



Spearheading the Future of Fishing.

255 DORADO

Owner's Manual



Scout Boats Inc.
2531 Hwy 78 West
Summerville, SC 29483

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Your Scout manual has been written to include a number of safety instructions to assure the safe operation and maintenance of your boat. These instructions are in the form of **CAUTION**, **WARNING**, **DANGER** and **NOTICE** statements. The following definitions apply:



All instructions given in this book are as seen from the stern looking toward the bow, with starboard being to your right, and port to your left. A glossary of boating terms is included.

IMPORTANT NOTE: Your boat uses internal combustion engines and flammable fuel. Every precaution has been taken by Scout to reduce the risks associated with possible injury and damage from fire or explosion, but your own precaution and good maintenance procedures are necessary in order to enjoy safe operation of your boat.

S.O.S SAVE OUR SEAS

Scout Boats has made a commitment to quality since the very beginning. More importantly, we've also made a commitment to saving our natural resources. Our boating and fishing waters are beautiful but often abused and neglected. With care, we can turn the tide in favor of preserving our shining seas for generations to come. At Scout, we're doing our part by using earth-friendly manufacturing techniques and materials, and by choosing suppliers who observe strict environmental controls in making their products. It means more expense and time on our part, but we think it's worth it. You can do your part by being sensitive to our environment. Our marshes are the filter systems of the world. As responsible boaters we must manage our natural resources so our children can enjoy them.



WARNING



A WIDE VARIETY OF COMPONENTS USED ON THIS VESSEL CONTAIN OR EMIT CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS AND OTHER REPRODUCTIVE HARM.

EXAMPLES INCLUDE:

- **ENGINE AND GENERATOR EXHAUST.**
- **ENGINE AND GENERATOR FUEL, AND OTHER LIQUIDS SUCH AS COOLANTS AND OIL, ESPECIALLY USED MOTOR OIL.**
- **COOKING FUELS.**
- **CLEANERS, PAINTS, AND SUBSTANCES USED FOR VESSEL REPAIR.**
- **WASTE MATERIALS THAT RESULT FROM WEAR OF VESSEL COMPONENTS.**
- **LEAD FROM BATTERY TERMINALS AND FROM OTHER SOURCES SUCH AS BALLAST OR FISHING SINKERS.**

TO AVOID HARM:

- **KEEP AWAY FROM ENGINE, GENERATOR, AND COOKING FUEL EXHAUST FUMES.**
- **WASH AREAS THOROUGHLY WITH SOAP AND WATER AFTER HANDLING THE SUBSTANCES ABOVE.**

CALIFORNIA HEALTH & SAFETY CODE §§ 25249.5-.13

Please fill out the following information section and leave it in your Scout Owner's Manual. This information will be important for you and Scout service personnel to know, if and when you may need to call Scout for technical assistance or service.

BOAT	
MODEL:	HULL SERIAL #:
PURCHASE DATE:	DELIVERY DATE:
IGNITION KEYS #:	REGISTRATION #:
DOOR KEY #:	OTHER KEYS #:
ENGINES	
MAKE:	MODEL:
PORT SERIAL #:	STARBOARD SERIAL #:
PROPELLERS	
MAKE:	BLADES:
DIAMETER/PITCH:	
TRAILER	
MAKE:	MODEL:
SERIAL #:	GVRW:
TIRE SIZE:	
ADDITIONAL EQUIPMENT/NOTES	
DEALER	SCOUT
NAME:	REPRESENTATIVE:
DEALER/PHONE:	SCOUT PHONE:
SALESMAN:	ADDRESS:
SERVICE MANAGER:	
ADDRESS:	
DEALER E- MAIL:	SCOUT E- MAIL:

Scout reserves the right to make changes and improvements in equipment, design and vendored equipment items, at any time without notification.

SPECIFICATIONS



HULL LENGTH OVERALL _____ 25' 6" / 7.77 m

BEAM _____ 8' 11" / 2.72 m

DRY WEIGHT W/O ENGINES _____ 5,258 lbs / 2,385 kg

FUEL CAPACITY _____ 132 gal / 499 L

FRESH WATER CAPACITY _____ 15 gal / 57 L

HOLDING TANK _____ 9 gal / 34 L

DEADRISE AT TRANSOM _____ 21.5°

MAXIMUM HORSEPOWER _____ 400 HP / 298 kw

DRAFT W/ ENGINES UP (approx) _____ 17" / 0.43 m

OUTBOARD SHAFT _____ 25" / 0.6 m

PERSON CAPACITY _____ 11

Note: Dry weight is the average weight of the base boat without options, fuel, water, waste, batteries or gear.





CERTIFICATIONS & SPECIFICATIONS

*** For Export Only ***

To be in compliance with European directives for recreational boats as published by the International Organization for Standardization (ISO) in effect at the time this boat was manufactured, we are providing the following information.

Manufacturer:

Name: Scout Boats

Address: 2531 Hwy 78 West

Summerville, South Carolina Zip Code: 29483

Identification Numbers:

Hull Identification Number: _____

Port Engine Serial Number: _____

Starboard Engine Serial Number: _____

Intended Design Category:

Ocean: _____ Inshore: _____

Offshore: X Sheltered Waters: _____

Weight and Maximum Capacities:

Unladen Weight: - Kilograms (Pounds) _____

Maximum Load: - Weight - Kilograms (Pounds) _____

Number of People: _____

Maximum Rated Engine Horsepower - Kilowatts (Horsepower) _____

Certifications:

Certifications & Components Covered: _____



NOTES

Warranty and Warranty Registration Cards

The Scout Limited Warranty Statement is included with your boat. It has been written to be clearly stated and easily understood. If you have any questions after reading the warranty, please contact Scout customer service.

Scout, Yamaha Motor Corporation, engine manufacturers, and the suppliers of major components maintain their own manufacturer's warranty and service facilities. It is important that you properly complete the warranty registration cards included with your boat and engines and mail them back to the manufacturers to register your ownership. This should be done within 15 days of the date of purchase and before the boat is put into service. A form for recording this information is provided at the beginning of this manual. This information will be important for you and service personnel to know, if and when you may need service or technical information.

The boat warranty registration requires the Hull Identification Number "HIN" which is located on the starboard side of the transom, just below the rubrail. The engine warranty registration requires the engine serial numbers. Please refer to the engine owner's manual for the location of the serial numbers.

IMPORTANT:

All boat manufacturers are required by the Federal Boat Safety Act of 1971 to notify first time owners in the event any defect is discovered "which creates a substantial risk of personal injury to the public." It is essential that we have your warranty registration card complete with your name and mailing address in our files so that we can comply with the law if it should become necessary.

Product Changes

Scout is committed to the continuous improvement of our boats. As a result, some of the equipment described in this manual or pictured in the catalog may change or no longer be available. Scout reserves the right to change standard equipment, optional equipment and specifications without notice or obligation. If you have questions about the equipment on your Scout, please contact Scout customer service.



Hull ID Number on Starboard Transom

Service

All warranty repairs must be performed by an authorized Scout Dealer. Should a problem develop that is related to faulty workmanship or materials, as stated in the Limited Warranty, you should contact your Dealer to arrange for the necessary repair. If you are not near your dealer or another authorized Dealer or the dealer fails to remedy the cause of the problem, then contact the Scout customer service department within 15 days. It is the boat owner's responsibility to deliver the boat to the dealer for warranty service.

Transferring The Warranty

For an administration fee of \$100, Scout will extend warranty coverage to subsequent owners of Scout models for the duration of the original warranty period. The Limited Warranty may be transferred to any subsequent purchaser of the vessel within seven years from the date of delivery to the original purchaser. Please refer to the Limited Warranty Statement for the procedure to transfer the warranty.

To take advantage of this program, notification of the change of ownership, including the new owner's name, address and telephone number together with the appropriate fee, must be sent to Scout within 10 days of the date of resale.

Scout will confirm, in writing, that the transfer of the warranty has taken place. After which, the transferee will be treated as the original purchaser as outlined in the Scout Boats Limited Warranty Statement.

Yamaha Engine Warranty

Yamaha is ready to stand behind your purchase with strong warranty coverage. To be sure you receive all the benefits of warranty for your engines, please take the following steps:

- Be sure your new Yamaha is registered for warranty. Your boat dealer should do this at the time of sale. Make sure your dealer gives you a copy of the completed Yamaha registration card for your records.
- Read the Yamaha Limited Warranty statement. This warranty applies to Yamaha outboard motors sold in the United States, whether purchased separately or when supplied as original equipment by a boat builder.

- If you need warranty repairs, you must take your Yamaha outboard to an authorized Yamaha outboard dealer.
- If you are away from home, or your selling dealer is not an authorized Yamaha dealer, use the following toll-free numbers to find the nearest Yamaha dealer.

United States Dealer Locations:
800-692-6242

Canada Dealer Locations:
800-267-8577

- Your warranty applies specifically to repairs made in the country of purchase.
- If you need any additional information about your Yamaha or warranty coverage which your dealer cannot provide, please contact Yamaha Directly. Refer to your engine owner's manual for the address and phone number to contact Yamaha directly.



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3 YEAR STEM TO STERN (LIMITED) WARRANTY

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10 YEAR TRANSFERRABLE STRUCTURAL HULL WARRANTY

Scout Boats Inc. has a limited transferable warranty that insures to the purchaser that each hull is free from structural defects in materials and workmanship, (under normal care and use), for a period of **ten (10) years** from the original date of purchase. Scout Boats, Inc. agrees to repair or replace, (at our discretion, based on review and/or observation of the hull in question), to the purchaser, any boats(s) that is found to be defective during the applied warranty period. Scout Boats, Inc. also warrants for a period of **three (3) years** to the original purchaser, that each new hull is free from non-structural defects, (i.e. defective materials and/or workmanship). **During this three year period Scout Boats, Inc. will cover the cost of all parts and accessories manufactured or installed by Scout Boats Inc. during the original manufacturing process. Labor associated with these repairs will be covered for a period of twelve months from the original date of purchase. This warranty excludes engines, trolling motors, batteries, generators, air conditioning systems, electronics, and all related components, which will only be covered by their respective warranties.**

In order to receive warranty service, the selling dealer must register the boat on www.dealerscircle.com, and the purchaser must take his/her boat to an authorized Scout Boats, Inc. dealer. Depending on the nature of the claim, Scout Boats, Inc. may require the boat to be returned to our factory at 2531 Highway 78 West, Summerville, SC 29483, in which case all transportation, haul-out, and/or loading charges shall be prepaid and the sole responsibility of the original purchaser. Scout Boats, Inc. will reimburse up to one half of such transportation charges to the original purchaser upon the discovery of a valid and applicable warranty claim that is a direct result of improper manufacturing processes on the part of Scout Boats, Inc. or one of our suppliers. The original purchaser must remove and reinstall, at his/her own expense, all outboard engines, (if directly related to damage in question), as well as any and all personal effects and electronics equipment. The decision to repair, replace or make reimbursement for a particular boat or part shall be at the discretion of Scout Boats, Inc.

Online registration, a bill of sale, or proof-of-purchase demonstrating individual in question as the purchaser, along with a proof of customer's identity, is required before warranty service can be rendered.

Scout Boats, Inc. does not warrant: (1) any Scout Boat which has been powered or loaded in excess of the manufacturer's maximum horsepower or capacity recommendations. The maximum horsepower and capacity recommendations are shown on the certification plate affixed to every boat. (2) Any Scout Boat used in or for racing (of any type, organized or not), commercial fishing, chartering or other commercial use. (3) Any Scout Boat which has been subject to misuse, neglect, or structural alterations. (4) Gelcoat cracking, crazing, bubbling, or blistering. (5) Excessive wear due to unprotected and/or over exposure to the elements. **(6) Any fuses, bulbs, switches or the failure of any electrical component due to corrosion.** (7) Any boat that has been deemed to have been misused neglected or re-powered by anyone other than the original purchaser. (8) Any Scout Boat sold to a customer, (who happens to be the original owner), by anyone other than an authorized Scout Boats, Inc. dealer. (9) Any Scout Boat that has been used on a trailer that does not adequately support the hull or any trailer that may be considered undersized, including any and all roller type trailers. (10) Any Scout Boat with a jack plate installed by anyone other than Scout boats, Inc., or an authorized dealer, or on any hull other than the 191, 201, 221, or 251 models. Any Scout Boat with a jack plate of 8" or greater. (11) Any part or component not manufactured directly by Scout Boats, Inc. after the first three years of this warranty policy, (three years from date of purchase), will only have that particular manufacturer's warranty available.

Scout Boats, Inc. reserves the right to improve its product through changes in design or material without obligation to incorporate such changes on boats built prior to the implementation of respected change(s).



SCOUT LIMITED WARRANTY



This warranty is in lieu of any other warranty implied or expressed. Scout Boats, Inc. accepts no responsibility for any representations, acts, or omissions of its dealer relating to the preparation and/or sale of Scout Boats, Inc. products to original consumer. This warranty is transferable, and to do so the original owner or purchaser must download a copy of the warranty transfer form from www.scoutboats.com from the warranty section of the website and mail it to Scout Boats, Inc. within 10 days of sale of his/her boat to the new owner. A notarized bill of sale and a \$100 administration fee payable to Scout Boats, Inc. must also be included with the notification of customer's intent to re-sell his/her boat.

Please mail to 2531 Hwy. 78 West, Summerville, SC 29483

❖ *By signing below I do hereby agree that I have read this Warranty Policy and do fully understand the terms and procedures listed within. I also attest and agree that my dealer, (listed below), has gone over this policy in full detail and has answered all of my questions regarding this policy and how it applies and has registered my boat online at www.dealerscircle.com.*

Customer _____ Date _____

❖ *By signing below the dealership representative hereby agrees that the status of this boat has been changed to "delivered" on Dealer's Circle, in order for warranty to go into effect.*

Dealership Representative _____ Date _____

You must mail the original signed copy of this agreement to Scout Boats Inc. at 2531 Highway 78 West; Summerville, SC 29483 and log on to www.dealerscircle.com to complete the warranty registration process.

WARRANTY WILL BE NULL AND VOID UNLESS THE BOAT IS REGISTERED ONLINE AT WWW.DEALERSCIRCLE.COM AND THE ORIGINAL SIGNED COPY OF THIS WARRANTY AGREEMENT IS RECEIVED BY SCOUT BOATS INC. WITHIN 30 DAYS OF THE POINT OF SALE!!!

Hull Identification Number: **SLP** _____
(located on the top right side of transom, under the rub rail)

Owner's Name: _____ Date: _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____ Phone: _____

Date of Purchase: _____

Dealership: _____

Salesman's Name: _____

Dealership Address: _____

Brand of Engine: _____ Horsepower: _____

Scout (white) Customer (yellow) Dealer (pink)





The Power of Innovation

WARRANTY REGISTRATION TRANSFER

DATE _____

HULL IDENTIFICATION NO. SLP _____

DATE OF PURCHASE _____

NEW OWNER'S NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

EMAIL _____ PHONE _____

BRAND OF ENGINE _____ HORSEPOWER _____

I agree to the warranty terms and conditions pursuant to my particular model year boat.

SIGNATURE

PREVIOUS OWNER'S NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

EMAIL _____ PHONE _____

ORIGINAL DATE OF PURCHASE _____

DEALER WHERE BOAT WAS ORIGINALLY PURCHASED _____

<p>→ There is a \$100.00 fee payable to Scout Boats. Fee covers official transfer and documentation of the warranty.</p> <p>Send CHECK or MONEY ORDER with a completed copy of this form along with a copy of the notarized BILL OF SALE. All information must be provided in order to transfer the warranty.</p>	<p>SEND PAYMENT & FORM TO:</p> <p>Scout Boats, Inc. Warranty Transfer Dept. 2531 Highway 78 West Summerville SC 29483</p>	
	<p>PHONE: 843.821.0068</p>	<p>www.scoutboats.com</p>



NOTES

Safety Equipment

1.1 General

Your boat and outboard engines have been equipped with safety equipment designed to enhance the safe operation of the boat and to meet U.S. Coast Guard safety standards. The Coast Guard or state, county, and municipal law enforcement agencies require certain additional accessory safety equipment on each boat. This equipment varies according to length and type of boat and type of propulsion. The accessory equipment required by the Coast Guard is described in this chapter. Some local laws require additional equipment. It is important to obtain "Federal Requirements And Safety Tips for Recreational Boats," published by the Coast Guard, and copies of state and local laws, to make sure you have the required equipment for your boating area.

Your boat is equipped with engine alarms. The alarms are designed to increase your boating safety by alerting you to potentially serious problems in the primary power systems. Alarm systems are not intended to lessen or replace regular maintenance and pre-cruise procedures.

This chapter also describes safety related equipment that could be installed on your boat. This equipment will vary depending on the type of engines and other options installed by you or your dealer.

1.2 Engine Alarms

Most outboards are equipped with an audible alarm system mounted in the helm area that monitors selected critical engine systems. The alarm will sound if one of these systems begins to fail. Refer to the engine owner's manual for information on the alarms installed with your engines.

If the alarms sounds:

- Immediately throttle the engine back to idle.
- Shift to neutral.
- Monitor the engine gauges to determine the cause of the problem.



- If necessary, shut off the engine and investigate until the cause of the problem is found and corrected.

1.3 Neutral Safety Switch

Every control system has a neutral safety switch incorporated into it. This device prohibits the engine from being started while the shift lever is in any position other than the neutral position and should be inspected and tested periodically to ensure the switch is working. If an engine will not start, slight movement of the shift levers may be necessary to locate the neutral position and disengage the safety cutout switch. Control or cable adjustments may be required to correct this condition should it persist. See your Dealer for necessary control and cable adjustments. Please refer to the Helm Control Systems chapter for more information on the neutral safety switch.

1.4 Engine Stop Switch

Your Scout is equipped with an engine stop switch and lanyard. When the lanyard is pulled (disengaged from the stop switch), it will engage the switch and shut off the engines. We strongly recommend that the lanyard be attached to the driver and the stop switch whenever the engines are running. If the engines will not start, it could be because the lanyard is not properly inserted into the engine stop switch. Always make sure the lanyard is properly attached to the engine stop switch before attempting to start the engines.

Notice:

You should carry an extra stop switch lanyard and instruct at least one other crew member on the operation of the stop switch and location of the extra lanyard.

1.5 Required Safety Equipment

Besides the equipment installed on your boat by Scout, certain other equipment is required by the U.S. Coast Guard to help ensure passenger safety. Items like a sea anchor, working anchor, extra dock lines, flare pistol, life vests, a line permanently secured to your ring buoy, etc. could at some time save your passengers' lives or save your boat from damage. Refer to the "Federal Requirements and Safety Tips for Recreational Boats" pamphlet for a more detailed description of the required equipment. You also can visit the U.S. Coast Guard Boating Safety web site, www.uscgboating.org, for information on boat safety courses and brochures listing the Federal equipment requirements. Also, check your local and state regulations.

The Coast Guard Auxiliary offers a "Courtesy Examination." This inspection will help ensure that your boat is equipped with all of the necessary safety equipment.

The following is a list of the accessory equipment required on your boat by the U.S. Coast Guard:

Personal Flotation Devices (PFDs)

PFDs must be Coast Guard approved, in good and serviceable condition, and of appropriate size for the intended user. Wearable PFDs must be readily accessible, meaning you must be able to put them on in a reasonable amount of time in an emergency. Though not required, the Coast Guard emphasizes that PFDs should be worn at all times when the vessel is underway. Throwable devices must be immediately available for use. All Scout boats must be equipped with at least one Type I, II or III PFD for each person on board, plus one throwable device (Type IV).

Please note that most state laws now require that children 13 years old and under must wear a PFD at all times.



Visual Distress Signals

All Scout boats used on coastal waters, the Great Lakes, territorial seas, and those waters connected directly to them, must be equipped with Coast Guard approved visual distress signals. These signals are either Pyrotechnic or Non-Pyrotechnic devices.

Pyrotechnic Visual Distress Signals

Pyrotechnic visual distress signals must be Coast Guard approved, in serviceable condition, and readily accessible. They are marked with a date showing the service life, which must not have expired. A minimum of three are required. Some pyrotechnic signals meet both day and night use requirements. They should be stored in a cool, dry location. They include:

- Pyrotechnic red flares, hand held or aerial.
- Pyrotechnic orange smoke, hand-held or floating.
- Launchers for aerial red meteors or parachute flares.

 **WARNING** 

PYROTECHNICS ARE UNIVERSALLY RECOGNIZED AS EXCELLENT DISTRESS SIGNALS. HOWEVER, THERE IS POTENTIAL FOR INJURY AND PROPERTY DAMAGE IF NOT PROPERLY HANDLED. THESE DEVICES PRODUCE A VERY HOT FLAME AND THE RESIDUE CAN CAUSE BURNS AND IGNITE FLAMMABLE MATERIAL. PISTOL LAUNCHED AND HAND-HELD PARACHUTE FLARES AND METEORS HAVE MANY CHARACTERISTICS OF A FIREARM AND MUST BE HANDLED WITH CAUTION. IN SOME STATES THEY ARE CONSIDERED A FIREARM AND PROHIBITED FROM USE. ALWAYS BE EXTREMELY CAREFUL AND FOLLOW THE MANUFACTURER'S INSTRUCTIONS EXACTLY WHEN USING PYROTECHNIC DISTRESS SIGNALS.

Non-Pyrotechnic Devices

Non-Pyrotechnic visual distress signals must be in serviceable condition, readily accessible, and certified by the manufacturer as complying with U.S. Coast Guard requirements. They include:

- Orange Distress Flag. (Day use only)
The distress flag is a day signal only. It must be at least 3 x 3 feet with a black square and ball on an orange background. It is most distinctive when attached and waved from a paddle or boat hook.

- Electric Distress Light. (Night use only)
The electric distress light is accepted for night use only and must automatically flash the international SOS distress signal. Under Inland Navigation Rules, a high intensity white light flashing at regular intervals from 50-70 times per minute is considered a distress signal.

Fire Extinguishers

Your boat is required to have two Marine Type USCG approved fire extinguishers. Coast Guard approved fire extinguishers are hand-portable, either B-I or B-II classification and have a specific marine type mounting bracket. It is recommended that the extinguishers be mounted in a readily accessible position.

Fire extinguishers require regular inspections to ensure that:

- Seals and tamper indicators are not broken or missing.
- Pressure gauges or indicators read in the operable range.
- There is no obvious physical damage, corrosion, leakage or clogged nozzles.



Refer to the "Federal Requirements And Safety Tips For Recreational Boats" pamphlet or visit the U.S. Coast Guard Boating Safety web site, www.uscgboating.org, for information on the type and size fire extinguisher required for your boat.

Please refer to the information provided by the fire extinguisher manufacturer for instructions on the proper maintenance and use of your fire extinguisher.

	WARNING	
<p>INFORMATION FOR HALON AGENT FE-241 AND AGENT FM 200 FIRE EXTINGUISHERS IS PROVIDED BY THE MANUFACTURER. IT IS ESSENTIAL THAT YOU READ THE INFORMATION CAREFULLY AND COMPLETELY UNDERSTAND THE SYSTEM, IN THEORY AND OPERATION, BEFORE USING YOUR BOAT.</p>		

Bilge and Fuel Fires

Fuel compartment and bilge fires are very dangerous because of the presence of gasoline and/or diesel fuel in the various components of the fuel system and the possibility for explosion. You must make the decision to fight the fire or abandon the boat. If the fire cannot be extinguished quickly or it is too intense to fight, abandoning the boat may be your only option. If you find yourself in this situation, make sure all passengers have a life preserver on and go over the side and swim well upwind of the boat. This will keep you and your passengers well clear of any burning fuel that could be released and spread on the water as the boat burns or in the event of an explosion. When clear of the danger, check about and account for all those who were aboard with you. Give whatever assistance you can to anyone in need or in the water without a buoyant device. Keep everyone together in a group for morale and to aid rescue operations.

	WARNING	
<p>GASOLINE CAN EXPLODE. IN THE EVENT OF A FUEL COMPARTMENT OR BILGE FIRE, YOU MUST MAKE THE DIFFICULT DECISION TO FIGHT THE FIRE OR ABANDON THE BOAT. YOU MUST CONSIDER YOUR SAFETY, THE SAFETY OF YOUR PASSENGERS, THE INTENSITY OF THE FIRE AND THE POSSIBILITY OF AN EXPLOSION IN YOUR DECISION.</p>		

Sound Signaling Devices

The navigation rules require sound signals to be made under certain circumstances. Recreational vessels are also required to sound fog signals during periods of reduced visibility. Therefore, you must have some means of making an effective sound signal that is audible for .5 nautical miles.

Navigation/Anchor Lights

Recreational boats are required to display navigation lights between sunset and sunrise and other periods of reduced visibility (fog, rain, haze, etc.) Navigation and/or anchor lights are intended to keep other vessels informed of your presence and course. Your Scout is equipped with navigation and anchor lights required by the U.S. Coast Guard at the time of manufacture. It is up to you to make sure they are operational and turned on when required.



First Aid Kit

1.7 First Aid

It is the operator's responsibility to be familiar with the proper first-aid procedures and be able to care for minor injuries or illnesses of your passengers. In an emergency, you could be far from professional medical assistance. We strongly recommend that you be prepared by receiving training in basic first aid and CPR. This can be done through classes given by the Red Cross or your local hospital.

Your boat should also be equipped with at least a simple marine first-aid kit and a first-aid manual. The marine first-aid kit should be designed for the marine environment and be well supplied. It should be accessible and each person on board should be aware of its location. As supplies are used, replace them promptly. Some common drugs and antiseptics may lose their strength or

become unstable as they age. Ask a medical professional about the supplies you should carry and the safe shelf life of prescription drugs or other medical supplies that may be in your first-aid kit. Replace questionably old supplies whether they have been used or not.

In many emergency situations, the Coast Guard can provide assistance in obtaining medical advice for treatment of serious injuries or illness. If you are within VHF range of a Coast Guard Station, make the initial contact on channel 16 and follow their instructions.

1.8 Additional Safety Equipment

Besides meeting the legal requirements, prudent boaters may want to carry additional safety equipment. This is particularly important if you operate your boat offshore. You should consider the following items, depending on how you use your boat.

Satellite EPIRBs

EPIRBs (Emergency Position Indicating Radio Beacon) operate as part of a worldwide distress system. When activated, EPIRBs will send distress code homing beacons that allow Coast Guard aircraft to identify and find them quickly. The satellites that receive and relay EPIRB signals are operated by the National Oceanic and Atmospheric Administration (NOAA) in the United States. The EPIRB should be mounted and registered according to the instructions provided with the beacon, so that the beacon's unique distress code can be used to quickly identify the boat and owner.

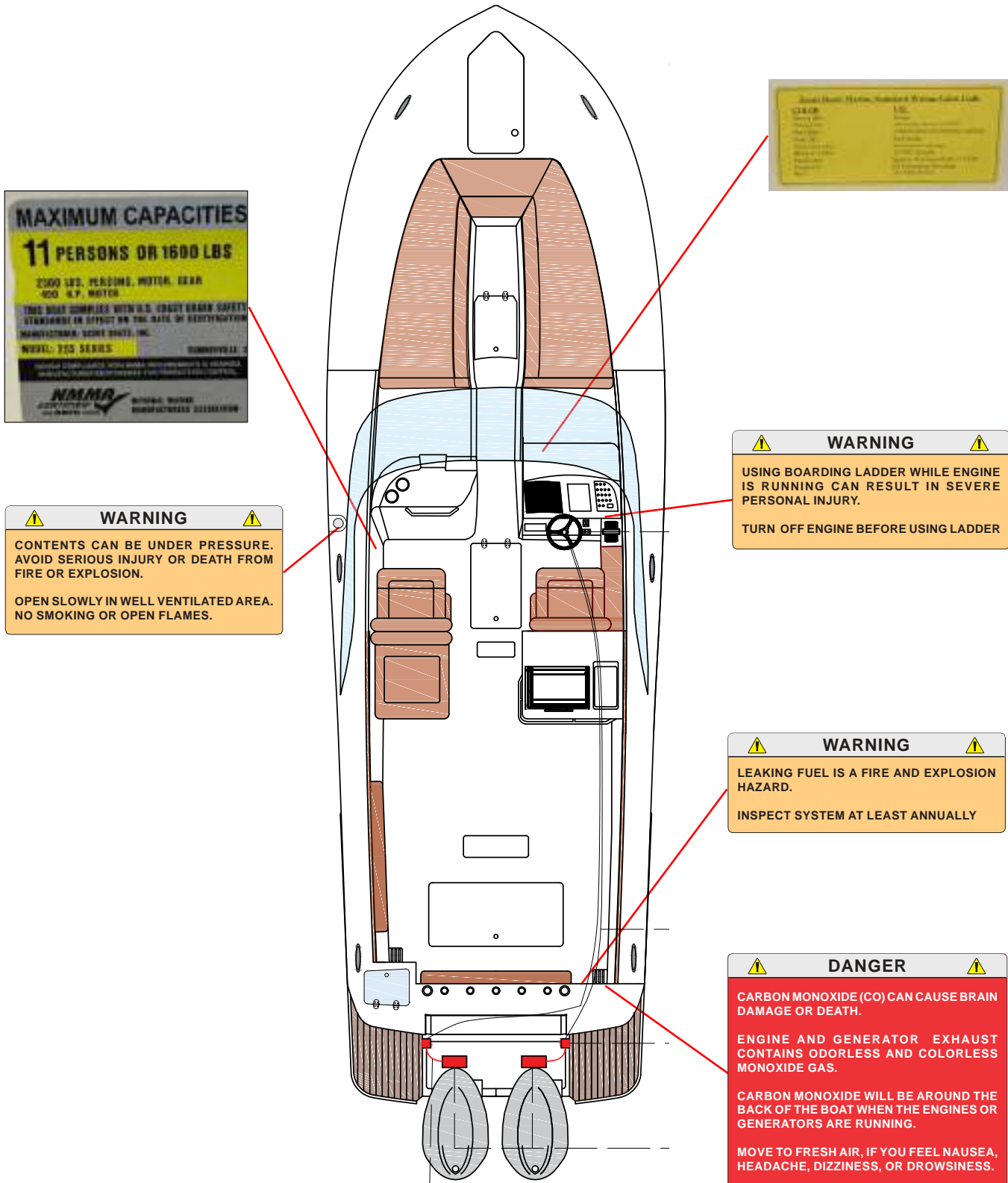
Additional Equipment to Consider

VHF Radio	Life Raft
Spare Anchor	Fenders
Heaving Line	Mirror
First Aid Kit	Tool Kit
Flashlight & Batteries	Searchlight
Boat Hook	Sunblock Lotion
Mooring Lines	Ring Buoy
Binoculars	Extra Clothing
Whistle or Horn	Portable Radio
Chart and Compass	Marine Hardware
Food & Water	Spare Keys
Sunglasses	Spare Parts
Spare Propeller	Satellite Telephone

1.9 Caution & Warning Labels

The caution and warning labels shown are examples of the labels that could be on your boat. The actual labels and their location could vary on your boat.

Caution and warning labels must remain legible for the safety of you and your passengers. If a label becomes missing or damaged it must be replaced. Immediately contact your dealer or Scout customer service for a replacement.



2.1 General

Before you start the engines on your Scout, you should become familiar with the various component systems and their operation, and have performed a "Pre-Cruise System Check." A thorough understanding of the component systems and their operation is essential to the proper operation of the boat. This manual and the associated manufacturers' information is provided to enhance your knowledge of your boat. Please read them carefully.

