45 CONVERTIBLE
OPERATORS MANUAL

SILVERTON.

Evolving · Excelling · Leading

SILVERTON

MARINE CORPORATION AN EMPLOYEE OWNERSHIP COMPANY

Thank you!!

from your

Silverton Team!

RICK CERAMI
President/General Manager

BOB CERAMI
Vice President of Operations

SEAN BERRIE
Director of Design & Engineering

WALT SHARP
Chief Engineer

BEN GARBACK
Comptroller

JENNEY PETERSEN
Accounting Manager

BRETT MARSHALL
Director of Sales

BOB MEISWINKLE
Regional Sales Manager

KEVIN ZEBROWSKI
Customer Service Manager

RICH KARRASCH
Quality Assurance Manager

ANNE SHARP
Human Resources Manager

TED BRODE
Purchasing Manager

KEN SHARRETTS
Production Manager

AL MECHOLSKY
Lamination Manager

MIKE CARTER
Mill Manager

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SPECIFICATIONS

45 CONVERTIBLE

Overall Length - 47’ - 8.125”

Length at Waterline - 39’ - 6.250”

Beam - 15’ - 4.250”

Beam - Waterline - 13’ - 0.875”

Draft (Maximum) - ’ - ”

Displacement (dry) - lbs.

Displacement (full fluids) - lbs.

Transom Deadrise - 13.25 degrees

Fuel Capacity - 607 Gal.

Fresh Water Capacity - 120 Gal.

Waste Water Capacity - 72 Gal.

Water Heater Capacity - 10.5 Gal.

Average Headroom - 6’ - 8”

Maximum Recommended Number of Persons - 14

Maximum Recommended Load - 2,623 lbs.

INTRODUCTION

Thank You!
From the President

Dear Silverton Owner,

Congratulations and welcome to the Silverton Family! As a Silverton owner, you will enjoy the quality and the attention to detail for which our Silverton yachts are renowned. Silverton and your dealer are committed to your service and total satisfaction.

This Owner's Manual will acquaint you with the proper operation and maintenance of your new Silverton yacht, as well as boating safety; which is our primary concern, whether docked or at sea.

Please mail in all manufacturers' registration and warranty cards to ensure that your Silverton and Original Equipment Manufacturer (O.E.M.) warranties are valid. The individual warranty cards are contained in the Owner's Packet along with all of the O.E.M. Manuals. Please remember that all information contained in the O.E.M. Manuals supersedes the information contained in this Owner's Manual.

Finally, if you are new to boating, be certain to learn the proper rules of seamanship to ensure your safety and the safety of your passengers. Refer to Chapman's Piloting, Seamanship, and Small Boat Handling Manual for important and useful information concerning this aspect of boating. Attend a safe boating course offered by the United States Coast Guard Auxiliary, United States Power Squadron, or any enterprise experienced in conducting safe boating courses.

Thank you for choosing a Silverton. I am confident your new yacht will provide you and your family with years of enjoyable cruising.

Richard Cerami, President
Silverton Marine Division

THE SILVERTON STORY

SILVERTON YACHT OWNERS AND FOUNDERS

WARREN LUHRS & JOHN LUHRS

Hailing from East Orange, New Jersey, John and Warren Luhrs' ancestry goes back to their great-grandfather, Henry, who helped pioneer the development of railroading and clipper ships in America, and to their great-uncle, John, who helped build the famous St. Petersburg-to-Moscow Railroad for Russian Czar Alexander II.

Henry Luhrs owned shares in twenty-two different ocean-going vessels - barques, brigs, and schooners - and was the principal owner of the barque, Sophia R. Luhrs, named after his wife. He was also a partner with Albert Sprout, who managed a shipyard in Melbridge, Maine, where the Sophia R. Luhrs was built.

The Luhrs' family sea tradition was carried on during the Great Depression by John and Warren Luhrs' father, Henry, who worked at a small boat manufacturer in Morgan, New Jersey, and later started his own company. When war broke out in Europe, the United States Coast Guard asked Henry Luhrs to repair their boats and install ice sheathing on their bows.

After World War II, Henry built 27-foot fishing boats and, in 1948, he began to construct custom-built pleasure craft. He then turned to skiffs and, in 1952, incorporated as "Henry Luhrs Sea Skiffs". He constructed lap strake sea skiffs using assembly-line techniques. Henry personally "shook down" his prototypes with family trips up the Hudson River to Lake Champlain.

Henry Luhrs' basic philosophy was to emulate the late Henry Ford in building an inexpensive boat for the average man, thus enabling him to enjoy the luxury of boating. He was both designer and engineer, creating innovative and progressive new models. He designed the change in the line of the bow from straight to curved at a time when all boats were being built with the straight, square effect. It is believed he was also the first designer-builder to popularize a small boat with a flybridge.

In 1960, Henry Luhrs acquired the Ulrichsen Boat Company, located in Marlboro, New Jersey. It was here, too, that the Luhrs Alura Fiberglass Division was located. In 1965, Henry sold his company to Bangor Arrostook Railroad, which was to become the recreational conglomerate, Bangor-Punta. It was also during this period that the Silverton Company in Toms River, New Jersey, was purchased by his sons, John and Warren Luhrs.

Today, John and Warren own Silverton Marine Corporation, Hunter Marine Corporation, Mainship Motor Yachts Corporation, and Luhrs Fishing Boats Corporation, known as the "Luhrs Marine Group."

In January 1996, John and Warren transferred a portion of the Luhrs Marine Group to its employees through an Employee Stock Ownership Program, ensuring a personal interest in the construction of your Silverton yacht.

INTRODUCTION TO YOUR YACHT

OWNER'S MANUAL

We appreciate your selection of the Silverton yacht. We have designed and manufactured this yacht to bring you a strong, safe, and attractive yacht that will provide you with many years of pleasure and pride in ownership.

All Silverton yachts are built in compliance with applicable United States Coast Guard regulations and recommendations. In addition, our yachts meet or exceed all standards developed by the National Marine Manufacturer's Association for its "Yacht Certification Program".

This Owner's Manual includes general information concerning the operation, handling, and maintenance of your yacht. In addition, the various systems, both standard and optional, and factory installed equipment are described.

Please note that the information contained in this Owner's Manual summarizes the detailed information contained in the Original Equipment Manufacturer's (O.E.M.) Manuals contained in the Owner's Packet and is only intended to be a convenient reference for your daily use. Refer to the appropriate O.E.M. Manual for detailed information concerning the operation and maintenance of its respective piece of equipment.

Maintain your Owner's Manual and the Owner's Packet together in a safe, convenient location that is easily accessible for readily available reference.

General information designed to assist you in understanding the contents of your Owner's Manual is as follows:

HAZARD COMMUNICATION

This Owner's Manual contains certain signal graphics designed to call your attention to important and specific information. These graphics are shown as follows:

DANGER calls attention to immediate hazards that WILL result in severe personal injury or death.

WARNING identifies hazards or unsafe practices that COULD result in severe personal injury or death.

CAUTION indicates hazards or unsafe practices that COULD result in minor personal injury, product, or property damage.

OWNER ADVISORY STATEMENTS

This Owner's Manual contains certain advisory statements designed to alert you to conditions affecting equipment operation and maintenance practices and they are as follows:

Important: *This is an advisory statement or procedure intended to prevent damage to equipment or its associated components.*

Note: *This is a general advisory statement relating to equipment and maintenance procedures intended to call your attention to important information that is not contained within the normal text describing the specific issue.*

SUMMARY OF OWNER'S MANUAL CONTENTS

Brief summaries of each section of this Owner's Manual are as follows:

Introduction

This section includes general information about your yacht, warranty information, your responsibilities as the owner and/or operator, laws and regulations, logs and records.

Getting Familiar

This section is like a tour; showing you the various accessories and appliances, both standard and optional, that are found on your yacht. In addition, the Hull, Deck, Interior, and Engine Compartment will be described.

Boating Safety

This section discusses potential hazards associated with boating, safety recommendations, safety information, and safety practices. It also discusses safety equipment necessary to provide a reasonably safe operating environment.

Note: *For your safety, this Owner's Manual has specific safety warnings and comments where appropriate. Be certain to read and have an understanding of the entire manual.*

Systems Operation

This section explains the various systems found on your yacht and their operation and maintenance procedures.

Cleaning / Maintenance

Preventive maintenance is the key to trouble-free operation and helps to protect your investment. This section explains what you should do to maintain your yacht and how to make basic adjustments and repairs. A Maintenance Chart summarizes maintenance tasks by frequency. Included are procedures for winterizing and storing your yacht.

Operation of Your YACHT

This section explains what procedures you should follow before, during and after your boating excursion to make it an enjoyable and safe experience.

Glossary of Terms

The Glossary defines common nautical terms associated with your yacht.

Systems Schematics

This section displays schematic drawings, such as the Mechanical Layout, Electrical Schematic, and Fresh Water Schematic that may be useful to you in understanding the general layout of the systems described.

ORIGINAL EQUIPMENT MANUFACTURER'S MANUALS

Silverton purchased various items of equipment from other manufacturers and installed them on your yacht while it was being built. Examples of this equipment include, but are not limited to, the engines, generator (if so equipped), and appliances. The Original Equipment Manufacturers (O.E.M.) have provided operation and maintenance manuals describing their specific piece of equipment. **Although this Owner's Manual summarizes the information contained in the O.E.M. Manuals, it does not replace them. In the event of a conflict between the information contained in this manual and the information contained in the O.E.M. Manual, the O.E.M. Manual takes precedence.** Maintain all O.E.M. Manuals with this Owner's Manual in a safe, convenient location and be certain to pass them on to the new owner in the event you sell or trade your yacht.

WARRANTY INFORMATION

Silverton Yacht Dealers

Your Silverton yacht dealer is a trained professional with facilities and resources available to serve you to your complete satisfaction. Your dealer can assist you in all phases of yacht service and you should bring to his attention any problems you may not be able to correct. All warranty claims and subsequent service must be approved through your Silverton Dealer. The Silverton warranty is reproduced in its entirety at the end of this section.

Pre-Delivery Service Record

Your Silverton yacht was thoroughly inspected before it was shipped from the factory. Your dealer also inspected it during the pre-delivery service inspection. Please take time to discuss these inspections, the Silverton warranty, component warranties, and operation of your yacht with your dealer.

Your Silverton Dealer completes a Pre-Delivery Service Record before you take delivery of your yacht. It is the dealer's responsibility to both you and to Silverton to give your yacht a final inspection. The purpose of this inspection is to assure the proper adjustment and operation of all components installed on your yacht. Your dealer should provide you with the Pre-Delivery Service Record at the time of delivery. After you and your dealer have signed the form, the original copy and your warranty card is forwarded to Silverton.

Silverton will not pay warranty costs for items that should have been corrected during the pre-delivery service inspection and recorded on the Pre-Delivery Service Record.

Warranty Registration

All Silverton yachts are shipped to the dealer with a warranty registration form for the yacht. The warranty card should be completed and returned to Silverton, together with signed copies of the Pre-Delivery Service Record, within ten (10) days of delivery. **Failure to do so may void the warranty.**

Warranty Conditions

To avoid any misunderstanding of Silverton's warranty policy, we suggest that you discuss the following with your Silverton yacht dealer:

- All customer warranty claims and subsequent repairs must be approved through your Silverton Dealer.
- Your yacht must be returned to your selling dealer for warranty repairs unless other arrangements between the dealer and the customer have been made before delivery. Silverton will not pay travel time or mileage for warranty claims.
- Silverton allows a set hourly rate for labor. If you use any service facility other than a Silverton Dealer for warranty repairs, either the owner or the dealer must absorb any difference between what Silverton allows and what the "service contractor" may charge.
- Silverton will not assume any responsibility or liability for parts replaced or labor completed by anyone other than an authorized Silverton Dealer without prior authorization from Silverton.
- Silverton will not warrant items that should have been covered during the pre-delivery service inspection.
- Silverton will not be responsible for any problems or inconveniences that may be caused as a result of a defect.
- Silverton will not be responsible for any losses caused as a result of a defect for any reason.

Second Owner's Warranty

Some Silverton yacht owners trade up to a newer or larger yacht before the warranty on their current yacht has expired. Silverton will transfer the remaining warranty on your new yacht to its new owner. Conditions of the warranty transfer are stated in their entirety at the end of this section.

Owner's Responsibilities

Silverton service and support does not end after you purchase your yacht. Our dealers are committed to your total satisfaction with your yacht. They cannot accomplish this objective without your assistance. You are responsible for:

- Obtaining state registration or federal documentation.
- Providing and maintaining all safety equipment required by the United States Coast Guard.
- Completing and forwarding all Original Equipment Manufacturer's warranty registrations.
- Performing and completing required OEM maintenance.

LIMITED WARRANTY

According to the U.S. Public Law No. 93-637, effective July 4, 1975, the following limited warranties apply to all 2002 and newer Model Year boats produced by SILVERTON MARINE CORPORATION.

LIMITED TWO-YEAR WARRANTY

Silverton Marine Corporation ("Silverton") warrants to the first-use purchaser and any subsequent registered owner during the warranty period, that any part manufactured by Silverton in its 2007 Model Silverton Yacht purchased from an authorized Silverton Dealer will be free of defects caused by faulty workmanship or materials for a period of twenty-four (24) months from the date of delivery to the first-use purchaser, provided the part is properly used and maintained and subject to the following exclusions, limitations, and conditions. As the sole and exclusive remedy, Silverton's obligation under this warranty is limited to repair or replace any such defective part.

LIMITED FIVE-YEAR BOTTOM BLISTER WARRANTY

Silverton warrants to the first-use purchaser and any subsequent owner during the warranty period that the boat will be free from gelcoat blistering on underwater, exterior gelcoat surfaces of the hull, for a period of five (5) years from the date of delivery to the first-use purchaser, provided the hull has been properly used and maintained and subject to the following exclusions, limitations, and conditions. During this period, Silverton will supply or reimburse an authorized Silverton Dealer the parts and labor required to repair a blistered underwater surface of the hull. It is recommended that the blister repair be done during a seasonal haul out for service or storage.

Silverton's obligation for the cost reimbursement pursuant to this warranty is based on the prorated schedule described hereafter during the five-year period. During the first two (2) years of the first-use purchaser's ownership, Silverton will pay for 100% of the repair cost. During the third year of the first-use purchaser's ownership, Silverton will pay for 75% of the repair cost. During the fourth year of the first-use purchaser's ownership, Silverton will pay for 50% of the repair cost. During the fifth year of the first-use purchaser's ownership, Silverton will pay for 25% of the repair cost.

The following will void this bottom blister limited warranty:

1. If the hull gelcoat has been sanded, sandblasted, and subjected to abrasion, impact or damage and/or such conditions being repaired.
2. If Silverton's required bottom preparation procedures described in the Silverton Owner's Manual are not followed.
3. If the hull gelcoat has been altered in any way by repairs or coatings other than the proper application of anti-fouling bottom paint.

LIMITED HULL AND DECK STRUCTURE FIBERGLASS WARRANTIES

Lifetime Limited Warranty Coverage to First-Use Purchaser (Non-Transferable): Silverton warrants to the first-use purchaser, who is not a corporation, limited liability entity, partnership or business entity, that the hull and deck of each boat will be free from structural defects in fiberglass materials and workmanship for the lifetime of the hull beginning with the date of delivery.

Five Year Limited Warranty Coverage (Transferable to Subsequent Registered Owner): Silverton warrants to the first-use purchaser and any subsequent registered owner during the warranty period the hull and deck of each boat shall be free from structural defects in fiberglass materials and workmanship for a period of five (5) years from the date of delivery to the first-use purchaser and subsequent registered owner under normal use and service.

These limited warranties apply only to the structural integrity of the deck and hull and the supporting pan/grid or stringer system. Hulls, pan/grid, or stringers modified in any way, or powered by engines other than the type and size installed or specified by Silverton, are not covered by these limited warranties. As the sole and exclusive remedy, Silverton's obligations under these limited warranties are limited to the repair or replacement of any such structurally defective part.

CONDITIONS ON THE APPLICABILITY OF LIMITED WARRANTY COVERAGE

The limited warranties contained herein apply only to covered defects first arising and reported in writing to Silverton or its authorized dealer within the applicable warranty coverage. If the Silverton Yacht is used for commercial, rental, charter or any other non-consumer, individual or recreational services, then the above warranty periods are limited to sixty (60) days from the date of purchase. These limited warranties shall not be effective unless the Silverton warranty registration form and pre-delivery service record are duly completed and signed by the first-use purchaser within ten (10) days of the date of delivery of a Silverton Yacht. The warranty registration form and the pre-delivery service record must be returned to Silverton, and they must be appropriately completed and signed by both the authorized Silverton Dealer and owner. Warranty coverage shall not be initiated until the completed form is received at Silverton. The Silverton Dealer is responsible for submitting the warranty registration form and pre-delivery service record to Silverton.

The Silverton Dealer is to be used by the Silverton Yacht owner for reporting, claiming, and receiving any warranty service from Silverton. All repairs covered by these limited warranties must be pre-approved by Silverton. Normally, all repair requests and approvals are to be communicated through an authorized Silverton Dealer. To obtain warranty service for your Silverton Yacht, including any allegedly defective part, you, as owner, must make a specific and detailed claim in writing to an authorized Silverton Dealer within the applicable warranty period. Warranty repairs may be performed at the authorized Silverton Dealers servicing location or at an otherwise Silverton approved servicing facility at Silverton's discretion. The owner is responsible for all expenses associated with transporting the Silverton Yacht and/or the defective part to and from the Silverton selected service location. Silverton may also, at its option, choose to conduct any repairs or replacements at the Silverton plant. If repairs or replacements are determined to be performed at the Silverton plant, then the transportation costs to and from the Silverton plant are the obligation of the owner.

The Silverton Yacht owner shall report to Silverton any Silverton Dealer failures in the performance of warranty repairs.

The sole and exclusive remedy under this warranty, including any applicable implied warranty, is the repair or replacement as determined by Silverton at its option of defects in materials and workmanship covered by the limited warranties. The labor cost reimbursement will be based on the Labor Allowance Schedule established by Silverton from time to time. Repairs are not to be performed by a non-Silverton Dealer and the repair cost MUST be authorized by Silverton in advance and be based on a reasonable number of hours as determined by Silverton. Transportation, hauling, launching, bottom paint, storage, dockage, cradling rental, rigging and de-rigging, or other similar costs are not part of Silverton's obligation under the limited warranties and shall not be paid for by Silverton.

LIMITED WARRANTY EXCLUSIONS

* Silverton does not provide any warranty coverage nor shall it have any liability or responsibility for any defects, costs, expenses or damages related to the following:

* Any yacht purchased from any party who is not an authorized Silverton Dealer.

* Damage or deterioration of the gelcoat surface finishes, including cracking, fading or oxidation of gelcoat.

* The cost to remove, dissemble, or reinstall any part not installed by Silverton which is needed to be removed before any warranty work approved by Silverton may be conducted.

* Engines, transmissions, or generator(s).

* Any component covered by its own specific warranty (such as, appliances or furniture not manufactured by Silverton).

* Any glass breakage.

* Speeds, fuel consumption, range or handling, or performance characteristics.

* Exterior fabrics, carpet, upholstery, canvas, and enclosures.

* Any parts or components not installed by Silverton.

* Any damage caused by collision, grounding, act of nature, accident, or abuse.

* Any loss of use, loss of time, maintenance cost, travel expenses, towing, transportation, survey expenses or other items not specifically covered within this document.

* Any Silverton that has been used for charter, rental or commercial, racing or military purpose (See 60-day limitation specified herein).

* Any Silverton that has been misused, used for commercial purpose, operated without required maintenance or operated contrary to instructions in the Silverton owner's manual, modified or altered from factory specifications or subject to improper maintenance.

* Damage, deterioration, and failure to maintain interior fabrics and finishes.

* Any Silverton product identified by Silverton to an authorized dealer as too damaged to be warranted.

* Paint, gelcoat, upholstery damage, plastic finishes, engines, engine parts, bilge pumps, stoves, blowers, pressure water pumps, propellers, shafts, rudders, controls, instruments.

* Problems caused by improper operation and maintenance, storage, cradling, blocking, normal wear and tear, misuse, neglect, accident, corrosion, electrolysis, or improper operation.

LIMITATION/EXCLUSION OF ANY APPLICABLE IMPLIED WARRANTIES

These limited warranties from Silverton are your sole and exclusive remedies and are expressly in lieu of any and all other remedies, including tort/negligence theories and warranties of merchantability and fitness for a particular purpose. Whether arising by law, custom, conduct, or usage of trade. Some states do not allow limitations on an implied warranty, so the above limitation may not apply to you. In the event that implied warranties are found to exist under the law of a particular state, notwithstanding the exclusion contained herein, the duration of any such implied warranty shall be limited to one year from the date of purchase by the first-use purchaser. All implied warranties, if any, including merchantability and fitness for a particular purpose, are excluded and disclaimed in their entirety after one year from the date of purchase by the first-use purchaser. No other warranties from Silverton Marine extend beyond the description of the warranties contained herein. Please note that some states do not allow limitations on the applicable time period for implied warranties, so the one-year time limitation which is contained here may not apply to you. Your specific legal rights will vary from state to state.

The purchaser acknowledges that no other representations were made to him or her with respect to the quality or function of the boat. Any oral statement or printed material advertising the boat which speaks to any performance characteristics of the boat or any of its components shall be considered and construed as an estimated description only and should not be relied upon as an express warranty or as the basis of the bargain for the boat or any of its components.

Any consequential, indirect, or incidental damages which may be incurred are excluded and purchaser(s) remedy is limited to repairs or replacement of any defective part(s). Some states do not allow the exclusion of limitation of incidental or consequential or indirect damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

TRANSFER OF LIMITED TWO-YEAR AND FIVE-YEAR BOTTOM BLISTER WARRANTIES

The unexpired portions of the two-year limited warranty and the limited five-year bottom blister warranty and the limited five-year hull and deck structure fiberglass warranty may be transferred to a second owner upon purchase of the Silverton Yacht from an authorized Silverton Dealer. An inspection report from an accredited marine surveyor and written request to transfer these warranties must be made within fifteen (15) days from date of resale. A non-refundable recording fee of $250.00 must accompany any transfer request. Silverton reserves the right to reject any warranty transfer request for a Silverton Yacht that has been damaged

or neglected. Silverton will confirm all warranty transfers in writing to the Silverton dealer and the second owner. The limited lifetime hull and deck structure fiberglass warranty is not transferable to any owner subsequent to the first use purchaser.

OWNER'S PROBLEM WITH WARRANTY SERVICE

In the event the first-use purchaser or registered subsequent owner has any problems or questions regarding the Silverton warranty or the Silverton warranty service being provided by an authorized Silverton Dealer, please forward that question or problem directly to the authorized Silverton Dealer in writing explaining your problem and asking for their assistance in resolving the problem. Generally speaking, the owner of the authorized dealership, which is an independent contractor of Silverton, is in the very best position to assist you because of their familiarity with the warranty work that was performed on your behalf. In addition, Silverton expects its dealers to be concerned with your continued satisfaction and, as a result, should be given an opportunity to provide that assistance.

If, after contacting the dealer in writing and you, as the first-use purchaser or registered subsequent owner, are unhappy with the dealer's response or if you feel that you require any further assistance, please write to the address below. In communicating to Silverton, please provide Silverton with a copy of the warranty claim which is the subject of your need for assistance, and any correspondence which you exchanged with the dealer. Please be certain that the forwarded information includes your hull identification number and name as well as the hours of usage on your engines. If at all possible, provide a chronological description of the problems which you confronted as well as the repair attempts. Include the dealer name and dealer personnel consulted. It is much appreciated if you would concisely describe your problem or question and any comments that you might have regarding the dealer's efforts to conduct the repair. Upon receipt of your correspondence, Silverton will begin its analysis and investigation into the circumstances. Silverton may contact you directly and the dealer if any further information is necessary. Silverton will also contact the dealership so as to assist both the dealer and you in resolving the question or concern.

The above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WARRANTY REGISTRATION

These limited warranties shall not be effective unless the SILVERTON Warranty Registration Form and Pre-Delivery Service Record; which are furnished with each new boat, are filled out completely and returned to SILVERTON within ten (10) days of delivery.

The return to SILVERTON of the fully signed Warranty Registration Form is critical. Warranty coverage cannot be initiated until the completed form is received at SILVERTON.

All repairs and/or replacements will be made by an authorized SILVERTON Dealer, or at the option of SILVERTON, at the SILVERTON plant. If the repairs are of such a nature that the warranty work must be performed at the SILVERTON plant, transportation costs to and from the SILVERTON plant shall be paid by the owner. The labor cost reimbursement will be based on the Labor Allowance Schedule established by SILVERTON and, where not applicable, on a reasonable number of hours as determined by SILVERTON. Any repairs and replacements must be approved in advance by an authorized SILVERTON Service Representative.

TRANSFER OF LIMITED WARRANTIES

Effective with 2007 model year boats, these limited warranties will be transferred to a subsequent purchaser of the boat if:

1. Purchased from a Silverton Dealer.

2. A notice of the transfer of ownership of the boat is given by the subsequent purchase in writing to SILVERTON within thirty (30) days of the transfer.

3. The notice shall include the name, address, and telephone number of the subsequent purchaser, the date of purchase, the hull number, and the name of the seller of the boat.

4. A non-refundable recording fee of $250.00.

5. An inspection report by an accredited marine surveyor.

SILVERTON will mail to the subsequent purchaser notice of the expiration dates of the limited warranties (See sample). The transfer of the ownership of the boat will not extend the expiration dates of the limited warranties.

BOOKS AND PUBLICATIONS

Silverton recommends you purchase and read the following publications:

Piloting, Seamanship and Small Boat Handling
By Chapman
(Included with this manual; compliments of Silverton Marine Corporation)

Boatman's Handbook
By Tom Bottomly
Motorboat and Sailing
P.O. Box 2319, FDR Station
New York, New York 10002

The Complete Book of Maintenance and Repair
By Dave Kendall
Doubleday and Company
Garden City, New York 11530

Pleasure Boating and Seamanship
United States Coast Guard Auxiliary
306 Wilson Road Oaklands
Newark, Delaware 19711

RECORD KEEPING

Boat Record

Use the **Boat Record** (included at the end of the Glossary Section of this manual) to record all important information concerning your yacht and its equipment. After your dealer has recorded all the information, remove the record from your Owner's Manual and store in a safe, convenient location. **Do not** keep this form aboard your yacht.

Float Plan

The **Float Plan** (included at the end of the Glossary Section of this manual) provides a record of your destination, departure and return times, yacht description, passenger list and other information about the trip you have planned. At the bottom of the form is a space for listing emergency telephone numbers in case your return is delayed past the expected time. It also has space for indicating information about the person filing this report. Leave a copy of the completed form ashore with a responsible person. Carry the original form with you on your cruise and if you deviate from your original plan, be certain to notify the person with whom you left the copy of your change in plans. Silverton recommends you make several copies of this form each yachting season to ensure you have an adequate supply.

Maintenance Log

The **Maintenance Log** (included at the end of the Glossary Section of this manual) provides the means to keep maintenance records in one location. Using this log will allow you to track maintenance work completed. Your Silverton Dealer will also find this information helpful if you decide to sell or trade your yacht. The maintenance record will make your yacht a more desirable purchase because it tells prospective buyers that you have maintained the proper care of the vessel on a regular basis.

Accident Reporting

No one likes to think about having a boating accident, but unfortunately, they do occur. You must file an **Accident Report** after a boating accident just as you would after an automobile accident. A copy of the United States Coast Guard Accident Report is included with this Owner's Manual. You can obtain more copies of the report by calling the

United States Coast Guard Boating Safety Hotline at 1-800-368-5647.

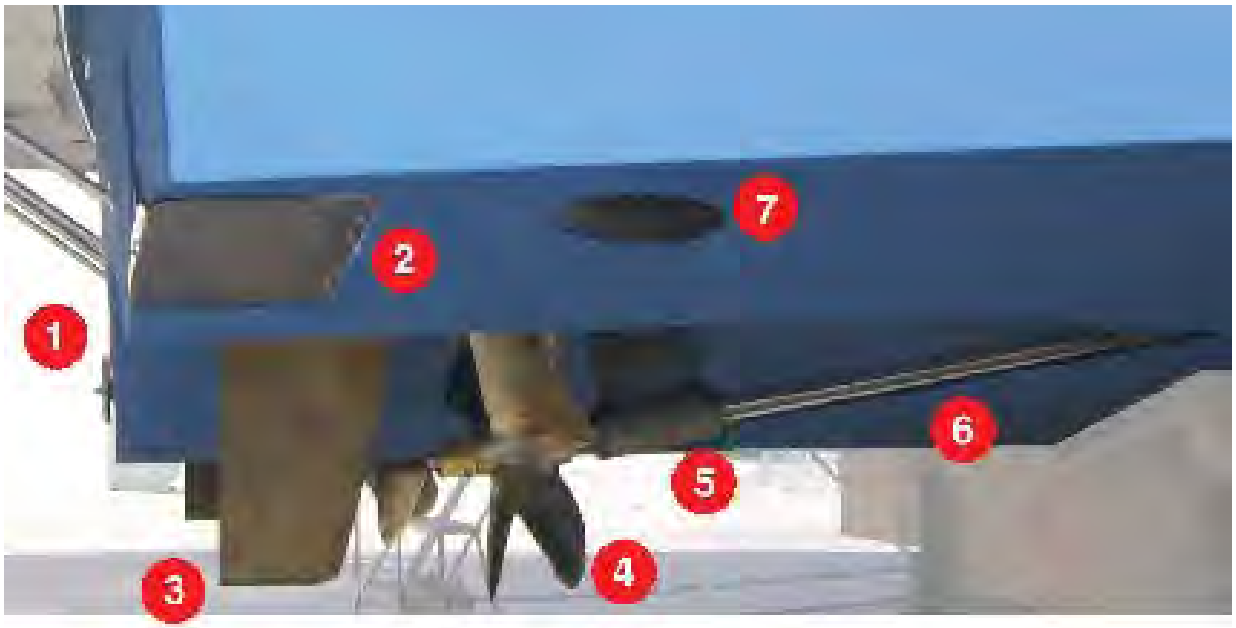
You are required to file an accident report with the United States Coast Guard within forty-eight (48) hours after the occurrence of an accident resulting in any one of the following:

- Loss of life.
- A person disappears from a vessel under circumstances that indicate the possibility of death or injury.
- Personal injury requiring medical treatment beyond first aid.
- Damage to the vessel or damage to property.*
- Complete loss of the vessel.

** State statutes determine whether you must file an accident report in this case. An accident report must be filed if the damage exceeds a threshold dollar value as established by the state in which the accident occurred. In most states, the threshold is $2,000.00. Contact the United States Coast Guard Boating Safety Hotline to verify the threshold for a particular state.*

***Note:** State and local agencies may also have accident reporting requirements. Check with local enforcement agencies or with your local Silverton Dealer regarding local requirements.*

HULL



1 - Anode Plate
2 - Trim Tab - Starboard
3 - Rudder - Starboard
4 - Propeller - Starboard
5 - Strut - Starboard
6 - Shaft - Starboard
7 - Underwater Exhaust

The **Shaft** is connected to the engine transmission with a coupling and extends through the bottom of the hull. The **Propeller** is attached to the end of the shaft. The shaft is supported forward of the propeller by a **Strut**. The strut supports and stabilizes the shafts.

The rotation of the **Propellers** propel the yacht in the selected direction, controlled from the helm station.

The **Rudders** provide steering for the yacht to port or starboard, depending on the direction they are turned by the operator from the helm station steering wheel.

The **Zinc Anodes** are factory installed on the trim tabs, shafts, rudders and transom for the purpose of preventing electrolysis and galvanic corrosion, which is discussed in the Winterization and Storage pages in the Cleaning and Maintenance section of this manual.

ENGINE SEAWATER PICKUP

The photograph below displays the **Engine Seawater Pickup** as shown on the starboard side. The Engine Seawater Pickups are located on the bottom exterior of the hull and are used for “scooping” water for the engine cooling system.

TRANSOM ANODE PLATE

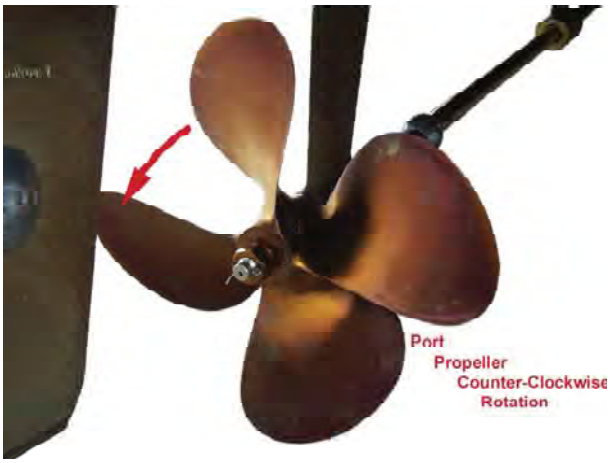
The photograph below displays the Transom Anode Plate, which is a sacrificial zinc anode that is bolted to the transom and connected to the electrical bonding system. Its purpose is to help in reducing the effects of electrolysis and galvanic corrosion of the underwater components in your yacht, which is discussed in the Bonding System pages in the Systems Operation section of this Owner’s Manual.

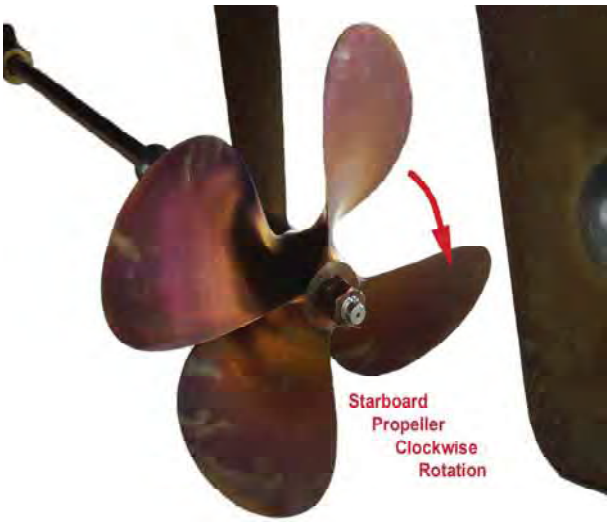
TRIM TABS

The photograph below displays the Starboard Trim Tab, which is factory installed on the lower edge of the transom. The port trim tab is located in the same location on the port side of the transom. The purpose of the trim tabs is to assist you in controlling the angle, both longitudinally and athwartships, that your yacht rides in the water during forward movement. The control panel for the Trim Tabs is located at the helm station.

PROPELLERS

The photographs below display the propeller rotation for the Port and Starboard sides.





ENGINE EXHAUST PORTS

The photograph above displays the Starboard Underwater Engine Exhaust Port. The Port Engine Exhaust Port is in the identical location on the port side of the yacht.

GENERATOR EXHAUST PORT

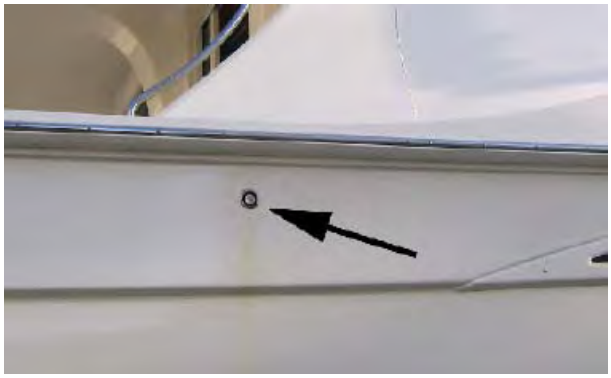
The photograph below displays the Generator Exhaust Port. It is located on the transom.

DISCHARGE PORTS

The various **Discharge Ports** (also known as thru-hull ports) are located on the starboard and port sides of the hull. Refer to the Thru-Hull Schematic Drawings in the SCHEMATICS SECTION of this manual.

FUEL TANK VENTS

The photograph below displays the **Starboard Fuel Tank Vent** as shown on the starboard side of the hull. There are two fuel tank vents in the hull. The port fuel tank vent is on the port side.



Note: *Please refer to the Thru-Hull Location Schematics in the SCHEMATICS SECTION of this Owner's Manual.*

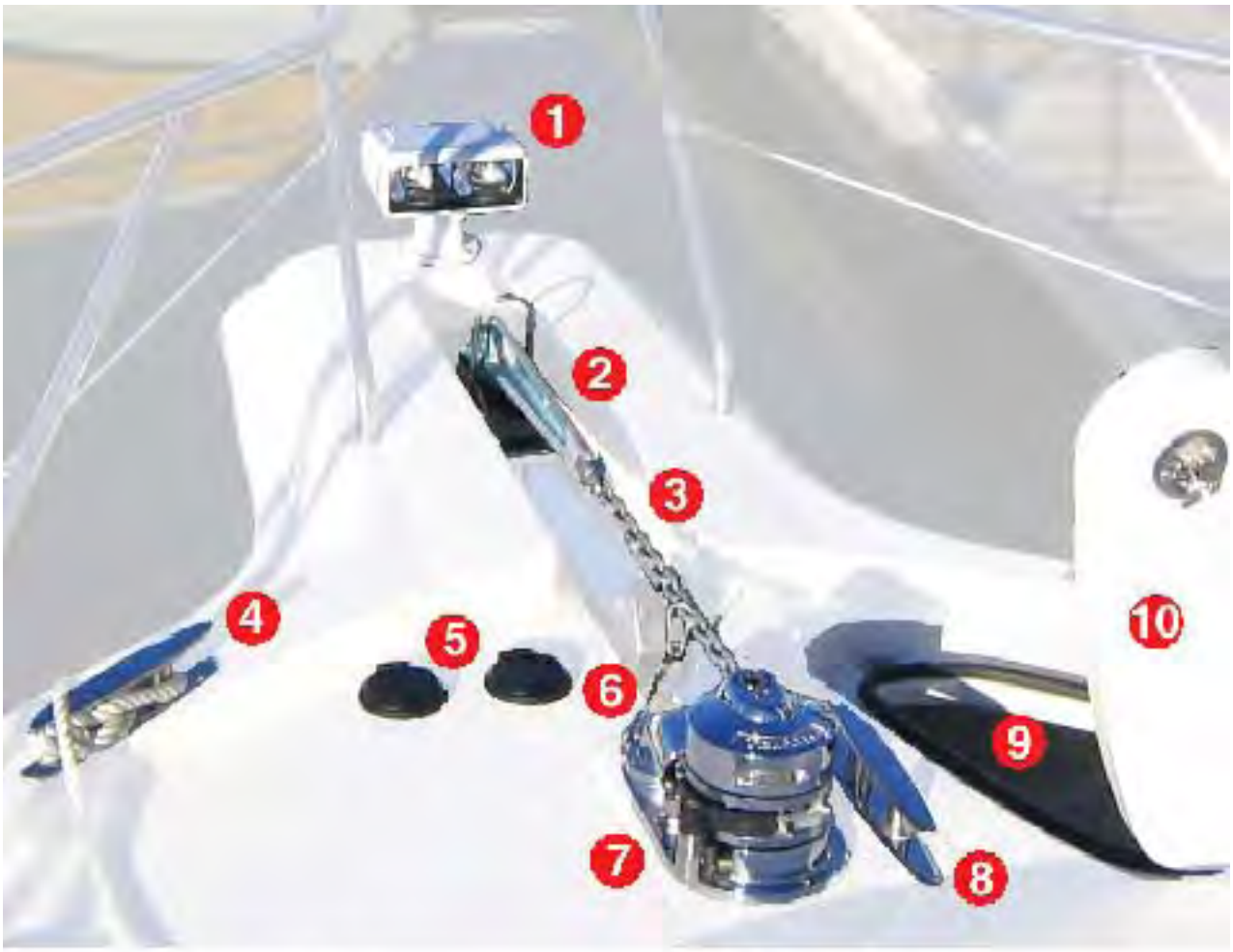
BILGE VENTS

Your 45C has ventilation vents from the Engine Room. There are large vents located on both sides of the hull. The photo below shows the Port Engine Room Vent.

This is an always open vent that has no fan attached to it.

The Bilge Ventilation System Pages in the Operations Systems Section of this manual discusses the ventilation system. Be certain to read and have a thorough understanding of this section. It contains important information concerning The SAFE operation of your yacht.

DECK



1 - Spotlight
2 - Anchor
3 - Anchor Chain
4 - Cleat
5 - Windlass Foot Controls
6 - Safety Cable
7 - Windlass
8 - Anchor Cleat
9 - Rope Locker
10 - Rope Locker Hatch

ANCHOR SYSTEM

The photograph below displays the location of the Anchor, which is located in its bracket under the pulpit.

The photograph below displays the optional Anchor Windlass and controls, which are located on the forward section of the deck immediately aft of the pulpit.

WARNING

Be certain to keep hands and feet away from any moving parts while operating the Anchor System. Becoming entangled in the anchor line may result in serious injury or death.

The photo below shows the Windlass Anchor Wench Control located at the helm.

SEARCH LIGHT

The 45C may be equipped with an optional **Search Light**, which is mounted on the forward portion of the pulpit. The photograph below displays the Search Light.

The actual control switch for the Search Light is an omni-positional switch. It con-

trols the kind of light that comes out of your search light. It can be either spot (S) or flood (F). The photo below shows the control, which is located at the Helm.

BRIDGE

ACCESS STEPS

The access steps to the Bridge are on the Starboard side of the Cockpit.

HELM

The Helm, located on the Bridge of your **45C**, is where your yacht is piloted.

Port Lounges

Located in the forward part of the bridge is the **Port Lounges**. The seat portions are removable and have storage underneath.

Starboard Lounge

The photo below shows the starboard lounge. The seat portions are removable and have storage underneath.

CAPTAIN'S CHAIRS

Aft of the Helm is two **Captain's Chairs**. These chairs are adjustable and swivel.

HORNS

The factory installed **Horns** are mounted on the forward section of the bridge.

The button for the Air Horns is located at the Helm. The photo below shows the location of the button that sounds the Air Horns.

NAVIGATION LIGHTS

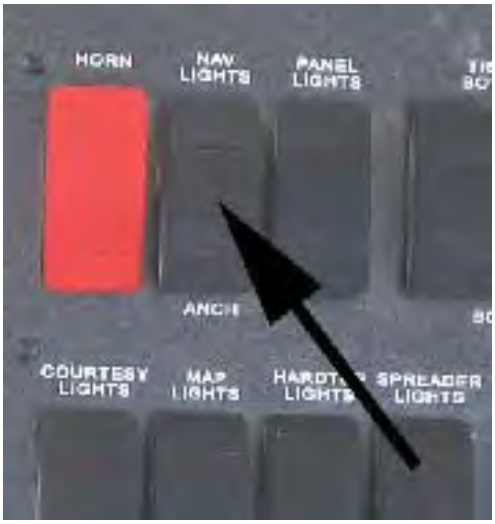
The photographs below display the location of the Port, Starboard, Stern and the combination Masthead/Anchor Light.

The Port Navigation Light is RED.

The Starboard Navigation Light is GREEN.

The Stern Light is WHITE.

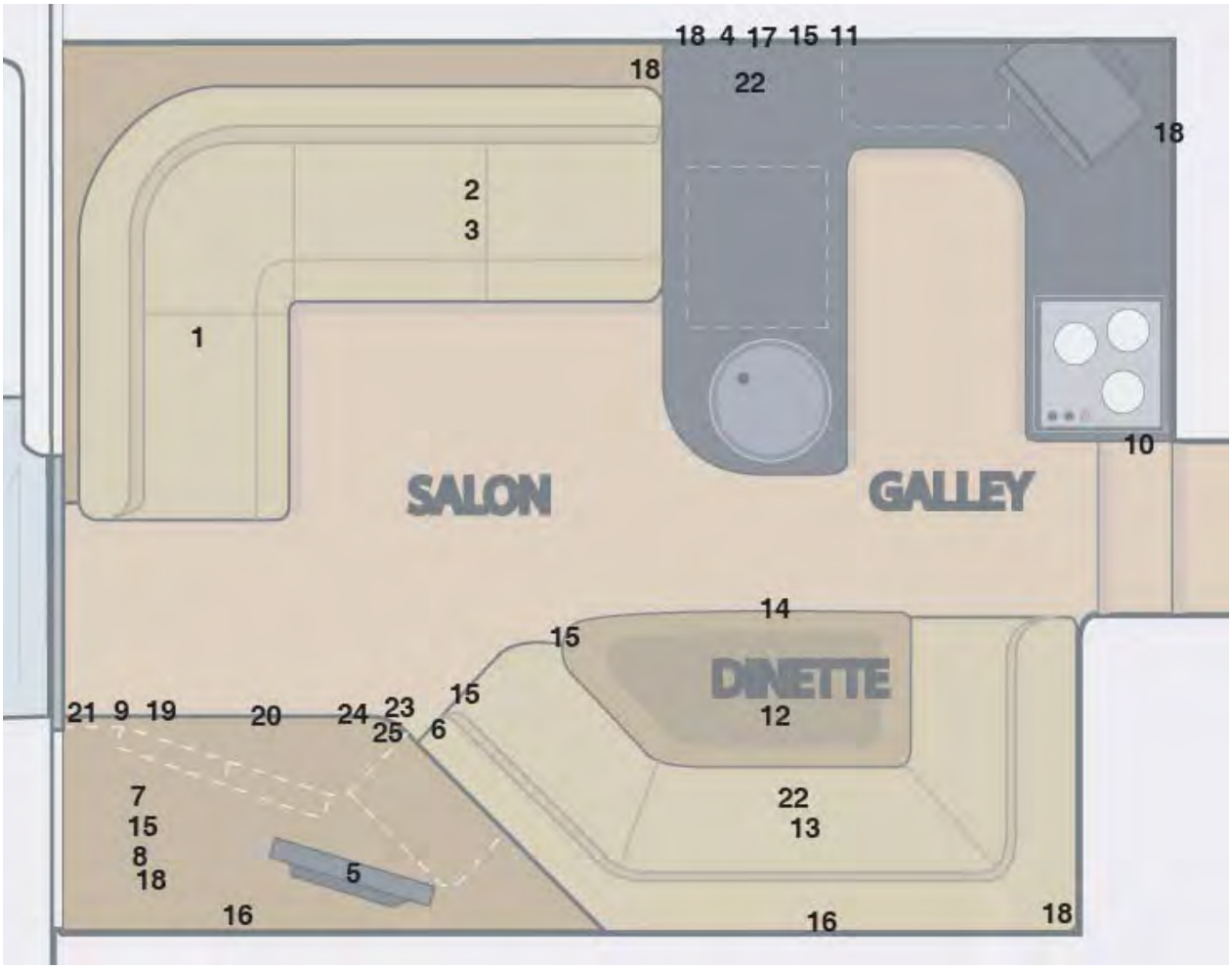
The Masthead/Anchor Light is also WHITE.



The Navigation/Anchor Light switch is located at the helm station.

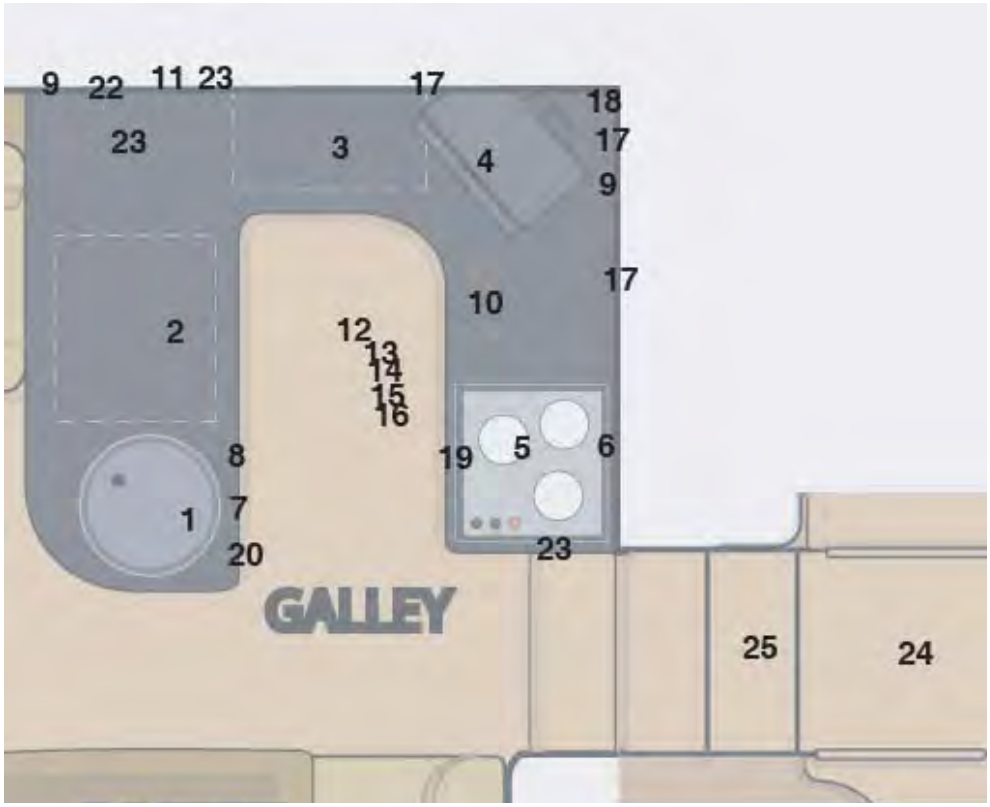
INTERIOR

This section will show you the various interior compartments of your 45C, starting with your entry into the Salon.



