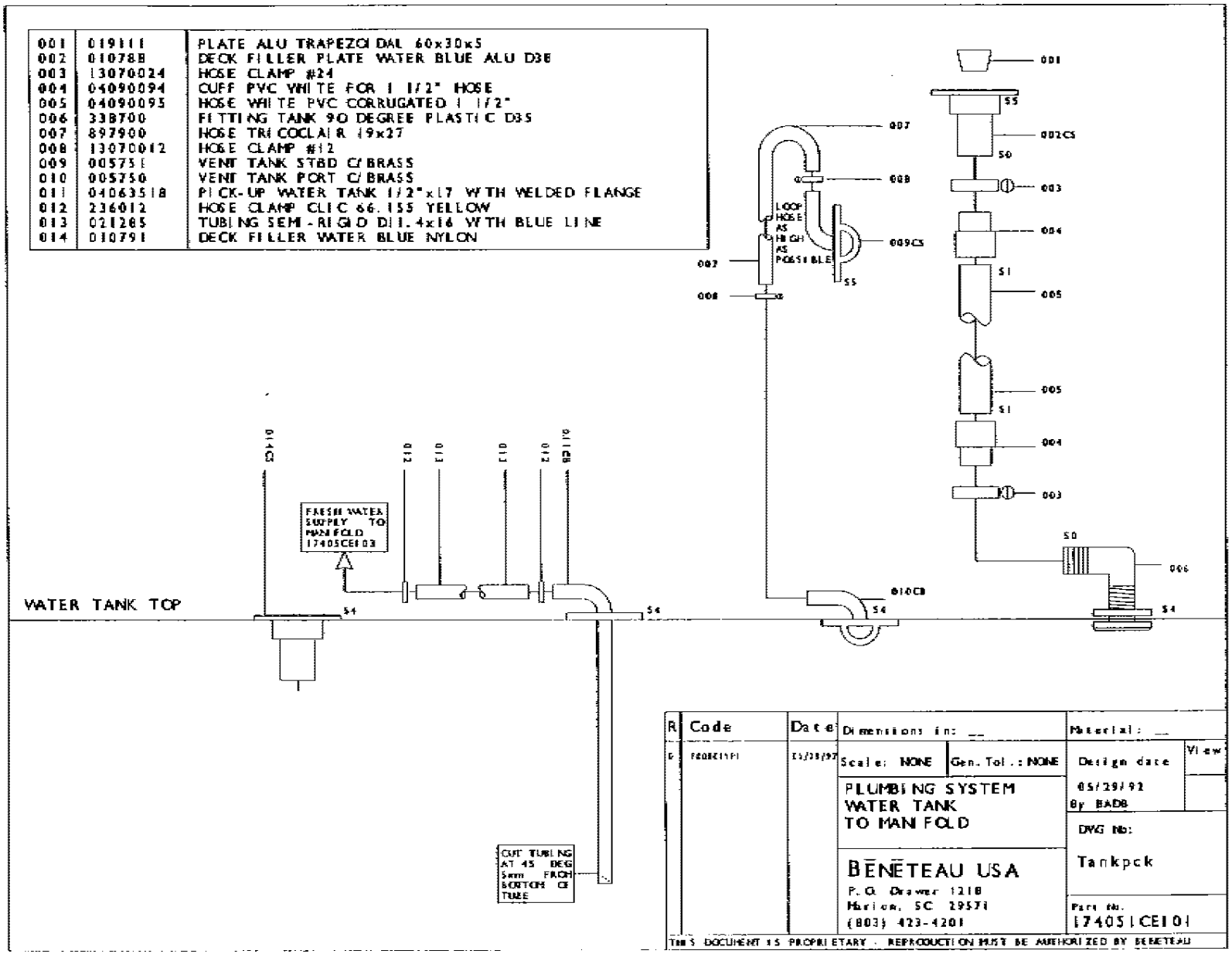
- Never top up with water and diesel at the same time if the filling points are close to each other, to avoid the risk of contaminating one liquid with the other.
- Similarly, avoid risk of contamination by never handling a product that might cause polution close to the deck fill while taking on water.
- If unused for a long time, the tanks and pipes need to be flushed with a solution of acetic acid (solution of vinegar and water).
- The sink and wash-basins are drained through their own through-hull valves; these should be kept closed when the fresh water system is not in use.

16.5.3. Fresh Water Drawings

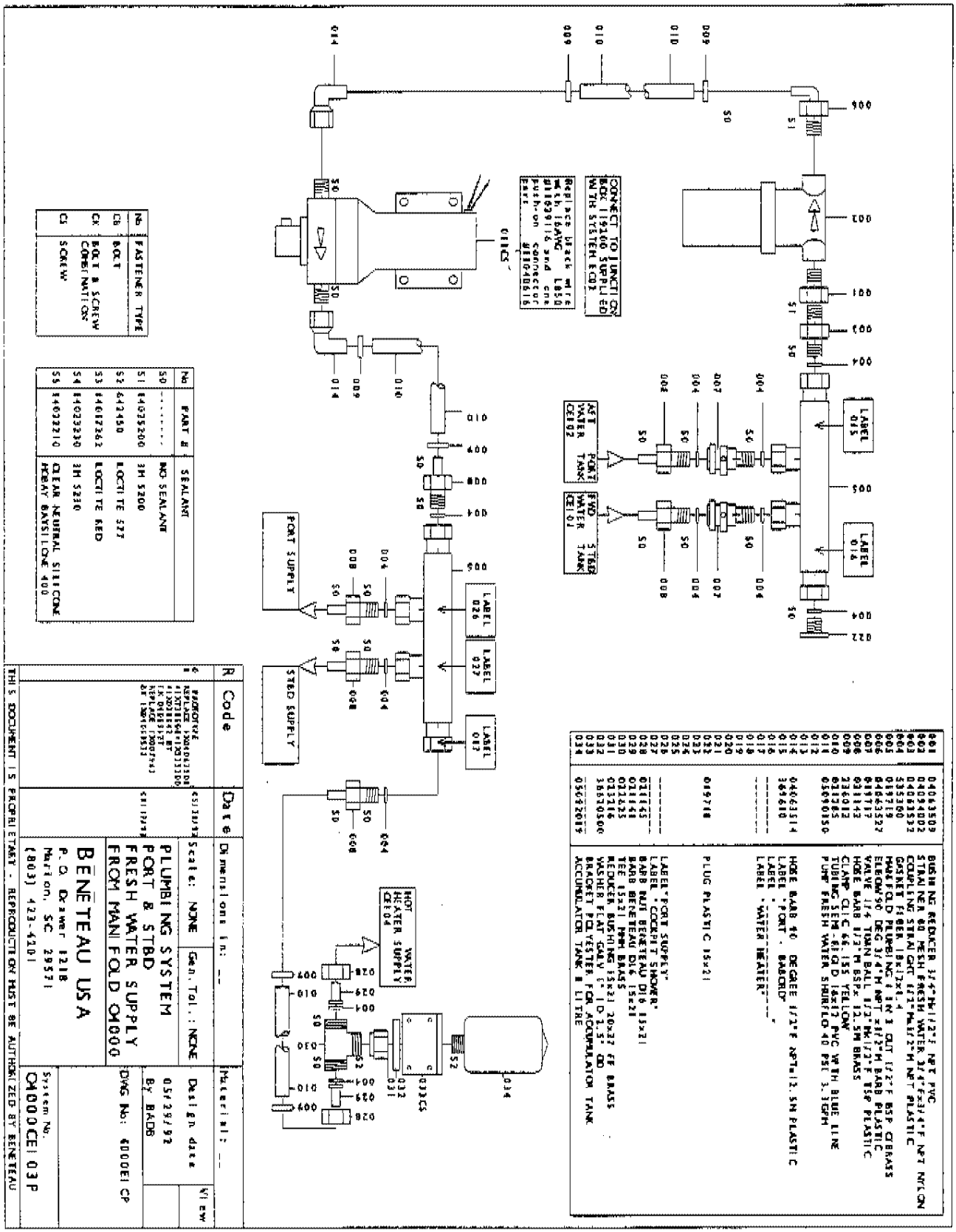


1. Pump House (Under Aft Midship Setee)
2. Fwd Water Tank
3. Fwd Water Tank Supply Line
4. Aft Water Tank
5. Aft Water Tank Supply Line
6. Hot Water Heater (Starbord Sail Locker)
7. Hot Water Heater & Transom Shower Supply Lines
8. Galley Sink
9. Galley Sink Supply Lines
10. Aft Head Sink & Shower
11. Head Supply Lines
12. Fwd Head Sink * Shower
13. Fwd Water Tank Vent
14. Fwd Water Tank Deck Fill
15. Aft Water Tank Deck Fill
16. Aft Water Tank Vent
17. Cockpit Shower

Water Tank Pickup



Pump house fresh water system located under the aft inboard setee in the main saloon.



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16.6. INTAKE & DISCHARGE THRUHULLS

16.6.1. General Description.

This is used for draining the bilge, shower sumps, icebox. and supplying and flushing out the heads. All these supply and flushing points have 1/4-turn valves, which must be opened only during use. The quarter-turn valve is open when the lever is in line with the pipe, and closed when it is at right angles.

16.6.2. Safety - Maintenance.

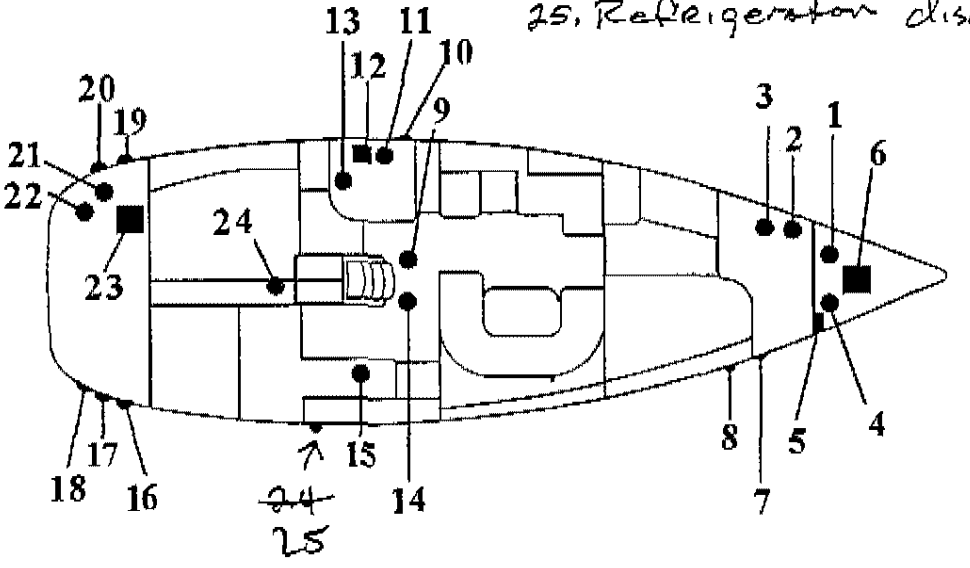
Take special care to see that these valves are well-maintained, have a good seal and work smoothly. Have a wooden tapered plug, of correct diameter at hand, so that they can be plugged on the outside if, for instance, a seized valve has to be dismantled, or lubricated.

After hot water has been run through a pipe for the first time, check the tightness of all the clamps.

NOTE: These recommendations also apply to the cooling system of the inboard engine, if your boat has one.

16.6.3. Thru Hull Drawing

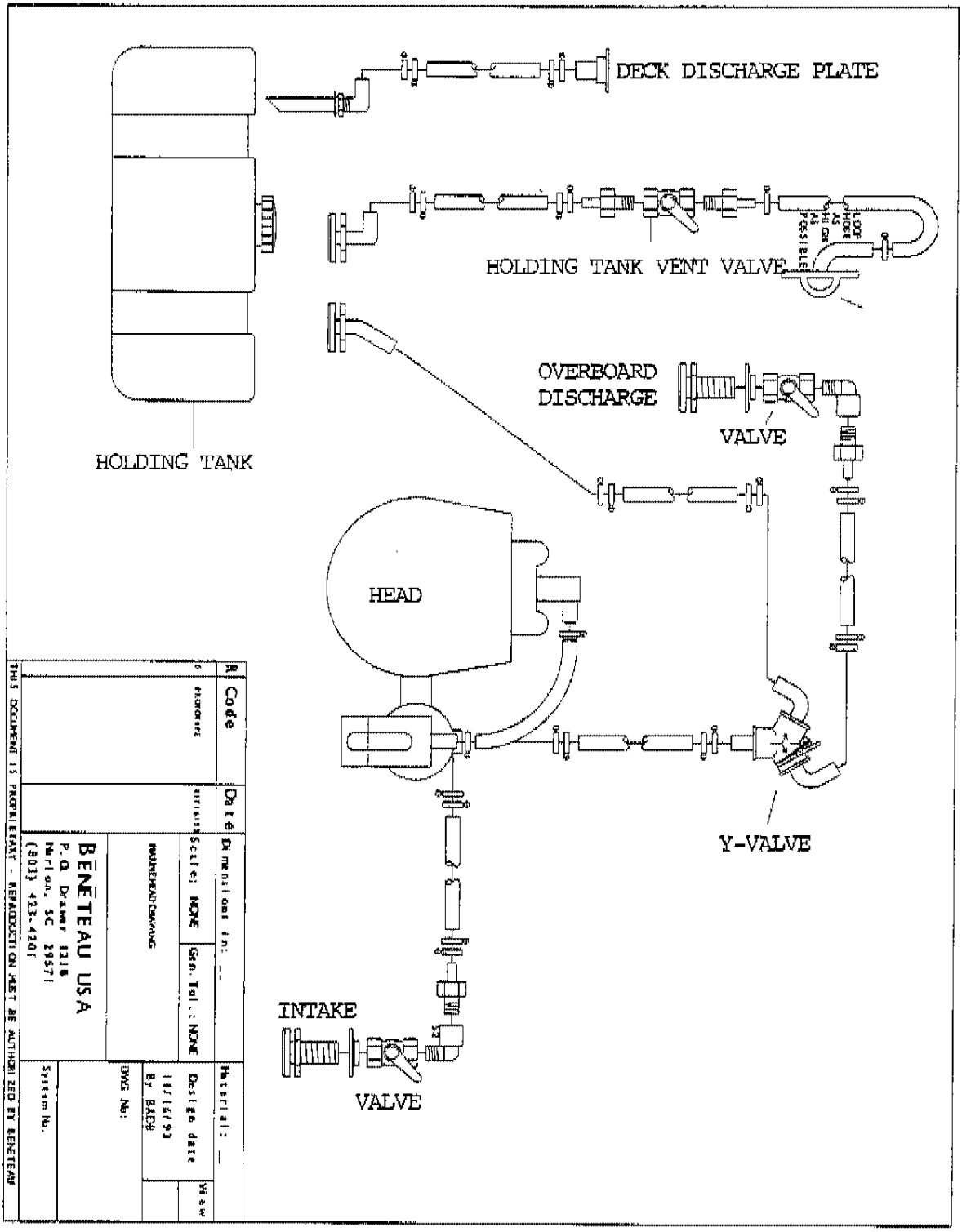
1. Fwd Head Sink Drain
2. Fwd Head Shower Discharge
3. Fwd Head Discharge
4. Fwd Head Intake
5. Y-Valve
6. Fwd holding tank
7. Fwd Holding Tank Vent
8. Fwd Water Tank Vent
9. Raw Water Engine Intake
10. Aft Shower Discharge
11. Aft Head Sink Drain
12. Y-Valve
13. Aft Head Discharge
14. Aft Head & Refrigeration Intakes
15. Galley Sink Drain
16. Electric Bilge Discharge
17. Manual Bilge Discharge
18. Engine Exhaust
19. Aft Holding Tank Vent
20. Aft Water Tank Vent
21. Gas Locker Drain
22. Port Sail Locker Drain
23. Aft Holding Tank
24. Stuffing Box Water Intake
25. Refrigerator discharge



16.7. MARINE TOILET & HOLDING TANK

16.7.1. General Description

The marine sanitary system consists of a marine toilet (head), a holding tank and a series of thru hull intakes, discharges and valves to control the intake of water into the head to flush the bowl either into the holding tank or overboard.



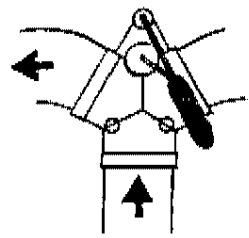
16.7.2. Head Operating Procedure.

The marine heads on your Beneteau are installed below the water line, all valves must be closed after use and the selection lever on the head must be returned to the dry bowl position. Failure do do so could result on the bowl overflowing and flooding the boat with water.

1. Read the instructions for use supplied by the head manufacturer and the precautions marked on the pump.
2. Before use, make sure that the water supply thru-hull valve is open, the holding tank vent line valve is open and the Y-valve is selected for discharge into the holding tank.

BY LAW YOU MUST USE A HOLDING TANK IN ALL US WATERS

3. Check with local authorities for regional laws governing your area before selecting the overboard discharge option. If you choose overboard discharge option, be sure the discharge thru-hull valve is open before using the head. Select the overboard discharge position on the Y-valve by turning the lever in the opposite direction of the overboard discharge hose.



4. Select "Flush Bowl" with the selection lever on top of the pump body and pump the handle until the bowl is flushed clean. Return the selection lever to "Dry Bowl" and pump the handle until the bowl is dry. The holding tanks capacity is approx. 12 gallons, limiting pump strokes will maximize its use.
5. **CLOSE THE VALVES AFTER USE.**

16.7.3. Holding Tank Pump Out Procedure

The holding tanks are pumped out thru deck plates located on the starbord transom and in the forward anchor locker. Consult your dealer or your marina for the closest pump out facility in your area.

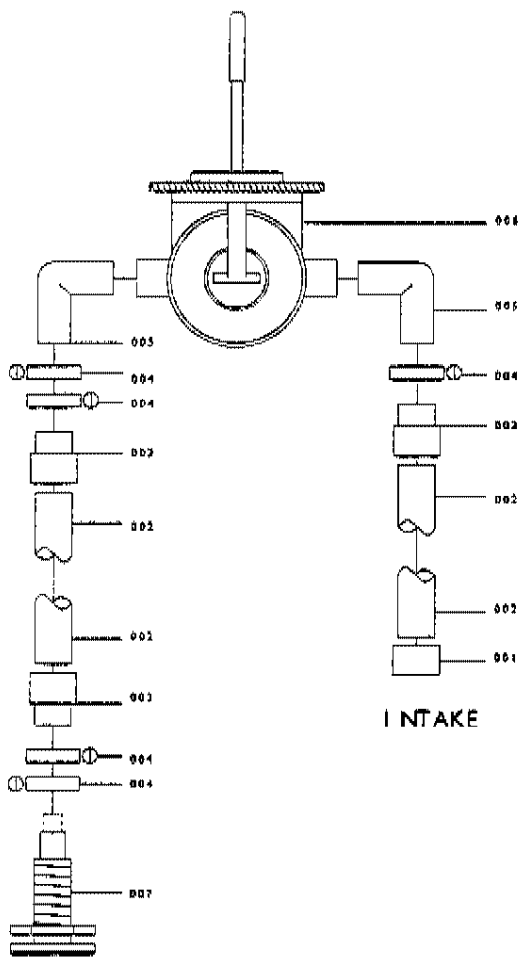
1. Be sure the holding tank vent line valve is open.
2. Open the deck plate with a winch handle and insert the pump out hose into the deck fill,
3. Follow the pump out stations operating procedure to pump all of the effluent from the tank.
4. Flush the tank by pumping water thru the head into the tank or by inserting a hose into the deck fitting to add fresh water and then pump the tank again.
5. Close the deck fitting.

16.8. BILGE PUMPS

16.8.1. Manual Bilge Pump

The manual bilge pump is located on the starbord side of transom walkthru. To operate the pump open the transom gate, insert the pump handle into the socket and pump vigorously The intake of the hand-pump is at the bottom of the bilge sump, and discharges through the side of the hull on the starbord aft corner.