Your boat must have the necessary safety equipment on board and be in compliance with the U.S. Coast Guard, local and state safety regulations. There should be one Personal Floatation Device (PFD) for each person. Non-swimmers and small children should wear PFDs at all times. You should know and understand the "Rules of the Road" and have had an experienced operator brief you on the general operation of your new boat. At least one other person should be instructed on the proper operation of the boat in case the operator is suddenly incapacitated.

The operator is responsible for his safety and the safety of all passengers. When boarding or loading the boat, always step onto the boat, never jump. All passengers should be properly seated whenever the boat is operated above idle speed. Your passengers should not be allowed to sit on the seat backs, gunnels, bows, transoms or on fishing seats whenever the boat is underway. The passengers should also be seated to properly balance the load and must not obstruct the operator's view, particularly to the front.

Overloading and improper distribution of weight can cause the boat to become unstable and are significant causes of accidents. Know the weight capacity and horsepower rating of your boat. Do not overload or overpower your boat.

You should be aware of your limitations and the limitations of your boat in different situations or sea conditions. No boat is indestructible, no matter how well it is constructed. Any boat can be severely damaged if it is operated in a manner that exceeds its design limitations. If the ride is hard on you and your passengers, it is hard on

the boat as well. Always modify the boat speed in accordance with the sea conditions, boat traffic and weather conditions.

Remember, it is the operator's responsibility to use good common sense and sound judgement in loading and operating the boat.

2.2 Rules of the Road

As in driving an automobile, there are a few rules you must know for safe boating operation. The following information describes the basic navigation rules and action to be taken by vessels in a crossing, meeting or overtaking situations while operating in inland waters. These are basic examples and not intended to teach all the rules of navigation. For further information consult the "Navigation Rules" or contact the Coast Guard, Coast Guard Auxiliary, Department of Natural Resources, or your local boat club. These organizations sponsor courses in boat handling, including rules of the road. We strongly recommend such courses. Books on this subject are also available from your local library.

Notice:

Sailboats not under power, paddle boats, vessels unable to maneuver, vessels engaged in commercial fishing and other vessels without power have the right of way over motor powered boats. You must stay clear or pass to the stern of these vessels. Sailboats under power are considered motor boats.

Crossing Situations

When two motor boats are crossing, the boat on the right has the right-of-way. The boat with the right-of-way should maintain its course and speed. The other vessels should slow down and permit it to pass. The boats should sound the appropriate signals.

Meeting Head-On or Nearly-So Situations

When two motor boats are approaching each other head-on or nearly head-on, neither boat has the right-of-way. Both boats should reduce their speed and turn to the right so as to pass port side to port side, providing enough clearance for safe passage. The boats should sound the appropriate signals.

Overtaking Situations

When one motor boat is overtaking another motor boat, the boat that is being passed has the right-of-way. The overtaking boat must make the adjustments necessary to provide clearance for a safe passage of the other vessel. The boats should sound the appropriate signals.

The General Prudential Rule

In obeying the Rules of the Road, due regard must be given to all dangers of navigation and collision, and to any special circumstances, including the limitations of the vessels, which may justify a departure from the rules that is necessary to avoid immediate danger or a collision.

Night Operation

Recreational boats are required to display navigation lights between sunset and sunrise and other periods of reduced visibility such as fog, rain, haze, etc. When operating your boat at night you should:

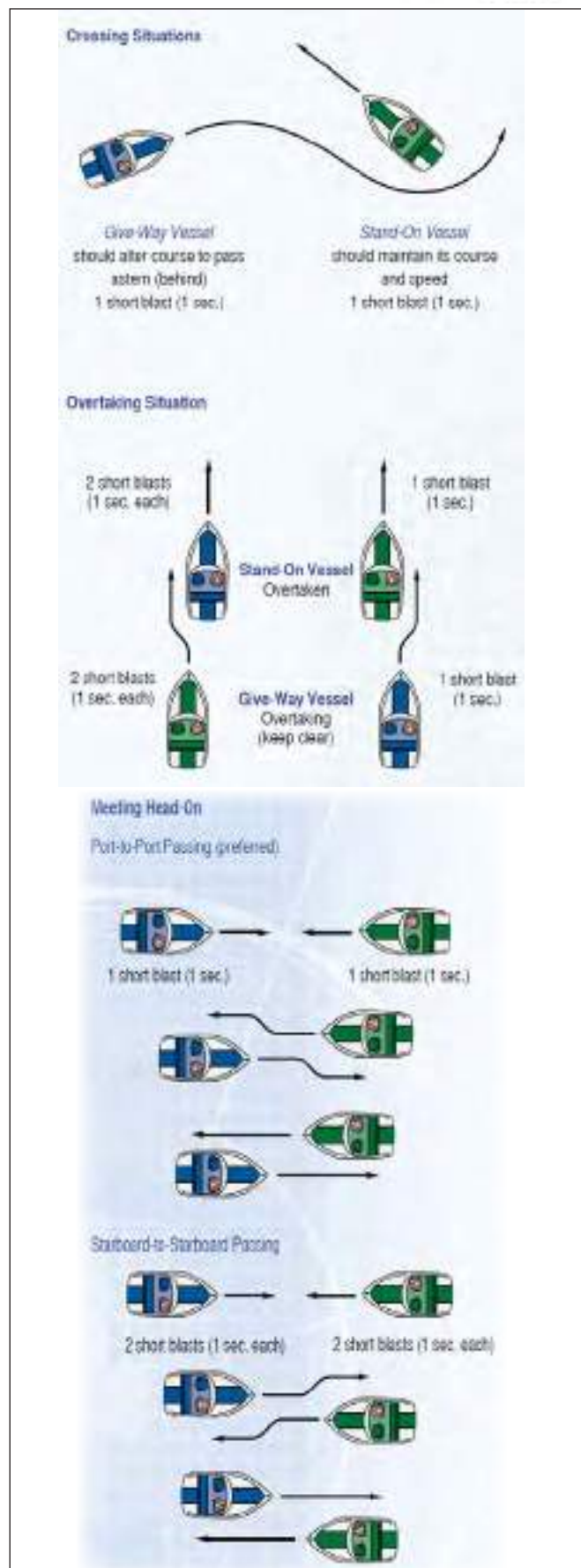
- Make sure your navigation lights are on and working properly. Navigation lights warn others of your position and course and the position and course of other vessels.
- All navigation rules apply. If the bow light of another vessel shows red, you should give way to that vessel, if it shows green, you have the right-of-way. If you only see a white light you are either overtaking or the boat is anchored and you must give way in both cases.
- Slow down and never operate at high speeds when operating at night, stay clear of all boats and use good common sense. Always be ready to slow down or steer clear of other vessels, even if you have the right-of-way.
- Avoid bright lights that can destroy night vision, making it difficult to see navigation lights and the lights of other boats. You and your passengers should keep a sharp lookout for hazards, other boats and navigational aids.

Navigation Aids

Aids to navigation are placed along coasts and navigable waters as guides to mark safe water and to assist mariners in determining their position in relation to land and hidden dangers. Each aid to navigation is used to provide specific information. You should be familiar with these and any other markers used in your boating area.

Notice:

Storms and wave action can cause buoys to move. You should not rely on buoys alone to determine your position.



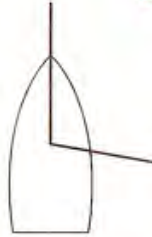
Navigational Aids Chart

REMEMBER THESE RULES

1. OVERTAKING - PASSING: Boat being passed has the right-of-way. KEEP CLEAR.
2. MEETING HEAD ON: Keep to the right.
3. CROSSING: Boat on right has the right-of-way. Slow down and permit boat to pass.

← PORT

Yield right-of-way to boats in your DANGER ZONE!



STARBOARD →

DANGER ZONE (Dead ahead to 2 points abaft your starboard beam)

STORM WARNINGS



RED FLAG
Small craft (winds up to 33 knots)



2 RED FLAGS
Gale (winds up to 47 knots)



SQUARE RED FLAG
BLACK BOX (Storm)



2 SQUARE RED FLAGS
BLACK BOX (Hurricane)

WHISTLE SIGNALS

- ONE LONG BLAST: Warning signal (Coming out of slip)
- ONE SHORT BLAST: Pass on my port side
- TWO SHORT BLASTS: Pass on my starboard side
- THREE SHORT BLASTS: Engine(s) in reverse
- FOUR OR MORE BLASTS: Danger signal

BRIDGE SIGNALS

SOUND

- VESSEL: Open
- BRIDGE: OK
- No
- VESSEL: Replies:
- RADIO: VHF CH. 13

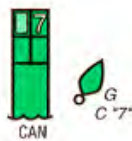
VISUAL

- VESSEL: Open
- BRIDGE: OK
- No
- DAY (Flag)
- NIGHT (Lights)

LATERAL AIDS AS SEEN ENTERING FROM SEAWARD

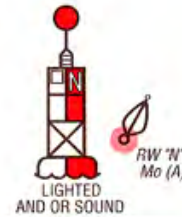
PORT SIDE ODD NUMBERED AIDS

- GREEN LIGHT ONLY
- FLASHING
- OCCULTING
- QUICK FLASHING
- ISOPHASE



SAFE WATER MID-CHANNELS OR FAIRWAYS NO NUMBERS — MAY BE LETTERED

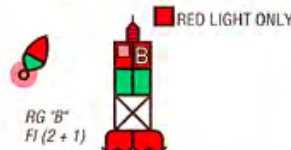
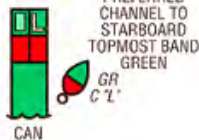
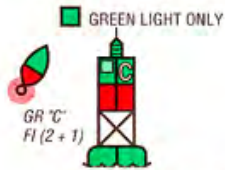
- WHITE LIGHT ONLY
- MORSE CODE



PREFERRED CHANNEL

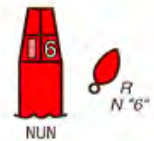
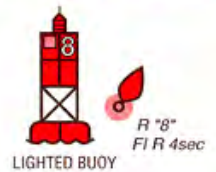
NO NUMBERS — MAY BE LETTERED

- COMPOSITE GROUP FLASHING (2 + 1)



STARBOARD SIDE EVEN NUMBERED AIDS

- RED LIGHT ONLY
- FLASHING
- OCCULTING
- QUICK FLASHING
- ISOPHASE





2.3 Pre-Cruise Check

Before Starting the Engines

- Check the weather forecast. Decide if the planned cruise can be made safely.
- Be sure all required documents are on board.
- Be sure all necessary safety equipment is on board and operative. This should include items like the running lights, spotlight, life saving devices, fire extinguishers, etc. Please refer to the Safety Equipment chapter for additional information on safety equipment.
- Make sure you have signal kits and flare guns aboard, and they are current and in good operating condition.
- Be sure you have sufficient water and other provisions for the planned cruise.
- Leave a written message listing details of your planned cruise with a close friend ashore (Float Plan). The float plan should include a description of your boat, where you intend to cruise, and a schedule of when you expect to arrive in the cruising area and when you expect to return. Keep the person informed of any changes in your plan to prevent false alarms. This information will be useful for authorities so they know where to look and the type of boat to look for in the event you fail to arrive. A float plan form is located in the Appendix section of this manual.
- Check the amount of fuel on board. Observe the "one third rule" by using: one third of the fuel for the trip out, one third to return and one third in reserve. An additional 15% may be consumed in rough seas.
- Check the water separating fuel filters for water and leaks.
- Check the oil in the engine oil tanks (2-cycle engines) or the crankcase oil level (4-cycle engines).
- Turn the battery switches to the ON position.
- Check the bilge water level. Look for other signs of potential problems. Monitor for the scent of fuel fumes.

- Test the automatic and manual bilge pump switches to make sure the system is working properly.

 **CAUTION** 

THERE MUST BE AT LEAST ONE PERSONAL FLOTATION DEVICE ON BOARD FOR EVERY PERSON ON BOARD AND ONE THROW-OUT FLOTATION DEVICE. CHECK THE U.S. COAST GUARD STANDARDS FOR THE CORRECT TYPE OF DEVICE FOR YOUR BOAT.

- Have a tool kit aboard. The kit should include the following basic tools:



Spark plug wrench	Hammer
Spark plug gap gauge	Electrician's tape
Screwdrivers	Offset screwdrivers
Lubricating oil	Pliers
Jackknife	Adjustable wrench
Basic 3/8" ratchet set	Vise grip pliers
Hex key set	Needle nose pliers
Wire crimping tool	End wrench set
Medium slip-joint pliers	Diagonal cutting pliers
DC electrical test light	

- Have the following spare parts on board:

Extra light bulbs	Spark plugs
Fuses and circuit breakers	Main engine fuses
Assorted stainless screws	Propellers
Assorted stainless bolts	Drain plugs
Flashlight and batteries	Engine oil
Fuel filters	Propeller nuts
Fuel hose and clamps	Wire ties
Wire connector set	Hydraulic steering oil
Assorted hose clamps	Rags
Steering fluid	

- Make sure all fire extinguishers are in position and in good operating condition.
- Check the engine and steering controls for smooth and proper operation. Be sure the shift controls are in the neutral position.
- Be sure the emergency stop lanyard is attached to the operator and the stop switch.
- Refer to the engine owner's manual for pre-operation checks specific to your engine.

2.4 Operating Your Boat

 **WARNING** 

TO REDUCE THE RISK OF A FIRE OR EXPLOSION, DO NOT START THE ENGINES WHEN FUEL FUMES ARE PRESENT. FUEL FUMES ARE DANGEROUS AND HARMFUL TO YOUR HEALTH.

After Starting the Engines

- Visibly check the engines to be sure there are no apparent water, fuel or oil leaks.
- Check the operation of the engine cooling systems.
- Check the engine gauges. Make sure they are reading normally.
- Check the controls and steering for smooth and proper operation.
- Make sure all lines, cables, anchors, etc. for securing a boat are on board and in good condition. All lines should be coiled, secured and off the decks when underway.
- Have a safe cruise and enjoy yourself.



Remember:

When you operate a boat, you accept the responsibility for the boat, for the safety of passengers and for others out enjoying the water.

- Avoid sea conditions that are beyond the skill and experience of you and your crew.
- Alcohol and any drugs can severely reduce your reaction time and affect your better judgment.
- Alcohol severely reduces the ability to react to several different signals at once.
- Alcohol makes it difficult to correctly judge speed and distance, or track moving objects.
- Alcohol reduces night vision, and the ability to distinguish red from green.

 **WARNING** 



YOU SHOULD NEVER OPERATE YOUR BOAT WHILE UNDER THE INFLUENCE OF ALCOHOL AND DRUGS.

 **WARNING** 

MAKE SURE ONE OTHER PERSON ON THE BOAT IS INSTRUCTED IN THE OPERATION OF THE BOAT AND ALWAYS OPERATE THE BOAT IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS GOVERNING THE USE OF A BOAT.

DO NOT OPERATE THE BOAT UNLESS IT IS COMPLETELY ASSEMBLED. KEEP ALL FASTENERS TIGHT. KEEP ADJUSTMENTS ACCORDING TO SPECIFICATIONS.

Before operating the boat for the first time, read the engine break-in procedures. The break-in procedures are found in the owner's manual for the engines. The manual is in the literature packet. Correct break-in operation is critical to ensure proper performance and longer engine life.

 **CAUTION** 

FAILURE TO FOLLOW THE BREAK-IN PROCEDURE MAY RESULT IN REDUCED ENGINE LIFE OR EVEN SEVERE ENGINE DAMAGE. MAKE SURE YOU FOLLOW THE BREAK-IN PROCEDURE EXACTLY.

As different types of engines are used to power the boat, have the dealer describe the operating procedures for your boat. For more instructions on "How to Operate the Boat," make sure you read the instructions given to you in the owner's manual for the engine you have selected.

Notice:

For more instructions on safety, equipment and boat handling, enroll in one of the several free boating courses offered. For information on courses offered in your area go to the U.S. Coast Guard Boating Safety web site at www.uscgboating.org.

Notice:

If the drive unit hits an underwater object, stop the engines. Inspect the drive unit for damage. If the unit is damaged, contact your dealer for a complete inspection and repair of the unit.

To stop the boat, follow this procedure:

- Bring the throttles back to the idle speed position.
- Move the shifting levers to the neutral position.

Notice:

If the engines have been run at high speed for a long period of time, allow them to cool down by running the engines at idle speed for 3 to 5 minutes.

- Turn the ignition keys to the OFF position.
- Raise the trim tabs to the full up position.

After Operation

- If operating in saltwater, wash the boat and all equipment with soap and water. Flush the engines using fresh water. Refer to the engine owner's manual for instructions on flushing your outboard engines.
- Check the bilge area for debris and excess water. Remove any debris and pump out excess water as necessary.
- Fill the fuel tank to near full to reduce the potential for condensation accumulation in the tank. Allow enough room in the tank for the fuel to expand without being forced out through the vent.
- Turn off all electrical equipment except the battery charger and automatic bilge pumps.
- If you are going to leave the boat for a long period of time, put the battery main switches in the OFF position and close all seacocks.
- Make sure the boat is securely moored.

2.5 Single Engine Docking, Anchoring & Mooring

Docking and Dock Lines

Maneuvering the boat near the dock and securing the boat require skill and techniques that are unique to the water, wind conditions and the layout of the dock. If possible, position a crew member at the bow and stern to man the lines and assist in docking operations. While maneuvering close to the dock consideration must be given to the wind and current. You should anticipate the effect these forces will have on the boat and use them to help put the boat where you want it. It is important to practice in open water using an imaginary dock enough to develop a sense for the way your boat handles in a variety of docking scenarios. You must be able to foresee the possibilities and have solutions in mind before problems occur.

Approaching a dock or backing into a slip in high winds or strong currents requires a considerable amount of skill. If you are new to boat handling, you should take lessons from an experienced pilot to learn how to maneuver your boat in tight quarters in less than ideal conditions. You should also practice away from the dock during windy conditions.

Dock lines are generally twisted or braided nylon. Nylon is strong and stretches to absorb shock. It also has a long life and is soft and easy on the hands. The line's size will vary with the size of the boat. Typically a 30 to 40 foot boat will use 5/8-inch line and a 20 to 30 foot boat will use 1/2-inch line. The number of lines and their configuration will vary depending on the dock, the range of the tide, and many other factors. Usually a combination of bow, stern and spring lines are used to secure the boat.



CAUTION



TO PREVENT DAMAGE TO THE BOAT, CLOSE ALL SEACOCKS BEFORE LEAVING THE BOAT.

Maneuvering - Single Engine Boats Maneuvering to the Dock

Approach the dock slowly at a 30 to 40 degree angle. Whenever possible, approach against the wind or current. Turn the engine straight & shift to neutral when you feel you have enough momentum to reach the dock. Use reverse while turning the steering wheel toward the dock to slow the boat and pull the stern toward the dock as the boat approaches. Straighten the engine and use reverse to stop the boat if it is still moving forward against the pilings. If you executed your approach properly, the boat will lightly touch the pilings at the same time the forward momentum is stopped. Have the dock lines ready and secure the boat as soon as it stops. Use fenders to protect the boat while it is docked. Keep the engine running until the lines are secured.

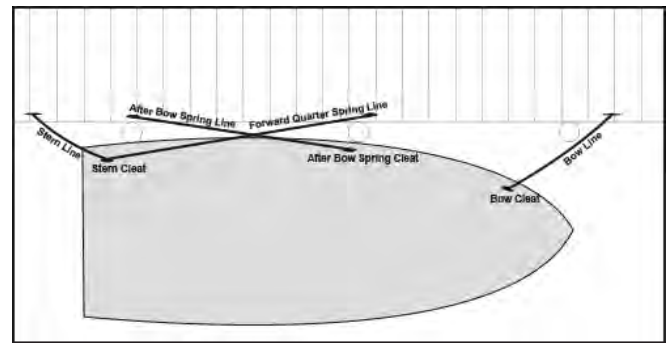
Backing into a Slip

Approach the slip with the stern against the wind or current and the engine straight ahead. Use the engine and turn the steering wheel to maneuver the boat into alignment with the slip. Reverse the engine and slowly back into the slip. Shift from reverse to neutral frequently to prevent the boat from gaining too much speed. Move the stern right and left by shifting the engine in and out of gear or turning the wheel. When nearly in the slip all the way, straighten the engine and shift to forward to stop. Keep the engine running until the lines are secured.

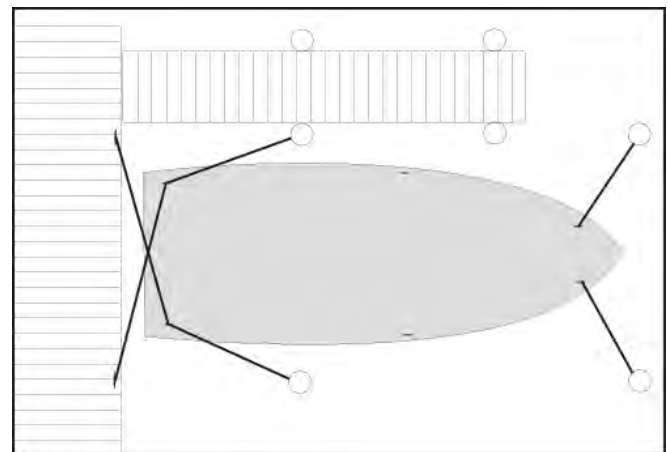
Securing Dock Lines

Securing a boat that is tied along side the dock typically requires a bow and stern line and two spring lines. The bow and stern lines are usually secured to the dock at a 40° angle aft of the stern cleat and forward of the bow cleat. The after bow spring line is secured to the dock at a 40° angle aft of the after bow spring cleat. The forward quarter spring line is secured to the dock at a 40° angle forward of the stern cleat or the stern spring cleat. The spring lines keep the boat square to the dock and reduce fore and aft movement while allowing the boat to move up and down with the tide.

Securing a boat in a slip is somewhat different. It typically requires two bow lines secured to pilings on each side of the bow, two stern lines secured to the dock and two spring lines that prevent the boat from hitting the dock. The bow lines are typically secured with enough slack to allow the boat to ride the tide. The stern lines are crossed.



Securing Boat Along Side A Dock (Typical)



Securing Boat In A Slip (Typical)

One line runs from the port aft boat cleat to the starboard dock cleat and the other line runs from the starboard aft boat cleat to the port cleat on the dock. The stern lines center the boat, control the forward motion, and allow the boat to ride the tide. Two forward quarter spring lines typically are secured to the stern cleats and to mid ship pilings or cleats. The spring lines keep the boat from backing into the dock while allowing it to ride the tide.

Leaving the Dock

Always start the engine and let it warm up for several minutes before releasing the lines. Boats steer from the stern and it is important that you achieve enough clearance at the stern to maneuver the boat as quickly as possible. Push the stern off and maneuver such that you get stern clearance quickly. Proceed slowly until well clear of the dock and other boats.

Maneuvering - Twin Engine Boats

If your boat is equipped with a joystick integrated into the engine control system and you are using the joystick to maneuver the boat, you should leave all engines running while using the joystick to maneuver the boat to the dock or back into the slip.

Note, most joystick controls will be deactivated if either throttle & shift control lever is moved while maneuvering the boat.

Electronic control system and joystick operation is unique to the engines installed on your boat. Operation manuals for the engines and control systems are included with this manual. You should read these manuals thoroughly and understand the control system in theory and operation before operating your boat. Additionally, your dealer should demonstrate the operation of the control system and instruct you in operating the controls properly.

Maneuvering to the Dock

Approach the dock slowly at a 30 to 40 degree angle. Whenever possible, approach against the wind or current. Turn the engines straight & shift to neutral when you feel you have enough momentum to reach the dock. Use reverse on the outboard engine while turning the steering wheel towards the dock to slow the boat and pull the stern toward the dock as the boat approaches. Straighten the engines and use both engines to stop the boat if it is still moving forward against the pilings. If you executed your approach properly, the boat will lightly touch the pilings at the same time the forward momentum is stopped. Have the dock lines ready and secure the boat as soon as it stops. Use fenders to protect the boat while it is docked. Keep the engines running until all of the lines are secured.

Backing into a Slip

Approach the slip with the stern against the wind or current and the engines straight ahead. Use the engines and turn the steering wheel to maneuver the boat into alignment with the slip. Reverse the engines and slowly back into the slip. Shift from reverse to neutral frequently to prevent the boat from gaining too much speed. Move the stern

right and left by shifting the engines in and out of gear or turning the wheel. When nearly in the slip all the way, straighten the engines and shift to forward to stop. Keep the engines running until the lines are secured.

Securing Dock Lines

Securing a boat that is tied alongside the dock typically requires a bow and stern line and two spring lines. The bow and stern lines are usually secured to the dock at a 40° angle aft of the stern cleat and forward of the bow cleat. The after bow spring line is secured to the dock at a 40° angle aft of the after bow spring cleat. The forward quarter spring is secured to the dock at a 40° angle forward of the stern cleat. The spring lines keep the boat square to the dock and reduce fore and aft movement while allowing the boat to move up and down with the tide.

Securing a boat in a slip is somewhat different. It typically requires two bow lines secured to pilings on each side of the bow, two stern lines secured to the dock and two spring lines that prevent the boat from hitting the dock. The bow lines are typically secured with enough slack to allow the boat to ride the tide. The stern lines are crossed. One line runs from the port aft boat cleat to the starboard dock cleat and the other line runs from the starboard aft boat cleat to the port cleat on the dock. The stern lines center the boat, control the forward motion, and allow the boat to ride the tide. Two forward quarter spring lines typically are secured to the stern cleats and to mid ship pilings or cleats. The spring lines keep the boat from backing into the dock while allowing it to ride the tide.

Leaving the Dock

Always start the engines and let them warm up for several minutes before releasing the lines. Boats steer from the stern and it is important that you achieve enough clearance at the stern to maneuver the boat as quickly as possible. Push the stern off and maneuver such that you get stern clearance quickly. Proceed slowly until well clear of the dock and other boats.

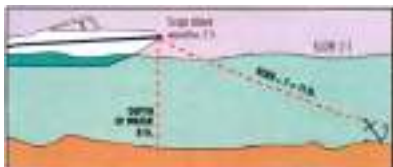
Mooring

Approach the mooring heading into the wind or current. Shift to neutral when you have just enough headway to reach the buoy. Position a crew member on the bow to retrieve the mooring with a boat hook and secure the line. Keep the engine running until the line is secured.

Leaving a Mooring

Start the engines and let them warm up for several minutes before releasing the mooring line. The boat will already be headed into the wind, so move it forward enough to loosen the line and untie it. Back the boat away from the mooring until you can see the buoy. Move the boat slowly away from the mooring.

Anchoring



Make sure the bitter end of the anchor line is attached to boat before dropping the anchor. Bring the

bow into the wind or current and put the engine in neutral. When the vessel comes to a stop, lower the anchor over the bow. Pay out anchor line so that it is at least 5 to 7 times the depth of the water and secure the line to a cleat. Use caution to avoid getting your feet or hands tangled in the line. Additional scope of 10 times the depth may be required for storm conditions. Check landmarks on shore to make sure the anchor is not dragging. If it is dragging, you will have to start all over. It is prudent to use two anchors if you are anchoring overnight or in rough weather.

Releasing the Anchor

Release the anchor by driving the boat slowly to the point where the anchor line becomes vertical. It should release when you pass that point. If the anchor doesn't release right away, stop the boat directly above the anchor and tie the line to the cleat as tight as possible. The up and down movement of the boat will usually loosen the anchor within a minute. Make sure you secure the anchor and properly stow the line before operating the boat.



WARNING



NEVER ANCHOR THE BOAT BY THE STERN. THE STERN OF THE BOAT IS VULNERABLE TO SWAMPING FROM WAVE ACTION AND WIND AND CURRENT WILL PUT MORE STRESS ON THE ANCHOR WHEN IT IS ATTACHED TO THE STERN. ONLY ANCHOR THE BOAT BY THE BOW

2.6 Controls, Steering, or Propulsion System Failure

If the propulsion, control or steering system fails while you are operating the boat, bring the throttles to idle and shift to neutral. Decide whether you need to put out the anchor to prevent the boat from drifting or to hold the bow into the seas. Investigate and correct the problem if you can. Turn the engine off before opening the engine cowling to make repairs. If you are unable to correct the problem, call for help.

If your boat is equipped with twin engines and only one engine has failed, you can usually run home on the other engine. Be careful not to apply too much power to the engine that is running. When only one engine is used to power a twin engine boat, that engine is over propped and can be overloaded if too much throttle is applied. You should contact your dealer or the engine manufacturer for the maximum power settings when running without one engine.

2.7 Collision



If your boat is involved in a collision with another boat, dock, piling or a sandbar, your first priority is to check your passengers for injuries and administer first aid if necessary. Once your passenger's situations are stabilized, thoroughly inspect the boat for damage. Check below decks for leaks and the control systems for proper operation. Plug all leaks or make the necessary repairs to the control systems before proceeding slowly and carefully to port. Request assistance if necessary. Haul the boat and make a thorough inspection of the hull and running gear for damage.

2.8 Grounding, Towing & Rendering Assistance

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



If the boat should become disabled, or if another craft that is disabled requires assistance, great care must be taken. The stress applied to a boat during towing may become excessive. Excessive stress can damage the structure of the boat and create a safety hazard for those aboard.

Freeing a grounded vessel or towing a boat that is disabled requires specialized equipment and knowledge. Line failure and structural damage caused by improper towing have resulted in fatal injuries. Because of this, we strongly suggest that these activities be left to those who have the equipment and knowledge, e.g., the U.S. Coast Guard or a commercial towing company, to safely accomplish the towing task.

 **DANGER** 

THE MOORING CLEATS ON SCOUT BOATS ARE NOT DESIGNED OR INTENDED TO BE USED FOR TOWING PURPOSES. THESE CLEATS ARE SPECIFICALLY DESIGNED AS MOORING CLEATS FOR SECURING THE BOAT TO A DOCK, PIER, ETC. DO NOT USE THESE FITTINGS FOR TOWING OR ATTEMPTING TO FREE A GROUNDING VESSEL.

WHEN TOWING OPERATIONS ARE UNDERWAY, HAVE EVERYONE ABOARD BOTH VESSELS STAY CLEAR OF THE TOW LINE AND SURROUNDING AREA. A TOW LINE THAT SHOULD BREAK WHILE UNDER STRESS CAN BE VERY DANGEROUS, AND COULD CAUSE SERIOUS INJURY OR DEATH.

 **WARNING** 

RUNNING AGROUND CAN CAUSE SERIOUS INJURY TO PASSENGERS AND DAMAGE TO A BOAT AND ITS UNDERWATER GEAR. IF YOUR BOAT SHOULD BECOME GROUNDING, DISTRIBUTE PERSONAL FLOTATION DEVICES AND INSPECT THE BOAT FOR POSSIBLE DAMAGE. THOROUGHLY INSPECT THE BILGE AREA FOR SIGNS OF LEAKAGE. AN EXPERIENCED SERVICE FACILITY SHOULD CHECK YOUR UNDERWATER GEAR AT THE FIRST OPPORTUNITY. DO NOT CONTINUE TO USE YOUR BOAT IF THE CONDITION OF THE UNDERWATER EQUIPMENT IS QUESTIONABLE.

2.9 Flooding or Capsizing

Boats can become unstable if they become flooded or completely swamped. You must always be aware of the position of the boat to the seas and the amount of water in the bilge. Water entering the boat over the transom can usually be corrected by turning the boat into the waves. If the bilge is flooding because of a hole in the hull or a defective hose, you may be able to plug it with rags, close the thru-hull valve or assist the bilge pumps by bailing with buckets. Put a mayday call in to the Coast Guard or nearby boats and distribute life jackets as soon as you discover your boat is in trouble.

If the boat becomes swamped and capsizes, you and your passengers should stay with the boat as long as you can. It is much easier for the Coast Guard, aircraft, or other boats to spot the boat, than just people in the water.