Salon - Dinette

1. Incliner - Standard
2. Sleeper Lounge or Incliner (Optional)
3. Sofa - Standard
4. Telephone Jack
5. Television
6. TV Lift Switch
7. CD Stereo / DVD System
8. CD Rack & Storage
9. Light Switches
10. Galley Switches (3)
11. A/C Control Panel - Galley
12. Table - Dinette
13. Dinette Lounge
14. Storage Cabinet under Dinette
15. Vent - A/C Outlet
16. Vent - A/C Intake
17. DC Outlet 12 Volt
18. AC Outlet 120 Volt (2)
19. CO Monitor
20. AC/DC Electrical Panels
21. A/C Control Panel - Salon
22. A/C Unit - Salon
23. Dual Water/Waste Monitor
24. Battery Management Center
25. Storage Locker

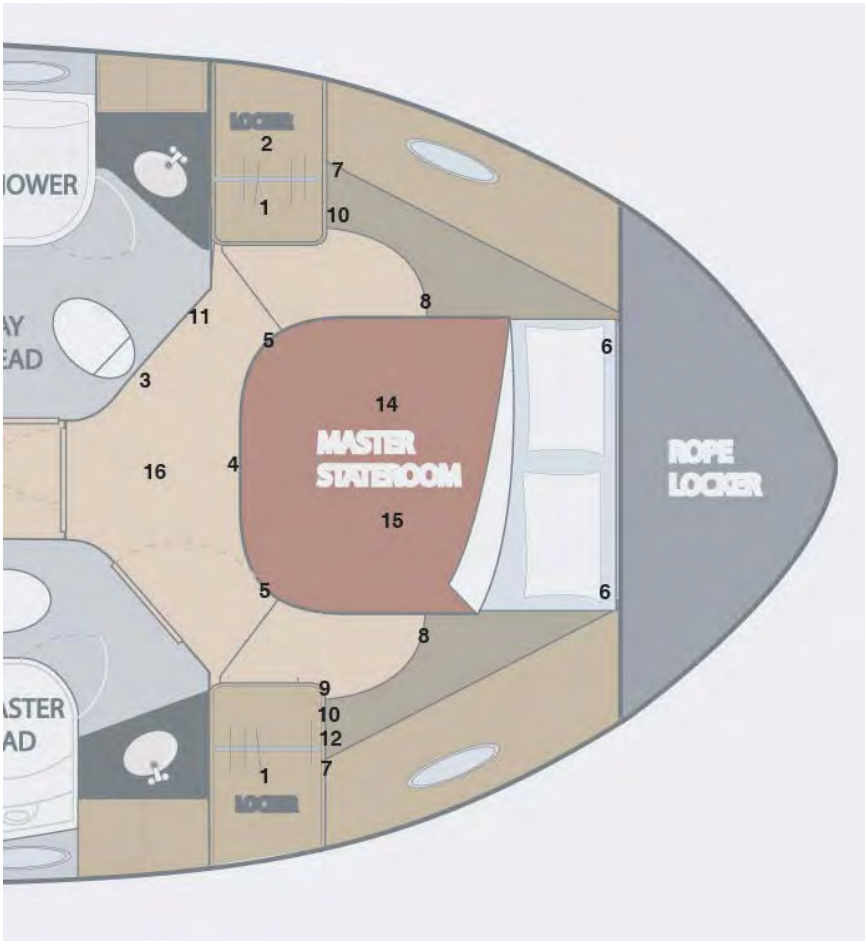


Galley

1. Galley Sink
2. Refrigerator
3. Freezer
4. Microwave
5. Cooktop
6. Cooktop Exhaust Fan
7. Compactor
8. Storage Locker under Sink
9. AC Outlet 120 Volt (2)
10. Drawers (4) and Storage Locker
11. Vent - A/C Outlet
12. Access Panel
13. A/C Unit - Master Stateroom
14. Storage Racks (2)
15. Water Pump
16. A/C Water Cooling Manifolds
17. Storage Cabinets (3) - above
18. Storage Cabinets (2) - bottom
19. Storage under Cooktop
20. Storage - Tall Cabinet
21. A/C Unit - Salon
22. Telephone Jack
23. Galley Switches

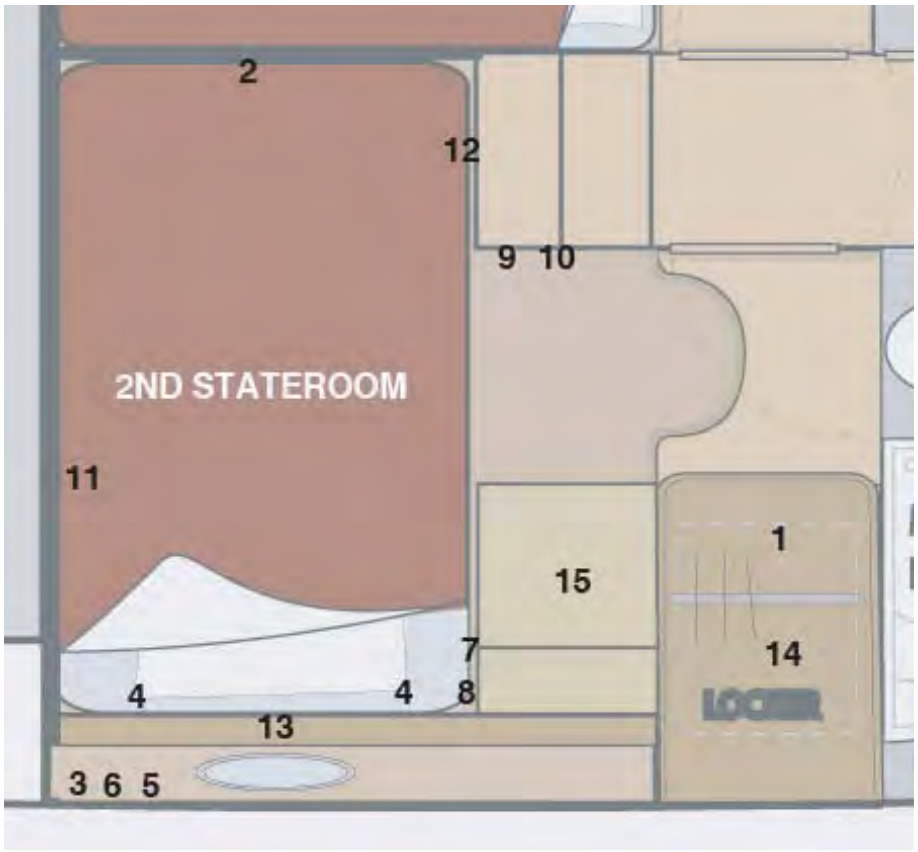
Companionway

24. Access Hatch in Floor
25. Central Vacuum under Step (Optional)



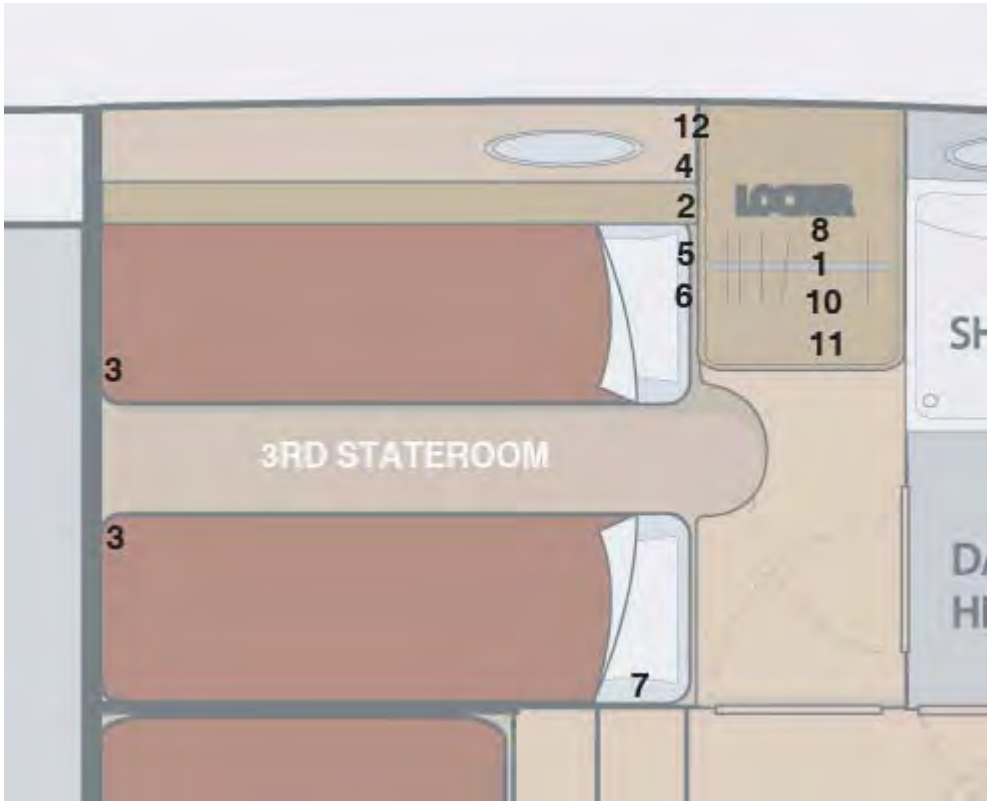
Master Stateroom

1. Hanging Locker - Lighted - Cedar Lined
2. CD Stereo / DVD System (Optional)
3. Television
4. Drawers under Mattress
5. Cabinets under Mattress
6. Reading Lights - Individual Controls
7. Vent - A/C Outlet (high)
8. Vent - A/C Inlet (DO NOT BLOCK)
9. DC Outlet 12 Volt
10. AC Outlet 120 Volt (2)
11. Switches (2)
12. CO Monitor
13. A/C Control Panel (low)
14. A/C Unit - Master Stateroom under Mattress
15. Access Panel under Mattress - Storage
16. Access Panel



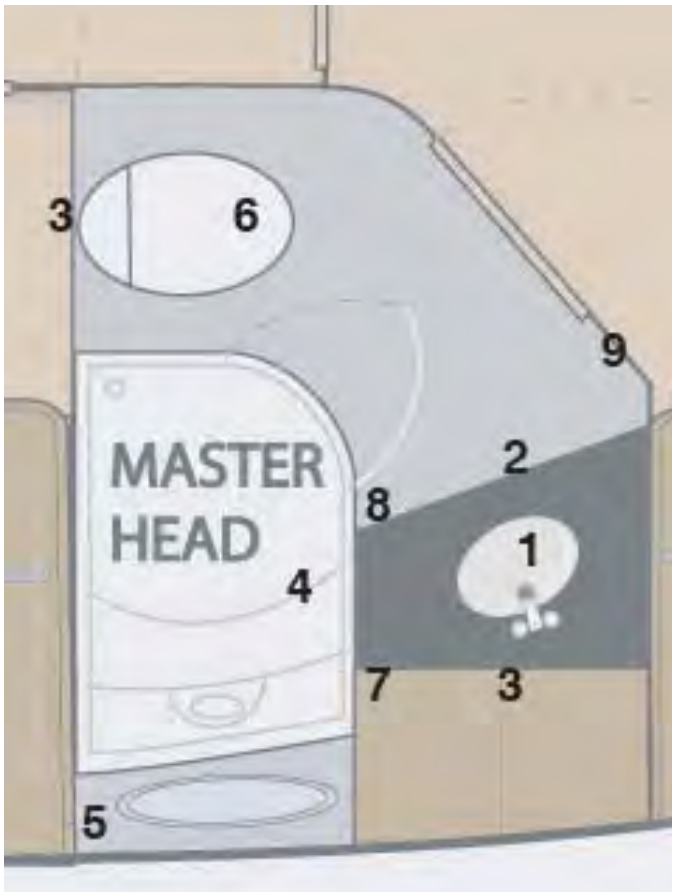
Second Stateroom

1. Hanging Locker - Lighted - Cedar Lined
2. Television (Optional)
3. Telephone Jack
4. Reading Lights - Individual Controls
5. DC Outlets 12 Volt
6. AC Outlet 120 Volt (2)
7. CO Monitor
8. Switches (2)
9. DVD System (Optional)
10. CD Stereo System (Optional)
11. Vent - A/C Outlet
12. Storage or Central Vacuum Access
13. Storage behind Headboard
14. Washer/Dryer (Optional) or Storage with Drawers & Hanging Locker (Standard)
15. Storage Cabinet



Third Stateroom

1. Hanging Locker - Lighted - Cedar Lined
2. Television (Optional)
3. Reading Lights - Individual Controls
4. AC Outlet 120 Volt (2)
5. CO Monitor
6. Switches (2)
7. DVD System (Optional)
8. CD Stereo System (Optional)
9. Vent - A/C Outlet
10. Drawers
11. Storage Cabinet
12. Storage

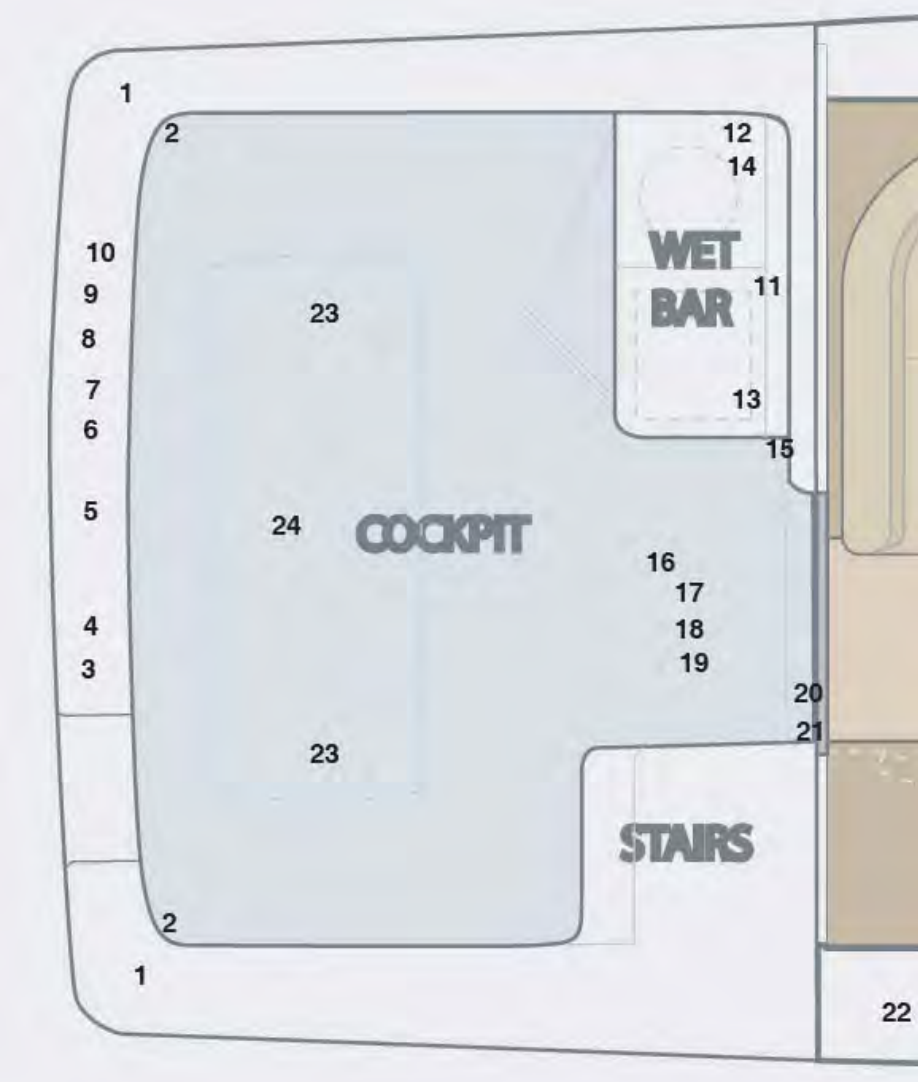


Master Head

1. Vanity Sink
2. Storage under Sink
3. Vanity Mirror & Cabinet
4. Shower
5. Exhaust Fan
6. Toilet
7. Vent - A/C Outlet
8. AC Outlet 120 Volt (2)
9. Switches (2)

Day Head

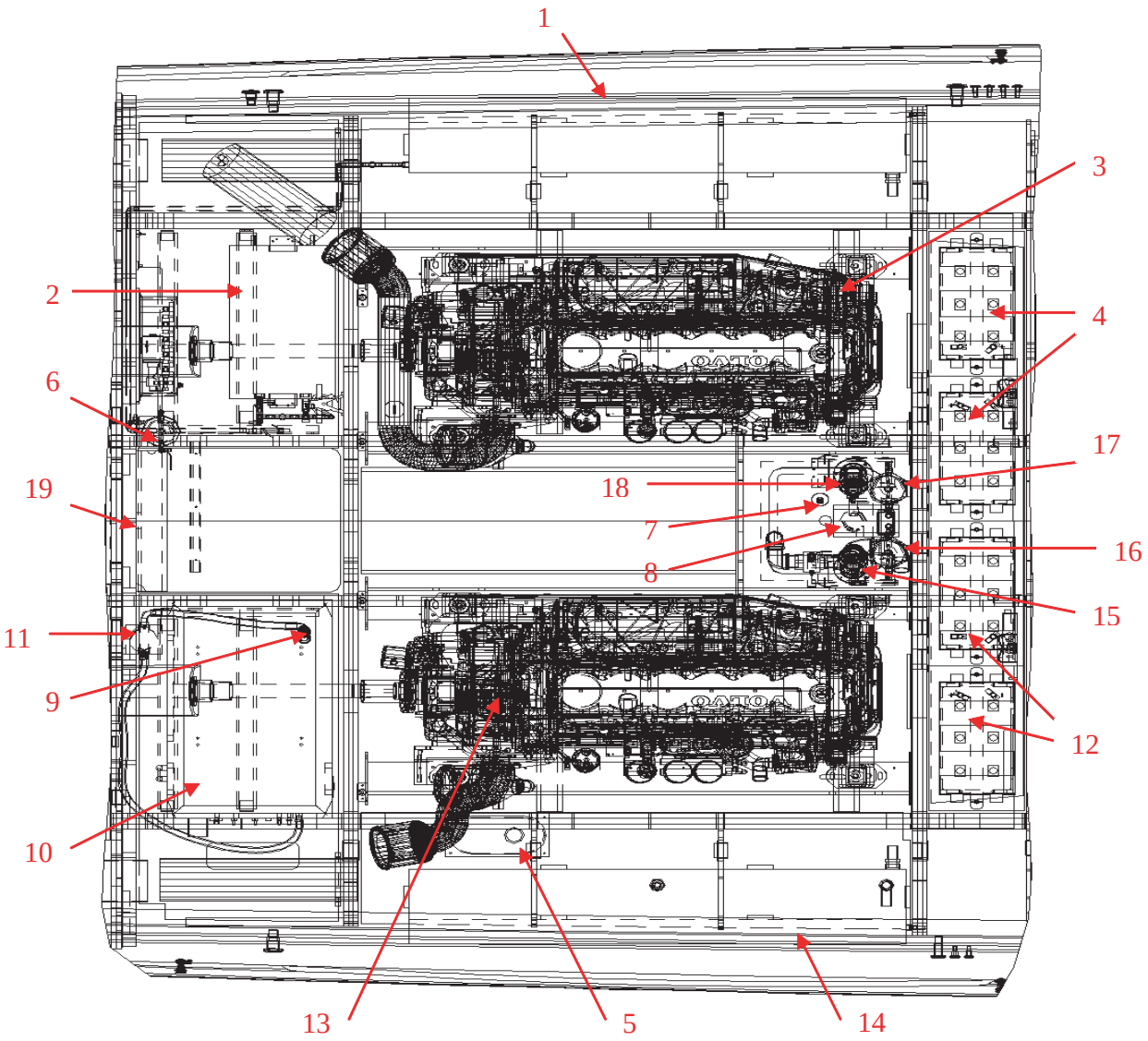
1. Vanity Sink
2. Storage under Sink
3. Vanity Mirror & Cabinet
4. Shower
5. Exhaust Fan
6. Toilet
7. Vent - A/C Outlet
8. AC Outlet 120 Volt (2)
9. Switches (2)



Cockpit

1. Cleat
2. Cockpit Drain
3. Faucets (2) Saltwater Washdown
4. Shower - Portable
5. Livewell (Optional) or Storage (Standard)
6. Glendinning Switch
7. Glendinning Outlet
8. 240 Volt Shore Power Inlet
9. Shore Water Inlet
10. Telephone / Cable TV Outlet
11. Wetbar
12. Icemaker
13. Refrigerator
14. Bar-B-Q (Optional)
15. AC Outlet 120 Volt (2)
16. Access Hatch to Engine Room
17. 120 Volt Outlet
18. Fish Box Macerator Switch (Optional)
19. Engine Room Light Switches
20. Overhead Light Switch
21. Courtesy Light Switch
22. Fuel Fill
23. Storage Box - Removable
24. Fish Box

ENGINE COMPARTMENT



1. Engine Room Vent - Port
2. Water Heater
3. Engine - Port
4. Batteries - Port
5. Muffler - Generator
6. Fuel Fill - Generator
7. Garber Drain - Mid
8. Bilge Pump - Mid
9. Seawater Pick-Up Generator
10. Generator
11. Generator Stainer
12. Batteries - Starboard
13. Engine - Starboard
14. Engine Room Vent - Starboard
15. Seawater Pick-Up Starboard Engine
16. Fuel Fill - Starboard Engine
17. Fuel Filter - Port Engine
18. Seawater Pick-Up - Port Engine
19. Engine Room Entry

BOATING SAFETY

Silverton believes your safety aboard your yacht, whether cruising or moored at your dock, is extremely important. A yacht operated in a safe manner will provide you, your passengers and other boaters many pleasurable hours of cruising and peace of mind. This section discusses the potential hazards that may be associated with boating for your awareness so they may be avoided, if possible. Be certain to read and have a thorough understanding of this section.

Silverton recommends completing a safe boating course if you are new to boating. Even if you are an experienced boater, you should consider enrolling in one of these courses as they will provide you with updated information that will prove to be valuable and enhance your cruising pleasure. Your local United States Coast Guard Auxiliary and United States Power Squadrons offer comprehensive safe boating classes several times a year. You may contact them for a course schedule in your area or the Boat/U.S. Foundation at 1-800-336-BOAT, or in Virginia, at 1-800-245-BOAT.

Safety Equipment

Important: Federal Law requires you provide and maintain certain safety equipment on your yacht. As the yacht owner, you are responsible for providing all required safety equipment. Consult the United States Coast Guard and your state and local regulations to ensure your yacht is in complete compliance with all requirements concerning safety equipment on board. Additional safety equipment may be recommended for your safety and the safety of your passengers. Be aware of its availability and specific use.

Minimum Recommended Safety Equipment

- ✖ Required life saving equipment, including personal flotation and throwing devices.
- ✖ Required fire-extinguishing equipment.
- ✖ Required visual distress signal devices.
- ✖ First aid kit.
- ✖ Emergency position indicating radio beam (EPIRB).
- ✖ Manual bailing device.
- ✖ Anchor with sufficient line/chain.
- ✖ Flashlight with fully charged batteries.
- ✖ Binoculars.
- ✖ Whistle.
- ✖ VHF Radio.
- ✖ Navigational charts for your cruising areas.
- ✖ Fog Bell (boats over 39.4 feet).

If you need assistance, please feel free to contact our Customer Service Hotline at 1-800-882-9266.

Personal Flotation Devices (PFD's)

United States Coast Guard regulations require you to have at least one (1) approved Type I, Type II, or Type III Personal Flotation Device (PFD) for each person on board. The PFD's must be of suitable size for each person aboard and must be maintained in serviceable condition and readily accessible. A minimum of three (3) PFD's (two wearable and one throwable) are required, regardless of the number of persons on board. Each of these Personal Flotation devices, commonly

known as “Life Jackets”, are described as follows:

TYPE I (Wearable): This off-shore PFD has the greatest buoyancy. It is most effective for all waters where rescue may be delayed. Its design allows for turning most unconscious persons in the water from a face down position to a face up position, assisting in the prevention of drowning.

Type II (Wearable): This near-shore PFD provides less buoyancy than a Type I PFD. It is intended for use in calm, inland waters or waters where there is a greater chance of a quick rescue. It turns its wearer to a face up position as does the Type I PFD, but the turning action is not as pronounced. A Type II PFD may not turn as many persons to a face up position under the same conditions as would a Type I PFD.

Type III (Wearable): Classified as a flotation aid, the Type III PFD permits the wearer to place himself in a vertical or face up position, but it will not do it automatically as would a Type I or Type II PFD. The Type III PFD has the same minimum buoyancy as a Type II PFD, but it has little, or no, turning ability. It is intended for use in calm, inland waters where immediate rescue is probable. The Type III PFD is used most often by people participating in water sports, as it is generally the most comfortable type for continuous wear.

Type IV (Throwable): United States Coast Guard regulations require at least one (1) throwable Type IV PFD to be on board, regardless of the number of passengers. The Type IV PFD is not intended to be worn; it is intended to be thrown to a person who has fallen overboard and is conscious. The Type IV PFD is held by the user until rescued. The most common examples of Type IV PFD’s are buoyant cushions or ring buoys and they are required to be immediately available for use and in serviceable condition.

Note: *United States Coast Guard regulations for the number and type of PFD’s are the minimum required. Silverton recommends exceeding the minimum requirements for your safety and the safety of your passengers.*

Fire Extinguishing Equipment

As a yacht owner, you are responsible to maintain a minimum number and type of portable fire extinguishers on board. All fire extinguishers must be approved by the United States Coast Guard and be readily accessible and in serviceable condition. United States Coast Guard classification includes foam, carbon dioxide, and chemical fire extinguishing materials, which are described in detail in the **Portable Fire Extinguisher System Section** of this Owner’s Manual. Be certain to read and have a thorough understanding of the portable fire extinguishing equipment. United States Coast Guard minimum requirements for portable fire extinguishers maintained aboard your yacht are as follows:

✷ **Yachts longer than 26 feet and shorter than 40 feet:** Two (2) Type B-I or at least one (1) Type B-II portable, hand-held fire extinguisher. If your yacht has a fixed fire extinguishing system approved by the United States Coast Guard, one (1) Type B-I portable fire extinguisher is required.

✷ **Yachts longer than 40 feet and shorter than 65 feet:** Three (3) Type B-I or one (1) Type B-I and one (1) Type B-II portable, hand held fire extinguishers. If your yacht has a fixed fire extinguishing system ap-

proved by the United States Coast Guard, two (2) type B-I or one (1) Type B-II portable fire extinguisher is required.

Note: United States Coast Guard regulations are the minimum requirements. Silverton recommends exceeding the minimum requirements for your safety.

Fire Safety

Fire safety is something that everyone who owns or operates a boat should practice. Each year, boating fires and explosions injure hundreds of boaters and cause millions of dollars in property damage. While there is a greater chance of a fire or explosion on a boat than on land, most of these accidents can be prevented. With a little effort on your part, fire prevention and fire safety are very attainable goals.

As owner of your yacht, it is your responsibility to:

✔ Have fire-fighting equipment inspected at regular intervals.

✔ Replace fire-fighting equipment, if expired or discharged, with devices of equal or greater fire-fighting capacity.

✔ Inform members of the crew and guests about:
- the location and operation of fire-fighting equipment.
- the location and operation of escape hatches.

✔ Ensure that fire-fighting equipment is readily accessible.

✔ Keep passageways to exits and escape hatches clear of obstructions.

✔ Never allow the use of gas lights on board.

✔ Never leave the boat unattended when cooking or heating appliances are in use.

✔ Never modify any of the boat's systems (especially electrical, fuel, and ventilation).

✔ Never handle fuel of any type when machinery is running or when cooking or heating appliances are in use.

✔ Follow proper fueling procedures (discussed in the fuel safety section of this publication).

✔ Never smoke while handling fuel.

✔ Keep machinery and bilge areas clean and free of debris.

✔ Always sniff for fuel vapors before starting engines or generator.

If you need assistance, please feel free to contact our Customer Service Hotline at 1-800-882-9266.

Other good ways to prevent fire aboard your yacht is to keep the bilge areas clean and to check for fuel and gas vapors at regular intervals, and not to fit free hanging curtains or other fabrics in the vicinity of, or above, cookers or other open flame devices. Also combustible material should not be stored in the engine compartment. If non-combustible materials are stowed in the engine space they shall be secured against falling into machinery and shall cause no obstruction to access in or from the space.

⚠ CAUTION

Fire prevention is something that you as the yacht owner are responsible for. Too much fire prevention is not possible. This is an area that is unfortunately often overlooked by boat owners. However, as long as this area is an important part of your boating safety preparation, you can help to make your journeys safer for not only for you, but your crew and family as well.

VISUAL DISTRESS SIGNAL DEVICES

The United States Coast Guard requires all boats operating on the coastal waters of the United States to maintain visual distress signal equipment (flares) on board. Coastal waters are defined as all waters, except rivers, streams and inland lakes. The Great Lakes and any river mouth greater than two (2) miles wide are considered coastal waters. All boats owned in the United States and operating on the high seas are required to carry visual distress signal equipment on board.

All visual distress signal devices are required to be maintained in serviceable condition and stowed in a readily accessible location. Equipment displaying a useful service life date must be within the specified usage date shown. Both pyrotechnic and non-pyrotechnic equipment must be United States Coast Guard approved.

Pyrotechnic visual distress signal devices and their associated equipment include the following:

- ☆ Red Flares - Hand held or aerial.
- ☆ Orange Smoke - Hand held or floating.
- ☆ Launchers for aerial red meteors or parachute flares.

Non-pyrotechnic visual distress signal devices include the following:

- ☆ Orange Distress Flag.
- ☆ Dye Markers.
- ☆ Electric Flashing Distress Light.

No single visual distress signal device is perfect for all conditions or purposes. Silverton recommends carrying various types of devices as described above. Careful selection and the proper stowage of visual distress signal equipment is extremely important. If young children are frequently aboard, you should select devices with packaging which children, but not adults, will find difficult to open.

Sound Signaling Devices

The United States Coast Guard requires all boats over 16 feet in length to have a device that is capable of producing a sound signal when conditions require. Boats greater than 26 feet and less than 39 feet 4 inches, must have a sound signaling device that is capable of producing a four (4) second blast, which can be heard at least one-half mile away. The device may be either hand held or power operated. Boats greater than 39 feet 4 inches must have in addition to the above sound signaling device, a whistle and a bell, which must meet or exceed the requirements of the Inland Navigational Rules Act of 1980.

Refer to the United States Coast Guard publication *"Navigational Rules, Interna-*

tional-Inland" for specific requirements of sound signaling devices.

Navigation Lights

The United States Coast Guard requires all boats that are operated during the hours of darkness or when visibility is impaired, be equipped with navigation lights that are illuminated. Observe all rules of navigation when meeting or passing another vessel. **DO NOT** operate your yacht at high speeds during night operation or when visibility is impaired. A good rule to follow is to **NEVER** operate your yacht at a greater speed than that which would prevent you from stopping within the distance of your visibility.

Always use common sense and good judgement when operating your yacht at night or during restricted visibility.

Refer to the United States Coast Guard publication *"Navigational Rules, International-Inland"* for specific navigational lighting requirements.

Additional Safety Equipment

You should consider having additional equipment on board your yacht to help make your cruising experience safer and more enjoyable. Some examples of this additional equipment are as follows:

- ✔ Anchor with chain and/or line.
- ✔ Boat hook.
- ✔ Bucket and sponge.
- ✔ Commonly used spare parts, such as hose clamps, spark plugs, etc.
- ✔ Compass.
- ✔ Docking lines.
- ✔ Engine and accessory manuals.
- ✔ Extra keys.
- ✔ Extra V-belts.
- ✔ Fenders.
- ✔ First aid kit.
- ✔ Flashlight with extra batteries.
- ✔ Manually operated bilge pump.
- ✔ Navigational charts for your cruising area.
- ✔ Owner's Manual.
- ✔ Replacement light bulbs.
- ✔ Ship-to-Shore radio.
- ✔ Spare fuel and oil filters.
- ✔ Spare propeller with fastening hardware.
- ✔ Tool kit.

Navigation Rules of the Road

Navigating your yacht is much the same as driving an automobile. Operating either one responsibly means complying with a set of rules intended to prevent accidents. Just as you assume other automobile drivers know the rules of the road and expect them to abide by them, other boaters assume the same of you. As a responsible yachtsman, you must comply with the **"Rules of the Road"**; the marine traffic laws enforced by the United States Coast Guard. There are two (2) sets of rules: The **United States Inland Navigational Rules** and the **Inter-**

national Rules. The United States Inland Navigational rules apply to all vessels operated within the demarcation lines separating inland and international waters. The United States Coast Guard publishes the **"Rules of the Road"** in its publication *"Navigational Rules, International-Inland"*. You can obtain a copy of this publication from your local United States Coast Guard Unit or the United States Coast Guard Headquarters, 1300 "E" Street NW, Washington, D.C. 20226.

Other helpful publications available from the United States Coast Guard include, *"Aids to Navigation"* (Pamphlet #123), which explains the significance of various lights and buoys; *"Boating Safety Training Manual"*; *"Federal Requirements For Recreational Boats"*. Be certain to check with your local United States Coast Guard station, your Silverton Dealer or a local marina concerning navigational aids unique to your yachting area.

It is impossible to establish rules for every type of yachting situation. Therefore, it is extremely important to use common sense and good judgement when operating your yacht. Some of the basic rules to follow are:

✖ Always adhere to navigational rules to avoid collisions.

✖ Less maneuverable boats generally have the right-of-way. Always steer clear of the Stand-on vessel (boat having the right-of-way) and pass to its stern in a crossing situation.

✖ If a collision appears unavoidable, **BOTH** vessels must act **IMMEDIATELY**. Prudence **ALWAYS** takes precedence over the right-of-way rules if a collision is imminent.

✖ **NEVER** send a **"MAYDAY"** message unless there is a serious emergency and you are in need of immediate assistance.

Be certain you understand important terminology distinctions:

Power Driven Vessel
: A boat propelled by an engine, including a sailboat propelled by an engine and sails.

Sailing Vessel
: A boat propelled by sail only, with no engine in operation.

Vessel Engaged In Fishing
: A commercial fishing boat with apparatus that restricts its maneuverability (does not include trolling lines or other apparatus that does not restrict its maneuverability).

Vessel With Restricted Maneuverability
: Any vessel, due to it size, draft, or cargo, that is restricted in its ability to maneuver in a certain waterway.

Underway
: Any vessel not anchored, not made fast to shore and not aground, whether or not it is under power or sail.

Basic Rules of Navigation

Power driven vessels must give the right of way to the following:

✖ A vessel unable to maneuver.
✖ A vessel whose maneuverability is restricted.
✖ A sailing vessel.

Sailing vessels must give the right of way to the following:

✖ A vessel unable to maneuver.
✖ A vessel whose maneuverability is restricted.
✖ A vessel engaged in commercial fishing.

Vessels engaged in commercial fishing must give the right of way to the following:

- ✖ A vessel unable to maneuver.
- ✖ A vessel whose maneuverability is restricted.

Basic Rules of Safe Boating

✖ **Drugs and/or Alcohol and Boating DO NOT Mix.** Drugs and/or alcohol decrease your reaction time, impair your judgement, and inhibit your ability to safely operate your yacht. As a responsible boater, you will refrain from using drugs or alcohol (singly or combined) while you are operating your yacht. Operation of motorized vessels while under the influence of drugs and/or alcohol carries a severe penalty.

✖ Always maintain your yacht and its equipment in safe operating condition. Inspect the hull, engines, safety equipment, and all boating accessories on a regular basis.

✖ Stow all loose items properly to prevent injury or damage caused by heavy sea conditions.

✖ Be certain lifesaving and fire extinguishing equipment is on board. This equipment must meet or exceed regulatory standards and it should be noticeable, easily accessible and in proper operating condition. Your passengers should know where this equipment is located and how to use it.

✖ Be certain you have sufficient fuel on board for your anticipated cruising requirements. In general, anticipate using 1/3 of your fuel supply to reach your destination and 1/3 of your fuel supply to return. Always maintain 1/3 of your fuel supply in reserve for changes in your plans due to unforeseen weather conditions or other circumstances.

✖ Use **EXTREME CAUTION** while fueling your yacht. Be certain you know the capacity of the fuel tank (s) and the amount of fuel you consume when operating at your normal cruising speeds. Read and have a thorough understanding of the **Fuel System Pages** in the Systems Operation Section of this Owner's Manual. It contains valuable information and warnings that, if strictly adhered to, will enhance your yachting pleasure and safety.

✖ Check the weather forecast before getting underway. DO NOT venture out if the weather is, or is expected to be, threatening. While underway, always be cognizant of changing weather conditions by frequently checking the local forecast. Monitor strong winds and electrical storms closely and head for sheltered waters or your marina BEFORE they are encountered.

✖ Always maintain accurate, updated charts of your cruising area on board and refer to them frequently. DO NOT rely on your memory of an area. All waters, particularly tidal waters, are subject to constant changes, such as shoaling and underwater hazards.

✖ Always file a Float Plan with a responsible person before you depart on your cruise. A blank Float Plan is in the back of the Owner's Manual.

✖ Instruct at least one other person on board your yacht in its basic operating procedure. This person can take over the operation of your yacht if you unexpectedly become unable to do so.

✖ DO NOT permit your passengers to ride on parts of your yacht that are not intended

for passenger use, such as the gunwales or the bowrail.

✖ Ask all persons to remain seated while your yacht is in motion, particularly during inclement weather.

✖ DO NOT use the swim platform or boarding ladder while the engines are in operation, whether or not your yacht is in motion.

✖ Always maintain a good lookout. Keep away from swimmers, divers, and waterskiers. They should display a flag when engaged in these types of water sports, but DO NOT rely upon it; if you suspect that type of activity, it is best to avoid that area, if possible.

✖ Understand and obey the “Rules of the Road”.

✖ Understand and obey all local boating laws.

✖ Always maintain complete control of your yacht.

✖ Finally, ALWAYS operate your yacht with care, courtesy, and common sense.

Voluntary Safety Inspections

The United States Coast Guard Auxiliary and boating officials in many states offer courtesy safety inspections of your yacht at no charge to you. They will examine your yacht for compliance with all safety standards and required safety equipment. You may voluntarily consent to one of these inspections and you are given sufficient time to make necessary corrections without fear of prosecution for any discrepancies found. Contact your local United States Coast Guard Auxiliary or appropriate state agency for details concerning these courtesy safety inspections.

CARBON MONOXIDE SAFETY

CARBON MONOXIDE CAN KILL!

This section is intended to provide educational information about carbon monoxide relative to boats and boating. Carbon Monoxide accumulation is affected by boat geometry, hatch, window and door openings, ventilation openings, proximity to other structures and boats, wind direction, boat speed, boat maintenance, and a multitude of other variables. This section discusses many of these and enables the boat owner to better understand some of the more predictable effects. However, this information is limited in that it cannot cover all conceivable variables. Therefore, the boat owner is cautioned not to exclusively rely on it to prevent the accumulation of carbon monoxide.

WHAT IS CARBON MONOXIDE?

Carbon monoxide is a highly poisonous gas formed by the combination of carbon and oxygen. Commonly referred to as CO, its chemical formula, “C” for carbon and “O” for oxygen. CO is a colorless, odorless, and tasteless gas that by itself can not be detected by human senses. CO diffuses in the air much more rapidly than any other gases that are detectable by the human senses. The weight of CO is about the same as air so it does not rise or fall like other gases but will distribute itself throughout the boat. CO is produced any time a material containing carbon is burned. In boating these materials include, but are not limited to, gasoline, diesel fuel, and propane. All carbon based fuels produce varying amounts of CO, depending on their carbon content. Gasoline is high in carbon and therefore produces high levels of CO. Diesel fuel is low in carbon and therefore produces lower levels of CO. However,

the exhaust of all engines and generators as well as any open flame device produce CO and the same precautions should be taken regardless of the type of fuel.

HOW A PERSON IS AFFECTED BY CARBON MONOXIDE

When breathed, carbon monoxide is absorbed by the lungs and reacts with the blood hemoglobin to form carboxyhemoglobin, which reduces the oxygen carrying capacity of the blood. The result is a lack of oxygen for the tissues with the subsequent tissue death and, if prolonged, death of the individual. Carbon monoxide in high concentrations can be fatal in a matter of minutes. Even lower concentrations must not be ignored because the effects of exposure to CO are cumulative and can be just as lethal. Certain health related problems and age increase the effects of CO. People, who smoke or are exposed to high concentrations of cigarette smoke, consume alcohol or have lung or heart disorders are particularly susceptible to an increase in the effects from CO. However, the health of all of the boat's occupants should be considered. Physical exertion accelerates the rate at which the blood absorbs CO. The early effects of CO poisoning are easy to overlook because they are similar to the effects of other boating related stresses such as eye strain, fatigue, sun exposure, seasickness, or alcohol consumption. But as the concentration of CO in the air increases, it has increasingly adverse effects on your health.

One or more of the following symptoms can signal the adverse effects of carbon monoxide accumulation. The order of this list is generally the sequence of symptoms. However, the number of symptoms and the order of appearance may change for different people:

- Watering and Itching eyes
- Flushed Appearance
- Throbbing temples
- Inattentiveness
- Inability to think coherently
- Ringing in the ears
- Tightness across the chest
- Headache
- Drowsiness
- Incoherence
- Nausea
- Dizziness
- Fatigue
- Vomiting
- Collapse
- Convulsions

WHAT TO DO WHEN SOMEONE IS OVERCOME WITH CARBON MONOXIDE

When someone falls victim to carbon monoxide poisoning, fast and responsive action is crucial. Know the symptoms. The earlier effects of CO are detected the better the chance for recovery. The following list shows the sequence of events that must be done in an effort to revive a CO victim:

- Evacuate, Ventilate, Investigate, Take Corrective Action
- Move the person to fresh air
- Administer oxygen if available
- Contact medical help
- If the victim is not breathing, perform artificial respiration per approved CPR procedures until medical help arrives and takes over. Prompt action can make the difference between life and death.
- Ventilate area
- Investigate the source of CO and take corrective actions.

HOW DOES CARBON MONOXIDE ENTER YOUR BOAT?

Any device that burns fuel creates carbon monoxide. For example, a propane cooktop or a space heater are both potential sources for CO. But the most serious danger comes from the gasoline engines and generators aboard your own and neighboring boats. There are four basic ways that CO from a running engine or generator can enter your boat:

The “station wagon effect” results from the aerodynamics of deck cabins and flying bridges. With the boat under way, the air flow over the top forms a low pressure area behind the cabin or transom which can suck exhaust gasses into the cockpit and the cabin. Inefficient trim angles also can cause the station wagon effect.

Obstructions are principally a problem when boats are rafted together or tied to a dock or seawall. Against an obstruction, exhaust gasses which normally dissipate may instead be directed back to your boat. Beware of open windows, hatches, doors and the location of the engine intake. Exhaust contains particularly high concentrations of CO when an engine is cold; so to protect yourself and your neighbors, minimize the time spent getting underway. Pay particular attention to potential obstructions when running a generator for long periods.

Infiltration of CO from a neighbor’s exhaust can be a problem aboard any boat at any time. Infiltration can happen any time your neighbors are running a generator or engine, even when they are many slips away.

Leaks in your own exhaust system from the engines or generator can allow harmful levels of CO to accumulate at a surprising rate. Good maintenance practices are critical to avoid this.

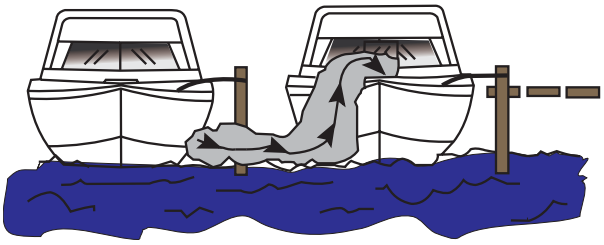
There are many variables that combine to affect the accumulation of carbon monoxide. Some of these variables are: the presence of weather enclosures and covers, boat layout and configuration, location of ports, hatches, windows, doors, and vents, proximity and types of structures and other boats, wind

speed and direction, speed of the boat, etc. Although it would be impossible to identify every variable or combination of variables that may affect the accumulation of carbon monoxide, the boat operator must remain aware at all times of the possibility of CO accumulation.

The following illustrations show some of the ways that carbon monoxide gas can accumulate in your boat while at dock and underway. Become familiar with these examples to prevent exposure to this poisonous gas.

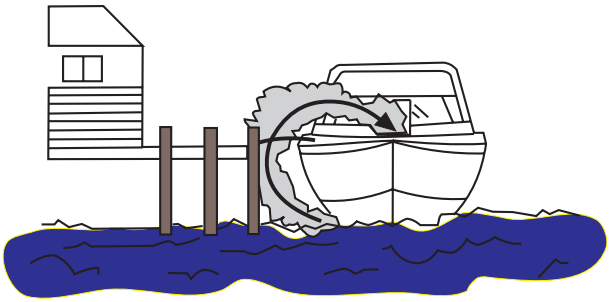
DANGER

Engine and generator exhaust from other vessels alongside your yacht, while docked or anchored, can cause excessive accumulation of Carbon Monoxide Gas (CO) within the cabin and cockpit areas of your yacht. Be alert for exhaust from other vessels.



DANGER

Blocked hull exhaust outlets near a pier, dock, seawall, bulkhead, or any other structure can cause excessive accumulation of Carbon Monoxide Gas (CO) within the cabin areas of your yacht. Be certain hull exhaust outlets are not blocked in any way.



DANGER

When protective weather coverings are in place, engine or generator exhaust from your yacht, while docked, at anchor, drifting, or underway can cause excessive accumulation of Carbon Monoxide Gas (CO) within the cabin and cockpit areas of your yacht. Always provide adequate ventilation when the weather coverings are in place and either the engine or the generator are running.

DANGER

Engine or generator exhaust from your yacht while underway at a slow speed can cause excessive accumulation of Carbon Monoxide Gas (CO) within the cabin and cockpit areas of your yacht. A tail wind can increase the accumulation. This is often referred to as the "Station-wagon Effect". Always provide adequate ventilation or increase your speed, if possible.

DANGER

Engine or generator exhaust from your yacht while underway and operating with a high bow angle can cause excessive accumulation of Carbon Monoxide Gas (CO) within the cabin and cockpit areas of your yacht. Always provide adequate ventilation and redistribute the load to lower the bow angle.

HOW TO MINIMIZE THE ACCUMULATION OF CARBON MONOXIDE

Practice good inspection and maintenance habits.

Be certain hull exhaust outlets are not blocked or restricted in any way.

Be alert for exhaust gasses from other boats.

Always provide adequate ventilation when weather enclosures are in place and engines or generator is running.

Do not run with a high bow angle. Use trim tabs or redistribute the load to maintain a low bow angle.

Orient your boat to maximize the dispersion of CO.

Be aware of the effects of your actions on other boats.

Be aware of the effects of the actions of others on your boat.

Provide adequate ventilation when open flame appliances are used in the cabin.

PREVENTIVE MAINTENANCE

Frequent inspections and proper maintenance of the engine, generator, and exhaust systems as well as other various areas of your boat are critical in preventing the accumulation of carbon monoxide. It is the owner's responsibility to make sure that the entire boat is inspected and maintained against CO.

The exhaust systems of your engines and generator are under constant attack from salt water, gasses, vibration, and normal wear. Inspect every exhaust system component often. Start with a visual inspection. Check each joint for discoloration, carbon buildup, stains, water leaks, or other signs of damage. Inspect all metal parts for corrosion, discoloration or flaking. Check that all hose clamps are in good condition and properly tightened. Carefully inspect all exhaust and cooling hoses for signs of wear, dry rot, cracking, discoloration, chafing or swelling. If any of these conditions exist, have the entire system inspected and corrected by a qualified technician before starting the engines or generator.

Next, start each engine and generator one at a time. Follow the full run of the exhaust system, listening and looking for leaks. While doing this, make sure there is adequate ventilation and that your CO detector is on.

Other items to inspect are as follows: Check that access panels around the engine and exhaust are in place and fit snugly to minimize the opportunity for CO to enter the cabin. There should be no large openings where CO could enter the cabin. Ensure that all ventilation systems are in good working order, and not blocked or punctured. Check all sink drains to assure that they have a good water trap to prevent CO from coming in from the outside.

Finally, because poor running engines produce excessive CO, make sure engines and generator are tuned up. They should run smoothly and not produce black smoke. The spark plugs and ignition systems should be maintained regularly, and the fuel system and air filters should be in good order.

CARBON MONOXIDE DETECTORS

If you carefully avoid potential CO accumulation and maintain your systems properly, you have made great strides towards protecting yourself and others from the dangers of carbon monoxide. Another important line of defense is a CO Detector, used whenever you're aboard your boat. A detector is the only way to properly detect the presence of CO. There is a CO detector located in every living area on your Silverton Yacht. These CO detectors are UL Approved for Marine Use. If you replace the CO detectors at any time, they must be replaced with marine CO Detectors, not residential detectors. Most CO detectors require specific maintenance procedures to remain accurate and functional. Follow the manufacturer's instructions supplied to you in your owner's packet. Carbon Monoxide Detectors should be installed in all boats and the operation of them should be known by all aboard.

Fuel Safety

DANGER

Gasoline and Diesel Fuel are extremely flammable. Proper handling is necessary to provide for the safety of you and your yacht.

✷ DO NOT smoke while fueling.

✷ Make sure that all accessories, both engines, and generator are turned off before beginning to fuel your yacht.

✷ When fueling your yacht in warm weather, allow for expansion of the fuel and do not top off the fuel tanks. The tanks may overflow

when the fuel expands after being pumped out from cool, underground tanks or when the air temperature is cool, such as early morning or evening.

✸ Always handle fuel with care.

✸ Never store fuel in portable containers aboard your yacht.

EMERGENCY SITUATIONS

Swamped or Capsized Yacht

If your yacht becomes swamped or capsizes, immediately put on a PFD and set off a visual distress signal. A swamped or capsized yacht will normally stay afloat. **DO NOT** leave your yacht or attempt to swim to shore, except under extreme conditions, such as fire or explosion. A capsized yacht is much easier to see by a potential rescuer than a person swimming, resulting in a greater chance of rescue. If you attempt to swim to safety, the shore may be farther away than it appears and you may tire and not be able to reach your destination, resulting in possible drowning.

Hypothermia

If a person falls overboard or is in the water due to a swamped or capsized yacht, hypothermia may be an immediate concern. Hypothermia exists when the body loses heat faster than it can replace it. If not rescued within a short period of time, the person will become exhausted and likely drown. In general, the colder the water, the shorter the time for survival. If the person is wearing a PFD, it will greatly increase his survival time as they act as an insulator and will also keep the person afloat even if he is unconscious.

Collision

If a collision occurs, the following procedure should be strictly adhered to:

✸ Be certain all passengers put on their PFD. If a passenger is unable to put on his own PFD due to a disabling injury, assist him.

✸ Examine all persons on board for any injuries and administer first aid, if necessary.

✸ If your yacht has a VHF radio, contact the United States Coast Guard and any other potential rescue vessel and advise of your situation and location. VHF radio contact may be made on Channel 16 and Citizen's Band (CB) radio contact may be made on Channel 22. If you have SeaKey services, you should send a "MAYDAY" Signal and mark your location. For details on these procedures refer to your SeaKey Operators Guide.

✸ Inspect your yacht to determine the extent of damage and its potential for sinking.

✸ Prepare to assist the other craft and its passengers, if possible.

✸ If the collision resulted in penetration of your hull, prepare to quickly plug the fracture with a spare life jacket or bunk cushion once the vessels are separated.

✸ Before plugging the fracture, trim the yacht to place the damaged section above the water level.

✸ Remain with your yacht until assistance arrives.

Running Aground

✸ If your yacht runs aground, examine everyone on board for injuries and render first aid, if necessary.

✷ Examine your yacht for damage to the hull and running gear. If no serious damage is noted, attempt to free the yacht by shifting weight to the bow to raise the stern and then reverse the engines and back out of the shallow water into deeper water.

✷ If towing is necessary, **DO NOT** attach the tow line to the deck cleats. They are not designed to take the full load of the yacht under pressure.

Silverton recommends using a commercial towing service for your safety and to decrease the potential for additional damage to your yacht as a result of removing it from the underwater obstruction.

DANGER

NEVER attach a tow line to a deck cleat or anchor windlass. The cleat or windlass may pull free from the deck and cause serious personal injury or property damage.

Hazardous Weather Conditions

Storms

Storms rarely appear without some advance warning. Check the local weather forecast before you leave port, but be aware that weather conditions can change rapidly. If you have a VHF radio, listen to the continuous weather reports issued by the National Weather Service. If you have a portable radio, keep it tuned to a station that broadcasts frequent weather reports. If you are tuned to an AM frequency, listen for static; it often means an electrical storm is approaching. Many boating clubs fly weather signals in the form of flags or lights. Learn to recognize these signals.

Your surroundings can also be a good indicator of changing weather conditions. Watch for changes in wind direction or cloud formations. There is no substitute for a good understanding of typical weather conditions and what to do when it takes a turn for the worse.

Fog

Fog is the result of either cold air passing over a warm earth surface or warm air passing over a cold earth surface. You can judge the likelihood of fog formation by periodically measuring the air temperature and the Dew Point temperature (the temperature at which moisture in the air will develop), which is given during a normal weather forecast. If the difference between these two temperatures is small, fog is likely to develop. Always remember the following guidelines if you encounter fog conditions:

- Unless your yacht is well equipped with charts, head for shore at the first sign of fog and wait until conditions improve before continuing your cruise. If you have charts on board, take your present location bearings as the fog sets in, mark your position, and continue to log your course and speed.
- **REDUCE YOUR SPEED.**
- Be certain all persons on board are wearing their PFD.
- Station a person forward as a lookout.
- Sound your horn or fog bell at the appropriate intervals to warn other vessels of your presence. Refer to the *"Rules of the Road"* for information concerning

the proper duration and interval of the fog signal.

- Listen for fog signals from other vessels and be aware of their presence. If possible, determine their proximity to your yacht, but remember, sound carries a long distance over water and can be deceiving.

- If there is any doubt concerning the safety of continuing your excursion, anchor your yacht. Listen for other fog signals while continuing to sound your fog bell or horn. Continue your cruise when conditions improve.

FIRE

Fire aboard your yacht is always serious, but it can usually be brought under control if you are prepared and act quickly. Fire extinguishers required by the United States Coast Guard are the minimum necessary. Silverton recommends exceeding the minimum requirements by placing additional fire extinguishers where they may be needed. Inspect all fire extinguishing equipment frequently and review emergency plans on a regular basis.

As a yacht owner, you should develop a **Fire Response Plan** and familiarize all passengers with this plan before departing on your cruise. The Fire Response Plan will identify the type of fire you may encounter and the appropriate reaction to quickly extinguish it before it gets out of control. Having a Fire Response Plan in place and the assignment of certain responsibilities to your passengers will result in faster and more accurate decisions and reactions in the event of a fire aboard your yacht.

Important: *All passengers on board your yacht should know the location of your fire extinguishers and be familiar with their use.*

In the event a fire does start aboard your yacht, follow these guidelines:

✔ If you detect a fire or suspect a fire aboard your yacht, immediately turn OFF your engines and electrical power supply. DO NOT turn OFF power to your VHF radio.

✔ Be certain all persons on board put on their PFD.

✔ If the fire is in the engine/generator compartment, DO NOT open the hatch. The fire will flare with the sudden introduction of fresh air.

✔ If you are able to get to the source of the fire, aim your fire extinguisher at the base of the flames and use a sweeping action to extinguish it. Concentrating your fire extinguisher in one location may cause the fire to spread.

✔ If the fire becomes out of control, send a distress signal and call for assistance on your VHF radio. Be certain to provide any potential responders with your location and a description of your situation. If you have SeaKey Services, you should send a “MAYDAY” Signal and mark your location. For information on these procedures, refer to your SeaKey Operators Guide.

Deciding whether to stay on board your yacht or abandon ship may be difficult and depends on the extent of the fire and the weather conditions. If you decide to abandon ship, all persons on board should jump, not dive, overboard and swim a safe distance

away from the burning yacht. Be certain all persons stay together after abandoning ship.

Be certain to read and have a thorough understanding of the Portable Fire Extinguisher System Section and the Automatic Fire Extinguisher System Section of this Owner's Manual. They contain valuable information and warnings for your safety.

Prevention is the safest and most effective method of fighting fire aboard your yacht. Always follow these guidelines:

✖ Use extreme caution and refrain from smoking while fueling your yacht.

✖ Use only marine safety approved cooking and heating systems and follow the manufacturer's directions concerning their operation.

✖ Open flames demand constant attention. DO NOT leave any open flame unattended.

✖ Ensure ventilation systems are unobstructed.

✖ Always provide adequate ventilation when cleaning and painting.

✖ Use extreme caution when using liquefied petroleum gas (LPG) or compressed natural gas (CNG). Close valves to cylinders and supply lines when not in use.

✖ Operate exhaust blower motors at least five (5) minutes before starting the engines or generator.

✖ Use your sense of smell to check for fumes in the bilge and engine/generator compartment before starting engines or generator.

✖ Always store flammable material in approved containers and in a locker sealed from the interior of your yacht and vented overboard.

✖ Remove the canvas enclosure, at least partially, before starting engines.

✖ Ensure there are no leaks in any fuel system, including LPG/CNG.

✖ Extinguish smoking materials carefully. Check cleaning materials for flammability and store as you would any flammable material.

✖ Always disconnect electrical power before performing any maintenance on electrical appliances.

✖ Always replace electrical breaker switches or fuses with the same recommended amperage. NEVER exceed the recommended amperage.

✖ Electrical service to your yacht should only be performed by a qualified marine electrical technician.