001	891900	PIPE PVC D43x50
002	04090095	HOSE WHITE PVC CORRUGATED 1 1/2"
003	04090094	CUFF PVC WHITE FOR 1 1/2" HOSE
004	13070024	HOSE CLAMP #24
005	737510	ELBOW 90 DEG PLASTIC D38
006	019178	BILGE PUMP MANUAL W LEVER AND GASKET
007	825100	THRU HULL SERRATED PLASTIC 33x42



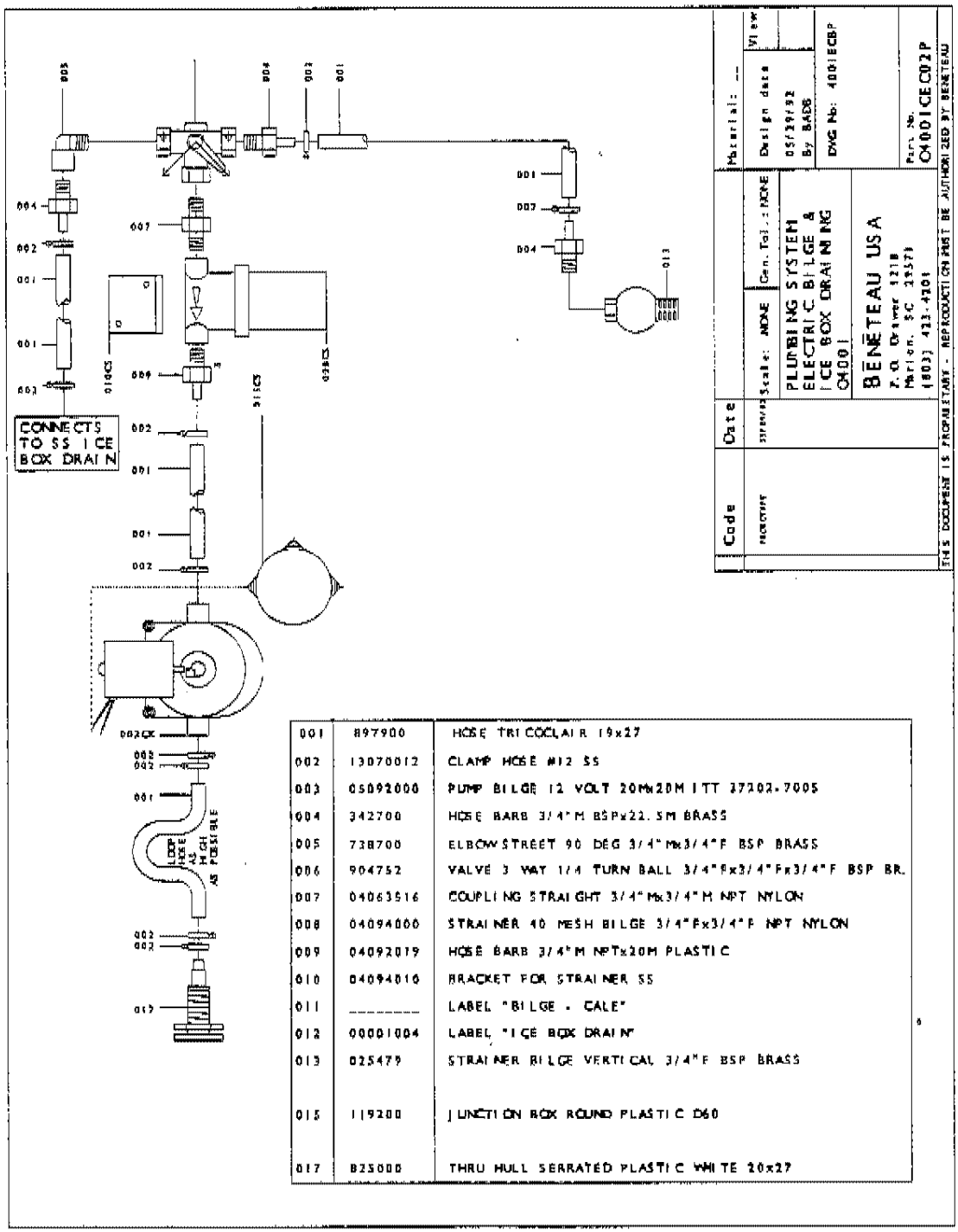
BENETEAU USA
P.O. Drawer 1216
Marion, SC 29571
(803) 423-4201

PLUMBING SYSTEM
MANUAL BILGE
DRAINING 400

Code
Date
Scale: NONE
Dimensions in: --
Gen. Tol.: NONE
Material: --
Design date: 05/29/02
By: BADE
DWG No: 400CE01
Part No.
View

16.8.2. Electic Bilge Pump

The electric bilge pump drains both the bilge pump and the galley ice box. The pump, Y-Valve and filter are located in the pump house under the aft inboard setee in the main saloon. To drain the bilge or icebox select the correct Position with the valve and turn on the pump. The pump is controlled from a switch on the main 12V panel. Be sure to clean the filter between the pump and sump carefully, at regular intervals. To clean the filter unscrew the body and wash out the filter sceen.

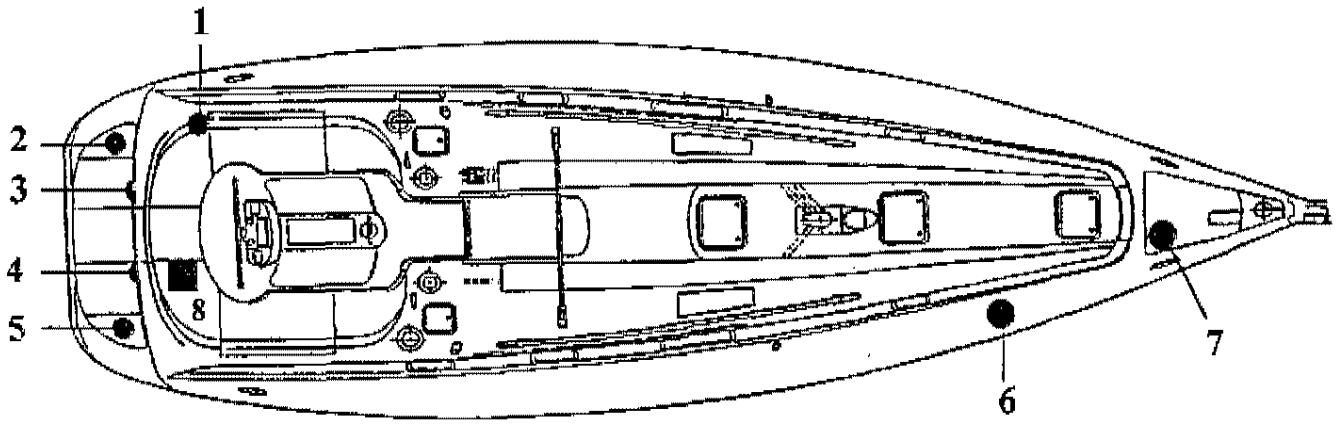


001	897900	HOSE TRICOCLAIR 19x27
002	13070012	CLAMP HOSE M12 SS
003	05092000	PUMP BILGE 12 VOLT 20Mx20M ITT 37202-7005
004	342700	HOSE BARB 3/4"M BSPx22.5M BRASS
005	738700	ELBOW STREET 90 DEG 3/4"Mx3/4"F BSP BRASS
006	904752	VALVE 3 WAY 1/4 TURN BALL 3/4"Fx3/4"Fx3/4"F BSP BR.
007	04063516	COUPLING STRAIGHT 3/4"Mx3/4"M NPT NYLON
008	04094000	STRAINER 40 MESH BILGE 3/4"Fx3/4"F NPT NYLON
009	04092019	HOSE BARB 3/4"M NPTx20M PLASTIC
010	04094016	BRACKET FOR STRAINER SS
011	_____	LABEL "BILGE - CALE"
012	00001004	LABEL "ICE BOX DRAIN"
013	025479	STRAINER BILGE VERTICAL 3/4"F BSP BRASS
015	119200	JUNCTION BOX ROUND PLASTIC D60
017	825000	THRU HULL SERRATED PLASTIC WHITE 20x27

BE CAREFUL NOT TO WASH THE O-RING SEAL OUT OF THE FILTER

16.9. DECK FILLER & DISCHARGE PLATES

1. AFT WATER TANK DECK FILL #010788
2. FUEL DECK FIL #010785
3. PORT COCKPIT DRAIN TUBE
4. STARBOARD COCKPIT DRAIN TUBE
5. AFT HOLDING TANK DECK PICKUP #623700
6. FWD WATER TANK DECK FILL #010788
7. FWD HOLDING TANK DECK PICKUP #623700
8. MANUAL BILGE PUMP



16.10. SELF- DRAINING COCKPIT.

The cockpit is drained thru 2 tubes located at the outboard aft corners of the cockpit. Make sure that these drainholes are not blocked.

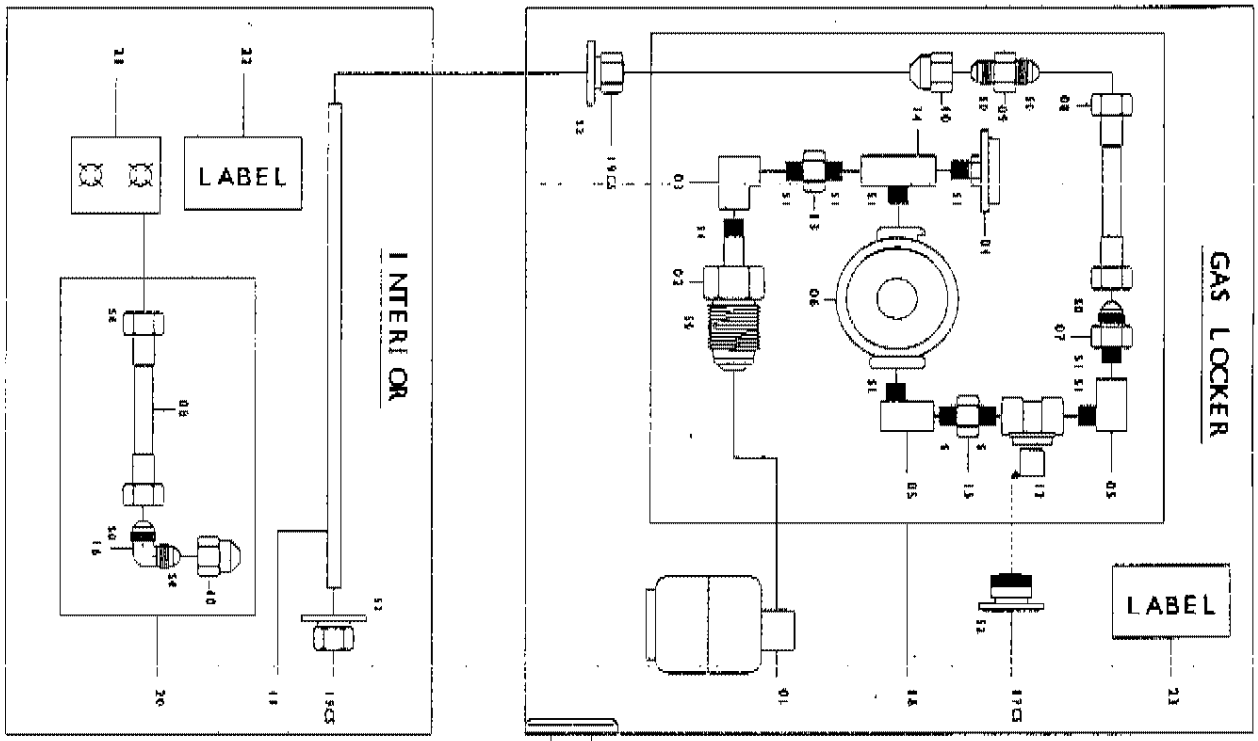
When using the cockpit as a "workshop" plug drainholes with large cork bungs to avoid the loss of any nuts or bolts which you may accidently drop.

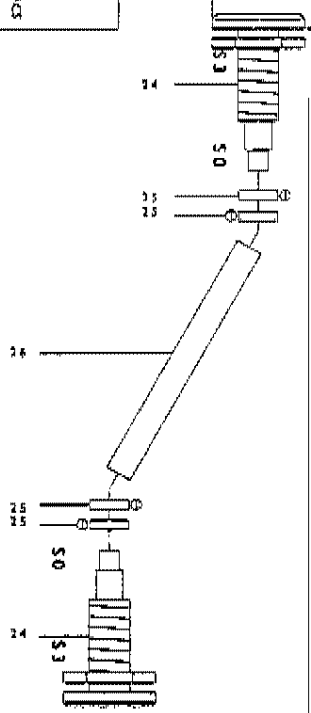
16.11. PROPANE.COOKING SYSTEM

16.11.1. Propane System Description.

Your Beneteau is equiped with a propane combination steve and oven. This unit is located in the galley and is gimbaled for your safety and comfort in a seaway. The stove is supplied by a storage bottle located in a self draining locker in the cockpit. The pressurized gas is fed thru a regulator at the bottle which reduces the pressure and feeds the propane gas to a 12V solenoid valve. The solenoid is a remotely controled valve which turns the flow of gas on and off from a switch located at the 12V distribution panel. A pressure guage is located before the regulator to check the gas system.

16.11.2. Propane Drawing





GAS DRAIN

IMPORTANT

THRU-HULL ON HULL MUST BE INSTALLED LOWER THAN THRU-HULL IN GAS LOCKER.

DRAIN HOSE MUST LEAD DIRECTLY TO THRU-HULL ON HULL - MAKE SURE IT HAS NO KINKS OR LOOPS.

No.	BENETEAU PART #	DESCRIPTION
01	04010032	LPG CYLINDER ALUMINIUM 10 LBS
02		SOFT HOSE EXCESS FLOW P.O.L. (7/8" x 1/4" NPT)
03		ELBOW 1/4"
04		GAUGE 300 PSI
05		STREET ELBOW 3/8"
06		SINGLE STAGE L.P. REGULATOR BODY
07		FLARE CONNECTOR MALE 3/8" x 3/8" NPT
08		HOSE ASSEMBLY 24"
09		FLARE UNION MALE 3/8" x 3/8"
10		FLARE NUT 3/8" FORGED
11	10010024	COPPER TUBING TYPE K 3/8"
12		SOLENOID LOW PRESSURE TYPE 0-4 PSI
13		HEX NIPPLE 1/4"
14		MALE BRANCH TEE 1/4"
15		HEX NIPPLE 3/8"
16		ELBOW MALE FLARE 3/8" x 3/8"
17	641000	DECK GLAND D88
18	04010041	PROPANE LOCKER KIT #2
19	11080024	DECK GLAND D10
20	04010051	STOVE HOSE KIT #2
21	04010004	STOVE SS 2 BURNER GAS TAUNTON
22	00001011	LABEL WARNING PROPANE STOVE
23	00001000	LABEL WARNING PROPANE LOCKER
24	835000	THRU-HULL SERRATED PLASTIC WHITE 20x27
25	13070012	CLAMP HOSE #12
26	897900	HOSE TRICOCLAIR 19x27

16.11.3. Operation

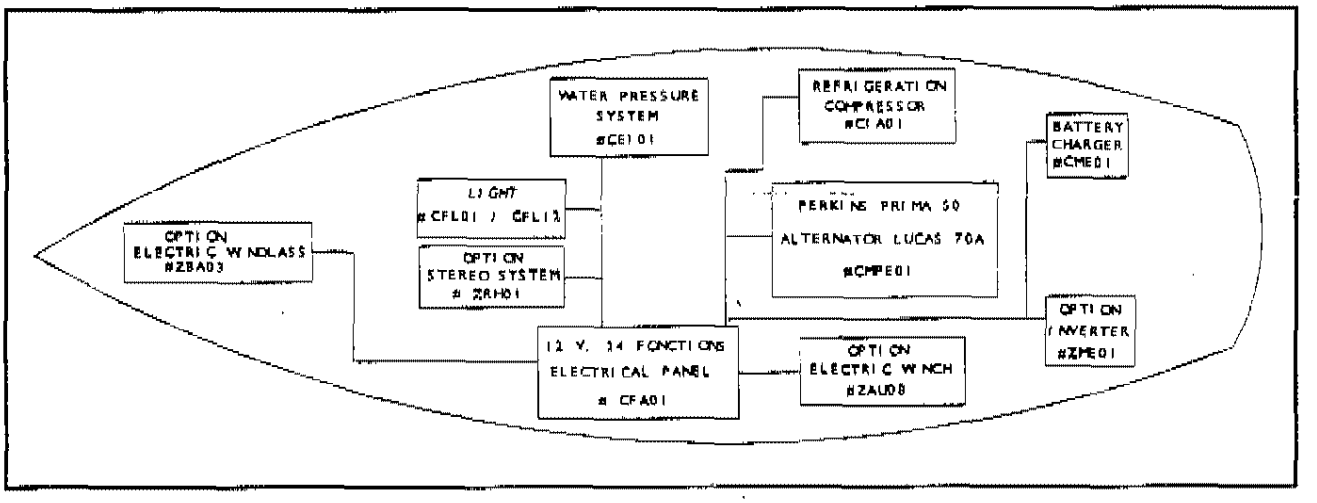
WARNING ALWAYS LEAVE BOTH THE SOLENOID VALVE AND THE VALVE ON THE GAS BOTTLE CLOSED WHEN THE STOVE IS NOT BEING USED

1. Read and follow the instructions printed on the propane warning labels located at the appliance and under the lid of the gas storage locker.
2. Be sure all burner and oven knobs are in the off position before attempting to operate the galley stove.
3. Activate the main 12V system and be sure the solenoid switch is in the off position.
4. Open the supply valves and test the system for leaks following the instructions on the locker warning label.
5. Light the appliance in accordance with the stove manufactures procedures. Generally each burner is lit by turning the burner control knob to the lighting position and then pushing the knob in. A saftey thermocoupler will keep the valve open as long as the burner remains lit. If the flame goes out it will stop the gas flow to the burner.

If the odor of gas is detected at any, time turn off all electrical and mechanical systems, extinquish any open flames and immediately check for a propane leak. Propane is a heavy gas and may settle in the bilge which represents an explosion and fire hazard.