2.10 Fishing

Fishing can be very exciting and distracting for the operator when the action gets intense. You must always be conscious of the fact that your primary responsibility is the safe operation of your boat and the safety of your passengers and other boats in the area.

You must always make sure the helm is properly manned and is never left unattended while trolling. If your boat is equipped with a tower, caution and good common sense must be exercised whenever someone is in the tower. Most towers are designed for two average-sized people. Remember, weight in the tower raises the boat's center of gravity and the boat's motion is greatly exaggerated for the people in a tower.

If you are fishing in an area that is crowded with other fishing boats, it may be difficult to follow the rules of the road. This situation can become especially difficult when most boats are trolling. Being courteous and exercising good common sense is essential. Avoid trying to assert your right of way and concentrate on staying clear and preventing tangled or cut lines and other unpleasant encounters with other boats. Also keep in mind that fishing line wrapped around a propeller shaft can damage seals in the engine's lower unit. If fishing line becomes tangled in the propeller shaft, remove it as soon as possible and have your authorized engine dealer check the propeller shaft seals for damage and leakage.

2.11 Water Skiing & Wakeboarding



Your boat could be equipped with an optional tow hook or ski pylon for water skiing and wakeboarding. If you have never driven skiers before, you should spend some hours as an observer and learn from an experienced driver. If you are an experienced driver, you should take some time to become familiar with the boat and the way it handles before pulling a skier. The driver should also know the skier's ability and drive accordingly.

Always use high quality tow ropes with attachment loops when pulling wakeboarders or skiers and

only attach the tow rope to the tow hook fitting or pylon. Never use mooring cleats or grab rails to pull skiers. They are not designed for towing skiers and injury to skiers or passengers and/or damage to the boat could result.

The tow rope should always be attached using the attachment loops and never tied to the tow fitting or to any type of metal hook attached to the tow fitting. Tied ski ropes are very difficult to remove and metal hooks will damage the pylon or tow hook and the fiberglass around it. Metal hooks also can cause injury to your skiers if the metal hook breaks under the strain of the tow.

When attaching a tow rope using the attachment loops, hold the attachment loop in one hand and pull a length of rope on the handle side of the loop through the loop, creating another 6" loop. Slide the loop just created over the tow fitting and pull the handle side of the rope to tighten the loop around the fitting. This procedure will attach the rope securely to the tow fitting, be easy to remove and will not come off if the skier or wakeboarder falls.

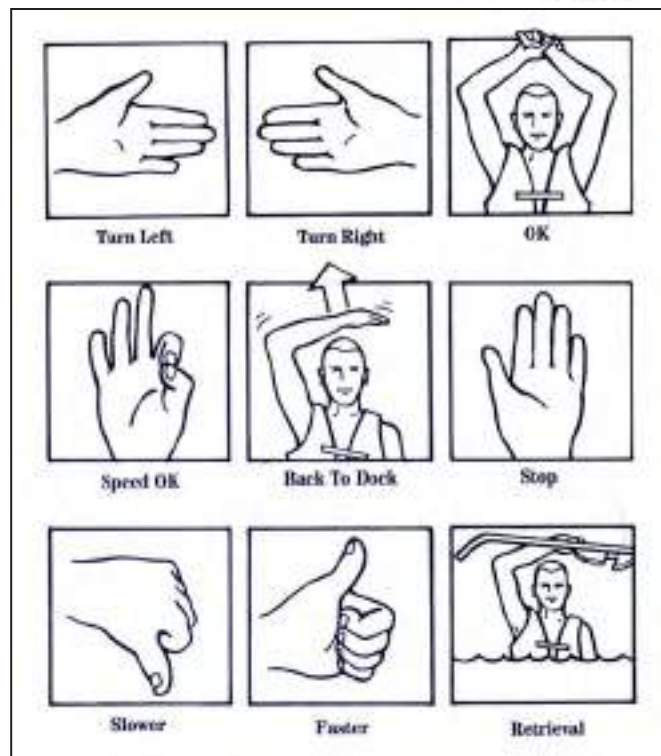
	WARNING	
<p>THE TOW HOOK OR PYLON IS DESIGNED FOR TOWING WATER SPORTS DEVICES ONLY. DO NOT TOW MORE THAN TWO SKIERS OR WAKEBOARDERS AT A TIME FROM THE TOW HOOK OR PYLON. IMPROPER USE OR OVERLOADING TOW FITTING MAY CAUSE DAMAGE TO THE TOW FITTING AND/OR BOAT.</p>		

The following safety precautions should be observed while towing water skiers.

- Water ski only in safe areas, away from other boats and swimmers, out of channels, and in water free of underwater obstructions. The area should be at least 5 feet deep, 3000 feet long and have at least 100' between each side of the boat and any obstructions.
- Make sure that anyone who skis can swim. Do not allow people who cannot swim to water ski.
- Be sure that the skier is wearing a proper life jacket. A water skier is considered on board the boat and a Coast Guard approved life jacket is required. It is advisable and recommended for a skier to wear a flotation device designed to withstand the impact of hitting the water at high speed.

- Make sure to inspect the ski equipment and tow rope before each ski session. Never use equipment that is damaged or with loose screws, torn boots, severe corrosion or tears in the fabric. You should also inspect the ski tow rope and replace if it is frayed, has unnecessary knots or damage. Never use a ski tow rope that is questionable.
- Always carry a second person on board to observe the skier or wakeboarder so that your full attention can be given to the safe operation of the boat. The operator should pay attention to driving the boat and have the observer keep him updated on the skier. Never ski after dark. It is hazardous and illegal. Neither the boat operator or skier can see well enough to navigate at skiing or wakeboarding speeds safely at night.
- Never spray swimmers, boats, rafts or other skiers. The risk for a collision makes this dangerous for the skier and people being sprayed.
- Some lakes have an approved tow pattern for skiing. Always make sure to follow the pattern on these lakes.
- Never follow directly behind another boat while pulling skiers. Always stay a safe distance behind or off the side of other boat traffic. If the boat you are following stops unexpectedly, you may not be able to respond quick enough endangering your skier and occupants of both boats.
- Never follow behind another boat pulling a skier for any reason, even if you are not pulling a skier. If the skier you are following falls, you may not be able to respond quick enough and could run over the skier.
- When pulling multiple skiers, make sure the ropes are the same length. Never pull multiple skiers with tow ropes of different length
- Always make sure to slowly pull the slack out of the ski rope and wait for the OK from the skier before advancing the throttle to ensure the rope is not wrapped around the skier and that the skier is ready. Never advance the throttle until the skier provides the ready signal.
- When turning around to pick up a fallen skier, make sure to look for other boat traffic in the direction of the turn before you turn the boat.

- Approach a skier in the water from the down-wind side and be certain to stop the motion of the boat and your motor before coming in close proximity to the skier.
- Give immediate attention to a fallen skier. A fallen skier is very hard to see by other boats and is extremely vulnerable. When a skier falls, be prepared to immediately turn the boat and return to the skier.
- Never leave a fallen skier alone in the water for any reason and have an observer display a skier down flag to alert other boaters that your skier has fallen.
- Agree on hand signals to be used between the observer and skier to communicate. This is important to eliminate confusion and ensure the safety of your skiers, wakeboarders or tubers. Refer the Hand Signals drawing in this section for signals that are commonly used during water sports activities.
- Make sure the observer watches for the skier's signal to indicate he or she is OK. If the signal is not seen immediately, assume the skier is injured and in need of immediate assistance. Be prepared to respond quickly.
- For additional information on water skiing, including hand signals and water skiing manuals, contact the American Water Skiing Association in Winter Haven, Florida, (863) 324-4341.





Common Hand Signals for Water Sports Activities

2.12 Man Overboard

If someone falls overboard, you must be prepared to react quickly, particularly when you are offshore. The following procedures will help you in recovering a person that has fallen overboard.

- Immediately stop the boat and sound a man overboard alarm and have all passengers point to the person in the water.
- Circle around quickly and throw a cushion or life jacket to the person, if possible, and another to use as a marker.
- Keep the person on the driver side of the boat so you can keep him in sight at all times.
- Make sure to approach the person from the downwind side and maneuver the boat so the propeller is well clear of the person in the water.
- Turn off the engines when the person is alongside and use a ring buoy or a boat cushion with a line attached, a paddle or boathook to assist him to the boat. Make sure you don't hit him with the ring buoy or the boat.
- Pull the person to the boat and assist him on board.
- Check the person for injuries and administer first aid if necessary. If the injuries are serious, call for help. Refer to the Safety Equipment chapter for more information on first aid and requesting emergency medical assistance.



	WARNING	
<p>MOVING PROPELLERS ARE DANGEROUS. THEY CAN CAUSE DEATH, LOSS OF LIMBS, OR OTHER SEVERE INJURY. DO NOT USE THE SWIM PLATFORM OR SWIM LADDER WHILE THE ENGINES ARE RUNNING. STOP THE ENGINES IF DIVERS OR SWIMMERS ARE ATTEMPTING TO BOARD. ALWAYS PROPERLY STORE THE LADDER BEFORE STARTING THE ENGINES.</p>		

2.13 Teak Surfing

Teak Surfing is a new and dangerous boating fad that involves an individual holding on to the swim platform of a vessel while a wake builds up then lets go to body surf the wave created by the boat; hence the term "Teak Surfing." This activity puts that individual directly in the path of the boat's exhaust and poisonous carbon monoxide. Because of the multiple dangers associated with teak surfing and the carbon monoxide problem in particular, the Coast Guard has issued a safety alert that strongly advises the public not to engage in teak surfing and warns that teak surfing may cause carbon monoxide poisoning and even fatalities.

Teak surfing not only exposes an individual to potentially fatal concentrations of carbon monoxide from the engine exhaust, it exposes them unnecessarily and dangerously to the boat's propellers. The danger is compounded by the fact that individuals do not usually wear a life jacket when teak surfing.

Teak surfing is an extremely dangerous activity and you should never allow anyone to "Teak Surf" behind your boat or be in the water near the ladder or swim platform while the engine is operating.

	WARNING	
<p>TEAK SURFING (HOLDING ONTO THE SWIM PLATFORM WHILE BOAT IS UNDERWAY) IS EXTREMELY DANGEROUS AND CAN CAUSE SEVERE INJURY OR DEATH. TEAK SURFING PUTS AN INDIVIDUAL DIRECTLY THE PATH OF THE BOAT'S EXHAUST AND EXPOSES THEM TO POISONOUS LEVELS OF CARBON MONOXIDE. IT ALSO EXPOSES AN INDIVIDUAL TO THE POSSIBILITY OF BEING THROWN INTO THE PROPELLERS. YOU SHOULD NEVER ALLOW ANYONE TO TEAK SURF BEHIND YOUR BOAT OR TO BE IN THE WATER NEAR THE LADDER OR SWIM PLATFORM WHILE THE ENGINE IS RUNNING.</p>		

2.14 Trash Disposal

The discharge of plastic trash or trash mixed with plastic is illegal anywhere in the marine environment. U.S. Coast Guard regulations also restrict the dumping of other forms of garbage. Regional, State, and local restrictions on garbage discharges also may apply.

Responsible boaters store refuse in bags and dispose of it properly on shore. You should make sure your passengers are aware of the local waste laws and the trash management procedure on your boat. Refer to the placard mounted on your boat for more specific information regarding solid waste disposal.

Federal law requires that vessels of 26 feet or longer must display in a prominent location, a durable placard at least 4 by 9 inches notifying the crew and passengers of the discharge restrictions (Marpol Treaty). It is the boat owner's responsibility to make sure this placard remains mounted and legible in accordance with the law.



Maximum Capacities Plate

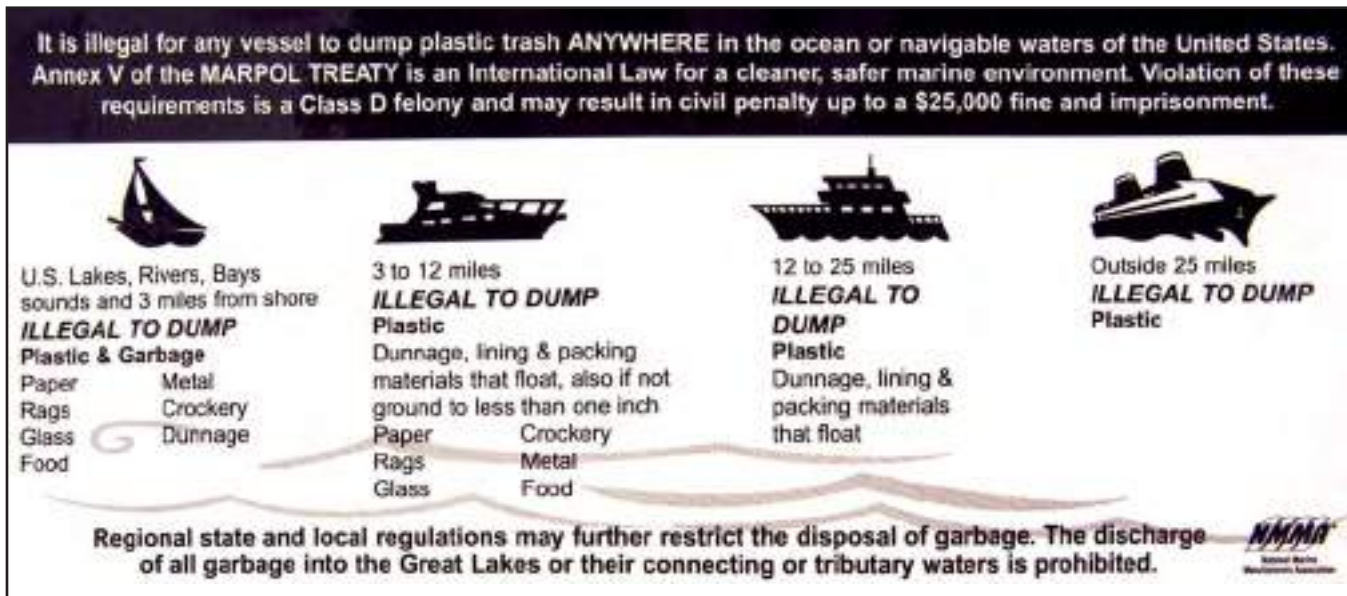
2.15 Yacht Certification/Capacities Plate

Coast Guard rules require boats less than 20 feet (6 meters) to display a gross weight and person-capacity plate provided by the manufacturer.

Boat manufacturers in the National Marine Manufacturers Association (NMMA) program will display a gross weight and person-capacity plate on boats up to 26 feet (7.9 meters).

The person/load capacity is determined by the US Coast Guard. The capacity plate is usually located near the helm in clear view of the operator. The limits indicated on the capacity plate are enforceable by law.

You should never exceed the "U.S. Coast Guard Maximum Capacities" indicated on the capacity plate.



Typical Trash Disposal Placard
Must be Mounted in a Prominent Location

2.16 Transporting Your Boat

If you trailer your boat, make sure that your tow vehicle is capable of towing the weight of the trailer, boat and equipment and the weight of the passengers and equipment inside the vehicle. This may require that the tow vehicle be specially equipped with a larger engine, transmission, brakes and trailer tow package.

The boat trailer is an important part of your boating package. The trailer should be matched to your boat's weight and hull. Using a trailer with a capacity too low will be unsafe on the road and cause abnormal wear. A trailer with a capacity too high, can damage the boat. Contact your trailer dealer to evaluate your towing vehicle and hitch, and to make sure you have the correct trailer for your boat.

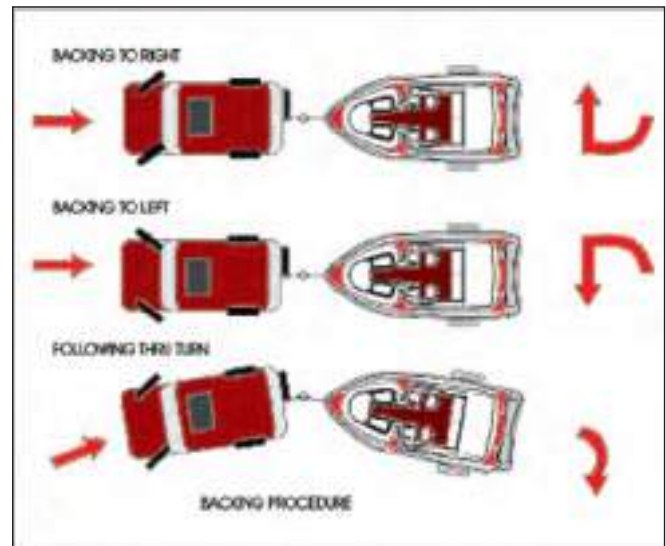
Notice:

Your Scout is a heavy boat and care must be taken when selecting the trailer. We recommend that you use a bunk style trailer that incorporates a combination of heavy duty rollers, to support the keel and long bunks running under and parallel to the stringers to support the hull. Avoid using a full roller trailer that does not have bunks. Roller trailers have a tendency to put extreme pressure points on the hull, especially on the lifting strakes, and have damaged boats. The situation is worse during launching and haul out. Damage resulting from improper trailer support or the use of a full roller trailer will not be covered by the Scout Warranty.

Notice:

Contact your trailer dealer to evaluate your towing vehicle and hitch, and to make sure you have the correct trailer for your boat.

- Make sure the trailer is a match for your boat's weight and hull design. More damage can be done to a boat by the stresses of road travel than by normal water operation. A boat hull is designed to be supported evenly by water. So, when it is transported on a trailer it should be supported structurally as evenly across the hull as possible allowing for even distribution of the weight of the hull, engines and equipment.



- Make sure the trailer bunks and rollers properly support the hull and do not put pressure on the lifting strakes. The rollers and bunks must be kept in good condition to prevent scratching and gouging of the hull.
- The capacity rating of the trailer should be greater than the combined weight of the boat, motor, and equipment. The gross vehicle weight rating must be shown on the trailer. Make sure the weight of the boat, engine, gear and trailer is not more than the gross vehicle weight rating of your tow vehicle.
- Make sure the boat is securely fastened on the trailer to prevent movement between the boat and trailer. The bow eye on the boat should be secured with a rope, chain or turnbuckle in addition to the winch cable. Additional straps may be required across the beam of the boat.

Notice:

Your trailer dealer will give instructions on how to load, fasten and launch your boat.

⚠
CAUTION
⚠

BOATS HAVE BEEN DAMAGED BY TRAILERS THAT DO NOT PROPERLY SUPPORT THE HULL. ALWAYS MAKE SURE THE TRAILER BUNKS AND ROLLERS ARE ADJUSTED SO THEY ARE NOT PUTTING EXCESSIVE PRESSURE ON THE LIFTING STRAKES AND ARE PROVIDING ENOUGH SUPPORT FOR THE HULL. HULL DAMAGE RESULTING FROM IMPROPER TRAILER SUPPORT IS NOT COVERED BY THE SCOUT WARRANTY.

Before Going Out On The Highway:

- SIDE CURTAINS, CLEAR CONNECTOR, BACK DROP and AFT CURTAIN must be removed when trailering. Canvas enclosures are not designed to withstand the extreme wind pressure encountered while trailering and will be damaged. Always remove and properly store the enclosure before trailering your boat.
- Make sure the tow BALL and TRAILER COUPLER are the same size and bolts and nuts are tightly secured.
- The COUPLER MUST BE COMPLETELY OVER THE BALL and the LATCHING MECHANISM LOCKED DOWN.
- Make sure the TRAILER IS LOADED EVENLY from front to rear as well as side to side and has the correct weight on the hitch. Too much weight on the hitch will cause the rear of the tow vehicle to drag and may make steering more difficult. Too little weight on the hitch will cause the rig to fishtail and will make controlling the tow vehicle difficult. Contact your trailer manufacturer or dealer for the correct weight on the hitch for your trailer.
- The SAFETY CHAINS must be attached criss-crossing under the coupler to the frame of the tow vehicle. If the ball was to break, the trailer would follow in a straight line and prevent the coupler from dragging on the road. Make sure the trailer emergency brake cable or chain is also installed to the tow vehicle frame.
- Make sure the LIGHTS on the trailer function properly.
- CHECK THE BRAKES. On a level parking area roll forward and apply the brakes several times at increasing speeds to determine if the brakes on the tow vehicle and trailer are working properly.
- Make sure the tow vehicle has SIDE VIEW MIRRORS that are large enough to provide an unobstructed rear view on both sides of the vehicle.
- CHECK THE TIRES and WHEEL BEARINGS.

Notice:

Make sure your towing vehicle and trailer are in compliance with all state and local laws. Contact your state motor vehicle bureau for laws governing the towing of trailers.

Propulsion System



3.1 General



Your boat is designed to be powered with 2-cycle or 4-cycle outboard motors. 4-cycle outboard engines do not use an oil injection system and are not equipped with an oil tank. They have an oil sump in the crankcase that must be kept full of the type of oil recommended by the engine manufacturer. The oil must be checked before each use and changed regularly.

Each manufacturer of the various outboard motors provides an owner's information manual with its product. It is important that you read the manual(s) very carefully and become familiar with the proper care and operation of the engines and drive systems. A warranty registration card has been furnished with each new engine and can be located in the engine owner's manual. All information requested on this card should be filled out completely by the dealer and purchaser and then returned to the respective engine manufacturer as soon as possible.



Twin Engine Outboard Engines

	WARNING	
<p>DO NOT ATTEMPT TO SERVICE ANY ENGINE OR DRIVE COMPONENT WITHOUT BEING TOTALLY FAMILIAR WITH THE SAFE AND PROPER SERVICE PROCEDURES. CERTAIN MOVING PARTS ARE EXPOSED AND CAN BE DANGEROUS TO SOMEONE UNFAMILIAR WITH THE OPERATION AND FUNCTION OF THE EQUIPMENT.</p>		

	WARNING	
<p>DO NOT INHALE EXHAUST FUMES! EXHAUST CONTAINS CARBON MONOXIDE THAT IS COLORLESS AND ODORLESS. CARBON MONOXIDE IS A DANGEROUS GAS THAT IS POTENTIALLY LETHAL.</p>		

3.2 Drive System Corrosion

Each outboard motor is a complete drive system with the gear case being just forward of the propeller and connected to the power head with a vertical drive shaft. All engines require some maintenance. Routine maintenance recommended for your engine is outlined in the engine owner's manual. Routine maintenance is normally the

primary concern unless the boat is to be kept in saltwater for extended periods of time. Then the main concerns are marine growth and galvanic corrosion.

Marine growth occurs when components are left in the water for extended periods and can cause poor performance or permanent damage to the exposed components. The type of growth and how quickly it occurs is relative to the water conditions in your boating area. Water temperature, pollution, current, etc. can have an effect on marine growth.

Galvanic corrosion is the corrosion process occurring when different metals are submerged in an electrolyte. Seawater is an electrolyte and submerged engine components must be properly protected. Outboard motors are equipped with sacrificial anodes to prevent galvanic corrosion problems. The anodes must be monitored and replaced as necessary. For locations and maintenance, please refer to the engine owner's manual.

When leaving the boat in the water, tilt the motors as high as possible. This will decrease the risk of marine growth around the cooling inlets, propeller and exhaust ports and damage from galvanic corrosion.



CAUTION



DO NOT PAINT THE OUTBOARD MOTOR WITH ANTI-FOULING PAINTS DESIGNED FOR BOAT HULLS. MANY OF THESE PAINTS CAN CAUSE SEVERE DAMAGE TO THE ENGINE. CONTACT YOUR DEALER OR ENGINE MANUFACTURER FOR INFORMATION ON THE PROPER PAINTING PROCEDURES.

3.3 Engine Lubrication

2-cycle Engine Lubrication

2-cycle outboard motors are lubricated by a variable ratio oil injection system. The oil tank is typically mounted inside the engine cowling.

Always monitor the oil level before each cruise. When additional oil is needed, use only the type of oil specified by the engine manufacturer. Refer to the engine owner's manual for oil specifications and additional information on the oil injection system.

Notice:

Always monitor the oil level in the tank and only use the type of oil specified by the engine manufacturer.

4-Cycle Engine Lubrication

4-cycle outboard engines incorporate a pressure-type lubrication system with an oil sump in the crankcase that must be kept full of the type and grade of oil recommended by the engine manufacturer. It is normal for 4-cycle engines to consume a small amount of oil. Therefore, the oil must be checked before each use and changed at regular intervals as instructed by the engine owner's manual.

Notice:

Always monitor the oil level in the crankcase and only use the type of oil specified by the engine manufacturer.

3.4 Engine Cooling System

Outboard engines are raw water (seawater) cooled. Water is pumped through the water inlets, circulated through the engine block, and relinquished with the exhaust gases through the propeller hub. The water pump uses a small impeller made of synthetic rubber. The impeller and water pump cannot run dry for more than a few seconds. In most outboard motors, some cooling water is diverted through ports below the engine cowling. This allows the operator to visually check the operation of the cooling system. When the engine is started, always check for a steady stream of water coming out of those ports.

Notice:

If the boat is used in salt or badly polluted water, the engines should be flushed after each use. Refer to the engine owner's manual for the proper engine flushing procedure.



CAUTION



NEVER RUN AN OUTBOARD MOTOR WITHOUT WATER FLOWING TO THE WATER PUMP. SERIOUS DAMAGE TO THE WATER PUMP IMPELLER OR ENGINE COULD RESULT.

3.5 Propellers

The propellers convert the engine's power into thrust. They come in a variety of styles, diameters and pitches. All boats powered by Yamaha engines are equipped with Yamaha propellers. The one that will best suit the needs of your boat will depend somewhat on your application and expected average load. Propeller sizes are identified by two numbers stamped on the prop in sequence. The 1st number in the sequence (example 14" x 21") is the diameter of the propeller, and the 2nd number is the pitch. Pitch is the theoretical distance traveled by the propeller in one revolution.

Always repair or replace a propeller immediately if it has been damaged. A damaged and therefore out of balance propeller can cause vibration that can be felt in the boat and could damage the engine gear assembly. Refer to the engine owner's manual for information on propeller removal and installation.

3.6 Performance Issues & Propellers

It is extremely important that the boat is propped to run at or very near the recommended top RPM with an average load. If the top RPM is above or below the recommend range, the propellers must be changed to prevent loss of performance and possible engine damage.

Your boat is equipped from the factory with counter rotating engines that are mounted to achieve quicker planing and optimum performance. Therefore, the left hand rotation engine is mounted on the port side of the transom and the right hand rotation engine is mounted on the starboard side. You should make sure that each propeller matches the rotation of the engine.

Notice:

Before changing propellers to correct boat performance problems, be sure factors such as engine tuning, bottom and running gear growth, etc. are not the source of performance changes. Always be sure the load conditions are those normally experienced, before changing propellers.

Your boat was shipped with propellers that typically provide optimum performance for your boat. However there are factors that can affect performance and propeller requirements.

The following are some other factors to consider:

- You should be sure the load conditions are those normally experienced. If the boat ran in the required RPM range when it was new and you have not added any additional gear or heavy equipment and have not damaged the propellers, there is a good chance the propellers are not the problem.
- The addition of heavy equipment such as a tower, life rafts, additional coolers, etc., will cause additional load on the engines. Consequently, different propellers may be required.



Typical Outboard Engine Propeller

- Boats operated at high altitudes (above 2000 feet). Engines operated at high altitudes will not be able to develop as much horsepower as they do at or near sea level. Consequently, different propellers may be required.

Notice:

Outboard engines can be damaged and the warranty void if the boat is not propped correctly. Always consult your Dealer or authorized engine service dealer when making changes to the propellers or if the boat does not run near the top recommended RPM.



Yamaha Command Link Plus® / Twin Engine Combo Screen

3.7 Engine Instrumentation

The helm station is equipped with a set of engine instruments and/or alarms. These instruments allow the operator to monitor the operational condition of the engines. Close observation of these instruments allows the operator to operate the engines at the most efficient level and could save them from serious costly damage.

Most Scout boats are equipped with Yamaha engines and Command Link® multifunction instruments or Garmin display panels with integrated engine data. A brief description of those instruments and their basic functions are listed in this section. Other functions that are dependent on the electronics installed on your boat may be available. You should refer to the Yamaha engine and Command Link® owner's manuals or other engine manufacturer's manuals and the manuals for the electronics installed on your boat for detailed information on the operation of the instruments and additional functions available.

The instrumentation is unique to the type of outboard motors installed on your Scout. Some or all of the following gauges may be displayed:



Typical Garmin Display Engine Data

Tachometers

The tachometers display the speed of the engines in revolutions per minute (RPM's). This engine speed is not the boat speed or necessarily the speed of the propeller. Analog tachometers may not register zero with the key in the OFF position.

Yamaha tachometers also contain the engine trim meter, oil pressure indicator (4 stroke engines), water pressure and the overheat warning indicator.

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CAUTION

NEVER EXCEED THE MAXIMUM RECOMMENDED OPERATION RPM OF THE ENGINES. MAINTAINING MAXIMUM, OR CLOSE TO MAXIMUM RPM FOR EXTENDED PERIODS CAN REDUCE THE LIFE OF THE ENGINES.

Speedometer

The speedometer indicates the speed of the boat in miles per hour (MPH). Most speedometers measure the water pressure against a small hole in a pickup tube located in the engine lower unit or mounted on the bottom of the transom. Yamaha speedometers also contain the fuel meters and low fuel warning light, a trip meter, a clock and a voltmeter.

Yamaha Command Link® speedometers can indicate boat speed via the engine pickup or an optional GPS or depth sounder triducer, if these options are installed in your boat. Refer to the engine gauge and electronics operating manuals for more information on the speedometer options available for your boat.

Overheat Warning Indicator

The temperature warning indicates that the temperature of the engine is too high. A sudden increase in the temperature could indicate an obstructed water inlet or a water pump impeller failure. On Yamaha engines the overheat warning indicator is built into each tachometer or command link display panel. It will start to blink and an alarm will sound if the engine temperature is too high.

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CAUTION

CONTINUED OPERATION OF AN OVERHEATED ENGINE CAN RESULT IN ENGINE SEIZURE. IF AN UNUSUALLY HIGH TEMPERATURE READING OCCURS, SHUT THE ENGINE OFF IMMEDIATELY. THEN INVESTIGATE AND CORRECT THE PROBLEM

Fuel Gauge

The fuel gauge indicates the amount of fuel in the fuel tank.

On boats equipped with Yamaha engines, the fuel gauge is built into the Yamaha speedometer multi-gauge or command link display panel. The fuel indicator on the Yamaha gauge will begin to blink if the fuel in the tank drops too low.



Single Engine Command Link Plus®
Tachometer and Engine Monitoring Display

Voltmeters

The voltmeters display the voltage level for the battery and the charging system voltage for each engine. The normal voltage is 11 to 12 volts with the engines off and 13 to 14.5 volts with the engines running. The Yamaha engine voltmeter is built into the speedometer or command link display panel. It will begin to blink if the voltage in the battery drops too low.

Hour Meters

The hour meters keep a record of the operating time for each engine.

Engine Tilt/Trim Gauges

The tilt/trim gauges monitor the position of each outboard engine. The upper range of the gauge indicates the tilt, which is used for trailering and shallow water operation. The lower range indicates the trim position. This is the range used to adjust the hull angle while operating your boat on plane. The Yamaha engine trim indicator is built into the tachometers or command link display panel. Refer to the engine owner's manual for more information on the operation of the outboard power tilt and trim.

Engine Alarms

All outboards are equipped with an audible alarm system mounted in the helm area that monitors selected critical engine systems. The alarm will sound if one of these systems begins to fail. Refer to the engine owner's manual for information on the alarms installed with your engines.

CAUTION

IF THE ENGINE ALARM SOUNDS, IMMEDIATELY SHUT OFF THE ENGINE UNTIL THE PROBLEM IS FOUND AND CORRECTED.