AIR CONDITIONING / HEATING SYSTEM

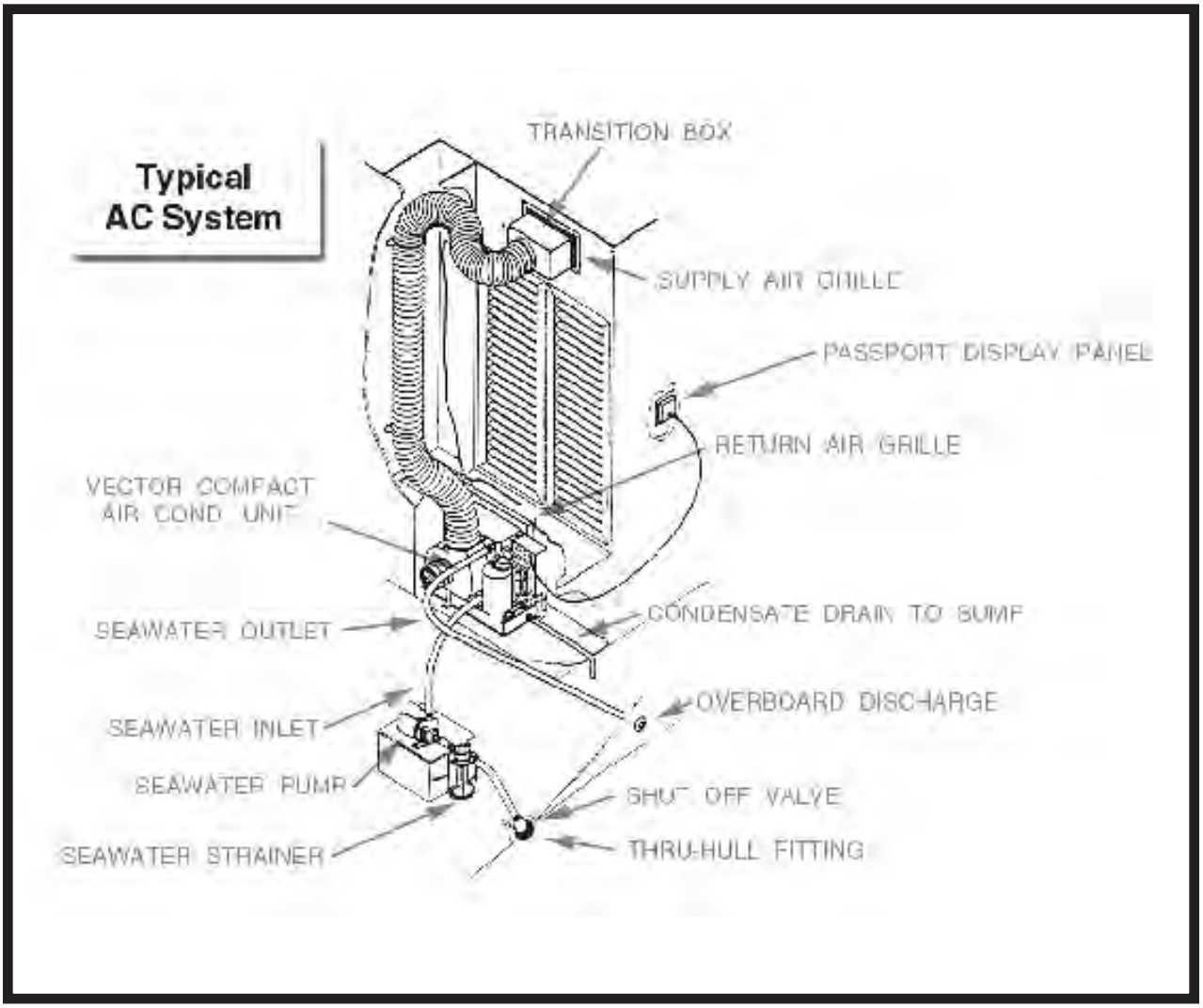
The **Air Conditioning/Heating System** in your **45C** is factory installed. The purpose of this system is to maintain a comfortable cabin temperature and humidity level, regardless of ambient temperature and humidity. Each air conditioning/heating unit in your **45C**, which operates on the A/C electrical system, is self-contained and manufactured by Marine Air Systems.

The four (4) **Air Conditioning/Heating System** units are described as follows:

Standard Units - This system utilizes three (3) self-contained air conditioning units.
- V-Berth - 10,000 BTU
- Galley - 12,000 BTU
- Salon - 16,000 BTU

Option Unit - Bridge unit
- Bridge - 16,000 BTU

Location of Units -
- V-Berth - Under the mattress
- Salon - Under Dinette Seat
- Galley - Behind Refrigerator
- Bridge - Forward of Port Lounge.



Each air conditioning unit is controlled by an independent thermostatic control panel ("Elite Control"), which is located within the respective cooling/heating zones. The desired zone temperature is manually set on the "Elite Control" and the air conditioning unit is activated to supply cooling or heating as required to constantly maintain the temperature selected. The photo below shows the control.

Each air conditioning unit will operate in a **"Dehumidification"** mode upon demand and is controlled by the "Elite Control".

Refer to the Marine Air Systems Operation and Maintenance Manual for a complete description and instruction in the operation of this mode.

Operation of the **Air Conditioning/Heating System** in your **45C** is as follows:

✔Turn ON the respective air conditioner breaker switch, located on the AC Electrical Panel (See **AC Electrical Pages** in the **System Operations Section** of this manual). Make sure Air Conditioner Pump is "ON".

✔Make sure seawater intake is open and seawater pump is operating properly.

✔Refer to the Marine Air Systems Operation and Maintenance Manual for a detailed description of the function of each button located on the "Elite Control".

✔All Air Conditioning units create condensation, which creates water that has to be drained.

Drain Locations for each unit:

V-Berth - Shower Sump Pump
Galley - Directly overboard
Salon - Directly overboard
Bridge - Directly overboard

Make sure shower sump circuit breaker is turned on when operating the Air Conditioning. The Shower Sump Pumps are on a Fuse behind the DC Panel. The 24V Main DC Breaker must also be "ON".

✔Turn ON the power button, located on the respective air conditioning unit "Elite Control".

✔Press the fan speed button on the "Elite Control" until the desired speed is obtained.

✔Press the appropriate temperature control button (Down/Up) to obtain the desired temperature.

Only certified and trained service technicians should perform maintenance of your **Air Conditioning/Heating System**. Contact your Silverton Dealer for general maintenance and winterization of the system on your **45C**. Untrained persons may carefully perform routine maintenance, such as the cleaning of filters and the exterior surfaces of the condensing coils.

Refer to the Marine Air Systems Operation and Maintenance Manual for technical information concerning your Air Conditioning/Heating System.

ANCHOR SYSTEM

The purpose of the **Anchor System** is to make fast your yacht to the ground surface below the water level. You may want to anchor your yacht for a variety of reasons, such as an overnight stay in a harbor, stationary fishing or, if your yacht becomes disabled, to remain in one identifiable location until assistance arrives. The equipment used in anchoring your yacht, also known as "ground tackle", is as follows:

- Anchor
- Anchor Chain or Line (Rode)
- Anchor Chock
- Anchor Cleat
- Anchor Safety Chain
- Anchor Windlass (Optional)
- Rope Locker

Anchor

Your **45C** is equipped with a plow type anchor, weighing 46.6 pounds. This universal type of anchor is very efficient for a variety of bottom terrain. This is not a storm anchor. Please refer to Chapman's for the recommended need for a storm anchor.

Anchor Chain or Line (Rode)

The Anchor Rode on your **45C** may be chain, rope, or a combination of both and, depending on the option you selected when you purchased your yacht from your Silverton Dealer, the length is as follows:

- Standard Equipment: Three hundred (300) feet of nylon rope, 9/16 inch in diameter.

- Optional Windlass Equipped (Standard): Fifteen (15) feet of chain coupled to three hundred (300) feet of nylon rope, 9/16 inch in diameter.

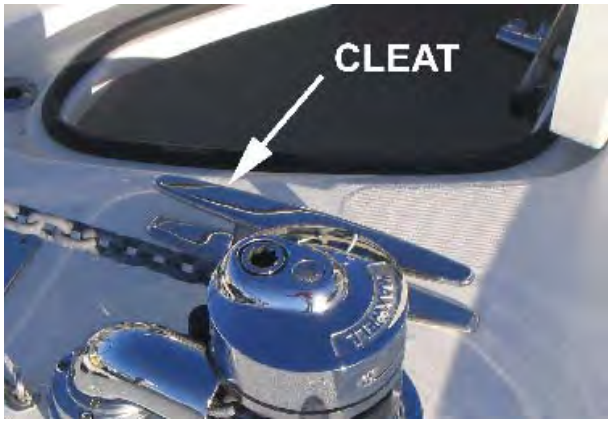
- Optional Windlass Equipped (Optional): Three hundred (300) feet of chain.

Anchor Chock

The Anchor Chock on your **45C** is located on the underside of the bow pulpit. The Anchor is pulled into the chocks on the pulpit, to steady the anchor.

Anchor Cleat

Your **45C** is equipped with an Anchor Cleat and its purpose is to hold the rope that secures the anchor, after the anchor is set. If your **45C** is equipped with the optional Windlass Anchor Winch, the cleat will help relieve constant pressure on the winch. Once the proper scope is determined, the cleat keeps the rope at a constant length. The Anchor Cleat is located to the starboard side of the winch. The photo below shows the anchor cleat.



Anchor Windlass (Optional)

Your **45C** may be equipped with an optional power Anchor Windlass, which is located at the pulpit. The purpose of the Anchor Windlass is to assist in lowering and raising the anchor with a minimum of manual effort. The Anchor Windlass operates on DC electrical power and may be operated from either the helm station or foot controls, which are located on the bow pulpit. Three conditions must be met for your Anchor Windlass to operate electrically.

1. The Windlass Breaker located forward of the engine room, must be in the ON position.
2. The Battery Switch labeled “Battery 2” located in the Salon must be in the “ON” position.
3. The 24V Breaker on the DC Main Panel must be ON.

The helm station control consists of a manual rocker-type switch, located on the helm switch panel (refer to the Electrical Pages of this section of this Owner’s Manual for the location of the switch). The foot controls, located adjacent to the Anchor Windlass, consist of two (2) foot depressed switches: one switch lowers the anchor; the other switch raises the anchor (See photograph below, which illustrates the location of the **Anchor Windlass**, the foot depressed **Control Switches**, **Safety Cable** and the **Anchor Cleat**).

Rope Locker

Your **45C** is equipped with a Rope Locker, which is located on the Starboard side of the Anchor Windlass. The purpose of the Rope Locker is to store the anchor rode in a convenient location removed from the deck surface. The Rope Locker is accessed by a hatch, which covers the locker and prevents you or your passengers from accidental falls into the storage well. This Rope Locker has a drain in the bottom. It is recommended that you wash off the salt water with fresh water after use of your anchor and rope.

Scope

Scope is defined as the ratio of the length of the anchor rode to the vertical distance from the anchor chock to the bottom surface (water depth plus the height of the anchor chock above the water). Under favorable current, tidal, and weather conditions, a Scope ratio of 8:1 is considered satisfactory. If the rode is chain, the ratio may decrease to 5:1 under the same favorable conditions. It may be necessary to increase the scope ratio under unfavorable weather conditions, such as severe wind and tidal currents, to hold your yacht fast to the bottom. Scope ratio is very important. Please refer to your Chapman's book for all details on anchor rode.

ANCHOR SAFETY CABLE

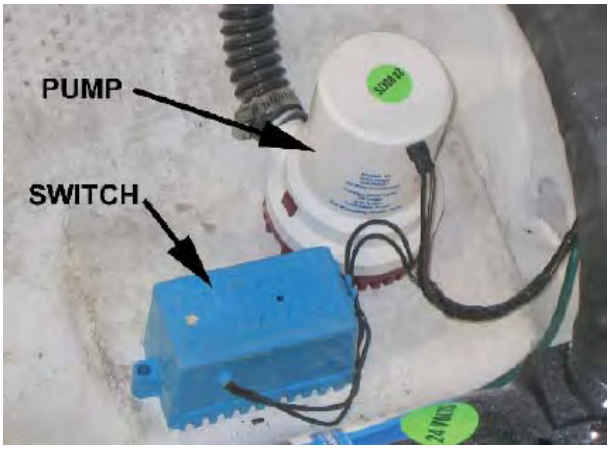
Attached to the anchor chain is a safety cable. This safety cable must be released before you can use your anchor. This safety cable must be released manually. The safety cable will ensure that the anchor is not released when not being used.

PROPER ANCHORING TECHNIQUE

Proper anchoring techniques are required for safe anchoring of your boat. Please refer to Chapman's book for complete instructions for anchoring your boat.

BILGE PUMP SYSTEM

The purpose of the **Bilge Pump System** is to remove any water that may accumulate within the bilge area of your yacht. Although a small amount of water in the bilge area is expected, the water should never be above the bilge switch. If it is, it means the switch is not working correctly. Make sure they are not turned off. If the problem continues, please contact a service technician to solve the problem. The bilge area is defined as the interior area of the hull below the designed waterline. Your **45C** is equipped with three (3) bilge pumps that are capable of pumping 2,000 gallons of water per hour. The bilge water is pumped directly overboard.



Normal operation of the bilge pumps is automatic. Each bilge pump is equipped with a float-type switch that will automatically activate the pump when the bilge water reaches a certain level. The automatic switches are connected directly to the batteries and will operate even if the battery switch is turned OFF. The Bilge Pumps operate on 24 Volt DC. Each of the bilge pumps can also be activated manually by individual switches located on the DC Electrical Panel (See the **Electrical Pages** in this section of your **Owner's Manual** for the location of the **Bilge Pump Switches**). The bilge pump will operate continuously until the manual switch is turned OFF.

Periodic maintenance of the bilge pumps should consist of the following:

- Visually inspect each bilge pump for any debris that may have accumulated. Remove any debris noted.

- Manually test each bilge pump by activating the manual switches located on the AC/DC Electrical Panel. Listen to each bilge pump as it is manually activated. They should emit a quiet "whirring" sound. If any abnormal sounds are noted, contact your Silverton Dealer for further inspection and replacement, if necessary.

IMPORTANT: After testing each bilge pump by turning ON the manual switches, be certain they are turned OFF. The constant operation of the bilge pumps will eventually discharge the batteries.

While underway the aft bilge pump should be used. While docked, the midships bilge pump should be used.

Location of the bilge pumps is as follows:

- FORWARD PUMP - Access to the forward pump is through the hatch opening located on the V-Berth Floor.

- MIDSHIP PUMP - Access to the midship pump is through the engine room. The pump is located under the hatch in the front center section of the engine room.

- AFT PUMP - Access to the aft pump is through either hatch located in the cockpit.

BILGE VENTILATION SYSTEM

WARNING

The engine and generator compartments on your 45C are enclosed areas and are subject to the accumulation of dangerous fuel fumes. If these fumes are not ventilated or properly exhausted from the engine/generator compartment, they may be ignited, resulting in fire or explosion and possible injury or death.

Your **45C** is equipped with intake vents for the engine room. These vents are located on the port and starboard side of your **45C**. The purpose of these vents is to ventilate the engine room area and supply air for the engines on your **45C**. The photo below shows the vent on the port side of your **45C**.

For quicker evacuation of air from the engine room, your **45C** is equipped with two (2) blowers. The blowers are located in the engine compartment and exhaust out through the engine room vent on the port and starboard sides of your **45C**. The photo below shows the blower exhaust on the port side of your **45C**.

Operation of the bilge blowers is as follows:

✔The battery switch must be turned to the ON position. The Battery Switches are located in the starboard cabinet in the salon.

✔The bridge electrical main breaker switch at the DC Electrical panel must be turned ON. The DC Electrical Panel is located in the Salon.

✔Depress the blower switch, located on the helm switch panel. The switch location is shown in the Electrical Pages of this section of the Owner's Manual. The small light located on the blower switch will illuminate to indicate the blower motors are in operation. The Electrical Pages of this section of this Owner's Manual shows the location of the switch on the DC Panel. There is also a Schematic of the DC Panel in the Schematics Section of this Owner's Manual.

The fuse for the blower is located on the fuse box behind the Electrical Panels in the Salon.

BONDING SYSTEM

The purpose of the **Bonding System** is to protect your yacht's underwater components from electrolysis and galvanic corrosion. Examples of underwater components would be the struts, rudders, engine/generator, and seawater intake valves.

Electrolysis and galvanic corrosion occurs primarily in salt water, but can occur to a lesser degree in fresh water. Salt water allows electric current to flow from anodic to cathodic material. Any two metals from two components and their relative positions in the galvanic rating table will determine which metal loses material (anode) and which metal remains largely undisturbed (cathode). The distance apart on the galvanic table of the two metals determines the rate of wear. To help prevent corrosion, sacrificial zinc anodes are fitted to the underwater components of your yacht, such as the propeller shafts and rudders.

A large sacrificial zinc anode plate is also attached to the underwater area of the transom.

The anodes on the rudder, shaft and trim tabs are installed by your Silverton Dealer. The purpose of these sacrificial zinc anodes is to attract any destructive electrical currents away from the metallic underwater components, thereby preventing their eventual corrosion and allowing the corrosion of the sacrificial zinc anodes. The sacrificial zinc anodes are considerably easier and cheaper to replace and their deterioration will not affect the performance of your yacht, as would the deterioration of a propeller or rudder.

The Bonding System is a network of wires (color coded green) that are connected to all metallic underwater components within the interior of the hull, which makes them one unit for electrical current purposes. This network of wires is then attached to the sacrificial zinc anode located on the transom, which allows corrosion of the anode, but prevents corrosion of the underwater components.

General maintenance of the Bonding System consists of replacement of the sacrificial zinc anode located on the transom and all other zinc anodes located on the propeller

shafts, rudders, etc. and should be completed as necessary. The anodes may require more frequent replacement, depending on your docking location and the length of your boating season. If possible, check the anodes for excessive corrosion midway through your boating season. If excessive corrosion is noted, have your dealer or a competent technician replace the sacrificial zinc anodes. Periodically check the continuity of wiring connections to make sure they are tight and free of corrosion. Tighten and clean connections as necessary.

NOTE: Silverton recommends placing sacrificial zinc anodes on the following components:

- *Propeller shafts*
- *Rudders*
- *Trim Tabs*

IMPORTANT: *DO NOT paint any of the sacrificial zinc anodes as it will retard the flow of electric current through them and render them ineffective.*

CARBON MONOXIDE (CO) DETECTOR SYSTEM

DANGER

Carbon Monoxide Gas (CO) is colorless, odorless, and tasteless. It is highly poisonous, endangering lives even at very low levels of concentration. Mild exposure causes headaches and fatigue, often resembling "flu-like" symptoms. Medium exposure causes severe headaches, drowsiness, nausea, and rapid heart rate. Extreme exposure results in unconsciousness, convulsions, cardio-respiratory failure, and death. If Carbon Monoxide Gas (CO) is detected in your yacht, immediately contact a qualified technician to locate and repair the source of the poisonous gas. DO NOT enter your yacht until repairs have been made and the Carbon Monoxide Gas (CO) is lowered to an acceptable level. Refer to the Carbon Monoxide Safety pages in the Boating Safety section of this Owner's Manual.

Your **45C** is equipped with four (4) Carbon Monoxide Gas (CO) detector monitors, which are located within the interior as follows:

- Forward Stateroom

- Salon

- Port Stateroom

- Starboard Stateroom

Each CO Monitor is operated by DC Electrical Power and they are connected directly to the batteries. It is not necessary for the battery switch to be turned ON for them to operate. The fuses for the monitors are located behind the AC/DC Panel.

The CO Monitor System has three indicator lights (GREEN, YELLOW, and RED) which illuminate on the control panel. When the monitor is installed, these indicator lights will light up simultaneously for about 1 second, followed by a short buzzing signal, and after which, they will go OFF. Following this process, the three indicator lights will illuminate according to the code of the monitor.

Operation of the CO Monitors requires a three (3) minute INITIAL HEATING PHASE; during which time, the commands to the solenoid valve and the buzzer will be inhibited. Throughout this three (3) minute warm-up period, the GREEN and YELLOW indicator lights will flash ON and OFF simultaneously. At the end of this Initial Heating Phase, the YELLOW indicator light will go OFF, but the GREEN indicator light will remain flashing to signify that the monitor is working properly. If the GREEN indicator light does not illuminate, check all wiring connections; clean and tighten, if necessary. If the GREEN indicator light still fails to illuminate, contact your Silverton Dealer for inspection and replacement. DO NOT attempt to make any repairs to the unit(s) yourself.

CO Alarm

In the event that Carbon Monoxide Gas is detected, the RED indicator light will turn ON and remain ON while a built-in buzzer emits a continuous signal. This indicates the presence of a dangerous level of Carbon Monoxide Gas. If the RED indicator light turns ON, please note that IMMEDIATE ACTION IS REQUIRED. Contact a qualified technician to locate the source of the Carbon Monoxide Gas and repair the monitoring device. DO NOT enter your yacht until repairs have been made and the CO vapors have been brought down to an acceptable level.

When CO vapors are no longer present, or have lowered to an acceptable level, the monitor will return to its normal operating state whereas the GREEN indicator light will start flashing ON and OFF, representing that the monitor is working properly.

CO Monitor Malfunction

When the CO Monitor is running properly, the GREEN indicator light will always flash ON and OFF. If the GREEN indicator light remains ON without flashing, or if it is OFF completely, this means that the monitor is no longer working properly and a failure has occurred. If a failure has occurs inside the monitor, the GREEN indicator light will stop flashing and remain fixed, while the YELLOW indicator light will start flashing. When this happens, you will need to contact a qualified technician to repair or replace the unit. DO NOT attempt to make any repairs to the unit(s) yourself.

CO Monitor Maintenance

Maintenance of your CO Monitors is as follows:

- Test each monitor after removing your yacht from storage, prior to departing on each cruise, and on a weekly basis. Refer to the User's Manual included with your Owner's Packet for the proper test procedure.
- Frequently observe the color of the indicator lights on each CO Monitor and during testing to be certain the lights are functioning properly.
- Vacuum the dust off the CO Monitor cover with the brush attachment of your vacuum cleaner at least once a year and more frequently if your yacht is maintained in a dusty climate.
- Frequently clean the CO Monitor cover with a damp cloth to remove all dirt and grease that may accumulate. Dry with a soft, dry cloth.
- DO NOT spray cleaning agents or waxes directly onto the CO Monitor cover.
- DO NOT expose the monitor to the following:
    - Solvent vapors
    - Perfume vapors, bleach, ammonia, etc.
    - Glue, paint fumes, and silicone vapors

Refer to the Boating Safety Section of this Owner's Manual for more important Carbon Monoxide Safety Information.

Refer to the User's Manual for additional technical information concerning the use and maintenance of your CO Monitors.

CRASH VALVE

The proper operation of the Crash Valve is very important. If caution is not used, you could sink your boat, or cause damage to the engines.

NOTE: This procedure only works when the engines are running.

The Crash Valve is only used in emergency situations. Crash Valves allow for quick removal of water from the bottom of your boat. The water is pumped through the engines and out the engine exhaust. The photo below shows four valves. The valves on the top (forward) are the seawater Intake valves. The valves on the bottom (aft) are the crash valves.

The photo shows the Crash Valve are closed (handle is perpendicular to the flow), and the Seawater intake valves are open (UP position is OPEN). This is the normal operating position of these valves. In this position the seawater comes through the Seawater Intake Valve into the Engines and out of the boats exhaust.

In an emergency situation, where you have a lot of water in the bottom of your boat and the Bilge Pumps can't handle the amount of water coming into your boat, you want to take the water from the bottom of the boat and send it through the engines and out of the boat. In this case the Seawater Intake Valves should be closed (perpendicular to the valve), and the Crash Valves OPEN (parallel to the valve)!

Here are the different positions the valves could be in:

Seawater Intake OPEN and Crash Valve CLOSED - this is the normal operating positions. The engines are cooled using water coming through the valve.

Seawater Intake CLOSED and Crash Valve OPEN - this is the emergency position of the valves. The water is drawn from the inside of the hull instead of outside the hull.

Seawater Intake OPEN and the Crash Valve OPEN. DO NOT DO!!! The water will come from outside the hull and through the Crash Valve, into your hull.

Seawater Intake CLOSED and Crash Valve CLOSED. DO NOT DO. If the engines are operating they are not getting any cooling water at all!!!

ELECTRICAL SYSTEMS

Your **45C** has two (2) different kinds of Electrical Power:

DC Electrical Power: DC Electrical Power is provided from batteries located on your **45C**. Your **45C** has both 24 Volt DC Electrical Power and 12 Volt Electrical Power.

There are two (2) banks of batteries: The Starboard Battery Bank, and the Port Battery Bank. Each bank of batteries consist of two 12 volt batteries wired in series to give you a 24 volt service. The photo below shows the Starboard Battery Bank.

Starboard and Port Battery Banks:
Access to the Starboard and Port Battery Banks are under the platform in the engine room, forward of the engines.

The 24 Volt DC Electrical System obtains its source of power from the batteries. The negative terminal of each battery is attached to a grounding stud on each engine. This is known as a "negative ground system" and is the approved system for marine DC electrical systems. The battery wiring system has two color-coded wires. The yellow wire is the ground (negative) wire and the red wire is the positive ("hot") wire. Your vessel has 8D Lead Acid Batteries.

The 24 Volt Electrical Power System will be explained further in the following Pages.

AC Electrical Power: The AC Electrical System is a four-wire grounded system powered by either the generator, or shore power. There is a "ground fault interruption circuit" (GFIC) that protects all systems. This GFIC system prevents accidental electrical shock. If power is lost to an outlet, reset the breaker switch.

WARNING

If you are unable to reset the GFIC breaker switch, contact your Silverton Dealer or a competent marine electrician for inspection and repair. Failure to do so may result in a fire or damage to the electrical system.

No matter which source you select, all AC Electrical Power is direct up to the AC Main Power Panel located in the Salon.

Using SHORE POWER: The Shore Power Hook-Up is located in the cockpit. The photo below shows the Shore Power Hook Up. Before the 240 Volt power gets to the AC

Main Panel, it goes through a Breaker in the cockpit. This Breaker is located inside the same compartment as the Shore Power Hook-Up. The Power then goes to the ISO Transformer. The isolation transformer will electrically isolate the AC Shore Power from your boats AC power system. This eliminates any worries of hooking the boat up to unknown sources of shore power. From the ISO Transformer, the 240 Volt Power goes to the Shore Power/Generator Slide Switch at the AC Main Panel in the Salon.

Using the GENERATOR source: The generator is located in the Engine Room, behind the Starboard Engine. The photo below shows the generator.

Before the AC Power goes to the AC Main Panel in the Salon, it goes through a breaker on the face of the generator.

Refer to the Generator System Pages of the System Operations Section of this Owner's Manual for the proper use of the Generator.

The AC Electrical Power will be explained further in the following pages.

BATTERY SYSTEM

The batteries located in the Engine Compartment are 12 volt batteries wired in series to give 24 volt service. The “Battery 1” Battery Switch located at the Battery Switch Panel in the salon is fed from the port batteries. The “Battery 2” Battery Switch is fed from the starboard batteries.

The battery system is charged thru alternators of the engines.

The port & starboard battery banks may be paralleled thru the parallel start switch at the helm.

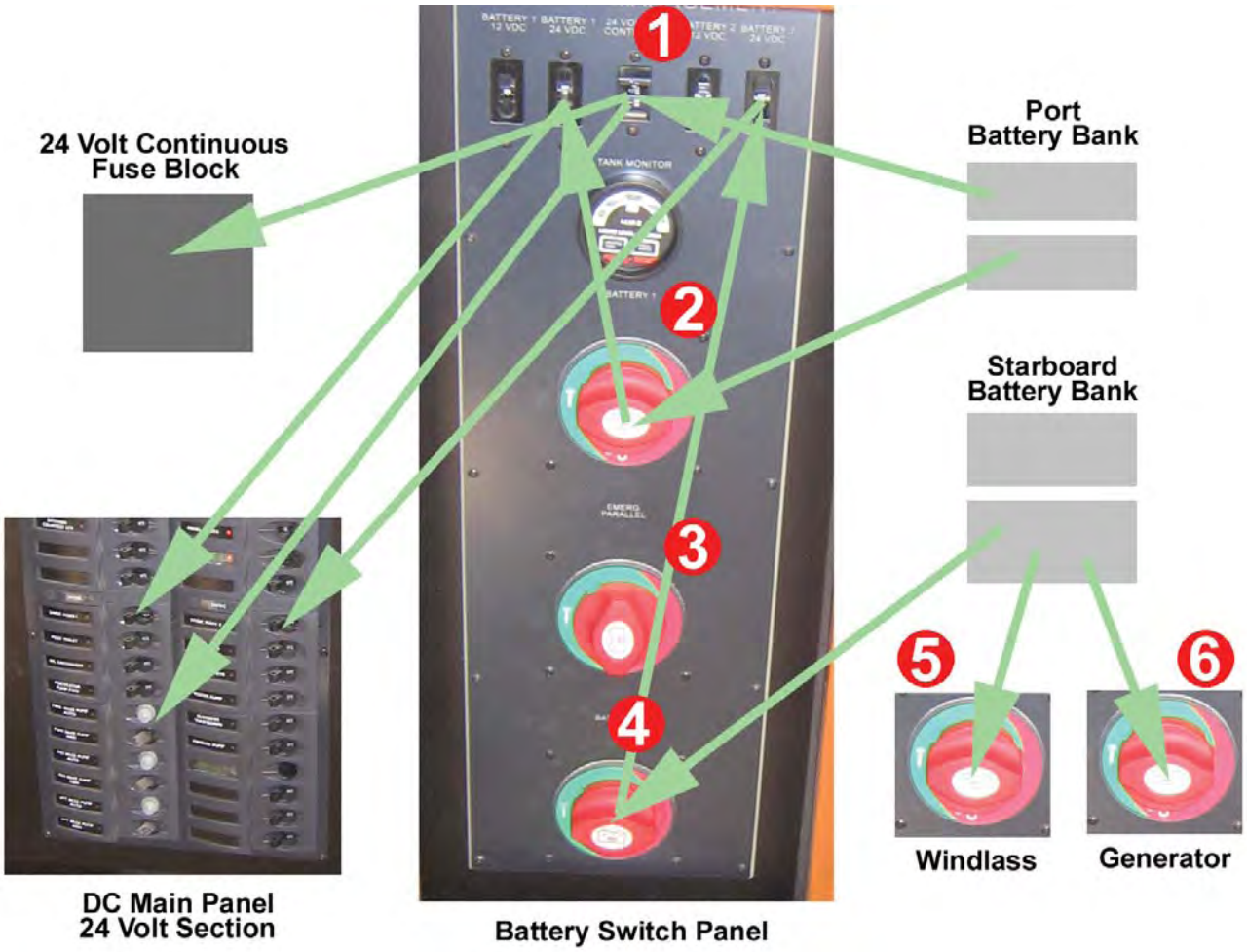
The generator Start is thru the starboard bank of batteries.

The photo below shows the Starboard Battery Bank.

BATTERY CHARGERS: Located above the Batteries on each side of the engine room are the battery Charges. The chargers have an AC input from your 120 volt supply, and a 24 volt output.

Refer to the Battery Chargers Owner’s Manual for operation of these chargers. Batteries also get charged from the engines when they are running.

24 Volt DC Electrical System



The photo above shows the main components of the 24 Volt Electrical Power System on your **45C**. It is important you understand what the 6 switches above do.

Switch #1 - 24 VOLTS CONTINUOUS - This breaker is a “Normally ON” breaker. Throughout your vessel there are components that need to be “Always ON”. An example of an “Always ON” component would be a bilge pump. 24 Volt DC goes directly to this breaker from the Port Battery Bank, which then goes to the 24 Volt Continuous Fuse Block and the Manual Bilge Pump Switches at the DC Main Panel. If you wanted to perform work on any of the “Always ON” components, you would turn this breaker to OFF. This switch should only be in the “OFF” position when servicing the “Always ON” components. The “OFF” side of the breaker can only be pushed down by using a small screw driver. These items are inoperable in an emergency situation when this switch is off. The “ON” position is easy to push in.

NOTE: The bilge pumps, carbon monoxide detectors, and SeaKey are NOT disconnected from their power source when the battery switches are turned to the OFF

position. These accessories are connected directly to the battery and do not require a switch for operation.

Switch #2 - Battery 1 Battery Switch - The majority of DC Power goes through the Battery 1 (#2) and the Battery 2 Switches (#4). The 24 Volt DC Power goes from the Port Battery Bank directly to this Battery Switch. From this Switch the power goes to the breaker at the top of the Battery Switch Panel. The breaker is marked “Battery 1 24 VDC”. From that breaker it goes directly to the DC Main Panel. Power goes to the breaker marked “24 VDC MAIN 1”. That breaker controls the power to the three breakers under the breaker.

Switch #3 - EMERGENCY PARALLEL Switch - Only used when you want both DC Systems (Port and Starboard) to draw its’ power from just one bank of Batteries (Port or Starboard). This is a Back-Up procedure. The normal operating position of this switch is “OFF”. The procedure for using the Back-Up Switch is as follows:

STEP 1 - Turn “OFF” the Battery Switch on the Batteries that are LOW in power. Remember the only time you use this switch or procedure is when one bank of batteries (Port or Starboard) is low in power.

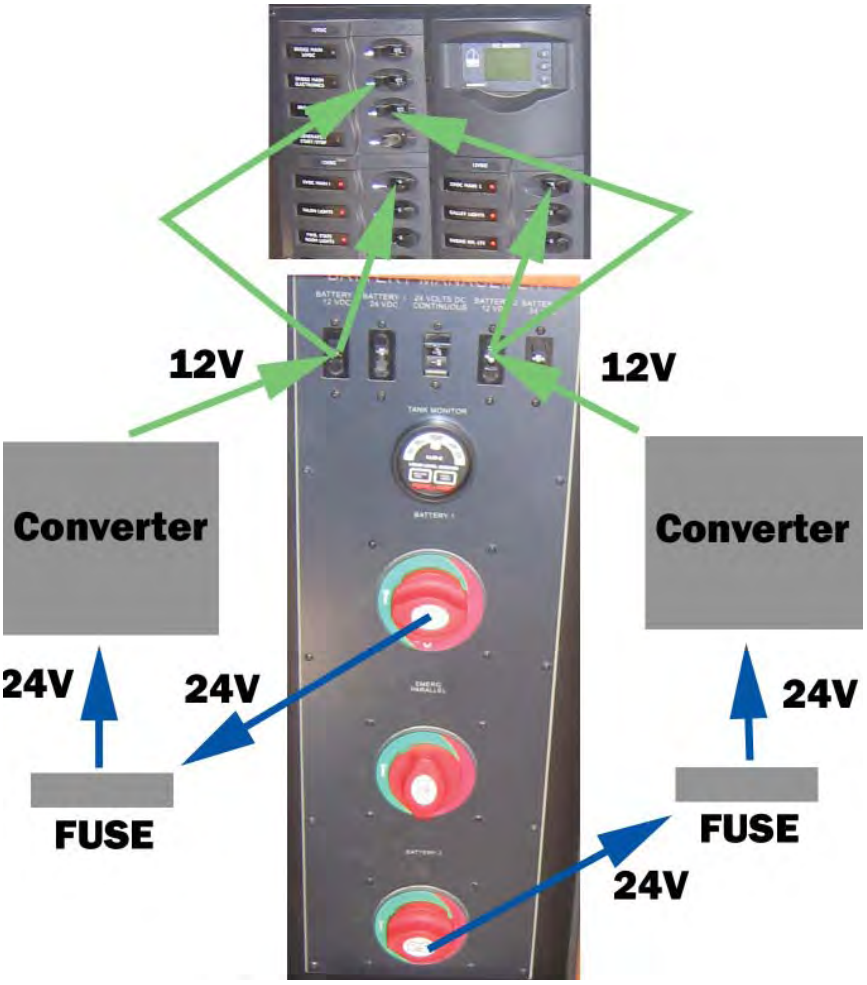
STEP 2 - Turn “ON” the Back-Up Battery Switch. At this point power is drawn only from the battery bank that has its’ switch on.

Switch #4 - Battery 2 Battery Switch - The majority of DC Power goes through the Battery 1 (#2) and the Battery 2 Switches (#4). The 24 Volt DC Power goes from the Starboard Battery Bank directly to this Battery Switch. From this Switch the power goes to the breaker at the top of the Battery Switch Panel. The breaker is marked “Battery 2 24 VDC”. From that breaker it goes directly to the DC Main Panel. Power goes to the breaker marked “24 VDC MAIN 2”. That breaker controls the power to the breakers under this breaker.

Switch #5 - Windlass Battery Switch - The Windlass on your pulpit is an option. If you chose that option, you would have this Switch down in the Hull of your vessel. Access to this switch is through the breaker on the forward wall of the Engine Room. Power goes directly to this switch from the Starboard Battery Bank. The power goes from this switch to the Windlass. If you did not choose the Windlass Option, you would not have this switch installed.

Switch #6 - Generator Battery Switch - The Generator Battery Switch is located in the Engine Room directly aft of the Generator. Power goes directly to this switch from the Starboard Battery Bank. The power goes from this switch to the Generator.

12 Volt DC Electrical System



All 12 Volt Power to your vessel is converted from 24 Volt Power. This conversion takes place in three separate instances on your vessel. The drawing above displays the 24 volt to 12 volt power conversion in two of the three instances and where it flows.

It is important to notice that the 12 Volt power comes off of the same Battery Switches as the 24 Volt System. The Battery 1 and Battery 2 Battery Switches control just about all the 24 volt and 12 volt Power to your vessel. By turning these switches to the OFF position, all DC power except continuous ON power, Windlass, and Generator will be OFF.

Converted 12 volt power is directed to the two Main Breakers on the 12 volt section of the DC Panel. 12 Volt Power is also directed to the two 12 volt bridge breakers that control the 12 volt DC power to the bridge.

The third instance of a 24 volt to 12 volt conversion is from the 24 volt continuous fuse box to the 12 volt continuous fuse box. The 24 volt power comes from the 24 volt continuous fuse box, that goes to the converter, then goes to the 12 volt continuous fuse box.

DC Electrical Main Panel

The DC Main Panel is the control point for the DC Electrical system.

Sections of the DC Main Panel:

- 24 Volt Beakers
- 12 Volt Breakers
- Bridge Main Breakers
- Generator Start/Stop
- Auto Bilge
- Meter

24 Volt Breakers:

The lower portion of the DC Main Panel has two columns of 24 Volt Breakers. The Main Breakers on top of each column must be ON for the breakers below them to work.

12 Volt Breakers:

In the middle of the DC Main Panel are two columns of 12 Volt Breakers. The Breaker on top of each column must be ON for the breakers below them to work.

Bridge Main Breakers:

The upper left section of the DC Main Panel has three breakers. These breakers control the flow of DC Electric to the bridge. The three controls are marked: BRIDGE MAIN 12VDC, BRIDGE MAIN 24VDC, and BRIDGE MAIN ELECTRONICS.

Generator START/STOP:

Directly below the three bridge breakers is a START/STOP switch for starting the Generator. This switch is spring loaded into the stop position. If you want to start the generator, push the switch over to the start side.

Auto Bilge:

The lower left section of the DC Main Panel (in with the 24 Volt Breakers) is the manual switch to run your bilge pumps. There are three sets of switches. There are 3 bilge pumps in your **45C**. The location is forward, mid and aft in the hull. There is two switches for each location. One switch is the ON/OFF switch. This switch is used to override the float switch. The other switch is the breaker switch for each bilge pump. Just push to reset. Remember the bilge pumps are 24v and are constantly powered up.

Meter:

The upper right portion of your DC Main Panel has a meter. This meter will read the voltage on either of the battery banks.

Activating the DC electrical system:

1. Turn “ON” Battery 1 and Battery 2 Battery Switches at the Battery Switch Main Panel.

2. Turn on 24VDC MAIN 1, 24VDC MAIN 2, 12VDC MAIN 1 and 12VDC MAIN 2 switches at the DC Main Panel.

3. To activate the DC Power to the Bridge turn ON BRIDGE MAIN 24VDC, BRIDGE MAIN 12VDC, and BRIDGE MAIN ELECTRONICS.

DC ELECTRICAL FUSE BOXES

There are four fuse boxes behind the DC Main Electrical panel. The fuse boxes are:

24 Volt Continuous ON: This fuse box is on the forward wall behind the panel. It is the top fuse box, of two that are there. All power to this fuse box goes through the top center breaker on the upper portion of the Battery Switch Main Panel. The breaker is marked "24 VOLT CONTINUOUS". That breaker is a normally ON breaker. The power goes from the Port Battery Bank, to the breaker, to the fuse box.

12 Volt Continuous ON: This fuse box is directly under the 24 Volt continuous ON fuse box. The power to this fuse box comes from the 24 volt Continuous ON fuse box, to a 24V to 12V Converter, to the fuse box.

NOTE: Since the power for this fuse box comes from the 24 volt continuous fuse box, the breaker marked "24 VOLT CONTINUOUS" controls the power to this fuse box also.

12 Volt Fuse Box #1 and #2: These two fuse boxes are located on the back wall behind the DC Main Panel. The power to these fuse boxes come directly from the switches marked "12VDC MAIN 1" and "12VDC Main 2" on the DC Main Panel.

DC ELECTRICAL - BRIDGE

DC Electrical components at the bridge:

- DC Helm Breaker Panel
- DC Helm Switch Panel

DC HELM BREAKER PANEL - On the port side of the helm console is the DC Helm Breaker Panel. This panel is the DC Helm Breaker Panel. The photo below shows the DC Helm Breaker Panel.

This panel is broken down into three sections.

12v Bridge Electric - This is the column of switches on the left side of the Panel. The 12V Power for these switches comes from the "BRIDGE MAIN 12 VDC" Breaker on the DC Main Panel.

12V Bridge Electronics - This will be configured differently for each different engine package.

24V Engine Mains - Power comes from the Ship Service Box in the engine room. A breaker labeled "Stbd" (or "Port") Engine Main. Configuration of the breaker will be according to the engine option selected. The power trail is: Batteries to Ship Service Box to The DC Helm Breaker Panel to the Starter. This power set up allows the pilot at the helm to shut-off the engine power from the helm, instead of going to the engine room. Always turn "OFF" these Switches when bridge is unattended. Engines can be started if left in the "ON" position.

DC HELM SWITCH PANEL - This panel is a mixture of 12v and 24v switches.

⚠ WARNING

Fuel fumes in the engine compartment can explode. Before working on any electrical wiring, ventilate the engine compartment and disconnect the batteries to prevent sparking.

⚠ CAUTION

NEVER reset a breaker switch which has tripped automatically without first locating and correcting the problem. The electrical system and devices may be damaged.

⚠ CAUTION

Alterations or extensions to the electrical system can cause electrical shock or fire. ONLY competent marine electricians should make system changes according to U.S. Coast Guard regulations.

240/120 AC Electrical System

AC MAIN PANEL - the AC main panel is located in the Salon. The panel is broken down into four parts:

- The Meter
- Shore Power/Ship Power Switch
- The 120 Volt Breakers
- The 240 Volt Breakers

The power takes two routes at the panel. One route is the power gets split into 2 legs (shore "A" and shore "B"), each leg having 120 volts. The other route is direct 240 VAC.

METERS - There is a meter on the top portion of the AC Panel. The meter reads the 120 and 240 Volt AC Power.

SHORE POWER/SHIP POWER SWITCH: This switch selects where you will be getting your AC Power from. The slide bar is there to make sure you only select one source at any one time. In order for the Ship Power Switch to be on, the slide bar has to move up to block the Shore Power Switch from being on. In order for the Shore Power Switch to be on, the slide bar must move down to block the Ship Power Switch from being on.

Shore Power

Follow the procedures below to connect shore power to your yacht:

- Turn OFF all AC Circuit Breakers at the AC portion of the AC/DC Panel. Shut down the generator if it is in operation.

WARNING

Using a damaged or improper cord for shore power connection can cause electrical shock and serious personal injury. Use a cord specifically designed for shore power connection. DO NOT use a household extension cord.

- Connect the female end of the shore power cord to the yacht's inlet receptacle. Be certain the lock ring is tightly secured. If there is a cord already supplied at the dock, be sure to unhook the cord from the dockside outlet.

WARNING

A LIVE CORD END IS DANGEROUS! Never leave a shore power cord on the dock with only the plug end connected. DO NOT connect the shore power cord to the dockside electrical source first. You can accidentally drop the cord into the water which may result in electrical shock and serious personal injury.

- Connect the Shore Power Cable to power supply. When connecting the shore power cable to the dockside outlet, be certain the cable has sufficient slack to prevent stretching during tidal changes.

- Slide the SHORE POWER/SHIP POWER slide bar down on top of the Ship Power portion of the switch. With the slide down, turn on the shore power switch.

The shore power side of the distribution panel should now be operable.

If there is no power to the electrical distribution panel, check the following:

- Breaker switch at dockside power supply.
- Main breaker switch on shore power side of distribution panel, and the main breaker located in the cockpit area.

Follow the procedures below to **disconnect** shore power from your yacht:

- Turn OFF all AC Circuit Breakers on the main distribution panel.
- Turn OFF the dockside circuit breaker switch.
- Disconnect the shore power cord from the dockside outlet.
- Disconnect the shore power cord from the yacht's inlet receptacle.
- Store your shore power cable in a safe, dry location.

You should periodically check the shore power cord for the following:

- Cuts, cracks, or severe abrasions on the yellow cord covering.
- Bent broken or loose plug blades.
- Plug blades or connector slots that show signs of overheating or arcing, such as,
    - Brown or black discoloration on insulation around blades or slots.
    - Discoloration and/or erosion of blade material.
- Do not allow cords to be pinched by a closed door or hatch. Pinch points create resistance and generate heat that can cause a fire.
- Spray all contacts monthly with an electrical contact cleaner, corrosion inhibitor, and lubricant, such as LPS-1 made by Holt Lloyd Corp. Please note that "WD-40" or silicone spays are not appropriate because the film they leave increases contact resistance. The proper spray types can be found at electrical supply houses or stores such as Radio Shack.
- If a shore power cord should become immersed with water, it should be immediately sprayed with fresh water, THOROUGHLY dried, and blades and contact slots sprayed with a moisture displacement before re-using.

STARTING THE GENERATOR

- Start the generator (Refer to "Starting Instructions" section in the Generator Manual included with your Owner's Packet). Be sure that it is operating properly.
- Turn off all AC breakers.
- Turn off the shore power switch on the Shore Power/Ship Power Switch.
- Slide the slide bar up on top of the Shore Power Switches. With the slide bar up, you should be able to switch "ON" the Ship Power Switches.

120 Volt Breaker Section: The 120 Volt AC Breakers are the breakers below the Shore Power/Ship Power Switch and the breakers on the lowest portion of the right hand column.

240 Volt Breaker Section: The 240 Volt AC Breakers are on the right hand side of the AC Main Panel. All breakers on the right side are 240 Volt AC, except the bottom portion which are 120 Volt AC Breakers.

⚠ CAUTION

NEVER reset a breaker switch which has tripped automatically without first locating and correcting the problem. The electrical system and devices may be damaged.

⚠ CAUTION

Alterations or extensions to the electrical system can cause electrical shock or fire. ONLY competent marine electricians should make system changes according to U.S. Coast Guard regulations.

TROUBLESHOOTING GUIDE

DC ELECTRICAL SYSTEM

PROBLEM	CAUSE	SOLUTION
12 Volt DC equipment not operating	Battery Selector switch turned OFF.	Check Battery Selector Switches to ensure they are turned ON.
	Main breaker at DC Control center OFF.	Switch Breaker to ON.
	Weak or Dead Battery.	Change Battery selector switch position; recharge battery.
	Main Breaker at battery switch has been tripped.	Reset Breaker.
Battery not charging (engine running)	Engine Alternator Belt Loose.	Tighten Belt.
Battery not holding a charge	Defective Battery.	Replace Battery.
12 Volt Device not working	Circuit Breaker for device is OFF.	Switch Breaker to ON.
	Weak or Dead Battery.	Change Battery selector switch position; Recharge Battery.
	Faulty Electrical Connection.	Check 12 volt DC Connections. Tighten or repair as needed.
Cabin Lights not working (off or dim)	CABIN LIGHTS breaker OFF.	Switch breaker to ON.
	Weak or Dead Battery.	Recharge or replace battery.
	Light Bulb burnt out.	Replace bulb.

TROUBLESHOOTING GUIDE

AC ELECTRICAL SYSTEM

PROBLEM	CAUSE	SOLUTION
No 120 Volt Power	Main breaker(s) in engine compartment tripped or OFF on generator.	Turn breakers ON or reset.
	Breaker(s) at AC Control Center tripped or OFF.	Turn breakers ON or reset.
	Shore power breaker tripped.	Turn Breakers ON or reset.
	Shore power cord not connected.	Check cord; plug in, if necessary.
	Loose or disconnected wire.	Tighten connections. See your dealer.
No power to 120 volt devices.	Breaker(s) at AC Control Center tripped or OFF.	Turn breakers ON or reset.
	Shore power cord not connected.	Check cord; plug in, if necessary.
	Loose or disconnected wire.	Tighten connections. See your dealer.
Inadequate power to 120 volt devices (generator running)	Electrical demand greater than generator output.	Switch OFF devices and equipment not needed.
		Increase generator RPM. Refer Generator Manual.
		Use shore power AC line, if available.

TROUBLESHOOTING GUIDE

AC ELECTRICAL SYSTEM

PROBLEM	CAUSE	SOLUTION
Continuous tripping of main.	Cause of problem not determined.	Determine cause and correct problem before resetting breaker.
		See your dealer if problem persists.
No power at AC outlets.	Outlet breakers in AC Control Center OFF.	Switch breakers to ON.
	Ground Fault interrupter tripped.	Reset button on outlet and test.

ENTERTAINMENT SYSTEM

SALON

The standard entertainment components that come with your **45C** are the 30" Flat Screen Television, DVD Player, and BOSE 321 Speaker System. The options available for the Salon would be the BOSE Lifestyle 18 Speaker System and the BOSE Lifestyle 38 Speaker System. The photo below shows the Television in the Salon.

Forward STATEROOM

In the Forward Stateroom you have the following optional entertainment components available:

- 15" Flat Screen Television and DVD Player.
- AM/FM single CD Stereo with remote control.

The photo above shows the 15" Flat Screen Television in the Forward Stateroom.

Port and Starboard Stateroom

In the Port or Starboard Stateroom you have the following optional entertainment components available:

- 15" Flat Screen Television with DVD Player.
- AM/FM single CD Stereo with remote control.

BRIDGE

On the Bridge you have the AM/FM single CD Stereo with sub and amp as an option entertainment component.

AUTOMATIC FIRE EXTINGUISHER SYSTEM

Your **45C** is equipped with a **Automatic Fire Extinguisher System**, which is permanently mounted in the engine room.

The photo above shows the FM 200 Unit in the Engine Room. The **Automatic Fire Extinguisher System (AFE)** is designed for use in enclosed compartments that are not normally occupied by passengers and are not normally subject to weather or water exposure. The automatic fire extinguisher is designed to extinguish Class B fires (flammable liquids) and Class C fires (electrical), which would be the type that would normally occur within the confined area of the engine/generator compartment.

NOTE: *The automatic fire extinguisher system DOES NOT replace the need for additional portable-type fire extinguishers required by the United States Coast Guard.*

The automatic fire extinguisher is activated when the engine/generator compartment reaches 165° Fahrenheit/74° Celsius. If a fire should occur in the engine compartment the CM 200 system will discharge and engines, generator, and blowers will shut off. The system releases HALON 1301 into the compartment, which immediately converts to a safe, odorless, and electrically non-conductive vapor that will not harm the components in the engine/generator compartment. In contrast to other fire extinguishing materials, HALON 1301 leaves no residue, assisting in the eventual cleaning of the compartment.

The Halon System can be manually activated by using the pull handle located under the helm.

The photo above shows the pull handle for the Halon System. The handle works just like a portable fire extinguisher. To activate you must pull the pin out first.

To the left of the pull handle is an Indicator Panel showing the condition of your Halon System.

The automatic fire extinguishing system on your **45C** is equipped with a GREEN indicator light, located on the helm switch panel. The purpose of this indicator light is to alert the operator of the charge/discharge status of the **Automatic Fire Extinguishing System**. The indicator light will illuminate when the ignition switch is turned to the ON position if the system is fully charged.

WARNING

If the Green indicator light does not illuminate after turning on the ignition switch or if it turns off at any time during operation of your yacht, either at dockside or while underway, DO NOT open the engine compartment for at least ten (10) minutes. Opening the engine compartment immediately will allow air to enter and may cause a fire "flashback", possibly resulting in serious injury or death. The sudden rush of air into the engine compartment may also render the automatic fire extinguishing system ineffective.

If the indicator light fails to illuminate after turning on the ignition switch, carefully examine the exterior of the engine/generator compartment for evidence of a fire that may have discharged the system by looking for signs of "scorching" and by your sense of smell.

If you do not observe or smell any evidence of a fire and you have waited the recommended ten (10) minutes, open your engine compartment and examine the Halon 1301 container actuator to determine if it has been discharged. Refer to the Operators Manual, which illustrates the charged and discharged positions of the actuator. If the system has been discharged or appears charged, but the indicator light does not illuminate, see your Silverton Dealer for further inspection and repair, if necessary.

In the event of an engine/generator compartment fire, the following steps should be taken to avoid the likelihood of personal injury or death and to minimize property damage:

- Remain calm and avoid panic.
- Immediately turn off all electrical power, including the engine ignition and the engine compartment ventilation blowers. NOTE: Do NOT turn OFF power to your VHF Radio.
- DO NOT open the engine/generator compartment for at least ten (10) minutes to allow the Halon vapor to extinguish the fire.
- Remove your portable fire extinguisher from its mounting bracket and prepare it for use, if necessary.
- Instruct all passengers to put on their Personal Flotation Devices (PFD's) and move away from the source of the fire.
- Contact the United States Coast Guard on your VHF radio and advise of your situation and location. Maintain radio contact until the crisis has ended and assistance has arrived.
- If the fire is successfully extinguished, examine the engine compartment components for damage. DO NOT start your engines if any damage is noted. Request towing assistance to a safe harbor and contact your Silverton Dealer for a thorough inspection and repairs.
- When replacing parts of the fire fighting installation only matching components shall be used, bearing the same designa-

tion or being equivalent in their technical and fire resistant capabilities.