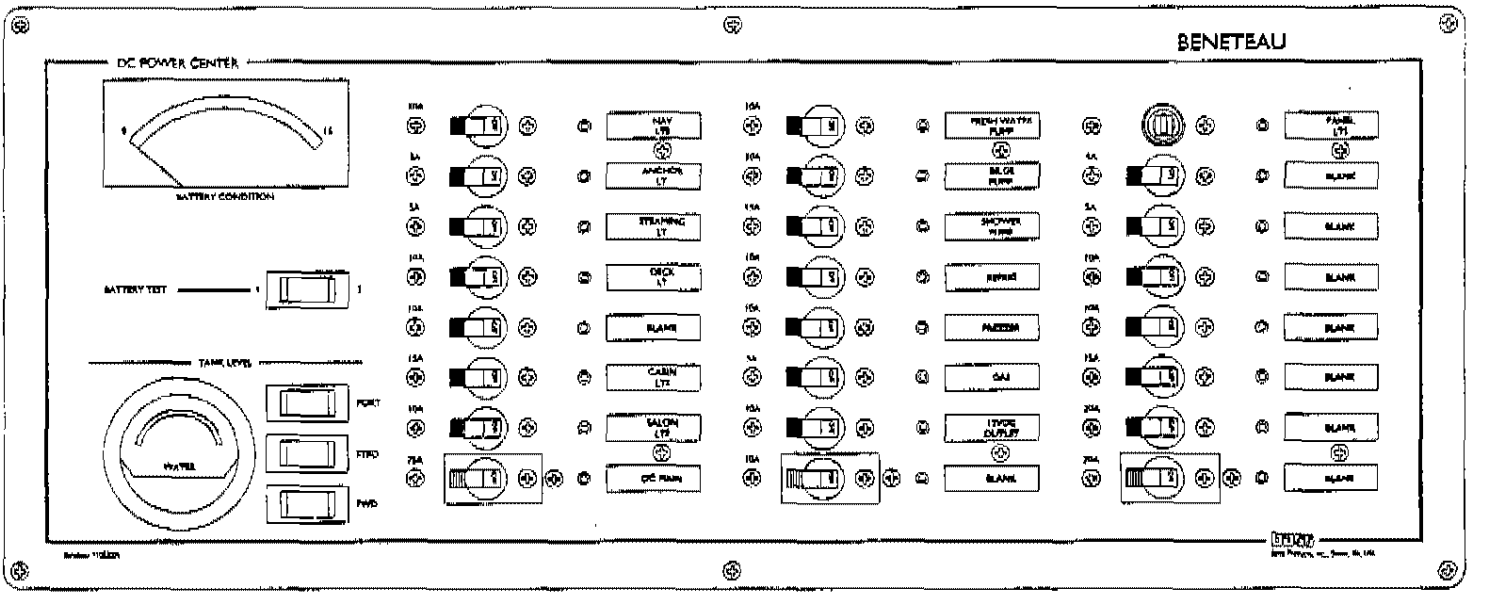
16.12. 12V SYSTEM

16.12.1. *System Schematic*

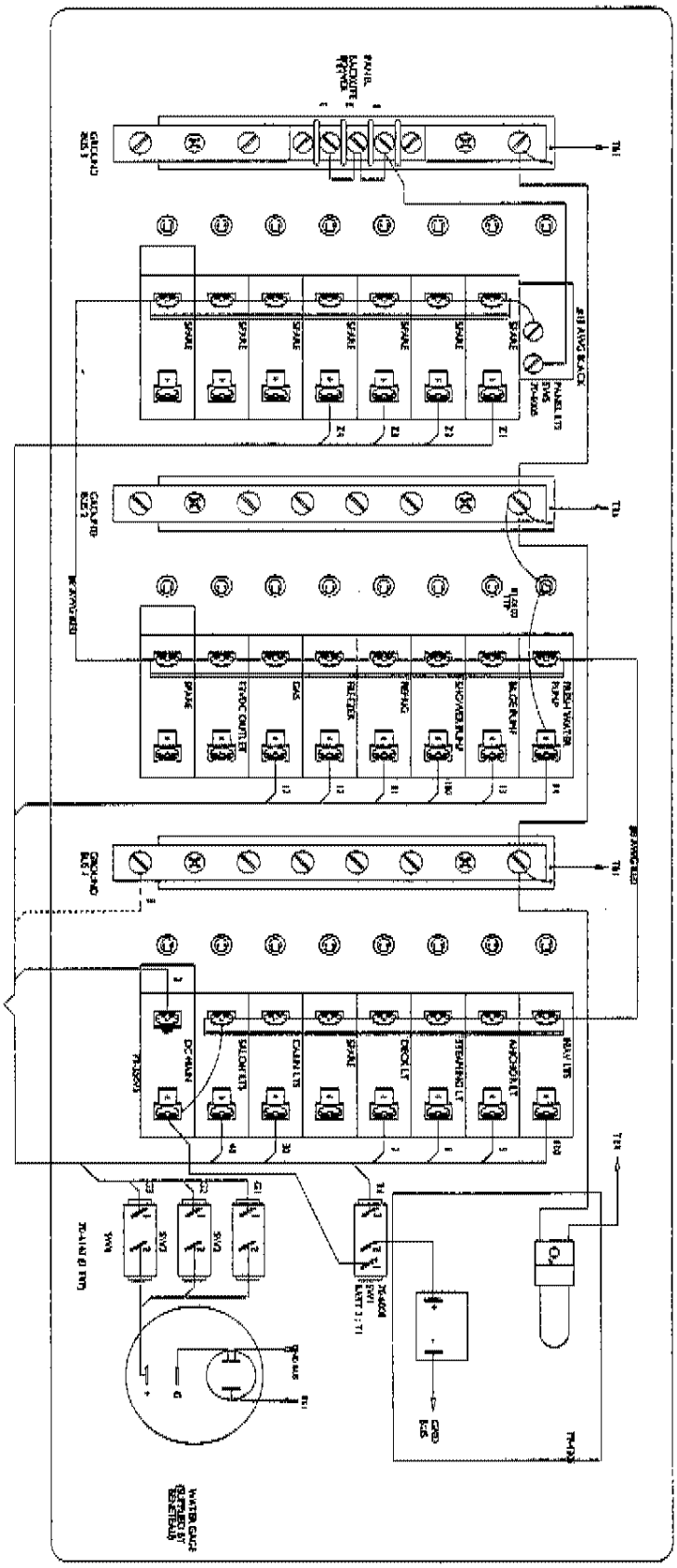


16.12.2. 12V Distribution Panel

The 12V power from your batteries is distributed throughout your boat via a distribution panel. This panel seperates the current into seperate circuits. Each circuit is protected by an individual breaker switch which allows you to turn the individual circuits on or off as needed at the panel. Each breaker switch has an individual amperage rating which it is designed to trip at in case it is overloaded.



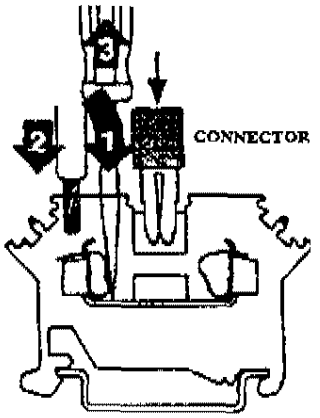
16.12.3. Panel Wiring Schematic



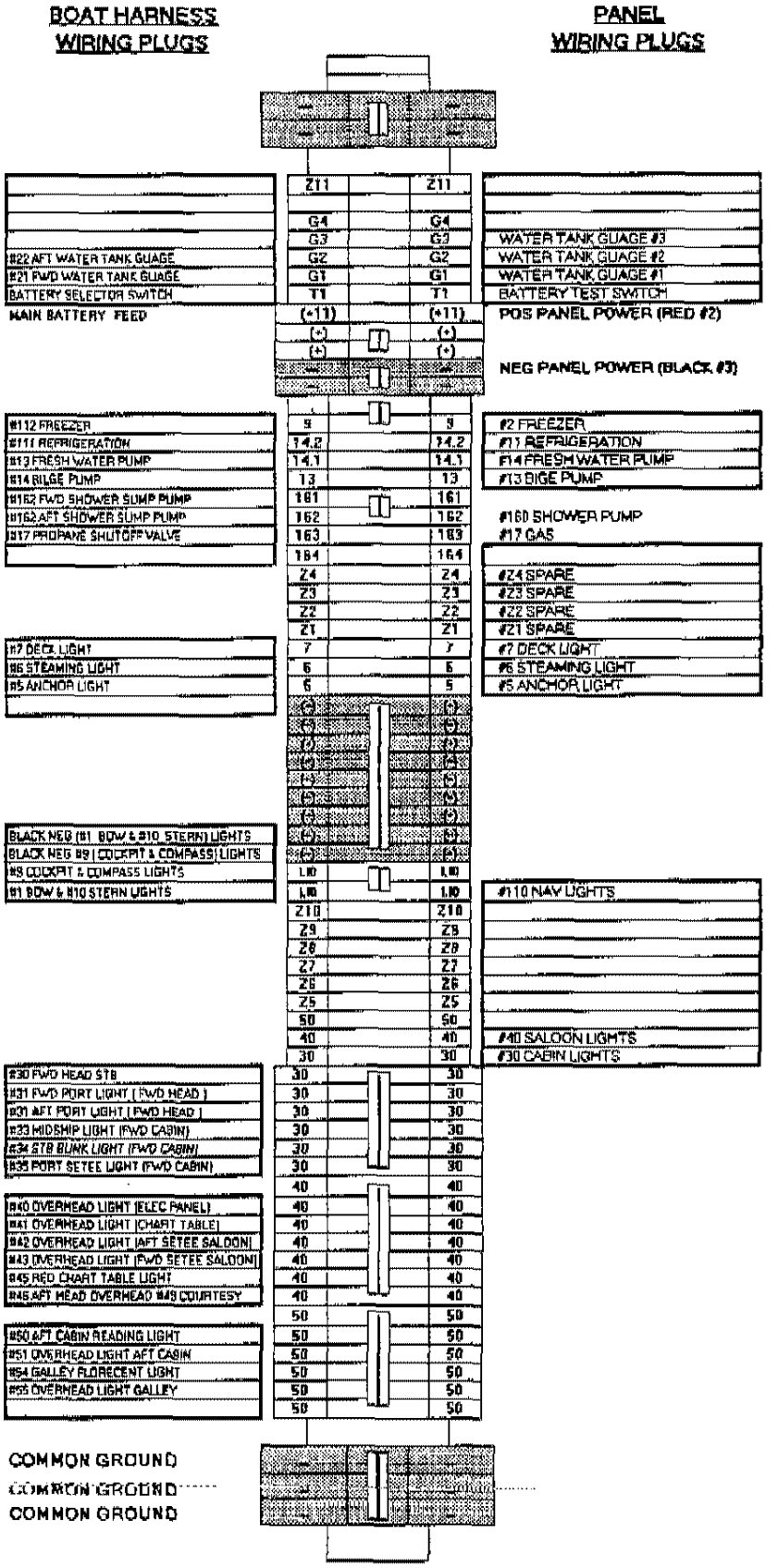
16.12.4. Wago Drawing

The panel is wired to the boat thru a "wago" wiring block strip.
The boat's wiring harness and the panel are connected together at the wiring block strip using a series of plugs.from each that snap onto opposite sides of the wiring block strip.
Each of the boats positive 12V circuits connect to it's circuit breaker in the panel this way, ie:Wire #7 "Deck Light' connects across the wiring block to circuit breaker #7 on the panel.
The negative side of the circuits lead to a common ground.

Each strip on the wago wiring block is an individual block mounted side by side on a frame to form the wiring block strip.
These individual blocks can be connected to the blocks on either side of it to create a larger circuit as in the saloon lights.

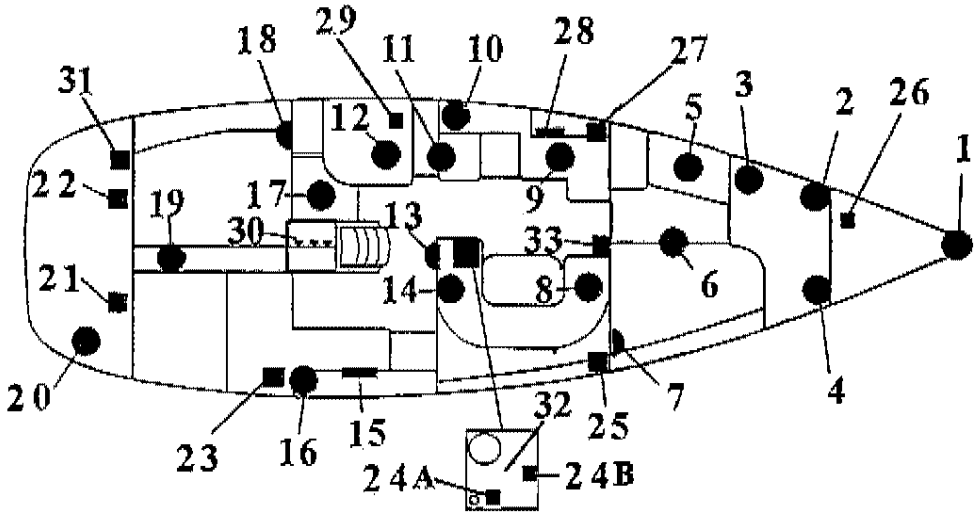


Wires are inseted into the block by:
1. Inserting a small screwdriver into the inside hole and pressing down.
2. Inert the wire.
3. Remove the screwdriver remove wires by inserting the screwdriver and pulling out the wire.



16.12.5. LIGHT NO.'s & WIRES NO.'s

1.	Bow Light	13.	#49 Courtesy Light	24b	#13 Elec Bilge Pump
2.	Fwd Head/Fwd Port Overhead light	14.	#42 Aft Setee Overhead Light	25.	#191 #192 fan Wires
3.	Fwd Head/Aft Port Overhead Light	15.	#54 Galley Florecent Light	25.	#272 Stereo Speaker Wires
4.	#30 Fwd Head/Fwd Stb Overhead Light	16.	#55 Galley Overhead Light	26.	#Fwd Head Shower Sump
5.	#35 Fwd Cabin Port Setee Light	17.	#51 Aft Cabin Overhead Light	27.	#193 Fan Wire
6.	#33Fwd Cabin Overhead Center Light	18.	#50 Aft Cabin Reading Light	27.	#272 Stereo Speaker Wire
7.	#34Fwd Cabin Stb Reading Light	19.	#9 Cockpit/Compass Light	28.	12V Panel
8.	#43 Fwd Setee Overhead Light	20.	#10 Stern Light	29.	#162 Aft Head Shower Sump
9.	#40 Elec Panel Overhead Light	21.	#274 Stb Cockpit Speaker	30.	Battery Switches
10.	#45 Red Chart Table Light	22.	#273 Port Cockpit Speaker	31.	#17 Propane Soleniod
11.	#41 Chart Table Overhead Light	23.	#111 Refrigeration #112 Freezer	32.	#142 Spare to Panel
12.	#46Overhead Light	24a	#14 Fresh Water Pump	33.	#5,6,7 Mast Lights

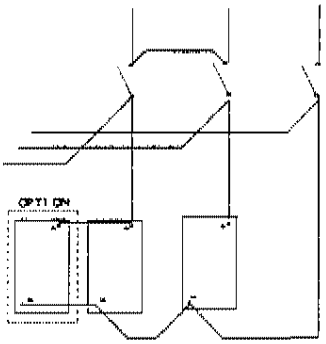


16.12.6. BULBS

Light	BEN #	Wattage
Cockpit	11082000	
Chromed Overhead Halogen	011976	12V / 5W
Red Nav Station	020105	12V / 10W
White Overhead Halogen	022340	
Galley Florecent	667610	12V / 8W
Cabin Reading Lights	016634	12V /5W
Courtesy Light	855700	
Stern Light	388060	
Bow Light	387550	
Deck Light	11060003	12V / 10W
Steaming Light	11060003	12V / 10W
Masthead Light	11060001	12V / 20W

16.12.7. Batteries

The power for the boat's electrical circuits and that of the inboard engine comes from one engine battery and one or more house 12V batterie(s).These are of the traditional lead accumulator type, and require a certain amount of regular maintenance. They need to be very carefully stowed and secured.



WARNING! NEVER OPERATE ISOLATING SWITCHES WHILE THE ENGINE IS RUNNING - DOING SO COULD DAMAGE THE ALTERNATOR DIODES AND REGULATOR BEYOND REPAIR.

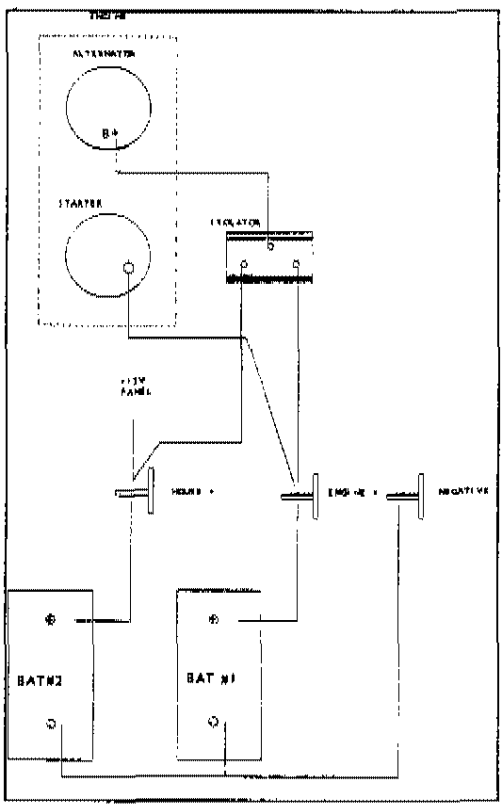
The amount of charge the battery is receiving can be checked on the voltmeter, which is graduated in either volts. This should be done when the battery is cold and has not been recharged or used for several hours beforehand. A reading of less than 11,5 V means that recharging is necessary.

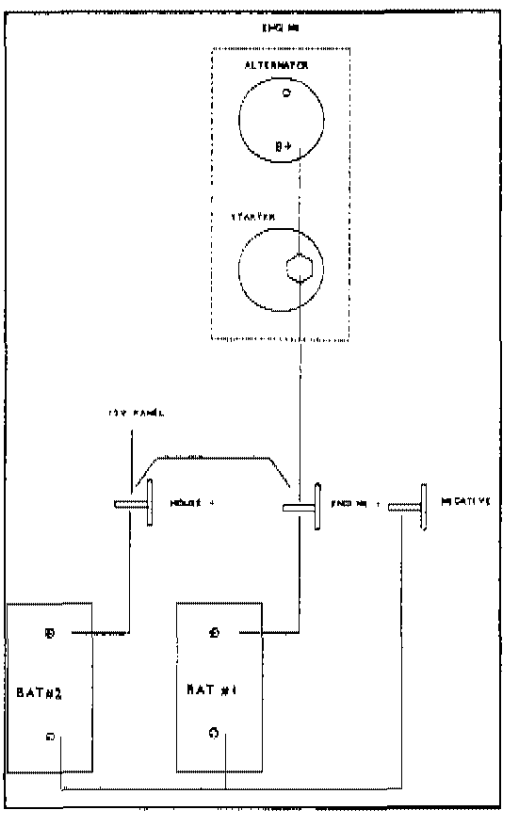
16.12.8. 12VCharging System

The batteries must be recharged by one of the following ystems:

16.12.8.1. Alternator

A belt drive alternator is mounted to the engine which produces 12V as needed by the batteries when the engine is running. The output of the alternator is wired to the battery switches