Fuel Management

Fuel management systems are standard equipment with some outboard engines. On Yamaha engines, the fuel management gauge is a multi-function gauge or is integrated in command link display panel. It monitors the gallons per hour, miles per gallon, total gallons used, total gallons remaining.

If you have a fuel management system installed on your boat, refer to the engine or fuel management manual for detailed information on that system.

Depth Gauge

The depth gauge indicates the depth of the water below the bottom of the boat.

Compass

All boats are equipped with a compass on the top of the instrument panel. The compass cannot be adjusted accurately at the factory as it must be compensated for the influence of the electrical equipment and electronics unique to your boat. Therefore, the compass should be adjusted by a professional after the electronics and additional electrical accessories are installed and before op-



Compass

erating the boat. To adjust the compass for your area, read the instructions on "Compass Compensation" given to you in the literature packet.

Instrument Maintenance

Electrical protection for instruments and ignition circuitry is provided by a set of fuses or circuit breakers located on each engine. The ignition switches should be sprayed periodically with a contact cleaner/lubricant. The ignition switches and all instruments, controls, etc. should be protected from the weather when not in use. Excessive exposure can lead to gauge and ignition switch malfunctions.

Helm Control Systems

4.1 General

The helm controls consist of three systems: the engine throttle and shift controls, the steering system, and the trim tab control switches. These systems provide the operator with the ability to control the direction and attitude of the boat from the helm station.

Each manufacturer of the control components provides an owner's manual with its product. It is important that you read the manuals and become familiar with the proper care and operation of the control systems.

4.2 Engine Throttle & Shift Controls

The shift and throttle controls on your boat may vary depending on the engine and options selected. The following description is typical of most cable and electronic control systems. Refer to the engine or control manual for specific information on the controls installed on your Boat.

Cable Engine Controls

Cable engine throttle and shift control systems consists of three major components: the control handle, the throttle cable and the shift cable. The cables are all the push-pull type. Two cables are required for each engine and control. One connects the remote throttle control to the engine and the other connects the remote shift control to the shift linkage.

The helm is designed for a binnacle mount control with a single lever for each engine that operates as a gear shift and a throttle. General operation will include a position for neutral (straight up and down), a forward position (the 1st detent forward of neutral), and a reverse position (the 1st detent aft of neutral). Advancing the control lever beyond the shift range advances the throttle in forward or reverse. Each control is equipped with a means of permitting the engine to be operated at a higher than idle RPM while in neutral for cold starting and warm-up purposes.

Electronic Engine Control - Single Engine

The helm is designed for a binnacle style control with a single lever. The electronic control system



Typical Yamaha Twin Engine Cable Controls

consists of three major components: the electronic control head, instruments and keypad, the control processors and applicable harnesses. The control is completely electronic and there are no cables.

The control has a single lever for the engine that operates as a gearshift and a throttle. General operation will include a position for neutral (straight up and down or slightly aft of vertical), a forward position (the 1st detent forward of neutral) and a reverse position (the 1st detent aft of neutral). Advancing the control lever beyond the shift range advances the throttle in forward or reverse. Each control is equipped with a means of permitting the engine to be operated at a higher than idle RPM while in neutral for cold starting and warm-up purposes. The control lever is equipped with an adjustable control head detent and friction settings. The engine control and key pad typically have integrated switches and indicator lights which allow the operator to control all aspects of the boat's propulsion system. LED lights on the control in-

indicate that the control is activated and the engine can be started.

The most common features activated or monitored by the keypad are:

- Starter lockout, which prevents the engine from being started in gear.
- Gear lockout, which allows the engine RPM to be advanced in neutral safely.
- Battery voltage warning indicator that warns the operator of high or low voltage supplied to the system (audible alarm).
- Trolling feature that allows the operator to increase the engine speed in 50 RPM increments while operating at trolling speeds between 600 - 1000 RPM.

These features and others not mentioned require specific procedures to activate and operate them properly. Some of the procedures and features are unique to the engine and other options installed on your boat. It is essential that you read the owner's manual for the controls and be completely familiar with their operation before using your boat.

CAUTION

ALWAYS RETURN THE ENGINE THROTTLE LEVER TO THE EXTREME LOW SPEED POSITION BEFORE SHIFTING. NEVER SHIFT THE UNIT WHILE ENGINE SPEED IS ABOVE IDLE RPM.



Typical Yamaha Single Engine Electronic Control

Electronic Engine Controls - Twin Engines

Electronic engine controls are standard equipment on some engines and an available option on others. The following control description is typical of most electronic control installations.

The helm is designed for a binnacle style control with a single lever for each engine. The electronic control system consists of three major components: the electronic control head, engine instruments and keypad, the control processors and applicable harnesses. The controls are completely electronic and there are no cables.

The controls have a single lever for each engine that operates as a gearshift and a throttle. General operation will include a position for neutral (straight up and down or slightly aft of vertical), a forward position (the 1st detent forward of neutral), and

a reverse position (the 1st detent aft of neutral). Advancing the control lever beyond the shift range advances the throttle in forward or reverse. Each control is equipped with a means of permitting the engine to be operated at a higher than idle RPM while in neutral for cold starting and warm-up purposes. The control levers are equipped with adjustable control head detent and friction settings.

The engine controls and key pads have integrated switches and indicator lights which allow the operator to control all aspects of the boat's propulsion system. LED lights on the control pad indicate that the control is activated and the engines can be started.



The most common features activated or monitored by the keypad are:

- Starter lockout, which prevents the engine from being started in gear.
- Gear lockout, which allows the engine RPM to be advanced in neutral safely.
- Battery voltage warning indicator that warns the operator of high or low voltage supplied to the system (audible alarm)
- An engine synchronization feature that automatically keeps both engines at the same RPM while cruising. Refer to Engine Synchronizing in this section and the control systems owner's manual for more information regarding engine synchronization.
- Trolling feature that allows the operator to increase the engine speed in 50 RPM increments while operating at trolling speeds between 600 - 1000 RPM.

These features and others not mentioned require specific procedures to activate and operate them properly. Some of the procedures and features are unique to the engines and other options installed on your boat. It is essential that you read the owner's manual for the controls and be completely familiar with their operation before using your boat.



Typical Yamaha Twin Engine Electronic Controls

	CAUTION	
ALWAYS RETURN THE ENGINE THROTTLE LEVER TO THE EXTREME LOW SPEED POSITION BEFORE SHIFTING. NEVER SHIFT THE UNIT WHILE ENGINE SPEED IS ABOVE IDLE RPM.		

Refer to the engine or control owner's manuals for more information on the engine synchronizer and other features for the electronic controls installed on your boat.

Engine Synchronizer

During most operations of a twin engine boat, it is advantageous for both engines to be operated at the same RPM. This reduces noise and vibration and can increase engine efficiency. Setting the throttles so that the engines are running the same RPM (synchronized) can be done by listening to the engine sounds at low RPM and with the automatic synchronizer feature built into the electronic engine controls when the engines are operating above 1000 RPM. Attempting to synchronize the engines solely by using the tachometer readings or control lever placement generally will not work. When the engines are in proper synchronization, the throttle levers may not necessarily be even.

4.3 Neutral Safety Switch

Every control system has a neutral safety switch incorporated into it. This device prohibits an engine from being started while the shift lever is in any position other than the neutral position. If the engine will not start, slight movement of the shift lever may be necessary to locate the neutral position and disengage the safety cutout switch. Control adjustments may be required to correct this condition should it persist. See your dealer for necessary control adjustments.

Neutral safety switches should be tested periodically to ensure that they are operating properly. To test the neutral safety switches, make sure the engines are tilted down and move the shift levers to the forward position.

Make sure the throttle control levers are not advanced past the idle position. Press the Start Button or turn the key just long enough to briefly engage the starter for the engine.

Notice:

Some outboard control systems are equipped with a computer controlled start feature that will keep the starter engaged until the engine starts if the neutral safety switch fails and allows the starter to engage.

The starter should not engage for any engine. Repeat this test with the shift levers in reverse and the engine throttles at idle. Again, the starter should not engage for any engine. If the starter for any engine engages with the shift controls in any position other than the neutral position, then the neutral safety switch is not functioning properly and you should contact your dealer to have the neutral safety switch repaired by a qualified marine mechanic before using the boat. If an engine starts in gear during this test, immediately move the control lever to the neutral position and turn the engine off.



Typical Yamaha Twin Engine Electronic Control Trim & Tilt Switches

	WARNING	
<p>IN SOME SITUATIONS, IT MAY BE POSSIBLE TO ACCIDENTALLY START THE ENGINES IN GEAR WITH THE THROTTLES ABOVE IDLE IF THE NEUTRAL SAFETY SWITCH IS NOT OPERATING PROPERLY. THIS WOULD CAUSE THE BOAT TO ACCELERATE UNEXPECTEDLY IN FORWARD OR REVERSE AND COULD RESULT IN LOSS OF CONTROL, DAMAGE TO THE BOAT OR INJURY TO PASSENGERS. ALWAYS TEST THE NEUTRAL SAFETY SWITCH PERIODICALLY AND CORRECT ANY PROBLEMS BEFORE USING THE BOAT.</p>		

4.4 Engine Power Tilt & Trim

All outboard engines have a tilt and trim feature. Most outboard engines have tilt/trim switches built into the engine shift and throttle control that allow the operator to control the position of the outboards from the helm. Typically, a switch or switches on the control lever grip activates the tilt/trim. Twin engine controls typically have two additional switches on the cover that activate each engine tilt/trim individually. On most engines, the maximum tilt angle can be adjusted by your dealer by reprogramming the settings using the engine diagnostic system.

Moving the outboard closer to the boat transom is called trimming "in" or "down." Moving the outboard



Typical Yamaha Twin Engine Cable Control Trim & Tilt Switches

further away from the boat transom is called trimming "out" or "up." In most cases, the boat will run best with the outboard adjusted so the hull will run at a 3 to 5 degree angle to the water.

The term "trim" generally refers to the adjustment of the outboard within the first 20° range of travel. This is the range used while operating your boat on plane. The term "tilt" is generally used when referring to adjusting the outboard further up for shallow water operation or trailering. For information on the proper use and maintenance of the power tilt and trim, please refer to the engine owner's manual.

⚠
CAUTION
⚠

ENGINE HOSES AND CABLES OR THE TRANSOM GEL COAT CAN BE DAMAGED BY TILTING ENGINES TO THE FULL UP POSITION WITH THE ENGINES TURNED TO THE WRONG POSITION. MOST BOATS REQUIRE THE STEERING WHEEL TO BE TURNED COMPLETELY TO STARBOARD BEFORE TILTING THE ENGINES TO THE FULL UP POSITION. YOU SHOULD MONITOR EACH ENGINE AS IT TILTS TO DETERMINE BEST FULL TILT ENGINE POSITION FOR YOUR BOAT.



Typical Yamaha Single Engine Trim & Tilt Switch

⚠
CAUTION
⚠

SOME AUTOPILOTS HAVE ENGINE POSITION SENSORS THAT ARE MOUNTED TO THE HYDRAULIC STEERING CYLINDER. WITH THESE AUTOPILOTS, THE ENGINE POSITION SENSOR BRACKET COULD HIT THE TRANSOM WHEN THE ENGINES ARE TILTED TO THE FULL UP POSITION AND CAUSE DAMAGE TO THE ENGINE RIGGING, THE AUTOPILOT OR THE TRANSOM. IF YOU HAVE AN AUTOPILOT INSTALLED ON YOUR BOAT, YOU SHOULD MONITOR THE LOCATION OF THE ENGINE CABLES AND AUTOPILOT BRACKETS AS THE ENGINES ARE TILTED TO DETERMINE THE BEST ENGINE POSITION AND MAXIMUM ENGINE TILT FOR YOUR APPLICATION.



Typical Yamaha Command Link Plus Twin Engine Key Switch, Start/Stop Buttons & Engine Stop Switch

4.5 Engine Stop Switch

Your boat is equipped with an engine stop switch and lanyard. When the lanyard is pulled it will engage the switch and shut off the engines. We strongly recommend that the lanyard be attached to the driver whenever the engines are running. If an engine will not start, it could be because the lanyard is not properly inserted into the engine stop switch. Always make sure the lanyard is properly attached to the engine stop switch before attempting to start the engines.

Refer to the engine owner's manual for more information on the engine stop switch.



Typical Yamaha Command Link Twin Engine Key Switches & Engine Stop Switch

4.6 Steering System

Hydraulic Steering System

The standard steering system is hydraulic and made of two main components: the helm assembly and the hydraulic cylinder. The helm unit acts as both a fluid reservoir and pump. Turning of the helm or steering wheel pumps the fluid in the hydraulic hoses and activates the hydraulic cylinder causing the motor to turn. A slight clicking sound may be heard as the wheel is turned. This sound is the opening and closing of valves in the helm unit and is normal.

Power Assist Hydraulic Steering (Optional)

Most power assisted steering systems on single engine boats or twin engine boats without the joystick option are hydraulic and comprised of two hydraulic circuits: a manual system, which is the control element, and a hydraulic power assist pump, which is the working element.

The manual system is hydraulic and made of three main components: the helm assembly, hydraulic hoses and the steering cylinder. The fluid reservoir for the system is built into the helm assembly and the helm acts as a pump. Turning of the steering wheel, pumps fluid through the hydraulic hoses and activates the hydraulic steering cylinder causing the motors to turn. A slight clicking sound may be heard as the wheel is turned. This sound is the opening and closing of valves in the helm pump unit and is normal.

The power system is an electronically controlled, 12 volt hydraulic pump that boosts the fluid pressure being sent from the helm pump to the steering cylinder to provide "Power" for the steering system which results in much easier effort at the steering wheel, even under heavy loads. In the event of a power loss or failure of the hydraulic steering pump, the steering system will automatically revert to a manual hydraulic system. The manual system operates as described previously in this section and will require more effort on the steering wheel to turn the motors.

Hydraulic Steering Cylinders and Tie Bar Single Engine Steering Cylinder

Single outboard engines with hydraulic steering are equipped with one hydraulic steering cylinder mounted on the engine that is connected directly to the engine tiller arm.



Typical Twin Engine Steering Cylinder & Tie Bar

Twin Engine Steering Cylinders

The outboards are coupled near the tiller arms by a tie bar and controlled by one or two steering cylinders, depending on the options selected. The engines must be aligned to provide maximum stability on straight ahead runs and proper tracking through corners. Dual outboards are aligned so the engines are towed in slightly (.25" to .5") at the propellers. Engine or steering system damage may require the engines to be realigned.

Twin Engine Electronic Steering (Optional)

Your boat could be equipped with an electronic steering system that provides precise and responsive steering. Electronic steering is usually available with or without a joystick control.

The system is 100% electronic and there are no mechanical connections between the steering wheel and the drives. Each engine is turned independently allowing improved tight quarter maneuvering and the convenience of an optional Joystick control at the helm.

For safety and improved tight quarter maneuvering, the controlling software on most systems senses engine speed and adjusts maximum steering angle and steering wheel resistance to preset limits as the engine speed increases or decreases. The steering angles and steering wheel resistance at specific engine speeds are programmed into the system at the factory and are not adjustable.

The steering on each motor is totally independent with full redundancy built into the system. If the steering fails on one engine, the other unit will con-

tinue to operate. Should a failure in one steering system occur, the controlling software will sense the failure, limit the engine RPM as a safety precaution and alert the operator.

Each steering control system has emergency procedures that are specific to the steering system and type of failure. It is very important to follow the correct procedure to avoid damage to the engine cowlings if a steering system failure occurs.

Refer to the engine manufacturer owner's manuals for specific information on the operation, maintenance and emergency procedures for the steering system installed in your boat.

Tilt Steering Wheel

The steering wheel can be tilted to five different positions by activating the tilt lock lever located on the bottom of the helm station. When the lever is released, it automatically locks the steering wheel at or close to that angle. Refer to the steering manufacturer owner's manual for specific information on the steering system.



Tilt Steering Wheel

4.7 Joystick Controls

A joystick control system is an option on some engine installations with electronic steering. The joystick can only be used at slow speeds. It is engaged by moving the shift and throttle controls to the neutral position and pressing the ON/OFF button on the base of the joystick control or the keypad on the main engine controls. Once activated, the boat moves in the direction the joystick is pushed with the engine speed increasing the further the stick is pushed, up to preset limits. Turning the knob on the top of the joystick rotates the boat in the direction the knob is turned. Another button on the joystick or engine control key pad raises the preset engine speed for maneuvering in high winds and/or strong tides.

When the joystick is released, it automatically returns to center, the engines shift to neutral, rotate to the straight ahead position, and the engine speed is reduced to idle. It is deactivated by pressing the ON/OFF button at the base of the joystick or control keypad or by moving the shift and throttle control levers.

Both engines must be running for the joystick control to maneuver boat properly.



Typical Yamaha Joystick

Always refer to the engine manufacturer owner's manuals for specific information on the operation and maintenance for the joystick and steering control systems on your boat.

4.8 Trim Tabs

The recessed trim tabs are mounted to the hull below the swim platform and integrated transom engine mounting system. A dual rocker switch is used to control the trim tabs. The switch controls bow up and down movements. It also controls starboard and port up and down movements. Bow up and bow down will control the hull planing attitude, while port and starboard up and down provides control for the hull listing.

An LED trim tab indicator switch is an available option. LED lights built into the switch display the position of each trim tab. When one LED is flashing at the top of the display, the tabs are in the "full-up" (bow up) position. When all LED lights are lit from the top to the bottom of the display, the tabs are fully extended (bow down).

The trim tabs are programmed to automatically retract when the engines are shutdown to keep the actuators clean and set the tabs in the full "UP" position when leaving the dock. Refer to the trim tab operating manual for more information on the operation and programming of the trim tabs.

Before leaving the dock, make sure that the tabs are in the full "UP" position. If they are not, press and hold the control in the bow up position for ten (10) seconds to fully retract the tabs.

Always establish the intended heading and cruise speed before attempting to adjust the hull attitude with the trim tabs. After stabilizing speed and direction, move the trim tabs to achieve a level side to side running attitude being careful not to over trim.

After depressing a trim tab switch, always wait a few seconds for the change in the trim plane to take effect. Avoid depressing the switch while awaiting the trim plane reaction. By the time the effect is noticeable the trim tab plane will have moved too far and thus the boat will be in an overcompensated position.

When running at a speed that will result in the boat falling off plane, lowering the tabs slightly, bow down, will improve the running angle and operating efficiency. Too much bow down tabs can reduce operating efficiency and cause substantial steering and handling difficulties.

Be extremely careful when operating in a following sea. The effect of trim tabs is amplified under such



Optional Trim Tab Control Switches & LED Indicators



Trim Tab Plane

conditions. Steering and handling difficulties can result from improper trim tab usage, particularly in a following sea. Always raise the tabs to the full bow up position in these conditions.

When running at high speeds be sure that the tabs are in the full "UP" position. Only enough trim plane action should be used to compensate for any listing. Trim tabs are extremely sensitive at high speeds. Adjust for this and be prepared to slow down if difficulties arise.

When running into a chop, a slight bow down attitude will improve the ride. Be careful not to over trim. Handling difficulties may result.

4.9 Control Systems Maintenance

Control Maintenance



Periodic inspection of the control systems and all connections should be made. Signs of rust, corrosion, wear or other deterioration should immediately be serviced. Generally, periodic lubrication of all moving parts and connections with a light waterproof grease is in order.

Lubrication should be performed as often as necessary to keep the system operating smoothly.

Control system adjustments may become necessary. If adjustments become necessary, see your Scout dealer.



Typical SeaStar Steering Power Assist Pump & Reservoir

	WARNING	
<p>DO NOT ATTEMPT CONTROL ADJUSTMENTS UNLESS YOU ARE FAMILIAR WITH SERVICING CONTROL SYSTEM PROCEDURES. CONTROL MISADJUSTMENT CAN CAUSE LOSS OF CONTROL AND SEVERE ENGINE OR LOWER UNIT DAMAGE.</p>		

Hydraulic Steering System Maintenance

A periodic inspection of all steering hoses, linkage and helm assemblies should be made. Signs of corrosion, cracking, loosening of fasteners, excessive wear or deterioration should be corrected immediately.

The fluid level for the hydraulic steering should be checked frequently and maintained at the proper level. For manual and power assist hydraulic steering, the fluid level at the vent/fill plug at the helm reservoir should be maintained at no less than 1/2" below the bottom of the filler cap threads. Only use power steering fluid recommended by the steering system manufacturer when adding fluid.

Generally, periodic lubrication of all moving parts and connections with a light waterproof grease is in order. Check the hydraulic hoses and fittings for chaffing, rub marks and leaks. Replace if necessary. Failure to do so could lead to steering system failure that would result in loss of control. When new or after repairs, hydraulic steering systems may need to have all air purged from the system.

Only use hydraulic steering fluid recommended by the steering system manufacturer. Difficult steering and premature seal failure can result if the wrong fluid is used in the steering system. Review the information provided by the steering system manufacturer for proper specifications and details on system service and maintenance.

Electronic Steering and Control Systems Maintenance

Electronic steering and control systems are supplied by the engine manufacturer. The systems have maintenance requirements that are specific to the engines and control options installed in your boat.

You should refer to the engine and controls systems owner's manuals for information and maintenance on the control and steering system installed in your boat. Their recommendations should be followed exactly.

The engine controls and steering systems are fully electronic and activated by micro processors and controlling software in each engine controller. If adjustment becomes necessary do not attempt to address the problem yourself. You should contact your Scout or outboard engine dealer for assistance.



WARNING



IMPROPERLY ADJUSTED ELECTRONIC ENGINE CONTROLS CAN CAUSE LOSS OF CONTROL AND SEVERE ENGINE DAMAGE. IF YOUR CONTROLS ARE NOT OPERATING PROPERLY, DO NOT ATTEMPT CONTROL SYSTEM ADJUSTMENTS YOURSELF. CONTACT YOUR SCOUT OR ENGINE DEALER FOR ASSISTANCE AND DO NOT USE THE BOAT UNTIL THE SITUATION IS CORRECTED.

Engine Lubrication

Refer to the engine owner's manual for maintenance and lubrication instructions for the outboard engines.

Trim Tab Maintenance

The trim tab actuators are electric and require no routine maintenance except to periodically inspect the tab actuators for corrosion or marine growth and test the system to ensure that it is operating properly.

Marine growth can interfere with the proper operation of the trim tab planes and actuators. To reduce problems due to marine growth, always return the trim tabs to the full "UP" position after operating the boat and periodically inspect and clean marine growth from the actuators and planes.

If the boat is kept in the water, the trim tabs must be equipped with a sacrificial anode to prevent galvanic corrosion. Galvanic corrosion is the corrosion process occurring when different metals are submerged in an electrolyte. Seawater is an electrolyte and submerged metal components must be properly protected. The anodes will need to be changed when they are 75% of their original size (25% depleted). Refer to the Routine Maintenance chapter of this manual for information on maintaining sacrificial anodes.

To discourage any marine growth on the tabs or actuators, antifouling paint can be applied. When applying paint to the actuator, make sure it is fully retracted. Do not paint the stainless ram above the area that is exposed when fully retracted. The bottom paint will damage the O-ring seals when the ram is retracted and allow seawater to enter the actuator motor. When painting the trim tabs, do not apply paint to the sacrificial anodes or the mounting surface under the anode. The sacrificial



Trim Tab Plane & Actuator



Trim Tab Plane Anode

anode must have full metal to metal contact with the trim tab plane or it will become ineffective. Contact your dealer or the trim tab manufacturer for information regarding the correct bottom paint for the trim tabs.

Refer to the trim tab owner's manual for additional maintenance information, specifications, troubleshooting and operating instructions.

5.1 General

The gasoline fuel system used in Scout boats sold in the United States is designed to meet or exceed the emission control standards of the Environmental Protection Agency (EPA) and the requirements of the U.S. Coast Guard, the Boating Industry Association and the American Boat and Yacht Council in effect at the time of manufacture.

All gasoline fuel systems have been factory inspected and pressure tested in accordance with regulations in effect at the time of manufacture. This inspection assures that the system is air tight, leak proof and safe. It is the responsibility of the purchaser to maintain it in that condition. Make frequent inspections to assure that no deterioration or loosening of connections is resulting from vibration.



Fuel Fill

⚠
DANGER
⚠

DO NOT LET THE ODOR OF GASOLINE GO UNCHECKED. ANY ODOR OF GASOLINE MUST BE IMMEDIATELY INVESTIGATED AND STEPS TAKEN TO PROTECT THE BOAT AND ITS OCCUPANTS UNTIL THE PROBLEM IS CORRECTED. IF THE ODOR OF GASOLINE IS NOTED, SHUT OFF ALL ENGINES AND ELECTRICAL EQUIPMENT. INVESTIGATE AND CORRECT THE SITUATION IMMEDIATELY. HAVE ALL PASSENGERS PUT ON PERSONAL FLOTATION DEVICES AND KEEP A FIRE EXTINGUISHER READY UNTIL THE SITUATION IS RESOLVED.

indication of the available fuel supply and not a calibrated instrument.

Fuel Fill

The fuel tank is vented through the fill fitting and cap. The system is equipped with a "keyless" fuel cap located on the port side gunnel that is marked with a "FUEL PUMP" insignia. The fuel fill cap is designed to seal out water and allow the fuel tank to vent to the atmosphere when the cap is closed.

The fuel fill is opened by turning the cap counter clockwise until it can be removed. After fueling, install the fuel cap and tighten. Be sure to use the proper type and grade fuel. Refer to the engine owner's manual for additional information.

Notice:

Do not overtighten the fuel cap. If the cap is overtightened, the O-ring seal could be damaged allowing water to contaminate the fuel system.

Fuel Withdrawal Tubes

The fuel withdrawal tubes are positioned in the fuel tank to achieve optimum fuel usage, fuel line routing, etc. At certain speeds and hull trim angles, the fuel supply at the withdrawal tank location can increase or decrease accordingly. Be extremely careful when attempting to operate the boat when low on fuel. Though some fuel may be in the tank, the relative trim angle of the boat may cause the fuel to flow away from the withdrawal tubes.

Fuel Gauge

Indicates the amount of fuel in the tank. Due to the mechanical nature of the fuel sender, variations in readings during various speeds of operation may occur. This system is merely a relative

Fuel Tank Vent

Your boat is equipped with a fuel tank vent system incorporated into the fuel fill. The fuel fill cap is designed to seal out water and allow the fuel tank to vent to the atmosphere when the cap is closed.

While the tank is being filled, air displaced by the fuel escapes through the vent and fuel fill. When the tank is full, special valves incorporated in the vent and fill hoses close and activate the automatic shutoff valve on the marina fuel pump nozzle to prevent the tank from being overfilled and/or fuel from being ejected from the fuel fill/vent fitting. You should never attempt to "top off" the tank after the pump shutoff has activated. The shutoff valves will not allow additional fuel to be added after they close and could be damaged by attempts to force additional fuel into the tank.

After fueling, close and tighten the fill cap. Then wash spilled fuel from the areas around the fuel fill if necessary. Residual fuel left on the deck and hull sides can be dangerous and will yellow the fiberglass gelcoat or damage the striping.



Engine Fuel Filter In Aft Systems Compartment

5.2 Outboard Fuel System

The fuel system on your Scout has one fuel tank located in the center of the bilge below the cockpit sole. The tank is equipped with one or two main fuel withdrawal tubes, depending on the engine options selected. Each fuel withdrawal line is equipped with an anti-siphon valve where the line attaches to the fuel tank. This valve prevents gasoline from siphoning out of the fuel tank should a line rupture.

	CAUTION	
DO NOT REMOVE THE ANTI-SIPHON VALVES FROM THE SYSTEM. SHOULD THE VALVE BECOME CLOGGED, CLEAN AND REINSTALL OR REPLACE.		

A fuel filter for each engine is installed in the aft systems compartment. The filters are accessed through the center hatch at the rear of the cockpit. The filters are the water separator type and should be serviced frequently to assure an adequate supply of clean, dry fuel to the engines. It is recommended that the filters are inspected periodically and the elements changed as needed.

There is a primer bulb in each fuel line that is used to prime the fuel system after service or as required. See Fuel System Maintenance and the engine owner's manual for additional information on the fuel filters and the outboard engine fuel system.



Typical Twin Engine Primer Bulbs In Aft Systems Compartment

Notice:
The procedure to prime the fuel system on outboard engines is specific to the type and model of engines on your boat. You should refer to engine manufacturer owner's manual for the priming procedure for your engines.

5.3 Fueling Instructions

WARNING

FUEL IS VERY FLAMMABLE. BE CAREFUL WHEN FILLING THE FUEL TANKS. NO SMOKING. NEVER FILL THE TANK WHILE AN ENGINE IS RUNNING. FILL THE FUEL TANKS IN AN OPEN AREA. DO NOT FILL THE TANKS NEAR OPEN FLAMES.

CAUTION

TO PREVENT DAMAGE TO THE FUEL SYSTEM, USE ONLY A GOOD GRADE OF GASOLINE FOR GASOLINE ENGINES. DO NOT USE FUEL THAT CONTAINS HARSH ADDITIVES OR IS AN ALCOHOL BLEND OF HIGHER CONCENTRATION THAN RECOMMENDED BY THE ENGINE MANUFACTURER. ANY DAMAGE DONE TO THE FUEL SYSTEM THAT IS THE RESULT OF USE OF AN ALCOHOL BLEND IS NOT COVERED BY THE SCOUT WARRANTY. REFER TO THE ENGINE MANUFACTURER OWNER'S MANUAL REGARDING FUEL REQUIREMENTS FOR YOUR ENGINES.

WARNING

DO NOT CONFUSE THE FUEL FILL DECK PLATE WITH THE WATER OR WASTE PUMP OUT DECK PLATE. THESE PLATES ARE LABELED ACCORDINGLY. IF FUEL IS ACCIDENTALLY PUMPED INTO THE WATER OR WASTE TANK, DO NOT ATTEMPT TO PUMP IT OUT YOURSELF. WATER AND WASTE PUMPS ARE NOT DESIGNED TO PUMP FUEL AND A FIRE OR EXPLOSION COULD RESULT. CONTACT YOUR DEALER OR THE SCOUT CUSTOMER SERVICE DEPARTMENT FOR ASSISTANCE IN HAVING THE FUEL PROFESSIONALLY REMOVED.

Preparing the Boat for Fueling

Use the following procedure to prepare the boat for fueling at a marina fuel station:

- Make sure the boat is securely moored and all engines are off.
- Make sure all switches are in the OFF position.
- Make sure all passengers leave the boat.
- Close all doors and hatches.

WARNING

GASOLINE FUEL VAPORS THAT ACCUMULATE IN THE BILGE, AFT SYSTEMS COMPARTMENT OR CABIN WHILE FUELING CAN EXPLODE!! FUEL VAPORS ARE HEAVIER THAN AIR AND CAN ACCUMULATE IF THEY ARE CARRIED BY THE WIND INTO THE BILGE OR CABIN THROUGH OPEN DOORS, HATCHES OR VENTS. ALWAYS CLOSE DOORS AND HATCHES BEFORE FUELING.

- Estimate how much fuel is needed and avoid overfilling the fuel tank.

Fueling the Boat

In order to comply with U.S. EPA emission regulations, Scout boats are equipped with special fuel systems that reduce the flow of fuel vapors from the fuel system to the atmosphere when fueling operations are complete.

These fuel systems meet U.S. EPA emission standards and are designed to maintain a specific air space at the top of the fuel tank that provides proper tank ventilation and protection for emission control components. Special valves in the fuel tank vent and fill systems and a shutoff valve in marina fuel pump nozzles are designed to automatically stop the fuel flow when the tank is full and maintain this air space.