There is a system override for the CM 200 System. REFER to the Manufacturer's Manual for a detailed description of your AUTOMATIC FIRE EXTINGUISHER SYSTEM. Be certain to complete the Warranty Card and mail to the manufacturer within ten (10) days of your purchase.

PORTABLE FIRE EXTINGUISHER SYSTEM

As a yacht owner or operator, you have the responsibility of having the required quantity of United States Coast Guard approved portable fire extinguishers aboard at all times, except during storage. The portable fire extinguishers must be operational and of the proper classification.

The classification of portable fire extinguishers and their appropriate use is as follows:

CLASS "A"
"Fires in ordinary combustible materials, such as wood, paper and cloth, where the quenching-cooling effect of quantities of water or high water content solution cools the burning material below the ignition temperature."

CLASS "B"
"Fires in flammable petroleum products or other flammable liquids, greases, etc., where the blanketing-smothering effect of oxygen-excluding media is most effective."

CLASS "C"
"Fires involving electrical equipment where the electrical conductivity of the extinguishing media is the first consideration."

Your **45C** is equipped with two (2) Class B/C portable, handheld fire extinguishers. Class B/C fire extinguishers will effectively fight fires of the Class "B" and Class "C" type. The Class B/C portable fire extinguisher contains pressurized dry powder, which when released, will leave a powder residue that smothers the fire and removes its source of oxygen. Once the source of oxygen is removed, the fire cannot continue to burn and it will be extinguished.

The fire extinguishers shipped with your **45C** should be mounted in a readily accessible location away from the engine compartment, but in a relative position to potential fire hazards, such as the Galley. The fire extinguishers should be mounted within plain view and all passengers on board should be familiar with their location and operation before departing your dock.

Maintenance of your portable fire extinguishers should consist of periodic cleaning of the canisters and making certain they are easily seen and readily accessible. Periodically examine the gauge on each fire extinguisher to be sure they are fully charged. If the gauge indicates the fire extinguisher is not fully charged, contact your Silverton Dealer for replacement. DO NOT test the charge of your portable fire extinguishers by operation of them; it will discharge them unnecessarily.

Refer to the operating instructions displayed on the fire extinguisher canisters for a detailed description of their operation and use.

FRESH WATER SYSTEM

The purpose of the **Fresh Water System** is to provide a supply of pressurized portable water to the Galley, Heads, and Transom Exterior Shower on demand and as needed. Your **45C** has two (2) separate sources that are independent of each other and they are identified as follows:

- **Fresh Water Pump System**
- **Dockside Water Supply System**

Fresh Water Pump System

The Fresh Water Pump System on your **45C** consists of the following components:

- **Fresh Water Tanks**
- **Fresh Water Pump**
- **Fresh Water Lines**

Fresh Water Tanks (120 gallon capacity):

The fresh water tanks are located in the engine room. There are two tanks, one on the outboard side of each engine. The Mechanical Schematic in the SCHEMATICS SECTION of this manual shows the location of the fresh water tanks. They are filled through a fill fitting that is marked "WATER" on the fill cap, which is located on the port side of the deck. The photo below shows the water fill.

The Deck Layout in the Schematics Section of this manual will show the location of the Fresh Water Fill.

WARNING

Fill the fresh water tank ONLY with portable water that is safe for drinking. DO NOT fill with water that may be of questionable quality as serious illness or death may occur.

Fresh Water Pump:

The fresh water pump is located under the water heater platform in the engine room.

The photo above shows the water pump on the aft bulkhead of the compartment. The fresh water pump operates on DC electrical power controlled by a breaker switch located on the DC Electrical Panel. The fresh water pump is equipped with an automatic pressure switch and when it is supplied with electrical power, it will operate until the entire fresh water system is pressurized to a preset pressure. Once the required pressure is obtained, the fresh water pump will automatically shut off. The fresh water system should maintain the preset level of water pressure until one of the faucet or shower valves is opened. When the required pressure is lowered below the preset level, the fresh water pump will automatically return to operation.

Fresh Water Filter:

The water pumped from the fresh water tank flows through a filter located on the suction side of the fresh water pump. Its purpose is to remove impurities that may be present in the fresh water system prior to its consumption. The filter is easily removed from the fresh water pump and should be cleaned on a regular basis. The accumulator maintains a constant pressure throughout your water system.

Fresh Water Lines (Cold Water and Hot Water): The fresh water lines carry the water from the fresh water tanks, the water heater, and the various faucets located in the Galley and Head areas of your **45C**. They are constructed of polybutylene plastic material and are 1/2 inch inside diameter. The COLD WATER lines have pale blue manufacturer's lettering and the HOT WATER lines have pale red manufacturer's lettering for identification purposes. The fresh water lines require minimal maintenance, but they should be visually examined on a regular basis for any leaks, chafing, or cracking. Tighten any loose connections as necessary. See your Silverton Dealer for inspection of any suspected defective fresh water lines and their replacement, if necessary.

Dockside Water Supply System

Your **45C** is equipped with a dockside water inlet located in the transom storage compartment. The photo below shows the Fresh Water Inlet at the cockpit.

This system operates independently of the Fresh Water Pump System and simply depends on its connection to a suitable garden-type water hose for its supply of fresh water. When the water supply is connected to the water inlet and turned ON, the system is automatically pressurized without the need for the fresh water pump. The water entering this system will not fill the fresh water tank; a check valve, located in the pressure line of the fresh water pump, prevents the water from entering the fresh water tank. Be sure to turn OFF the fresh water pump at the AC/DC Panel when connected to the shore water supply.

⚠ WARNING

Connect this system ONLY to a portable water system that is safe for drinking. DO NOT use water that may be of questionable quality as serious illness or death may occur.

When you are connecting your system to a dockside water supply, be certain to examine all connections and water lines for any leaks. If any leaks are noted, turn OFF the water supply immediately and make the necessary repairs before you again turn ON the water supply. Remove any trapped air from the water system by opening all faucets until the air is exhausted and there is a steady flow of water. Close the faucets after the air is removed.

⚠ CAUTION

Always turn OFF the dockside water supply source when leaving your yacht unattended. A leak in the system could result in flooding and may cause your yacht to sink.

Refer to the WINTERIZATION AND STORAGE PAGES in the Cleaning and Maintenance Section of this Owner's Manual for the proper preparation and maintenance of your FRESH WATER SYSTEM prior to seasonal storage of your yacht.

FUEL SYSTEM

WARNING

Fuel, is flammable. Failure to follow these recommendations and the rules of good common sense could result in fire, which could cause personal injury or death.

The purpose of the Fuel System is to maintain the necessary supply of fuel to the engines and generator upon demand and as needed. The fuel system on your **45C** is comprised of the following components, which will be described separately:

- Fuel Tank
- Fuel Tank Fills and Vents
- Fuel Tank Grounding System
- Fuel Distribution Hoses
- Fuel Filtration

Fuel Tank

Your **45C** is equipped with a fuel tank having a capacity of 607 gallons. See the Mechanical Schematic in the SCHEMATICS Section of this Owner's Manual for the location of the fuel tank.

The Fuel Tank should be inspected for signs of leaks, corrosion, and/or pitting at least once a year. Corrosion normally appears as a white chalky, discolored, or flaky appearance on the surface of the tank. Sometimes it also appears as pitting or small pockets of missing aluminum. If any one of theses conditions are present, have an authorized Silverton Service Technician inspect the tank immediately. If a leak is found, immediately turn off battery switches, disconnect shore power (instructions in the electrical pages of this section of the Owner's Manual), and disable any possible source of ignition. Notify your Silverton Dealer or Silverton's Customer Service Department immediately.

WARNING

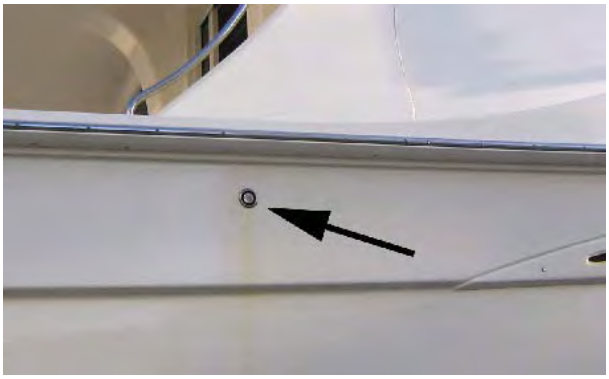
NEVER operate your boat if a fuel leak is present!

Fuel Tank Fill and Vent

The fuel tanks are filled through the Fuel Fill Fitting. The cap is marked DIESEL. The photo below shows the Fuel Fill on the starboard side of the deck.

CAUTION

Using the wrong type of fuel will result in severe damage to the engines. Only use DIESEL Fuel.



The fuel tank is vented. The photo above shows the fuel tank vent on the starboard side.

The vent fitting is connected to the fuel tank with a fuel vent hose. This vent allows air to pass through the tank when fueling and when the engines are drawing fuel from the tank.

The fuel fill and fuel vent hose, fittings and connections should be inspected for leaks and signs of dry rot or swelling at least once a year. If any of these conditions are present, have an authorized Silverton Service Technician inspect the entire fuel system immediately. If a leak is found, turn OFF the battery switches, disconnect the shore power (refer to the electrical pages in this section of the Owner's Manual), and disable any possible source of ignition. In addition, all Fuel Shut-Off Valves should be shut off. Shut-Off Valves are located at the fuel tank and the fuel filters. Contact your Silverton Dealer or Silverton's Customer Service Department immediately.

WARNING

Leaking fuel is a fire hazard; personal injury or death could occur.

If any fuel fill or vent hoses are in need of replacement, be certain that ONLY USCG TYPE A1 or A2 are used.

WARNING

The use of any hose other than USCG TYPE A1 or A2 could result in fuel leakage. Leaking fuel is a fire and explosion hazard; personal injury or death could occur.

Fuel Tank Grounding System

The fuel tank and fuel fill on your **45C** are electrically grounded (or bonded) to the ground buss of the bonding system. The grounding system is designed to prevent the discharge of static electricity, which could cause a spark, especially when fueling your yacht. An authorized Silverton Service Technician should inspect this system at least once each year.

WARNING

While fueling, a spark caused by static electricity could result in fire, which could cause personal injury or death.

Fuel Distribution Hoses

Each engine has a fuel supply hose that runs from the pickup tube in the fuel tank. Also, each engine has a fuel return hose that runs from the engine to the fuel tank. The generator also has a fuel supply hose that runs from the fuel tank to the generator. There is also a fuel return hose routed similar to the supply hose. See the photo below which shows the fuel distribution hoses at the fuel tank. Arrows on the photo indicate distribution hoses.

The fuel distribution supply and return hoses, fittings, and connections should be inspected often for leaks and signs of wear, dry rot, cracking, chafing, or swelling. A good way to examine the fuel hoses is to run your hand along the length of the hose including the fittings. Small leaks will be revealed as wet spots on your hand. If any evidence of hose deterioration is present, have a qualified technician replace all of the hoses with USCG TYPE A1 hoses immediately. If a leak is found, turn OFF battery switches, disconnect shore power and disable any possible source of ignition. Do not start your engines, the generator, or any devices that could create a spark. Contact your Dealer or Customer Service Department immediately. If hoses need to be replaced, make sure that only USCG TYPE A1 are used. TYPE A2 is not acceptable for fuel distribution.

Fuel Filtration

The fuel that is supplied to the engines and generator may contain impurities found in the fuel tanks or contained in the fuel from your supplier. If these impurities are not removed prior to entering the engines/generator, performance may be seriously affected. Removal of the fuel impurities is accomplished by external fuel filters, which are located in the fuel supply line system.

The photo above shows a typical fuel filter system for the diesel engines. Arrows on the photo indicate Fuel Shut-Off Valves. Each engine has a separate fuel filter and fuel shut-off valve located near the engine. The fuel filter is located forward of the engines.

The generator is equipped with a remote fuel filter, located in the generator fuel supply line, separate from the engine fuel supply lines. The photo below shows the generator fuel filter.

An Authorized Silverton Service Technician should replace all fuel filters annually prior to spring launch.

Fuel Consumption

Fuel consumption is determined by monitoring gallons used through engine instrumentation. Refer to the Engine Manual for Fuel Consumption.

Fueling Your 45 Convertible

Fuel Quality

Refer to your **Engine Manual**, included with your owner's packet, for specific fuel requirements for your engine, i.e., recommended octane level.

Fuel Additives

Refer to your **Engine Manual** for recommendations concerning fuel additives.

Refer to the **Winterization and Storage Pages** in the Cleaning and Maintenance Section of this Owner's Manual concerning the use of fuel stabilizers. Always follow the manufacturer's recommendation when using fuel additives or stabilizers.

General Guidelines For Fueling Your Yacht

Improper fueling procedures can cause boat fires and explosions. It is imperative that the following procedures be followed every time you fuel your boat:

⚠ WARNING

Leaking fuel is a fire and explosion hazard; personal injury or death could occur.

✔Before fueling, check the fuel system for leaks and repair; replace any components prior to fueling or starting your engines, generator, or any electrical device.

✔If possible, fuel your boat during daylight hours. Check fuel vents to assure the fuel tanks are not over-filled. Fuel spills are easier to detect when visibility is good.

✔In very warm weather, DO NOT "top off" the fuel tanks, as the fuel will expand as it heats up and spill out the vents.

✔Make sure you are using the correct fuel type required by the engine manufacturer.

⚠ CAUTION

Using the wrong type of fuel will result in severe damage to the engines.

✔Be sure to turn off all engines, the generator and all devices that could create a spark prior to fueling. Battery switches should also be shut off to prevent sparks from any electrical device.

✔Disconnect shore power.

✔Extinguish all smoking materials and any other items that may create a spark.

✔Completely close all doors, ports, hatches, and windows; ask guests to leave the boat during fueling.

✔Before fueling, touch the fuel nozzle to the fuel fill cap to discharge any static electricity. Open the designated fill pipe, insert the nozzle while maintaining contact with the side of the fill pipe.

✔After pumping several gallons, STOP. Inspect engine and tank compartments for any signs of leakage.

✔DO NOT continue fueling if leaks or the smell of fuel are present. Contact a qualified technician to inspect your boat and repair it before continuing to fuel.

✔If no leaks are noted, continue fueling allowing for expansion in warmer weather. Slow the flow as approaching full to avoid overflow.

✔Once full, remove nozzle, replace fill cover tightly, and clean up any spills.

✔After fueling has been completed, open all hatches, doors, and compartments. Visually check all fuel fittings, lines, and tanks for leakage, including engine and generator fuel lines. Immediately notify a qualified technician of any problems and correct them before proceeding.

✔Turn main battery switches on to operate bilge blower. Ventilate all bilges for at least five minutes.

✔Make a final inspection of the engine and/or generator space and smell for fumes. If they are present, open all doors and ports and evacuate the boat. Notify the Dockmaster and request a qualified technician to correct the problem. If it is clear, follow the recommended engine starting procedure. When storing your boat for extended periods, it is preferable to top off the tanks and add fuel conditioner and or stabilizer. Please refer to the engine Owner's Manual for recommendations.

FUEL SYSTEM MAINTENANCE

Maintenance of your fuel system must also be a high priority. As boats get older, maintenance may be done by people with varying degrees of expertise. Materials and methods previously used may also change.

FUEL SAFETY CHECKLIST FOR BOARDING

This fuel safety checklist is designed to be used as a quick reference to minimize the risks associated with fuel hazards. You should refer to this checklist every time you board your yacht. Read your Owner's Manual so that you have a full understanding of the fuel system on your yacht.

WARNING

Fuel is flammable. Failure to follow these recommendations and the rules of good common sense could result in fire; which could cause personal injury or death.

✔Before approaching your boat, extinguish all smoking materials and make certain there are no other devices on or near your boat that could create a spark and start a fire or cause an explosion.

✔Approach your boat alone to make the initial inspection. Have your guests and crew standby at a safe distance away from your boat.

✔Visually inspect your boat from the dock for any fuel leaks from the deck fills or hull vents and take notice if there is any odor of fuel. Also, check the water surface around your boat for signs of fuel.

✔Once onboard, open the cabin door and sniff at the doorway and then inside the cabin for fuel odor.

✔Open the engine compartment hatch and sniff for fuel odor.

✔Inspect the engine compartment and all bilge compartments for fuel leaks and sniff for fuel odor.

✔If there are any signs of fuel leakage, either visually or by odor, open doors, hatches, and windows and most importantly, do not start the engines, the generator or any other device that could create a spark. Shut off all battery switches. Evacuate the boat and inform the Dock Master. Have a qualified technician determine the source of the leak. **NEVER** operate your boat if a fuel leak is suspected or present!

✔If no signs of a fuel leak are present, board your guests and crew.

✔Run exhaust blowers for five minutes before starting the engines or generator.

✔Always be aware of the hazards associated with fuel and follow all safety and maintenance procedures in this publication, the Safety Manual, and Chapman's.

"HAPPY SAFE BOATING"

FROM THE SILVERTON TEAM

GENERATOR SYSTEM

When you purchased your **45C**, a **Generator System**, manufactured by Kohler was factory installed at the Silverton plant. As discussed in the **Fuel System Pages of the Systems Operations Section** of this Owner's Manual, fuel is supplied to the generator from the fuel tank.

The **Generator System** is controlled by a slide bar breaker switch, located on the AC Electrical Panel (Check the AC Electrical Pages of the Systems Operations Section of this manual). This slide bar breaker allows you to switch from shore power to generator power.

The system START and STOP switch is located on the DC Electrical Panel. The **Generator System** is located in the aft part of the engine room, behind the starboard engine.

Operation of the **Generator System** is as follows:

✔Turn ON the Generator System battery switch. This switch is located in the engine room, behind the generator.

✔Check sea strainer for debris and clean if needed.

✔Be certain the seawater intake valve that services the generator is in the OPEN position. The valve is open when the handle is parallel to the valve body. The photo below shows the seawater intake valve and the seawater strainer below the generator.

✔Turn ON the breaker located on the generator.

✔Move slide bar switch at the AC Panel to Ship Power position.

✔Check for presence of fuel odor in the Bilge.

✔Start the generator (Refer to "Starting Instructions" section in the Generator Manual included with your owner's packet).

✔Push START switch on DC Electrical Panel until generator starts.

⚠ CAUTION

DO NOT depress START switch for more than thirty (30) seconds as damage to the generator starter motor may result. If the generator does not start within 30 seconds, release the START switch and allow the starter motor to cool for at least sixty (60) seconds before again attempting to start the generator.

To cease operation of the Generator system, depress the STOP switch on the DC Electrical Panel. After the generator stops running, release the STOP switch. Continue to operate the blower motor for several minutes to be certain the generator compartment is completely evacuated of any fuel fumes. Return the slide bar switch to the shore power mode and turn OFF the breaker switch. Turn OFF the Generator System Battery Switch.

Refer to “Generator” in the Electrical System pages in this section of this manual for using the generator output to power the boat.

⚠ DANGER

While operating your Generator system, always be certain there is adequate ventilation in the cabin areas of your yacht to avoid the potential accumulation of Carbon Monoxide Gas (CO). Carbon Monoxide Gas is colorless, odorless, and tasteless. It is highly poisonous, endangering lives even at very low levels of concentration. Mild exposure causes headaches and fatigue, often resembling “flu-like” symptoms. Medium exposure causes severe headaches, drowsiness, nausea, and rapid heart rate. Extreme exposure results in unconsciousness, convulsions, cardiorespiratory failure, and death. If Carbon Monoxide Gas is detected in your yacht, immediately contact a qualified technician to locate and repair the source of the poisonous gas. DO NOT enter your yacht until repairs have been made and the Carbon Monoxide Gas is lowered to an acceptable level. Refer to the Carbon Monoxide Gas (CO) Detector System Section of this Owner’s Manual for additional information and cautions concerning this deadly gas.

Refer to the KOHLER COMPANY Generator Manual included with your owner's manual for additional technical information concerning the operation and maintenance of your generator system.

⚠ CAUTION

Your Generator may not be able to operate all equipment at one time.

⚠ DANGER

Due to the risks related to Carbon Monoxide poisoning, NEVER sleep on board your boat while the generator is running.

HOT WATER SYSTEM

Your **45C** is equipped with a 10.5 or optional 20.0 gallon water heater, which is operated on the A/C electrical system. The Fresh Water Pump and the dockside supply feed cold water to the water heater, which is then heated for distribution when desired. Similar to the water heater in your home, there is always a continuous supply of water to maintain a full tank at all times. The water heater in your **45C** is a "high recovery" model, meaning the cold water entering the tank is heated very quickly to replace the hot water as it is used.

Operation of the water heater is as follows:

✔Be certain the water heater is full of water. You can easily check this by turning ON a hot water faucet. If water flows from the faucet, the water heater is full.

⚠ CAUTION

If the water heater is not full of water, damage to the heating elements may result when electrical power is turned ON to the unit.

✔Turn ON the water heater breaker switch, which is located on the AC electrical panel. The Electrical pages in this section of this manual explain the location of this switch.

NOTE: *The water heater will operate on AC electrical current only. You must either plug in your shore power cord or operate your generator for the water heater to function.*

✔Allow sufficient time for the water heater to heat its contained water before using (approximately 1/2 hour).

General maintenance of the Hot Water System is as follows:

✔Inspect all water lines and their connections at regular intervals. Tighten connections as needed. If the water lines appear worn or are not flexible, see your Silverton dealer for replacement.

✔Manually operate the pressure relief valve on the water heater at least once a year (See photograph below, which illustrates the location of the valve).

WARNING

DO NOT operate the pressure relief valve while the water heater contains hot water. Serious burns or injury could result.

✔Flush out the water heater tank at least once a year, if not used regularly.

✔Refer to the **Winterization and Storage pages** in the Cleaning and Maintenance section of this Owner's manual for proper preparation for seasonal storage of the water heater.

OIL EXCHANGER

The ***OIL X-CHANGE-R*** **System**, manufactured by Ray Zager & Company and factory installed at the Silverton plant. The purpose of the ***OIL X-CHANGE-R*** **System** is to automatically drain, fill, and maintain engine and/or transmission oil with relative ease and no spilled oil, which is normally associated with your required periodic oil changes. The ***OIL X-CHANGE-R*** **System** consists of an enclosed pump, located in the engine compartment, which operates on DC electrical power. The system pump is attached to a breaker switch, located on the DC Electrical Panel and described as “Oil Exchanger” (Refer to the Electrical Pages in this section of this Owner’s Manual for the location of the switch for the ***OIL X-CHANGE-R*** **System**). Operation of the system is accomplished by turning ON the toggle switch located on the pump unit. The system also has a drain hose for draining the discharged oil.

Refer to the OIL X-Change-R System Manual included with your owner’s packet for information concerning the operation and maintenance of this system.

PROPULSION SYSTEM

Propulsion of your **45C** is accomplished by two inboard engines, located within the engine compartment. The engines are fueled by diesel fuel. Each engine transmits its power to a separate transmission, which rotates the attached propeller shaft and the propeller, providing forward or reverse movement of your yacht as selected from the shift control unit located at the helm. The transmissions are counter-rotating. This is defined as when in the forward shift mode and viewing forward from aft, the Port transmission rotates the Port propeller counterclockwise and the Starboard transmission rotates the Starboard propeller clockwise.

Access to the engine compartment in your **45C** is provided through the hatch in the forward part of the cockpit.

The engine starting procedure is as follows:

✔Open and inspect the engine compartment. Use your sense of smell to detect the presence of fuel fumes.

✔Turn battery switch ON.

✔Operate the bilge blower motors for at least five (5) minutes. Check indicator light on the Blower Switch to make sure the switch is “ON”. Listen to make sure blowers are “ON”.

✔Check the bilge water level. If it appears above normal, turn ON the bilge pump(s) and remove the water. Determine the source of the excess water and repair, if necessary, before starting the engines.

✔Check the bilge for the presence of any oil. Determine the source of the oil and repair, if necessary, before starting the engines.

✔Open both engine seawater intake valves (location of these valves are shown on the Mechanical Layout in the Schematics Section of this Owner’s Manual). The valves are open when the handles are parallel to the valve body.

The photo above shows two sets of valves. The upper set of valves, closest to the bilge pump, are the seawater intake valves. The lower set of valves are the crash valves. It is very important to know the various combinations of these valve settings. The wrong combination of setting could sink your vessel. The photo above shows the normal operating positions. The Seawater Valves are open and the Crash valves are closed.

⚠ CAUTION

Improper use of the Crash Valve can cause catastrophic damage to the engine.

The photo above shows an unacceptable combination of valve settings. The Seawater Intake Valves are closed, and the Crash Valves are closed. The engine CAN NOT run in this condition. There is NO water cooling the engine.

It is very important to read and understand the Crash Valve procedures. Please refer to the Crash Valve Page in this section of this Owner's Manual.

✔Check all cooling and lubricating fluids. Add engine oil or transmission oil, if needed, but DO NOT overfill.

⚠ WARNING

DO NOT remove the cooling system filler cap when the engine is hot. Allow the engine to cool and then remove the pressure cap slowly, allowing the pressure to vent. Hot coolant, under pressure, may discharge violently and result in serious personal injury and burns.

✔The controls at the helm station must be in the neutral position. This is done by placing the shifter in the center detente of the control. Check the Manual for the particular controls that are on your vessel.

✔Turn the ignition to ON, but not to START ENGINE. Depress the actuation button at the controls to take command of your controls. Check the automatic fire extinguisher system indicator light. It should illuminate.

✔Turn the ignition key to START and hold in this position until the engine starts. Release the ignition switch as soon as the engine starts. The engine alarm buzzer should turn OFF when the engine oil pressure reaches normal operating range. The automatic fire extinguisher indicator light should remain illuminated.

⚠ CAUTION

If the engine fails to start within thirty (30) seconds, release the ignition switch. Allow the starter motor to cool for at least sixty (60) seconds and then try again to start the engine. Prolonged starting attempts may result in starter motor overheating and damage.

⚠ CAUTION

Failure to release the ignition switch from the START position after the engine starts may result in serious damage to the starter motor and/or engine flywheel.

⚠ CAUTION

If the engine alarm buzzer DOES NOT turn OFF, turn OFF the engine immediately if the oil pressure gauge displays no, or very low, oil pressure. See your Silverton dealer for inspection and repair, if necessary. No, or very low, oil pressure may cause serious damage to the internal mechanism of your engine(s).

⚠ WARNING

If the automatic fire extinguisher indicator light DOES NOT remain illuminated, turn OFF the engine(s) immediately and follow the proper procedure to check for fire aboard your yacht as detailed in the Automatic Fire Extinguisher System Section of this Owner's Manual. A fire aboard your yacht may result in serious personal injury or death.

✔If one of the batteries is "dead" or not sufficiently charged to start your engine, depress the "Parallel Start Switch" simultaneously while turning the ignition switch to START. The parallel start switch draws power from both batteries during the starting procedure and it is located on the helm switch panel. Refer to the Electrical pages of this section of your Owner's Manual for a location of the Switch. Release both switches immediately after the engine starts.

⚠ CAUTION

DO NOT continue to depress the "Parallel Start Switch" after the engine has started. Damage to the alternator(s) may result.

After you have started both engines and determined they are running properly, the "warm-up" procedure should be followed before departing the dock/mooring. The proper "warm-up" procedure is as follows:

✔Check the oil pressure gauges to be certain each engine has sufficient oil pressure. Diesel engines should have between 35 and 70 psi. If the oil pressure is lower than the normal operating range, turn OFF the respective engine and contact your Silverton dealer for further inspection and repair, if necessary.

✔Start and allow engines to run at specified RPM until they reach proper operating temperature. Warm-up RPMs are listed in the engine operator's manual. Normal operating temperature for gasoline and diesel engines are 165° F – 175° F depending on manufacturer's specifications.

In gasoline engine applications, if the engine temperature rises above the normal operating range (a maximum of 200° F) and audible warning alarm and indicator light will come on indicating the engine is over heating.

Turn OFF the respective engine immediately. In a diesel engine application, if the engine temperature rises significantly above the normal

operating range (a maximum of 200° F), the affected engine will send a code to the engine panel display when the engine is overheating. Again, if this occurs, turn OFF the respective engine immediately; contact your Silverton Dealer for inspection and repair, if necessary.

✔Check the exhaust outlets for the presence of water. Water coming from the exhaust outlets indicates proper water circulation in the engine exhaust system. Water should start coming out of the exhaust outlet shortly after the engine is started. If you do not observe any water coming from the exhaust outlet(s), turn OFF the respective engine and contact your Silverton dealer for inspection and repair.

✔Visually inspect the engine compartment for fuel, oil and water leaks. If leaks are found refer to your Fuel Section of this manual. Also, contact your Silverton dealer for inspection and repair, if necessary.

✔Visually inspect the exhaust system for leaks. If any leak is observed, immediately turn OFF the engines and contact your Silverton dealer for inspection and repair, if necessary.

✔Check the transmission fluid level. The transmission fluid should read FULL on the “dipstick”. If the fluid level is low, add sufficient transmission fluid to raise the level to the FULL mark or slightly lower. DO NOT overfill. If the fluid level is low, check the transmission(s) for leaks and contact your Silverton dealer for repairs if leaks are noted.

Refer to the ENGINE MANUAL included with your owner’s packet for additional technical information concerning maintenance requirements for the specific engines with which your **45C** is equipped.

Bow Thruster (Optional)

You may have chosen as an option when you purchased your **45C**, a **Bow Thruster System**. The purpose of this system is to aid in maneuvering your yacht in close quarters, such as departing or entering a marina boat slip. The **Bow Thruster** propels the bow of your yacht in a Port or Starboard direction, depending on your selection, which is made from a control panel located at the helm station. The **Bow Thruster** operates on 24V DC electrical power, controlled by a breaker switch, located in the forward bilge area. The Bow Thruster has its’ own set of batteries. The battery switch for the Bow Thrusters is by the batteries for the Bow Thruster. The system has its’ own 25 amp charger. The breaker for the charger, and the fuse for the Bow Thruster is located by the batteries also.

Refer to the Bow Thruster User and Maintenance Manual for technical information concerning your Bow Thruster System. This manual is provided by your Silverton Dealer and located in your Owner’s Packet.

Batteries

The bow thruster batteries’ provide power to the thruster motor and controls. The batteries are two (2) 31 Series AGM batteries wired in series to make 24VDC and are located under the galley floor hatch. The batteries must only be replaced with AGM batteries.

Battery Charger
The bow thruster's battery charger, along with the 355 Amp DC Fuse, is located under the galley floor hatch. The purpose of the charger is to maintain the battery voltage level. The charger breaker is located in the Main AC Distribution Panel and is a 15 Amp AC.

Joystick
The bow thruster is operated with a joystick, which is located at the helm. The motor and control box for the joystick are located under the forward stateroom floor hatch.

Operation
The following information refers to the operation of your bow thruster.

- To engage the bow thruster, press the ON/OFF Switch. When the bow thruster is not in use, make sure to disengage the bow thruster by pressing the ON/OFF switch.

- To maneuver your vessel, simply press the left arrow button on the touch pad control panel and the boat will move to port. To move to the right, push the right arrow button and the boat will move to starboard.

- Turn OFF the bow thruster's main switch when the system is not in use and always when leaving the boat.

Warning! Look out for swimmers before operating the bow thruster.

Warning! Do not operate the bow thruster without the belt cover installed.

Warning! Only operate the bow thruster when its propellers are fully submerged.

Refer to the Bow Thruster User and Maintenance Manual for technical information concerning your Bow Thruster System.

Electronic Protection

Refer to the Bow Thruster User and Maintenance Manual for technical information concerning the Electrical Protection of your Bow Thruster System.

Test Running

Refer to the Bow Thruster User and Maintenance Manual for technical information concerning a Test Run of your Bow Thruster System.

Maintenance

Warning! When working on the bow thruster, always turn OFF the main switch.

Refer to the Bow Thruster User and Maintenance Manual for technical information concerning the Maintenance of your Bow Thruster System.

⚠ CAUTION

Batteries for your Bow Thruster must be replaced with Sealed AGM Type batteries ONLY.

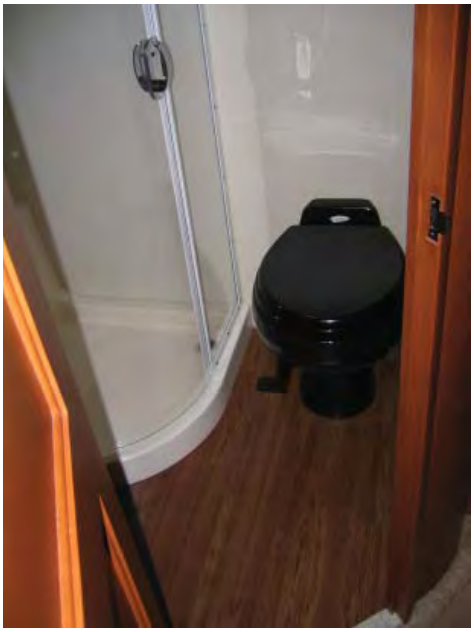
Refer to the BOW THRUSTER Manual included with your owner's packet for additional technical information concerning the operation and maintenance of this optional system.

MARINE SANITATION SYSTEM

All vessels with fixed toilets that are operated on the waterways of the United States and some foreign countries are required to be equipped with an operable Marine Sanitation Device (MSD). The **Marine Sanitation System** in your **45C** is a Waste Tank system, defined by the United States Coast Guard as a Type III System. Type III Systems permit operation of the toilet without the direct discharge of untreated waste after every flush. Type III Systems can be discharged at marina dockside pump-out stations.

NOTE: Overboard discharge capability must remain inoperative while within the 3 mile limit. This is accomplished by closing the macerator discharge thru-hull valve. Refer to the Mechanical Layout Schematic in the Schematic Section of this Owner's Manual for the location of the valve.

Your **45C** is equipped with the two Vacu-Flush Toilets as a standard feature.



SeaLand Vacu-Flush Toilet

This system is operated by vacuum, combined with a small quantity of water supplied by the pressurized fresh water system (approximately one (1) pint per flush) and is controlled by DC electrical power. Each toilet is equipped with an integral vacuum breaker that prevents a backflow of contaminated water into the potable water supply. Vacuum energy, supplied by the Vacuum Pump, is stored in a Vacuum Tank and is monitored to maintain a certain level. The Vacuum Pump is controlled by an electrical breaker switch, located on the AC/DC Electrical Panel. Refer to the Electrical Pages of this section in this Owner's Manual for the location of the switch. As the toilet is flushed, vacuum energy is depleted and the Vacuum Pump will automatically activate to restore the required level. The Vacuum Pump will operate for approximately 30 to 90 seconds until the system reaches the required operating vacuum level. Toilet waste, both liquid and solid, is removed by the vacuum energy and water combination to a Waste Tank having a capacity of seventy-two gallons. The Mechanical Layout in the Schematics Section of this Owner's Manual shows the location of the Tank.
This waste is stored in the Waste Tank

until pumped out at a proper facility. The photo below shows the waste tank.
The Waste Tank is equipped with an electronic Waste Level Gauge, which monitors the volume of waste in the tank for your convenience in determining when pump-out is required. The photo below shows the Meter in the Salon.

Maintenance of your Vacu-Flush Sanitation System consists of periodic cleaning of the toilet bowl with a mild nonabrasive cleaner. The Waste Tank should be thoroughly rinsed after each pump-out and a sanitation system deodorizer should be added to the Waste Tank by flushing through the toilet.

⚠ CAUTION

DO NOT use chlorine-based or caustic cleaning agents or chemicals, such as drain opening products, in your *SeaLand* Vacu-Flush Sanitation System. Use of these products may cause serious damage to the system's seals and hoses.

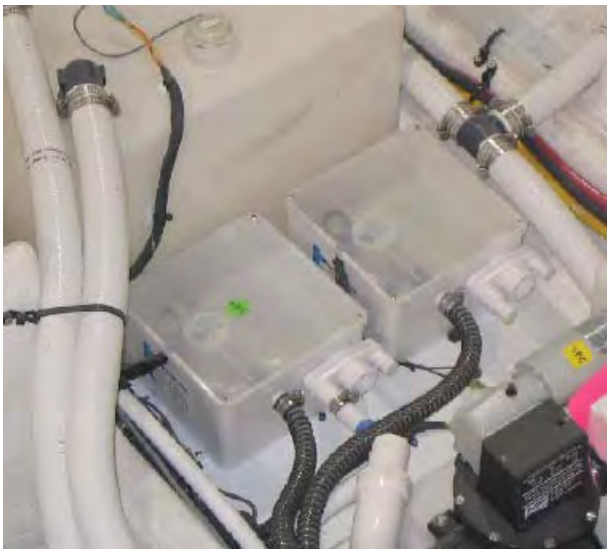
Fuses for both toilets are located behind the DC Panel in the Salon. Refer to the Electrical Section of this Owner's Manual for more information.

There is a filter in the waste line above the Waste Tank. This filter requires changing and can be accessed by removing the panel in the rear of the port stateroom hanging closet.

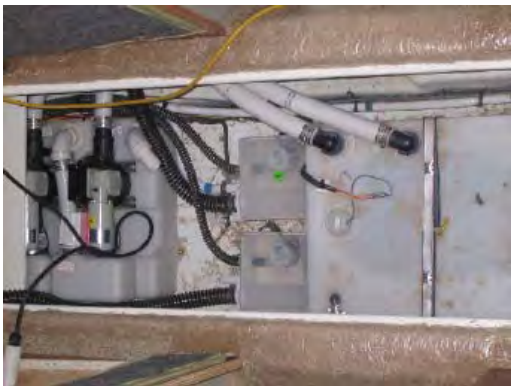
Refer to the SEALAND VACU-FLUSH SANITATION SYSTEM MANUAL included with your owner's packet for additional information concerning the use and maintenance of this system, including the proper procedure for winterization and storage.

SHOWER SUMP PUMP SYSTEM

Your **45C** is equipped with two showers. The V-Berth Shower is on the starboard side of the boat, and the other shower is on the port side of the boat. Each shower is equipped with a separate Automatic Sump Pump (Refer to the Mechanical Schematic in the Schematics Section of this Owner's Manual for the location of the Shower Sump Pump). As water drains from the shower into the Sump Pump it reaches a certain level, that raises an automatic switch lever, which activates the Shower Sump Pump and the water is pumped overboard. The photo below shows the Shower Sump Pumps.



Access to the Shower Sump Pump is through a hatch located on the passageway floor. The photo below shows the panel removed.



The **Shower Sump Pump System** operates on 24V DC electrical power. The fuses for the Shower Sump Pumps are behind the DC Electrical Panel in the Salon. Refer to the Electrical Pages of this section of this Owner's Manual for the location of the fuses.

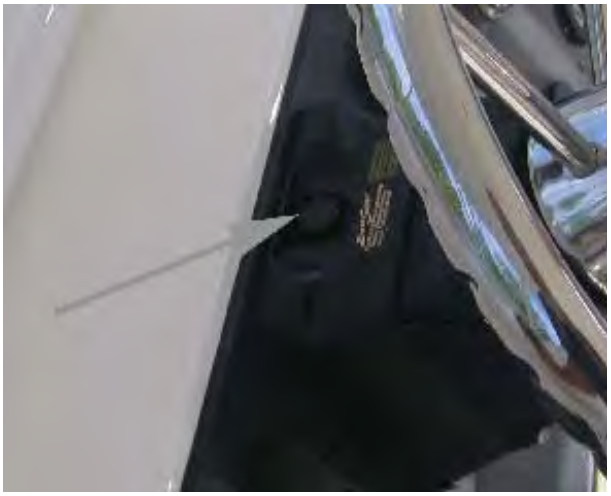
General maintenance of the **Shower Sump Pump System** involves periodic cleaning to remove any accumulated debris. If you notice that the shower does not drain properly, check the pump basket for debris and clean, if necessary. Remove the six (6) screws securing the top cover for access to the debris basket and automatic float switch. If the shower still does not drain properly, check the operation of the pump by manually raising the automatic float switch. If the Sump Pump is operable, but will not drain properly, check all drain lines for debris and clean as needed. See your Silverton dealer for further inspection and repair if the shower continues to drain improperly.
Refer to the Winterization and Storage section of this Owner's Manual for the proper preparation and maintenance of the SHOWER SUMP PUMP SYSTEM prior to seasonal storage.

STEERING SYSTEM

The steering system in your **45C** is manufactured by Sea Star, a subsidiary of TeleFlex (Canada, Ltd.). The **Hydraulic Steering System** in your **45C** differs from your automobile, as a separate pump is not used to circulate the hydraulic fluid contained in the system; the system is completely filled with hydraulic fluid and is free of air. As you turn your steering wheel, the hydraulic fluid is pumped by the steering head into the appropriate fluid line, Port or Starboard, resulting in movement of the steering cylinder in the respective direction. The steering cylinder is connected to the rudders and they are subsequently turned, which enables your yacht to turn in the desired direction; to Port or Starboard (See photograph below which illustrates the location of the steering cylinder and its connection to the rudders).

The **Hydraulic Steering System** in your **45C** utilizes an adjustable tilt-type steering head, which allows you to adjust the steering wheel angle for maximum personal comfort. The photo below shows the tilt control on the Steering Wheel.

On the Top is the vented fill cap. The photo below shows the vented cap.



Maintenance of the **Hydraulic Steering System** should only be performed by your Silverton dealer or a qualified technician, who is experienced in marine hydraulic systems. Periodically examine all connections and hydraulic lines for any signs of leakage. If any leaks are noted, contact your Silverton dealer for further inspection and repair, if necessary.

Refer to the SEA STAR Manual included with your Owner's Packet for the specific type of hydraulic fluid required and technical information concerning the Hydraulic Steering System.

TRIM TAB SYSTEM

The purpose of the **Trim Tab System** on your **45C** is to assist in reaching planing speed as soon as possible and to maintain a proper "running attitude" while in forward motion. "Running Attitude" is defined as the level of the boat; both fore, aft, and athwartships, while the vessel is underway. Your yacht, upon reaching planing speed, should rise slightly in the bow and should not list to either side for the greatest stability and fuel economy. Your **45C** is equipped with two (2) *Bennett Trim Tabs*, each measuring 12" x 24", which are mounted on the trailing edge of the transom (See photograph below, which illustrate the location of the Port Trim Tab).

Each Trim Tab operates independently of each other and they are controlled by separate rocker-type switches, located on the Helm Switch Panel (Refer to the Electrical Pages in this section of this Owner's Manual for the location of these switches). Each Trim Tab is actuated by a hydraulic cylinder, which moves them in an Up or Down motion.

The position as determined by depressing the rocker-type switches as follows:

- Depressing the TOP of the switch lowers the trim tab.
- Depressing the BOTTOM of the switch raises the trim tab.

The **Trim Tab System** operates in the following manner:

✔The function of the trim tab is to redirect the flow of water beyond the bottom of the transom. This creates an upward pressure on the hull bottom at the transom, which results in lowering the bow.

✔When the Port trim tab is lowered, the Port stern section is raised, which lowers the Starboard side of the bow.

✔When the Starboard trim tab is lowered, the Starboard stern section is raised, which lowers the Port side of the bow.

✔Both trim tabs should be lowered/raised as needed to maintain a proper "Running Attitude".

⚠WARNING

Operation of the Trim Tab System may require practice to attain a level of proficiency. DO NOT operate either trim tab to its extreme lowered position suddenly. This may cause the bow to lower to an unsafe position while heading into or away from waves, which may cause "swamping" of your yacht, resulting in possible injury or death. DO operate the trim tab switches with short "bursts" until the desired "Running Attitude" is obtained.

Maintenance of the **Trim Tab System** is as follows:

✔Silverton recommends painting the trim tabs with good quality, antifouling bottom paint. Cylinders should be in the full UP position before painting.

✔To reduce the risk of electrolysis and galvanic corrosion, Silverton recommends the installation of sacrificial zinc anodes on the trim tab plates at least once a year, preferably during preparation for spring launch. DO NOT paint the sacrificial zinc anodes.

✔Periodically examine the trim tabs for accumulation of underwater growth and clean as necessary. Underwater growth will affect the boats performance.

✔Periodically examine the trim tab pump and hydraulic lines, which are located in the bilge area, for leaks (Refer to the Mechanical Schematic in the Schematic Section of this Owner's Manual for the location of the trim tab pump). Tighten connections if leaks are noted. If the hydraulic lines appear worn or chafed, contact your Silverton dealer for inspection and replacement, if necessary.

The Trim Tabs run on 12DC power and the breaker is located at the Helm Breaker Panel.

Refer to the BENNETT TRIM TAB Manual included with your owner's packet for technical information concerning the operation and maintenance of the trim tab system.

ICEMAKER UNIT (OPTIONAL)

You may have chosen as an option when you purchased your **45C**, an **Icemaker Unit**, manufactured by *U-Line Corporation* and installed by Silverton. The purpose of this system is to provide you with a continuous supply of fresh ice upon demand and as needed.

The **Icemaker Unit**, which is located in the cockpit, operates on AC electrical power and is controlled by a breaker switch located on the AC Electrical Panel (See **AC/DC Electrical Panel Layout** in the Schematics Section of this Manual, which illustrates the location of the breaker switch that controls the **Icemaker Unit**). While your **45C** is underway, you must operate your generator to maintain operation of the **Icemaker Unit.**

Refer to the *U-LINE CORPORATION* ICEMAKER MANUAL included with your owner's packet for specific instructions concerning the operation and maintenance of the **ICEMAKER UNIT**.

FISHPAK (Optional)

One of the options available on your **45C** is the FishPak.

KeepAlive - Live Well

The photo below shows the Live Well System on the stern of your boat.

The Live Well system will keep your fish and bait alive. The Live Well system circulates and inserts air into the tank the fish are in.

Here are the parts installed with the Live Well System:

PUMP - The pump adds the air and provides the water flow.

Air Control - The Air Control controls the amount of air into the tank. Be aware the more air, the less water flow. The less air, the more water flow.

Pump Switch - Turns the pump on and off.

Check Valve - Only allows water to enter the tank. Does not allow water to go from tank to pump.

Bottom Tank Drain - Drain for allowing the water to re-circulate in the tank. This drain will also completely drain the tank if used in conjunction with the Thru-Hull fitting.

Strainer - Before the water goes into the pump it must pass through the strainer. This strainer must be checked on a daily basis. Pump will not work correctly if Strainer is clogged.

Thru-Hull Fitting - this fitting allows water to come into the tank, and allows the tank to drain when used in conjunction with the bottom drain valve.

Overflow - On the top of the tank is an overflow outlet. This outlet is connected to a hose that drains directly out the stern of the boat.

CONTROL VALVES
There are two very important valves associated with your Live Well system:

-Thru-Hull Fitting Valve - this valve is at the bottom of your boat, and allows the seawater to come into and out off your tank.

-Bottom Tank Drain Valve - This valve is directly below the Tank Bottom Drain and controls the water coming out of the tank.

NOTE: The position of these valves are very important!!!

Normal Operation - Tank Drain Valve closed and Thru-Hull Valve Open. At this position seawater is going into the pump, then into the tank and excess seawater is going out the overboard drain.

Re-Circulating Mode - Thru-Hull Valve Closed and Tank Bottom Drain Valve Open. At this position the water is coming from the bottom of the tank into the pump, then back into the tank. The pump is re-circulating the same seawater.

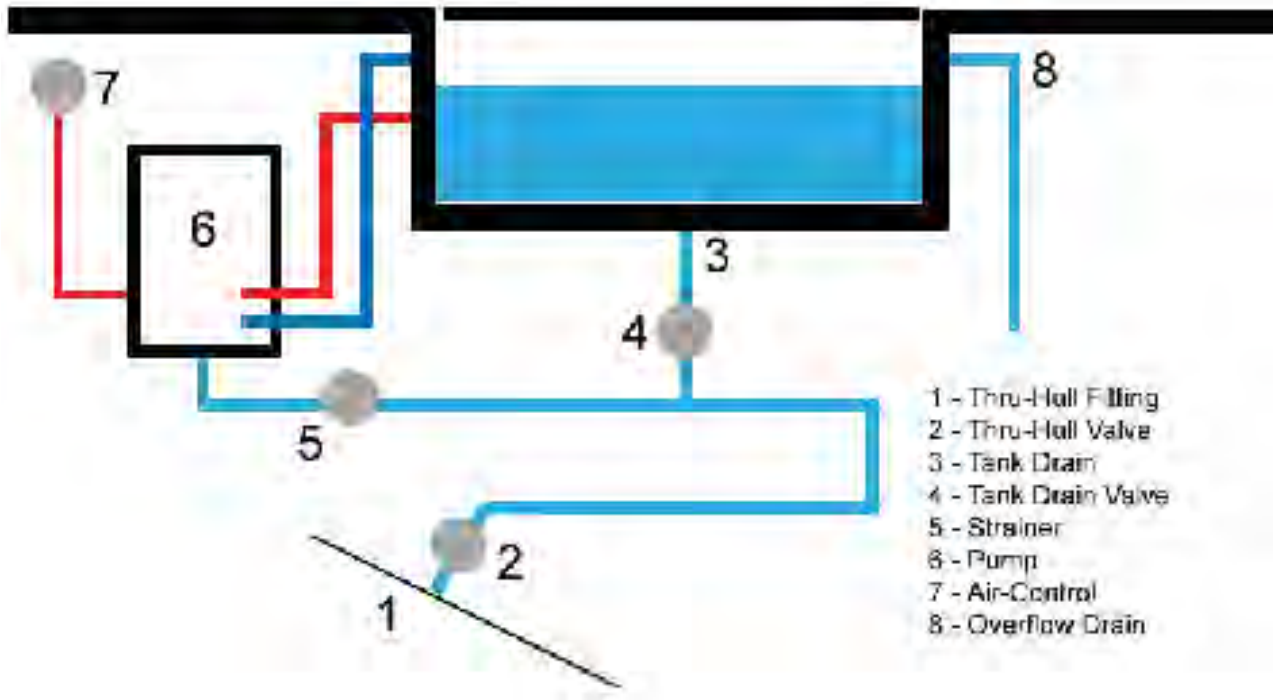
Clean Strainer Mode - In this mode both valves must be closed. The pump must also be off. With both valves closed, no seawater is going into your pump, which allows you to open the strainer and clean it.

The check valve will prevent any water from the tank from draining through the pump while cleaning the strainer.

Drain Tank Mode - to drain the tank both valves must be open. The seawater from the tank goes through the Tank Bottom Drain, then thru the thru-hull fitting.

BE CAREFUL! If the Thru-Hull Valve is open while underway, the tank will fill and items stored in the tank may float to the top, usually making the Live Well cover lift off the tank and go overboard.

Please refer to the drawing below, for the position of all parts of the Live Well System.



REMOTE CONTROLLED SPOTLIGHT (OPTIONAL)

You may have chosen as an option when you purchased your **45C**, a **Remote Controlled Spotlight**, ACR 1930-RCL100 was factory installed at the Silverton plant. The spotlight unit is permanently mounted on the foredeck at the pulpit and operates on the 12V DC electrical system. The Breaker for the Spotlight is located at the Helm Breaker Panel.

The system is controlled by a control panel on the Port side of the Helm.

The photo above shows the Spotlight Control Panel.

Refer to the ACR Owner's Manual included with your owner's packet for information concerning the operation and maintenance of the remote controlled spotlight.

SEAKEY

The SeaKey Satellite Communication System is installed on your yacht at the factory. It is comprised of the following items:

High Water Alarm Switch
SatCom Sending Unit
Display Control Unit

Your SeaKey System always has battery power to it. This is a major advantage over the VHF Radio, which may be accidentally turned off.

HIGH WATER ALARM SWITCH

Please be advised that the switch is only in the mid compartment. Other compartments could flood first and the switch would not be activated. The switch will only be activated when the normal operating bilge pumps have failed and cannot handle the incoming water flow.

SatCom Sending Unit

The SatCom Sending Unit is installed inside the console on your yacht. This unit sends out a low frequency signal to the satellite, which in turn sends the signal to the receiving location. You must know the location of the Sending Unit. If anyone is standing in front of the Sending Unit, they could block the signal from going to the satellite. Refer to the SeaKey Owners Guide for more information.

DISPLAY CONTROL PANEL

The Control Panel has many functions. Refer to the SeaKey Owners Guide to understand all the important features of the control panel.

Your SeaKey system draws its' power from the batteries in your yacht. If the batteries go dead, or if the batteries are removed from the system, the system will send a signal to the receiving station. Before removing power from your system we recommend contacting SeaKey Member Services for the proper procedures.

CLEANING AND MAINTENANCE

A periodic cleaning and maintenance schedule of the interior and exterior surface for your yacht is recommended. Not only will it maintain your yacht in pristine condition, but it will also result in a higher resale or trade-in value when you decide to purchase another Silverton yacht. A clean yacht is both pleasing to the eye and a source of pride in ownership. Cleaning and maintenance of your yacht is described in the following categories:

- Interior Cleaning/Maintenance
- Exterior Cleaning/Maintenance
- Canvas Enclosure Cleaning & Maintenance

Interior Cleaning / Maintenance

There are several different types of surfaces in the interior of your yacht and all require a different method of cleaning. The surfaces and their respective cleaning and maintenance procedures are as follows:

Fiberglass

Wash with a mild soap and water solution. Thoroughly dry with a soft cloth and apply a coat of good quality wax designed for marine use.

⚠CAUTION

DO NOT use abrasive cleaning agents on fiberglass surfaces, as they will scratch and dull the finish.

Wood

There are many wood surfaces in your yacht, such as galley cabinets, entertainment cabinets and trim. Care and cleaning of the wood surfaces is identical to the maintenance of the wood surfaces in your home. Frequently remove dust from the wood with a feather duster or similar cleaning tool. Apply a good quality furniture polish, such as *Liquid Gold*, to all wood surfaces on a regular basis to maintain their beauty and lustre.

Nautolex (Vinyl)

Gently wash with a mild soap and water solution and dry with a soft, lint-free cloth on a regular basis. DO NOT wait for the vinyl surface to appear soiled before you clean it, as stains and ground-in surface dirt may be difficult to remove.