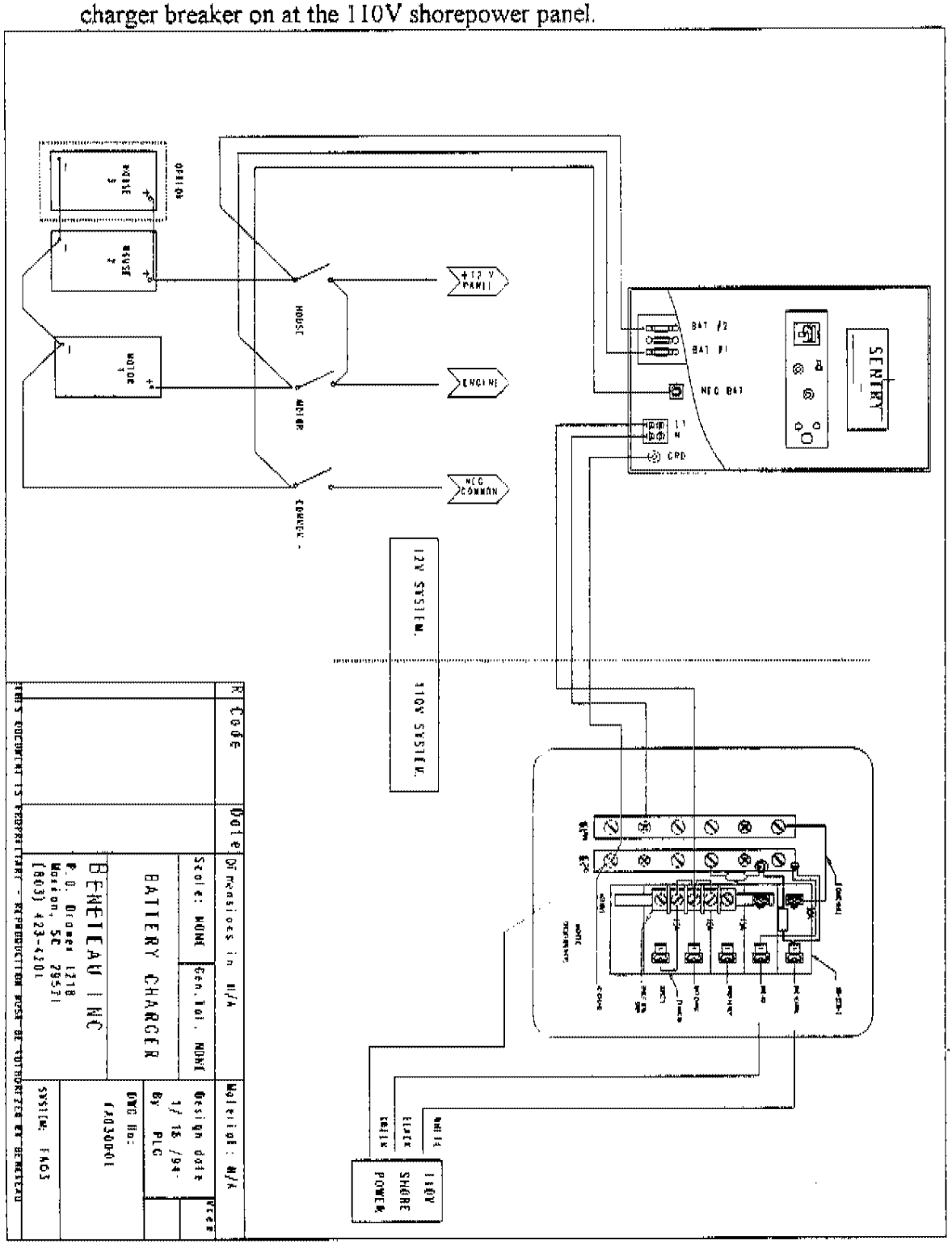


16.12.8.2. Battery Charger

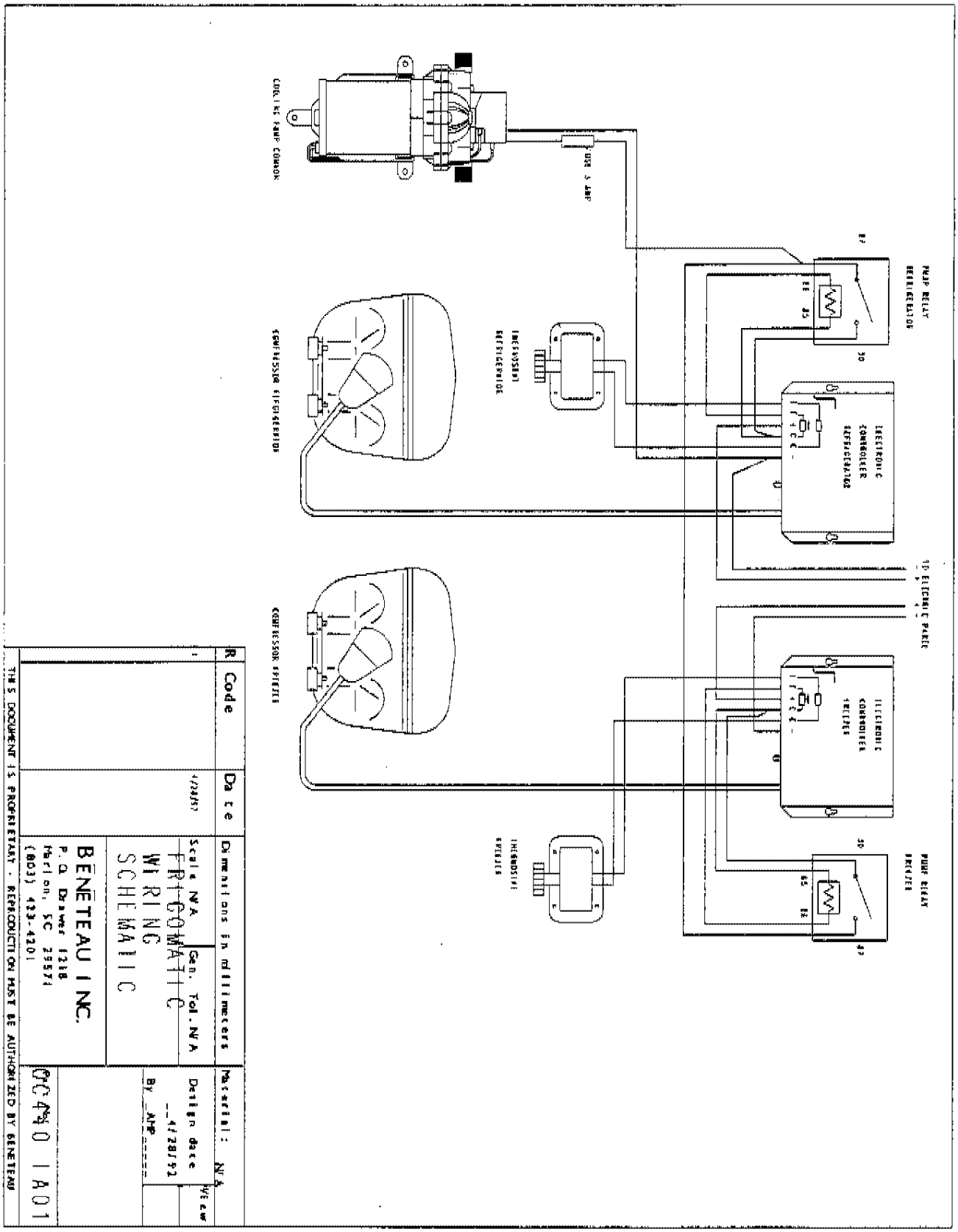
A marine battery charger is wired into the 110V shorepower system. This charger converts the AC dock power to 12V DC and feeds it to the batteries.

DO NOT OPERATE THE CHARGER WHEN THE ENGINE IS RUNNING

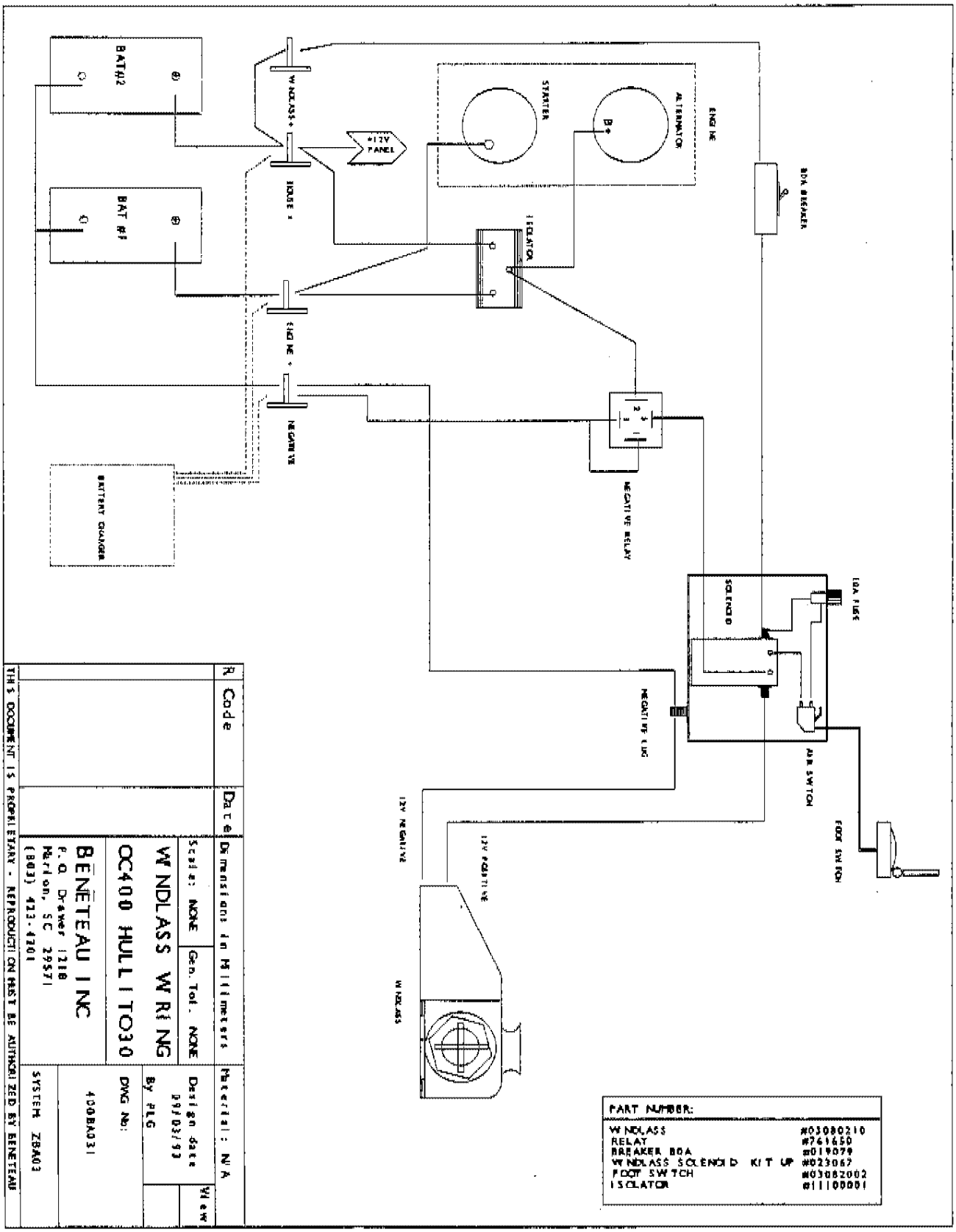
The battery charger is completely automatic, refer to the charger's manual for complete details. To charge the batteries using the charger: plug in the shorepower cord and turn the charger breaker on at the 110V shorepower panel.



16.12.9. Refrigeration



16.12.10. OPTIONAL ELECTRIC WINDLASS INSTALLATION HULL 1 - 30



16.12.12. Windlass Operation

The windlass is used to raise and lower your ground tackle (anchors, chains and rodes), refer to the windlass owners manuals for proper operation. As a general quide please observe the following procedures.

Control the speed of the chain running over the gypsy as the anchor is being released **.ALLOWING THE CHAIN TO RELEASE FREELY MAY CAUSE THE CHAIN TO JUMP FROM THE GYPSY DAMAGING THE WINDLASS, THE BOAT OR CAUSE PERSONEL INJURY.**

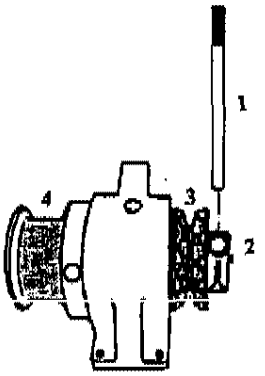
Set the anchor by engaging the engine in reverse briefly. Do not set the anchor by pulling in with the windlass.

Always make the anchor rode fast on a cleat when the anchor is set. Do not rely on the windlass brake to hold the boat. **THE MOTION OF THE BOAT AT ANCHOR CAN CAUSE LOADS ON THE ANCHOR RODE THAT MAY DAMAGE THE WINDLASS.**

Always motor the boat up to the anchor as you take in on the rode. **NEVER PULL THE BOAT UP TO THE ANCHOR WITH THE WINDLASS.**

NEVER BREAK THE ANCHOR OUT USING THE WINDLASS, CLEAT THE RODE OFF AND USE THE ENGINE TO BREAK OUT THE ANCHOR.

16.12.12.1. Mechanical Windlass Operation

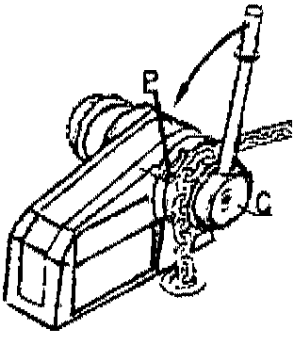


To release the anchor insert the windlass lever (#1) in the spoked nut (brake #2) on the starbord side of the windlass and slowly release the nut by moving the lever aft. Control the speed of the chain over the gypsy (#3)by increasing the tension on the the brake nut (push the lever forward to increase the tension).

When enough rode has been played out set the brake nut by pushing the lever forward.

To use the windlass to raise an anchor: wrap the anchor rode around the port side drum (#4) or be sure the chain is engaged in the gypsy then insert the lever into one of the holes on the drum (port side) and move the lever back and forth (the brake must be set for this operation). Each for and aft motion will take in on the anchor rode (you must take in and maintain tension on the anchor line if the port side drum is used.)

16.12.12.2. Optional Electric Windlass Operation



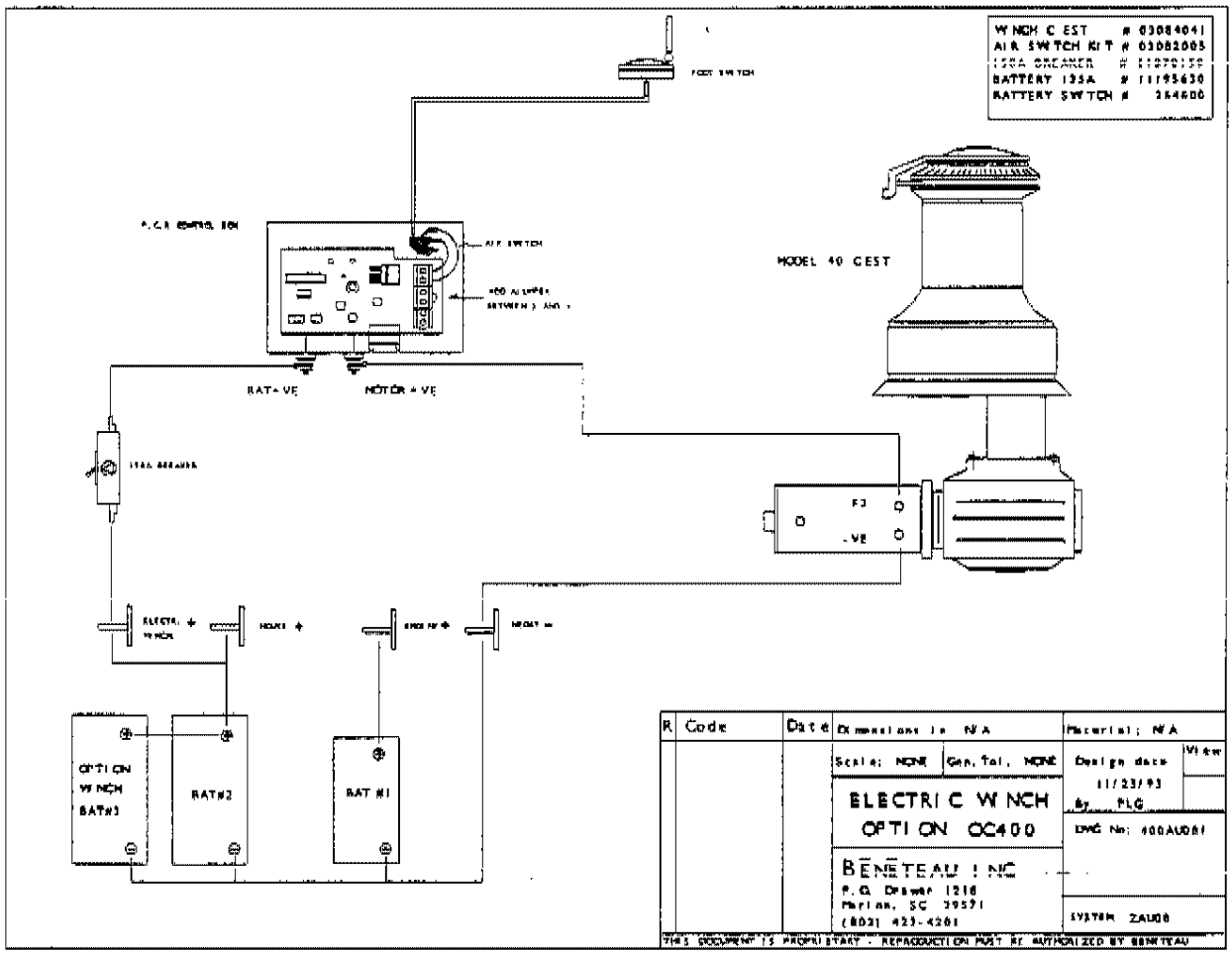
The electric windlass is released in the same manner as the mechanical windlass by inserting the lever in the starbord brake nut (C) and pulling the lever aft to release the brake. Be sure the gypsy pawl (P)is pulled up to allow the gypsy to rotate clockwise.

To raise the anchor using the electric windlass the engine must be running and the main red handled windlass battery switch must be turned on (turn the switch on before starting the engine).

Push the gypsy pawl (P) forward and downwards to allow the gypsy to rotate counterclockwise.

To begin hauling in on the rode: wrap the anchor rode around the port side drum or be sure the chain is engaged in the gypsy then step on the foot switch to engage the electric motor.(you must take in and maintain tension on the anchor line if the port side drum is used.)

16.12.13. Optional Electric Winch



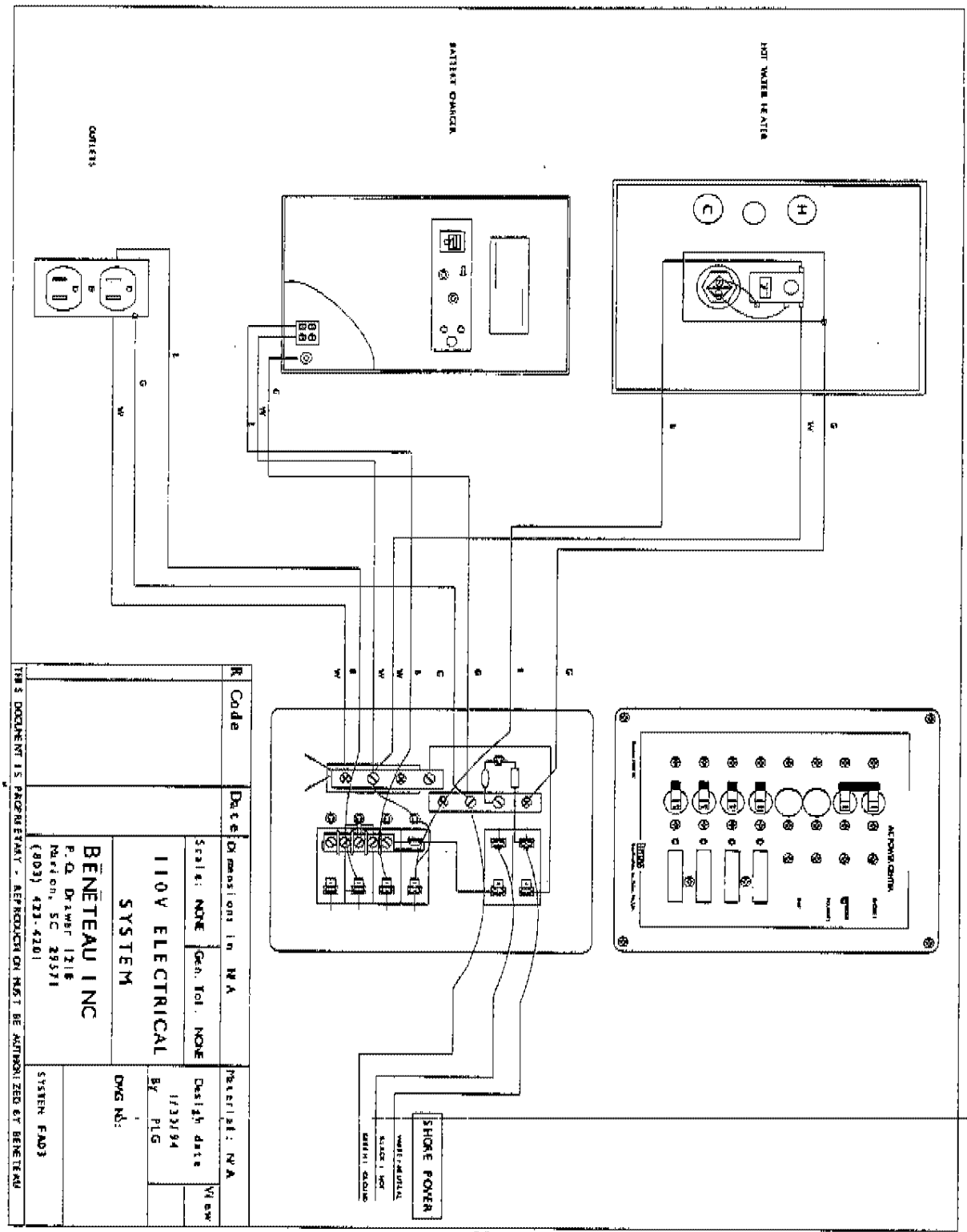
16.13. 110V SHOREPOWER SYSTEM

The shorepower system consists of a marine power cord adapter plug mounted on the transom of the boat which is connected to a 110V panel that distributes the 110V AC current to the outlets and appliances on your boat. The shorepower system is rated for a maximum of 30AMPS, care must be taken to not overload the system.

DO NOT WIRE OPTIONAL AIR CONDITIONERS TO THE SHOREPOWER SYSTEM, INSTALL A SEPERATE SERVICE AND PANEL

The 110V panel consists of breaker switches which protect and turn the individual circuits on and off. The charger, hot water heater and the 110V outlet circuit are on seperate breakers.

16.13.1. 110V Schematic



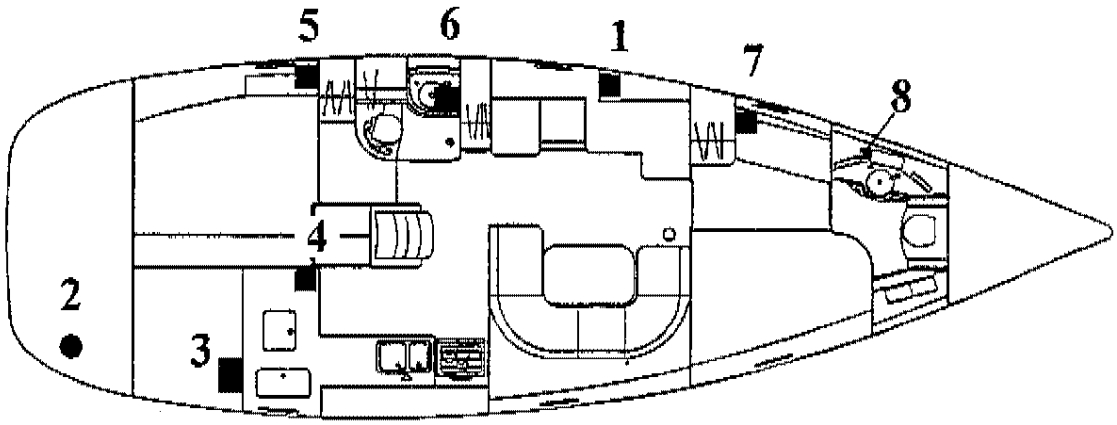
16.13.1.1. Operation

1. Shut down the diesel engine.
2. Switch all 110V breakers off.
3. Switch the dock outlet breaker off.
4. Plug the shorepower cord into the boat and dock outlet.
5. Switch the dock breaker on.
6. Switch the panel breakers on as needed.