Notice:

When the fuel tank is full, the shutoff valve in the marina fuel pump nozzle will activate and automatically shut off the flow, indicating that the tank is filled to the maximum level. You should stop filling the tank at this point and never attempt to "top off" the tank. Attempting to "top off" the tank could damage fuel level control valves.

WARNING

STATIC ELECTRICITY GENERATED BY FLOWING FUEL CAN CAUSE A FIRE OR EXPLOSION. TO PREVENT STATIC SPARKS WHEN FILLING THE TANK, MAKE SURE THE NOZZLE IS ALWAYS IN CONTACT WITH THE FUEL FILL OPENING WHILE FUELING.

To fill the fuel tank, follow this procedure:

- The fuel cap is designed to be opened by hand and does not require a key. Turn the cap counterclockwise to remove it for fueling.
- Make sure the nozzle is equipped with an automatic shutoff valve. Then put the nozzle in the fuel fill opening and make sure it stays in contact with the fuel fill fitting during the entire fueling operation.
- Fill the tank until the shutoff valve in the pump nozzle clicks and automatically stops the fuel flow.
- Install and tighten the fuel cap. Make sure you don't overtighten the fuel cap and damage the O-ring seal.



Fuel Gauge Below Removable Hatch In Cockpit Sole



WARNING



FUEL TANK CONTENTS CAN BE UNDER PRESSURE. TO AVOID SERIOUS INJURY OR DEATH FROM FIRE OR EXPLOSION, OPEN FUEL CAP SLOWLY IN A WELL VENTILATED AREA. NO SMOKING OR OPEN FLAMES.



WARNING



SPILLED FUEL CAN CAUSE A FIRE OR AN EXPLOSION. MAKE SURE YOU DO NOT SPILL ANY FUEL. IF A SMALL AMOUNT OF FUEL IS SPILLED ON THE FIBERGLASS, USE A CLOTH TO REMOVE THE FUEL AND PROPERLY DISPOSE OF THE CONTAMINATED CLOTH. IF FUEL IS SPILLED ON THE WATER, EXERCISE EXTREME CAUTION. FUEL FLOATS ON THE SURFACE OF THE WATER AND CAN IGNITE. IF FUEL IS SPILLED INTO THE WATER, IMMEDIATELY EVACUATE THE AREA AND NOTIFY THE MARINA AND THE PROPER OFFICIALS.

5.4 Fuel System Maintenance

Periodically inspect all primer bulbs, connections, clamps and hoses for leakage, damage or deterioration. Replace as necessary. Spray the valves, tank fuel gauge sender and ground connections with a metal protector.

Notice:

Access to the fuel tank sending unit is located below a small removable hatch in the cockpit sole.

Preparing the Boat For Operation

Use the following procedure to prepare the boat for operation when fueling operations are complete:

- Open all hatches, windows and doors.
- Check the fuel compartment and below the deck for fuel odors. If you smell fuel, do not start the engines.



Frequently inspect and lubricate the fuel fill cap seal with Teflon or silicone grease. The seal prevents water from entering the fuel system through the fuel fill cap and it should be immediately replaced if there is any sign of damage or deterioration.



Contaminated fuel may cause serious damage to your engines. Fuel filters must be checked for corrosion and deterioration frequently. Fuel filters must be changed at least once a season or more



frequently depending on the type of engine and the quality of the fuel. Refer to the engine or fuel filter manufacturer's instructions for information on servicing and replacing the fuel filter.

The age of gasoline can effect engine performance. Chemical changes occur as the gasoline ages that can cause deposits and varnish in the fuel system as well as reduce the octane rating of the fuel. Severely degraded fuel can damage the engine and boat fuel tank and lines. Therefore, if your boat is not being run enough to require at least one full tank of fresh fuel a month, a fuel stabilizer should be added to the gasoline to protect the fuel from degradation. Your dealer or the engine manufacturer can provide additional information on fuel degradation and fuel stabilizers recommended for your engine.

In many states, most gasoline is blended with ethanol alcohol. Ethanol is a strong solvent and can absorb water during periods of storage. You should refer to the engine operating manual for information regarding alcohol blended fuels and how it affects the operation of your marine engine.

	WARNING	
<p>DO NOT DRAIN ANY FUEL INTO THE BILGE WHEN SERVICING THE FUEL SYSTEM. THIS COULD LEAD TO A FIRE OR EXPLOSION.</p> <p>AFTER THE FILTER ELEMENTS HAVE BEEN CHANGED, PRIME THE FUEL SYSTEM AND CHECK ALL FITTINGS FOR LEAKS BEFORE AND AFTER STARTING THE ENGINES.</p> <p>BEFORE STARTING THE ENGINES, ALWAYS OPEN ALL HATCHES, WINDOWS AND DOORS TO COMPLETELY VENTILATE THE BOAT AFTER SERVICING THE FUEL SYSTEM.</p>		

	WARNING	
<p>TO REDUCE THE POSSIBILITY OF A FIRE OR EXPLOSION, MAKE SURE ALL ELECTRICAL SWITCHES ARE IN THE "OFF" POSITION BEFORE SERVICING THE FUEL SYSTEM.</p>		

	DANGER	
<p>AVOID SERIOUS INJURY OR DEATH FROM FIRE OR EXPLOSION RESULTING FROM LEAKING FUEL, INSPECT SYSTEM FOR LEAKS AT LEAST ONCE A YEAR.</p>		

NOTES

Electrical System

6.1 General

Your boat is equipped with a 12 volt DC electrical system and a 120 volt AC battery charging system. The 12 volt DC system draws current from onboard batteries.

The boat engine charging system is designed for 12 volt, lead acid wet cell or AGM (Absorbed Glass Mat) marine batteries. They will require similar maintenance as those found in automobiles.

All wires in the electrical systems are color coded to make identifying circuits easier. Wiring schematics have been included with this manual to aid in following an individual circuit of the boat.

6.2 12 Volt DC System Overview

The 12 volt system is a fairly standard marine system. The DC electrical system on your boat is designed for wet cell or absorbed glass mat (AGM) marine batteries. Do not attempt to use gel cell or other non wet cell batteries. The engine charging system and the battery charger are not designed to recharge these batteries which could cause unusually short battery life, engine starting problems and damage to the DC charging systems. You also should not mix the size or brand of marine batteries.

The batteries were installed by your dealer. Always consult your dealer before changing the type of batteries in your boat or if you have questions regarding the batteries or charging system.

The batteries for the engine or engines, house and electronics are located in the ski storage compartment below the cockpit sole. They are controlled by separate battery switches for the engines and for the house 12 volt accessories and electronics. The batteries themselves can be charged by the engines or by the battery charger when connected to shore power.

Most 12 volt power is distributed to the 12 volt accessories through individual circuit breakers in the DC/battery switch panel located in the helm storage compartment. All circuit breakers and fuses are labeled by the name of the circuit they



Scout Boats Marine Standard Wiring Code

<u>COLOR</u>	<u>USE</u>
Brown (Br)	Pumps
Orange (O)	Accessory Feed + 12 VDC
Dark Blue	Cabin/Courtesy/Instrument Lighting
Pink (Pk)	Fuel Sender
Dark Gray (Gy)	Navigation Lighting
Black or Yellow	12 VDC Ground
Purple (Pu)	Ignition Instrument Feed + 12 VDC
Green (G)	DC Grounding (Bonding)
Red	+ 12 VDC Power

protect. Main circuit breakers in the DC panel protect the primary DC circuit, windlass, amplifier and electronics.

Most 12 volt accessories are operated directly by switches in the helm panel. Other accessories are controlled directly by separate switches at the helm or near the accessory.

Main breakers or fuses located on each engine protect the ignition systems and gauges. Yamaha and Mercury engine electrical circuits are protected by fuses located in a fuse panel on the side of the engine. The fuse panel is equipped with a spare fuse for each circuit. Always replace fuses used with the fuse specified by the engine manufacturer. Refer to the engine owner's manual for more information on the fuses, fuse panels or circuit breakers on your engines.


CAUTION


PROPER FUSE OR BREAKER PROTECTION MUST BE PROVIDED FOR ALL 12 VOLT EQUIPMENT ADDED. DO NOT OVERLOAD THE ACCESSORY CIRCUIT BREAKERS OR OTHER CIRCUITRY THROUGH ADDITIONAL 12 VOLT EQUIPMENT.



Twin Engine DC Breaker & Battery Switch Panels In Helm Storage Compartment

6.3 Batteries & Battery Switches - Twin Engines

Twin Engine boats have four batteries. There is one battery for each engine and two batteries wired in parallel for the house and electronics circuits. The engine and house batteries can be temporarily connected in parallel by the Parallel switch in the helm or DC panel to provide additional starting current for each engine.

The batteries supplied by your dealer are the size and capacity batteries recommended by the engine manufacturer. These specifications should be considered the minimum size battery required.

There are three motorized battery switches and two emergency battery parallel switches in the battery switch panel located in the helm storage compartment. The battery switches can be activated or deactivated remotely by labeled switches in the DC panel, wirelessly using the key FOB remote or manually by rotating the knob on each switch. The parallel switches can be activated by Parallel switches located on the DC panel and helm switch panel.

The house battery is charged by the accessory charge circuit on the engines whenever they are operating. The engine batteries are dedicated to starting and operating the engines. They are charged by the engines whenever they are operating. The engine and house batteries are also



Typical Twin Engine Starting & House Batteries In Ski/ Battery Storage Compartment Below Cockpit Sole

charged by the battery charger when plugged into shore power.

The motorized battery and parallel switches can be controlled remotely, in Auto Mode, by switches in the cabin DC panel and the Parallel switch at the helm or manually, in Manual Mode, by turning the knob on the switches. There are LED lights on both the remote switches and the battery switches that indicate battery switch mode and status. These lights will blink when the switch has been activated and the motor is turning the battery switch ON or OFF. The Emergency Parallel switches operate in exactly the same manor as the battery switches.

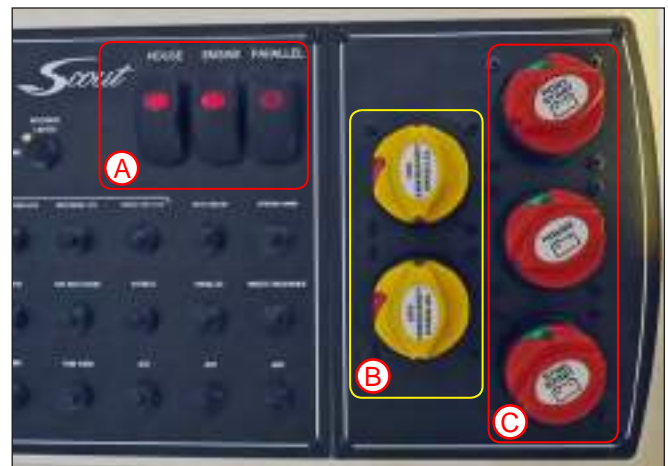
Press the remote switch once to engage the battery switch. A light in the switch will illuminate to indicate that the battery switch is ON. To turn the battery switch OFF, press and hold the switch for 3 seconds. The LED light may not turn off immediately or will slowly fade out if there are no loads present on the system. This is normal as the capacitors in the system drain.

To operate the battery switches remotely in Auto Mode, the manual knob on each battery switch must be set to "AUTO OFF." In this position, each battery switch will move from "AUTO OFF" to "AUTO ON" when the remote switch is turned on and from "AUTO ON" to "AUTO OFF" when the remote switch is turned off. LED lights at the remote switches and on each battery switch will be lit when the battery switches are in the ON position. The LED lights at the remote switches and on the battery switches will be off and the battery switches will indicate "AUTO OFF" when the battery switches are turned off. Remote operation of the battery switches is not possible when they are set to Manual Mode. If auto operation is attempted, the LED lights will flash for 3 seconds, then stop. The knob on the battery switches must be set to "AUTO OFF" before they can be activated remotely.

The remote operation of the battery switches can be overridden at anytime by depressing the control knob on the battery switch and turning it to the "MAN ON" or "MAN OFF" position. The "MAN ON" LED light on the battery switch will be lit whenever the battery switch is activated in Manual Mode. The knob on the battery switch must be returned to the "AUTO OFF" position before the battery switch can be activated remotely. For more information on the motorized battery switches, refer to the switch manufacturer's operation manual.

When in port or at anchor, the engine battery switches should be off. Only the battery switch that activates the house battery bank should be on. This will keep both engine starting batteries in reserve for starting the engines. If the house batteries become discharged to the point that the accessories will not operate, the engines can be started to recharge the house battery bank.

Notice:
Current is supplied to the automatic switch for the bilge pump when the batteries are connected and the battery switches are off.



DC Panel Remote Switches & Main Battery & Parallel Switches

- A. Remote Battery & Parallel Switches
- B. Main Parallel Switches
- C. Main Battery Switches

6.4 Batteries & Battery Switches - Single Engine

Single engine boats have three batteries. There is one battery for the engine and two batteries wired in parallel for the house and electronics circuits. The engine and house batteries can be temporarily connected in parallel by the Parallel switch in the helm or DC panel to provide additional starting current for each engine.

The batteries supplied by your dealer are the size and capacity batteries recommended by the engine manufacturer. These specifications should be considered the minimum size battery required.

There are two motorized battery switches and a battery parallel switch in the battery switch panel located in the helm storage compartment. The battery switches can be activated or deactivated remotely by labeled switches in the DC panel, wirelessly using the key FOB remote or manually by rotating the knob on each switch. The parallel switches can be activated by Parallel switches located on the DC panel and helm switch panel.

The house batteries are charged by the accessory charge circuit on the engine whenever it is operating. The engine battery is dedicated to starting and operating the engine. It is charged by the engine whenever it is operating. The engine and house batteries are also charged by the battery charger when plugged into shore power.

The motorized battery switches can be controlled remotely in Auto Mode by switches in the DC panel or manually in Manual Mode by turning the knob on the battery switches. There are LED lights on both the remote switches and the battery switches that indicate battery switch mode and status. These lights will blink when the switch has been activated and the motor is turning the battery switch ON or OFF. The Emergency Parallel switch operates in exactly the same manner as the battery switches.

Press the remote switch once to engage the battery switch. A light in the switch will illuminate to indicate that the battery switch is ON. To turn the battery switch OFF, press and hold the switch for 3 seconds. The LED light may not turn off immediately or will slowly fade out if there are no loads present on the system. This is normal as the capacitors in the system drain.

To operate the battery switches remotely in Auto Mode, the manual knob on each battery switch must be set to "AUTO OFF." In this position, each battery switch will move from "AUTO OFF" to "AUTO ON" when the remote switch is turned on and from "AUTO ON" to "AUTO OFF" when the remote switch is turned off. LED lights at the remote switches and on each battery switch will be lit when the battery switches are in the ON position. The LED lights at the remote switches and on the battery switches will be off and the battery switches will indicate "AUTO OFF" when the battery switches are turned off.

Remote operation of the battery switches is not possible when they are set to Manual Mode. If auto operation is attempted, the LED lights will flash for 3 seconds, then stop. The knob on the battery switches must be set to "AUTO OFF" before they can be activated remotely.

Remote operation of the battery switches can be overridden at anytime by depressing the control knob on the battery switch and turning it to the "MAN ON" or "MAN OFF" position. The "MAN ON" LED light on the battery switch will be lit whenever the battery switch is activated in Manual Mode. The knob on the battery switch must be returned to the "AUTO OFF" position before the battery switch can be activated remotely. For more information on the motorized battery switches, refer to the switch manufacturer's operation manual.

When in port or at anchor, the engine battery switch should be off. Only the battery switch



Helm Switch Panel & Parallel Switch

that activates the house battery bank should be on. This will keep the engine starting battery in reserve for starting the engine. If the house batteries become discharged to the point that the accessories will not operate, the engine can be started to recharge the house batteries.

Notice:

Current is supplied to the automatic switch for the bilge pump when the batteries are connected and the battery switches are off.

6.5 Parallel Switch & Dead Batteries

In the event of a dead starting battery for an engine, the engine and house batteries can be placed in a temporary parallel configuration. This allows you to start an engine from the engine and house batteries combined. Make sure the House and Engine battery switches are on. Activate the Parallel switch on the helm switch panel or DC panel, then start the engine with the dead battery normally. After 10 minutes, the Parallel switch will automatically disengage.

In the event of dead house batteries, there are a couple options.

- If at the dock, simply plug in the shore power and operate the battery charger to recharge the house batteries.
- If at sea, start one or both engines. Once an engine is running, the alternator accessory circuit will charge the house batteries. If your boat is equipped with twin engines, operating both engines will recharge the house batteries much quicker. The house batteries will continue to be charged until the engine or engines are shutdown, isolating the house batteries from the engine batteries.

Notice:

If a battery is fully discharged/dead for a lengthy period it may become permanently damaged and will not be able to hold a charge.

6.6 Key FOB Remote

A key FOB remote that turns the battery switches and some lights on or off is standard equipment. The buttons are programmed at the factory and perform the following functions.

Button 1

Press once to turn the battery switches on. Press and hold for three seconds to turn the battery switches off.

Button 2

Press once to turn the spreader lights on. Press again to turn the lights off.

Button 3

Press once to turn the courtesy lights on. Press again to turn the lights off.

6.7 Ignition Switch Panels

Ignition Switch Panels

Ignition switch panels are unique to each engine manufacturer and the engine control options selected. Your dealer will provide you with the proper starting procedure for your boat at the time of delivery. Additional information for the ignition switch system installed in your boat is located in the engine and control system operating manuals included in your information packet.



Typical Key FOB



Typical Single Engine Yamaha Command Link Ignition Switch Panel

Most Scout boats are equipped with Yamaha engines and the Command Link or Command Link Plus® ignition key panels that offer the latest in technology and durability.

Most engine ignition circuits are protected by fuses or circuit breakers located on each engine.

Yamaha Command link Ignition Switches

Scout boats equipped with Yamaha engines and Command Link ignition key panels offer a key activated ignition switch for each engine located at the helm. Each switch has OFF/ON and momentary START positions.

Starting Procedure

Make sure each engine is down with the shift lever in the neutral position and your hand on the control lever. Turn the ignition key to the ON position to activate the fuel pump and ignition system. Wait 5 seconds for the fuel pump to pressurize the system, then turn the key to the start position. When the engine starts, release the key and the switch will automatically return to the run position. For twin engine boats, allow the engine to stabilize, then repeat the starting procedure for the other engine. Stop each engine by turning the key to the OFF position.

The engine ignition circuits are protected by fuses or circuit breakers located on each engine.

Yamaha Command Link Plus Ignition Switches

Scout boats equipped with Yamaha engines and Command Link Plus® ignition key panels offer the latest in technology and durability. The system energizes the ignition system of multiple outboards with only one key.

A START/STOP panel is used in conjunction with the key panel and features lights which indicate when engines are running and a START/STOP button for each engine. This system greatly simplifies the starting and stopping process of your engines. For convenience and protection, engines can not be restarted while running.

Starting procedure

Make sure each engine is down with the shift lever in the neutral position and your hand on the control lever. Turn the ignition key to the ON position to activate the start button for each engine. Press and release the START/STOP button. The computer will automatically check all engine systems and start the engine. For twin engine boats, allow the engine stabilize, then repeat the starting procedure for the other engine. Stop each engine by pressing the start/stop button again.



Typical Twin Engine Yamaha Command Link Ignition Switch Panel



Typical Twin Engine Yamaha Command Link Plus Ignition & Start/Stop Switch System

6.8 12 volt Accessory Switch Panels

Helm Switch Panel

The main accessory switch panel is located at the helm. The circuit breakers that protect the accessories are located in the DC breaker panel in the helm storage compartment. An LED light built into the switches indicates that the circuit is activated.

Your boat may have all or some of the switches described in this section, depending on the accessories and optional equipment installed on your boat.

The following is a description of the accessories typically controlled by switches in the helm accessory switch panel.

Nav/Anc LT

The switch is a three-position switch. The middle position is OFF. Moving the switch in one direction will activate the navigation lights. Moving the switch in the opposite direction activates the anchor light.

Court LTS

Activates the lights that illuminate the cockpit.

Spreader LTS

Activates the overhead flood lights in the optional hardtop that illuminate the forward and rear cockpit.

Baitwell LT

Activates the lights that illuminate the baitwell.

Storage LTS/Bilge LTS

Activates the lights in the aft system station and ski/battery storage compartment.

Underwater Lights (Optional)

Activates the LED underwater lights in the stern below the waterline.

Bilge Pump

The switch has two positions, ON and OFF. When the switch is in the ON position it activates the aft bilge pump located in the stern bilge near the transom. The pump moves water out a thru-hull fitting in the hull side. When pumping is complete, move the switch to the OFF position to turn off the pump.

When the switch is in the OFF position, the pump is controlled by an automatic switch that is activated whenever the batteries are connected. The pump



Helm Switch Panel

will run as needed whenever water in the bilge accumulates high enough to activate the automatic switch and turn OFF when the water is removed.

Notice:

The bilge pump will start automatically when there is sufficient water in the bilge to activate the automatic switch. The pump and automatic switch are protected by a circuit breaker located in the battery switch panel and always supplied current when the batteries are connected.

Baitwell 1

The switch is a three-position switch. The middle position is OFF. Moving the switch in one direction activates the baitwell pump that supplies water to the baitwell. Moving the switch in the opposite direction activates the baitwell pump that recirculates the water in the baitwell.

Freshwater

Activates the fresh water pump that supplies the fresh water system. The pump is the pressure demand type. A pressure switch automatically controls the water pump when the system is activated and properly primed.

Raw Water

Activates the raw water pump that supplies seawater to the raw water washdown hose connection. The pump is the pressure demand type. A pressure switch automatically controls the water pump when the system is activated and properly primed.

Windlass

The switch is a three-position momentary switch. The center position is OFF. Moving the switch in one direction will pay the anchor line out. Moving the switch in the opposite direction will pull the anchor line in. Release the switch to stop the windlass.

Wiper (Optional)

Activates the windshield wiper. If the windshield wiper option is not installed, this switch is reserved for additional 12 volt accessories.

Wiper/Wash (Optional)

Activates the solenoid that sprays water on the windshield washer from the fresh water system. If the windshield washer option is not installed, this switch is reserved for additional 12 volt accessories.

Horn

A momentary switch that activates the boat horn.

Parallel

A momentary switch that provides additional starting power to the engine starters. When activated, the house and engine batteries are temporarily connected in parallel to provide additional battery power to start an engine with a depleted or dead battery. After 10 minutes, the Parallel switch will automatically disengage.

ACC

The accessory switch is reserved for additional 12 volt equipment.

House Battery Volt Meter

Monitors the voltage in the house battery circuit.



Storage Compartment In The Helm With USB & 12 Volt Receptacle Plugs



Trim Tab Switch

Additional DC Switches And Panels

12 volt Receptacle

Located in the storage compartment in the helm dash. Provides electrical current for portable 12 volt equipment.

USB Receptacles

Located in the storage compartment in the helm dash. Used to charge phones and other electronic equipment or connect an MP3 player to the stereo.

Trim Tab Switches

Located in the helm. These switches control the trim tab planes located on the transom of the boat. They are protected by a circuit breaker located in the cabin DC panel. Refer to the Helm Control Systems chapter for detailed information on the operation of the trim tab controls.

Engine Trim and Tilt Switches

Located in the helm. These switches are typically installed in the engine throttle and shift control. They control the trimming and tilting of the engines. Refer to the Helm Control Systems chapter and the engine owner's manual for information regarding the proper use of the tilt and trim switches.

Hardtop Light Switch

A push button switch that activates the overhead lights in the optional hardtop. An LED light in the switch indicates the lights are activated.

Press the switch once to activate white lights. Press the switch again to change the lights from white to blue. Press the switch again to change the lights from blue to red. Press the switch again to turn the lights off.

Seat

A three-position momentary switch that extends and retracts the rear facing lounge seat on the port side of the cockpit. The center position is OFF. Moving the switch in one direction will extend the seat to the lounge seat. Moving the switch in the opposite direction will retract the seat. Release the switch to stop the seat in the current position.



Engine Tilt & Trim Switches



Optional Hardtop Light Switch



Lounge Seat Control Switch



Twin Engine DC Breaker & Battery Switch Panels In Helm Storage Compartment

6.9 DC Breaker Panel

Power is distributed to 12 volt circuits through individual “push to reset” circuit breakers located in the DC breaker panel. Main circuit breakers protect the main panel circuits from an overload. Some 12 volt accessories are operated directly by the circuit breaker in the panel. Switches fed by the panel breakers activate other accessories.

Proper fuse or breaker protection must be provided for all 12 volt equipment added. Do not overload the accessory circuit breakers or other circuitry through additional 12 volt equipment.

The following is a description of the DC panel and accessories controlled by switches or circuit breakers.

DC Panel Volt Meter And Switches

Volt Meter

The digital DC volt meter displays voltage for the battery selected. A three position switch below the meter selects the battery to be monitored.

Battery and Parallel Switches

These switches activate the motorized battery switches for the engines and house circuits. An LED light in each switch illuminates when the battery switch it controls is on. The light may not turn off immediately or will slowly fade out when the switches are turned off.

Interior Lights Switch

Activates the helm storage compartment and head compartment lights.

Waste Discharge

Activates the waste discharge pump that empties the waste tank. Refer to the Marine Head System in the Interior Equipment chapter for additional information on the operation of the overboard discharge system.

DC Panel Main Breakers

The main accessory breakers are located on the upper port side of the DC panel. These breakers are the flat rocker, restricted OFF (Slot Reset) design. The rocker is flush to the panel in the ON position and raised when the breaker is tripped or OFF. Slot reset breakers can only be switched OFF by inserting a small screwdriver into the slot next to the OFF symbol on the breaker rocker. An LED light above each breaker indicates that the circuit is activated.

These breakers are always ON unless tripped by an overload or turned off to service the circuit or a component powered by the circuit.

The following circuits are supplied power and protected by the restricted OFF circuit breakers.

DC Main

Supplies 12 volt current to the DC accessory breakers and protects the panel from an overload. This breaker is supplied current when the House battery switch is activated.

Windlass

Protects the circuit that provides power to the windlass relay. This breaker is supplied current when the House battery switch is activated.

AMP

Protects the circuit that provides power to the optional stereo amplifier. This breaker is supplied current when the House battery switch is activated. If the amplifier is not installed, this breaker position will be blank and reserved for additional 12 volt equipment.

DC Panel "Push TO Reset" Breakers

The "push to reset" circuit breakers are labeled for the accessory circuit they protect. Most circuits are activated by the House battery switch. The continuous power circuits are always supplied current when the house batteries are connected.

If a breaker trips, the reset button pops out and can be felt through the protective cover. Press the button to reset the tripped breaker. If the breaker trips again, find and correct the problem before resetting the breaker.

The following circuits are supplied power and protected by the "push to reset" circuit breakers:

Nav/Anc LT

Protects the circuit for the navigation and anchor lights.

Cock LT

Protects the circuit for the lights that illuminate the cockpit sole.

Spread LT

Protects the circuit for the flood lights that illuminate the forward and aft cockpit.

Baitwell LT

Protects the circuit for the lights that illuminate the baitwell.

Storage/Bilge LT

Protects the circuit for the lights that illuminate the aft system station and ski/battery compartment.

Underwater LT (Optional)

Protects the circuit for the LED underwater lights in the stern below the waterline. If this option is not installed, the breaker is wired in reserve.

Interior LT

Protects the circuit for the lights that illuminate the helm storage and head compartments.

Hard Top LT (Optional)

Protects the circuit for the lights in the hardtop that illuminate the helm and cockpit. If the optional hardtop is not installed, this breaker is wired in reserve.



DC Panel Main Breakers

Auto Bilge

A continuous power circuit breaker that protects the circuit that supplies continuous 12 volt electrical power to the automatic switch for the aft bilge pump. This breaker is always supplied current when the house batteries are connected.

Stereo Memory

A continuous power circuit breaker that protects the circuit that supplies continuous 12 volt electrical power to the memory circuit in the stereo and electronics. This breaker is always supplied current when the house battery is connected.

Bilge Pump

Protects the circuit for the switch that manually activates the bilge pump.

Baitwell

Protects the circuit for the pump that supplies seawater to the baitwell.

Freshwater

Protects the circuit for the fresh water system pump.

Raw Water

Protects the circuit for the raw water washdown pump.

Wiper/Wash (Optional)

Protects the circuit that activates the optional windshield washer solenoid valve. If the windshield wiper/washer option is not installed, this breaker is wired in reserve.

Wiper

Protects the circuit for the optional windshield wiper. If the windshield wiper option is not installed, this breaker is wired in reserve.

12V ACC Plugs

Protects the circuit that supplies 12 volt electrical current to the 12 volt accessory and USB charging plugs.

Stereo

Protects the circuit that supplies 12 volt electrical current to the stereo.

Parallel

Protects the circuit for the switches that activate battery parallel system.

Waste Discharge

Provides protection and 12 volt electrical current to the overboard discharge pump for the waste tank.

ACC Fuse Block

Protects the circuit that supplies 12 volt electrical current to the fuse panel that protects the circuits for electronics and other equipment installed in the helm.

Windlass

Protects the circuit for the up/down switches for the windless.

Cockpit Seat

Protects the circuit for the switch that controls the reclining lounge seat in the cockpit.

Horn

Protects the circuit for the horn.

Trim Tabs

Provides protection and electrical current to the switches that control the trim tabs.

ACC Circuit Breakers (3)

Reserved for additional 12 volt equipment.

Notice:

The continuous power circuit breakers are always supplied current when the batteries are connected. These circuits are not deactivated when the battery switches are off.

6.10 Additional DC Circuit Protection Heavy Duty Circuit Breakers & Fuses

Heavy duty circuit breakers or fuses located in the compartment behind the aft bench seat provide protection for the engine charging and power steering circuits. These breakers are supplied



Helm Accessory Fuse Panel



Typical Engine Charging Circuit & Power Steering Pump Circuit Breakers Located Behind The Aft Bench Seat.

current whenever the Engine battery switches are activated. Other heavy duty circuit breakers on the batteries protect the charging circuits for the 120 volt battery charging system.

If one of these circuit breakers is tripped by an overload, a lever will be exposed near the center of the breaker. Reset the breaker by moving the lever until it locks in the reset position. A test button near the reset lever can be pressed to test the breaker to ensure it is operating properly.

The following are high amperage circuits supplied and protected by individual heavy duty circuit breakers:

Power Steering Pump Circuit Breaker (Optional)

Provides protection and power for the optional power assist steering pump. This breaker is

supplied current whenever the engine battery switches are activated.

Electronic Steering Fuses or Circuit Breakers

Provides protection and power to the engine electronic steering system if an electronic steering option is installed on your boat. Refer to the engine manual for additional information on the steering system and fuse or circuit breaker requirements for your boat.

Engine Charging System Circuits

Some engine installations are equipped with heavy duty fuses or circuit breakers that provide protection for the engine battery charging circuits. Refer to the engine manual for additional information on the engine charging system and the fuse or circuit breaker requirements for your boat.

Battery Charger Circuit Breakers

The charging circuits for the engine starting batteries and house battery bank are protected from short circuits or an overload by heavy duty circuit breakers located at each battery.



Battery Charger Circuit Breaker At Engine Starting Battery

6.11 DC Power Management

Modern outboard powered boats are typically equipped with a full array of electronics, fuel injected engines, and could be equipped with a stereo amplifier, electric grill or other accessories that consume a significant amount of DC electrical power. All outboard engine charging systems are designed to provide maximum electrical output at or above cruising RPM. The electrical output from the charging system is considerably less at idle or trolling speeds.