⚠CAUTION

DO NOT use cleaning agents containing bleach, as they will remove the color tint from the vinyl surface, causing a blotching appearance and will dry the material, resulting in surface cracks.

Upholstery

The upholstery in your yacht is high quality and stain resistant. Frequently vacuum the upholstery to remove any dirt before it accumulates and becomes imbedded. Stains may be removed by using a quality household stain remover. Be certain to follow the manufacturer's directions concerning its use.

Carpeting

The carpet in your yacht is a high quality nylon pile. Normal cleaning and maintenance is accomplished by vacuuming on a frequent and regular basis (Refer to the carpet manufacturer's pamphlet included with your Owner's Packet for additional cleaning procedures, such as stain removal).

You may have chosen as an option at the time of purchase of your yacht, a "Central Vac" vacuum cleaning system. Similar to the system in your home, only a removable vacuum hose with cleaning attachments is necessary to vacuum any portion of the interior of your yacht. The "Central Vac" system in your yacht is operated on the AC electrical system with a "Ground Fault Interrupter" circuit for your protection. The vacuum motor and canister (stores the vacuumed soil) are self-contained in one unit and located in the lower portion of the dinette seat. Access to the canister is gained through a panel located on the inboard face of the dinette seat. There is one (1) vacuum hose outlet, which is located on the face of the canister access panel (Refer to the manufacturer's pamphlet included with your Owner's Packet for specific directions concerning operation of the system).

Corian

The galley and head counter tops and head sinks are manufactured of Corian, which is a superior quality, tough, scratch-resistant material. The Corian surfaces in your yacht are a Matte/Satin finish and are easily cleaned and maintained in the following manner:

✳ **Cleaning:** Dirt and stains are removed by using a soap and warm water solution. Tough stains may be removed by using an ammonia-based cleaning agent. Watermarks may be removed simply by wiping the surface with a clean, damp cloth and drying with a towel.

✳ **Disinfecting:** Occasionally wipe the surfaces with a 50/50 water and bleach solution. Rinse with warm water and dry with a towel.

✳ **Sink Cleaning and Disinfecting:** General cleaning of the Corian sinks is the same procedure as described above. For a more thorough cleaning, occasionally fill the sink with a 50/50 water and bleach solution and let soak for fifteen (15) minutes. As the solution drains, wash the bottom and sides, rinse with warm water and dry with a towel.

✳ **Cuts and Scratches:** Cuts and scratches may be removed from your Corian surfaces. Refer to the manufacturer's pamphlet included with your Owner's Packet for the proper procedure.

Exterior Cleaning / Maintenance

The exterior surfaces of your yacht consist primarily of fiberglass, stainless steel, aluminum, safety glass, acrylic plastic and anti-fouling bottom paint. As with the interior surfaces, the exterior surfaces demand frequent cleaning and maintenance. The respective procedures are as follows:

Fiberglass

Wash with a mild soap and water solution, particularly if your yacht is used in salt or brackish water. Always thoroughly wash your yacht after each use in addition to a regular, periodic washing schedule. A more frequent washing schedule may be required, depending on the environment where your yacht is normally docked/moored. A soft scrub brush may be used on the non-skid surface areas. Thoroughly dry with a soft cloth and apply a coat of good quality wax designed for marine use, such as carnauba paste wax. **DO NOT** apply wax to the non-skid surface areas, as it will render them ineffective. If your boating season is year around, it is recommended a coat of wax be applied every three (3) months. If your boating season is restricted to the summer months, it is recommended a coat of wax be applied prior to spring launch and again at the end of the season prior to winter storage.

⚠CAUTION

DO NOT use abrasive cleaning agents on fiberglass surfaces, as they will scratch and dull the finish.

Stainless Steel

The bow rail, aft deck rail, mooring cleats and other hardware on your yacht are manufactured of quality 316L grade stainless steel. Stainless steel will not rust under normal conditions, but it must be properly maintained on a regular basis. Thoroughly wash the hardware with a soap and warm water solution and rinse with fresh water. Dry with a soft cloth to remove any water stains. If discoloration or salt deposits are not removed with normal washing, a non-abrasive household cleaner or stainless steel polishing powder may be used with a soft bristle brush. Always scrub in the direction of the polishing lines imbedded in the stainless steel to avoid scratching the surface. For a superior shine, wipe the stainless steel with a light coat of kerosene, followed by a light coat of lemon oil. The kerosene enhances the lustre and protects the stainless steel and the lemon oil removes the unpleasant kerosene odor. Be careful not to spill or wipe kerosene on the fiberglass surfaces, as it will remove the coat of wax.

⚠CAUTION

DO NOT use abrasive cleaning agents, steel wool pads, or brushes as these products may scratch and damage the stainless steel finish.

Aluminum

The windshield and window frames on your yacht are manufactured of aluminum, unless you purchased, as an option, stainless steel frames. The aluminum components are cleaned and maintained in the same manner as the components manufactured of stainless steel.

⚠CAUTION

DO NOT use kerosene or lemon oil on any painted aluminum surfaces, as they will soften and remove the paint.

⚠CAUTION

DO NOT use any abrasive cleaning agents or steel wool products when cleaning aluminum. Aluminum scratches very easily and these products will scratch the surface.

Safety Glass

The windshield and windows on your yacht are manufactured of safety glass similar to the safety glass found on your automobile. The safety glass on your yacht is much heavier and thicker than the glass on your automobile and meets or exceeds all American Boat and Yacht Council (ABYC) standards. The safety glass may be cleaned with the same soap and warm water solution used for cleaning the exterior surfaces of your yacht and then dried with a soft towel. For a thorough cleaning and to remove all water stains, use a quality window cleaner, such as *Windex*, and dry with a paper towel.

⚠CAUTION

DO NOT use any abrasive cleaning agents, abrasive cleaning cloths, or pads when cleaning safety glass surfaces, as they will scratch the surface.

Acrylic Plastic

The venturi windshield, which is located on the bridge of your yacht, is manufactured of a tough acrylic plastic. Clean the acrylic plastic surfaces with a mild soap and water solution or non-ammonia based cleaner and dry with a soft cloth.

⚠CAUTION

DO NOT use any abrasive cleaning agents or abrasive cleaning cloths or pads when cleaning acrylic plastic surfaces, as they will scratch the surface.

RADAR ARCH

Your radar arch (if applicable) is constructed from aluminum to give it strength, rigidity, wire access, and hardware mounting ability. It has a very durable painting finish backed by a 3-5 year limited warranty. In order to maintain the high luster finish and the warranty of this product, please follow these instructions:

GENERAL CARE:

- Wash your radar arch with mild, non-abrasive soap and water, using a soft cloth on a regular basis. This will help maintain the shine on your radar arch by keeping the salt and atmospheric acids from dulling your finish.

- To add extra shine and durability to your radar arch we suggest you wax the finish after washing the radar arch, with a clear-coat, non-abrasive wax.

Canvas Enclosure (Optional) Cleaning / Maintenance

The canvas enclosure you purchased as an option from your Silverton dealer consists of canvas fabric, vinyl windows and zippers. An aluminum tubular frame supports the enclosure and it is secured to the bridge and deck with "snaps". Each of these components require a different cleaning and maintenance procedure and they are as follows:

Canvas Fabric

The canvas should be cleaned on a regular basis before dirt, salt, and other deposits accumulate and become imbedded in the fabric. The canvas may be cleaned, without removal from your yacht, while it is in the normal upright position. Brush off any loose dirt and then rinse with fresh water. Wash the fabric with a mild soap and lukewarm (temperature less than 100° F) water solution, rinse thoroughly with fresh water and allow to air dry.

CAUTION

DO NOT use any cleaning agents containing detergent, as they will remove the protective coating, resulting in stiffness and eventual cracking of the fabric.

CAUTION

DO NOT dry the canvas fabric by any means other than air-drying. Use of heated drying apparatus, such as a hair dryer, will result in stiffness and cracking of the material.

Vinyl Windows

The vinyl windows in your enclosure should be cleaned on a frequent basis to extend their life and maintain clarity. Rinse off any loose dirt with fresh water and then wash with a mild soap and cool water solution. After washing, rinse with fresh water and dry with a soft cloth.

CAUTION

DO NOT use any abrasive cleaning agents or brushes when cleaning your vinyl windows, as they will scratch the material, resulting in poor clarity.

CAUTION

DO NOT fold the vinyl windows after removing them from the enclosure. Roll them prior to placing them in storage. Folding the vinyl windows will cause creases and eventual cracking. If you anticipate long-term storage, place a soft cloth over the vinyl window and roll the window with the cloth in place. The cloth barrier will prevent the vinyl from sticking to itself, particularly during warm weather.

Zippers

The various sections of your canvas enclosure are secured together with zippers to permit easy removal of any or all sections without the cumbersome weight or size of the entire unit. The zippers are manufactured of high impact plastic coated stainless steel and have large teeth for smooth operation. They should be washed while you are washing the canvas and then periodically lubricated by rubbing a candle on the zipper in the closed position and then opening and closing several times to distribute the wax lubricant.

Aluminum Tubular Frame

The upper portion of your canvas enclosure is supported by a tubular aluminum frame. The frame is secured by stainless steel pins placed in brackets that are permanently mounted on the fiberglass surface at various locations on the bridge and deck. The aluminum frame is cleaned and maintained in the same manner as the other aluminum components on your yacht as previously described.

⚠CAUTION

DO NOT use kerosene or lemon oil on the aluminum frame, as it will stain the canvas fabric. A small amount of lubricant, such as *CRC*, may be used to lubricate the stainless steel pins.

Two-Piece "Snaps"

The lower portion of your canvas enclosure is secured to the bridge and deck by two-piece "snaps", which are manufactured of chrome-plated brass. The female portion is permanently secured in the lower seam of the canvas and the male portion is permanently secured into the fiberglass surface of the bridge and deck. Frequently examine the snaps for the presence of dirt and remove with a soap and water solution and rinse with fresh water. Periodically lubricate the female portion with a small amount of lubricant, such as *Vaseline Petroleum Jelly*.

Winterization and Storage

In most cases, the reason for storage of your yacht is winter lay-up. The information contained in this section is a general guide. Your Silverton Dealer or a competent boat yard should prepare your yacht for winter storage.

If you are removing your yacht from the water for another reason, use the information in this section as a guideline. Following the procedures in this section will help extend the life of your yacht and its equipment and simplifies recommissioning in the spring.

Indoor storage is beneficial if you are storing your yacht in a climate that produces ice and snow. The storage building should be adequately ventilated and not tightly closed. Ventilation, both around and throughout the yacht, is very important to help prevent the growth of mold and mildew.

If you use outdoor storage facilities, cover your yacht with a cover having provisions for ventilation to keep the yacht from "sweating". Building a frame over the boat to support the cover will allow the passage of air around the yacht. The frame should be a few inches wider than the yacht so the cover will extend beyond the rubrail. The frame should also support the center of the cover and cause it to rise in a slight "teepee" position to allow for water run-off.

***NOTE:** DO NOT seal the cabin tightly to allow proper ventilation throughout.*

Before preparing your yacht for winter storage, thoroughly check the condition of the yacht and its systems and equipment. Note any repairs that may be needed. The need for additional repairs may become apparent during the winterization process. Make arrangements with your Silverton Dealer to have the repairs completed.

Cleaning and Preparation for Storage

❑ Thoroughly clean the hull immediately after removing the yacht from the water. Pressure wash the bottom, if possible, to remove all marine growth. If pressure washing is not possible, thoroughly scrub the hull bottom. Marine growth is much easier to remove while it is still wet.

❑ Thoroughly clean the remainder of the hull and the deck. Silverton recommends a coat of wax be applied to the hull above the waterline and to the deck for added winter protection.

❑ Apply rust inhibitor to all metal parts.

❑ Thoroughly clean the inside of all hull openings, thru-hull fittings and filtration screens (See **Mechanical Layout** in the Schematics Section of this Owner's Manual, which illustrates the location of the seawater intake valves). Inspect the hull and underwater gear for signs of wear, deterioration or damage and repair, if possible, before covering and storing your yacht.

❑ Fill the fuel tanks to prevent condensation and add a good quality fuel preservative (Refer to the fuel preservative manufacturer's recommendation for the proper ratio).

***IMPORTANT: DO NOT** overfill the fuel tanks so fuel flows from the vent(s). Allow sufficient room in the tanks for fuel to expand.*

❑ Prepare the engines for storage. Refer to the engine manual for winterization and storage procedures.

❑ Prepare the generator and air conditioners (if so equipped) for storage. Refer to the generator manual and the air conditioner manual, included with your Owner's Packet, for the proper winterization and storage procedures.

Draining Your Yacht

Your yacht has drain plugs for draining water from the bilge (See **Mechanical Layout** in the Schematics Section of this Owner's Manual, which illustrates the location of the garboard drain plugs). Some compartments in the bilge may not drain completely due to the position of the yacht. Pump these compartments out with a portable pump and then use a sponge to remove all remaining water.

The procedure for draining and winterizing the fresh water system is as follows:

❑ Drain the fresh water supply tank by opening the hot and cold faucets in the galley for ten (10) minute intervals until the tank is empty.

❑ Open all faucets in the galley, both showers, both head sinks, and the exterior cockpit shower.

❑ Remove the fresh water filter bowl and strainer. Clean, dry and replace strainer bowl.

❑ Drain the water heater, remove the cold water intake hose and hot water output hose, and hook them together.

❑ Remove the inlet hose from the fresh water tank (See **Mechanical Layout** in the Schematics Section of this Owner's Manual, which illustrates the location of the fresh water tank) and insert it into a container of non-toxic, fresh water anti-freeze. Turn the fresh water pump ON and starting at the farthest faucet from the pump, turn ON all faucets until the anti-freeze flows out.

❑ Turn OFF the fresh water pump and reconnect the inlet hose to the fresh water tank.

❑ Pour non-toxic anti-freeze into all sink and shower drains until the liquid is discharged overboard.

Alternate procedure for draining and winterizing the fresh water system is as follows:

❑ Drain all water from the fresh water tank.

❑ Drain all water from the water heater.

❑ Remove hose from the input side of the fresh water pump and allow to completely drain.

❑ Remove hose from the output side of the fresh water pump and turn ON all faucets.

❑ Blow compressed air (15-20 lbs. psi) through the output hose until all water stops flowing from the faucets.

❑ Leave water lines at the fresh water pump disconnected to allow any trapped water vapor to drain and evaporate.

The procedure for draining and winterizing the marine sanitation system is as follows:

❑ Drain all water lines into the waste holding tank. Continue to flush fresh water into the waste holding tank and pump out into an approved waste facility until thoroughly clean.

❑ Add non-toxic, freshwater anti-freeze to the waste holding tank by flushing through the toilet.

❑ Run the macerator pump to allow anti-freeze to flow through the pump and the input/output lines.

❑ Remove the drain plug from the macerator seacock while the valve is closed and allow the line to drain. Replace the drain plug.

❑ Thoroughly clean the toilet and leave the bowl exposed to prevent mildew.

❑ Remove all seacock and strainer drain plugs to prevent from freezing. Close all seacocks.

Seacocks

- Engines
- Head System (Intake)
- Head System (Macerator pump-out)
- Generator
- Air Conditioners (if equipped)

Strainers

- Engines
- Fresh Water System
- Generator
- Air Conditioners (if equipped)

Battery Storage

The procedure for battery winterization and storage is as follows:

❏ Turn battery switch to OFF.

❏ Remove engine batteries and generator battery (if so equipped) from their respective compartments (See **Mechanical Layout** in the Schematics Section of this Owner's Manual, which illustrates the location of the engine and generator batteries).

❏ Place batteries on a wooden pallet or bench and store in an area where temperatures remain above freezing.
IMPORTANT: DO NOT store batteries on a concrete surface, such as a garage floor, as they will tend to discharge.

❏ Keep batteries fully charged during storage. Periodic charging (once a month) with a battery charger set on a low amperage charge is recommended. Check the battery electrolyte levels regularly. Add electrolyte, if needed.

⚠CAUTION

Refer to the battery literature included with your Owner's Packet for additional information concerning the care and storage of your batteries.

Interior Preparation

The procedure for preparing the interior of your yacht for winter storage is as follows:

❏ Remove all items that will hold moisture (towels, PFD's, blankets, clothing, canvas, etc.) from the interior of the yacht to prevent mold and mildew formation.

❏ Remove all electronic equipment and items of value that are detachable.

❏ Remove all garbage and trash.

❏ Thoroughly clean the interior of your yacht. Clean all cabinets, drawers and cupboards. Allow the cabin area to air dry for at least one day, if possible.

❏ Stand or prop up all mattresses and cushions that are to remain on board during storage to allow air circulation around them.

❏ Place *Mildew Pacs* in various locations within the interior of your yacht to help prevent mold and mildew formation during storage (Refer to the manufacturer's recommendation for the quantity and location required).

Lifting Your Yacht

The following are guidelines that will help prevent damage to your yacht as it is being lifted:

✷ Never lift the yacht with a greater than normal accumulation of water in the bilge. All tanks containing fresh water should be empty.

✷ Place lifting slings where indicated by the sling tab labels on the gunwales (See **Thru-hull Locations Layout-Port and Starboard** in the Schematics Section of this Owner's Manual, which illustrates the location of the sling tab locations). Avoid placing slings where they may lift the propeller shaft or other underwater fittings. Padding, placed under the slings at the chine corners, will help to keep pressure to a minimum at this location.

✷ Disconnect the propeller shafts at the transmissions to prevent damage to the transmissions and shafts.

✷ Use wide, flat, lifting slings made of belting and spreader bars long enough to keep pressure off of the gunwales.

⚠CAUTION

DO NOT use slings made of cable. Pressure caused by the slings on the gunwales can cause severe gelcoat crazing or more serious hull damage. The spreader bar at each lifting sling should be at least as long as the distance across the widest point the sling surrounds.

✷ If a marine railway or platform hoist is being used, locate and adjust the blocking to distribute the weight over several areas. The weight borne by the keel must not be so great as to cause crushing or distortion of the member.

✷ When lifting the yacht, keep the bow higher than the stern so the engine and generator (if so equipped) exhaust lines can drain. This will prevent water from flowing forward through the manifold and into the engine itself, where it may become trapped.

⚠CAUTION

Always keep the bow higher than the stern every time the yacht is lifted. DO NOT lift the stern higher than the bow at any time as this may cause water to enter the engines. Engine failure is possible if water enters the engine cylinders. The water can cause "hydrostatic lock" and bend the piston rods. "Hydrostatic lock" is a situation where the piston cannot travel to its full upward position due to the presence of a liquid above the piston and extreme pressure is forced downward as the piston moves upward. Even a small quantity of water can cause rust or other internal engine damage.

NOTE: *Silverton recommends an optional storage cradle with the purchase of your yacht. The cradle is factory made to conform to the bottom of your yacht for safe storage and minimizes the risk of hull distortion.*

OPERATING YOUR YACHT

Most people who purchase a Silverton yacht have boat handling knowledge and experience with other types of vessels. This section of the Owner's Manual provides basic information concerning the safe operation of your yacht and is a review of the information contained in each of the "Systems Sections". Be certain to read and have a thorough understanding of all systems described in this Owner's Manual BEFORE you operate your yacht. Even if you are an experienced yachtsman, you can benefit from reviewing the information contained in this section.

The first cruise on your new Silverton yacht should be a time for you to become acquainted with the vessel. Before you depart on your first cruise, you should be able to answer **YES** to the following questions:

✔ Has your Silverton Dealer completed the "Pre-Delivery Service Inspection"?

✔ Have you and your Silverton Dealer signed the "Pre-Delivery Service Record"?

✔ Have you completed and mailed all warranty registration cards?

✔ Have your read and do you have a complete understanding of this Owner's Manual and the O.E.M. Manuals included with your owner's packet?

✔ Does your yacht's safety equipment comply with all United States Coast Guard and local regulations?

✔ Is your safety equipment in operable condition and accessible, if needed?

✔ Has your Silverton Dealer reviewed the operation of your yacht and its systems with you?

✔ Has your Silverton Dealer answered all of your questions concerning the operation of your yacht and all of its systems?

If you have completed the above preliminary steps, you are ready to take your first cruise. Before you depart, give some thought to the cruise itself. Choose a calm day, if possible, and take only those people who will be members of your regular crew. Leave guests on shore, so that you are able to concentrate on learning as much as possible about your new Silverton yacht without unnecessary distractions.

Engine Startup Preparation

Make sure that you have read the Fuel Safety Checklist For Safe Boarding prior to your initial or first seasonal engine startup, and then follow the below listed procedures:

✔ Be certain all electrical circuit breaker switches are turned OFF.

✔ Raise the engine compartment access hatch and use your sense of smell to detect any fuel fumes.

If **ANY** fuel fumes are detected:

✔ Evacuate your yacht **IMMEDIATELY**.

✔ Notify the Dockmaster.

✔ Open all hatches, doors and windows to provide natural ventilation.

✔ Have a qualified marine technician exam-

ine your yacht immediately to determine the source of the fuel fumes.

✔ If a leak is detected, have it repaired as soon as possible by a competent technician.

✔ If you do not detect any fuel fumes, open all hatches, doors and windows to ventilate your yacht.

✔ Visually examine the engines and generator (if so equipped) for any oil leaks. If leaks are noted, have them repaired by a competent technician.

✔ Examine the bilge area for water accumulation. Remove excess water and locate the source of the water. Remember, a small quantity of water in your bilge is normal.

Turn ON the following switches:

✔ Both battery switches.

✔ DC Electrical Panel main breaker switch.

✔ Helm electronics breaker switch.

✔ Helm accessory breaker switch.

✔ Visually examine the fire extinguisher system in the engine compartment to be certain it has not been discharged.

✔ Check the engine oil level. Refer to the Engine Manual for specific instructions concerning the proper oil level and filling procedure.

✔ Check the transmission fluid level. If the level is low, add fluid, but **DO NOT** overfill. Be certain the fluid level is below the full mark on the dipstick when the transmission is cold. The fluid will expand as it warms and will overflow if the level is too high. Refer to the Transmission Owners Manual.

✔ Check the generator (if so equipped) oil level. Refer to the Generator Manual for specific instructions concerning the proper oil level and filling procedure.

✔ If your yacht is equipped with fresh water cooled engines, remove the pressure cap from the heat exchangers and check that the coolant is filled to the neck of the filler tube. If coolant is low, refer to the Engine Manual for proper filling instructions.

✔ If your yacht is equipped with diesel engines, refer to the Engine Manual for the proper procedure for checking the coolant level and the proper antifreeze/water ratio.

✔ Open both raw water intake valves. The valves are in the open position when the handle is parallel to the valve body.

✔ Remove raw water strainer cap and check for debris. Remove any debris noted.

✔ If your yacht is equipped with a generator, be certain there is no debris in the water strainer. Remove any debris noted.

✔ Examine the propeller shaft stuffing boxes for excessive water leakage. One drop of water every sixty (60) seconds is normal.

✔ Open the fuel shutoff valves for the engines and generator. The valve is in the open position when the handle is parallel to the valve body.

✔ Check the oil level in the trim tab reservoir and be certain the level is between the FULL and ADD marks.

Engine Startup

IMPORTANT: *Always be very careful when starting your engines. Use common sense and good judgement. Turn OFF the engine(s) immediately if you observe any unsafe operating condition.*

The below listed procedures should be followed when starting your engines:

✔ Operate the bilge blower motors for five (5) minutes before starting your engines.

✔ Place shift control levers in the neutral position.

✔ Place throttle control levers in the "down" position.

✔ Turn ignition switch to ON, but not to START. Be certain the engine oil pressure alarm sounds and the Automatic Fire Extinguisher System indicator light is ON.

✔ Turn ignition switch to START and hold until the engine starts. Release the ignition switch immediately after the engine starts. If the starter motor does not operate when you turn the ignition switch to START, the neutral safety switch may be out of adjustment. Carefully move the shift control lever up and down slowly until the starter motor operates. Have a competent technician adjust the neutral safety switch as soon as possible.

⚠ CAUTION

If the engine fails to start within thirty (30) seconds, release the ignition switch. Allow the starter motor to cool for at least sixty (60) seconds and then try again to start the engine. Prolonged starting attempts may result in starter motor overheating and damage.

⚠ CAUTION

Failure to release the ignition switch from the START position after the engine starts may result in serious damage to the starter motor and/or engine flywheel.

✔ If one of the batteries is not sufficiently charged to start the engine, start the engine with the fully charged battery first. Start the other engine using the "Parallel Start" switch, which draws power from both batteries. Release the parallel start switch immediately after the engine starts.

⚠ CAUTION

DO NOT continue to depress the "Parallel Start Switch" after the engine has started. Damage to the alternator(s) may result.

✔ Be certain the oil pressure is between 30 and 50 psi (gasoline engines) or 35 and 70 psi (diesel engines). If the oil pressure is low, turn OFF the respective engine immediately.

✔ Allow the engines to operate at the recommended RPM's as specified in the Engine

Manual until they reach normal operating temperature. Normal operating temperature for gasoline engines equipped with a fresh water cooling system is 170° F and if equipped with a raw water cooling system, 140° F. Normal operating temperature for diesel engines is between 170° F and 190° F.

✔ Check for water discharging from the exhaust outlets. The presence of water indicates water circulation in the exhaust cooling system. Water should discharge through the exhaust outlets immediately after the engine starts.

✔ After engines reach their normal operating temperature, increase the RPM's to 2000. Be certain the voltmeters read between 13 and 14.5 volts.

✔ Visually inspect the exhaust system for leaks. If any leaks are detected, immediately turn OFF the respective engine, and contact a competent technician for repair.

✔ Check the transmission fluid level after the engine is warm. The transmission should be in neutral and the engines operating at idle speed. Transmission fluid should be at or slightly below the FULL mark on the dipstick. Add transmission fluid if the level is low, but **DO NOT** overfill. Refer to the Transmission Owners Manual.

Shakedown Cruise

Silverton recommends a shakedown cruise after the initial or seasonal startup. This will test the engines and various systems under normal operating conditions. Note any condition that does not meet normal operating performance standards. Repair any condition noted as soon as possible.

IMPORTANT: Before fueling your yacht, be certain you have read and have a thorough understanding of the information contained in the **"Fuel System" Section** of this Owner's Manual. It contains valuable information and cautions for your safety and the safety of your passengers.

Check the following for proper operation during your shakedown cruise:

❑ **Air Conditioner(s):** If your yacht is equipped with an air conditioning system, be certain each air conditioner is operating properly.

❑ **Engines:** Be certain both engines are capable of obtaining their maximum RPM range. Check for fuel, oil and water leaks. Check the exhaust system for leaks.

❑ **Generator:** If your yacht is equipped with a generator, be certain it starts and operates properly. Check for oil, water and exhaust system leaks.

❑ **Instruments:** Be certain that all instruments operate properly and provide normal readings.

❑ **Steering:** Check that the steering system is responsive.

❑ **Shift and Throttle Controls:** Be certain

the shift and throttle controls operate properly and are in the proper adjustment.

❑ **Transmissions:** Check that both transmissions shift smoothly and positively.

❑ **Trim Tabs:** Check that the trim tabs operate properly and are responsive to your use of the controls.

After completing your shakedown cruise, recheck all fluid levels. Check all drive belts for the proper tension. Generally examine all components to be certain they did not loosen during the cruise. Make all adjustments as necessary.

WARNING

DO NOT remove the cooling system filler cap when the engine is hot. Allow the engine to cool and then remove the pressure cap slowly, allowing the pressure to vent. Hot coolant, under pressure, may discharge violently and result in serious personal injury and burns.

Getting Underway

After your engines have warmed to normal operating temperature, you are ready to depart your dock/mooring. Check the wind, tide and current to determine the best way to safely maneuver your yacht away from the dock. Cast off all mooring lines.

Shift the transmissions into forward or reverse, depending on which way you want to depart your dock. Your engines should be at idle speed while departing your dock and power should only be used if necessary for control of your yacht.

Once your yacht has departed the dock and is in open water, accelerate to cruising speed (RPM's) as recommended in the Engine Manual.

Be certain to follow all safety precautions as mentioned in the "Boating Safety" Section of this Owner's Manual while operating your yacht.

Daily Engine Shutdown

After you have completed your cruise and secured your yacht to the dock, shut down the engines in the following manner:

❑ Reduce engine speed to idle.

❑ Place transmission controls in neutral.

❑ Allow engines to operate at idle speed for several minutes.

❑ Turn ignition switches to the OFF position to shut down the engines.

❑ Operate the bilge blower motors for several minutes to circulate fresh air through the engine compartment.

❑ Turn OFF battery switches.

SIXTEEN WAYS TO REDUCE FUEL CONSUMPTION

1. Keep the bottom of your yacht clean. A fouled bottom can increase drag up to 10% or more. A 10% increase in drag is equivalent to a 10% increase in fuel consumption.

2. **DO NOT** idle your engines needlessly. Depart your dock/mooring after warm-up.

3. Watch your trim. A well balanced yacht gets on plane faster, handles better, and runs with less surface contact.

4. Navigate better. By plotting courses to your destination instead of just waiting for them to appear somewhere in front of you, you can eliminate miles off of your distance and gallons off of your fuel consumption.

5. Know your fuel consumption. By plotting a fuel consumption/RPM curve for your yacht, you will probably find that reducing your engines' RPM's 10% can often reduce your fuel consumption 30% with only a slight reduction in speed.

6. Remove extra weight. If you are not going to use it, do not carry it aboard. Any extra weight requires more fuel to move your yacht. Do not just stop at the lockers. Remember that water weighs 64 pounds per cubic foot, so keep the bilge areas dry.

7. Improve your yacht handling ability. **DO NOT** let the yacht labor along below a planing attitude. This is the absolute peak of fuel waste.

8. Purchase good quality fuel. Be certain you are using the correct fuel for your engine.

9. Load your yacht correctly. **DO NOT** put all of the heavy gear, such as anchors, chain, canned goods and spare parts exclusively in either the bow or stern. Heavy items should be placed amidships where they will not affect the trim and plane of the yacht.

10. Check the drive train. An inboard engine that is improperly aligned can cost you money. Check to see if the transmission has sufficient fluid (too little increases friction), if the stuffing box is too tight (increases the load on the engine) or if a bent rudder or propeller are robbing you of economy. Be certain the rudders are properly aligned.

11. Check the engine cylinder compression. Low compression indicates worn piston rings or valves which will consume oil and reduce engine power.

12. Check the engine idle speed. For the times it is necessary to operate at idle speed, be certain the engine is not running too fast and using unnecessary fuel.

13. Check the engine operating temperature. Compare your normal operating temperature with the range specified in the Engine Manual and in this Owner's Manual. An overheating engine will cause excessive wear and will be less efficient.

14. Keep the engine and transmission oil clean. Dirty oil causes varnish to form on the moving surfaces of the engine/transmission. Varnish can cut into the piston ring seal and contribute to fuel waste. Varnish will cause the transmission to "slip".

15. Check for engine air leaks. A leak in the

engine intake manifold disturbs the air/fuel mixture and reduces your performance. A leak in the exhaust manifold is DANGEROUS. Carbon Monoxide Gas (CO) could enter the cabin area of your yacht.

DANGER

Carbon Monoxide Gas (CO) is colorless, odorless, and tasteless. It is highly poisonous, endangering lives even at very low levels of concentration. Mild exposure causes headaches and fatigue, often resembling "flu-like" symptoms. Medium exposure causes severe headaches, drowsiness, nausea, and rapid heart rate. Extreme exposure results in unconsciousness, convulsions, cardiorespiratory failure, and death. If Carbon Monoxide Gas (CO) is detected in your yacht, immediately contact a qualified technician to locate and repair the source of the poisonous gas. DO NOT enter your yacht until repairs have been made and the Carbon Monoxide Gas (CO) is lowered to an acceptable level.

16. Keep hot water use to a minimum. The less hot water you use, the less time your generator will have to run, resulting in lower fuel consumption.

GLOSSARY

ABAFT: Toward the rear of the yacht.

ABEAM: At right angles to the yacht's keel.

ABOARD: On the yacht.

ABREAST: Side by side.

ADRIFT: Loose. Not on a mooring or tow line.

AFT: Near or at the stern.

AGROUND: Stuck fast on the bottom.

AHEAD: In a forward motion.

ALOFT: Above the deck, usually in the rigging.

AMIDSHIP: (1) The area midway between the bow and the stern of the yacht. (2) The area between the Port and Starboard side of the yacht.

AMPERE: The standard unit to measure the strength of electrical current.

ANCHOR: A shaped metal device that digs into the ground to hold the boat in place.

ANTIFOULING: Paint used on the bottom of the vessel to prevent unwanted adhesions.

ASTERN: (1) In the rear area of the yacht. (2) Direction of travel when the yacht moves in reverse.

ATHWARTSHIP: Movement from Port to Starboard or Starboard to Port.

BEAM: (1) The widest distance across the yacht. (2) A transverse structural member that stiffens and supports a portion of the deck.

BERTH: A seaman's name for a bed aboard a boat.

BILGE: The interior area of the hull below the waterline.

BILGE PUMP: A pump used to remove water that has drained into the yacht's bilge.

BOW: The forward end of the yacht.

BOW LINE: A docking line leading from the yacht's bow.

BRIDGE: Control area of a boat.

BULKHEADS: The interior walls of the yacht.

CABIN: (1) Structure above the main deck. (2) Area below the deck.

CAST OFF: Let go.

CHINE: The point where the bottom and side of the hull meet.

CHOCK: A fitting or hole through a yacht's deck through which a mooring or anchor line is routed.

CIRCUIT BREAKER: A device used to interrupt an electrical current when the current flow exceeds a predetermined level.

CLEAT: A fitting on a yacht's deck on which a mooring or anchor line is tied.

COAMING: Area around the cockpit that prevents water from coming on the boat.

COCKPIT: An exposed aft deck area substantially lower than the forward adjacent deck.

COME-ABOUT: A change in direction according to the wind.

COMPANIONWAY: The steps or ladder leading from the deck to the cabin of the yacht.

COMPARTMENTS: Rooms or spaces divided by bulkheads.

COMPASS: (1) Navigation device. (2) Drawing tool used to draw arcs or circles.

CRADLE: A wooden framework used to support a yacht when it is on land.

CURRENT: The movement of water.

DAVIT: A device used to hold up a small boat or an anchor.

DEAD AHEAD, DEAD ASTERN: Directly in front of the yacht.

DINGHY: A small open boat used for ship to shore transportation.

DISPLACEMENT: The weight of the water displaced by the yacht's hull.

DRAFT: (1) The depth of a yacht from the actual waterline to the bottom of the lowest part, such as the propeller tip or rudder. (2) The depth of water necessary to float a yacht.

DRIFT: Causes the vessel to move with the current of the water.

EVEN KEEL: To be floating evenly without listing to either side.

EXHAUST SYSTEM: The means by which the hot engine or generator gases are removed from the engine and released into the atmosphere.

FATHOM: A nautical linear measurement equal to six (6) feet.

FENDER: A rubber or plastic device used to absorb impact between vessels or a vessel and a dock.

FLARE: (1) Outward curve of the hull as it rises up the side from the waterline. (2) A pyrotechnic device used for emergency signaling.

FLOTSAM: Refuse that floats when discharged overboard. See "Jetsam".

FLYING BRIDGE: The uppermost steering station from which a yacht is controlled.

FORE-AND-AFT: A line, or anything else, that runs parallel to the longitudinal center of the yacht.

FOREDECK: The forward most part of the main deck of a vessel.

FORWARD: Toward the bow of the yacht.

FREEBOARD: The vertical distance from the waterline to the sheerline (rubrail).

GALLEY: The kitchen area of the yacht.

GASKET: A strip of sealing material used to make joints fluid tight.

GARBOARD: (1) The strake (plank) next to the keel. (2) The continuous band of planking on a ship's hull next to its keel.

GARBOARD DRAIN: A drain located at the keel leading out from the bilge area.

GELCOAT: The thin outer layer of pigmented plastic-like substance used to cover exposed fiberglass components.

GIVE-WAY VESSEL: The boat that does not have the right of way when two boats are crossing paths.

GLAND: The moveable part of the stuffing box which compresses the packing when tightened (also referred to as the "packing gland").

GRAB RAIL: Grip on the top of a cabin or on the sides of a companion ladder.

GROUND: (Electrical) The electrical potential of the earth's surface, which is zero.

GUNWALE: The horizontal surface of the deck immediately above where it meets the hull.

HATCHES: Covers the openings in a deck or floor.

HATCHWAY: Access port through the deck.

HARDTOP: A permanent cover over the cabin or cockpit.

HAWSER: A heavy rope used for mooring or towing.

HEAD: A toilet or bathroom.

HEADING: The direction that a vessel is traveling with reference to true, magnetic, or compass north.

HEADWAY: The forward motion of a vessel through the water.

HEEL: To tip or tilt to one side by means of an external force.

HELM: Steering gear for a boat.

HELMSMAN: The person steering the yacht.

HULL: The main body of the yacht.

INBOARD: (1) From either the Port or Starboard side to the centerline of the yacht. (2) The dock side of a moored yacht.

JETSAM: Refuse that sinks when discharged overboard. See "Flotsam".

KEEL: The centerline of a yacht running fore and aft at the lowest point of the hull.

KNOT: (1) A Maritime unit of speed equal to 1.15 miles per hour. (2) A term for hitches and bends in a line of rope.

LAZARETTE: Storage compartments below the deck at the stern of the yacht.

LIST: A vessel that inclines to Port or Starboard by its own means.

LOCKER: A seaman's term for a closet.

LONGITUDINAL: Lengthwise.

MIDSHIPS: Area in the center of a boat.

MOORING: An arrangement for securing a yacht to a mooring buoy or pier.

NAUTICAL MILE: An international standard for a mile that measures 6076.12 ft.

NAVIGATIONAL LIGHTS: A set of red, green and white lights which indicate the presence of a vessel and must be illuminated between the hours of dusk and dawn and during times of restricted visibility (fog, rain, snow, etc.).

OVERHEAD: The ceiling or roof of a yacht.

OUTBOARD: (1) From the centerline of a yacht to the Port and Starboard sides. (2) The seaward side of a moored yacht.

PASSAGEWAY: A corridor or hallway aboard ship.

PERSONAL FLOTATION DEVICE (PFD): Life preserver or life vest.

PIER: A loading platform that extends at an angle from the shore.

PILING: Support or protection for wharfs, piers, etc.

PITCH: (1) The vertical motion of a yacht in a seaway about the athwartship axis. (2) The axial advance in inches of a propeller during one complete revolution.

PLANING HULL: At slow speeds, a planing hull will displace water in the same manner as a displacement hull. As speed increases, the hull provides a lifting effect up onto the surface of the water.

PORT: (1) Looking forward, the left side of a yacht from bow to stern. (2) A harbor.

PORT BEAM: The left center of a yacht.

PORT BOW: Looking forward, the front, left side of the bow.

PORT QUARTER: Looking forward, the left rear section of a yacht.

PULPIT: Rails at the bow of a boat.

QUARTER: The sides of a yacht aft of amidships.

QUARTERING SEA: Sea (waves) coming from a yacht's quarter.

RADAR: An electronic system that uses high frequency radio waves.

RADIO BEARING: The direction that is determined by the radio.

RAIL: The bars that are found at the edge of a boat to prevent passengers from falling overboard.

RIGGING: Equipment used to support and control the spars and sails.

RODE: The anchor line or chain.

RUNNING LIGHTS: Refer to "Navigational Lights".

RUBRAIL, STRAKE, OR GUARD: A protective strip located along the hull.

RUDDER: A vertical plate used to steer the yacht.

SALON: The main social cabin of a yacht.

SCOPE: A ratio used to measure the distance from the bow of the boat to the bottom of the water; according to how much of the anchor was dropped.

SCREW: A propeller.

SCUPPER: A drain from the edge of the deck or cockpit that discharges overboard.

SEACOCK: A positive action shut-off valve connected directly to the hull seawater intake valve.

SHAFT: The long round member that connects the transmission to the propeller.

SHAFT LOG: A fitting at the hull bottom where the propeller shaft penetrates the hull. The shaft log permits rotation of the shaft while simultaneously preventing water from entering the hull.

SHEER: The top of the hull from bow to stern. The point in which the hull meets the deck.

SHEER STRAKE: The upper edge of the hull immediately below the deck.

SHEERLINE: (1) The curve of the boat when being viewed from the side. (2) A turn off course due to poor helmsmanship or trouble steering.

SOLE: Term used to refer to the cockpit floor or floor of the cabin.

SPRING LINE: A pivot line used in docking or to prevent the yacht from moving forward or astern while made fast to a dock.

STANCHION: The metal posts that help hold up the rails on a boat.

STARBOARD: Looking forward, the right side of a yacht from bow to stern.

STARBOARD BOW: Looking forward, the front, right side of the bow.

STARBOARD QUARTER: Looking forward, the right rear section of a yacht.

STATEROOM: A bedroom for guest or the captain.

STEM: The leading edge of a yacht's hull.

STERN: The rear of a yacht.

STRINGER: A fore and aft continuous member located in the bottom of the hull used to provide longitudinal strength.

STRUT: A propeller shaft support that is below the hull. The main strut is a large strut that is mounted immediately forward of the propeller. An intermediate strut is smaller than the main strut and is mounted between the main strut and the shaft log.

SUMP: A pit or well into which water is drained.

SUPERSTRUCTURE: A flying bridge or other structure that extends above the deck.

SWELL: Long, large wave that does not break.

SWIM PLATFORM: Low platform, used for boarding, found at the back of the boat.

TOPSIDE: To go to the uppermost deck.

TRANSOM: The stern cross section of a yacht.

UNDERWAY: A vessel that is not moored, docked, at anchor or aground.

V-BERTH: Small galley consisting of a folding table, tabletop stove, and a basin.

V-BOTTOM: A hull with the bottom section that is in the shape of a "V".

V-DRIVE: A drive system that has the output of the engine facing forward and is coupled to a transmission, which then changes the output aft.

VESSEL: A boat, ship, yacht, or another craft used to travel on water.

WAKE: The movement of waves caused by the boat's hull.

WATERLINE: The line of water on the hull when the boat is afloat and at rest.

WEATHER DECK: A deck with no overhead protection.

WHARF: A landing place or pier where ships may tie up and load or unload

WINCH: A mechanism used to increase the pull on sheet lines.

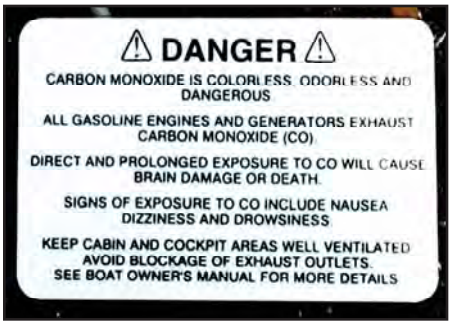
WINDLASS: A device used to raise and lower an anchor.

YAW: To go off course.

YACHT: A vessel used for pleasure instead of work.

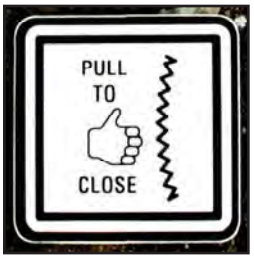
Warning Labels

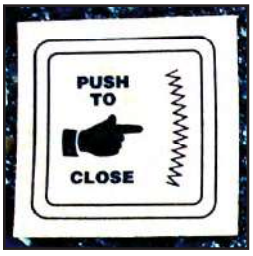
The following Warning Labels appear at various locations on your yacht and are self-explanatory. Be certain to familiarize yourself and your passengers with these Warning Labels and their contents.



Identification Labels

The following labels identify the location or operating procedure of certain items on your yacht that are designed to assist you and increase your yachting pleasure.





MAINTENANCE LOG

DATE	MAINTENANCE PERFORMED	HOURMETER

MAINTENANCE LOG

DATE	MAINTENANCE PERFORMED	HOURMETER

MAINTENANCE SCHEDULE

GASOLINE ENGINE MAINTENANCE SCHEDULE					
ITEM	DAILY	25 Hr.	50 Hr.	100 Hr.	YEARLY
Check oil levels	■	■	■	■	■
Check fuel system for leaks	■	■	■	■	■
Check cooling system for leaks	■	■	■	■	■
Check exhaust system for leaks	■	■	■	■	■
Check for loose or damaged parts	■	■	■	■	■
Change engine oil		■		■	■
Replace oil filter		■		■	■
Clean flame arrestor		■		■	■
Check electrical connections		■	■	■	■
Check belt drive tension		■		■	■
Tighten engine mounts		■		■	■
Check engine alignment & tighten bolt				■	■
Check condition of zinc anodes				■	■
Check fuel canister for corrosion				■	
Check condition of spark plugs-NOTE 1					■

DIESEL ENGINE MAINTENANCE SCHEDULE					
ITEM	DAILY	75 Hr.	250 Hr.	YEARLY	2 YRS.
Check exhaust system for leaks	■	■	■	■	■
Check for loose or damaged parts	■	■	■	■	■
Check fuel system lines for leaks	■	■	■	■	■
Drain water and sediment from primary fuel filter		■	■	■	■
Tighten engine mounts		■		■	■
Check engine alignment & tighten bolt				■	■
Clean or replace air cleaner elements-NOTE 2			■		
Check oil levels	■	■	■	■	■
Check oil and filters-NOTE 3			■		
Check cooling system for leaks	■	■	■	■	■
Check zinc anodes		■			
Clean seawater strainer and inspect and lubricate impeller-NOTE 4					■

TRANSMISSION MAINTENANCE SCHEDULE					
ITEM	DAILY	25 Hr.	50 Hr.	100 Hr.	YEARLY
Check Transmission fluid level	■	■	■	■	■
Change Transmission fluid					■

PROPELLER MAINTENANCE SCHEDULE					
ITEM	DAILY	25 Hr.	50 Hr.	100 Hr.	YEARLY
Check propeller for dents or gouges-NOTE 5					■

MISCELLANEOUS MAINTENANCE SCHEDULE					
ITEM	DAILY	25 Hr.	50 Hr.	100 Hr.	YEARLY
Halon fire extinguishers-NOTE 6			■		
Check Battery electrolyte level		■	■	■	■
Check raw water strainers (generators, engines, AC units)		■	■	■	■
Check pumps (bilge & shower sump) for automatic operation		■	■	■	■

NOTE 1 - Replace spark plugs yearly
NOTE 2 - More often if necessary
NOTE 3 - Or once a year
NOTE 4 - More frequently if operated in shallow water
NOTE 5 - Retrue if necessary
NOTE 6 - Remove and weight every six months

BOAT RECORD

The Boat Record is provided to record information about the yacht and its components. This record should be filled out by the selling Dealer at the time of delivery.

Owner's Name_____ Phone (____)_____

Address_____

Dealer_____ Phone (____)_____

Address _____

Boat Name_____ Hull Number* US STNE_____

Delivery Date_____/_____/_____ Registration Number_____

Length_____ Beam_____ Draft_____

Approximate Displacement _____ lbs.

Approximate Height Above Waterline _____

DOCKSIDE INFORMATION

Fuel Capacity_____ Fuel Type_____ Fuel Filter_____

Engine Oil Type_____ Oil Filter_____

Generator Oil Type_____ Oil Filter_____

Transmission Oil Type_____ Oil Filter_____

ENGINE AND TRANSMISSION

Engine Manufacturer_____ Model_____

Engine Serial Number: Port_____ Stbd._____

Transmission Manufacturer_____ Model_____

Transmission Serial Number: Port_____ Stbd._____

GENERATOR

Manufacturer_____ Model No._____ Serial No._____

PROPELLER AND SHAFTS

Propeller Manufacturer_____ Model _____

No. Blades_____ Bore _____ Diameter_____ Pitch_____ Cupped_____

Shaft Length_____ Diameter_____

BATTERIES

Battery Manufacturer _____ Model_____

Rating: Engine_____ Generator _____

* The Hull Identification Number is located on the outside of the transom, on the starboard side, upper corner.

Note: The following is provided for your use in recording electronic equipment which you may add to your yacht. All equipment should be recorded so that the information is available in case of repair or for any insurance claim.

Electronic Equipment

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

Item: _____

Manufacturer_____ Model no._____ Serial no._____

DEPARTMENT OF TRANSPORTATION
U.S. COAST GUARD CG-3865 (Rev. 9/95)

BOATING ACCIDENT REPORT

STATE ASSIGNED CASE NO._____

FORM APPROVED OMB NO. 2115-0010

THE OPERATOR/OWNER OF A VESSEL USED FOR RECREATIONAL PURPOSES IS REQUIRED TO FILE A REPORT IN WRITING WHENEVER AN ACCIDENT RESULTS IN: LOSS OF LIFE OR DISAPPEARANCE FROM A VESSEL; AN INJURY WHICH REQUIRES MEDICAL TREATMENT BEYOND FIRST AID; OR PROPERTY DAMAGE IN EXCESS OF $2000 OR COMPLETE LOSS OF THE VESSEL. REPORTS IN DEATH AND INJURY CASES MUST BE SUBMITTED WITHIN 48 HOURS. REPORTS IN OTHER CASES MUST BE SUBMITTED WITHIN 10 DAYS. REPORTS MUST BE SUBMITTED TO THE REPORTING AUTHORITY IN THE STATE WHERE THE ACCIDENT OCCURRED. THIS FORM IS PROVIDED TO ASSIST THE OPERATOR IN FILING THE REQUIRED WRITTEN REPORT.