DO NOT OPERATE THE 110V WATER HEATER DRY

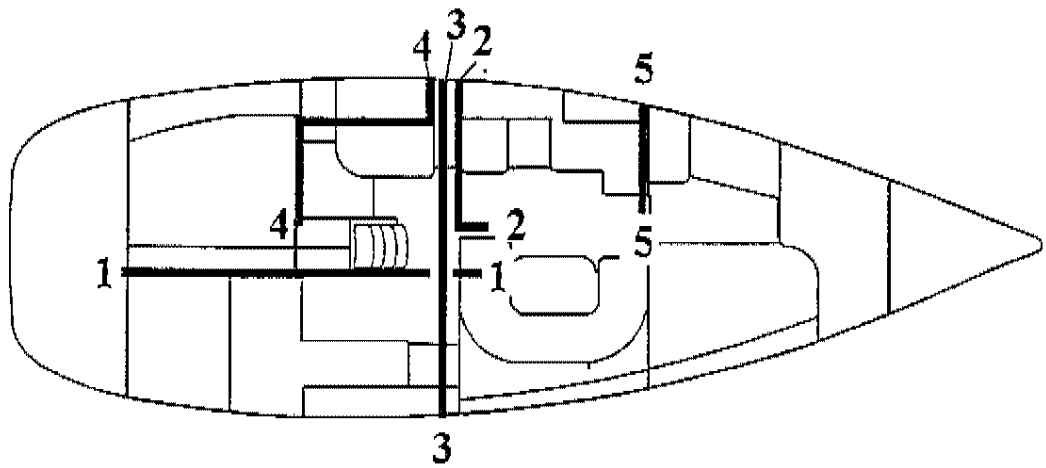
16.13.2. 110V Layout

1. 110V Shore Power Panel
2. Shore Power Plug
3. Battery Charger (Stb Sail Locker)
4. 110V Galley Outlet
5. 110V Aft Cabin Outlet
6. 110V Aft Head Outlet
7. 110V Fwd Cabin Outlet
8. 110V Fwd Head Outlet

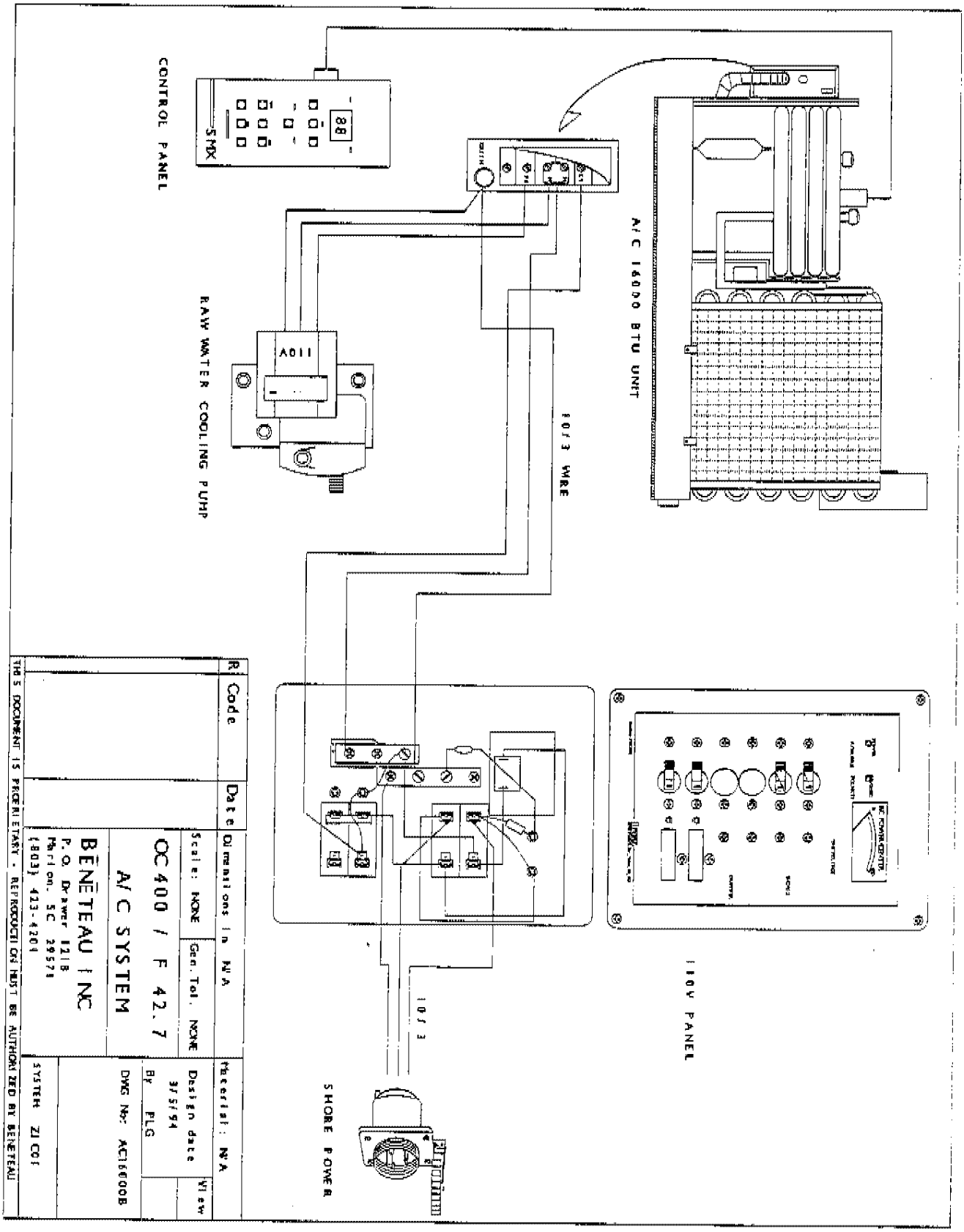


16.13.3. Conduit Layout

1. 35mm Sump-Stern
2. 25mm Sump -Port midship Hull
3. 25mm Port- Stb.
4. 25mm Port-Stb
4. 5.36mm Midship prt-Engine
5. Panel-Mast

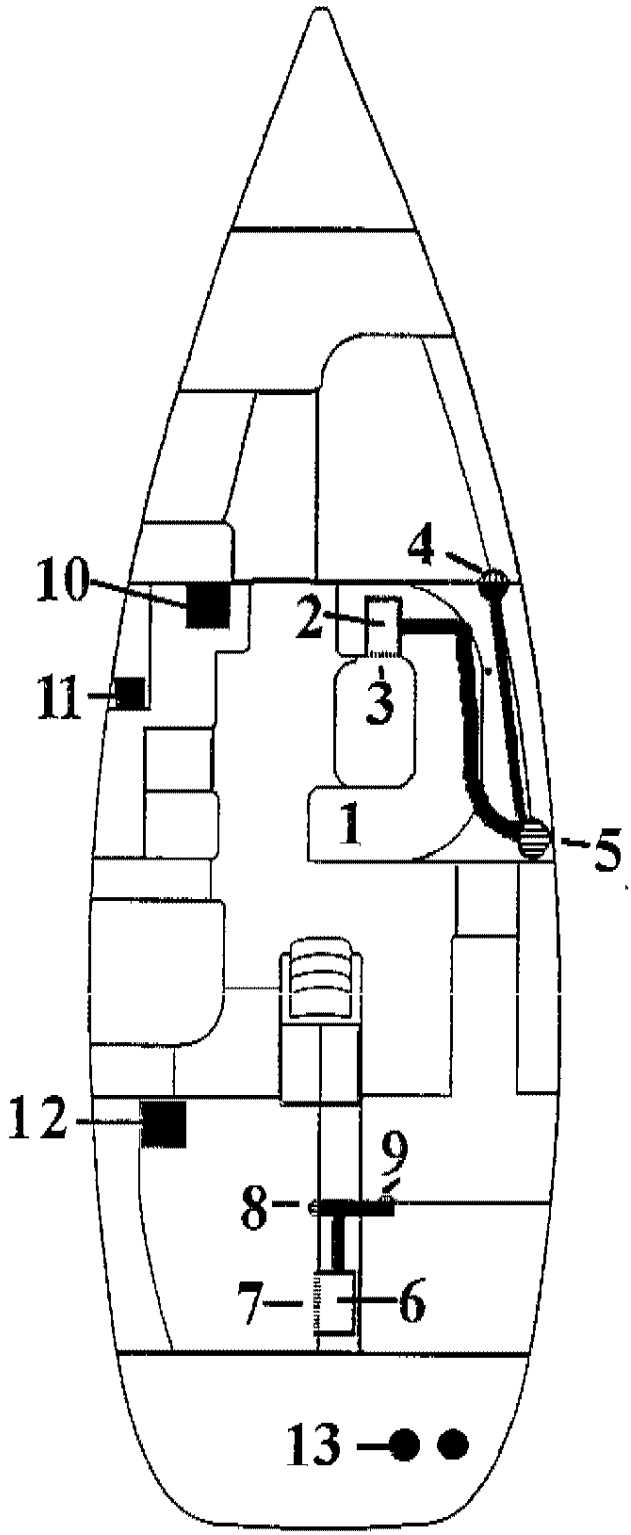


16.13.4. Optional Air Conditioning Schematic

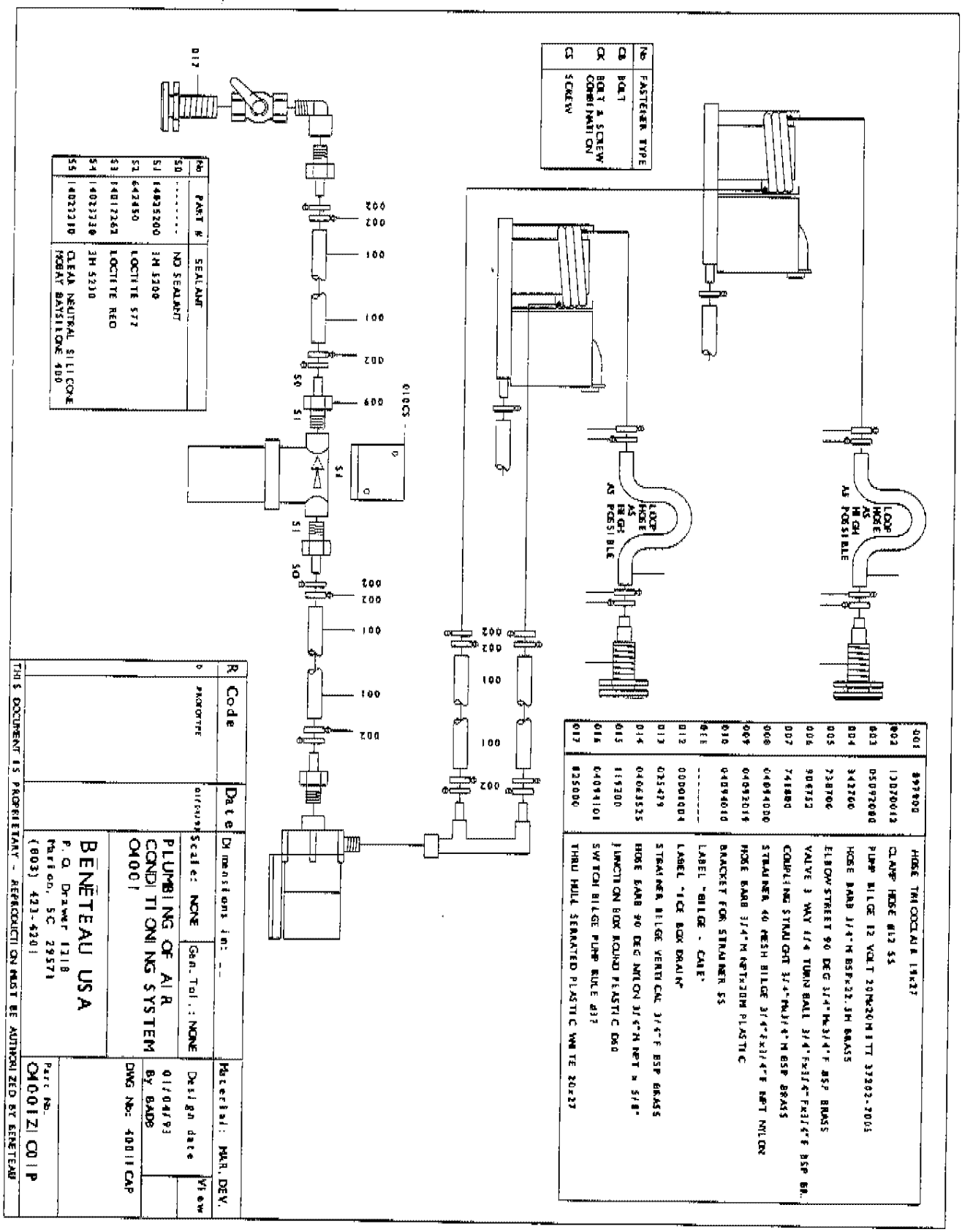


16.13.4.1. Optional Air Conditioning Layout

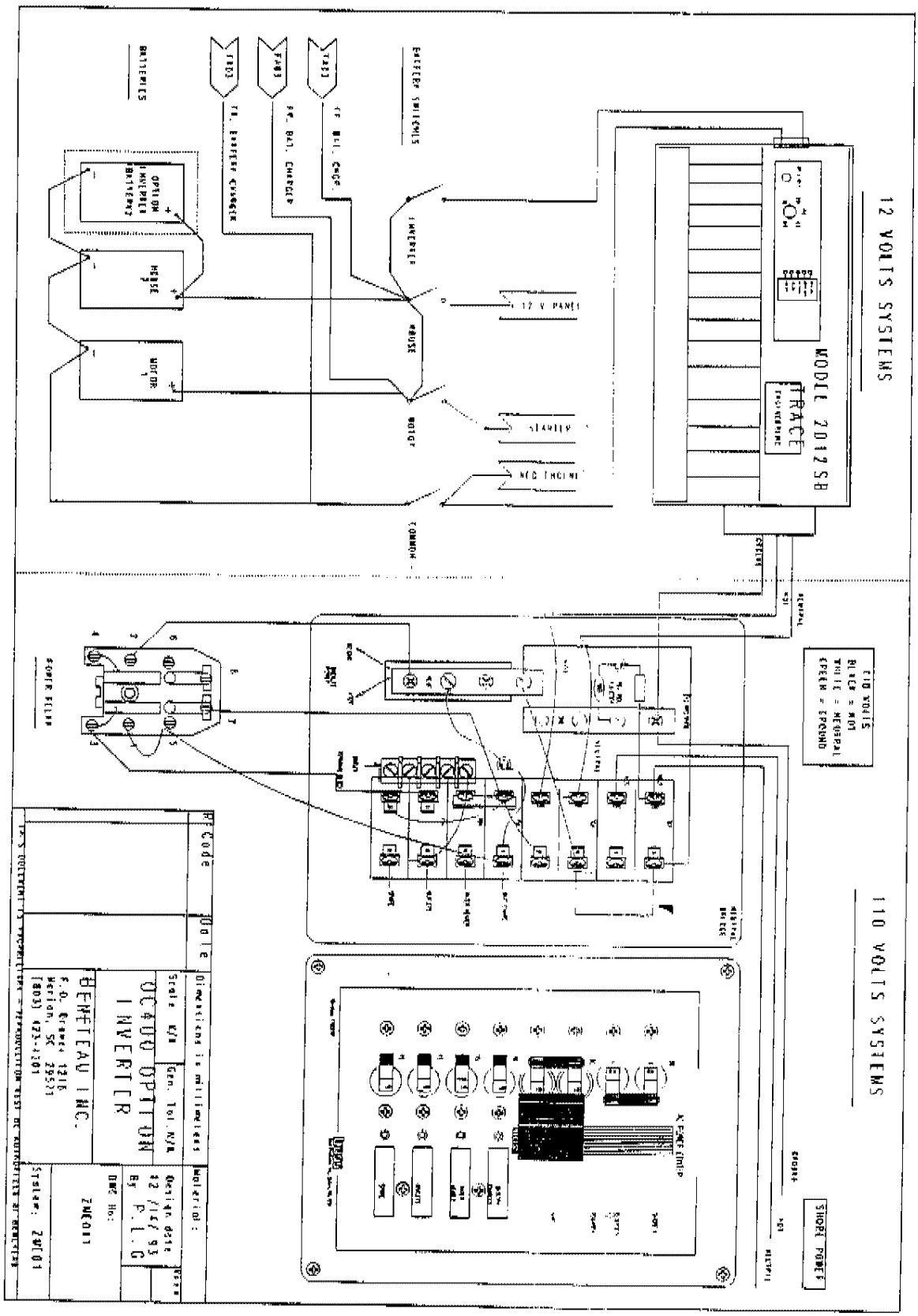
1. AC Pump
2. Fwd. AC Unit
3. Fwd AC Unit Air Return
4. Fwd Cabin Outlet
5. Main Saloon Outlet
6. Aft AC Unit
7. Aft AC Unit Air Return
8. Aft Cabin Outlet
9. Galley Outlet
10. Fwd AC Unit Control Panel
11. AC 110V Breaker Panel
12. Aft AC Unit Control Panel
13. 2nd Shore Power Plug



16.13.4.2. Optional Air Conditioning Plumbing



16.13.5. Optional 110V Inverter Schematic



16.14. RIGGING

16.14.1. General Description

The rig consists of a mast and boom held up and tensioned by the standing rigging. The standing rigging on your Oceanis is discontinuous. This style of rigging has a turnbuckle assembly at the lower spreader tips to attach the upper cap shrouds (V2/D3's) and upper intermediates (D2's) to the lower cap shrouds (V1's) This arrangement saves weight aloft by eliminating extra shrouds. The sails are attached to the mast, boom and genoa furler. The sails are shaped and controlled by the running rigging.