Depending on the optional equipment and electronics installed on your boat, there may be times when the charging system on your engine or engines will not be able to meet the DC electrical power demand if too many accessories are activated while the boat is operating at idle or trolling speeds. Consequently, POWER MANAGEMENT PRACTICES may need to be observed at slow speeds, particularly if your boat is equipped with a full electronics package, optional stereo amplifier and electric grill.

The house battery system in your Scout is designed to provide several hours of reserve capacity, which is adequate for most situations. However, you should be aware of the load each of your DC accessories draw and make sure you don't

overload the capacity of the charging system for extended periods while operating the boat below cruising speed. Always monitor the volt meters while operating at slow speeds and turn off unnecessary equipment that draw high amperage loads if the volt meters indicate that the voltage in the batteries is below 12 volts. If necessary, reduce the electrical load by turning off or alternating the use of high draw DC accessories such as the radar units, stereo, spreader lights, etc.

If the house battery system that powers the electronics and accessories on your boat becomes critically discharged while underway at low speeds or trolling, make sure that you turn off all unnecessary DC equipment and run the engines at an RPM that will provide a reading of the at least 13 volts on the volt meters to recharge the house batteries.

Proper DC power management will prevent low voltage that can cause critical navigation equipment to become erratic or shutdown unexpectedly. Additionally, good power management practices increase the life of your batteries and engine charging systems. You should contact your dealer if you have any questions regarding DC power management or the DC electrical system on your boat.



6.12 AC Battery Charging System

General

A 120 volt AC battery charging system is standard equipment. The system is supplied 120 volt AC current by a power cable connected to a shore side outlet and the shore power inlet. It is wired totally separate from the 12 volt DC system and charges the engine and house batteries simultaneously when connected.

Notice:

The power cord used for the battery charger system is not equipped with lock rings on the shore side or boat connector plugs. The charger has integrated reverse polarity protection and the circuit is not equipped with a reverse polarity light.

 **DANGER** 

TO REDUCE THE POSSIBILITY OF AN ELECTRICAL SHOCK, IT IS IMPORTANT THAT THE AC GROUND SYSTEM IS FUNCTIONING PROPERLY AND THAT A PROPER CONNECTION EXISTS BETWEEN THE SHORE POWER CORD AND THE SHORE POWER INLET AND THE OUTLET GROUND CIRCUITS. IF THERE IS ANY DOUBT ABOUT THE INTEGRITY OF THE GROUND CIRCUIT, A QUALIFIED MARINE ELECTRICIAN SHOULD BE CONTACTED IMMEDIATELY AND THE SHORE POWER SHOULD BE DISCONNECTED UNTIL THE NECESSARY REPAIRS ARE COMPLETED.



ELECTRICAL SHOCKS FROM 120 VOLT CIRCUITS CAN CAUSE SEVERE INJURY OR DEATH. TO REDUCE THE RISK OF ELECTRICAL SHOCK IN WET WEATHER, AVOID MAKING CONTACT WITH THE SHORE CABLE OR MAKING A CONNECTION TO A LIVE SHORE OUTLET. NEVER SPRAY WATER ON ELECTRICAL CABLES WHILE WASHING DOWN DECKS.

Procedure For Making A Shore Connection

If the dockside outlet includes a circuit breaker, turn it to the OFF position. To avoid strain on the cable, make sure it has more slack than the mooring lines. Dress the cable so that it cannot be damaged by chafing between the boat and the dock. Make sure the cable does not come in contact with the water.



Open the cover on the inlet port and connect the shore cable to the inlet cord plug making sure the shore cord includes a three-prong plug with a ground wire. Turn the dockside circuit breaker on and check that the battery charger is operating properly. If the battery charger is not working, turn off the shore circuit breaker and remove the

cable. Contact your dealer or a qualified electrician to find and correct the problem.

 **WARNING** 

DO NOT ATTEMPT TO CORRECT THE WIRING YOURSELF. ELECTRIC SHOCK CAN CAUSE SEVERE INJURY OR EVEN DEATH. ALWAYS HAVE A QUALIFIED ELECTRICIAN CHECK WIRING.

KEEP CHILDREN AWAY FROM ANY ELECTRICAL CABLES OR EQUIPMENT.

 **WARNING** 

UNDETECTED FAULTS IN THE AC BATTERY CHARGING SYSTEM COULD CAUSE THE WATER AROUND THE BOAT TO BECOME ENERGIZED. THIS COULD CAUSE A SEVERE SHOCK OR EVEN DEATH TO SOMEONE IN THE WATER NEAR THE BOAT. NEVER SWIM OR ALLOW SWIMMING AROUND THE BOAT WHEN THE BATTERY CHARGING SYSTEM IS ACTIVATED BY THE SHORE POWER CONNECTION.

Procedure For Disconnecting A Shore Connection

Turn circuit breaker on the dockside outlet to the OFF position. Disconnect the cable from the dockside outlet and replace the outlet cap. Disconnect the cable from the inlet port and close the cap. Store cable.

Battery Charger

The battery charger is mounted in the helm storage compartment. Your boat could be equipped with a two or three bank charger, depending on the engine options selected.

AC electrical current is supplied directly to the battery charger by the shore power cable. The charger automatically charges and maintains the engine and house batteries simultaneously when activated. It is equipped with LED lights to indicate the state of charge for each battery.

The charge to the engine batteries can be monitored by using the volt meter in the DC breaker panel, the volt meters in the engine gauge cluster or the LED lights on the charger. To monitor the engine batteries with the volt meters in the engine gauge cluster, activate the charger and turn the engine battery switches on. Turn the ignition key switch for each engine to the ON position (DO NOT START THE ENGINES) and read the voltage

on the volt meter for each engine. To monitor the house or engine batteries with the DC panel volt meter, activate the charger and turn the battery switches on. Select to read the voltage on the desired battery using the switch in the panel below the volt meter. If the batteries are in good condition and charging properly, the volt meters will indicate between 12 and 14.5 volts. If the reading is below 12 volts, then the battery is not accepting a charge or the charger is not working properly. Always turn the ignition switches off immediately after the monitoring is complete when using the voltmeters in the engine gauge cluster.

The wires that supply DC charging current to the batteries are protected by an internal fuse in the battery charger and external circuit breakers, one for each battery output wire, located at each battery. The external circuit breakers protect the DC charging circuit from the batteries to the charger. The internal fuses in the charger protect the DC charging circuit from the charger to the batteries. Refer to the battery charger manual for additional information.



Typical Battery Charger

6.13 Bonding System

Your boat is equipped with a bonding system that interconnects the underwater metal hardware and the engine to ensure that they are of the same electrical potential. Sacrificial anodes of the size and type recommended by the engine manufacturer are attached to each outboard motor. There are also sacrificial anodes on each trim tab plane that are isolated from the boat bonding system to protect each tab plane assembly.

Anodes deteriorate before the other metals, thereby protecting the underwater metals from galvanic corrosion or stray electrical current. Since the anodes are sacrificial, it is important to monitor them and replace them when they have deteriorated to 50 - 75% of their original size.

The bonding system is connected to the engine and battery DC ground. If your boat is equipped with the optional battery charger, the earth ground wire for the AC electrical system is also connected to the bonding system. It provides a path to the safety earth ground in the event of a fault in the shore earth ground connection.



Engine Starting Battery Charging Wire Circuit Breakers



6.14 Electrical System Maintenance

General System Maintenance

At least once a year, spray all exposed electrical components behind the helm, in the stern bilge area and in the plugs with a protector. Removable light fixture bulbs should be removed and the metal contact areas coated with a non-water soluble lubricant like Teflon or Silicone grease. The sockets should be sprayed with a protector. Care must be taken not to get any oil or grease on the glass portion of the bulbs as this will cause the bulb to overheat and burn out.

Notice:

Most LED light fixtures are sealed and not serviceable.

 **CAUTION** 

WHEN REPLACING LIGHT BULBS IN MARINE LIGHT FIXTURES, ALWAYS USE A BULB WITH THE SAME RATING AS THE ORIGINAL. USING A DIFFERENT BULB COULD CAUSE THE FIXTURE TO OVERHEAT AND MELT OR SHORT CIRCUIT.

Check all below deck wiring to be sure it is properly supported, that the insulation is sound and that there are no loose or corroded terminals. Corroded terminals should be thoroughly cleaned with sandpaper or replaced, tightened securely and sprayed with a metal and electrical protector. Inspect all engine wiring.



Your boat is equipped with batteries that were supplied by your dealer. Some batteries are sealed, AGM or maintenance free wet cell batteries that do not require inspection or service. However, if your boat is equipped with standard wet cell type batteries that are not maintenance free, they will require the following inspection and service.

Check the electrolyte level in the batteries regularly and add distilled water as necessary. If the batteries are frequently charged by an automatic battery charger, the electrolyte level will have to



be checked more often. The correct fluid level in the cells is approximately 1/4 to 1/2 inch above the plates. If fluid is needed, fill to the proper level with distilled water. Do not over fill and only use distilled water.

Keep all battery tops clean and dry. Dirt and water can conduct electricity from one post to the other causing the battery to discharge.

The battery posts on all batteries should be kept free of corrosion. Remove the cables and clean the posts and cable clamps with a battery post cleaner or sandpaper as required. Coating the battery posts and cable clamps with Teflon or Silicone grease will protect them and reduce corrosion. Battery cables, both hot and ground, must be replaced when they show signs of corrosion or fraying. Deteriorated cables cause a considerable voltage loss when high currents are drawn, as for starting the engine.

 **WARNING** 

NEVER USE AN OPEN FLAME IN THE BATTERY STORAGE AREA. AVOID STRIKING SPARKS NEAR THE BATTERY. A BATTERY CAN EXPLODE IF A FLAME OR SPARK IGNITES THE HYDROGEN GAS THE BATTERY EMITS WHILE BEING CHARGED.

 **WARNING** 

CORROSION ALLOWED TO BUILD ON THE ELECTRICAL CONNECTORS CAN CAUSE A POOR CONNECTION RESULTING IN SHORTS OR POOR GROUND CONNECTIONS. ELECTRICAL CONNECTORS SHOULD BE CHECKED AT LEAST ANNUALLY AND CLEANED AS REQUIRED. DO NOT ALLOW CORROSION TO BUILD ON CONNECTIONS.

THE ELECTRICAL SYSTEM SHOULD ALWAYS BE DISCONNECTED FROM THE POWER SOURCE BEFORE INSPECTING OR SERVICING THE SYSTEM. NEVER SERVICE ANY COMPONENT OF AN ELECTRICAL SYSTEM WHILE IT IS ENERGIZED.

Fresh Water System

7.1 General (Optional)

The fresh water system consists of a potable water tank, distribution lines and a pump. The pump and water tank are located in the aft system station.

Shutoff valves on the water manifold in the ski/battery storage compartment enable the operator to turn off individual water lines if necessary.

	CAUTION	
<p>DO NOT FILL SYSTEM WITH ANYTHING OTHER THAN WATER. SHOULD THE SYSTEM BECOME CONTAMINATED WITH FUEL OR OTHER TOXIC FLUIDS, COMPONENT REPLACEMENT MAY BE NECESSARY.</p>		

	WARNING	
<p>DO NOT CONFUSE FUEL FILL DECK PLATE WITH THE WATER FILL OR WASTE PUMP OUT DECK PLATES. THESE PLATES ALSO ARE LABELED ACCORDINGLY. IF FUEL IS ACCIDENTALLY PUMPED INTO THE WATER OR WASTE TANK, DO NOT ATTEMPT TO PUMP IT OUT YOURSELF. WATER AND WASTE PUMPS ARE NOT DESIGNED TO PUMP FUEL AND A FIRE OR EXPLOSION COULD RESULT. CONTACT YOUR DEALER OR THE SCOUT CUSTOMER SERVICE DEPARTMENT FOR ASSISTANCE IN HAVING THE FUEL PROFESSIONALLY REMOVED AND COMPONENTS OF THE FRESH WATER SYSTEM REPLACED AS NECESSARY.</p>		



Fresh Water Tank In Aft Systems Compartment



Fresh Water Deck Fill Plate

Note: Press down and turn cap 1/4 turn counter-clockwise to release cap and provide handhold

7.2 Fresh Water System Operation

Fill the water tank slowly through the labeled deck fill fitting. After filling the tank, activate the Fresh-water switch in the helm switch panel. Partially open all faucets and allow the pump to run until all of the air is purged from the system and a steady stream of water is flowing from each outlet. Next, turn off the faucets, one by one. As the pressure builds the pump will automatically shut off.

When properly primed and activated, the water system will operate much like the water system in a home. An automatic pressure sensor keeps the system pressurized. If the system has been recently filled or has not been used for an extended period, air bubbles may accumulate at the pump and the system may have to be reprimed.



Fresh Water Manifold & Control Valves In Ski/Battery Storage Compartment



Cockpit Sink Faucet



Head Compartment Sink Faucet

Whenever the boat is left unattended, the Fresh-water switch should be placed in the OFF position.

	CAUTION	
DO NOT ALLOW THE FRESH WATER PUMP TO RUN DRY. THE FRESH WATER PUMP WORKS ON DEMAND AND WILL NOT SHUT OFF AUTOMATICALLY WHEN THE TANK IS EMPTY. THIS CAN RESULT IN DAMAGE TO THE PUMP. ALWAYS TURN THE FRESH WATER SWITCH OFF WHEN THE SYSTEM IS NOT IN USE.		



Fresh & Raw Water Washdown Quick Release Connectors On Transom

Cockpit Sink and Head Sinks

The sink faucets are supplied by the fresh water system. Each faucet pivots and folds down for storage. To use the sink rotate the faucet outlet up. Make sure the fresh water system is activated. Open the faucet to supply fresh water to the sink.

Washdown Hose Connector

A quick-release fresh water washdown hose connector is located on the transom. The connector has an automatic valve that is always closed until the washdown hose is connected. The hose requires a special fitting that snaps into the connector and activates the automatic valve. The cover on the connector should always be in the closed position to keep the connector clean when the washdown hose is not attached. Contact your dealer for information on replacement fittings and hoses.



Cockpit Fresh Water Washdown Hose & Connection

7.3 Fresh Water System Maintenance

Information supplied with water system components by the equipment manufacturers is included with this manual. Refer to this information for additional operation and service data.

The following items should be done routinely to maintain your fresh water system:

- Periodically remove and clean the water strainer located at the intake side of the pressure pump. To clean the strainer, make sure the Freshwater switch is off. Rotate the strainer bowl counterclockwise to release it. Remove and clean the screen with freshwater. Lubricate the O-ring lightly with Teflon or silicon grease and reinstall the screen and strainer bowl.
- Periodically spray the pump and metal components with a metal protector.
- The batteries must be properly maintained and charged. Operating the pressure pump from a battery with a low charge could lead to pump failure.
- Add a commercially available potable water conditioner to the water tank to keep it fresh.

Sanitizing the Fresh Water Tank

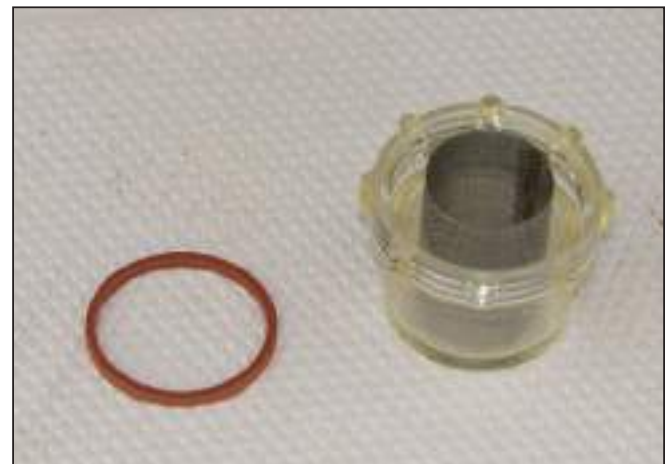
The freshwater system should be sanitized if it has not been used for a long period or you are unsure of the quality of the water in the system.

The following steps can be used to sanitize the system:

- Activate the system and pump out as much water as you can.
- Make a chlorine solution by mixing two ounces of household chlorine bleach in a gallon of water. This mixture will treat approximately fifteen gallons. If the water tank on your boat is larger or smaller than 15 gallons, then adjust the mixture accordingly. Always mix the chlorine with water in a separate container first and never add straight chlorine to the fresh water tank.



Typical Fresh Water Pump & Strainer





Typical Fresh Water Pump Strainer Removed for Cleaning

Fresh Water System



- Fill the water tank half full with freshwater and pour the mixture into the water tank. Top off the tank.
- Activate the system and allow the water to run from the washdown hose for about 1 minute. Let the treated water stand for 4-6 hours.
- Drain the system by pumping it dry and flush with several tank fills of freshwater.
- The system should now be sanitized and can be filled with freshwater. If the chlorine smell is still strong, it should be flushed several more times with freshwater.

 **CAUTION** 

THE FRESH WATER SYSTEM MUST BE PROPERLY WINTERIZED PRIOR TO WINTER LAY-UP. SEE SECTION ON WINTERIZING.



Aft Systems Compartment

8.1 General

In the raw or seawater system, the baitwell seawater pump is mounted to a seacock on a thru-hull fitting located in the aft systems compartment bilge. The raw water washdown pump is connected to an auxiliary supply fitting at the base of the baitwell pump. Always make sure all valve is open before attempting to operate any component of the raw water system.

Priming the System

Make sure the seacock valve is open and the raw water washdown hose is connected. Turn the Raw Water switch in the helm switch panel on and run the pressure pump by activating the raw water washdown hose nozzle until all of the air is purged from the system, then turn the nozzle off. Turn on the Baitwell 1 switch and run the baitwell pump until all air is purged from the system. Then turn the pump off.

The intake fitting for the baitwell seawater pumps are equipped with a scoop and seacock valve. If the pump runs but will not prime, make sure the valve is open. If the pump still won't prime, it



Baitwell Pump, Seacock Valve & Auxiliary Supply Fitting

may be air locked. Make sure the valve is open and run the boat at or above 15 M.P.H. The water pressure from the scoop will force the trapped air through the pump and allow it to prime. If this procedure doesn't work, contact your dealer or Scout customer service for assistance.

Closing the thru-hull valve before the boat is hauled from the water will help to eliminate air locks in raw water systems. The valve should also be closed whenever you leave the boat unattended.

Notice:

It may be necessary to reprime the raw water system if it is not used for an extended period and at the time of launching.

8.2 Raw Water Washdown System Operation

A high pressure pump controlled by a pressure sensor is activated by the Raw Water switch located in the helm switch panel. When activated, the pressure switch will automatically control the pump that supplies the raw water hose connector.

As the pressure builds in the system, the pump will shut off. When the system is in use and the pressure drops, the pump will turn on. Whenever the boat is left unattended, the Raw Water switch should be placed in the OFF position.

Washdown Hose Connector



A quick-release washdown hose connector is located on the port side of the transom. The connector has an automatic valve that is always closed until the washdown hose is connected. The hose requires a special fitting that snaps into the connector and activates the automatic valve. The cover on the connector should always be in the closed position to keep the connector clean when the washdown hose is not attached. Contact your dealer for information on replacement fittings and hoses.



Fresh & Raw Water Washdown Quick Release Connectors On Transom

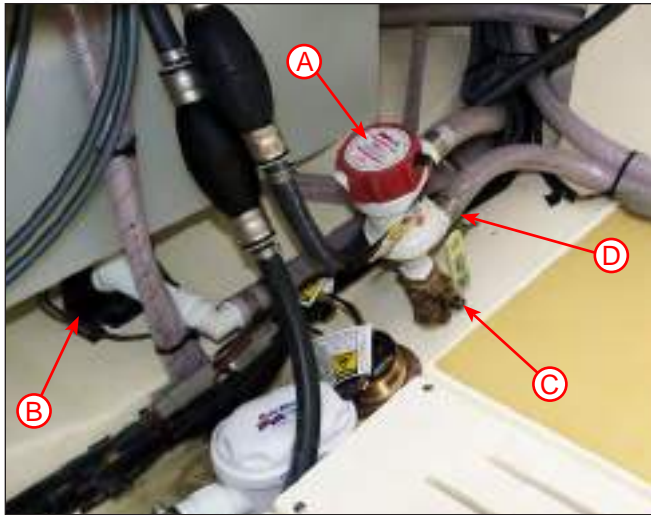


Raw Water Quick Release Cover

	CAUTION	
DO NOT ALLOW THE WATER PUMP TO RUN DRY. THE PUMP WORKS ON DEMAND AND WILL NOT SHUT OFF AUTOMATICALLY IF NO WATER IS AVAILABLE. THIS CAN RESULT IN DAMAGE TO THE PUMP. ALWAYS TURN THE RAW WATER SWITCH OFF WHEN THE RAW WATER SYSTEM IS NOT IN USE.		



Cockpit Raw Water Washdown Connection



Baitwell Pumps

- | | |
|--------------------------------|----------------------|
| A. Baitwell Pump | C. Seacock Valve |
| B. Baitwell Recirculation Pump | D. Auxiliary Fitting |



Baitwell Supply Valve & Light

8.3 Baitwell

Seawater is provided to the baitwell by a 12 volt seawater pump in the aft systems compartment. The pump is designed to carry a constant flow of water to the baitwell. The pump does not have a pressure sensor and is activated by the Baitwell 1 switch in the helm switch panel. There is also a light in the baitwell that is activated by the Baitwell LTS switch.

An overflow built into the baitwell automatically controls the water level. Always turn the pump off when the baitwell is not in use.

To fill the baitwell, insert the plug into the drain fitting at the bottom of the well. Make sure the seacock for the seawater pump and the supply valve in the baitwell are open. Then activate the baitwell pump. When the water level reaches the overflow, it will begin to circulate.

The baitwell is equipped with a recirculation/aerator system that includes a separate centrifugal pump located in the aft systems compartment. The recirculating system only recirculates and aerates the existing seawater, it does not deliver additional water to the baitwell. Once the water level is up to the overflow in the baitwell, the recirculating system can be activated by the moving the Baitwell 1 switch to the recirculation position. To avoid damage to pump, always make sure the recirculating system is turned off before draining the baitwell.



Baitwell Overflow & Drain Fittings

To drain the baitwell, turn off the pumps and remove the plug in the drain fitting at the bottom of the well. When the well has completely drained, use the washdown hose to flush the baitwell and drain of debris.

NOTICE:

Do not use the baitwell as a dry storage area when it is not in use. Seawater could accidentally be delivered to the baitwell from the thru-hull fitting and damage equipment stored there.

8.4 Raw Water System Maintenance

The following items should be done routinely to help maintain your raw water system:

- Check hoses, particularly the seawater supply lines, for signs of deterioration. Tighten fittings or replace deteriorated hoses and components as necessary.
- Periodically remove and clean the water strainer located near the intake side of the washdown pump. To clean the strainer, make sure the raw water pump is turned off and close the valve at the thru-hull fitting. Rotate the strainer bowl counterclockwise to release it. Remove and clean the screen with fresh water. Lubricate the O-ring lightly with silicon or Teflon grease and reinstall the strainer bowl.
- To prevent corrosion, spray pumps and thru-hull valves with a protective oil periodically.
- Fishboxes and baitwells should be drained and cleaned after each use.
- Operate all seacock valves at least once a month to keep them operating properly.



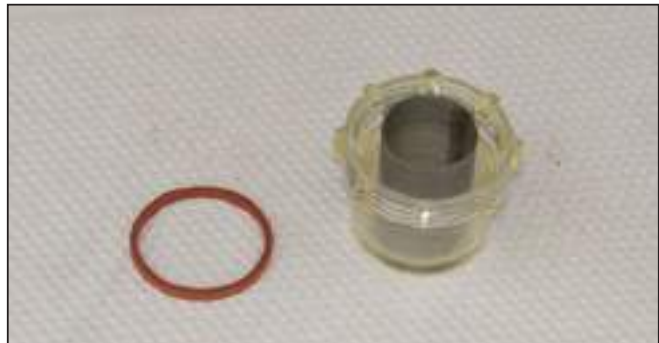
Raw Water Washdown Pump & Strainer

CAUTION

SHOULD A HOSE RUPTURE, TURN THE PUMP OFF IMMEDIATELY. ALWAYS CLOSE THE THRU-HULL VALVE WHEN PERFORMING MAINTENANCE ON A SEAWATER PUMP.

THE BATTERIES MUST BE PROPERLY CHARGED. OPERATING ANY PUMPS FROM A BATTERY WITH A LOW CHARGE MAY LEAD TO A PUMP FAILURE.

THE RAW WATER SYSTEM MUST BE PROPERLY WINTERIZED PRIOR TO WINTER LAY-UP. SEE SECTION ON WINTERIZING FOR PROPER PROCEDURES.



Typical Raw Water Pump Strainer Removed for Cleaning

CAUTION

A RUPTURED RAW WATER INTAKE OR PRESSURE LINE COULD CAUSE THE BOAT TO TAKE ON WATER AND SINK. ALWAYS TURN THE RAW WATER SYSTEMS OFF AND CLOSE THE THRU-VALVES WHEN LEAVING THE BOAT UNATTENDED.



Aft Systems Compartment Showing Hatch Drain Rails & Bilge Pump

9.1 General

All water is drained by gravity or pumped to overboard thru hull fittings located in the hull. It is important to check the drain system frequently to ensure it is free flowing and that the hoses on thru hull fittings are secure and not leaking. Please review the drainage schematic to become familiar with the location of the drain thru hull fittings.

9.2 Cockpit & Deck Drainage

Cockpit Drains

Your Scout has two scupper drains located in the rear of the cockpit that drain the cockpit through fittings in the hull sides above the waterline. A flap built into each scupper drain fitting reduces the surge of seawater through the scupper and into the cockpit while maneuvering or in rough water.

Water is channeled away from all hatches by a gutter or drain rail system. The water then drains overboard through the scupper drain system.



Starboard Cockpit Scupper Drain

Bow Storage Compartments

The storage compartment in the bow below the cockpit sole is drained by gravity to the bilge. The forward cooler/storage compartments below the bow seats drain by gravity to thru-hull fittings located in the hull sides above the waterline.

Rope Locker Drainage

The rope locker drains overboard through a drain fitting located in the hull side at the bottom of the rope locker. It is important to inspect the drain frequently to remove any accumulated debris.



Rope Locker Drain

Ski/Battery Storage Compartment

The storage compartment below the cockpit sole between the driver and passenger seats is drained by gravity to the bilge.

Cockpit Sink

The cockpit sink is drained by gravity to a thru-hull fitting in the hull side.

Baitwell Drains

The baitwell and baitwell overflow are drained by gravity to thru-hull fittings in the hull.

Cup Holder Drains

All cup holders in the helm and cockpit areas drain by gravity to the cockpit sole.



Bilge Pump W/ Built In Automatic Switch
In Aft Systems Compartment

9.3 Bilge Drainage

Bilge Pump

The aft bilge pump is located in the aft systems compartment bilge. It is activated both manually, by a switch in the helm switch panel and automatically, by an automatic switch built into the pump.

The automatic switch is connected to the batteries and protected by a circuit breaker in the DC breaker panel. The automatic switch remains activated when the battery switches are in the OFF position and the batteries are connected.

The manual Bilge Pump switch in the helm is supplied current when the house battery switch is activated. An LED light in the switch indicates when the bilge pump is operating. The manual circuit is protected by a circuit breaker in the DC breaker panel. The bilge pump pumps water to a thru-hull fitting located above the waterline in the hull side.



Automatic Bilge Pump Test Button
Hold For 5 Seconds Or Until Pump Activates

The manual bilge pump switch should be activated briefly each time the boat is used. This will ensure the pump is operating properly and increase the service life of the pump. The automatic switch should be manually activated periodically to verify



operation by pressing the "Pump Check" button on the pump. You can also flood the bilge with a garden hose to verify operation. This is particularly important before operating your boat offshore. Refer to the Electrical Systems chapter and the bilge pump operating manual for additional information on bilge pump operation.

Garboard Drain Plug

When the boat is out of the water the bilge can be drained by a garboard drain plug located in the transom near the bottom of the hull. The plug is designed to stay with the fitting and should be opened whenever the boat is hauled out of the water and installed just prior to launching. It is important to check the drain plug regularly to make sure it is tight.

Notice:

Any oil spilled in the bilge must be thoroughly removed and properly disposed of before operating the bilge pump. The discharge of oil from the bilge is illegal and subject to a fine.

	CAUTION	
<p>THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE NAVIGABLE WATERS OF THE UNITED STATES OR THE WATERS OF THE CONTIGUOUS ZONE IF SUCH DISCHARGE CAUSES A FILM OR SHEEN UPON, OR A DISCOLORATION OF THE SURFACE OF THE WATER, OR CAUSES A SLUDGE OR EMULSION BENEATH THE SURFACE OF THE WATER. VIOLATORS ARE SUBJECT TO A PENALTY OF \$10,000.</p>		

9.4 Head Compartment Drains

The head sink drains by gravity to a thru-hull fitting in the hull side. The compartment sole drains to the bilge through a drain fitting at the rear of the compartment.



Garboard Drain



Head Compartment Sole Drain

9.5 Optional Hardtop Drains

There is a hole drilled in the center of some leg bases to prevent water from being trapped within the leg and provide a wire chase for accessories. A small hole is drilled in the tubing at the base of the other legs, which are not drilled for a wire chase, which allows water to drain.

Notice:



Always make sure the leg drain holes are clear when the boat is laid up for the winter. Water trapped inside the legs could freeze and cause the legs to split.

9.6 Drainage System Maintenance

It is essential that the following items be done periodically to maintain proper drainage of your boat:

- Clean the cockpit drain rails with a hose to remove debris that can block water drainage.
- Clean the hardtop leg drain holes. This is especially important just before winter lay-up.

- Clean the bilge pump strainer of debris and check the bilge for foreign material that can cause the automatic switch to malfunction.
- Frequently test the bilge pump automatic switch.
- Flush all gravity drains with fresh water to keep them clean and free flowing.
- Clean and flush cooler/storage boxes with soap or a bilge cleaner and fresh water after each use to keep them clean and fresh.
- Operate the thru hull valves once a month to keep them free and operating properly. Service as required.

	CAUTION	
NEVER USE HARSH CHEMICAL DRAIN CLEANERS IN MARINE DRAIN SYSTEMS. PERMANENT DAMAGE TO THE HOSES AND FITTINGS MAY RESULT.		
ALL DRAINS AND PUMPS MUST BE PROPERLY WINTERIZED BEFORE WINTER LAY-UP.		

10.1 Deck



Rails and Deck Hardware

The rail system and hardware fittings have been selected and installed to perform specific functions. Hand rails are installed to provide a handhold in certain areas of the boat. You should make sure you keep at least one hand on the handholds as you move about the boat.

Your boat is equipped with cleats that are retractable and flush with the deck when not in use. To use the cleats, pull up on the center of the cleat until it locks in the mooring position. Mooring lines should be secured to the cleats and not to rails or stanchions. Be sure a clear lead exists when running dock lines or anchor lines. A line inadvertently run around a stanchion or over the rail could cause damage.

Notice:

All fittings must be inspected periodically for loose fit or wear and damage. Any problems should be corrected immediately.

	WARNING	
<p>SCOUT BOATS ARE NOT EQUIPPED WITH HARDWARE DESIGNED FOR TOWING PURPOSES. THE MOORING CLEATS ARE NOT TO BE USED FOR TOWING ANOTHER VESSEL OR HAVING THIS BOAT TOWED.</p>		

Bow Roller

The bow roller assembly is built into the hull and allows the anchor to be operated and stored at the roller. The windlass, roller assembly, anchor line and chain binder are concealed below a hatch in the bow at deck level. A gas spring holds the hatch in the open position. A twist latch secures the hatch when it is closed. Always make sure the hatch is closed with the latch in the secured position before operating the boat above idle speed.