COMPLETE ALL BLOCKS (INDICATE THOSE NOT APPLICABLE BY "NA")

ACCIDENT DATA

DATE OF ACCIDENT

TIME AM PM

NAME OF BODY OF WATER

LOCATION (GIVE LOCATION PRECISELY)

NUMBER OF VESSELS INVOLVED

NEAREST CITY OR TOWN

COUNTY

STATE

ZIP CODE

WEATHER (CHECK ALL APPLICABLE)
[ ] CLEAR [ ] RAIN
[ ] CLOUDY [ ] SNOW
[ ] FOG [ ] HAZY

WATER CONDITIONS
[ ] CALM (WAVES LESS THAN 6")
[ ] CHOPPY (WAVES 6" TO 2')
[ ] ROUGH (WAVES 2' TO 6')
[ ] VERY ROUGH (GREATER THAN 6')
[ ] STRONG CURRENT

TEMPERATURE (ESTIMATE)
AIR_____°F
WATER_____°F

WIND
[ ] NONE
[ ] LIGHT (0-6 MPH)
[ ] MODERATE (7-14 MPH)
[ ] STRONG (15-25 MPH)
[ ] STORM (OVER 25 MPH)

VISIBILITY
DAY NIGHT
[ ] GOOD [ ]
[ ] FAIR [ ]
[ ] POOR [ ]

NAME OF OPERATOR

OPERATOR ADDRESS

OPERATOR TELEPHONE NUMBER
( )

[ ] MALE [ ] FEMALE

DATE OF BIRTH
MO DAY YR

OPERATOR'S EXPERIENCE
[ ] NONE
[ ] UNDER 100 HOURS
[ ] > 100 HOURS

INSTRUCTION IN BOATING SAFETY
[ ] STATE COURSE [ ] U.S. POWER SQUADRON
[ ] USCG AUXILIARY [ ] AMERICAN RED CROSS
[ ] NONE

NAME OF OWNER

OWNER ADDRESS

OWNER TELEPHONE NUMBER
( )

NUMBER OF PEOPLE ON BOARD

NUMBER OF PEOPLE BEING TOWED

RENTED BOAT?
[ ] YES [ ] NO

BOAT NO. 1 (THIS VESSEL)

BOAT REGISTRATION OR DOCUMENTATION NUMBER

STATE

HULL IDENTIFICATION NUMBER

BOAT NAME

BOAT MANUFACTURER

LENGTH

MODEL

YEAR BUILT

TYPE OF BOAT
[ ] OPEN MOTORBOAT
[ ] CABIN MOTORBOAT
[ ] AUXILIARY SAIL
[ ] SAIL (ONLY)
[ ] ROWBOAT
[ ] CANOE/KAYAK
[ ] PERSONAL WATERCRAFT
[ ] PONTOON BOAT
[ ] HOUSEBOAT
[ ] OTHER (SPECIFY)

HULL MATERIAL
[ ] WOOD
[ ] ALUMINUM
[ ] STEEL
[ ] FIBERGLASS
[ ] RUBBER/VINYL/CANVAS
[ ] RIGID HULL INFLATABLE
[ ] OTHER (SPECIFY)

ENGINE
[ ] OUTBOARD
[ ] INBOARD
[ ] INBOARD-STERNDRIVE (I/O)
[ ] AIRBOAT

PROPULSION
[ ] PROPELLER
[ ] WATER JET
[ ] AIR THRUST
[ ] MANUAL
[ ] SAIL

PERSONAL FLOTATION DEVICES (PFDS): WAS BOAT ADEQUATELY EQUIPPED WITH COAST GUARD APPROVED PFDS?
[ ] YES [ ] NO
WERE PFDS ACCESSIBLE?
[ ] YES [ ] NO

FUEL
[ ] GASOLINE
[ ] DIESEL
[ ] ELECTRIC

NUMBER OF ENGINES

TOTAL HORSEPOWER

FIRE EXTINGUISHERS
ON BOARD? [ ] YES [ ] NO
USED? [ ] YES [ ] NO

OPERATION AT TIME OF ACCIDENT (CHECK ALL APPLICABLE)
[ ] CRUISING
[ ] CHANGING DIRECTION
[ ] CHANGING SPEED
[ ] DRIFTING
[ ] TOWING
[ ] BEING TOWED
[ ] ROWING/PADDLING
[ ] SAILING
[ ] LAUNCHING
[ ] DOCKING/UNDOCKING
[ ] AT ANCHOR
[ ] TIED TO DOCK/MOORED
[ ] OTHER (SPECIFY)

ACTIVITY AT TIME OF ACCIDENT (CHECK ANY IF APPLICABLE)
[ ] FISHING
[ ] TOURNAMENT
[ ] HUNTING
[ ] SWIMMING/DIVING
[ ] MAKING REPAIRS
[ ] WATERSKIING/TUBING/ETC.
[ ] RACING
[ ] WHITEWATER SPORTS
[ ] FUELING
[ ] STARTING ENGINE
[ ] NON-RECREATIONAL
[ ] OTHER (SPECIFY)

ESTIMATED SPEED
[ ] NONE [ ] UNDER 10 MPH
[ ] 10 - 20 MPH [ ] 21 - 40 MPH [ ] OVER 40 MPH

TYPE OF ACCIDENT
[ ] GROUNDING
[ ] CAPSIZING
[ ] FLOODING/SWAMPING
[ ] SINKING
[ ] FIRE OR EXPLOSION (FUEL)
[ ] FIRE OR EXPLOSION (OTHER)
[ ] SKIER MISHAP
[ ] COLLISION WITH VESSEL
[ ] COLLISION WITH FIXED OBJECT
[ ] COLLISION WITH FLOATING OBJ.
[ ] FALLS OVERBOARD
[ ] FALLS IN BOAT
[ ] STRUCK BY BOAT
[ ] STRUCK BY MOTOR/PROPELLER
[ ] STRUCK SUBMERGED OBJECT
[ ] OTHER (SPECIFY)

[ ] HIT AND RUN

WHAT CONTRIBUTED TO ACCIDENT? (CHECK ALL APPLICABLE)
[ ] WEATHER
[ ] EXCESSIVE SPEED
[ ] IMPROPER LOOKOUT
[ ] RESTRICTED VISION
[ ] OVERLOADING
[ ] IMPROPER LOADING
[ ] HAZARDOUS WATERS
[ ] ALCOHOL USE
[ ] DRUG USE
[ ] HULL FAILURE
[ ] MACHINERY FAILURE
[ ] EQUIPMENT FAILURE
[ ] OPERATOR INEXPERIENCE
[ ] OPERATOR INATTENTION
[ ] CONGESTED WATERS
[ ] PASSENGER/SKIER BEHAVIOR
[ ] DAM/LOCK
[ ] OTHER (SPECIFY)

DECEASED (IF MORE THAN 2 FATALITIES, ATTACH ADDITIONAL FORMS)

NAME OF VICTIM		ADDRESS OF VICTIM	WAS PFD WORN? [ ] YES [ ] NO
DATE OF BIRTH	[ ] MALE [ ] FEMALE	DEATH CAUSED BY [ ] DROWNING [ ] OTHER	[ ] DISAPPEARANCE
NAME OF VICTIM		ADDRESS OF VICTIM	WAS PFD WORN? [ ] YES [ ] NO
DATE OF BIRTH	[ ] MALE [ ] FEMALE	DEATH CAUSED BY [ ] DROWNING [ ] OTHER	[ ] DISAPPEARANCE

INJURED (IF MORE THAN 2 INJURIES, ATTACH ADDITIONAL FORMS)

NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	MEDICAL TREATMENT BEYOND FIRST AID? [ ] YES [ ] NO ADMITTED TO HOSPITAL? [ ] YES [ ] NO		DESCRIBE INJURY

WAS PFD WORN? [ ] YES [ ] NO PRIOR TO ACCIDENT? [ ] YES [ ] NO AS A RESULT OF ACCIDENT? [ ] YES [ ] NO
WAS IT INFLATABLE? [ ] YES [ ] NO

NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	MEDICAL TREATMENT BEYOND FIRST AID? [ ] YES [ ] NO ADMITTED TO HOSPITAL? [ ] YES [ ] NO		DESCRIBE INJURY

WAS PFD WORN? [ ] YES [ ] NO PRIOR TO ACCIDENT? [ ] YES [ ] NO AS A RESULT OF ACCIDENT? [ ] YES [ ] NO
WAS IT INFLATABLE? [ ] YES [ ] NO

OTHER PEOPLE ABOARD THIS BOAT (IF MORE THAN 2 PEOPLE, ATTACH ADDITIONAL FORMS)

NAME		ADDRESS	
DATE OF BIRTH	WAS PFD WORN? [ ] YES [ ] NO AS A RESULT OF ACCIDENT [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO WAS IT INFLATABLE? [ ] YES [ ] NO	
NAME		ADDRESS	
DATE OF BIRTH	WAS PFD WORN? [ ] YES [ ] NO AS A RESULT OF ACCIDENT [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO WAS IT INFLATABLE? [ ] YES [ ] NO	

BOAT NO. 2 (IF MORE THAN 2 VESSELS, ATTACH ADDITIONALIDENTIFYING INFORMATION)

NAME OF OPERATOR	OPERATOR ADDRESS
OPERATOR TELEPHONE NUMBER ( )	BOAT REGISTRATION OR DOCUMENTATION NUMBER STATE
NAME OF OWNER	OWNER ADDRESS
OWNER TELEPHONE NUMBER ( )	

PROPERTY DAMAGE

ESTIMATED AMOUNT: THIS BOAT AND CONTENTS: $	OTHER BOAT(S) AND CONTENTS: $	OTHER PROPERTY: $
DESCRIBE PROPERTY DAMAGED		

WITNESSES NOT ON THIS VESSEL

NAME	ADDRESS	TELEPHONE NUMBER ( )
NAME	ADDRESS	TELEPHONE NUMBER ( )

PERSON COMPLETING REPORT

NAME	ADDRESS	TELEPHONE NUMBER ( )
SIGNATURE	QUALIFICATION [ ] OPERATOR [ ] OWNER [ ] INVESTIGATOR [ ] OTHER	DATE SUBMITTED

FOR AGENCY USE ONLY

CAUSES BASED ON (CHECK ONE): [ ]THIS REPORT [ ] INVESTIGATION [ ] INVESTIGATION AND THIS REPORT [ ] OTHER

NAME OF REVIEWING OFFICE DATE RECEIVED	RECREATIONAL [ ] NON-REPORTABLE [ ] COMMERCIAL [ ]
PRIMARY CAUSE	SECONDARY CAUSE

ACCIDENT DESCRIPTION

DESCRIBE WHAT HAPPENED (SEQUENCE OF EVENTS. INCLUDE FAILURE OF EQUIPMENT. INCLUDE A DIAGRAM IF NEEDED. CONTINUE ON ADDITIONAL SHEETS IF NECESSARY. INCLUDE ANY INFORMATION REGARDING THE INVOLVEMENT OF ALCOHOL AN/OR DRUGS IN CAUSING OR CONTRIBUTING TO THE ACCIDENT. INCLUDE ANY DESCRIPTIVE INFORMATION ABOUT THE USE OF PFD'S.)

Float Plan

Complete this form before going boating and leave it with a reliable person who can be depended upon to notify the Coast Guard or other rescue organization, should you not return as scheduled.

Do not file this plan with the Coast Guard.

1. Person Report Overdue

Name _____ Phone _____

Address _____

2. Description of Boat

Registration/ Documentation No. _____

Length _____ Make _____ Type _____

Hull Color _____ Trim Color _____

Fuel Capacity _____ Engine Type _____ No. of Engines _____

Distinguishing Features _____

_____

_____

3. Operator of Boat

Name _____ Age _____

Health _____ Phone _____

Address _____

_____

Operator's Experience _____

_____

4. Survival Equipment (Check as Appropriate)

☐ # ____ PFDs ☐ Flares ☐ Mirrors

☐ Smoke Signals ☐ Flashlights ☐ Food

☐ Paddles ☐ Water ☐ Anchor

☐ Raft or Dinghy ☐ EPIRB

☐ Other _____

5. Marine Radio

☐ Yes ☐ No

Type _____ Freqs. _____

6. Trip Expectations

Depart from

Departure Date Time

Going to

Arrival Date Time

If operator has not arrived/returned by: Date Time

call the Coast Guard or Local authority at the following number:

7. Vehicle Description

License No. Make

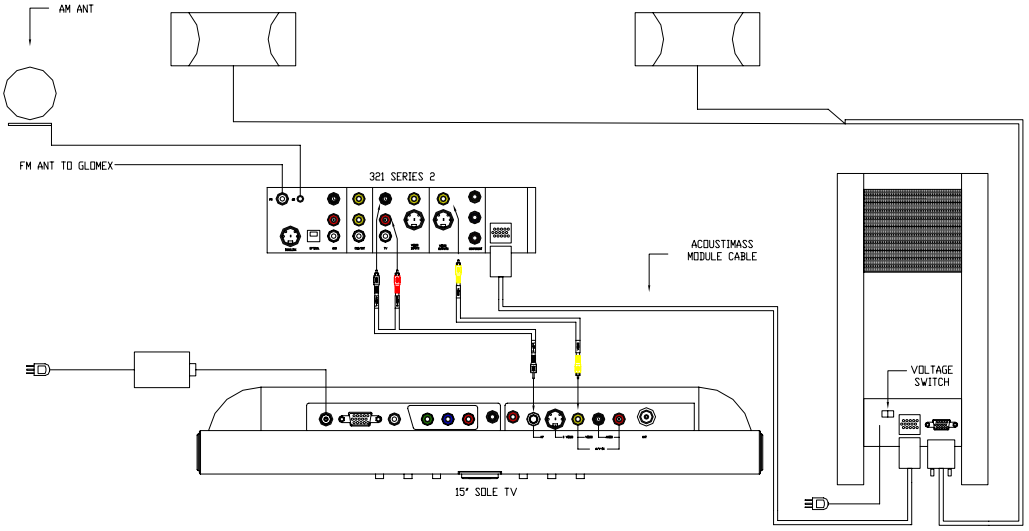
Model Color

Where is vehicle parked?

8. Persons on Board

Name	Age	Phone	Medical Conditions

9. Remarks



DATE	DISTRIBUTION

DATE	INT	REVISIONS

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609-293-8025

MODEL

321 S2 /SOLE TV 15"
321 S2 /SOLE TV 18"

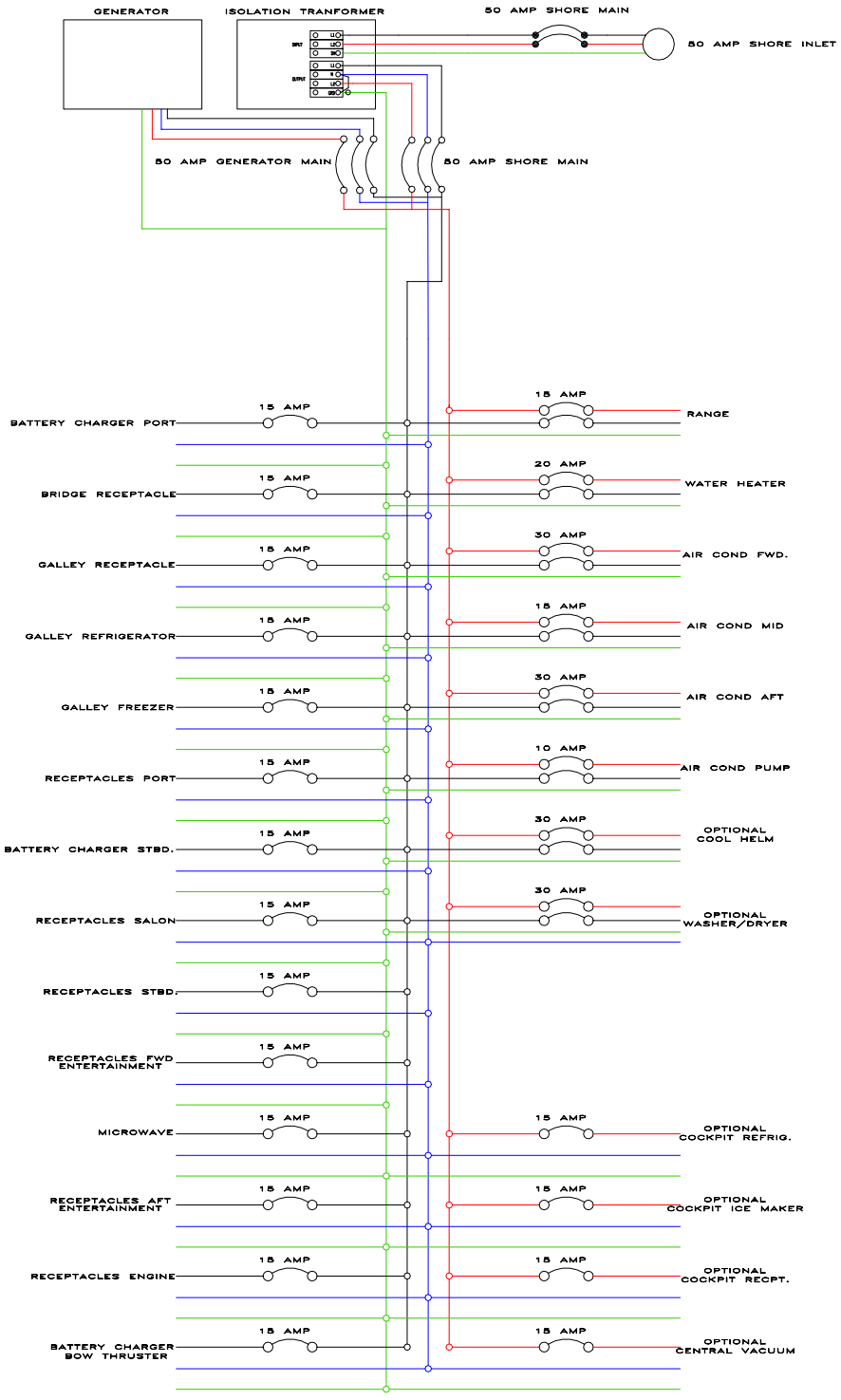
DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	9-10-04
DRAWING NO.:	SILALL9-11-04

45 CONVERTIBLE AC ELECTRICAL LADDER

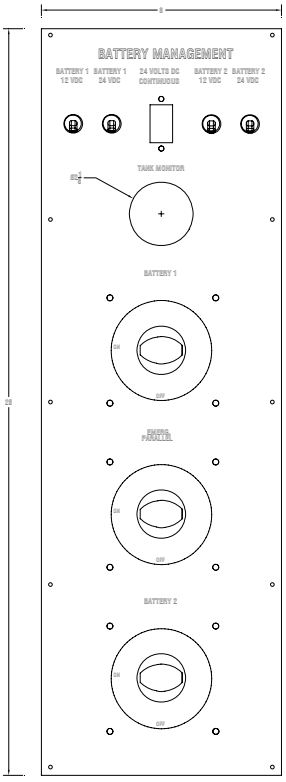
50 AMP SHORE MAIN L1
50 AMP SHORE MAIN L2
50 AMP SHORE MAIN NEUTRAL
50 AMP SHORE MAIN GROUND

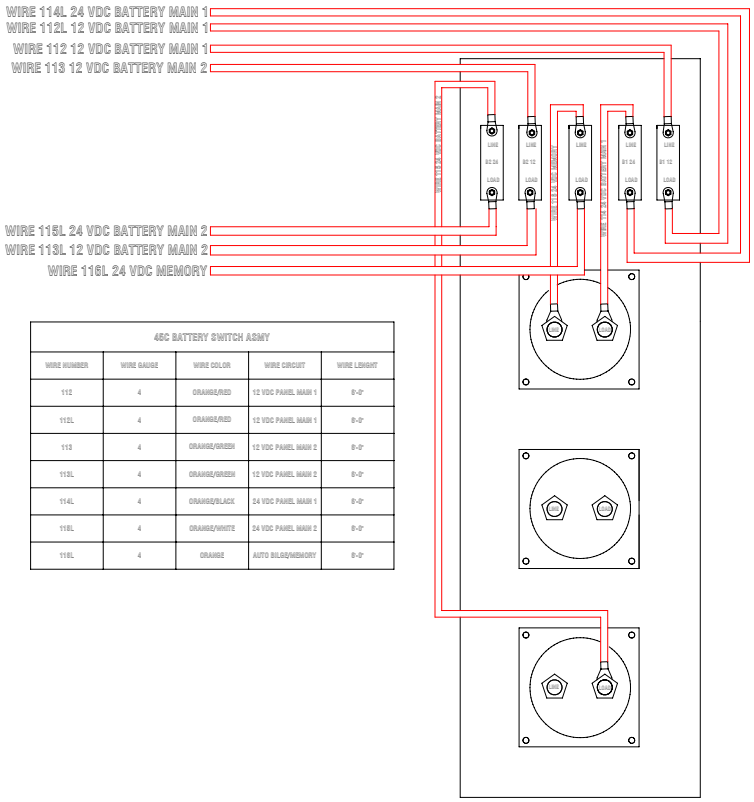
GENERATOR MAIN L1
GENERATOR MAIN L2
GENERATOR MAIN NEUTRAL
GENERATOR MAIN GROUND

SILVERTON



NOTE:
BEP 2500 AMP BATTERY SWITCH
L TYPE BREAKERS





45C BATTERY SWITCH ARMY

WIRE NUMBER	WIRE GAUGE	WIRE COLOR	WIRE CIRCUIT	WIRE LENGHT
112	4	ORANGE/RED	12 VDC PANEL MAIN 1	8'-0"
112L	4	ORANGE/RED	12 VDC PANEL MAIN 1	8'-0"
113	4	ORANGE/GREEN	12 VDC PANEL MAIN 2	8'-0"
113L	4	ORANGE/GREEN	12 VDC PANEL MAIN 2	8'-0"
114L	4	ORANGE/BLACK	24 VDC PANEL MAIN 1	8'-0"
115L	4	ORANGE/WHITE	24 VDC PANEL MAIN 2	8'-0"
116L	4	ORANGE	AUTO BILGE/MEMORY	8'-0"

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BATTERY MANAGEMENT PANEL

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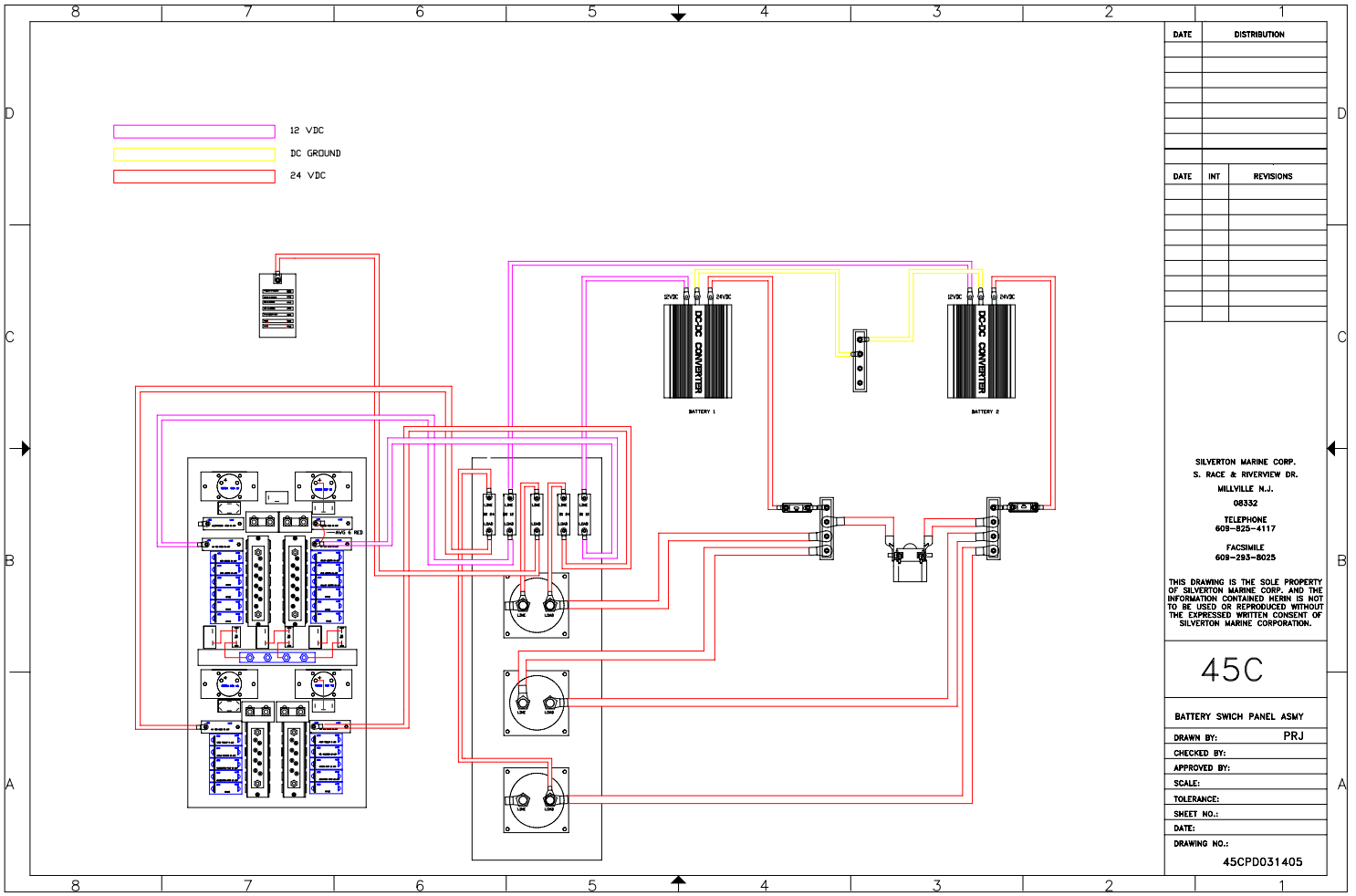
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	3-14-05
DRAWING NO.:	45CEP031405



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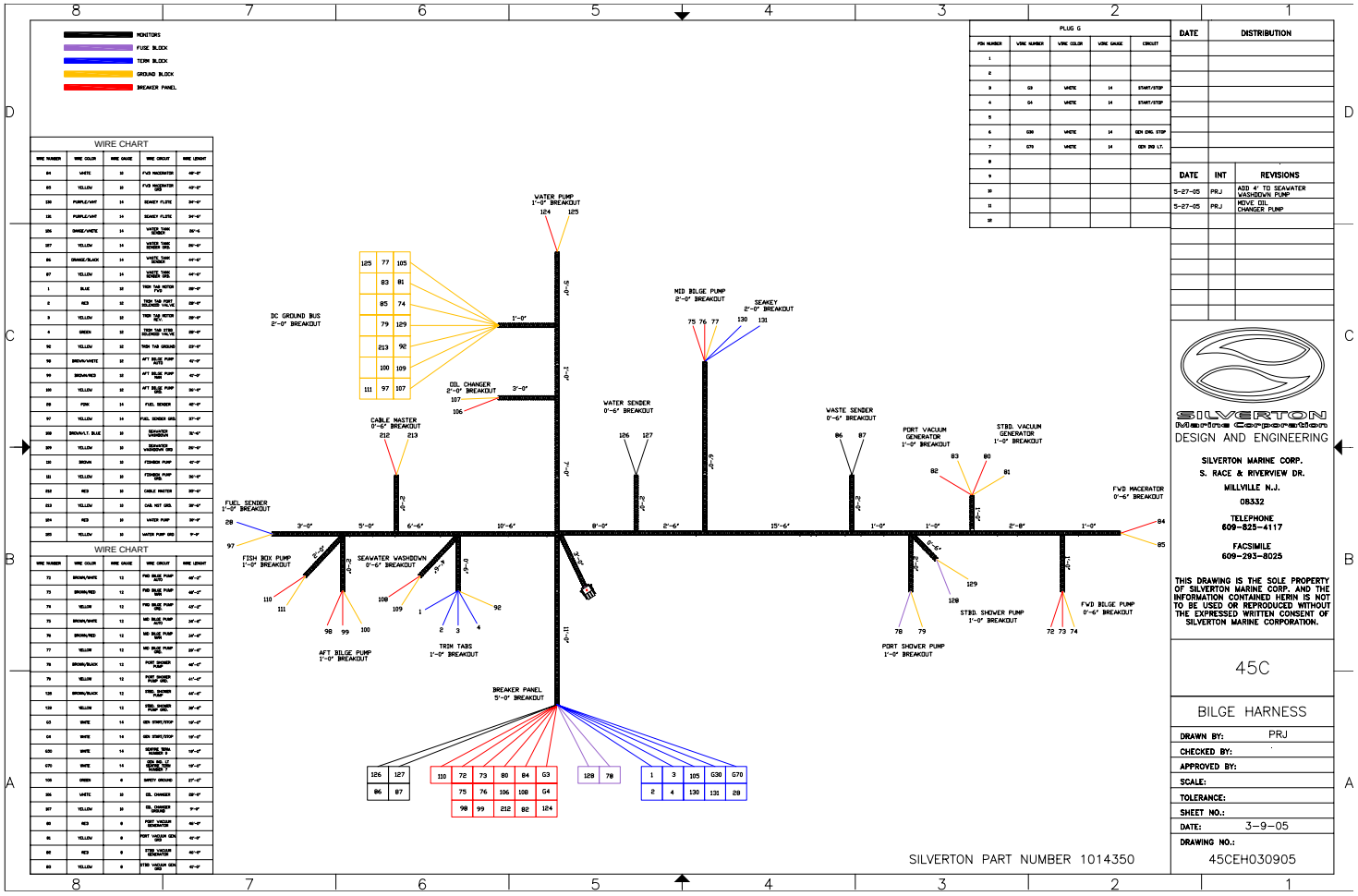
BATTERY SWICH PANEL ASMY

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	
DRAWING NO.:	45CPD031405



WIRE CHART

WIRE NUMBER	WIRE COLOR	WIRE GAUGE	WIRE CIRCUIT	WIRE LENGHT
84	WHITE	10	FWD MACERATOR	48'-0"
85	YELLOW	10	FWD MACERATOR GND	48'-0"
120	PURPLE/WHT	14	SEAKEY FLUTE	34'-0"
121	PURPLE/WHT	14	SEAKEY FLUTE	34'-0"
126	ORANGE/WHITE	14	WATER TANK SENDER	66'-6
127	YELLOW	14	WATER TANK SENDER GND	66'-6"
86	ORANGE/BLACK	14	WASTE TANK SENDER	44'-6"
87	YELLOW	14	WASTE TANK SENDER GND	44'-6"
1	BLUE	10	TRIM TAB MOTOR PWR	88'-6"
2	RED	10	TRIM TAB PORT SOLENOID VALVE	88'-6"
3	YELLOW	10	TRIM TAB MOTOR GND	88'-6"
4	GREEN	10	TRIM TAB STBD SOLENOID VALVE	88'-6"
90	YELLOW	10	TRIM TAB GROUND	83'-6"
98	BROWN/WHITE	10	AFT BILGE PUMP PWR	42'-6"
99	BROWN/RED	10	AFT BILGE PUMP GND	42'-6"
100	YELLOW	10	AFT BILGE PUMP GND	36'-6"
69	PINK	14	FUEL SENDER	40'-6"
97	YELLOW	14	FUEL SENDER GND	37'-6"
108	BROWN/LT. BLUE	10	SEAWATER WASHDOWN	32'-6"
109	YELLOW	10	SEAWATER WASHDOWN GND	32'-6"
110	BROWN	10	FISHBOX PUMP	42'-6"
111	YELLOW	10	FISHBOX PUMP GND	36'-6"
212	RED	10	CABLE MASTER	39'-6"
213	YELLOW	10	CAB. MST GND.	39'-6"
214	RED	10	WATER PUMP	39'-6"
215	YELLOW	10	WATER PUMP GND	9'-6"

WIRE CHART

WIRE NUMBER	WIRE COLOR	WIRE GAUGE	WIRE CIRCUIT	WIRE LENGHT
72	BROWN/WHITE	12	FWD BILGE PUMP PWR	48'-0"
73	BROWN/RED	12	FWD BILGE PUMP GND	48'-0"
74	YELLOW	12	FWD BILGE PUMP GND	43'-0"
75	BROWN/WHITE	12	MID BILGE PUMP PWR	34'-6"
76	BROWN/RED	12	MID BILGE PUMP GND	34'-6"
77	YELLOW	12	MID BILGE PUMP GND	28'-6"
78	BROWN/BLACK	12	PORT SHOWER PUMP PWR	46'-0"
79	YELLOW	12	PORT SHOWER PUMP GND	41'-0"
128	BROWN/BLACK	12	STBD. SHOWER PUMP PWR	44'-6"
129	YELLOW	12	STBD. SHOWER PUMP GND	39'-6"
63	WHITE	14	GEN START/STOP	19'-6"
64	WHITE	14	GEN START/STOP	19'-6"
632	WHITE	14	GENRAL TERM MODULE 2	19'-6"
670	WHITE	14	GEN NO. 1/2 MODULE 1	19'-6"
105	GREEN	6	SAFETY GROUND	27'-6"
306	WHITE	10	OIL CHANGER	29'-6"
307	YELLOW	10	OIL CHANGER GROUND	9'-6"
80	RED	8	PORT VACUUM GENERATOR	42'-6"
81	YELLOW	8	PORT VACUUM GEN GND	42'-6"
82	RED	8	STBD VACUUM GENERATOR	42'-6"
83	YELLOW	8	STBD VACUUM GEN GND	42'-6"

PLUG G

PIN NUMBER	WIRE NUMBER	WIRE COLOR	WIRE GAUGE	CIRCUIT
1				
2				
3	G3	WHITE	14	START/STOP
4	G4	WHITE	14	START/STOP
5				
6	G30	WHITE	14	GEN ENG. STOP
7	G70	WHITE	14	GEN IND LT.
8				
9				
10				
11				
12				

DATE	DISTRIBUTION

DATE	INT	REVISIONS
5-27-05	PRJ	ADD 4" TO SEAWATER WASHDOWN PUMP
5-27-05	PRJ	MOVE OIL CHANGER PUMP

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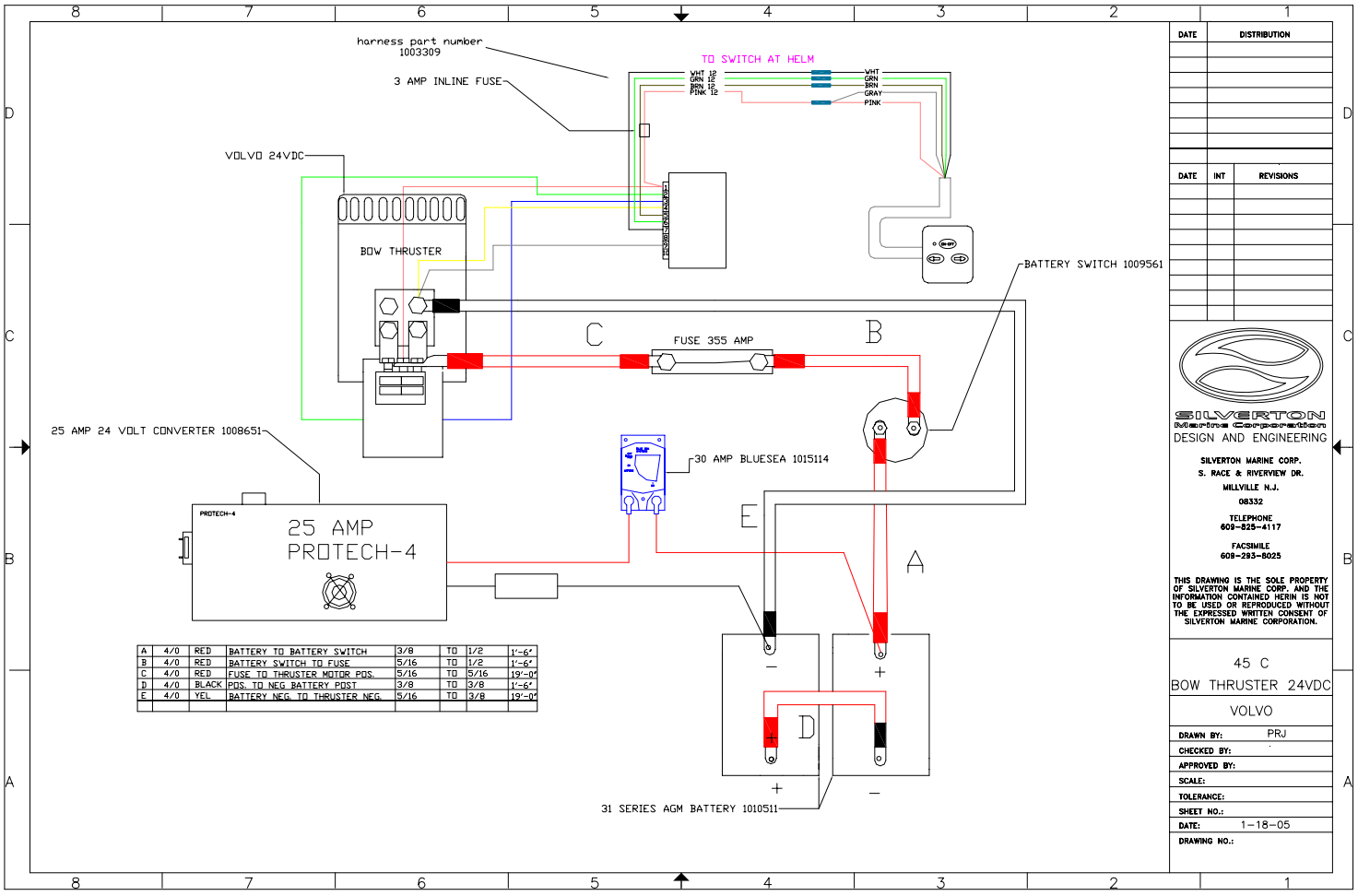
45C

BILGE HARNESS

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	3-9-05
DRAWING NO.:	45CEH030905



A	4/0	RED	BATTERY TO BATTERY SWITCH	3/8	TO	1/2	1'-6"
B	4/0	RED	BATTERY SWITCH TO FUSE	5/16	TO	1/2	1'-6"
C	4/0	RED	FUSE TO THRUSTER MOTOR POS.	5/16	TO	5/16	19'-0"
D	4/0	BLACK	POS. TO NEG BATTERY POST	3/8	TO	3/8	1'-6"
E	4/0	YEL	BATTERY NEG. TO THRUSTER NEG.	5/16	TO	3/8	19'-0"

DATE	DISTRIBUTION

DATE	INT	REVISIONS

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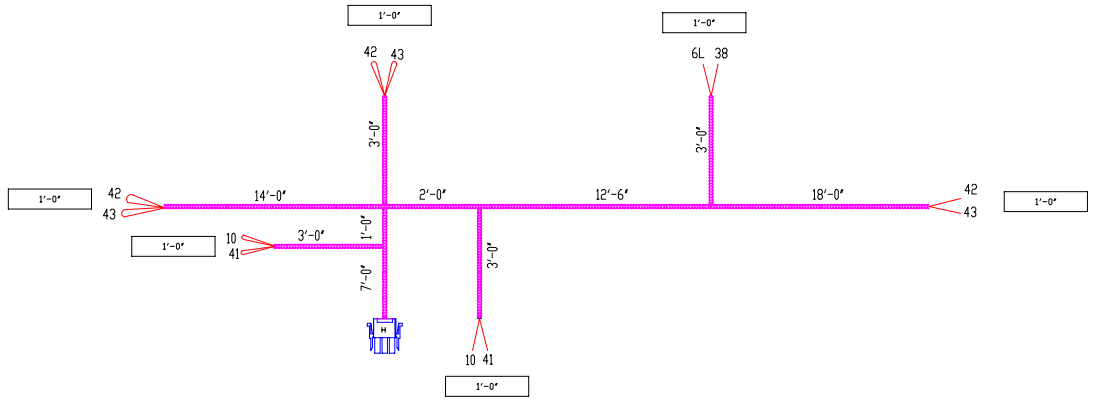
45 C
BOW THRUSTER 24VDC
VOLVO

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	1-18-05
DRAWING NO.:	

NOTE:

MUST PULL WIRE FOR COCKPIT LIGHTS WIRE 12-2 BLUE YELLOW

MUST PULL WIRE FOR COCKPIT SPEAKERS AND BRIDGE SPEAKERS



PLUG H TO HELM SWITCH PANEL					
WIRE NUMBER	PIN NUMBER	WIRE	WIRE GAUGE	WIRE COLOR	LENGTH
38	1	HORN GROUND	10	YELLOW	26'-6"
6L	2	HORN	10	GREEN/WHITE	26'-6"
10	3	COURTESY LTS	14	BLUE/WHITE	22'-0"
41	4	COURTESY LTS GRD	14	YELLOW	22'-0"
42	5	NAV. LIGHTS	12	GRAY/GREEN	79'-6"
43	6	NAV. LT'S GRD.	12	YELLOW	79'-6"

DATE	DISTRIBUTION

DATE	INT	REVISIONS
3-18-03	GH	ADD 2' TO PLUG WIRES

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BRIDGE HARNESS

DRAWN BY:	PRJ
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APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	4-13-05
DRAWING NO.:	45CEH041305

WIRE CHART

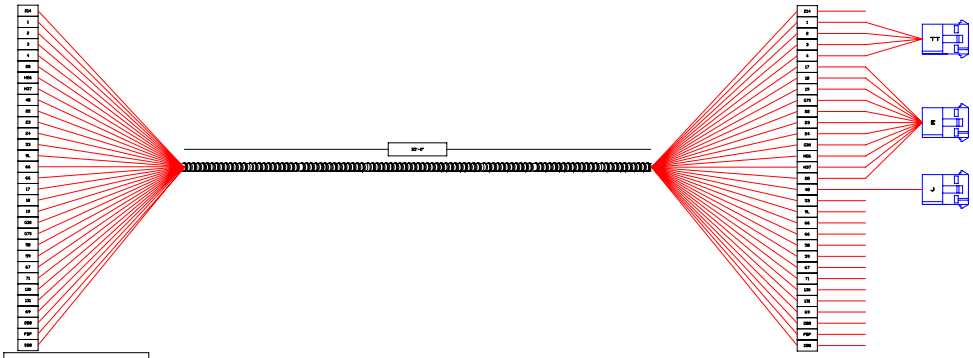
WIRE NUMBER	WIRE COLOR	WIRE GAUGE	WIRE CIRCUIT	WIRE LENGTH
1	BLUE	12	TRIM TAB MOTOR FWD	46'-0"
2	RED	12	TRIM TAB PORT SOLENOID VALVE	46'-0"
3	YELLOW	12	TRIM TAB MOTOR REV.	46'-0"
4	GREEN	12	TRIM TAB STBD SOLENOID VALVE	46'-0"
28	PINK	14	FUEL SENDER	46'-0"
H26	BLACK/WHITE	14	HALON	46'-0"
H37	BLACK/WHITE	14	HALON	46'-0"
48	RED/WHITE	10	BATTERY PARA.	46'-0"
22	BLUE	14	AFT BILGE PUMP IND. LIGHT	46'-0"
23	BLUE	14	MID BILGE PUMP IND. LIGHT	46'-0"
24	BLUE	14	FWD. BILGE PUMP IND. LIGHT	46'-0"
53	ORANGE/WHITE	4	ELECTRONICS MAIN	46'-0"
9L	YELLOW/ORANGE	8	ENGINE ROOM BLOWERS	46'-0"
66	ORANGE/BLACK	4	BRIDGE ELECTRIC 12VDC	46'-0"
214	ORANGE/GREEN	4	BRIDGE ELECT 24VDC	46'-0"
17	ORANGE/RED	12	WINDLASS CTRL. UP	46'-0"
18	ORANGE	12	WINDLASS CTRL FEED	46'-0"
19	ORANGE/GREEN	12	WINDLASS CTRL. DOWN	46'-0"
G30	WHITE	14	GENERATOR EMG. SHUT DOWN	46'-0"
G70	WHITE	14	GEN IND. LT SEAFIRE TERM NUMBER 7	46'-0"
58	RED	8	ACR SPOT LIGHT	46'-0"
59	YELLOW	8	ACR SPOT LIGHT GRD.	46'-0"
67	YELLOW	4	BRIDGE DC GROUND	46'-0"
71	ORANGE/WHITE	12	BRIDGE STEREO MEMORY	46'-0"
130	PURPLE/WHITE	12	SEAKEY FLOTE	46'-0"
131	PURPLE/WHITE	12	SEAKEY FLOTE	46'-0"
69	ORANGE	8	BRIDGE 24VDC MEMORY	46'-0"
288	YELLOW	4	BRIDGE 24VDC GRD.	46'-0"
PBP	RED	12	PORT BATTERY PARA. FEED	46'-0"
SBP	RED/GREEN	12	STBD BATTERY PARA. FEED	46'-0"

CAP E TO HELM SWITCH PANEL

PIN NUMBER	WIRE NUMBER	WIRE COLOR	WIRE GAUGE	WIRE CIRCUIT
1	17	ORANGE/RED	12	WINDLASS CTRL. UP
2	18	ORANGE	12	WINDLASS CTRL FEED
3	19	ORANGE/GREEN	12	WINDLASS CTRL. DOWN
4	G70	WHITE	14	GEN IND. LT SEAFIRE TERM NUMBER 7
5	22	BLUE	14	AFT BILGE PUMP IND. LIGHT
6	23	BLUE	14	MID BILGE PUMP IND. LIGHT
7	24	BLUE	14	FWD. BILGE PUMP IND. LIGHT
8	G30	WHITE	14	GEN EMG. SHUT DOWN SEAFIRE TERM 9
9	H26	BLACK/WHITE	14	HALON
10	H37	BLACK/WHITE	14	HALON
11	28	PINK	14	FUEL SENDER
12	-	-	-	-

DATE	REVISIONS	DATE	DISTRIBUTION

HELM BREAKOUT 6'-0"



PANEL MAIN BREAKOUT 5'-0"

CAP TT TO HELM SWITCH PANEL

PIN NUMBER	WIRE NUMBER	WIRE COLOR	WIRE GAUGE	WIRE CIRCUIT
1	1	BLUE	12	TRIM TAB MOTOR FWD
2	2	RED	12	TRIM TAB PORT SOLENOID VALVE
3	3	YELLOW	12	TRIM TAB MOTOR REV.
4	4	GREEN	12	TRIM TAB STBD SOLENOID VALVE

CAP J TO HELM BREAKER PANEL

PIN NUMBER	WIRE NUMBER	WIRE COLOR	WIRE GAUGE	WIRE CIRCUIT
1	48	RED/WHITE	10	BATTERY PARA
2	-	-	-	-

PART # 1014399

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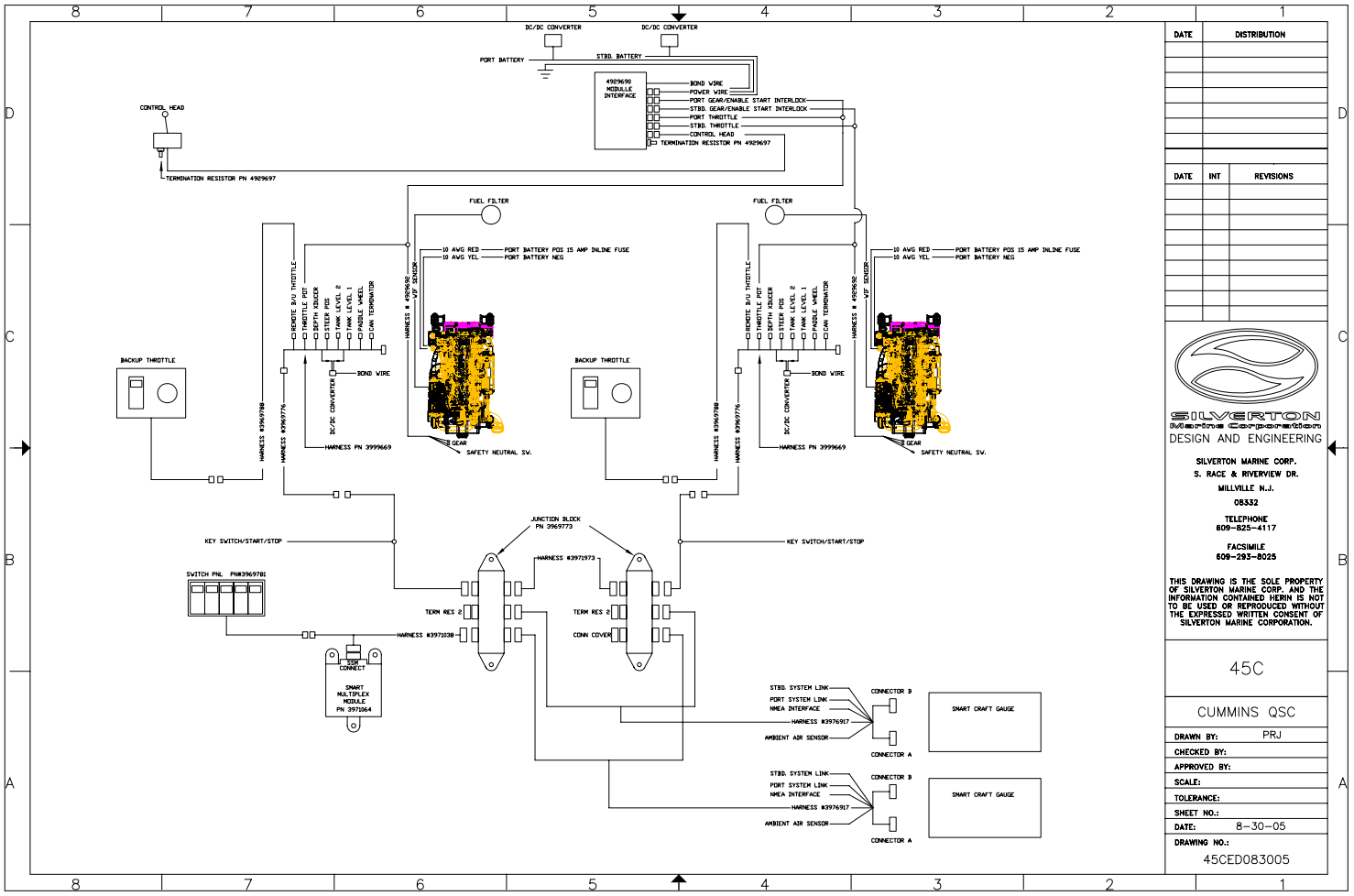
BRIDGE JUMPER HARNESS

SIZE	DWN BY	DWG NO.	REV
	PRJ	45CEH041205	
SCALE SCALE	DATE: 4-12-05	SHEET NO. 1 OF 1	



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CUMMINS QSC

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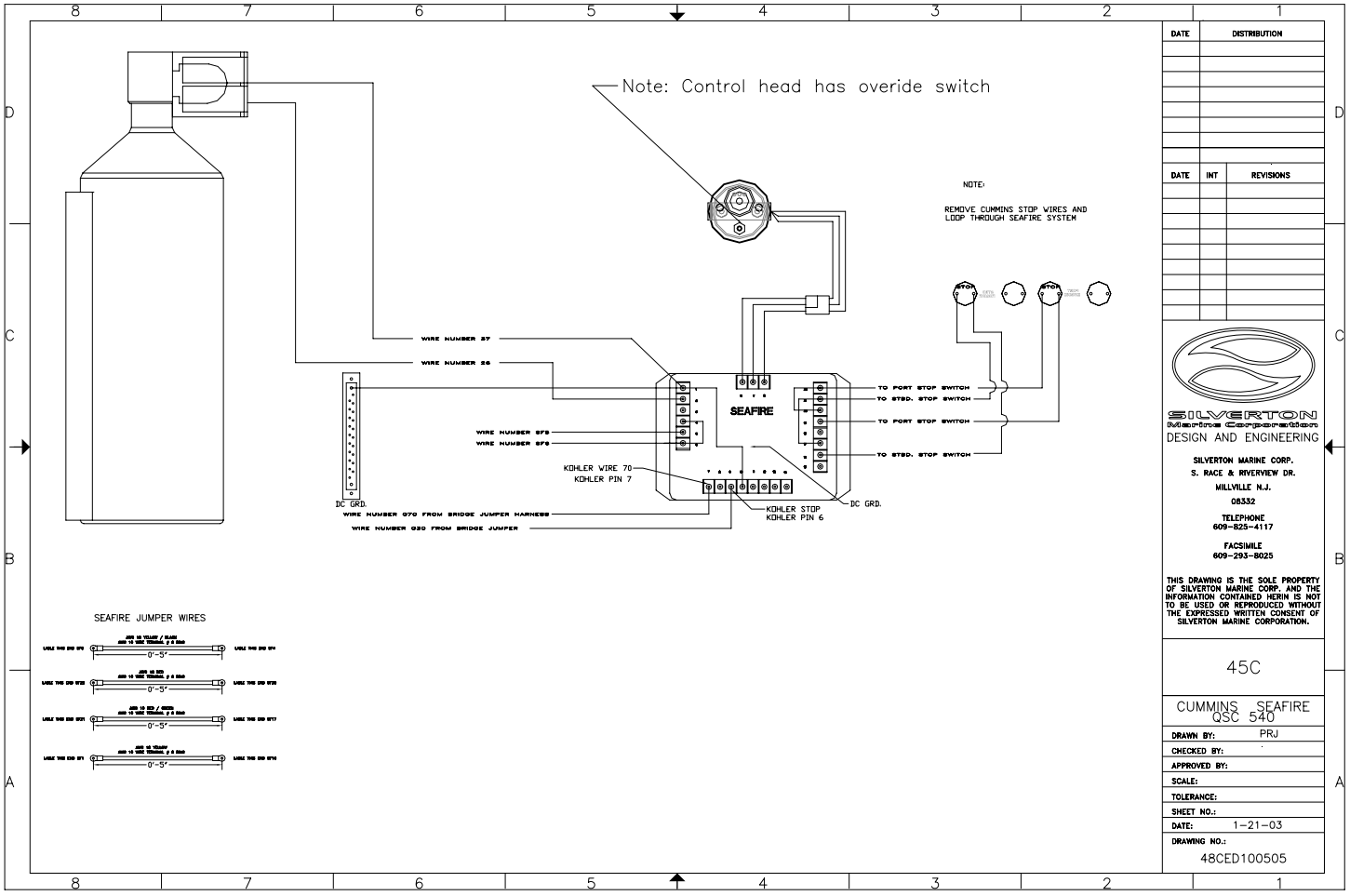
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	8-30-05
DRAWING NO.:	45CED083005