1.Upper Cap Shroud (D3/V2)

2.Intermediate Shroud (D2)

3.Spreader Tip Turnbuckles)

4.Spreader Tip

5.Backstays

6.Lower Cap Shroud (V1)

7..Aft Lowers Shroud (D1)

8.Fwd Lowers Shroud (D1

9.Chainplate & Turnbuckles

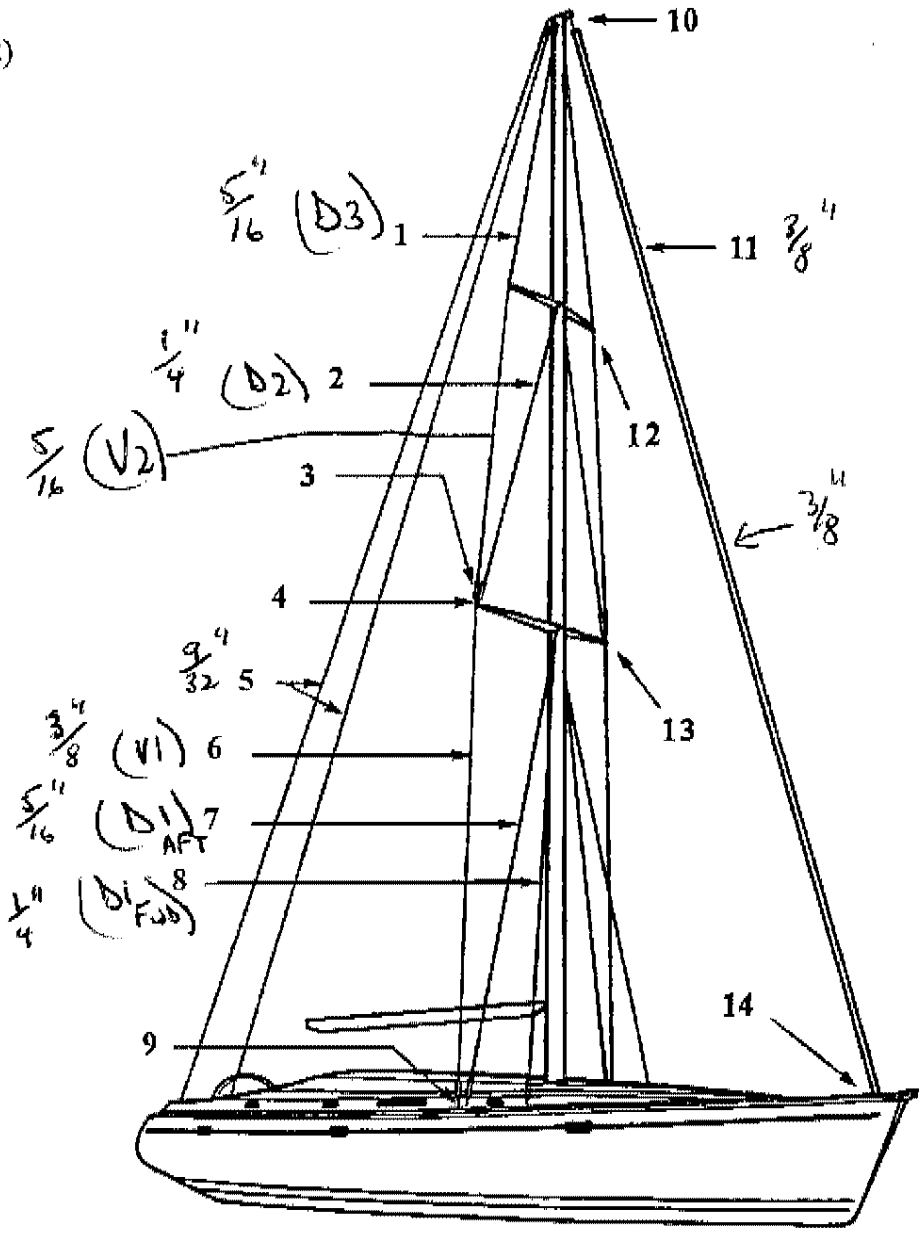
10.Masthead

11.Genoa Furling Tubes

12.Upper Spreaders

13.Lower Spreaders

14.Furling Drum & Forestay Cainplate Below Deck



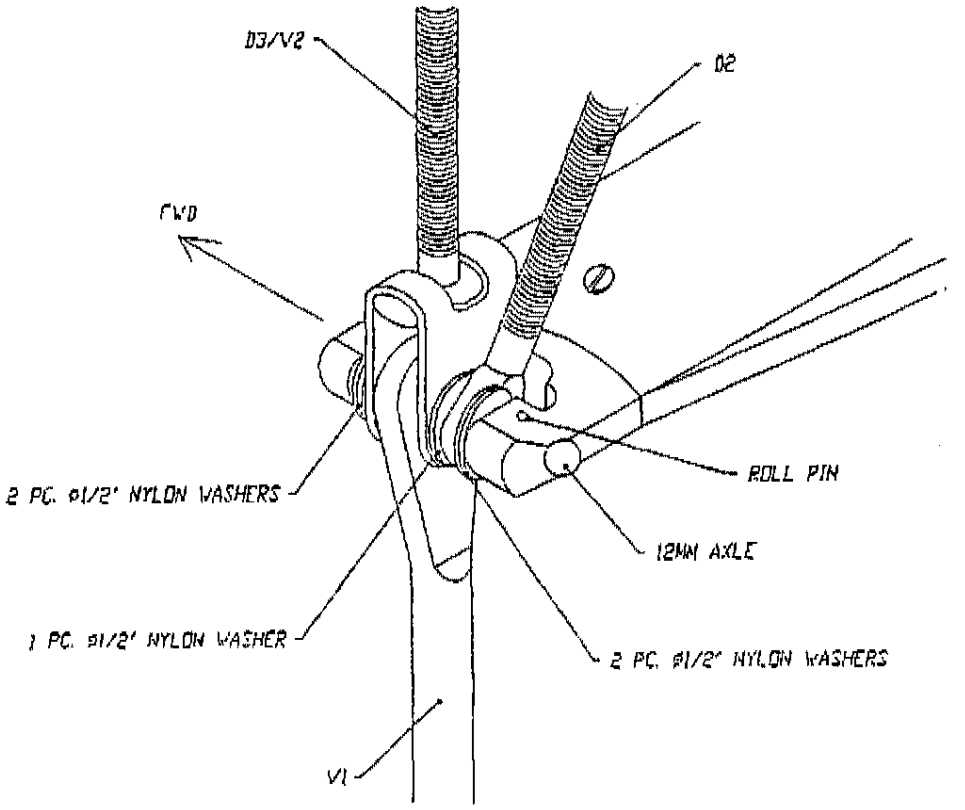
Breaking Strength

1/4 = 8200 lb

9/32 = 10300

5/16 = 12500

16.14.2. SPREADER TIP DEATAIL



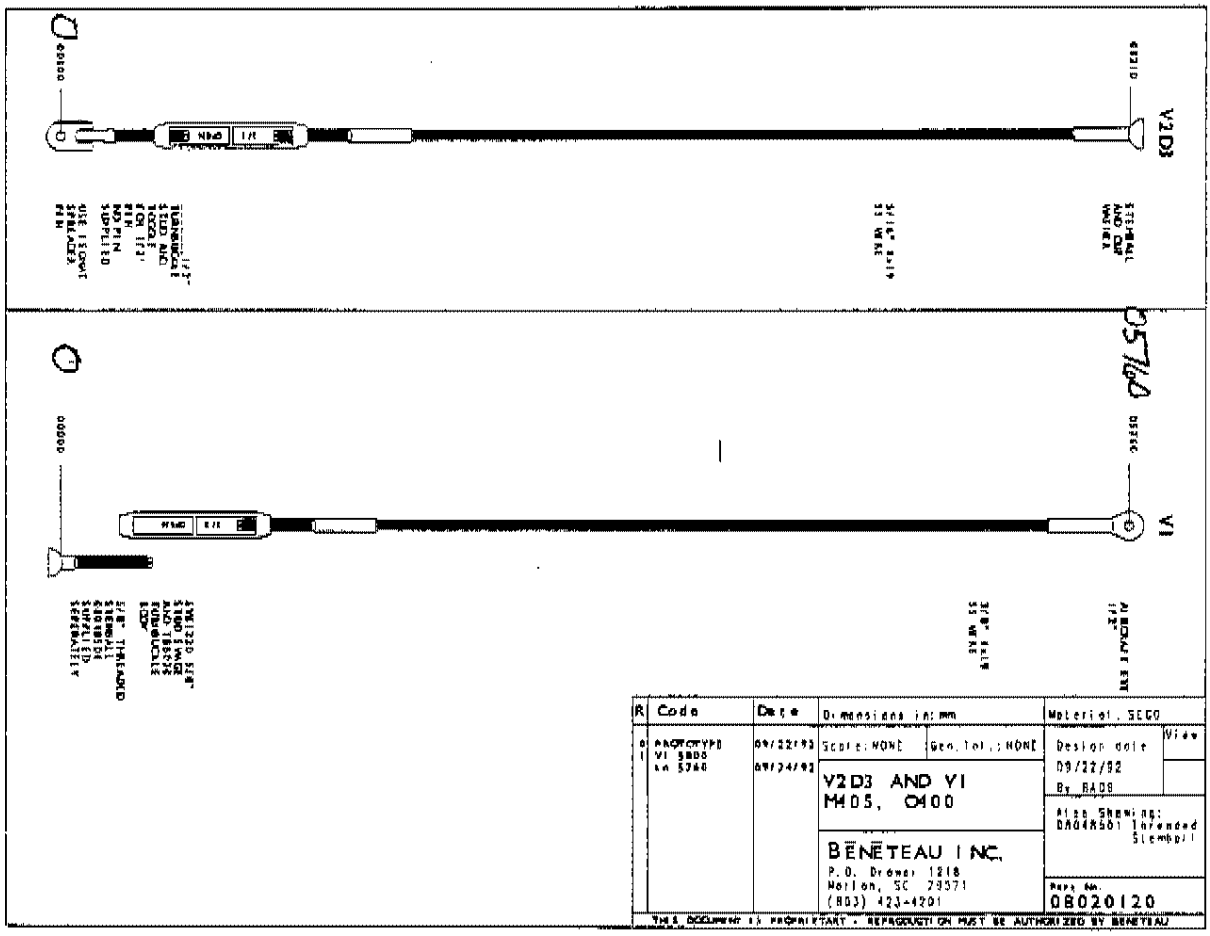
16.14.3. TUNING

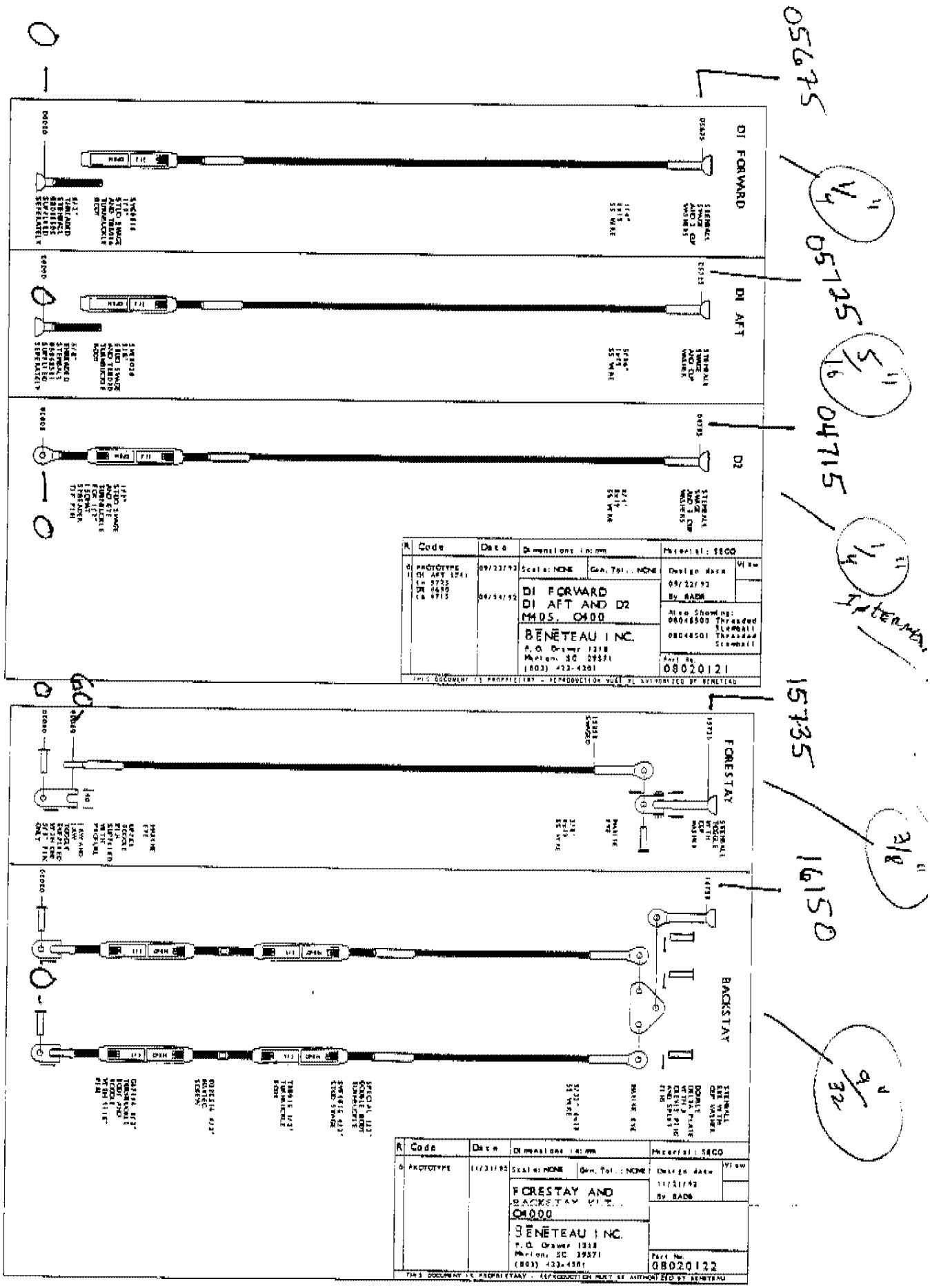
To achieve the best performance from your boat the mast and rigging needs to be tuned correctly, the initial tuning of your boat should be completed by your Beneteau Dealer. The tuning of your Beneteau takes a little bit of time and care, but if the mast is correctly setup initially it will require very little adjustment in the future. (some stretch will occur with new wire and the rig may need adjustment to compensate for this initial stretch).

1. Keep all turnbuckle threads clean and free of grit. Always apply copper paste or never sieze to the turnbuckle threads before screwing on the turnbuckle bodies.
2. Attach the V2/D3's and D2's to the lower spreader tip turnbuckles.
3. Set the V2/D3's to the length specified in the rigging specs on page 57.
4. Leave the D2's slack.
5. Step the mast and attach the genoa furler first. The headstay is a fixed length, this sets up the mast rake automatically.
6. Attach and finger tighten the V1's and backstays, attach the fore and aft D1's leaving these turnbuckles loose.
7. Center the mast in the boat by tightening the V1's alternately until the masthead is centered athwartships. (Attach a tape measure to the main halyard and measure to opposite points on the toerail to check the position)

8. Commence tightening the V1's with equal turns on each side until they become tight. (Be sure the D2's do not come under any tension during this process.)
9. When the V1's are tight start tensioning the aft D1's equally keeping the mast in column until they are tight. (Looking up the aft side of the mast, the mainsail track should be straight up and down. Equalize the tension on the D1's to keep the track straight)
10. Tension the forward D1's equally, again check the mast to maintain it in column.
11. Now go up the mast and tighten the D2's. These do not have to be very tight. They only hold the mast straight while sailing and do **NOT** require a lot of tension.
12. Tighten the backstays, if you have a furling mast do not induce any bend in the mast by over tightening the backstays.
13. Pin all turnbuckles and tape around the turnbuckle body with rigging tape only where the pins go through.
14. The mast should remain straight while sailing on either tack.
15. Do not worry if the leeward shrouds are slightly slack under sail . For most sailing it is quite acceptable.

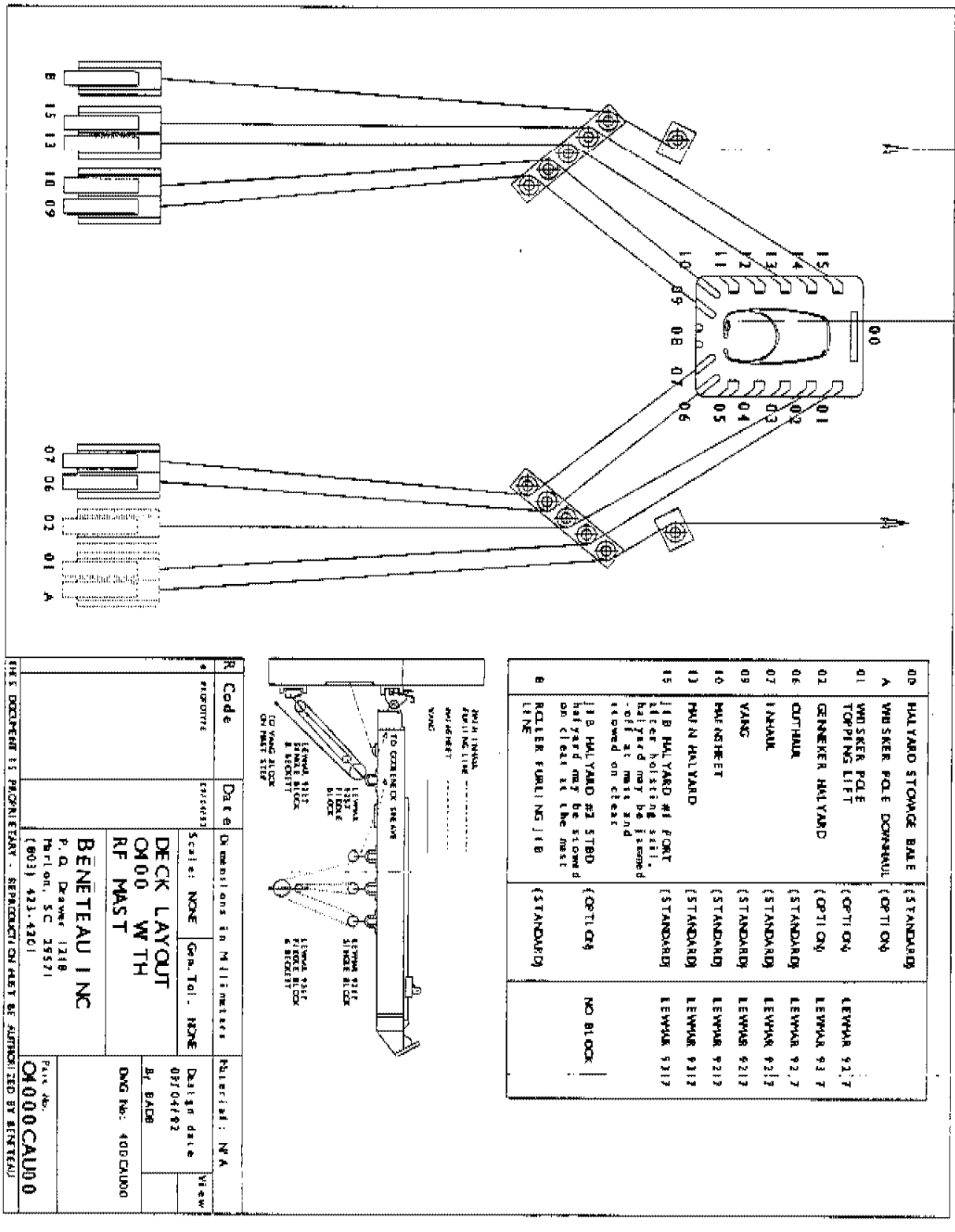
16.14.4. STANDING RIGGING SPECIFICATIONS



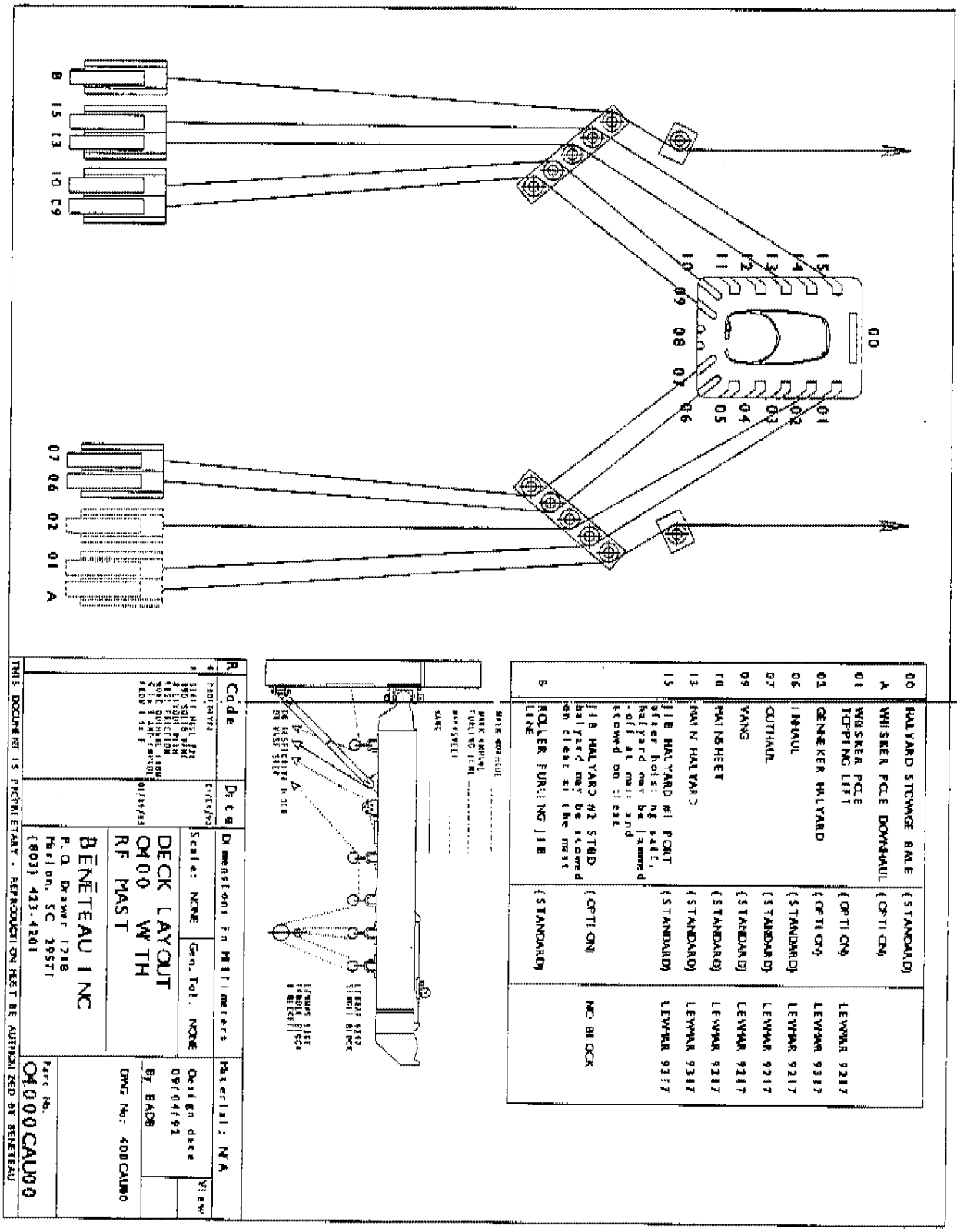

D1 FORWARD
D1 AFT
D2
FORESTAY
BACKSTAY
DI FORWARD
DI AFT AND D2
M405, O400
BENETEAU INC.
FORESTAY AND
BACKSTAY
O400
BENETEAU INC.
08020121
08020122