The anchor line is stored in the rope locker and routed out the windlass, through the roller and connected to the anchor chain. The bow roller is designed for a Delta plow anchor. A chain binder is provided near the windlass to secure the anchor when it is hauled in. Always make sure the anchor



Stern Mooring Cleat Up



Stern Mooring Cleat Retracted



Anchor Roller & Delta Plow Anchor

is properly secured with the chain binder when it is in the stored position on the bow roller.

Anchor Rope Locker

The anchor rope locker is in the bow of the boat below the windlass and accessed through a hatch below the center bow cushion. The anchor line is always stored in the locker. The rope locker is

drained by a thru-hull fitting in the hull side near the bottom of the locker. It is very important to check the drain frequently to make sure it is clean and free flowing.

After the anchor is hauled in and secured with the chain binder and/or at the end of the cruise, the anchor, anchor line, windlass and all hardware should be rinsed with fresh water. Rinsing with fresh water will reduce odors in the rope locker and reduce corrosion on the hardware, anchor and windlass.

The locker is designed for the anchor line and not for storing anchors or additional anchor lines. Do not store anchors or any heavy objects in the anchor locker. Anchors and weights for floating markers will bounce and damage the hull or anchor locker if they are stored there. They will also interfere with the operation of the windlass. Always store and secure additional anchors and weights in a storage compartment in the cockpit, as far aft as possible.

Periodically remove the anchor line from the rope locker, rinse it with fresh water and allow it to dry in the sun. Cleaning the anchor line regularly will reduce odors in the anchor locker and increase the life of the line.

Periodically inspect the anchor line for abrasions or signs of deterioration. Replace the line if it shows any sign of damage or deterioration. It is important to replace the anchor line with a new line of the type recommended or supplied by the windlass manufacturer.

Windlass

The windlass is mounted to the deck below a hatch at the bow. The anchor is stored on the bow roller and is raised and lowered by the windlass. The anchor line is stored in the rope locker and routed out through the windlass to the anchor chain.

The anchor is lowered by releasing the anchor from the chain binder and operating the "DOWN" control at the helm or the foot switch at the bow. The windlass control switches are activated and protected by circuit breakers in the DC panel. Hinged covers protect the foot switches from being accidentally activated. Make sure to open the covers to expose the switches when using the windlass foot switches and close the covers when done.



Rope Locker



Windlass Compartment



- | | |
|------------------------|----------------------|
| 1. Windlass | 4. Anchor Chain |
| 2. Optional Bow Ladder | 5. Bow Roller |
| 3. Chain Binder | 6. Anchor Line Cleat |

After the anchor is set, the windlass must not be left to take the entire force from the anchor line. Boats lying to their anchor in a high swell or heavy weather conditions will snub on the line. This can cause slippage or apply excessive loads to the windlass. The line should be made fast to the anchor cleat to relieve the load on the windlass.

The anchor is hauled in by releasing the line from the cleat and operating the "UP" control at the helm or the foot switch on the deck near the windlass. Always start the engines before hauling the



anchor and motor up to the anchor as the line is retrieved to relieve the load on the windlass. Once the anchor is retrieved, independently secure the anchor to the chain binder to prevent it from being accidentally released. This is especially important while the boat is underway.

The windlass manufacturer provides an owner's manual with its product. It is extremely important that you read the manual and become familiar with the proper care and operation of the windlass. Refer to the Operation chapter for tips on anchoring your boat.

	WARNING	
<p>A WINDLASS MUST BE USED WITH CARE. IT IS EXTREMELY IMPORTANT THAT YOU READ THE WINDLASS OWNER'S MANUAL AND BECOME FAMILIAR WITH THE SAFETY INSTRUCTIONS AND PROPER OPERATION OF THE WINDLASS BEFORE USING IT WITH YOUR BOAT. ALWAYS ENSURE THAT LIMBS, FINGERS, HAIR AND CLOTHING ARE KEPT CLEAR OF THE WINDLASS AND ANCHOR LINE DURING OPERATION.</p>		



Bow Ladder Retracted In Windlass Recess

	WARNING	
<p>A PARTIALLY LOWERED AND LOOSE ANCHOR CAN CAUSE CONSIDERABLE DAMAGE TO THE HULL. DO NOT USE A WINDLASS AS A SOLE MEANS OF SECURING AN ANCHOR IN THE BOW PULPIT. ALWAYS SECURE THE ANCHOR WITH THE CHAIN BINDER BEFORE OPERATING YOUR BOAT.</p>		



Bow Ladder Extended

Bow Ladder (Optional)

A telescoping boarding ladder could be installed in the windlass recess below the bow hatch. To use the ladder, make sure the engines are off and the boat is securely moored or anchored with the lines at the bow clear of the hatch and ladder.

Open the bow hatch and rotate the ladder out of the rope locker. Make sure the bracket rotates with the ladder to the deployed position in the bow recesses, extending the ladder forward of the rubrail. Release the strap securing the ladder steps and stow it in a safe place. Then pull the bottom step to extend the ladder. Close and securely latch the bow hatch before using the ladder.

The ladder must be retracted and folded into the windlass recess with the hatch closed and latched before starting the engine. Make sure the steps are secured in the retracted position with the strap.



Windshield

Windshield

Your boat is equipped with heavy duty aluminum windshield with tinted glass. The center windshield panel opens to provide ventilation and access to the bow seating area.

The panel is opened by releasing the latches on the inside of the windshield. An automatic latch on the deck secures the panel in the open position. To close the windshield panel, pull the spring loaded release button on the latch, then close the panel and secure it with the latches. Make sure the center section is properly secured in the open or closed position before cruising.



Windshield Center Panel Open

	CAUTION	
<p>USE CAUTION WHEN OPENING WINDSHIELD WALKTHROUGH SECTION. ALWAYS MAKE SURE THE LATCH THAT SECURES THE PANEL WHEN IT IS OPEN IS RELEASED SO IT WILL AUTOMATICALLY SECURE THE PANEL. IF THE LATCH IS NOT RELEASED, THE PAUL ON THE PANEL WILL REST ON TOP OF THE LATCH AND IT WILL NOT BE SECURED.</p>		
<p>TO AVOID INJURY, THE CENTER WINDSHIELD PANEL MUST BE SECURED IN THE OPEN OR CLOSED POSITION WHEN THE VESSEL IS IN MOTION. MAKE SURE TO USE BOTH LATCHES WHEN SECURING THE WINDSHIELD PANEL WHEN IT IS CLOSED.</p>		



Windshield Center Panel Latch

If the boat is operated in saltwater, the windshield should be washed after each use with soap and water to keep it clean. Saltwater allowed to remain on the windshield frame will eventually begin to attack the aluminum and cause corrosion, usually around fasteners and hardware mounted to the windshield. Snaps or any hardware mounted to the windshield must be properly sealed and isolated with caulk or Teflon sealer to prevent salty moisture and galvanic corrosion from damaging the frame. Poor maintenance or improperly mounted hardware and snaps can void the warranty on the windshield.

Refer to the Routine Maintenance chapter for more information on the care and maintenance of anodized aluminum.



Stern Ladder Retracted & Folded In Recess

10.2 Hull

Engine Mounting System and Swim Platform

Your Scout is equipped with an engine mounting system and swim platform that is integrated into the hull and stringer system and designed to equally distribute the stresses of engine weight and thrust throughout the entire hull.



The engine hoses and cables or transom gel coat can be damaged by tilting the engines to the full up position with the engines turned to the wrong position. You should monitor the engines as they tilt to determine the best full tilt engine position for your boat.

Stern Boarding Ladder

A telescoping boarding ladder is recessed into the swim platform. To use the ladder, make sure the engines are shutdown and the steering wheel is turned straight ahead or slightly to port to move the propellers as far away from the ladder location as possible. Rotate the ladder out of the recess to the down position. Then release the strap securing the steps and pull the bottom step to extend the ladder. The ladder must be retracted and folded into the recess before starting the engines and operating the boat.



Stern Ladder Extended

	WARNING	
<p>MOVING PROPELLERS ARE DANGEROUS. THEY CAN CAUSE DEATH, LOSS OF LIMBS, OR OTHER SEVERE INJURY. DO NOT USE THE SWIM PLATFORM OR BOARDING LADDER WHILE AN ENGINE IS RUNNING. STOP THE ENGINES IF DIVERS OR SWIMMERS ARE ATTEMPTING TO BOARD. ALWAYS REMOVE AND PROPERLY STORE THE LADDER BEFORE STARTING THE ENGINES.</p>		

Unassisted Boarding Situations

When using the swim platform ladder in an unassisted boarding situation in deep water, hold the swim platform and brace your feet against the hull for stability. Then rotate the ladder out of the recess to the down position with your free hand. Hold the side rail of the ladder for stability, then release the strap securing the ladder in the retracted position. Use your free hand and feet to pull the ladder out to the extended position. Use the ladder side rails and transom grab rail for stability while boarding. Remember to retract the ladder and fold it into the recess before starting the engines.

Underwater Lights (Optional)

Your boat may be equipped with optional underwater lights mounted in the transom. They are activated by a switch in the helm switch panel and should only be used when the boat is in the water and the lights are submerged.

Trim Tabs

The trim tabs are located on the transom below the swim platform. The trim tabs are an important part of the control systems. Refer to the Helm Control Systems chapter for detailed information on the operation of the trim tabs.



Stern Ladder Folded In Recess & Transom Grab Rail

10.3 Cockpit Features

General

The hatches in the cockpit sole are secured with twist latches and flush mounted handles that store flush in the hatch. Other hatches and doors are secured with automatic "push to close" latches. Gas charged springs are used to help raise most hatches and hold them in the open position.

Large hatches in the cockpit sole and deck are secured with flush mounted, twist lock latches with handles that store flush to the hatch only when they are in the latched position. Always make sure that all hatches are closed with the latches in the secured position before operating the boat above idle speed.



Anchor Locker Hatch Twist Lock Latch Handle can be stored flush to hatch only when latched

	WARNING	
<p>IN CERTAIN CONDITIONS, OPEN EXTERIOR DOORS AND HATCHES THAT ARE NOT SECURED PROPERLY CAN SLAM CLOSED UNEXPECTEDLY AND CAUSE INJURY TO PASSENGERS OR DAMAGE TO THE BOAT. SOME DOORS AND HATCHES ARE EQUIPPED WITH SPECIAL FASTENERS, HATCH LIFTERS OR SNAPS AND/OR STRAPS TO SECURE THEM IN THE OPEN POSITION. ALWAYS MAKE SURE THAT THESE HATCHES AND DOORS ARE PROPERLY SECURED WHENEVER THEY ARE IN THE OPEN POSITION.</p>		

Transom Door

A access door is incorporated into the transom. It is secured by a sliding bolt latch mounted on the inboard side of the door. The latch is secured in the closed and latched position by rotating the dead bolt handle into the slot in the latch base. When the transom door is closed, make sure the latch dead bolt is completely engaged and rotated into the slot prevent the latch from opening accidentally.

The transom door should only be opened when the boat is not underway. The door must be latched in the full closed position whenever the boat is underway. Never leave the transom door unlatched.



Transom Door & Dead Bolt Latch

Notice:

Periodically inspect the transom door fittings for wear, damage or loose fit. Any problems should be inspected and corrected immediately.

	WARNING	
<p>THE TRANSDOR DOOR SHOULD BE CLOSED AND PROPERLY LATCHED WHENEVER THE ENGINES ARE RUNNING. NEVER OPEN THE TRANSDOR DOOR WHILE UNDERWAY OR IN ROUGH SEA CONDITIONS. IN CERTAIN SITUATIONS, AN OPEN TRANSDOR DOOR COULD ALLOW A SUBSTANTIAL AMOUNT OF WATER TO ENTER THE COCKPIT CREATING A POTENTIALLY DANGEROUS CONDITION.</p>		



WARNING



OPERATING THE BOAT UNDER POWER WITH THE TRANSOM DOOR OPEN MAY ALLOW PERSONS TO FALL OVERBOARD AND INTO BOAT PROPELLERS OR TO BE LOST IN OPEN WATER. ALWAYS CHECK TO MAKE SURE THE TRANSOM DOOR IS PROPERLY CLOSED AND LATCHED BEFORE STARTING THE ENGINES AND NEVER OPERATE THE BOAT UNDER POWER WITH THE TRANSOM DOOR OPEN.

Ski Tow Pylon (Optional)

A removable ski tow pylon that mounts just forward of the splashwell is optional equipment. To install the pylon, open the stern seat and remove the access panel to provide access to the pylon base plate receiver.

Slide the pylon through the flush deck plate in the aft deck just forward of the splashwell and into the base plate receiver. Align the hole in the pylon with the hole in the base receiver and insert the pin to secure the pylon.

Using The Ski Tow Pylon

The tow pylon is designed for pulling one or two averaged sized skiers or wakeboarders. Always use high quality tow ropes with attachment loops when pulling wakeboarders or skiers. The tow rope should always be attached to the pylon using the attachment loops and never tied to the pylon or to any type of metal hook. Tied ski ropes are very difficult to remove and metal hooks will damage the ski tow. Additionally, metal hooks can cause injury to your skiers or damage the engine cowlings if the metal hook breaks under the strain of the tow.

When attaching a tow rope using the attachment loops, hold the attachment loop in one hand and pull a length of rope on the handle side of the loop through the loop, creating another 6" loop. Slide the loop just created over the pylon tow fitting and pull the handle side of the rope to tighten the loop around the fitting. This procedure will attach the rope securely to the ski tow, be easy to remove and will not come off if the skier or wakeboarder falls.

Refer to Water Skiing in the Operation chapter for safety information on operating the boat with a skier.



Ski Tow Pylon



Cockpit Rod Racks & Stretch Cords

Rod Racks

There is a recessed rod storage rack located below the gunnel on the starboard side of the cockpit. It is equipped with stretch cords to secure the rods to the rack. Always make sure the rods are properly secured in the storage rack with the rod tips forward.



Stern Bench Seat Folded



Stern Bench In Seat Position

Aft Bench Seats

Your boat is equipped with a forward facing stern bench seat and a port side bench seat that faces starboard in the rear of the cockpit. The seats are designed to fold flush against the cockpit when they are not in use.

To use the seats, pull the handle near the top of the seat base to rotate the base out of the recess toward the cockpit. The side supports move out with the seat as it folds out. When the seat is half way out, lift the rear of the seat with one hand while pushing the front of the seat down with the other hand until it rotates to the full down position.

To store the seat, lift the front of the seat with one hand while pushing the rear of the seat down with the other hand until the seat rotates to the half closed position. Push the top of the seat firmly into the recess. The seat will automatically be secured in the stored position when it is completely folded into the recess.



Port Side Bench Seat Folded



Port Side Bench Seat In Seat Position



Aft Facing Lounge Seat & Control Switch



Aft Facing Lounge Seat Reclined

Aft Facing Lounge Seat

There is an aft facing seat on the port side of the cockpit. It is equipped with a storage below the removable seat cushion. An electric actuator converts the aft facing seat to a reclined lounge seat.

A momentary rocker switch on the seat base controls the electric actuator that reclines the seat. Press and hold the rear of the switch to extend the seat base to the reclined position. Press and hold the front of the switch retract the seat. Release the switch to stop the seat in the current position. A limit switch in the actuator will automatically stop the seat when it reaches the maximum extended or retracted position.

In the reclined position, this seat works with the port and stern bench seats to cover the seats to an L-lounge seat configuration.



Reclining Seat Control Switch



Cockpit Seats In L-Lounge Seat Configuration



Aft Systems Compartment & Hatch



Aft Electrical Systems Compartment Behind Stern Bench Seat

Aft systems compartment Access Hatch

A hatch in the rear of the cockpit provides access to the fuel filters, pumps, strainers and other equipment in the stern bilge. The stern bilge pump, baitwell pumps, fresh water pump and raw water pump are among the equipment in this compartment. The hatch is held open by a gas hatch lifter and secured closed with a rotating latch. Always make sure the hatch is closed with the latch in the secured position before operating the boat above idle speed.

Aft Electrical Systems Compartment

Engine control modules and circuit breakers or fuses for power steering, engine charging systems and other engine related systems are located in the electrical systems compartment behind the aft bench seat. Access to the compartment is provided by a large removable hatch located behind the seat.

To access the electrical systems compartment, open the bench seat approximately half way to expose the hatch. Release the hatch latches and remove it. Adjust the angle of the seat as required to provide optimum access to the compartment. If better access to the compartment or component replacement is necessary, the stern seat base will need to be removed.



Stern Tackle Drawers

Stern Cockpit Tackle drawers

Two removable tackle drawers are located in a compartment below the transom door. The drawers are accessed by opening the compartment door. The door is secured in the closed position with a push to close latch.



Cockpit Console With Sink & Cooler



Slide Out Cooler

Cockpit Console Sink and Cooler

The console behind the helm seat is equipped with a sink, counter top/cutting board, a pullout basket and storage drawer. There is also a slide out cooler below the sink. A grab rail provides a handhold when moving about the cockpit.

The sink is plumbed to the fresh water system and drained by gravity to a thru-hull fitting in the hull side above the waterline. To use the sink, remove the lid and rotate the faucet to the operating position. Make sure the Fresh Water switch in the helm switch panel is on. The faucet works like faucets in your home when the water system is activated. Always lower the faucet to the stored position and replace the lid when the sink is not being used.

The basket access door and storage drawer are secured in the closed position with push to close latches. To open, pull the latch handle to release the latch. To close, push the door or drawer until the latch catches. Periodically clean and lubricate the latch to protect it from corrosion and help keep it operating properly.

Slide Out Cooler

A carry on, slide-out cooler is located in a compartment below the sink and storage drawer. The cooler is mounted on a slide track in the compartment that is secured with a spring loaded latch. The cooler can be slid out of the compartment for easy access or removal.



Cooler Slide Lock

To slide the cooler out of the compartment, pull up on the latch lanyard to release it and slide the cooler out. To store cooler, push the cooler into the compartment with enough force to engage the latch. Periodically clean and lubricate the latch to protect it from corrosion and help keep it operating properly.

Always make sure the cooler is slid into the compartment and securely latched before operating the boat above idle speed.



Optional Electric Grill & Control Panel



Electric Grill With Hood Open

Electric Grill (Optional)

When installed, the stainless steel grill is located in the cockpit console next to the sink. The grill is recessed into the counter top and operates on 120 volt AC power provided by an inverter connected to the house batteries.

To use the grill, make sure the Grill AC circuit breaker is activated, then open the hood and use the touch control to activate the burner and control the temperature. After cooking, be sure the burner is turned off and allowed to cool before closing the hood. Never close the hatch while the grill is hot. Deactivate the Electric Grill circuit whenever the grill is not being used to ensure it is not activated accidentally.

Refer to the grill operating manual for additional information on the proper operation and maintenance of the grill.

Notice:

The inverter draws significant amperage from the house batteries when the grill is operating. Always monitor house battery voltage when using the grill for extended periods when the battery charger is not plugged into shore power.

Helm and Passenger Seats

The helm and passenger seats are equipped with a flip up bolster to provide more room between the seat and the helm or dash area. The bolster converts the seat to a leaning post style seat with a backrest, allowing the operator and passenger to sit or stand. To convert each seat to a leaning post, lift the front of the seat cushion to raise the bolster and push it back above the seat cushion.



Helm Seat Bolster & Armrest Up



Helm Seat Bolster & Armrest Down

Helm

The steering, engine controls, engine instruments and switches for exterior equipment and navigation lights are located on the helm station. The helm station is designed to provide good visibility and a functional control station.

The steering wheel is located on the rear of the helm console. The binnacle style engine shift and throttle controls are on the starboard side next to the steering wheel. The helm switch panel and ignition switches are forward of the engine controls.

Circuit breakers for helm activated accessories are located in the DC breaker/battery switch panel in the storage compartment forward of the helm.



Helm

Helm Storage Compartment

There are two matched acrylic doors secured with flush, push to close latches that provide access to the large storage compartment forward of the helm. The outside door is used to close off the walk-through area below the opening windshield panel when desired and is designed to "nest" to the storage compartment door when it is open. To secure the door in either position, push the door until the latch catches. Both doors are opened simultaneously to access the storage compartment when the walk-through door is nested to the storage compartment door. Periodically clean and lubricate the latches to protect them from corrosion and help keep them operating properly.

A 12 volt light activated by the Interior Lts switch at the helm or on the DC panel illuminates the compartment. The battery switch panel, 12 volt accessory circuit breaker panel, battery charger and optional stereo amplifier are among the equipment mounted in this compartment.

The doors could be damaged or hurt a passenger by the motion of the boat if they are allowed to swing free. Always make sure the doors are latched in rough water or whenever the boat is underway.

Head Compartment Door

An molded fiberglass door provides access to the head compartment forward of the passenger seat. It is secured with a flush mounted, twist lock compression latch.

The door could be damaged or hurt a passenger by the motion of the boat if it is allowed to swing free.



Helm Storage Compartment & Walk-Through Doors





Bow Walk-Through Door & Windshield Panel Closed

It should be in the closed position and latched when not being used, particularly in rough water and whenever the boat is underway. Periodically clean and lubricate the latch to protect it from corrosion and help keep it operating properly.

The head compartment is designed to accommodate a portable marine toilet or an optional porcelain marine toilet with a holding tank. It is equipped with a light that is activated by the Interior Lts switch at the helm or DC panel and an ON/OFF switch on the light fixture in the head compartment.

Refer to the Interior Equipment chapter for additional information on the head compartment equipment and operation.


WARNING


NEVER LEAVE THE HEAD DOOR UNLATCHED. THE HEAD DOOR IS HEAVY AND SWINGS EASILY. IF THE DOOR IS LEFT UNLATCHED, IT COULD SWING UNEXPECTEDLY AS THE BOAT ROCKS, DAMAGING THE DOOR OR CAUSING INJURY TO PASSENGERS. TO AVOID INJURY TO PASSENGERS OR DAMAGE TO THE BOAT, ALWAYS CLOSE AND SECURE THE DOOR WHENEVER THE HEAD COMPARTMENT IS NOT BEING USED, THE BOAT IS IN MOTION OR IN ROUGH WATER CONDITIONS.



Head Compartment Door



Ski/Battery Compartment Hatch

Ski/Battery Storage Compartment

There is a large storage compartment located below the cockpit sole between the helm and passenger seats. The compartment is designed for the storage of large items such as skis and wakeboards. The batteries and fresh water system valves are located in the rear of this compartment. If your boat is equipped with the optional porcelain marine head with an overboard waste discharge system, the supply valve, discharge valve and the waste pump will be mounted in this compartment.

A gas spring holds the hatch in the open position and a flush twist latch holds it closed. A drain rail around the hatch channels water away from the compartment. Always make sure the hatch is closed with the latch in the secured position before operating the boat above idle speed.

A slotted grate in the center of the compartment sole provides drainage for the storage area and can be removed to access the forward bilge if necessary. Typically this panel will only need to



Freshwater System Valves & Optional Marine Toilet Valves In Ski/Battery Storage Compartment



Bow Seats



Bow Seats In Sun Lounge Configuration

be removed to clean the bilge or to service hoses or other components that can be accessed by removing this grate.

Bow Seats and Storage Compartments

The bow seat area is accessed by releasing the two latches on the center windshield panel and opening it. A spring loaded latch on the deck automatically secures the windshield section in the open position. Use caution when opening the windshield walkthrough. The latch must be set in the open to receive the pawl on the windshield panel and secure it. To close the windshield panel, pull the spring loaded release button on the latch, then close the panel and secure it with the latches.



Bow Seat Friction Latches

Always make sure the center windshield panel is secured in the open or closed position and that passengers in the bow seating area are properly seated before operating the boat above idle speed. The passengers also should not be restricting the forward visibility of the operator.

There are seats and built in drink holders that drain to the bilge forward of the windshield. Forward facing backrests with folding armrests on each side create lounge seats.

The bow seat cushions are secured with special friction latches. These latches are equipped with a notched male fitting that seats in a female receiver. The latches require a firm upward pull to release and a firm downward push to latch. The bow seat cushions should be removed and stored when the boat is not being used.



Rope Locker Hatch Below Center Bow Seat

Filler cushions convert the bow seating area to a sun lounge. The filler cushions rest on molded fiberglass supports built into the seat bases.

There are two storage/cooler compartments located below the port and starboard bow seats. The rope locker is located below the center bow seat. Opening hatches below the cushions provide access to the compartments.

The port and starboard compartments can be used for dunnage, coolers or fishboxes. They drain overboard by gravity through fittings in the hull sides. Drain plugs can be inserted in each drain fitting to control drainage or isolate the compartments from the seawater. If the compartments are used as fishboxes or coolers, they should be cleaned and flushed thoroughly with fresh water after each use.

Forward Below Deck Storage Compartment

A storage compartment that provides additional storage for dunnage is located below the cockpit sole between the bow seats. A flush, twist lock latch secures the hatch when it is closed. This compartment is drained by gravity to the bilge.

Always make sure the hatch is closed with the latch in the secured position and the handle folded flush to the deck before operating the boat above idle speed.



Storage Compartment Below Starboard Bow Seat



Forward Below Deck Storage Compartment Hatch



Typical Bimini Top

10.4 Bimini Top & Enclosure

A bimini top and enclosure is optional on the 255 Dorado. The top is designed with a relatively flat profile and a snug fit. The canvas is fit to the boat at the factory and the bimini top must be installed properly in order for the clear connector and side curtains to fit.

To install the bimini top, attach the main leg ball ends to the deck hinge sockets. Secure them with the quick release pins and leave the rear stanchions loose. Next, open the bimini and attach the front straps to the metal eye straps on the top of the windshield frame. Attach the rear stanchion ball ends, one at a time, to the rear deck hinge sockets located aft of the windshield. Use your body weight on the rear corner of the bimini to pull down and stretch the fabric until the stanchion ball end aligns with the socket in the deck hinge. Insert the stanchion ball end in the socket and secure it with the quick release pin. Repeat for the other side. If the top is still adjusted to factory specifications, the top will be level and the canvas tight.



Typical Deck Hinge Socket & Quick Release Pin

NOTICE:

The front straps of the bimini must be secured to the windshield before the rear stanchions are secured to the deck. If the rear stanchions are secured first, it will be very difficult to secure the front straps without loosening them. If the front straps are loosened, the bimini top will be too loose and the clear connector and side curtains will not fit properly and appear to be too short.

Side Curtains and Clear Connector

To install the curtains, close the center windshield section and attach the clear connector to the zipper at the front of the top and snap it to the top of the windshield frame beginning with the center snaps. If the bimini top is adjusted properly, the clear connector will have to be stretched just enough to pull out the wrinkles and reach the snaps on the windshield. The front straps will continue to bear the main load of the top.

Once the clear connector is completely installed, the side curtains can be put on. Attach the side curtains to the zippers on the sides of the bimini and to the front connector. Snap the curtains to the windshield and the deck beginning with the forward snaps on the windshield. If the bimini is adjusted properly, the side curtains will have to

be stretched slightly to pull out the wrinkles and reach the snaps. The main load for the top should remain on the front straps and the rear stanchions. If you have the optional drop curtain, attach it to the zipper on the back of the top and to the rear of the side curtains. Snap the drop curtain to the deck and cockpit.

There is a panel in the clear connector that can be rolled up and secured by straps near the top of the bimini. This roll up panel allows the walk-through feature of the cockpit and windshield to be used when the bimini and clear connector are installed.

The side curtains and clear connector should be stored either rolled or flat, without folds or creases. Folding the curtains will make permanent creases that could cause the vinyl to crack.

NOTICE:

Cold weather can make the clear vinyl material on the curtains stiff and difficult to stretch to the snaps. This can particularly difficult with new canvas that has been stored off the boat. Laying the curtains in the sun for 30 minutes during the heat of the day will make installing them much easier in cold weather.



Typical Hardtop

10.5 Hardtop

The optional hard top consists of a laminated fiberglass top mounted to a welded powder coated aluminum frame that is bolted to the deck. The top is designed to accommodate radio antennas, radar antennas and navigation lights. It is equipped with a mast head light, spreader lights, stereo speakers, courtesy lights and rod holders. The courtesy and spreader lights are activated by switches in the helm switch panel and hardtop.

The warranty for the hard top will be void if the structure is modified in any way or if heavy accessories (over 50 lbs) like life rafts are mounted to the top. Additionally, if items like radar antennas, spotlights and other accessories are mounted in the wrong location or the hard top frame is used for towing, the warranty could be void. If you intend to add equipment or make modifications to the hardtop, you should contact an authorized Scout dealership to make sure the equipment you would like to add or the intended modification will not void the warranty on the top.

Because the aluminum frames vary slightly, the side curtains, front clear connector and drop curtain are custom made to each boat at the factory. To install the curtains, slide the front clear connector into the slide track at the front of the top and

snap it to the top of the windshield frame beginning with the center snaps. The clear connector will have to be stretched just enough to pull out the wrinkles to reach the snaps on the windshield.

Once the clear connector is completely installed, the side curtains can be put on. Slide the side curtains into the slide tracks on the sides of the top, then attach to the zippers on each side of the front connector. Snap the curtains to the windshield, hardtop frame and the deck beginning with the forward snaps on the windshield. The side curtains will have to be stretched slightly to pull out the wrinkles and reach the snaps.

If you have an optional drop curtain, slide it into the slide track on the back of the hard top and attach it to the rear of the side curtains. Snap the drop curtain to the deck and cockpit.

NOTICE:

Cold weather can make the clear vinyl material on the curtains stiff and difficult to stretch to the snaps. This can particularly difficult with new canvas that has been stored off the boat. Laying the curtains in the sun for 30 minutes during the heat of the day will make installing them much easier in cold weather.

10.6 Cockpit & Bow Covers

Cockpit and bow covers are optional on most bow rider models. Bow covers fasten to snaps in the deck and are secured to the cockpit cover at the windshield base with Velcro. A support pole in the middle of the cover provides support to prevent puddling.

Cockpit covers fasten over the windshield to snaps on the deck and to hook and loop fasteners at the rear of the cockpit. A support pole in the middle of the cover provides support to prevent puddling.

Bow Cover Installation

To install the canvas, start with the bow cover and work toward the back of the boat. Snap the bow cover to the deck beginning with the snaps at the bow and work toward the windshield. When all the bow cover snaps are fastened, install the support pole and make sure it is adjusted to make the canvas snug and raise the center enough for proper water drainage.

Cockpit Cover Installation

Close and latch the opening windshield panel. Find the front of the cockpit cover and place it over the windshield. Snap the cover to the snaps on each side of the forward windshield base. Secure the Velcro flap on the cockpit cover to the flap on the bow cover.

Insert the support pole in the center of the cockpit cover and make sure it is adjusted slightly higher than the windshield. Continue fastening the snaps on the port and starboard sides of the cover as you work your way to the rear of the boat. When you get near the stern seat, double check the support pole. Make sure it is vertical and adjusted to snug the canvas and provide proper water drainage. Adjust the pole if necessary.

Step onto the swim platform and fasten the rear of the cover to the deck.

10.7 Aftermarket Hardtop or Arch

Scout does not recommend installing an aftermarket hardtop or arch. An improperly designed or installed fabrication can cause structural damage to the deck and void the Scout Limited Warranty. Additionally, Scout will not be responsible for any damage resulting from the installation of a fabrication not installed at the Scout factory. If you intend to install an aftermarket hardtop or arch on your boat, please contact your authorized Scout dealer.

Refer to the Routine Maintenance section for more information on maintaining aluminum fabrications and precautions for adding additional equipment and fasteners.