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CUMMINS SEAFIRE QSC 540

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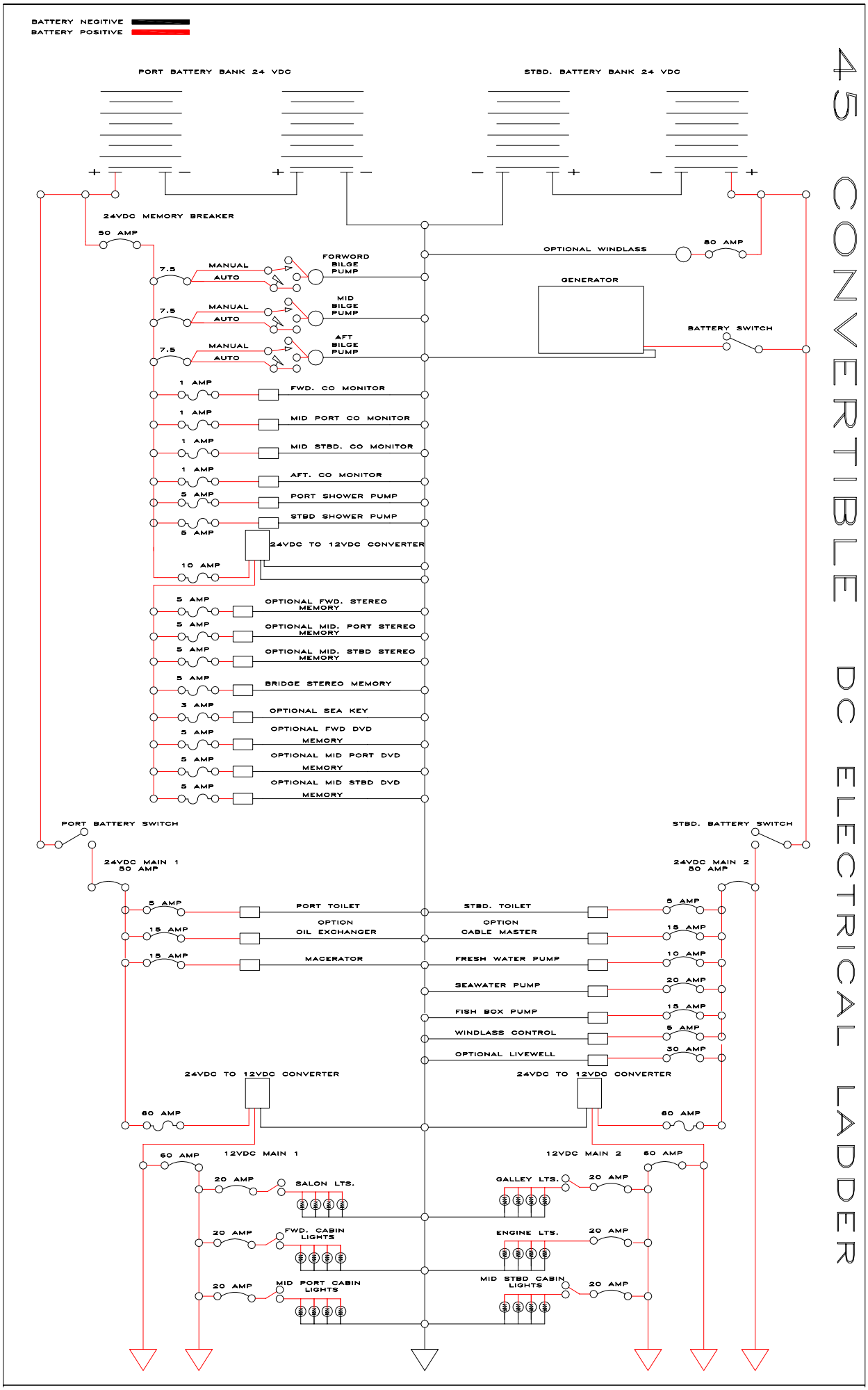
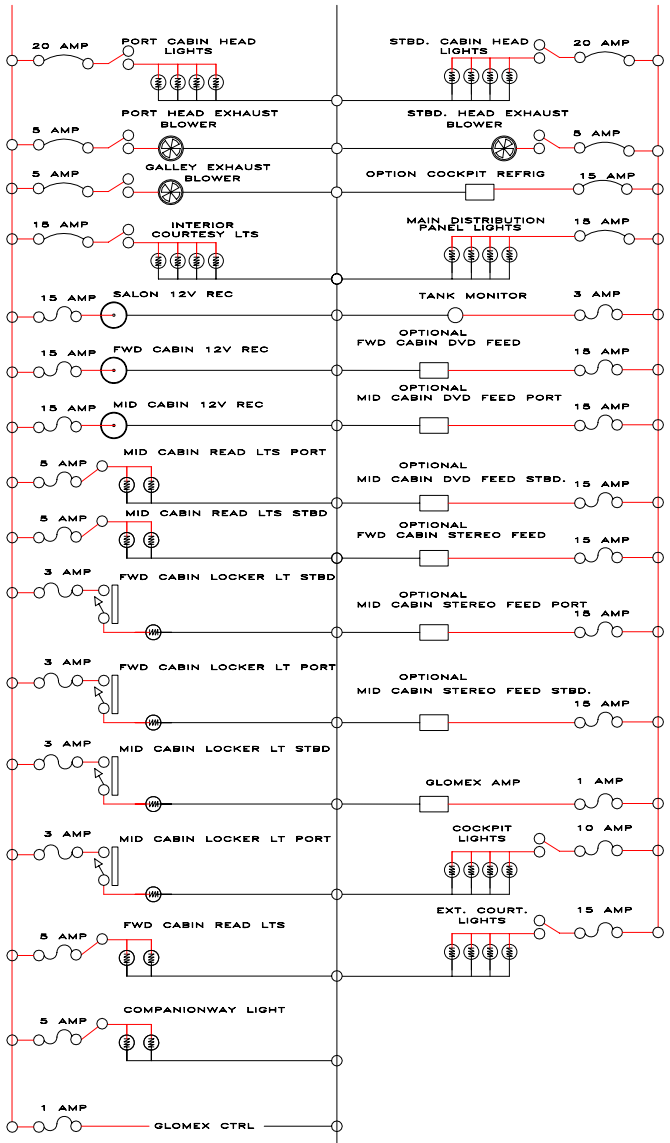
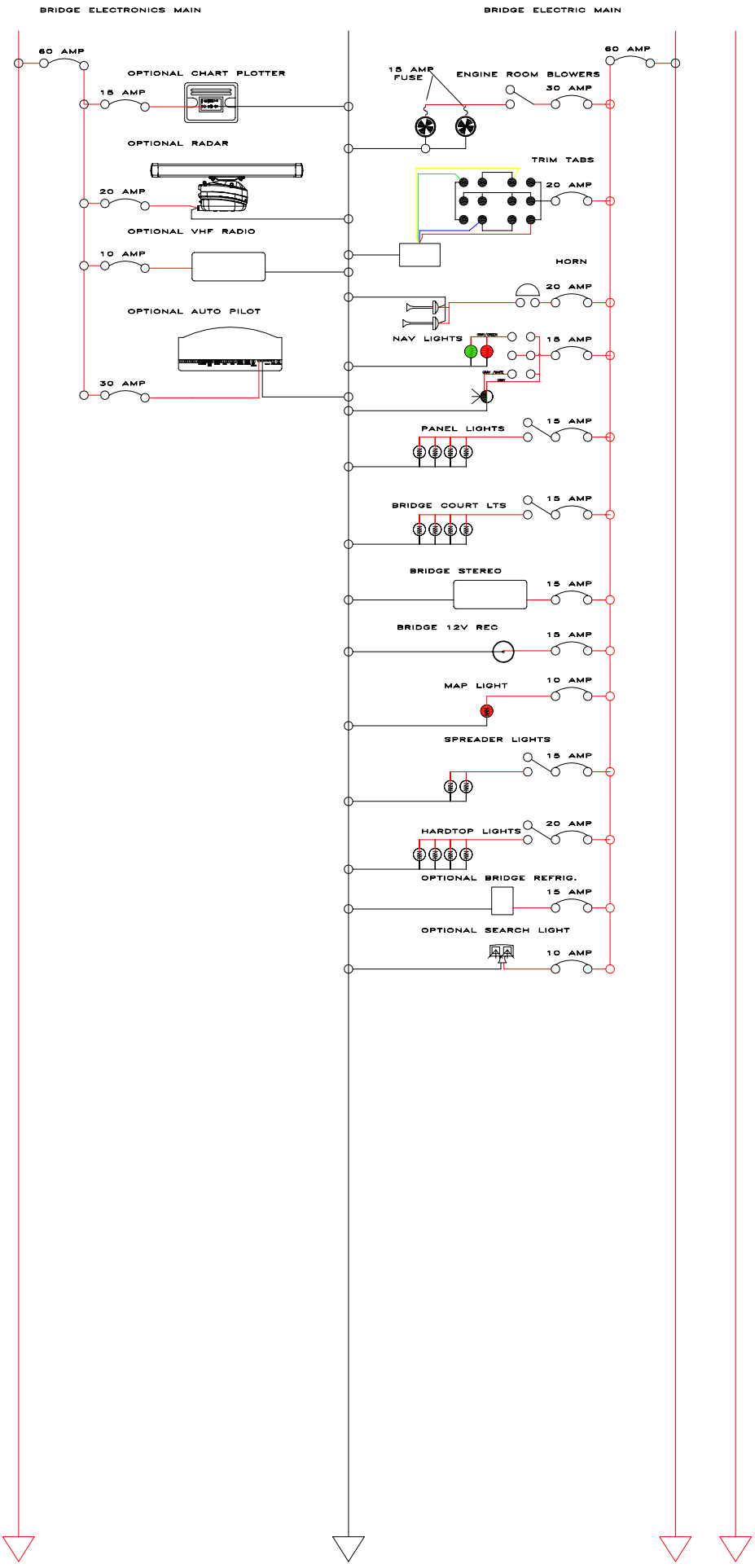
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	1-21-03
DRAWING NO.:	48CED100505

45 CONVERTIBLE DC ELECTRICAL LADDER

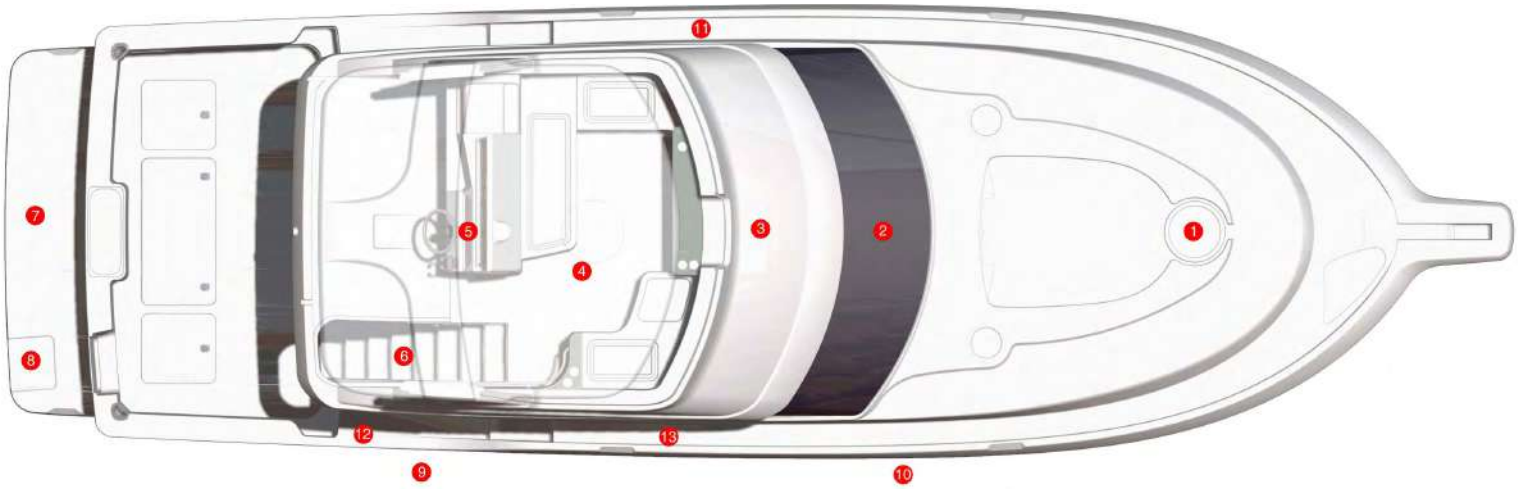


45 CONVERTIBLE DC ELECTRICAL LADDER





45 CONVERTIBLE DC ELECTRICAL LADDER

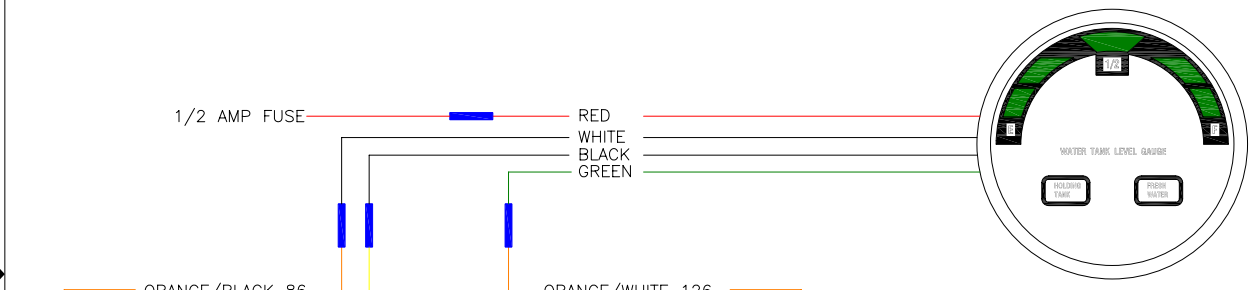


1 – Escape Hatch – V-Berth
2 – Windshield
3 – Horns
4 – Bridge
5 – Helm
6 – Access Steps
7 – Swim Platform

8 – Swim Ladder
9 – Aft Sling Lifting Point
10 – Forward Sling Lifting Point
11 – Waste Pump-Out
12 – Fuel Fill
13 – Water Fill

45 Convertible
DECK

DATE	REVISIONS	DATE	DISTRIBUTION



Silverton YACHT

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MILLVILLE N.J.
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(FAX) 609-293-8025

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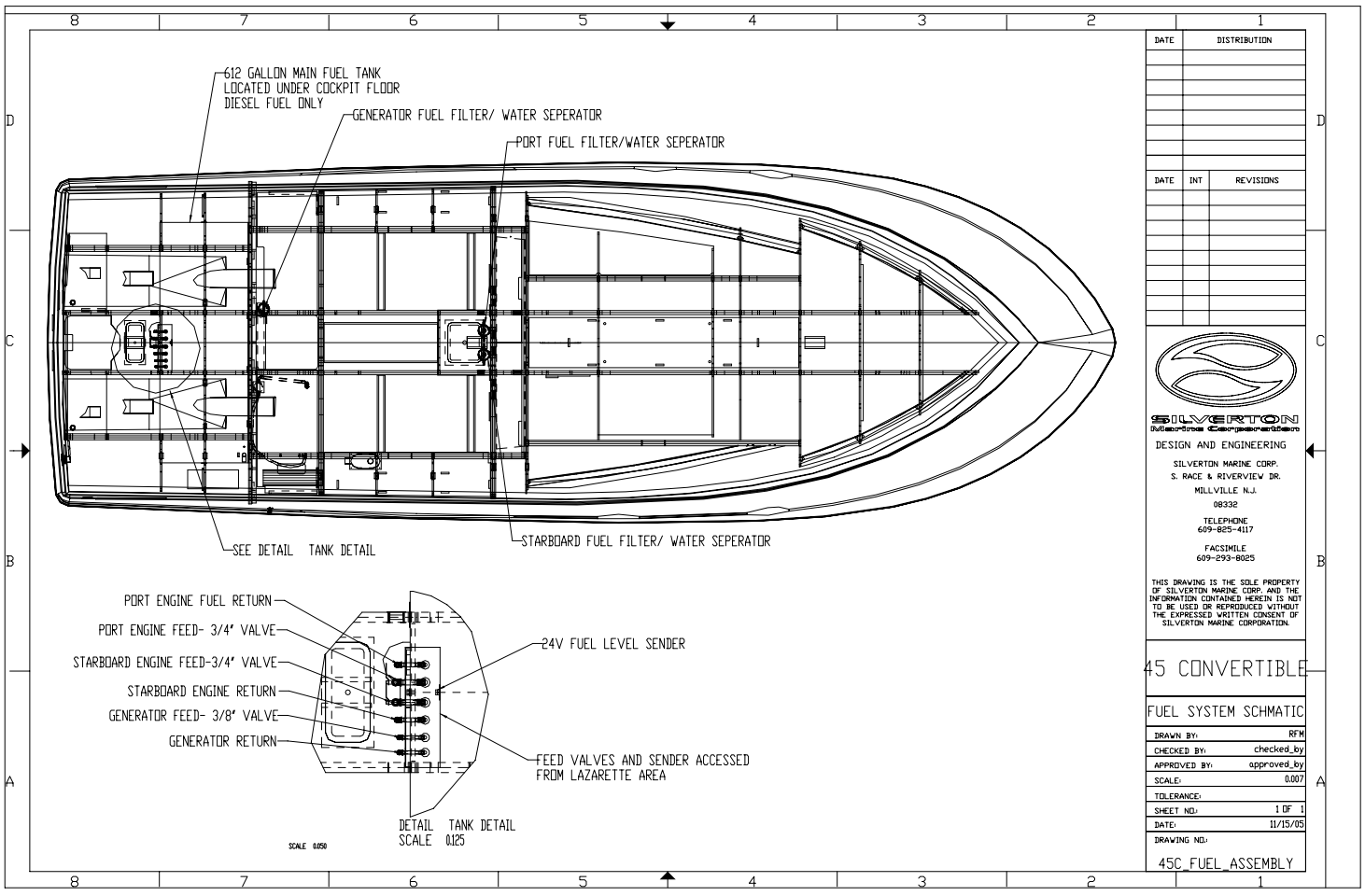
FIREBOY TANK MONITOR

SIZE	DWN BY	DWG NO.	REV
	PRJ	EA091505	
SCALE	DATE: DATE	SHEET NO.	



DATE	DISTRIBUTION

DATE	INT	REVISIONS

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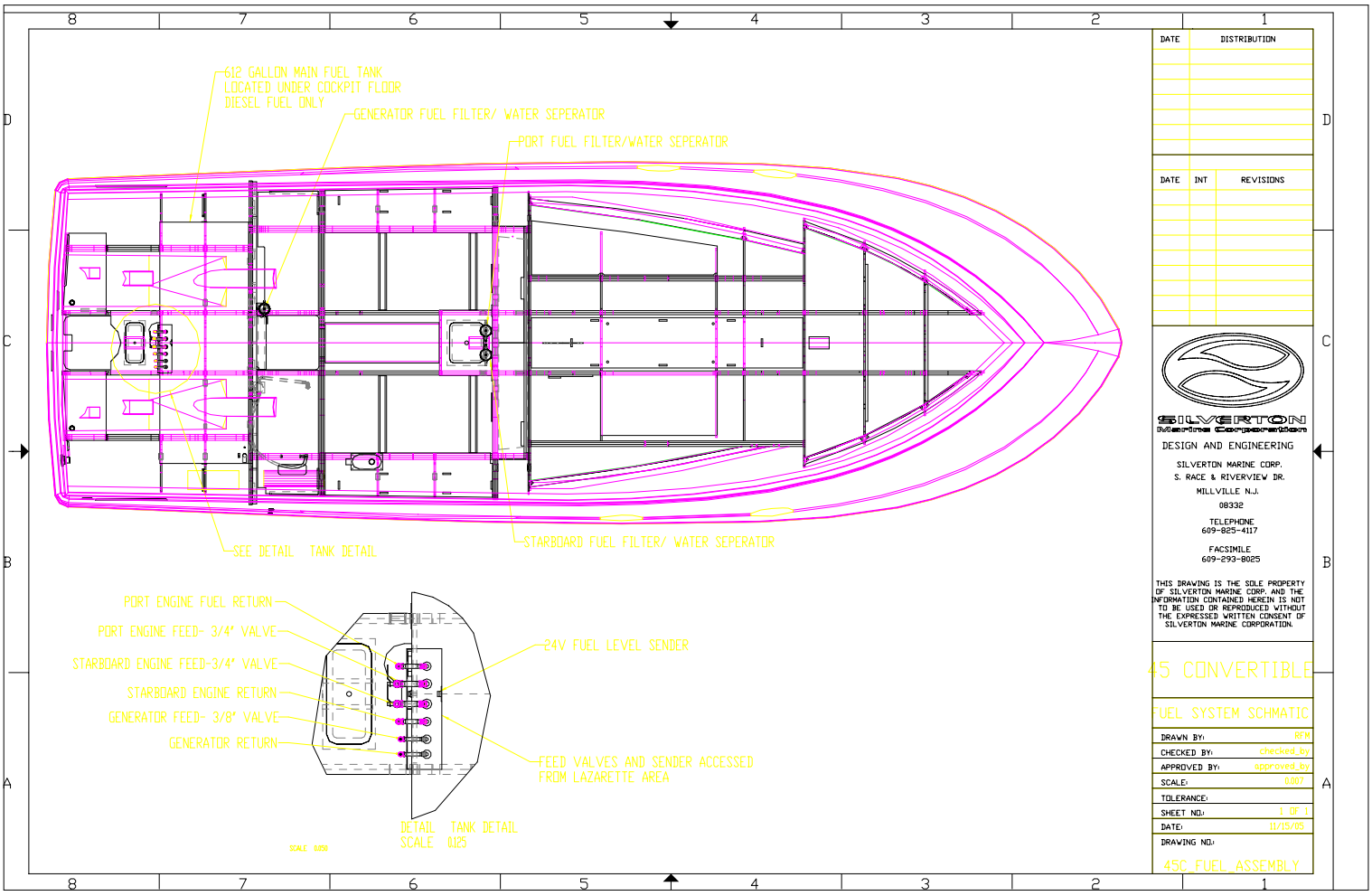
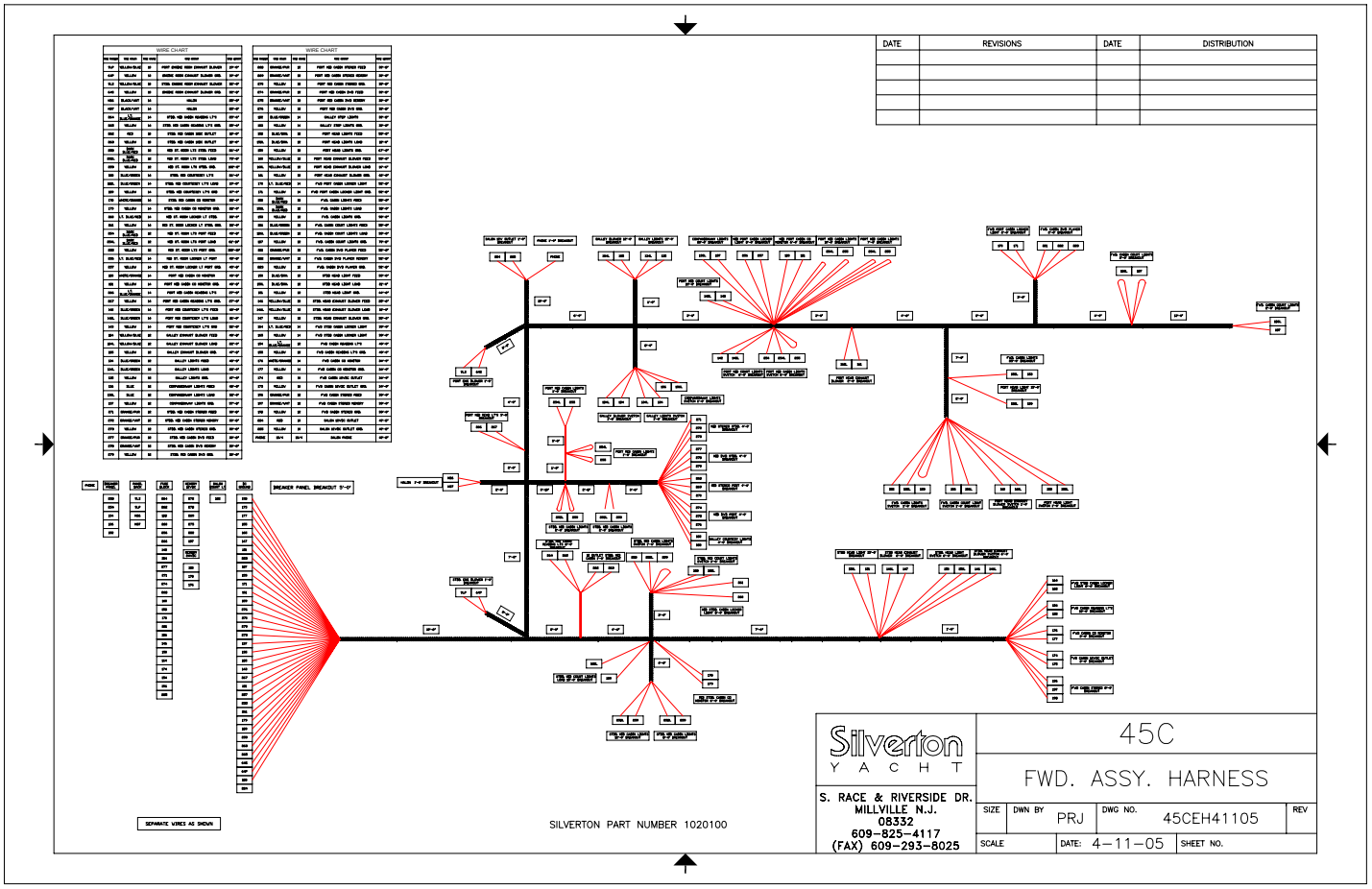
FACSIMILE
609-293-8025

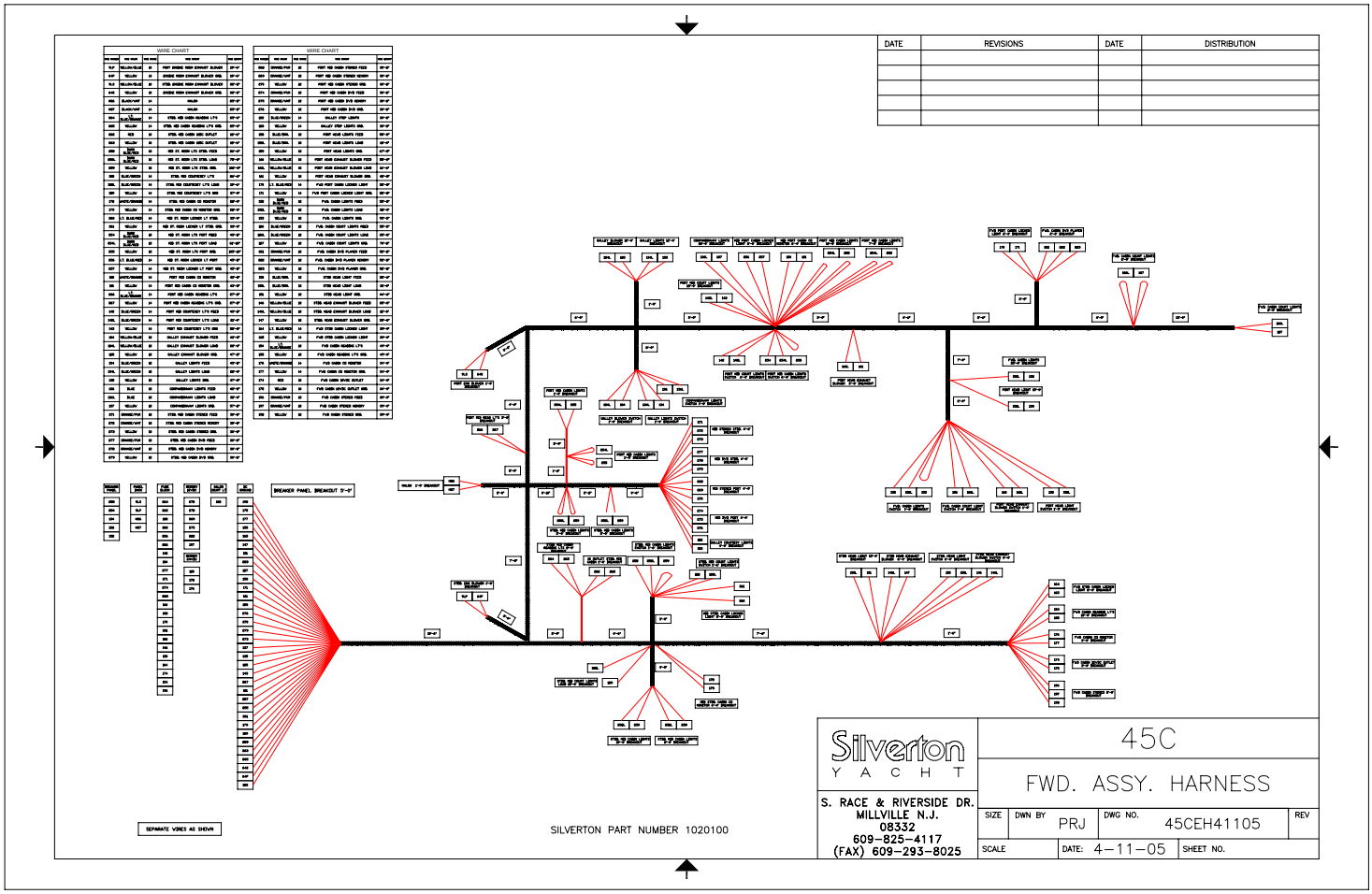
45 CONVERTIBLE

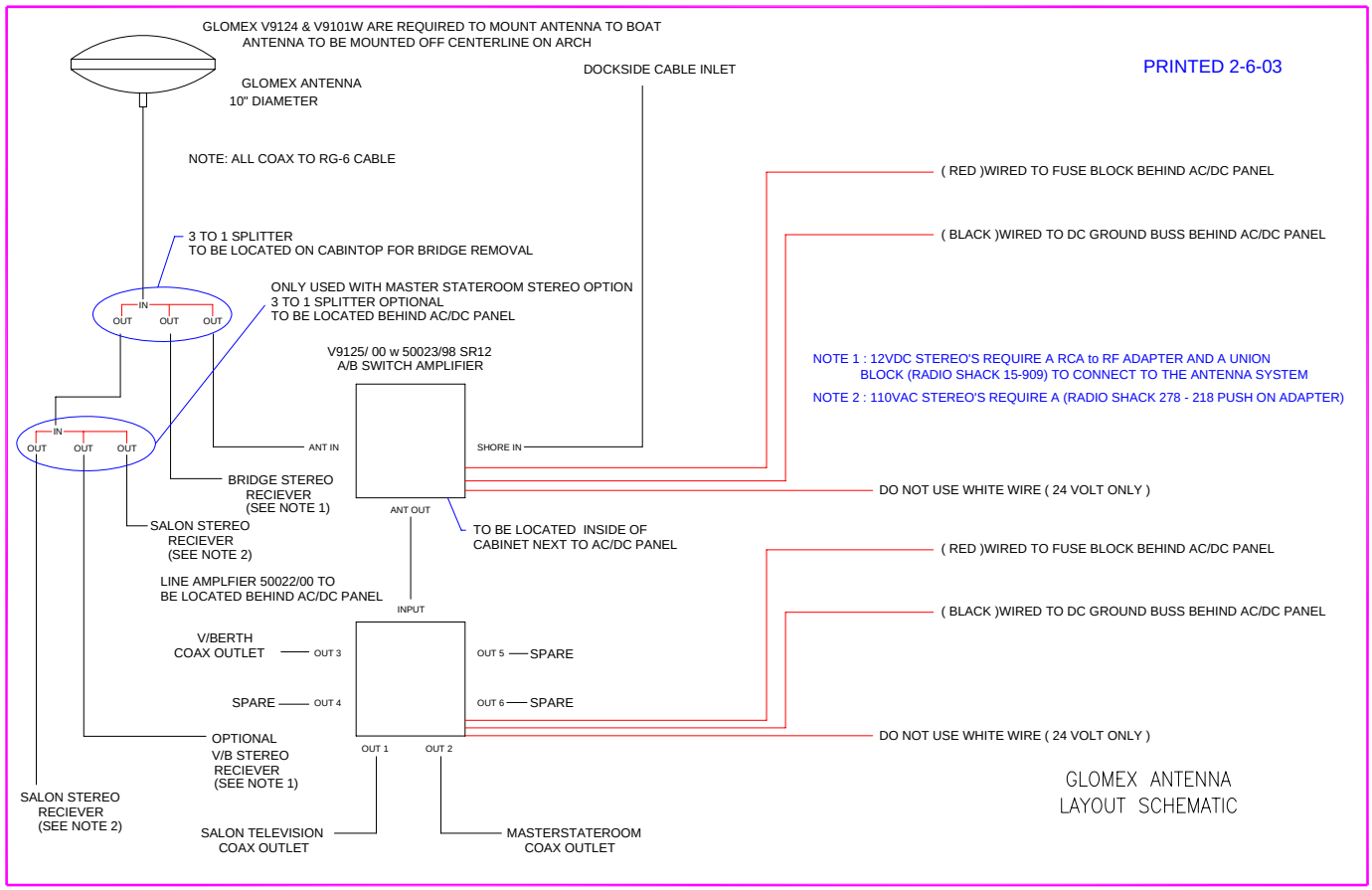
FUEL SYSTEM SCHMATIC

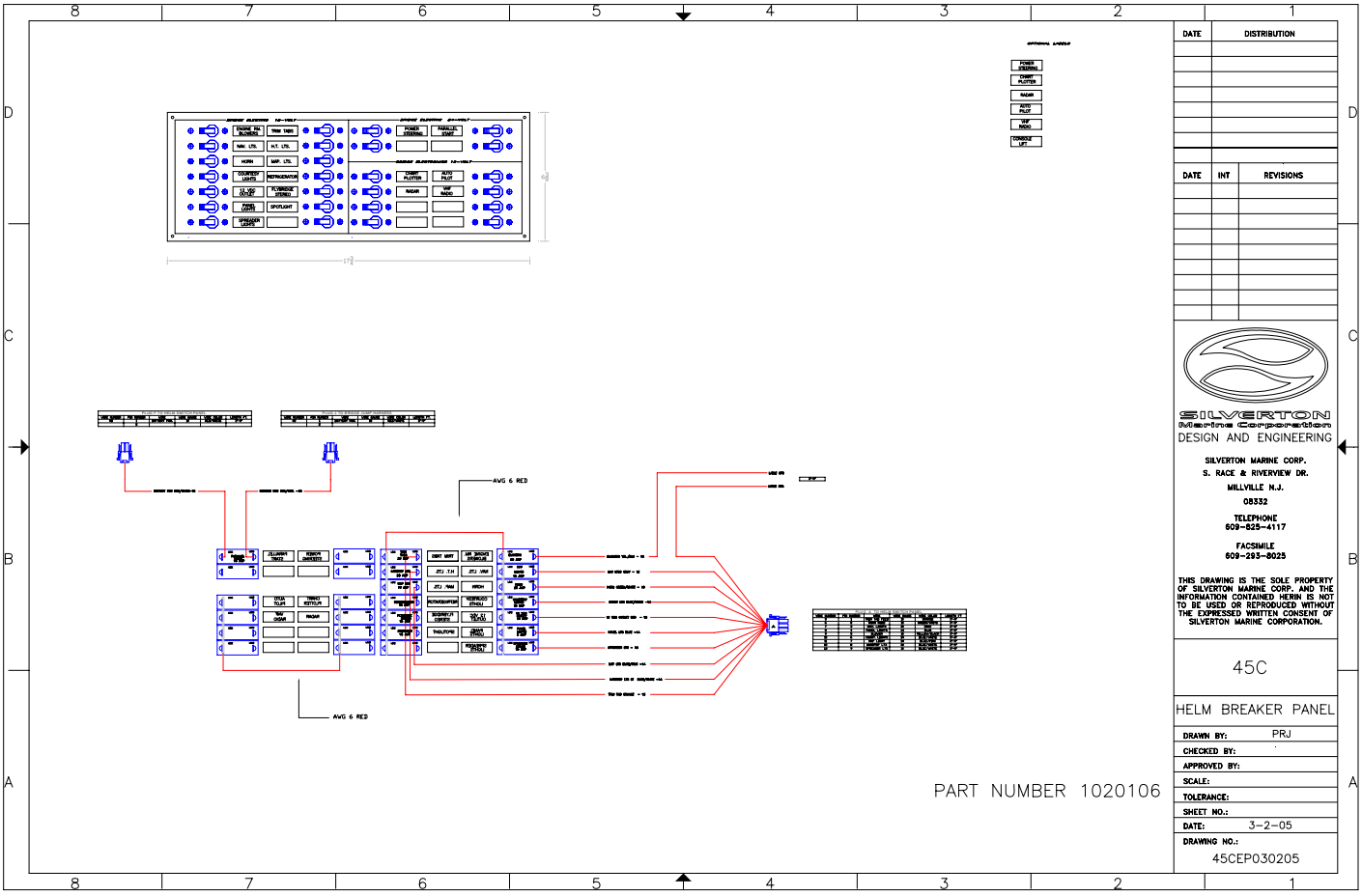
DRAWN BY:	RFM
CHECKED BY:	checked_by
APPROVED BY:	approved_by
SCALE:	0.007
TOLERANCE:	
SHEET NO.:	1 OF 1
DATE:	11/15/05
DRAWING NO.:	45C_FUEL_ASSEMBLY











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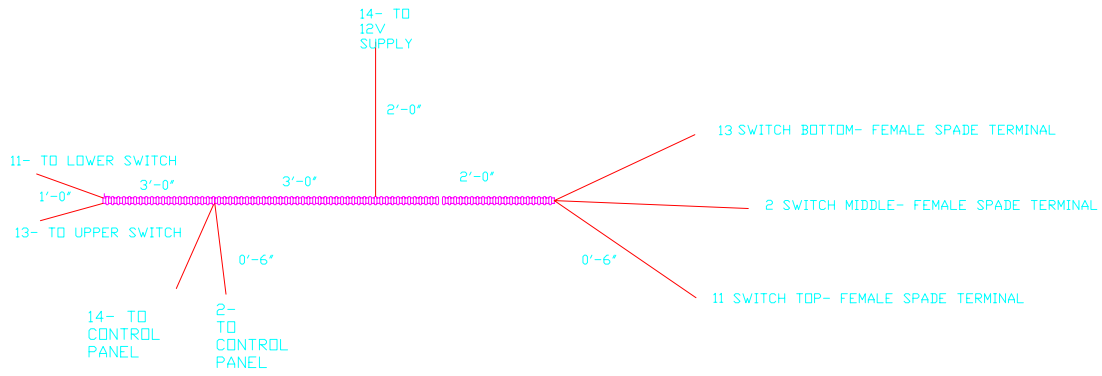
HELM BREAKER PANEL

PART NUMBER 1020106

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	3-2-05
DRAWING NO.:	45CEP030205

WIRE CHART				
11	RCKR TO LIMIT-GRN	14	ORG/GREEN	9'-6"
2	RCKR POWER	14	ORANGE	6'-0"
13	RCKR TO LIMIT-RED	14	ORG/RED	9'-6"
14	12 V POWER	14	BROWN/RED	5'-6"



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Helm Lift Harness

DRAWN BY:	RFM
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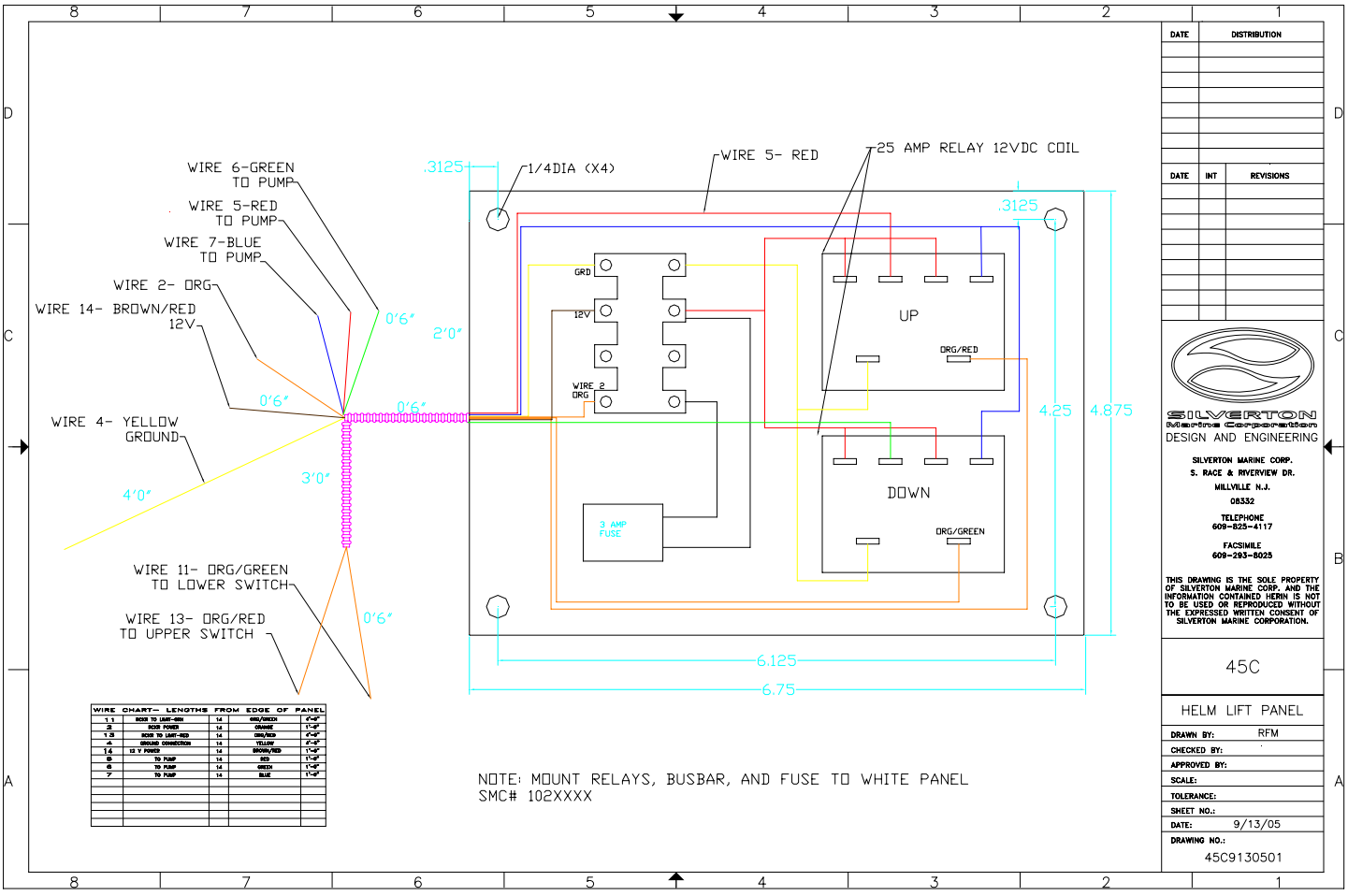
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	9/13/05
DRAWING NO.:	45C9130502



WIRE CHART- LENGTHS FROM EDGE OF PANEL				
11	ROCK TO LIMIT-GRN	14	ORG/GREEN	4'-0"
2	ROCK POWER	14	ORANGE	1'-0"
13	ROCK TO LIMIT-RED	14	ORG/RED	4'-0"
4	GROUND CONNECTION	14	YELLOW	4'-0"
14	12 V POWER	14	BROWN/RED	1'-0"
5	TO PUMP	14	RED	1'-0"
6	TO PUMP	14	GREEN	1'-0"
7	TO PUMP	14	BLUE	1'-0"

NOTE: MOUNT RELAYS, BUSBAR, AND FUSE TO WHITE PANEL
SMC# 102XXXX

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HELM LIFT PANEL

DRAWN BY:	RFM
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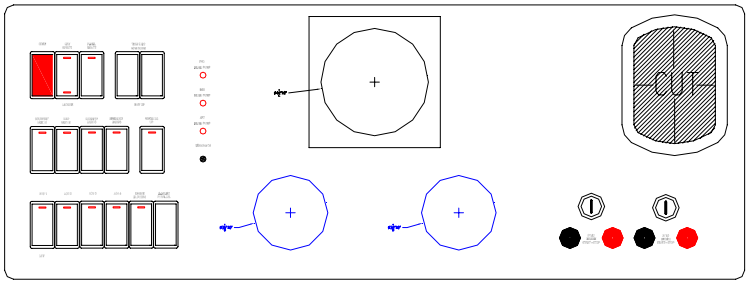
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	9/13/05
DRAWING NO.:	45C9130501



PART NUMBER 1022353

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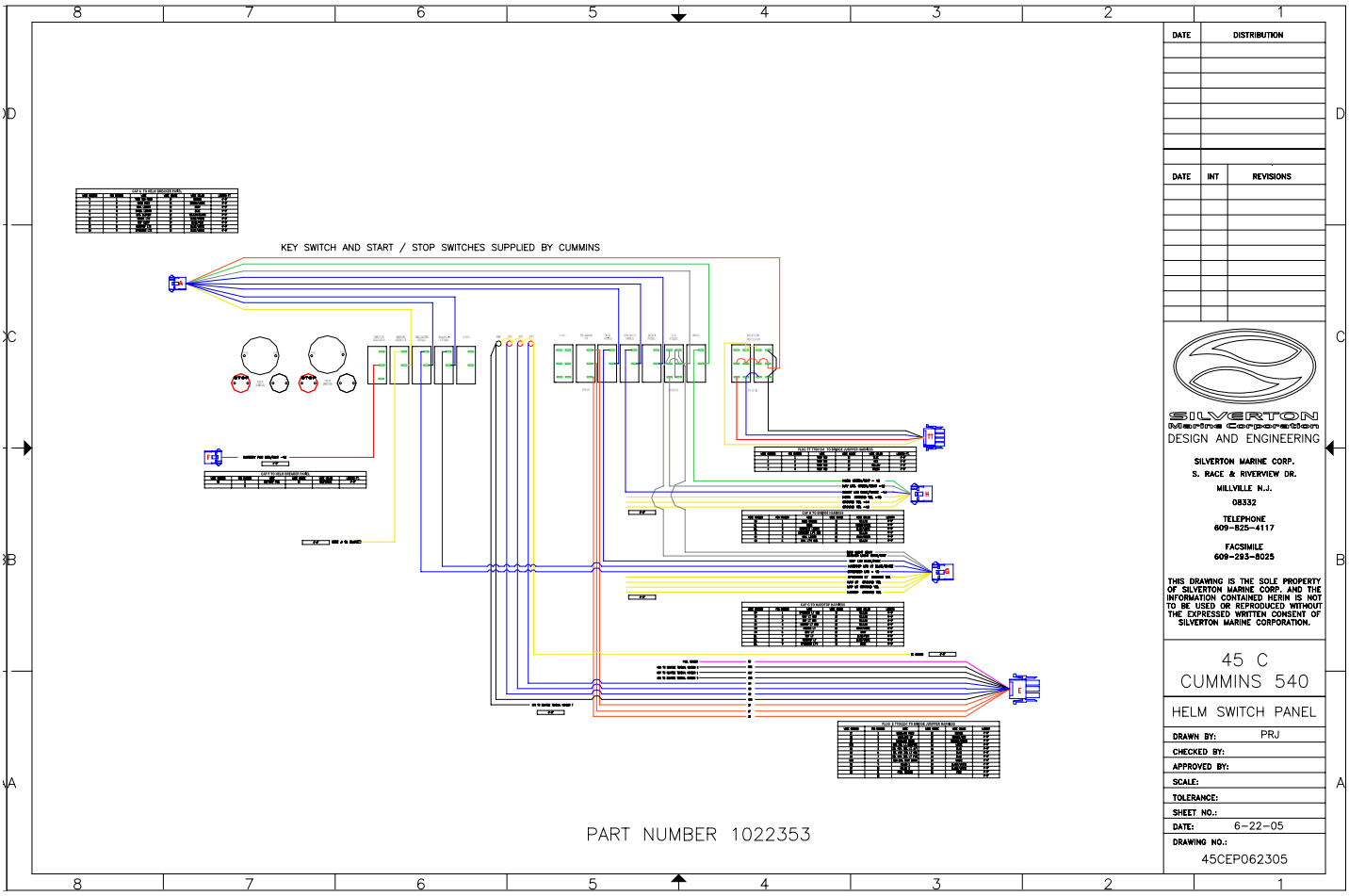
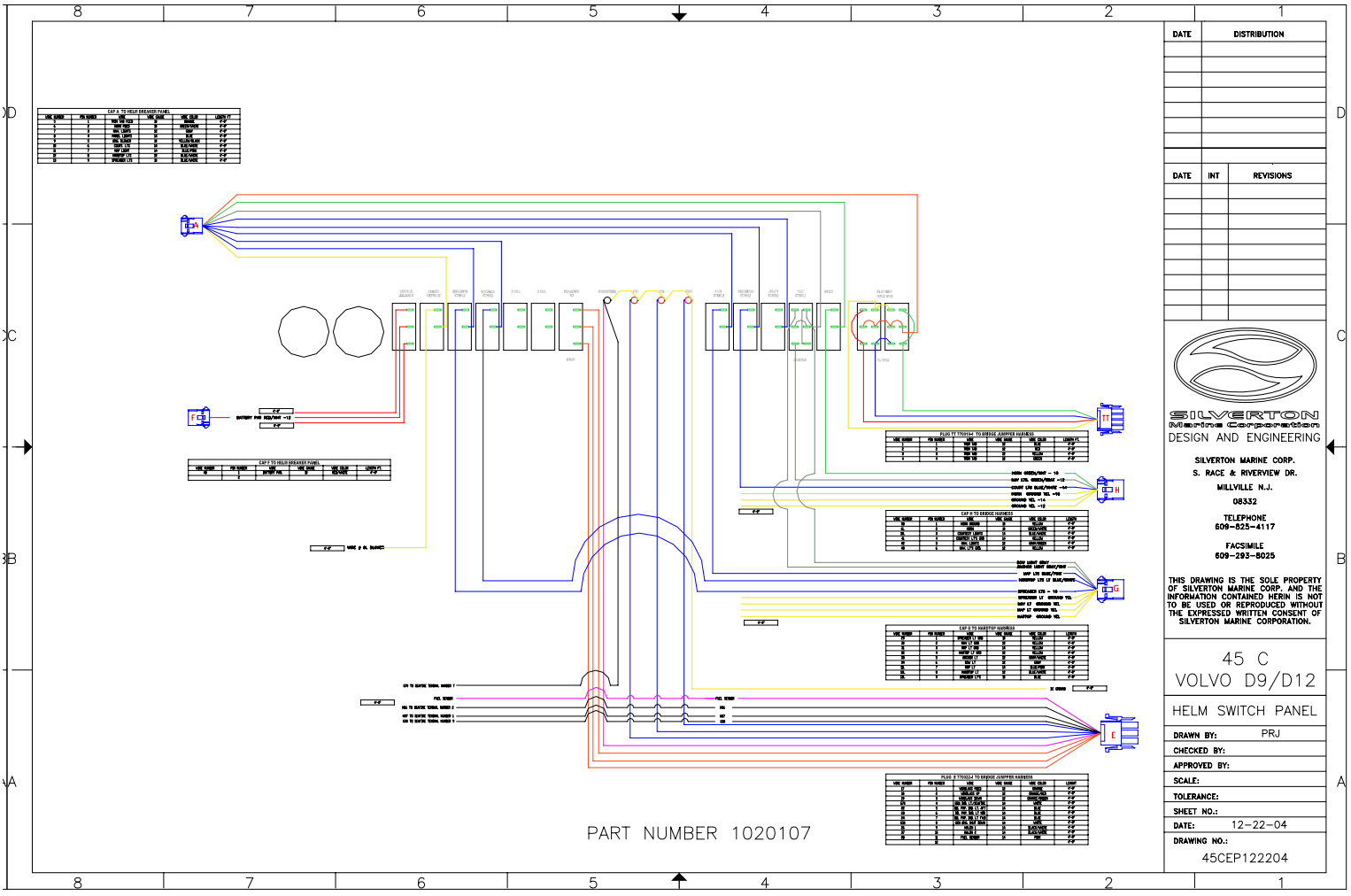
FACSIMILE
609-293-8025

45 C
CUMMINS 540

HELM SWITCH PANEL

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	6-22-05
DRAWING NO.:	45CEP062305





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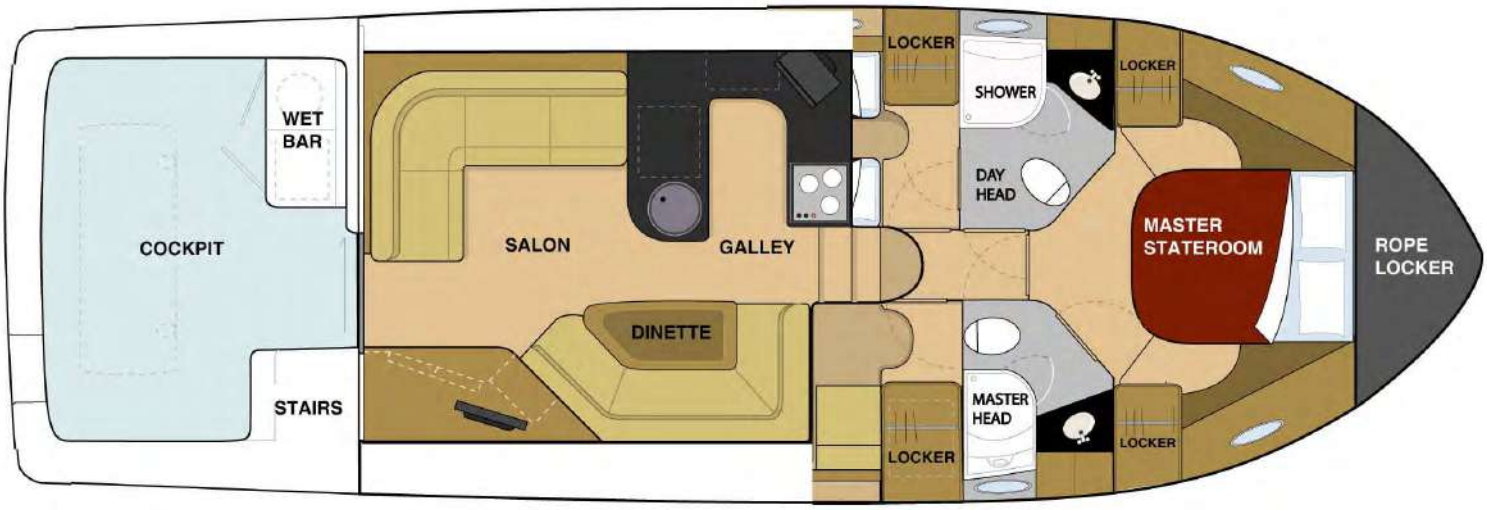
45 C
VOLVO D9/D12

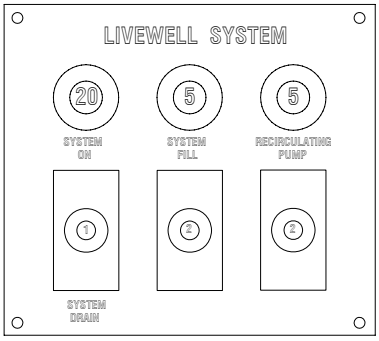
HELM SWITCH PANEL

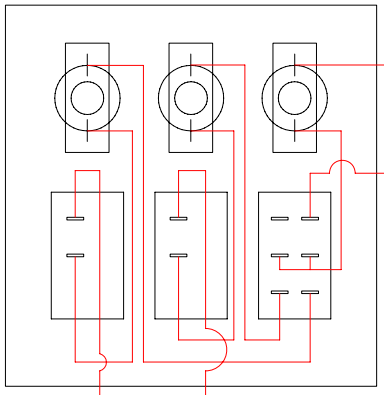
DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	12-22-04
DRAWING NO.:	45CEP122204



45 Convertible
FLOOR PLAN

10'-0" LEAD ON WIRES





NOTE:
SWITCH #1- 20 AMP ON-OFF-ON DPDT TOGGLE WITH RUBBER BOOT
SWITCH #2- 20 AMP ON-OFF SPST TOGGLE WITH RUBBER BOOT

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DATE	INT	REVISIONS

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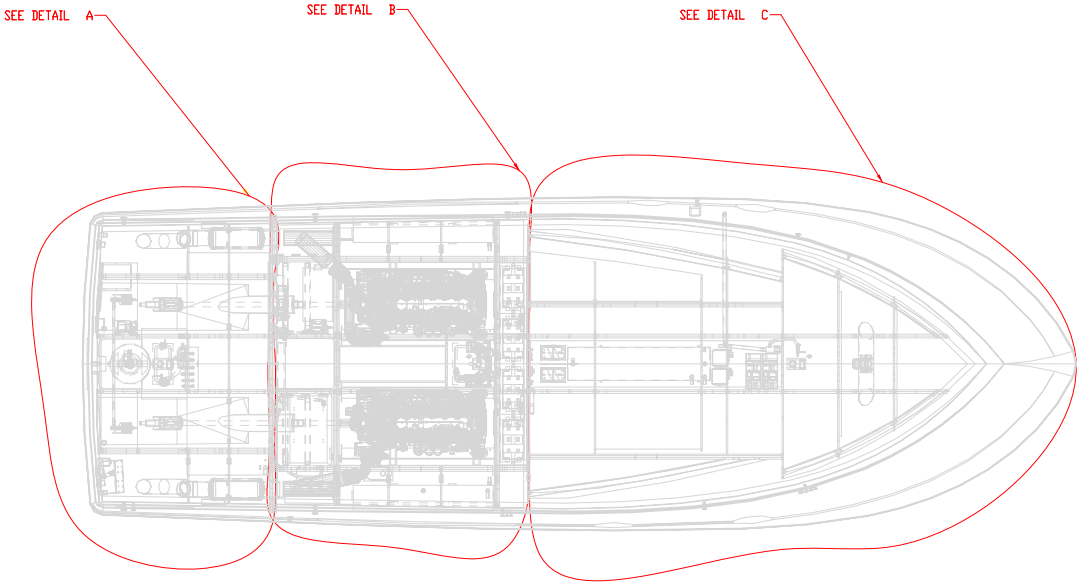
FACSIMILE
609-293-8025