16.14.5. ROLLER FURLING MAST DECK LAYOUT

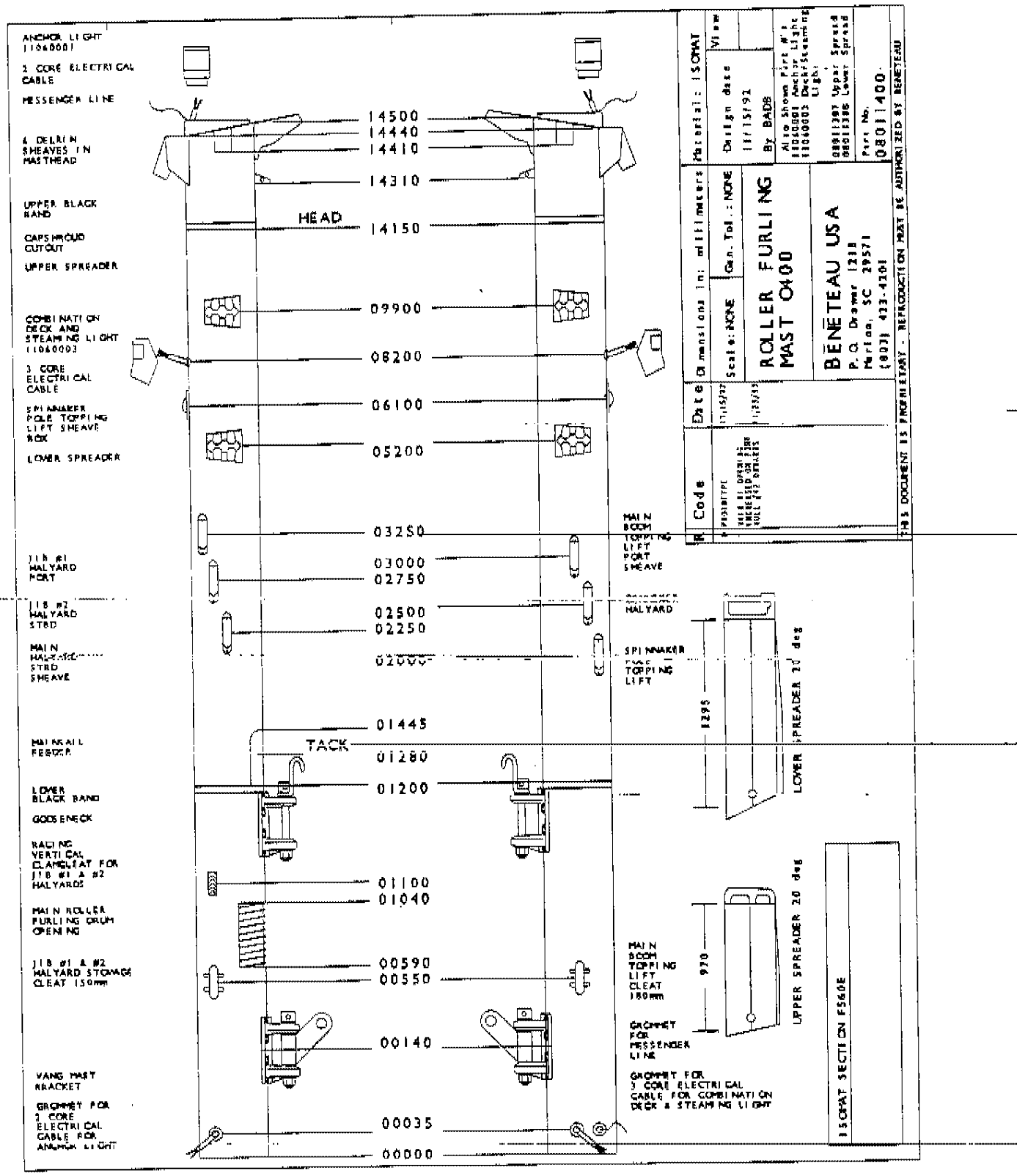
16.14.5.1. HULL 1-27



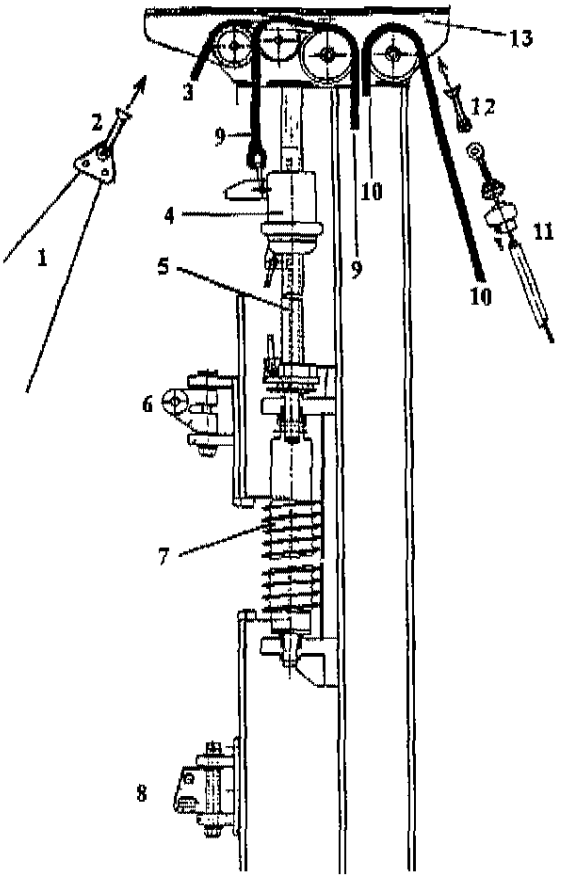
16.14.5.2. HULL 28 UP



16.14.6. ROLLER FURLING MAST



16.14.7. ROLLER FURLING MAST



1. Backstays
2. Backstay Plate & Stemball
3. Topping Lift
4. Main Swivel Hoist Car
5. Furling Tubes
6. Boom Gooseneck
7. Reefing Line Drum
8. Vang Gooseneck
9. Main Halyard
10. Genoa Halyard
11. Genoa Furler
12. Forestay Stemball
13. Mast Head

MAINSAIL INSTALLATION

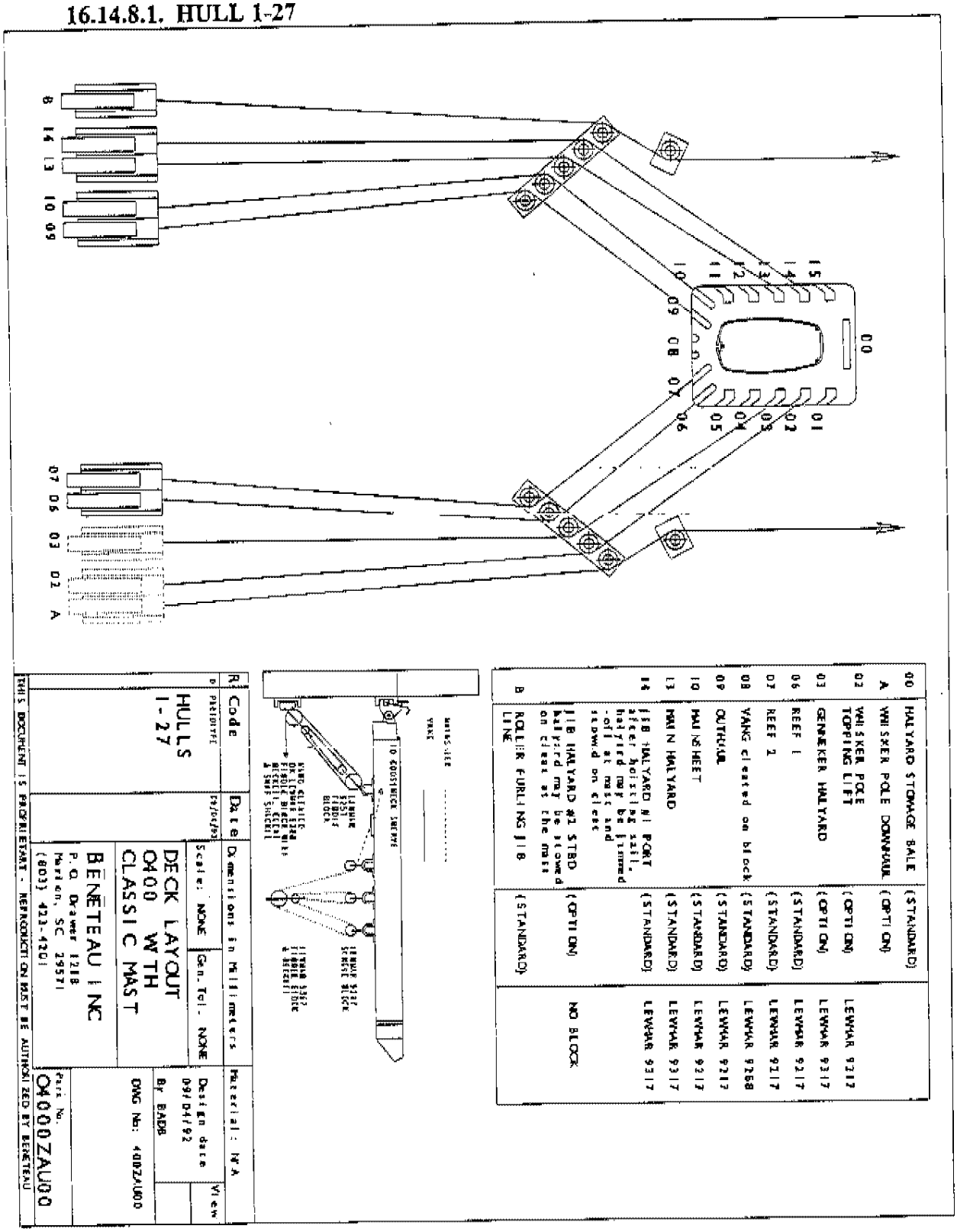
1. The main should be installed in as little wind as possible.
2. Be sure the furling drum line is completely wound with line before installing the mainsail. (Wind the drum by hand to wrap more line onto the drum.)
3. Lower the main swivel hoist car to the gooseneck with the main halyard.
4. Attach the mainsail headboard to the shackle on the bottom of the swivel car.
5. Hoist the mainsail slowly, feeding the luff tape into the extrusion luff groove.
6. Attach the mainsail tack to the lower swivel shackle and tension the luff with a winch.
7. Run the outhaul line thru the block on the clew of the main and back to the outhaul car.
8. The main is now ready to be furled.

FURLING MAST OPERATION

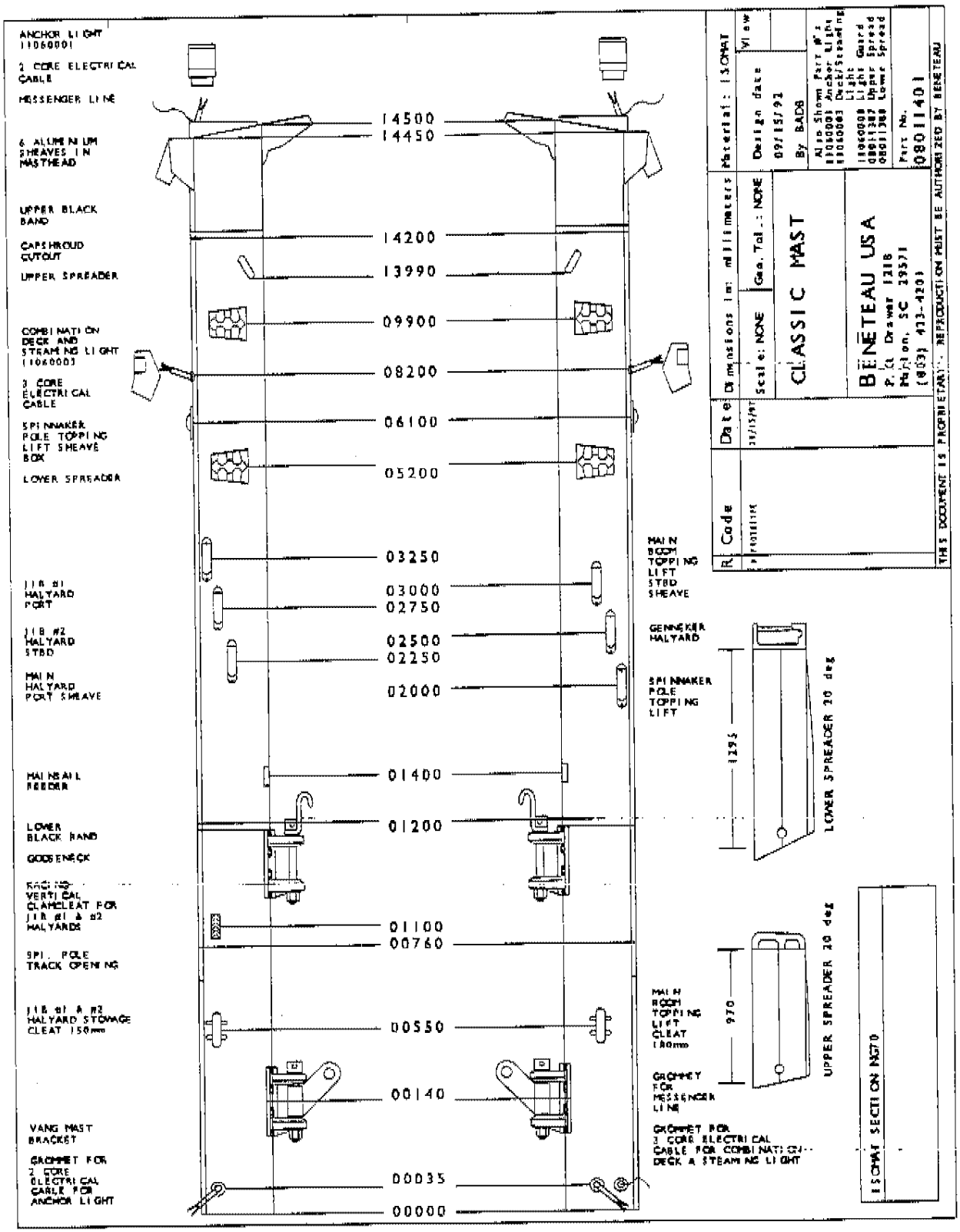
1. Two lines control the mainsail furling operation: The furling line controls the rotation of the furling tubes and the outhaul line controls the tension on the sail.
2. **IT IS IMPORTANT TO REMEMBER THAT THE FURLING LINE CONTROLS THE SAIL AREA AND THE OUTHAUL LINE CONTROLS THE SAIL SHAPE**
3. Always furl and unfurl the main with the boat head up to wind.
4. The main is unfurled by easing out the furling line while taking up on the mainsail outhaul
5. The main is furled by taking in on the main inhaul line, it is important to feed the outhaul line as you furl the main.
6. **NEVER TAKE IN ONE LINE WITHOUT KEEPING A LITTLE TENSION ON THE OPPOSITE LINE**
7. The main may be reefed by turning the boat into the wind and furling the main up to the marked reef points on the sail.