45C

LIVEWELL SWITCH PANEL

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	2-23-05
DRAWING NO.:	48CEP22305



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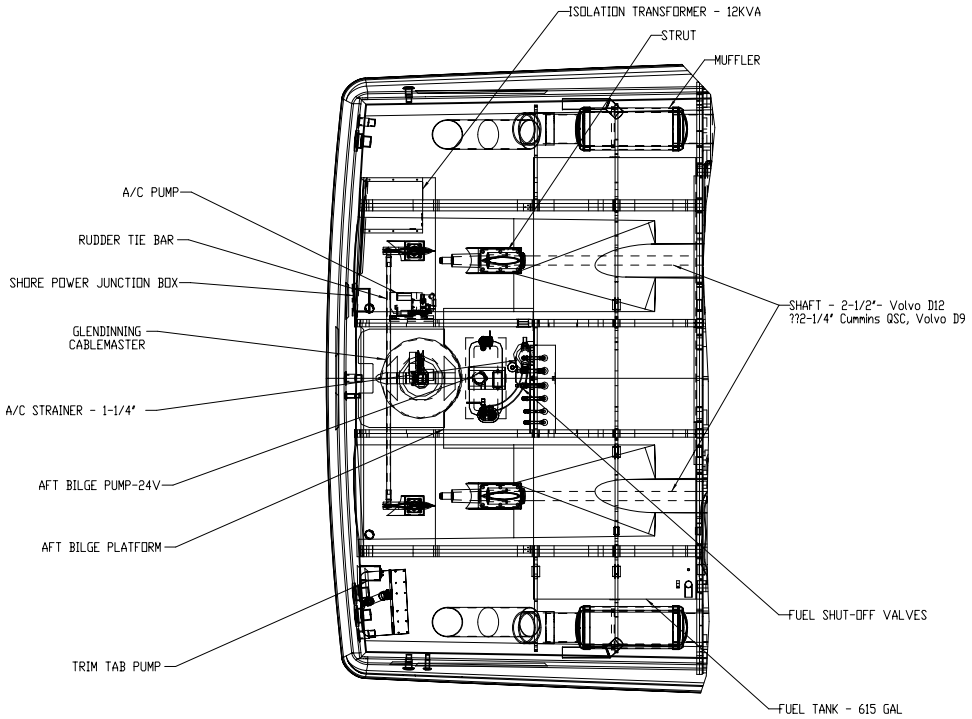
MECHANICAL ASSEMBLY

DRAWN BY:	DJT
CHECKED BY:	
APPROVED BY:	
SCALE:	0.010
TOLERANCE:	
SHEET NO.:	1 OF 5
DATE:	4-21-05
DRAWING NO.:	45C_MECHANICAL



DETAIL A
SCALE 0.083

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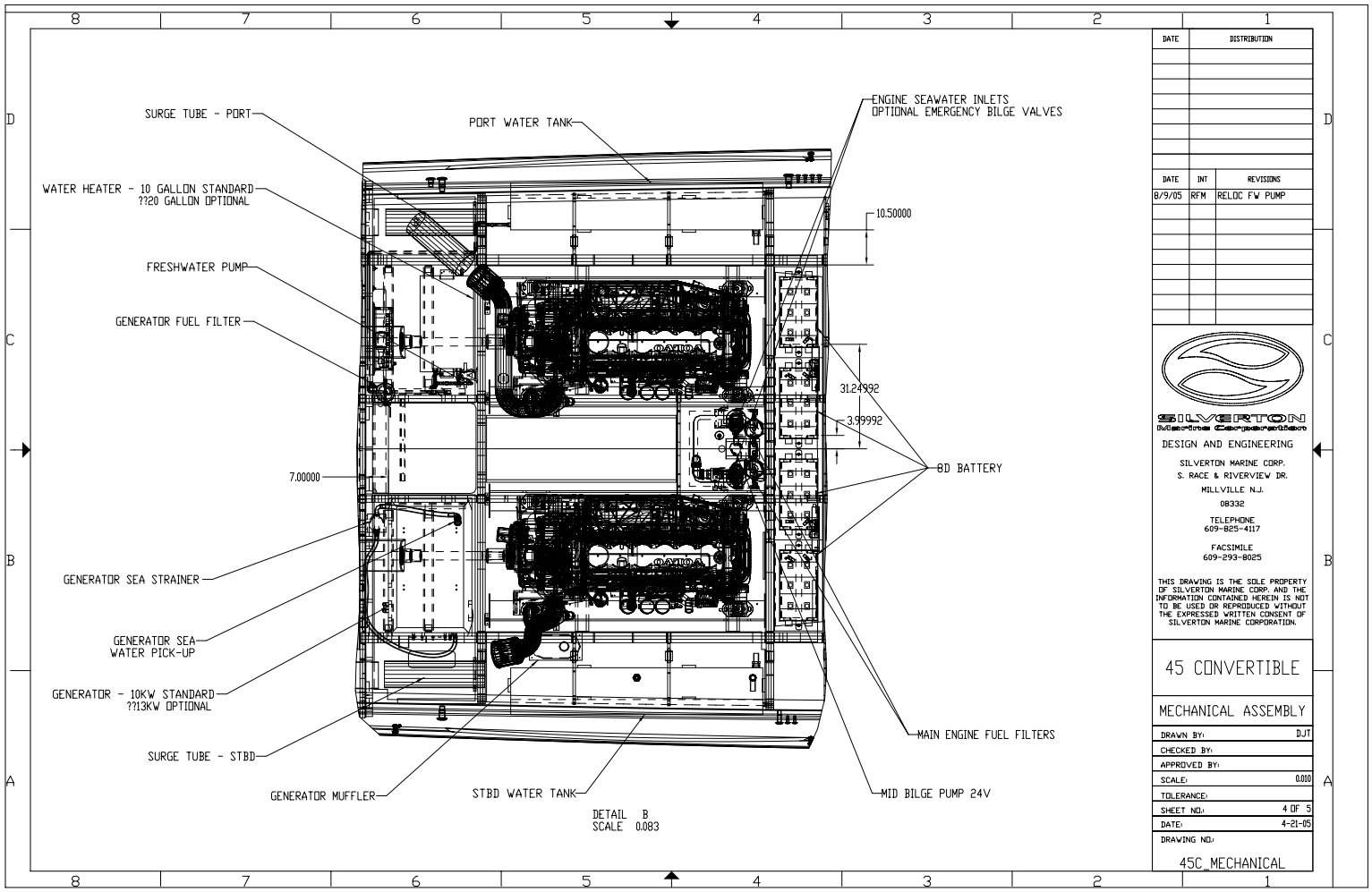
MECHANICAL ASSEMBLY

DRAWN BY:	DJT
CHECKED BY:	
APPROVED BY:	
SCALE:	0.010
TOLERANCE:	
SHEET NO.:	3 OF 5
DATE:	4-21-05
DRAWING NO.:	45C_MECHANICAL



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DATE	INT	REVISIONS
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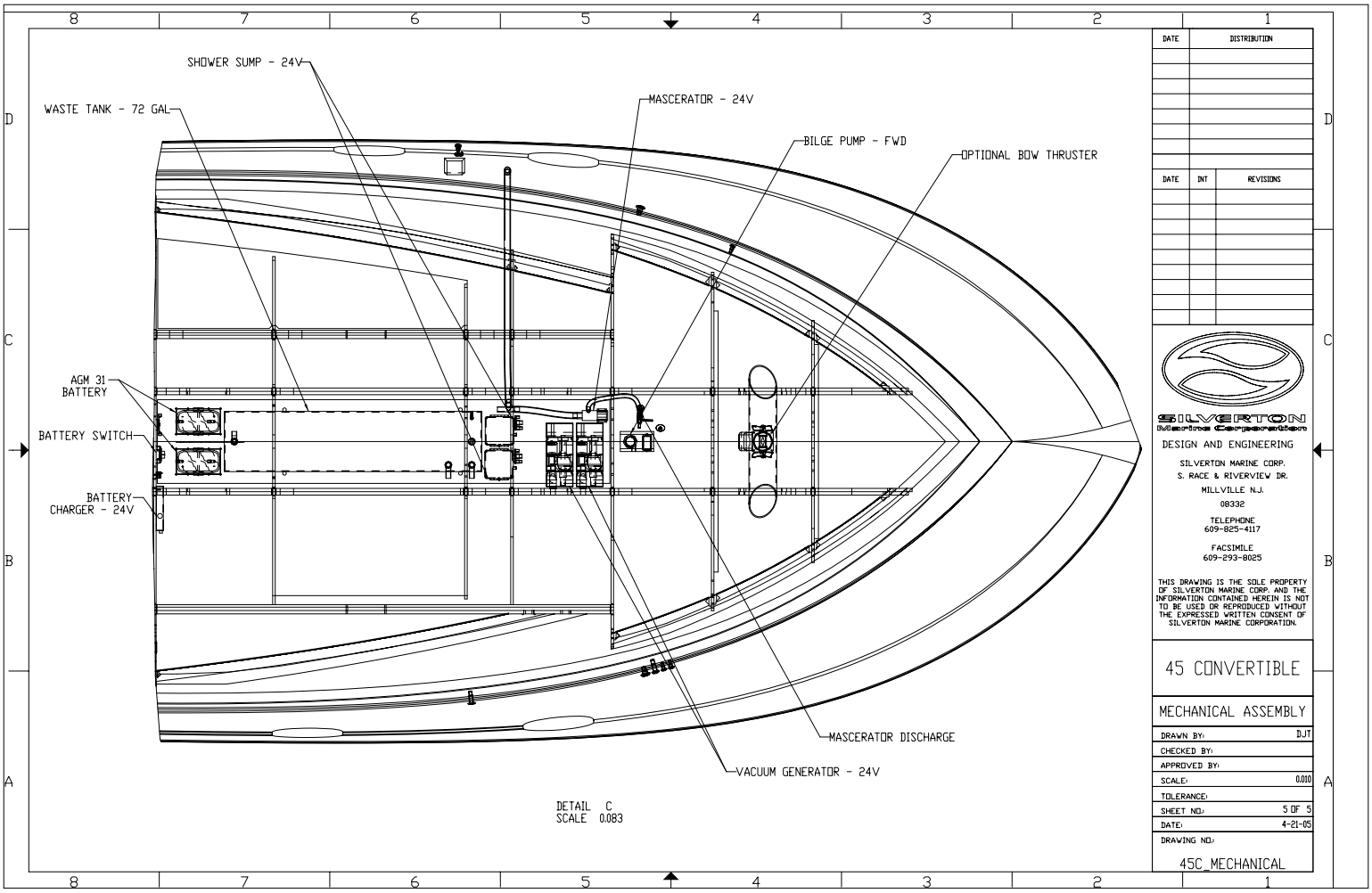
MECHANICAL ASSEMBLY

DRAWN BY:	DJT
CHECKED BY:	
APPROVED BY:	
SCALE:	0.010
TOLERANCE:	
SHEET NO.:	4 OF 5
DATE:	4-21-05
DRAWING NO.:	45C_MECHANICAL



DATE	DISTRIBUTION

DATE	INT	REVISIONS

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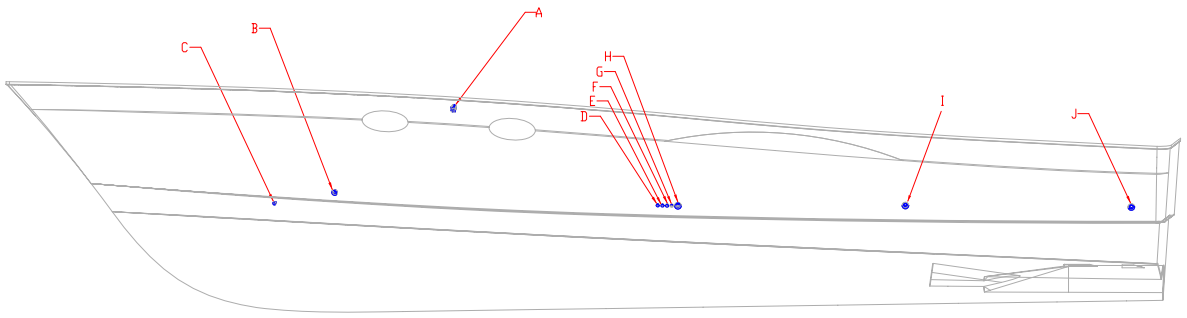
MECHANICAL ASSEMBLY

DRAWN BY:	DJT
CHECKED BY:	
APPROVED BY:	
SCALE:	0.010
TOLERANCE:	
SHEET NO.:	5 OF 5
DATE:	4-21-05
DRAWING NO.:	45C_MECHANICAL

PORT THRU-HULLS
A - WASTE VENT
B - VANITY DRAIN
C - FWD A/C DISCHARGE
D -BRIDGE COOL HELM A/C DISCHARGE
E -BRIDGE COOL HELM A/C CONDENSATE
F -PORT SALON A/C DISCHARGE
G -PORT SALON A/C CONDENSATE
H -GALLEY SINK DRAIN
I- VENT BOX DRAIN
J- LIVEWELL OVERFLOW



DATE	DISTRIBUTION

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PORT
THRU-HULLS

DRAWN BY:	DJT
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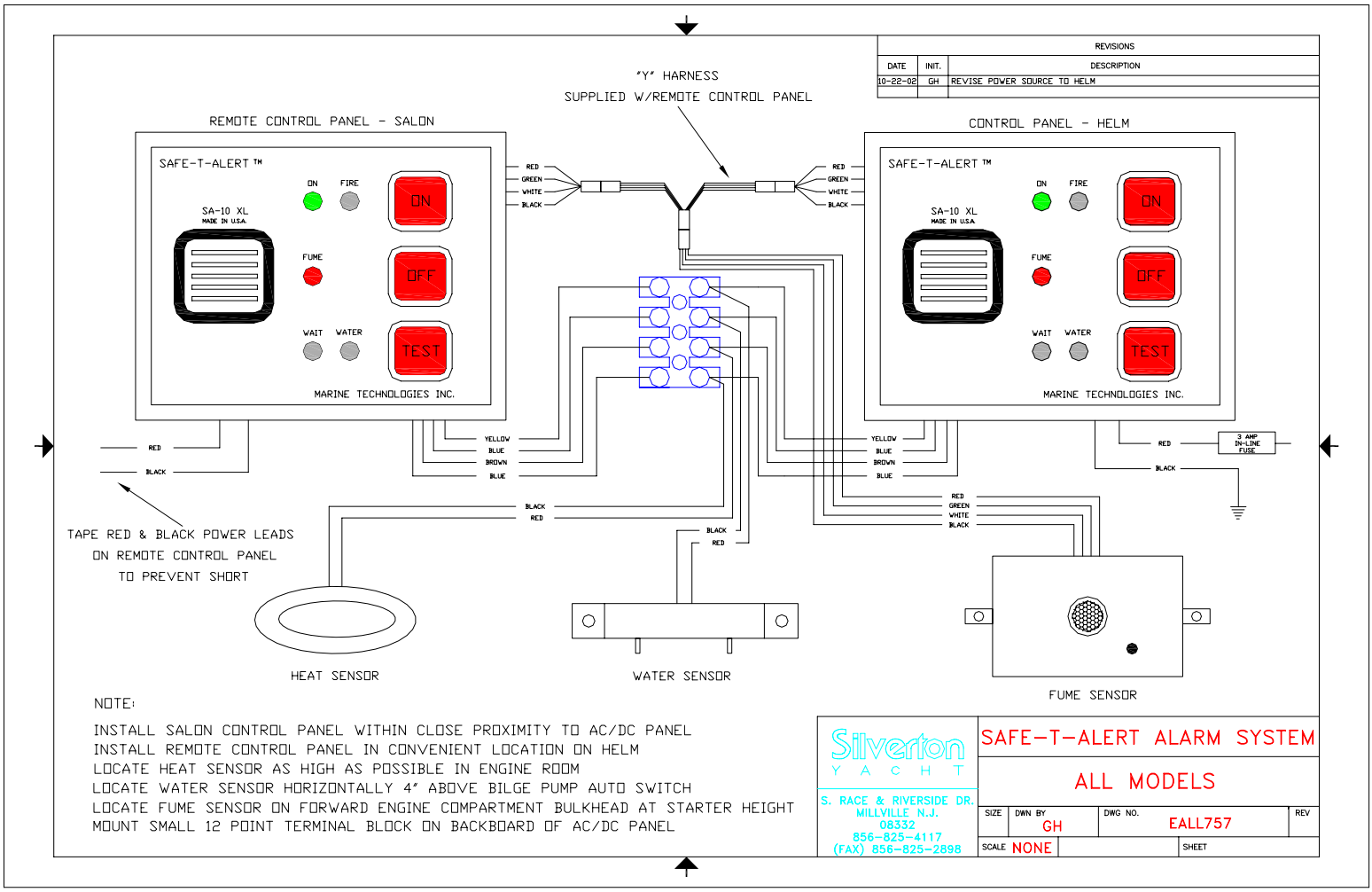
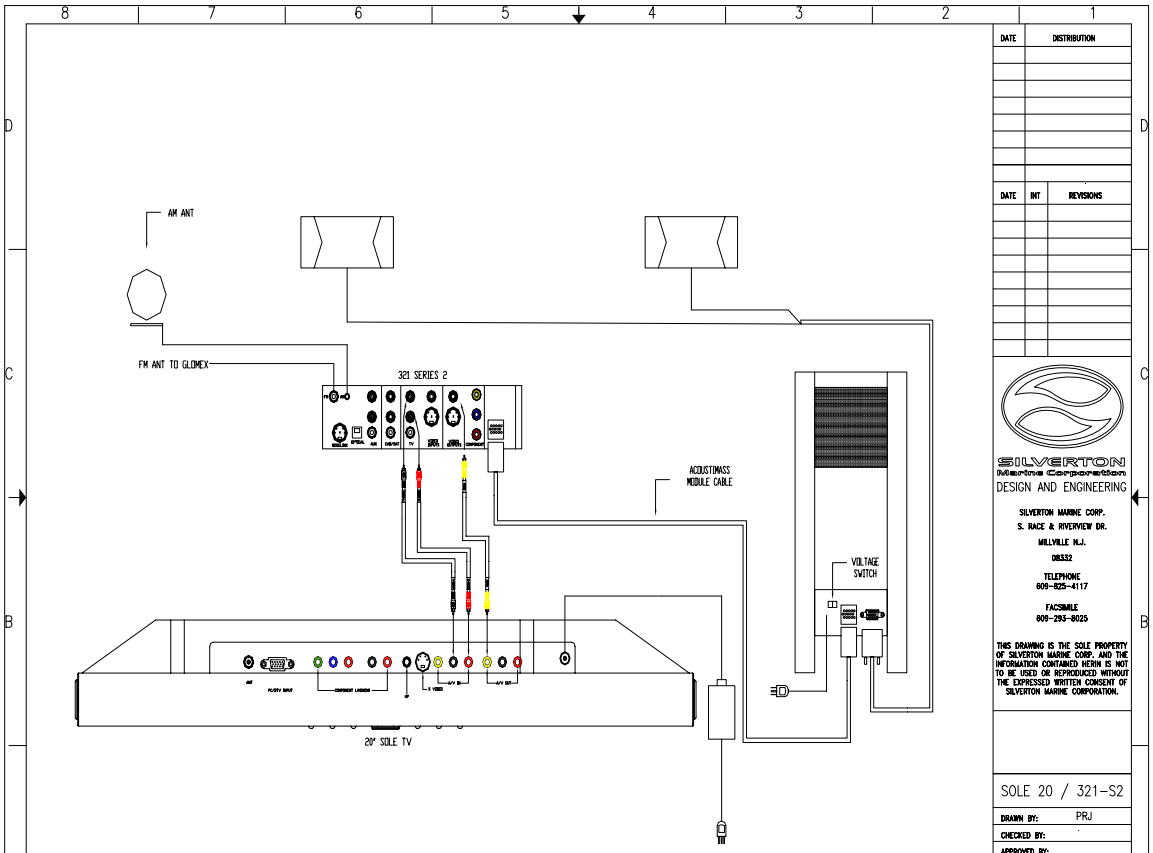
APPROVED BY:	
SCALE:	0.011
TOLERANCE:	
SHEET NO.:	4 OF 5
DATE:	4-20-05
DRAWING NO.:	45C_THRU_HULLS





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SOLE 20 / 321-S2

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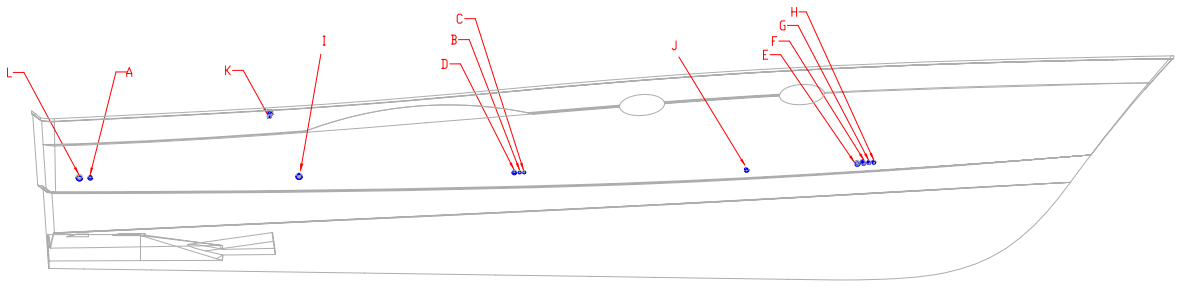
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	9-12-04
DRAWING NO.:	SILALL91204

STARBOARD THRU-HULLS
A - AFT BILGE DISCHARGE
B -STBD SALON A/C DISCHARGE
C -STBD SALON A/C CONDENSATE
D - MID BILGE DISCHARGE
E - VANITY DRAIN
F - FWD BILGE DISCHARGE
G - SHOWER SUMP 1
H - SHOWER SUMP 2
I - STBD VENT BOX DRAIN
J - WASHER DRAIN
K - FUEL VENT
L - LIVEWELL OVERFLOW



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STARBOARD
THRU-HULLS

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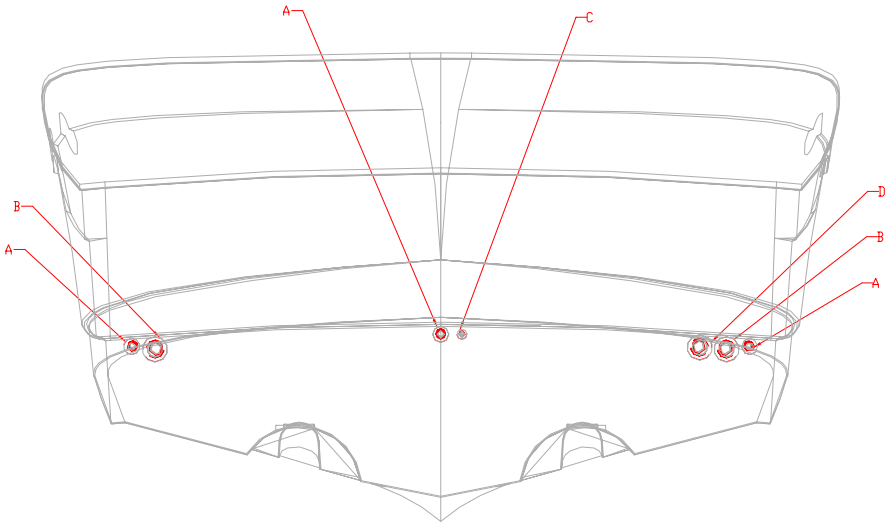
CHECKED BY:	
APPROVED BY:	
SCALE:	0.011
TOLERANCE:	
SHEET NO.:	3 OF 5
DATE:	4-20-05
DRAWING NO.:	45C_THRU_HULLS

TRANSOM THRU-HULLS
A - COCKPIT DRAIN
B - ENGINE EXHAUST BYPASS
C - LIVEWELL DRAIN
D - GENERATOR EXHAUST



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TRANSOM THRU-HULLS

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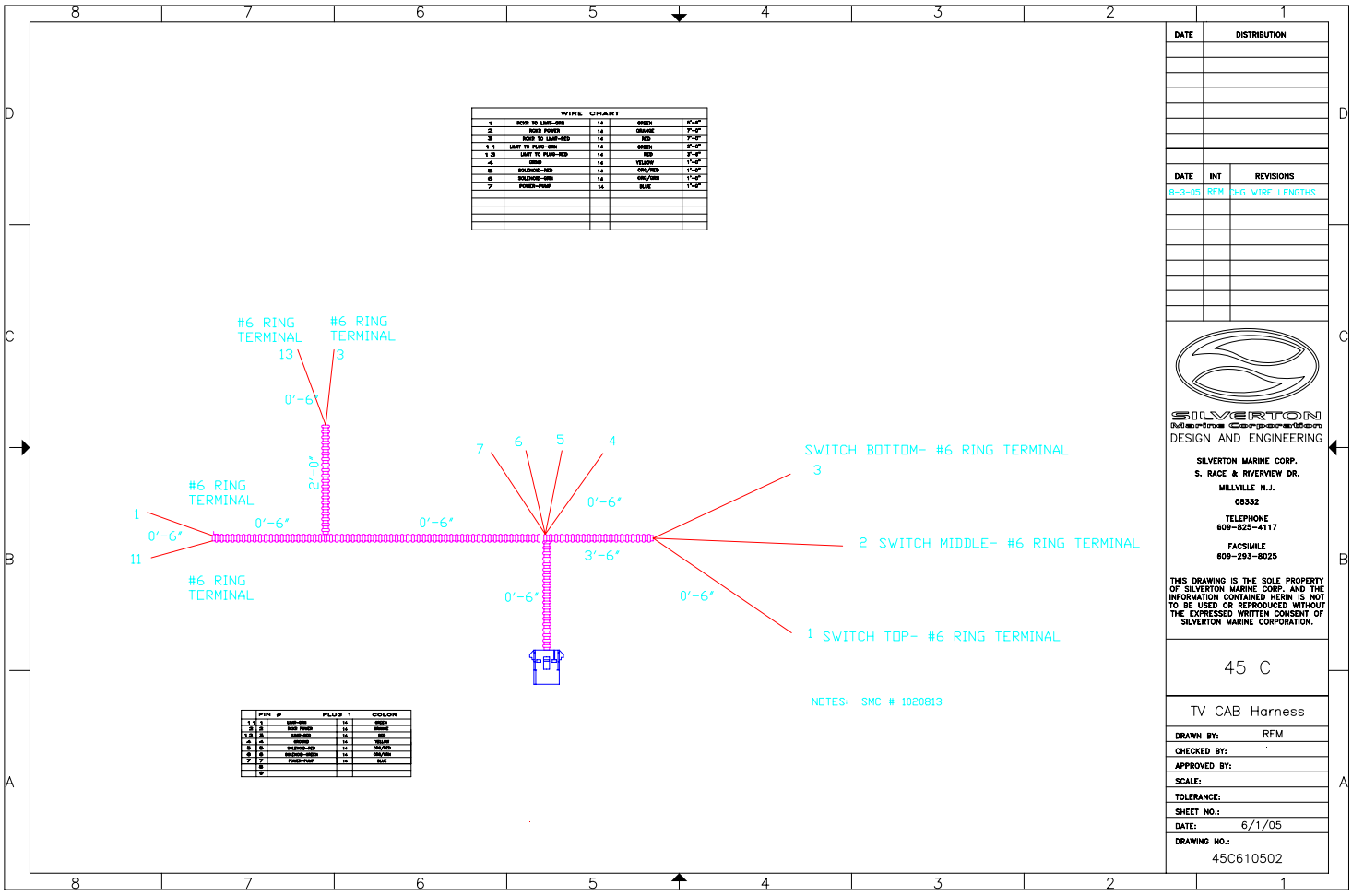
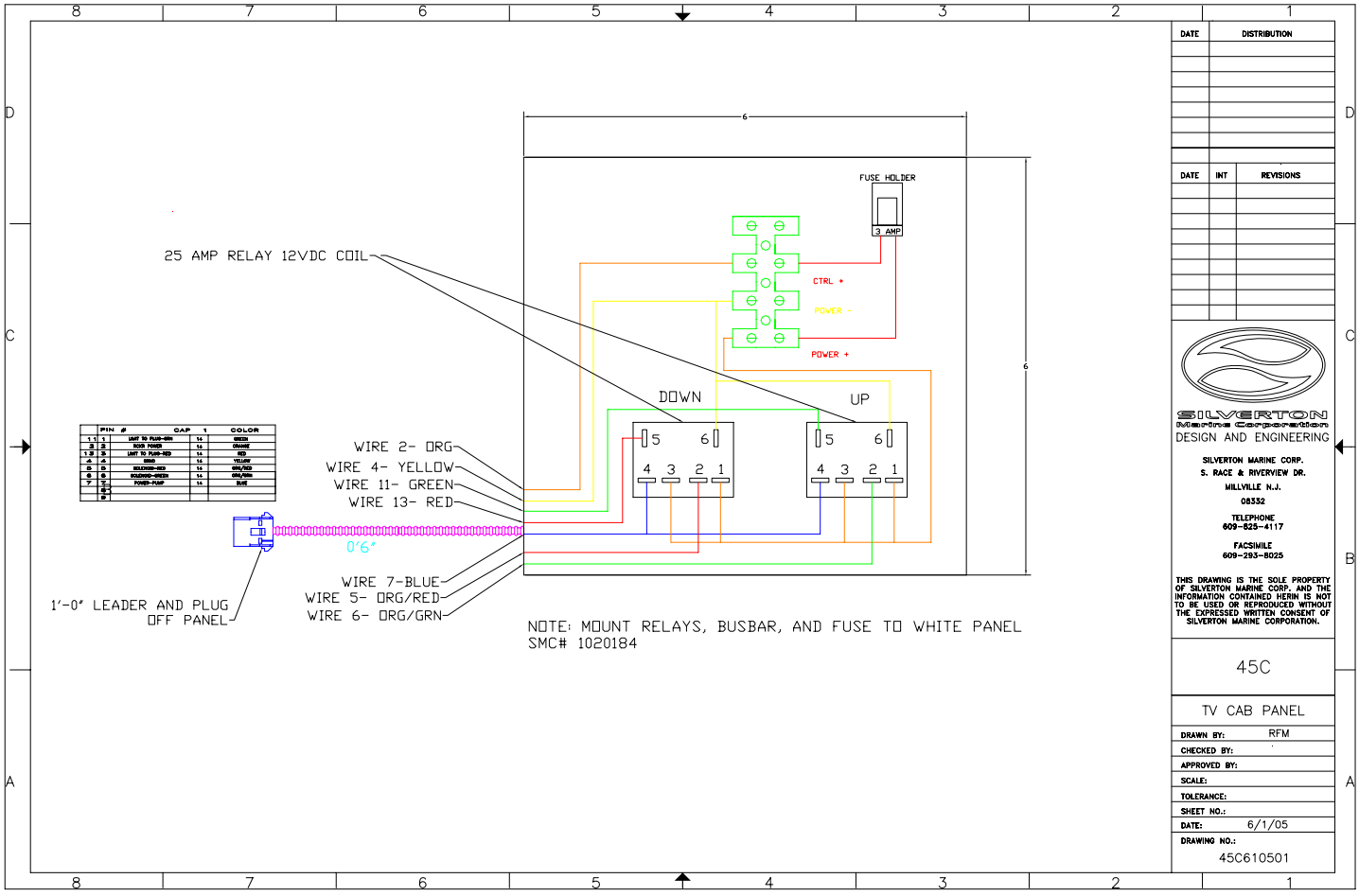
CHECKED BY:	
APPROVED BY:	
SCALE:	0.011
TOLERANCE:	
SHEET NO.:	5 OF 5
DATE:	4-20-05
DRAWING NO.:	45C_THRU_HULLS





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TV CAB PANEL

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APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	6/1/05
DRAWING NO.:	45C610501

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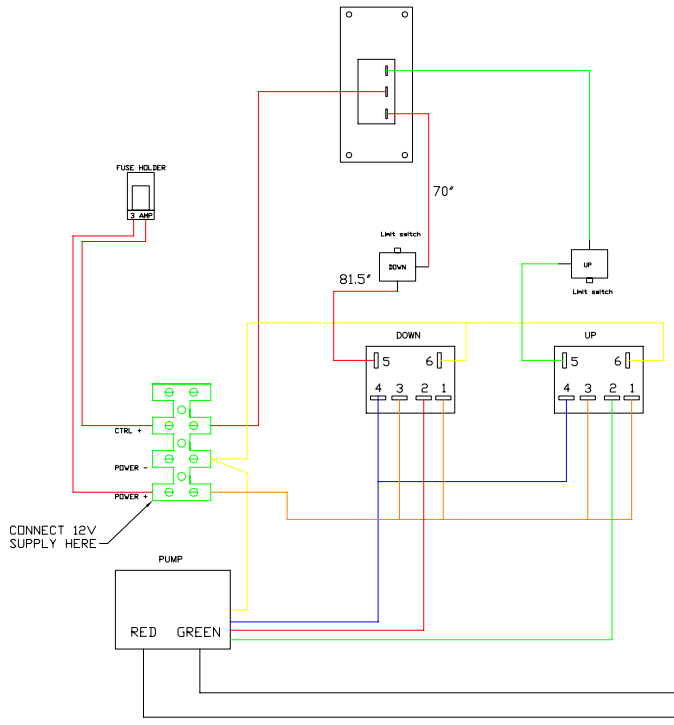

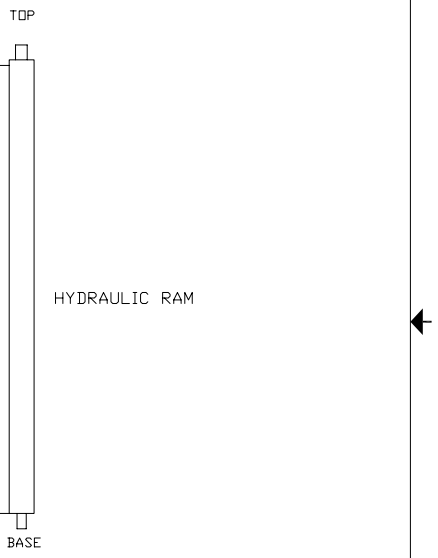

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MILLVILLE N.J.
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(FAX) 609-293-8025

45C

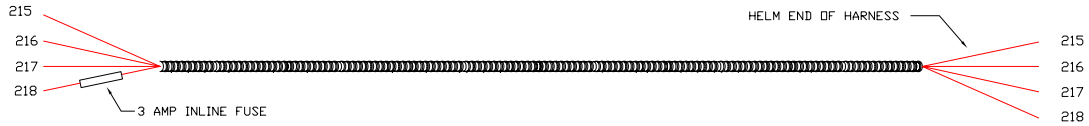
TV REMOTE LIFT CONTROL

SIZE	DWN BY	DWG NO.	REV
	PRJ		

SCALE	DATE	SHEET NO.
SCALE	1-20-05	

REV: 11-10-04 CHANGE TO 18 AWG WIRE

NO.	GAUGE	COLOR	LENGTH
215	18	WHITE	
216	18	GREEN	
217	18	BROWN	
218	18	PINK	



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DATE	INT	REVISIONS

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609-293-8025

45C

VOLVO BOW THRUSTER

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	1-17-05
DRAWING NO.:	EH011705

45C VOLVO D-12

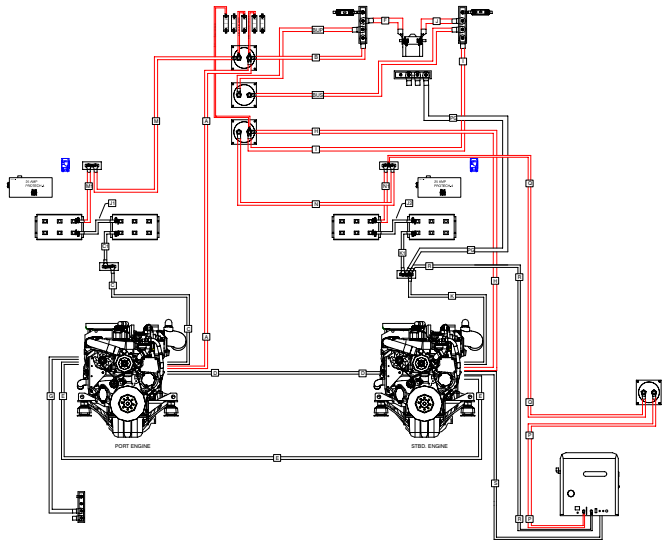
CABLE	WIRE GAUGE	WIRE COLOR	WIRE CIRCUIT	TERMINAL	TO	TERMINAL	WIRE LENGTH
A	4/0	RED	PORT BATTERY SWITCH TO PORT STARTER	RING EYE	TO	RING EYE	28'-0"
B	4/0	RED	PORT BATTERY SWITCH TO PORT MAIN BUSS	RING EYE	TO	RING EYE	
C	4/0	YELLOW	PORT ENGINE TO PORT GROUND BUSS	RING EYE	TO	RING EYE	12'-0"
C1	4/0	YELLOW	PORT BATTERY TO PORT GROUND BUSS	NEG TERM	TO	RING EYE	4'-0"
D	4/0	YELLOW	ENGINE TO ENGINE GROUND INBOURD	RING EYE	TO	RING EYE	18'-0"
E	4/0	YELLOW	ENGINE TO ENGINE GROUND OUTBOURD	RING EYE	TO	RING EYE	22'-0"
F	4/0	RED	PORT BUSS TO SOLENOID	RING EYE	TO	RING EYE	
G	4/0	YELLOW	PORT ENGINE TO GROUND BUSS	RING EYE	TO	RING EYE	15'-0"
H	4/0	RED	STBD. BATTERY SWITCH TO STBD. STARTER	RING EYE	TO	RING EYE	19'-0"
I	4/0	RED	STBD. BATTERY SWITCH TO STBD. MAIN BUSS	RING EYE	TO	RING EYE	
J	4/0	RED	STBD. BUSS TO SOLENOID	RING EYE	TO	RING EYE	
K	4/0	YELLOW	STBD. BATTERY TO STBD. ENGINE GROUND	RING EYE	TO	RING EYE	10'-0"
K1	4/0	YELLOW	STBD. BATTERY TO STBD. GROUND BUSS	NEG TERM	TO	RING EYE	4'-0"
M	4/0	RED	PORT BUSS TO PORT BATTERY SWITCH LINE	RING EYE	TO	RING EYE	22'-0"
M1	4/0	RED	PORT BATTERY TO PORT BUSS	POS TERM	TO	RING EYE	4'-0"
N	4/0	RED	STBD. BUSS TO STBD. BATTERY SWITCH LINE	RING EYE	TO	RING EYE	17'-0"
N1	4/0	RED	STBD. BATTERY TO STBD. BUSS	POS TERM	TO	RING EYE	4'-0"
PG	4/0	YEL	STBD. BATTERY GROUND BUSS TO MAIN GROUND BUSS	RING EYE	TO	RING EYE	17'-0"
J1	4/0	BLACK	PORT BATTERY JUMPER POS TO NEG	NEG TERM	TO	POS TERM	1'-6"
J2	4/0	BLACK	STBD. BATTERY JUMPER POS TO NEG	NEG TERM	TO	POS TERM	1'-6"
GBJ1	4/0	YELLOW	PORT STARTER TO BLOCK GROUND JUMPER	RING EYE	TO	RING EYE	2'-0"
GBJ2	4/0	YELLOW	STBD. STARTER TO BLOCK GROUND JUMPER	RING EYE	TO	RING EYE	2'-0"
BUP	4/0	RED	BACK UP SWITCH TO PORT PANEL BUSS	RING EYE	TO	RING EYE	
BUS	4/0	RED	BACK UP SWITCH TO STBD. PANEL BUSS	RING EYE	TO	RING EYE	

GENERATOR CABLES

CABLE	WIRE GAUGE	WIRE COLOR	WIRE CIRCUIT	TERMINAL	TO	TERMINAL	WIRE LENGTH
P	1/0	RED	BATTERY SWITCH TO GENERATOR	RING EYE	TO	RING EYE	9'-0"
Q	1/0	RED	STBD. BATTERY TO GENERATOR BATTERY SWITCH	RING EYE	TO	RING EYE	24'-0"
R	1/0	YELLOW	STBD. BATTERY GROUND TO GENERATOR GRD.	RING EYE	TO	RING EYE	18'-0"
S	1/0	YELLOW	STBD. ENGINE TO GENERATOR ENGINE GROUND	RING EYE	TO	RING EYE	10'-6"

BATTERY NEGATIVE

BATTERY POSITIVE



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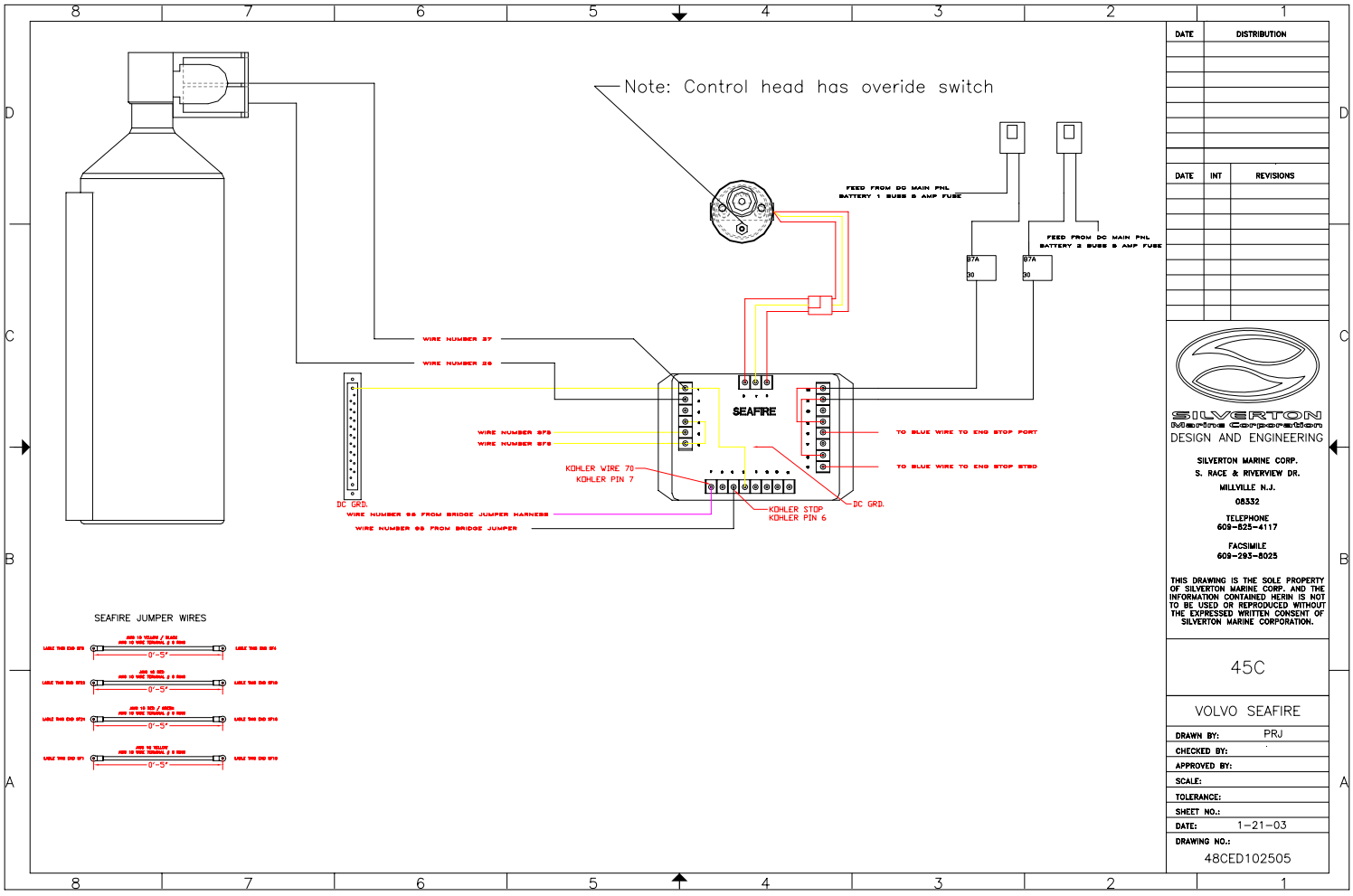
609-825-4117

FACSIMILE
609-293-8025

45C

VOLVO D12 BATTERY SYSTEM

DRAWN BY:	NAME
CHECKED BY:	
APPROVED BY:	
SCALE:	SCALE
TOLERANCE:	
SHEET NO.:	SHEET
DATE:	DATE
DRAWING NO.:	NUMBER



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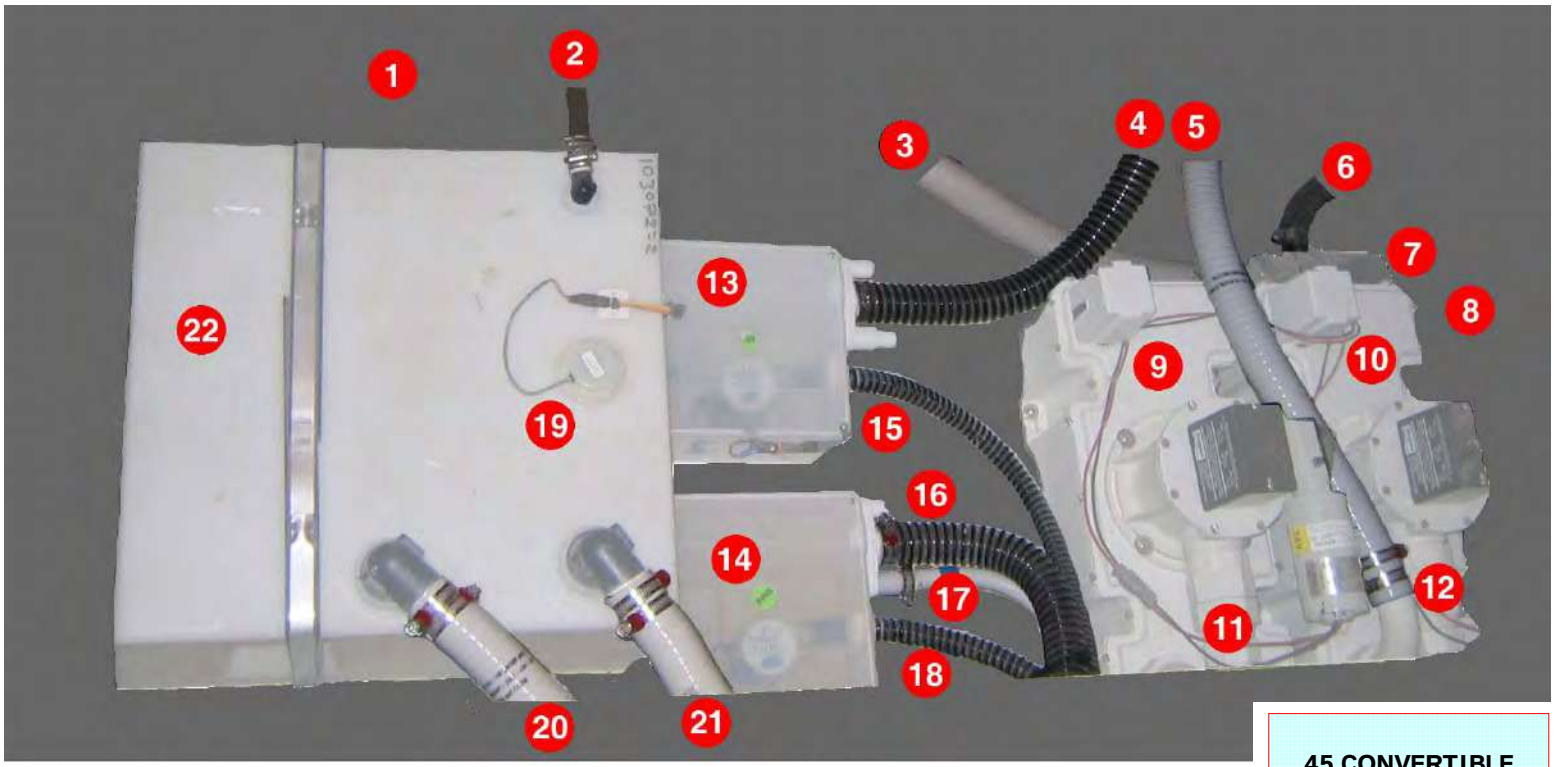
TELEPHONE
609-825-4117

FACSIMILE
609-293-8025

45C

VOLVO SEAFIRE

DRAWN BY:	PRJ
CHECKED BY:	
APPROVED BY:	
SCALE:	
TOLERANCE:	
SHEET NO.:	
DATE:	1-21-03
DRAWING NO.:	48CED102505



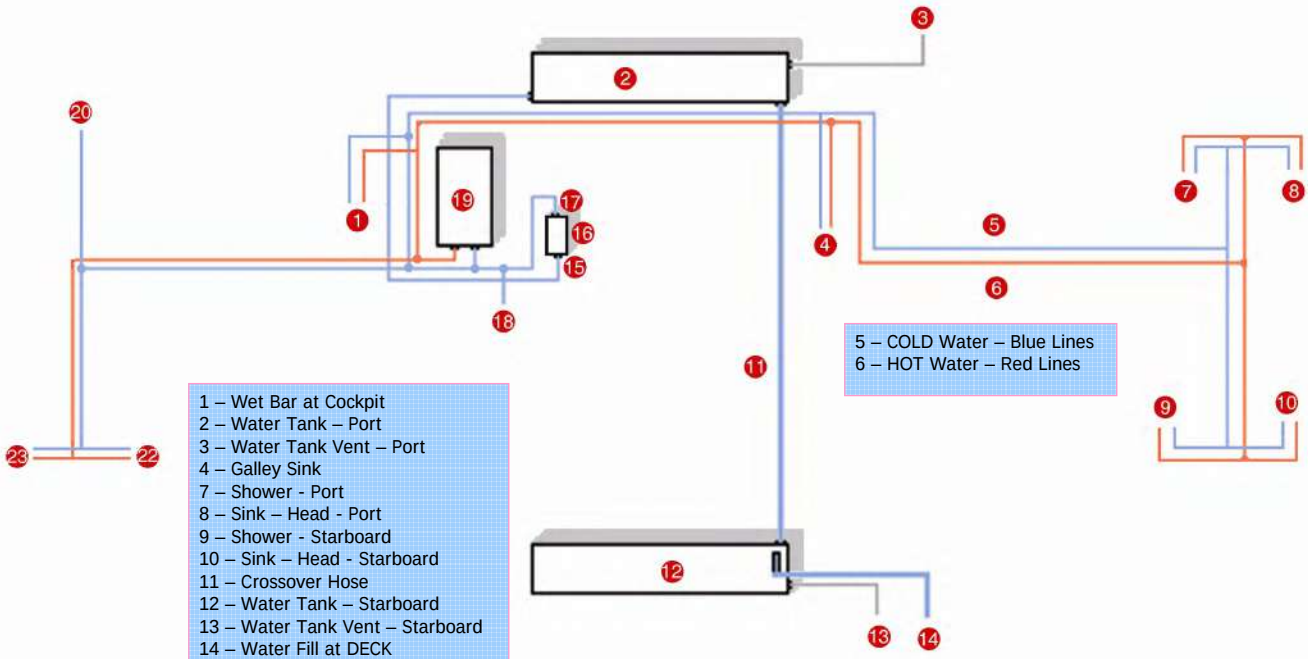
Waste from toilet -
5 and 8(not shown) - Waste goes to Vacuum Pumps 9 and 10.
11 and 12 - Waste leaves vacuum pumps and goes to Waste Tank at 20 and 21.
22 - Waste Tank

1 (not shown) and 3 - Waste leaves Waste Tank through hoses 1 and 3.
Discharge hose 1 (not shown) - Waste goes from tank to Pump-out at the deck.
Discharge hose 3 - Waste goes from the tank to the macerator (7)
Macerator (7) - Waste goes from here to valve on thru-hull (not shown).

Waste from showers -
Hoses 4 and 16 - waste goes to Sump Pumps 13 and 14
AC Water Coolant 17 - goes to Sump Pump.
Waste gets discharged overboard through hoses 15 and 18.

2 - Waste Tank Vent
19 - Waste Tank Sender

45 CONVERTIBLE
WASTE



1 – Wet Bar at Cockpit
2 – Water Tank – Port
3 – Water Tank Vent – Port
4 – Galley Sink
7 – Shower - Port
8 – Sink – Head - Port
9 – Shower - Starboard
10 – Sink – Head - Starboard
11 – Crossover Hose
12 – Water Tank – Starboard
13 – Water Tank Vent – Starboard
14 – Water Fill at DECK
15 – Water IN – Unpressurize
16 – Water Pump
17 – Water OUT – Pressurized
18 – Faucet – Engine Room
19 – Water Heater
20 – Shore Water Hook-Up
22 – Faucet – Cockpit
23 – Shower – Hand Held at Cockpit

5 – COLD Water – Blue Lines
6 – HOT Water – Red Lines

45 CONVERTIBLE

WATER