16.14.8. STANDARD MAST DECK LAYOUT

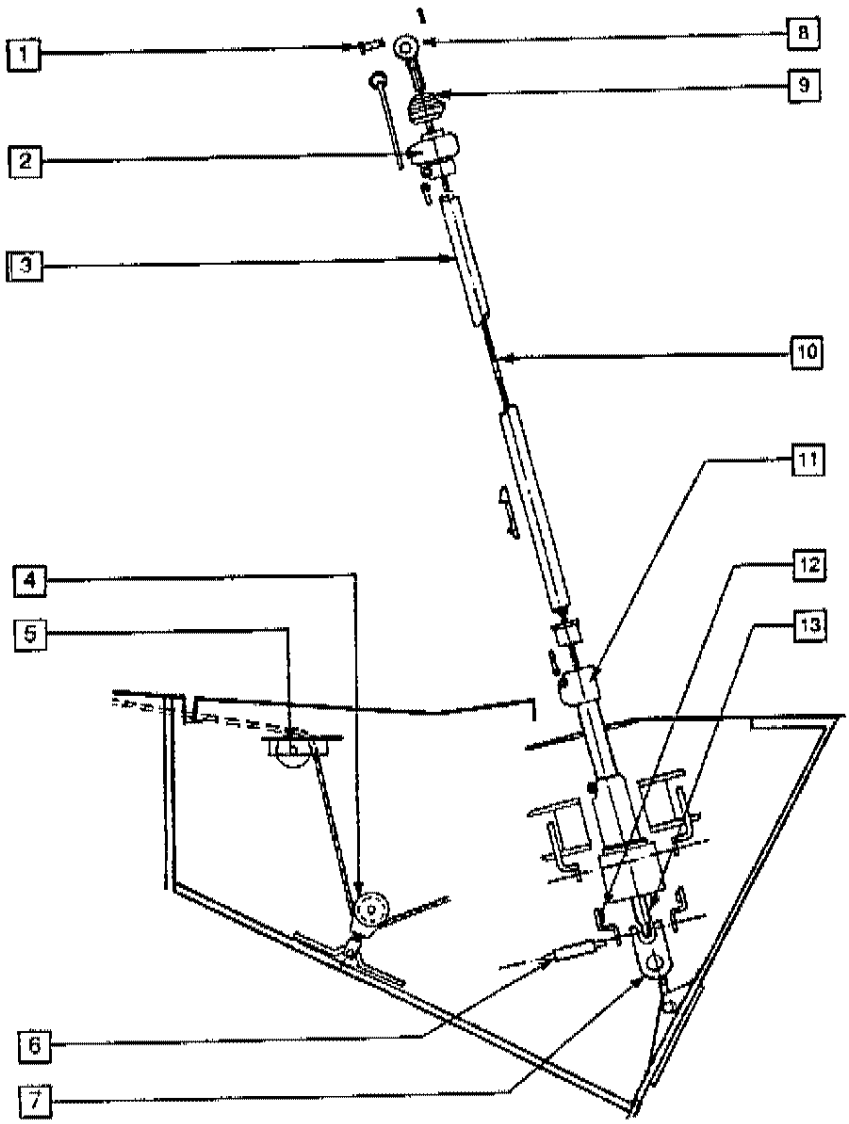
16.14.8.1. HULL 1-27



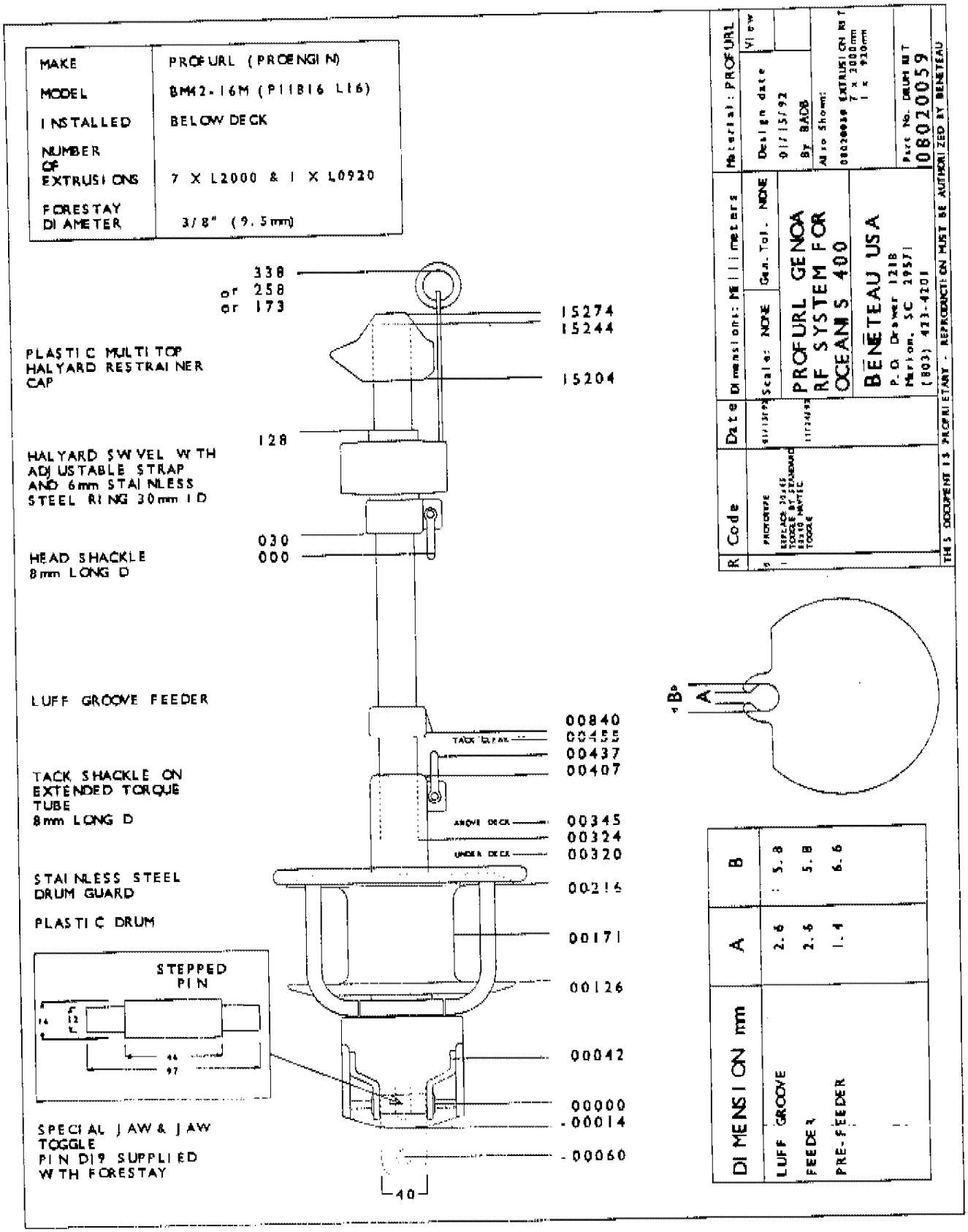
16.14.9. STANDARD MAST



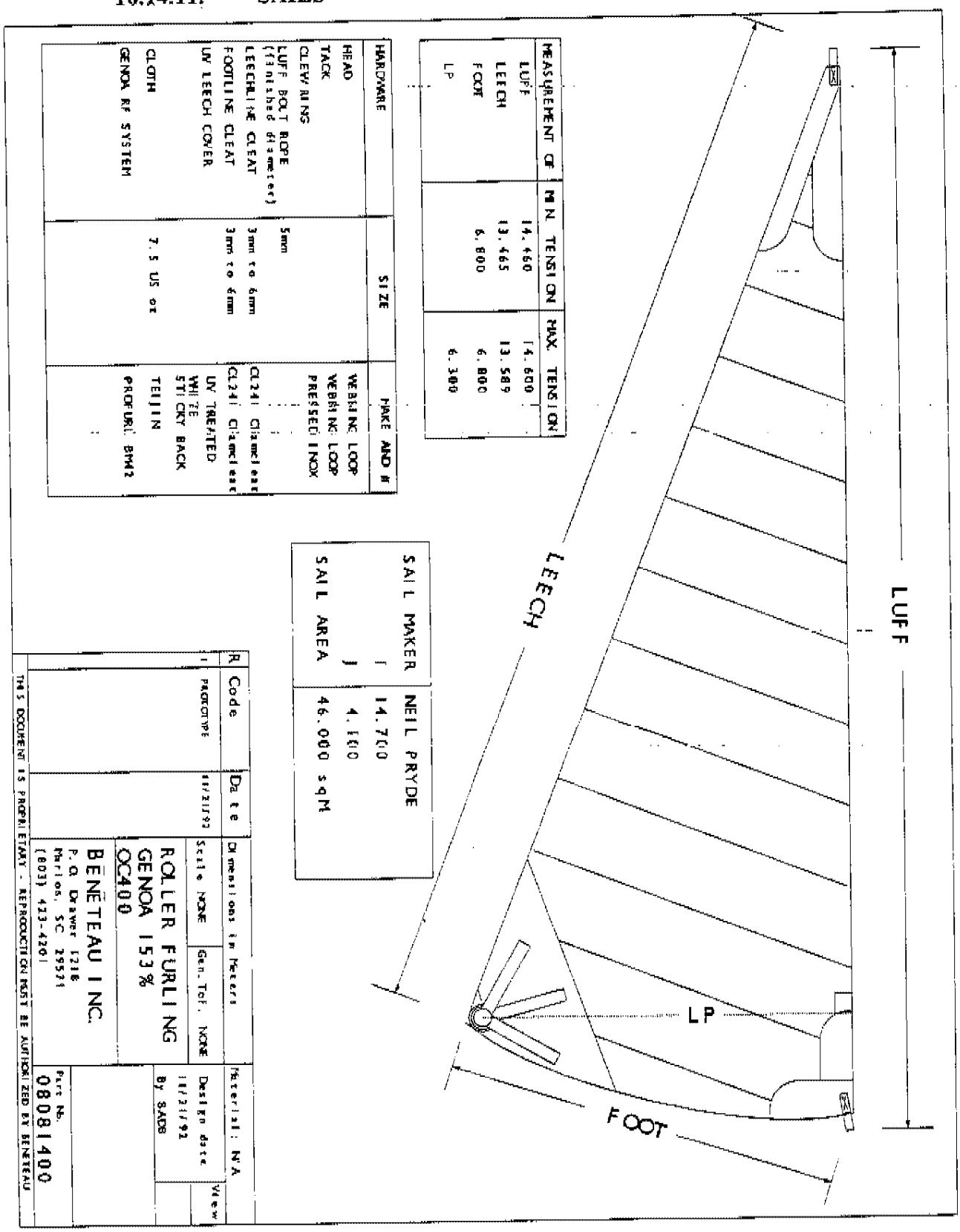
16.14.10. GENOA FURLERING SYSTEM



1. Clevis Pin
2. Swivel Car
3. Furling Tubes
4. Anchor locker Block
5. Thru Deck Sheave
6. Stepped Pin
7. Jaw Toggle
8. Forestay Upper Swaged Eye
9. Halyard Restrainer
10. Forestay
11. Luff Groove Feeder
12. Plates
13. Forestay Lower Swaged Eye


MAKE
PROFURL (PROENGIN)
MODEL
BM42.16M (P11816 L16)
INSTALLED
BELOW DECK
NUMBER OF EXTRUSIONS
7 X L2000 & 1 X L0920
FORESTAY DIAMETER
3/8" (9.5mm)
PLASTIC MULTITOP HALYARD RESTRAINER CAP
HALYARD SWIVEL WITH ADJUSTABLE STRAP AND 6mm STAINLESS STEEL RING 30mm ID
HEAD SHACKLE 8mm LONG D
LUFF GROOVE FEEDER
TACK SHACKLE ON EXTENDED TORQUE TUBE 8mm LONG D
STAINLESS STEEL DRUM GUARD
PLASTIC DRUM
STEPPED PIN
SPECIAL JAW & JAW TOGGLE PIN DIP SUPPLIED WITH FORESTAY
338
or 258
or 173
128
030
000
15274
15244
15204
00840
00455
00437
00407
00345
00324
00320
00216
00171
00126
00042
00000
-00014
-00060
40
Material: PROFURL
Design date 01/15/92
By BADB
Dimensions: Millimeters
Scale: NONE
Gen. Tol. NONE
PROFURL GENOA RF SYSTEM FOR OCEANIS 400
BÉNÉTEAU USA
P.O. Drawer 1218
Marion, SC 29571
(803) 423-4201
Part No. DRWG SET 08020059
THIS DOCUMENT IS PROPRIETARY - REPRODUCTION MUST BE AUTHORIZED BY BENETEAU
A
B
DIMENSION mm
A
B
LUFF GROOVE FEEDER
2.6
5.8
PRE-FEEDER
2.6
5.8
1.4
6.6

16.14.11. SAILS



MEASUREMENT OF	MIN. TENSION	MAX. TENSION
LUFF	14.460	14.600
LEECH	13.465	13.589
FOOT	6.800	6.800
LP		6.309

HARDWARE	SIZE	MAKE AND #
HEAD		WEBBING LOOP
TACK		WEBBING LOOP PRESSED INOX
CLEW RINGS	5mm	
LUFF BOLT ROPE (finished diameter)	3mm to 6mm	CL241 Clamcleat
LEECH LINE CLEAT	3mm to 6mm	CL241 Clamcleat
FOOTLINE CLEAT		
UV LEECH COVER		UV TREATED WHITE STICKY BACK
CLOTH	7.5 US oz	TEIJIN
GENOA RF SYSTEM		PROFURL BM12

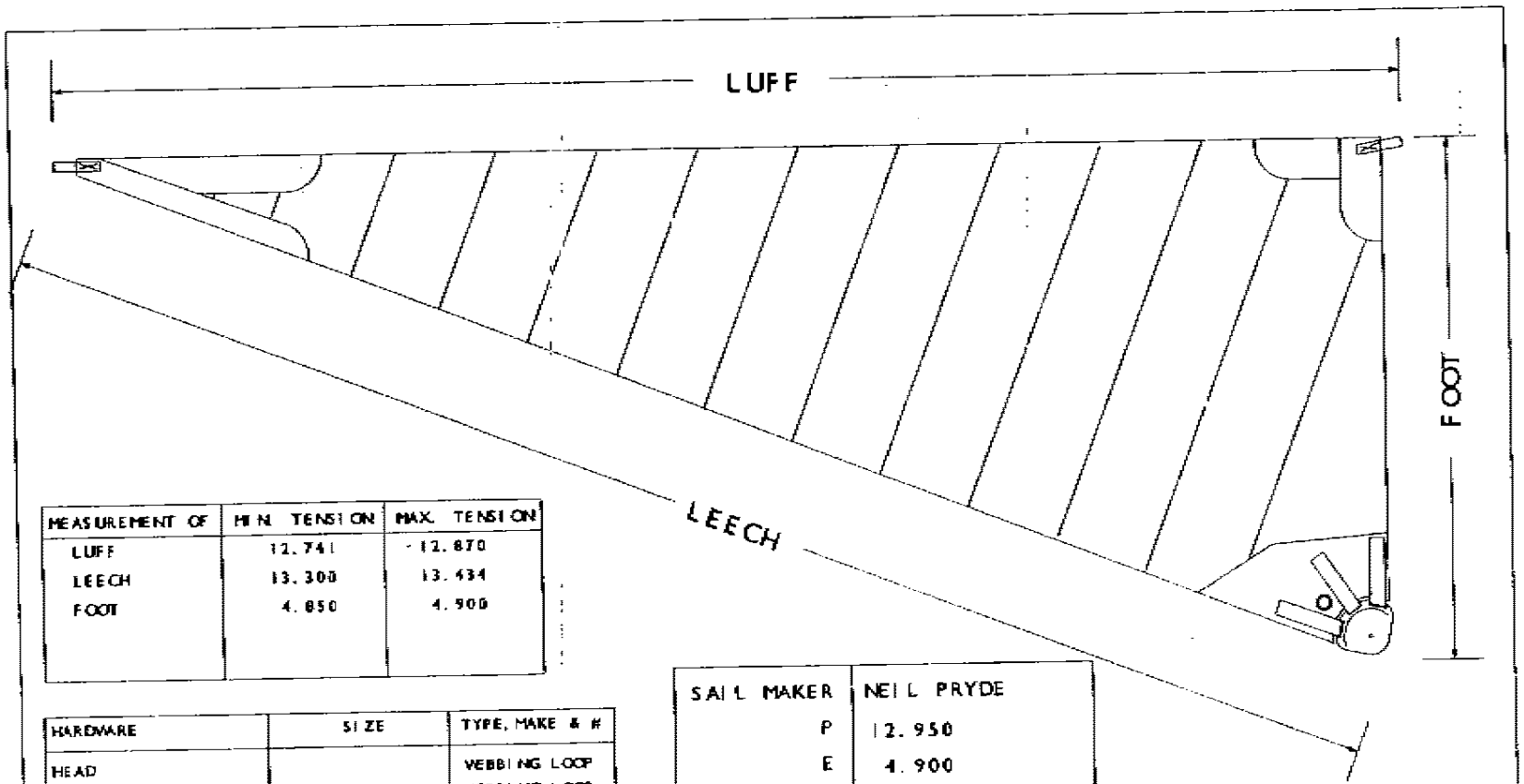
SAIL MAKER	NEIL PRYDE
	14.700
	4.100
SAIL AREA	46.000 sqM

R	Code	Date	Dimensions in Meters
1	PROTOTYPE	11/21/92	Scale NONE Gen. Tol. NONE

ROLLER FURLING
GENOA 153%
OC400

BENETEAU INC.
P.O. Drawer 1218
Marion, SC 29571
(803) 423-4201

Material: N/A
Design date 11/21/92
By SADS
Part No. 08081400
View



MEASUREMENT OF	MIN. TENSION	MAX. TENSION
LUFF	12.741	12.870
LEECH	13.300	13.434
FOOT	4.850	4.900

SAIL MAKER	NEIL PRYDE
P	12.950
E	4.900
SAIL AREA	31.728 sqM

HARDWARE	SIZE	TYPE, MAKE & #
HEAD		WEBBING LOOP
TACK		WEBBING LOOP
CLEW BLOCK		Z SPAR 3259 with Alu. sheave
LUFF BOLT ROPE (finished diameter)	6mm	
LEECH LINE CLEAT	3 to 6mm	CL245 Clamcleat
UV CLEW COVER		UV TREATED WHITE STICKY BACK
CLOTH	8.5 US oz	CHALLENGE
RF MAST		ISOMAT F560E
SPARE CLEW RING		PRESSED INOX RING

R	Code	Date	Dimensions in Meters		Material: N/A
1	PROTOTYPE	11/21/92	Scale NONE	Gen. Tol. NONE	Design date 11/21/92 By BADB

ROLLER FURLING MAINSAIL OC400

BENETEAU INC.
P.O. Drawer 1218
Marion, SC 29571
(803) 423-4201

Part No. 08071400

16.14.12. RUNNING RIGGING SPECIFICATIONS

PART No.	USAGE	COL.	TERMINAL 1	TERMINAL 2	DIA	MM	FT	II N
08031040 Rev.00	Genneker Halyard	Red	Soft Eye Snapshackle NF15000S	Whipping and Loop	7/16"	34500	113	2 1 / 4
08031208 Rev.01	Genneker Tack Strop	Red	Soft Eye Snapshackle NF11000S	Whipping	1/2"	6097	20	0 1 / 16
08031043 Rev.00	Genneker Sheet	Red	Soft Eye Snapshackle NF11000S	Whipping	7/16"	18000	59	0 5 / 8
08030934 Rev.00	Whisker Pole Topping Lift	Blue	Soft Eye Snapshackle NF11000S	Whipping and Loop	3/8"	22000	72	2 1 / 8
08030935 Rev.00	Foreguy	Red	Soft Eye Snapshackle NF11000S	Whipping and Loop	3/8"	16500	54	1 5 / 8
0803___ Rev.00	Whisker Pole Inboard End Uphaul & Downhaul	White /Blue	Soft Eye	Whipping and Loop	5/16"	13000	42	7 1 / 16 3
08031036 Rev.00	Jib Halyard #1	Black	Soft Eye Long D Bar Shackle Captive Pin 8mm	Whipping and Loop	7/16"	34500	113	2 1 / 4
031037 Rev.00	Jib Halyard #2	Green	Soft Eye Snapshackle NF15000S	Whipping and Loop	7/16"	34500	113	2 1 / 4
08031215 Rev.00	Jib Sheet	Black	Whipping	Whipping	1/2"	14500	47	6 7 / 8
08030936 Rev.00	Genoa Roller Furling Line	White /Blue	Burnt	Whipping and Loop	3/8"	23000	75	5 1 / 2
08031038 Rev.00	Main Halyard CLassic Mast	Grey	Soft Eye Long D Bar Shackle Captive Pin 8mm	Whipping and Loop	7/16"	34500	113	2 1 / 4
08031039 Rev.00	Main Halyard RF Mast	Grey	Soft Eye D Shackle Non Captive Pin 8mm	Whipping and Loop	7/16"	34500	113	2 1 / 4
08031216 Rev.00	Mainsheet #1 Purchase	Grey	Soft Eye	Whipping and Loop	1/2"	23000	75	5 1 / 2
08030933 Rev.00	Main Boom Topping Lift	White	Soft Eye D Shackle Non Captive Pin 8mm	Whipping and Loop	3/8"	30500	100	0 3 / 4
08031041 Rev.01	Vang #1 Purchase RF Mast	White	Soft Eye	Whipping and Loop	7/16"	12500	41	0 1 / 8
08031042 Rev.00	Vang #1 Purchase Classic Mast	White	Soft Eye	Whipping	7/16"	7200	23	7 7 / 16

08030833 Rev.00	Mainsheet Traveller Control Line	Blue	Soft Eye	Whipping	5/16"	9500	31	2 0 / 16
Rev.00	Inhaul Furling Line RF Mast	Black	Burnt	Burnt	3/8"	16500	54	1 5 / 8
Rev.00	Outhaul RF Mast	Gold	Burnt	Burnt	3/8"	20500	67	3 1 / 16
Rev.00	Outhaul Classic Mast	Black	Burnt	Burnt	3/8"	14000	45	11 3 / 16
Rev.00	Reef 1 Classic Mast	Red	Burnt	Burnt	3/8"	18500	60	8 5 / 16
Rev.00	Reef 2 Classic Mast	Green	Burnt	Burnt	3/8"	24000	78	8 7 / 8
08030505 Rev.00	Shockcord Strop	White Black	Eye Loop using Hog Eye Ring	Burnt	3/16"	610	2	0 0 / 16
08030616 Rev.00	Utility Line - Locker	White	Burnt	Burnt	3/16"	1500	4	11 1 / 16
08030618 Rev.00	Utility Line - Locker	Blue	Burnt	Burnt	1/4"	2000	6	6 3 / 4

16.14.13. LIFELINE SPECIFICATIONS

PART No.	LIFELINE	MM	FT	IN	DIA	QTY	TERMINAL 1	TERMINAL 2	TYPE
Rev.00 PART OF KIT 03054007	SWEDISH PULPIT STROP	670	2	2 3 / 8	1/8" x 7/32"	1	3/16" SCREW PIN STRIP SHACKLE WITH MARINE EYE	5mm KEY BAR STRIP SHACKLE WITH MARINE EYE	S/S 7 x 7 PVC
Rev.00 PART OF KIT 03054007	FORWARD LIFELINE UPPER	7040	23	1 3 / 16	3/16" x 5/16"	2	ADJUSTER W/SHEAVE	STEMBALL	S/S 7 x 7 PVC
Rev.00 PART OF KIT 03054007	FORWARD LIFELINE LOWER	6840	22	5 5 / 16	3/16" x 5/16"	2	ADJUSTER W/SHEAVE	STEMBALL	S/S 7 x 7 PVC
Rev.00 PART OF KIT 03054007	AFT LIFELINE UPPER	2100	6	10 11 / 16	3/16" x 5/16"	2	STEMBALL	ADJUSTER W/SHEAVE	S/S 7 x 7 PVC
Rev.00 PART OF KIT 03054007	AFT LIFELINE LOWER	1935	6	4 3 / 16	3/16" x 5/16"	2	STEMBALL	ADJUSTER W/SHEAVE	S/S 7 x 7 PVC
Rev.00 PART OF KIT 03054007	SIDE GATE UPPER	661	2	2 0 / 16	3/16" x 5/16"	2	PELICAN HOOK ABI1554	JAW TOGGLE 1/4" PIN CSJ25304	S/S 7 x 7 PVC

.00 RT OF KIT 03054007	SIDE GATE LOWER	661	2	2	0 /	16	3/16" x 5/16"	2	PELICAN HOOK ABI1554	JAW TOGGLE 1/4" PIN CSJ25304	S/S 7 x 7 PVC
Rev.00 PART OF KIT 03054007	STERN GATE UPPER	1150	3	9	1 /	4	3/16" x 5/16"	1	JAW TOGGLE 1/4" PIN CSJ25304	PELICAN HOOK ABI1554	S/S 7 x 7 PVC