NOTES

Interior Equipment

12.1 Head Compartment

The head compartment is equipped with a sink plumbed to the fresh water system, a light and a portable head or optional manual marine toilet. The light is activated by the Interior Lts switch on the helm switch panel, DC breaker panel and a switch on the light fixture in the head compartment. The compartment drains by gravity to the bilge.

12.2 Portable Marine Head System

The portable head is standard equipment. The system is made up of two major components, an upper tank and a lower tank. The upper tank contains the fresh water supply, a bellows pump, a seat and the lid. The bottom tank contains the flush valve, a waste holding tank, a chemical storage compartment and the drain nozzle. The components are secured together by a clamping mechanism when the portable head is ready for use.

In some areas the law requires that portable heads be equipped with an optional permanent deck mounted pump out system to evacuate the waste with a dock side pump. Boats with a portable head pump out will be equipped with a deck fitting marked "WASTE" located on the deck. Since this system is required to be permanent, the bottom waste tank cannot be removed and the only way to evacuate the system is by a dock side pump. The waste pump out system is an option on all models.

To use the portable head, add the recommended amount of holding tank deodorant to the waste tank and fill the fresh water tank. To flush after use, pull the waste valve handle straight out, then press the flushing bellows one or more times to rinse. To close and seal the waste holding tank, simply push the valve handle all the way in. Monitor the level in the waste tank and empty as necessary.



Head Compartment



Typical Portable Marine Toilet

Portable Toilet Maintenance

To keep your portable head operating properly it must be emptied and properly cleaned periodically. Refer to the manufacturer owner's manual for detailed instructions on the proper operation of your portable head.

NOTICE:

In some areas the law requires a waste pump out system on portable heads. If your boat is equipped with the waste pump out, make sure you know the laws for the areas in which you boat before modifying or removing the pump out system.

The portable head must be properly winterized before winter lay-up or for cold weather use. Refer to the manufacturer owner's manual for winterizing and cold weather instructions



Manual Marine Toilet

12.3 Manual Marine Head System

A manual marine toilet is available as optional equipment. Flush water is supplied by a thru-hull fitting located in the ski/battery compartment and a raw water supply line.

Before using, make sure the valve at the thru-hull fitting is on. Then open the inlet valve on the head and pump to wet the inside of the bowl. After use, close the inlet valve and pump to discharge the waste to the holding tank. Once the waste is discharged, the toilet should be pumped dry.

The waste is pumped directly into the holding tank where it remains until it is pumped out by a waste dumping station.

NOTICE:

In many areas it is illegal to flush head waste directly overboard. Violation of these pollution laws can result in fines or imprisonment. Always know the law for the areas in which you boat. Never dump head or holding tank waste overboard illegally.



Marine Toilet Intake Valve, Overboard Discharge Valve & Waste Tank Pump

12.4 Head System Holding Tank

The holding tank is located in the bilge. When the tank is full it must either be pumped out by an approved waste dumping station through the waste deck fitting or the optional overboard discharge pump.

To pump out the holding tank with the overboard waste discharge system, open the valve at the discharge thru-hull fitting in the bilge. Activate the Waste Discharge switch in the DC circuit breaker Panel. Monitor the fluid level closely as the tank is pumped. Turn off the overboard pump when pumping is complete. Then close the ball valve at the thru-hull fitting.

NOTICE:

Monitor pumping operation as the overboard discharge pump drains the holding tank. Be prepared to turn the pump off immediately when draining is complete.

NOTICE:

In order to comply with current State, Federal and Coast Guard regulations, the valve at the discharge thru-hull fitting must be turned off and secured whenever the boat is operating in areas where the discharge of sewage is prohibited.



Waste Tank Deck Fitting



Waste Discharge Switch In DC Breaker Panel

CAUTION

IN MANY AREAS IT IS ILLEGAL TO PUMP HEAD WASTE DIRECTLY OVERBOARD. VIOLATION OF THESE POLLUTION LAWS CAN RESULT IN FINES OR IMPRISONMENT. ALWAYS KNOW THE LAW FOR THE AREAS IN WHICH YOU BOAT. NEVER DUMP HEAD OR HOLDING TANK WASTE OVERBOARD ILLEGALLY.

Head System Maintenance

The head should be cleaned and inspected for leaks regularly.

The holding tank should be pumped out and flushed as needed. Periodically add chemical to the holding tank to help control odor and to chemically break down the waste. See the head manufacturer owner's manual for additional operating and maintenance information.

The vent hose for the holding tank is equipped with a charcoal filter to reduce odor from the holding

tank. The filter should be changed once a year or if the holding tank has become overfilled, which will plug the filter and could cause damage to the waste system.

NOTICE:

The head system must be properly winterized before winter lay-up. Please refer to the Seasonal Maintenance chapter and the manufacturer owner's manual for winterizing instructions.

NOTES

Routine Maintenance

13.1 Exterior Hull & Deck

Hull Cleaning-Below The Water Line

When the boat is removed from the water, clean the outer bottom surface immediately. Algae, grass, dirt and other marine growth is easier to remove while the hull is still wet. Use a pressure cleaner or a hard bristle brush to clean the surface.

Bottom Painting

If the boat is to be left in saltwater for extended periods, the hull must be protected from marine growth by antifouling paint. Because of variations in water temperature, marine growth, and pollution in different regions, a qualified boat yard in your area should be consulted when deciding what bottom paint system to apply to your hull. This is extremely important as pollution and marine growth can damage fiberglass hulls.

Use only standard antifouling paints and fiberglass wax removers and primers recommended by the antifouling paint manufacturer when preparing the hull for bottom paint. Light sanding, just enough to scuff the gel coat or a skip sand primer system can be used to prepare the hull for bottom paint. The use of a coating other than standard antifouling paint or epoxy barrier coatings are not recommended and will void the hull blister warranty.

Do not allow the hull antifouling paint to contact the outboard motors. Most antifouling paints designed for hull bottoms contain copper and can cause severe galvanic corrosion damage to the motors. Always leave at least a 1/2" barrier between the hull bottom paint and outboard motors.

Most bottom paints require some maintenance. Proper maintenance is especially important when the boat is in saltwater and not used for extended periods or after dry storage. If the hull bottom has been painted with antifouling paint, contact your dealer or local boat yard for the recommended maintenance procedures.

Anodes

Sacrificial anodes are installed on the outboard motors, engine brackets and trim tabs. The anodes are less noble than copper based alloys, stainless steel and aluminum. They will deteriorate first, protect-

ing the more noble underwater hardware against galvanic corrosion.

They must be monitored if the boat is to be left in the water. Anodes should be checked monthly and changed when they are 75% of their original size. When replacing the anodes, make sure the contact surfaces are clean, shiny metal and free of paint and corrosion. Never paint over the anode.

Boats stored in saltwater will normally need to have the anodes replaced every 6 months to one year. Anodes requiring replacement more frequently may indicate a stray current problem within the boat or at the slip or marina. Anodes that do not need to be replaced after one year may not be providing the proper protection. Loose or low quality anodes could be the problem.

There are multiple anodes on outboard engines. You should refer to the outboard engine owner's manual for the location of the anodes on your engines. Only use replacement anodes recommended by the engine manufacturer.

Contact your engine dealer or Scout customer service for the proper size and type of anodes to be used and the specific installation procedure.

Fiberglass Gel coat

Normal maintenance requires only washing with mild soap and water. A stiff brush can be used on the nonskid areas. Kerosene or commercially prepared products will remove oil and tar which could be a problem on trailered boats. Harsh abrasive and chemical cleaners are not recommended because they can damage or dull the gel coat, reducing its life and making it more susceptible to stains. When the boat is used in saltwater, it should be washed thoroughly with soap and water after each use.

At least once a season, wash and wax all exposed fiberglass surfaces. Use a high quality automotive or boat wax. Follow the procedure recommended by the wax manufacturer. The washing and waxing of your boat will have the same beneficial effects as they have on an automobile finish. The wax will fill minute scratches and pores thus helping to prevent soiling and will extend the life of the gel coat or paint.



After the boat is exposed to the direct sunlight for a period of time, the gel coat or painted surfaces tend to fade, dull or chalk. A heavier buffing is required to bring the finish back to its original luster. For power cleaning use a light cleaner. To clean the boat by hand, use a heavier automotive cleaner. Before cleaning the surfaces, read the instructions given with the cleaner. After cleaning the surfaces, apply wax and polish all fiberglass surfaces except the nonskid areas.

Avoid the following on gelcoat surfaces:

- Do not use plastic or other nonporous (non-breathable) materials to cover gelcoat surfaces. Trapped moisture from condensation can cause gelcoat damage. Shrink wrap storage covers must be properly ventilated, including hull sides.
- Do not use abrasives, bleaches, ammonia, acids or harsh detergents. See your dealer for special marine formulations. Harsh abrasive and chemical cleaners are not recommended because they can damage or dull the gelcoat, reducing its life and making it more susceptible to stains.
- NEVER apply wax or buffing compound to a gelcoat surface in direct sunlight.

Chalking, stains and minor scratches can be removed in most cases with careful rubbing and polishing with appropriate compounds or chemicals and is best done by a professional - see your dealer.

If the fiberglass should become damaged and need repair, contact your dealer or Scout customer service for assistance in finding an authorized repair person to make the repairs.

 **CAUTION** 

DO NOT WAX NONSKID AREAS AS THIS COULD MAKE THEM SLIPPERY AND CONSEQUENTLY INCREASE THE POSSIBILITY OF INJURY.

Stainless Steel Hardware



When using the boat in saltwater, the hardware should be washed with soap and water after each use. When your boat is used in a corrosive environment such as saltwater, water with a high sulfur content or polluted water, the stainless steel will periodically develop surface rust stains. This is perfectly normal under these conditions.

The following guidelines will help keep stainless steel looking good for many years:

- Clean stainless steel frequently (daily in salt or polluted environments) with mild soap and plenty of water. Any cleaner safe for use on glass is usually safe for stainless.
- Remove rust spots (especially around welds) immediately with a brass, silver or chrome cleaner. Irreversible pitting will develop under rust allowed to remain on stainless for any period of time.
- Remove rust stains on gelcoat. See dealer for recommended product.
- Stainless Steel can normally be cleaned and protected by using a high quality boat or automotive wax or a commercial metal cleaner and protectant.

Never do the following on Stainless Steel:

- Do not use coarse abrasives like sandpaper or steel wool which may actually cause rusting.
- Do not use acids or bleaches which may etch the naturally occurring protective coating.
- Do not leave stainless steel in contact with iron, steel or other metals which cause contamination leading to rust or corrosion.

 **CAUTION** 



UNDER NO CIRCUMSTANCES SHOULD ANY ABRASIVE MATERIALS SUCH AS SANDPAPER, BRONZE WOOL, OR STEEL WOOL BE USED ON STAINLESS STEEL. DAMAGE TO THE HARDWARE WILL RESULT.

Anodized Aluminum Surfaces

Anodized aluminum should be washed periodically with soap and water to keep it clean. If the boat is used in saltwater or polluted water, the aluminum should be washed with soap and water after each use. Saltwater allowed to remain on anodized aluminum will penetrate the anodized coating and attack the aluminum.

Hardtops, bimini tops or T-tops with canvas and/or fiberglass tops require special attention to the anodized aluminum just below the top. This area is subject to salt build up from salty condensation and sea spray. It is also frequently overlooked when the boat is washed and will not be rinsed by the rain. Consequently, the aluminum just below

the top is more likely to become pitted than the exposed aluminum on the structure. Make sure the aluminum in this area is washed frequently with soap and water and rinsed thoroughly. Pay particular attention to places where the top material or lacing contact the frame. Once a month coat the entire frame with a metal protector made for anodized aluminum to protect against pitting and corrosion caused by the harsh effects of saltwater. Do not use automotive or boat wax designed for paint or gel coat on anodized aluminum. The wax can contaminate the aluminum and damage the anodized surface.


CAUTION


ONE DRAWBACK TO METAL PROTECTORS IS THAT THEY CAN MAKE THE METAL SLIPPERY. THEREFORE, THEY SHOULD BE NOT BE USED ON TOWER LADDERS, STEERING WHEELS AND OTHER AREAS WHERE A GOOD GRIP AND SURE FOOTING IS IMPORTANT.

Stains can be removed with a metal polish or fine polishing compound. To minimize corrosion, use only high quality stainless steel fasteners on aluminum fabrications. Isolate the fasteners from the aluminum by using fiber washers and caulking compound or Tef Gel to bed hardware and fasteners mounted to aluminum fabrications. If the anodized coating is badly scratched, it will require special attention and more frequent cleaning to the damaged area. With proper care, anodized aluminum will provide many years of service.

Powder Coated Aluminum

Powder coated aluminum should be washed periodically with soap and water to keep it clean. If the boat is used in saltwater or polluted water, the aluminum should be washed with soap and water after each use. Saltwater allowed to remain on powder coated aluminum will penetrate the coating and attack the aluminum, usually around fasteners and hardware mounted to the aluminum.

Pay special attention to the area just below the top. This area is subject to salt buildup from salty condensation and sea spray. It is also frequently overlooked when the boat is washed and will not be rinsed by the rain. Consequently, the powder coating near fasteners and hardware mounted just below the top is more likely to be attacked by the salt and become corroded than the exposed areas on the structure. Make sure the aluminum in this area is washed frequently with soap and water and rinsed thoroughly. Pay particular at-

ention to places where the top material and/or lacing contact the frame.

Once a month check the entire frame for damaged powder coating and corrosion around fasteners and hardware. Nicked or badly scratched powder coating can be sanded and touched up with enamel paint. Corrosion around fasteners will have to be sanded, then touched up with paint. The fasteners will require fiber washers and sealing with caulk or Tef Gel to isolate the fastener from the aluminum and prevent damage to the paint or powder coating when the fastener is installed. Periodically applying automotive or boat wax to the powder coating will provide additional protection from the harsh effects of saltwater.

Always repair scratches, nicks and corroded areas in powder coating as soon as possible. Corrosion left unaddressed will lift the powder coating allowing moisture to travel between the powder coating and the aluminum causing the corrosion to spread below the coating and damage the aluminum.

If excessive chipping and peeling occurs, it could be an indication of an electrical fault in the boat or aluminum fabrication. You should contact a qualified marine electrician to inspect your boat immediately and correct the problem if you suspect that your boat may have a fault in the aluminum frame. You should also contact Scout customer service.

Notice:

Boats that are towed behind larger vessels require special attention to the aluminum hardware. The salt spray, salty steam, and chemicals in exhaust gases are particularly corrosive and will damage the surface of anodized or powder coated aluminum. It is imperative that the boat and the aluminum are cleaned thoroughly at the completion of each trip or at the end of each day on long cruises to reduce accelerated deterioration of the anodizing or powder coating and premature corrosion to the aluminum.

Notice:

You should contact Scout customer service before making any modifications to aluminum fabrications. Unauthorized modifications can void the warranty.

Chrome Hardware

Use a good chrome cleaner and polish on all chrome hardware.

Acrylic Plastic Glass

Acrylic glass scratches easily. Never use a dry cloth or glass cleaning solutions on acrylic. Use a soft cloth and mild soap and water for routine cleaning. Solvents and products containing ammonia can permanently damage acrylic plastic glass.

Fine scratches can be removed with a fine automotive clear coat polishing compound. A coat of automotive or boat wax is beneficial to protect the surface. Do not use the following on acrylic glass:

Abrasive cleaners	Acetone
Solvents	Alcohol
Cleaners containing ammonia	Glass cleaners

13.2 Upholstery, Canvas & Enclosures

Vinyl Upholstery

The vinyl upholstery used on the seats, cushions, bolsters, and for the headliner in some cabins, should be cleaned periodically with mild soap and water. Any stain, spill or soiling should be cleaned up promptly to prevent the possibility of permanent staining. When cleaning, always rub gently. Avoid using products containing ammonia, powdered abrasive cleaners, steel wool, ink, strong solvents, acetone and lacquer solvents or other harsh chemicals as they can cause permanent damage or shorten the life of vinyl. Never use steam heat, heat guns or hair dryers on vinyl.

Stronger cleaners, detergents and solvents may be effective in stain removal, but can cause either immediate damage or slow deterioration. Lotions, sun tan oil, waxes and polishes, etc., contain oils and dyes that can cause stiffening and staining of vinyls.

- Dry soil, dust and dirt - Remove with a soft cloth.
- Dried on dirt - Wash with a soft cloth dampened with water.
- Variations in surface gloss - Wipe with a water dampened soft cloth and allow to air dry.

- Stubborn dirt - Wash with a soft cloth dampened with Ivory Flakes® and water. Rinse with clean water.
- Stubborn spots and stains - Spray with either Fantastik Cleaner® or Tannery Car Care Cleaner® and rub with a soft cloth. Rinse with clean water.
- Liquid spills - Wipe immediately with a clean absorbent cloth. Rinse with clean water.
- Food grease and oily stains - Spray immediately using either Fantastik Cleaner® or Tannery Car Care Cleaner®, wiping with a soft cloth. Take care not to extend the area of contamination beyond its original boundary. Rinse with clean water.

Acrylic Canvas (Sunbrella)

Modern, bright colored canvas tops are usually fabricated from acrylic fabrics with the trade names like Sunbrella®, Argonaut®, etc. Acrylic fabrics look similar to cotton canvas but are much more durable and color fast.

Acrylic canvas can be cleaned by using Ivory Flakes, Ivory Liquid or another mild soap and water. Scrub lightly and rinse thoroughly to remove the soap. Do not use detergents, as they will deteriorate the waterproofing in the fabric. The underside can be brushed with a soft brush and sprayed with a disinfectant to prevent the accumulation of dirt and mildew. The top or accessories should never be folded or stored wet.

In fresh water areas, the top and curtains should be washed weekly. This is particularly important if the boat is stored near a highway, airport or in a large city. Residue from jet fuel, exhaust fumes and industrial pollution can shorten the life of tops and enclosures.

In saltwater areas, the top and curtains should be rinsed with fresh water after each use and at least weekly if it is stored outside. Saltwater attracts moisture and dirt can shorten the life of fabric tops and enclosures. The salt is also abrasive and can cause premature wear in the fabric and stitching.

After several years, the acrylic canvas may lose some of its ability to shed water. If this occurs, wash the fabric and let it dry thoroughly. Then treat the outside surface with a commercially available waterproofing designed for this purpose.

Waterproofing is available in bulk at most canvas shops. One-gallon garden sprayers are excellent for applying waterproofing.

Notice:

Some leakage at the seams is normal and unavoidable with acrylic enclosures.

Laminated Vinyl Tops

Laminated vinyl top material is a lamination of two plies of specially formulated vinyl with an inner reinforcing core fabric. The most common trade name for this fabric is Weblon.[®] It is not unusual for the interior ply to be a different color than the exterior. There is a greater tendency for this type of fabric to leak at the seams than with acrylic or vinyl coated polyester. Paraffin wax that matches the top can be used to seal the seams if necessary.

Laminated vinyl fabrics should be cleaned periodically by using Ivory Flakes, Ivory Liquid or another mild soap and water. Scrub lightly and rinse thoroughly to remove the soap. Do not use detergents, or harsh cleaners like bleach and ammonia. They will attack the vinyl in the fabric and shorten its life. The top or accessories should never be folded or stored wet.

In fresh water areas, the top and curtains should be washed weekly. This is particularly important if the boat is stored near a highway, airport or in a large city. Residue from jet fuel, exhaust fumes and industrial pollution can shorten the life of tops and enclosures.

In saltwater areas, the top and curtains should be rinsed with fresh water after each use and at least weekly if it is stored outside. Saltwater attracts moisture and dirt can shorten the life of fabric tops and enclosures. The salt is also abrasive and can cause premature wear in the stitching.

Clear Curtains and Connectors

Side curtains and clear connectors can be cleaned with mild soap and water. They should not be allowed to become badly soiled. Dirt, oil, mildew, and cleaning agents containing ammonia, will shorten the life of the vinyl that is used for clear curtains. After cleaning the curtains and allowing them to dry, apply a non-lemon furniture polish or an acrylic glass and clear plastic protector to extend the life of the curtains.

Vinyl curtains should be stored either rolled or flat, without folds or creases. Folding the curtains

will make permanent creases that could cause the vinyl to crack.

Notice:

Do not use any polish containing lemon scents or lemon. The lemon juice will attack the vinyl and shorten its life.

Snaps should be lubricated periodically with petroleum jelly, silicone grease or a lubricant designed for snaps. Zippers should be lubricated with silicone spray, paraffin or silicone stick.

Strataglass

Strataglass[®] is a special coated vinyl that could be used in the curtains for the hardtop enclosure. The coating protects the vinyl glass and resists scratching. Waxes and Plexiglas polishing compounds should not be used on strataglass as the protective coating prevents them from penetrating into the vinyl and they will build up on the surface. These products will create a hazy, greasy appearance that will affect the clarity of the strataglass. Products that repel water, like Rainex[®], should not be used as they will not take well to the surface and could appear spotty and may also yellow or dull the Strataglass over time.

Strataglass can be cleaned by rinsing off dirt or salt deposits with fresh water, then washing with a clean cloth and mild soap. Chamois dry to remove water spots and improve clarity. If a polish is accidentally used, use Windex[®] or its equivalent to remove it. While window cleaners will destroy the standard vinyl normally used in side curtains and clear connectors, it will not harm strataglass. Always roll down the curtains and snap in place at the end of each day so the curtains will maintain their shape and to minimize fold distortions.

Depending upon usage, it is recommended that an occasional application of Aquatech Strataglass Cleaner be done. Treat this like a polish, as opposed to a cleaner - wash and dry curtains first, then apply Aquatech Strataglass Cleaner, actually buffing the surface to a beautiful sheen. This is not just a wipe on/ wipe off product...it needs to be buffed to perform.

Remember, the coating on strataglass is scratch resistant and not scratch proof. Always handle the curtains with care and never roll up curtains that are salty or dirty. If you have any questions about the clear curtains used on your boat, please contact the Scout customer service department.

Canvas enclosures must be removed when trailering. Enclosures are not designed to withstand the extreme wind pressure encountered while trailering and will be damaged. Always remove and properly store the enclosure before trailering your boat.

13.3 Interior

The cabin or head interior can be cleaned just like you would clean a home interior. To preserve woodwork, use teak oil. To maintain carpeting, use a vacuum cleaner. Because air and sunlight are very good cleansers, periodically put cushions, sleeping bags, etc. on deck, in the sun and fresh air, to dry and air out. If cushions or equipment get wet with saltwater, remove and use clean, fresh water to rinse off the salt crystals. Salt retains moisture and will cause damage. Dry thoroughly and reinstall.

Vinyl headliner material should be cleaned periodically as explained in the previous section. Avoid using products containing ammonia, bleach, or harsh chemicals as they can shorten the life of vinyl. Fiberglass headliners should be wiped down with a damp towel as necessary to remove dust and dirt.

If you leave the boat for a long period of time, put all cushions on their sides, open all interior cabin and locker doors, and hang a commercially available mildew protector in the cabin.

Notice:

Always read the label carefully on mildew protectors. Remove the protector and allow the cabin to ventilate completely before using the cabin.

Counter Tops - Corian Surfaces

A mild liquid detergent and water or ammonia-based cleaners will remove most dirt and stains from Corian. For heavy cleaning, oil, and grease, use Fantastik spray cleaner. Rinse with a clean cloth moistened with fresh water. Wipe dry with a clean cloth.

In most cases, Corian can be repaired if accidentally damaged. Minor damage, including scratches, general or chemical stains, scorches or burns, and minor impact marks, can be repaired with a light abrasive cleanser and a Scotch-Brite® pad. For heavier damage, light sanding and machine buffing may be necessary so contact your dealer or a professional.

- Avoid exposing Corian to strong chemicals, such as paint removers, oven cleaners, etc. If contact occurs, quickly flush the surface with water.
- Remove nail polish with a non acetone-based polish remover and flush with water.
- Do not cut directly on Corian counter tops.

Interior Woodwork

Oiled and varnished woodwork or laminated, simulated wood can be cleaned with a damp cloth. For heavy duty cleaning, use a mixture of water and Murphy's Oil Soap or a solution of 10% white vinegar and water to clean the wood and wipe it dry with a clean towel. Apply a furniture polish to add luster and help to preserve the finish.

13.4 Engines and Fuel

Proper engine maintenance is essential to the proper performance and reliability of your outboard engines. Maintenance schedules and procedures are outlined in your engine owner's manual. They should be followed exactly.

If the boat is used in saltwater, flush the cooling systems after each daily use. To flush the systems when the boat is out of the water, follow the procedure outlined in your engine owner's manual.

Proper engine operation requires a good supply of clean, dry fuel. Improper marina fuel storage techniques, limited boat usage, etc. can cause the fuel to become contaminated.

The age of fuel can affect engine performance. Chemical changes occur as the fuel ages that can cause deposits and reduce the octane rating of the fuel. Severely degraded fuel can damage the engines and boat fuel tank and lines. Therefore, if your boat is not being run enough to require at least one full tank of fresh fuel a month, a fuel additive should be added to protect it from degradation. Your dealer or the engine manufacturer can provide additional information on fuel degradation and fuel stabilizers recommended for your engine.

In many states, most gasoline is blended with ethanol alcohol. Ethanol is a strong solvent and can absorb water during periods of storage. You should refer to the engine operating manual for information regarding alcohol blended fuels and how it affects the operation of your marine engine.

13.5 Bilge, Pump & Components

To keep the bilge clean and fresh, it is recommended that you use a commercial bilge cleaner on a regular basis. Follow the directions carefully. All exposed pumps and metal components in the bilge should be sprayed periodically with a protector to reduce the corrosive effects of the high humidity always present in these areas.

Periodically check the bilge pumps and alarms for proper operation and clean debris from the strainers and float switches. Inspect all hoses, clamps and thru-hulls for leaks and tightness on a regular basis and operate all thru-hull valves at least once a month to keep them operating properly.

Frequently test the automatic switches for the bilge pumps and alarms for proper operation. The automatic switch should be manually activated periodically to verify operation by pressing the "Pump Check" button on the pump until the pump is activated. You can also use a garden hose to flood the bilge until the water level is high enough to activate the pump.

13.6 Drainage System

It is essential that the following items be done periodically to maintain proper drainage of your boat:

- Clean the cockpit drains with a hose to remove debris that can block water drainage.
- Clean the hardtop leg drain holes. This is especially important just before winter lay-up.
- Flush all gravity drains with fresh water to keep them clean and free flowing.
- Operate the thru-hull valves once a month and service as required.
- Run all overboard pumps briefly at least once a month to keep them operating properly.

Notice:

All drains and pumps must be properly winterized before winter lay-up.

NOTES

Seasonal Maintenance

14.1 Storage & Lay-up

Before Hauling:

- Pump out the head holding tank. Flush the holding tank using clean water, soap and a deodorizer. Pump out the cleaning solution.
- The fuel tank should be left nearly full to reduce condensation that can accumulate in the tank. Allow enough room in the tank for the fuel to expand without leaking out the vents. Moisture from condensation in the fuel tank can reach such concentrations that it becomes heavy enough to settle out of the fuel to the bottom of the tank. Since fuel pickup tubes are located near the bottom of the tank, this accumulated moisture can cause the engines to run poorly or not at all after extended storage.



Chemical changes also occur as the gasoline ages that can cause deposits and varnish in the fuel system as well as reduce the octane rating of the fuel. Severely degraded fuel can damage the engines and boat fuel tank and lines. Therefore, if your boat is not being run enough to require at least one full tank of fresh fuel a month or during winter storage, a fuel stabilizer should be added to the gasoline to help protect the fuel system from these problems. Operate the boat for at least 15 minutes after adding the stabilizer to allow the treated fuel to reach the engines. Most engine manufacturers recommend using specific fuel conditioner and stabilizer for their engines.

Your dealer or the engine manufacturer can provide additional information on fuel degradation and fuel stabilizers recommended for your engines. For more recommendations for your specific area, check with your local Scout dealer.

- Drain water from the fresh water system.
- Consult the engine owner's manual for detailed information on preparing the engines for storage.

Lifting

It is essential that care be used when lifting your boat. Make sure the spreader bar at each sling is at least as long as the distance across the widest point of the boat that the sling will surround. Refer to the sling locations drawing for the correct position of the lifting slings. The fore and aft slings should be tied together to prevent the slings from sliding on the hull.


CAUTION


BOATS CAN BE DAMAGED FROM IMPROPER LIFTING AND TRANSPORTING WITH FORK LIFTS. CARE AND CAUTION MUST BE EXERCISED WHEN TRANSPORTING A BOAT WITH A FORK LIFT. NEVER HOIST THE BOAT WITH A SUBSTANTIAL AMOUNT OF WATER IN THE BILGE.

SEVERE GEL COAT CRACKING OR MORE SERIOUS HULL DAMAGE CAN OCCUR DURING HAULING AND LAUNCHING IF PRESSURE IS CREATED ON THE GUNWALES (SHEER) BY THE SLINGS. FLAT, WIDE BELTING SLINGS AND SPREADERS LONG ENOUGH TO KEEP PRESSURE FROM THE GUNWALES ARE ESSENTIAL. DO NOT ALLOW ANYONE TO HAUL YOUR BOAT WHEN THE SPREADERS ON THE LIFT ARE NOT WIDE ENOUGH TO TAKE THE PRESSURE OFF THE GUNWALES.

Supporting The Boat For Storage

A trailer, elevating lift, well-made cradle or proper blocking is the best support for your boat during storage.

When storing the boat on a trailer for a long period:

- Make sure the trailer is large enough to properly support your boat and that it is rated to support the weight.
- Make sure the trailer is on a level surface and the bow is high enough so that water will drain from the bilge and cockpit.
- Make sure the engines are in the down position.
- The trailer must properly support the hull. The bunks and rollers should match the bottom of the hull and should not be putting pressure on the lifting strakes.

- Make sure the hitch is properly supported.
- Check the tires once each season. Add enough air for the correct amount of inflation for the tires as necessary.

Notice:

Read the owner's manual for the trailer for the correct amount of inflation for the tires.

When storing the boat on a lift or cradle:

- The cradle must be specifically for boat storage.
- Make sure the cradle or lift is well supported with the bow high enough to provide proper drainage of the bilge and cockpit.
- Make sure the engines are in the down position.
- The cradle or lift must be in the proper fore and aft position to properly support the hull. When the cradle or lift is in the correct location, the bunks should match the bottom of hull and should not be putting pressure on the lifting strakes.



CAUTION



BOATS HAVE BEEN DAMAGED BY TRAILERS, LIFTS, AND CRADLES THAT DON'T PROPERLY SUPPORT THE HULL. ALWAYS MAKE SURE THE BUNKS AND ROLLERS ARE ADJUSTED SO THEY ARE NOT PUTTING PRESSURE ON THE LIFTING STRAKES AND ARE PROVIDING ENOUGH SUPPORT FOR THE HULL. HULL DAMAGE RESULTING FROM IMPROPER CRADLE OR TRAILER SUPPORT IS NOT COVERED BY THE SCOUT WARRANTY.

When supporting the boat with blocking:

- Make sure the boat is blocked on a level surface and the bow is high enough so that water will drain from the bilge and cockpit.
- Make sure the keel is supported with large, solid wood blocks in at least three points.
- Use at least two heavy duty jacks on each side of the hull and make sure the boat is level from side to side. The jacks must be on a solid surface like packed gravel, concrete or pavement. All of the supports must be set up properly to prevent the boat from shifting while it is in storage.

Preparing The Boat For Storage:

- Remove the bilge drain plug, if installed. (Some boats do not have bilge drain plugs)
- Thoroughly wash the fiberglass exterior, especially the antifouling portion of the bottom. Remove as much marine growth as possible. Lightly wax the exterior fiberglass components.
- Remove all oxidation from the exterior hardware and apply a light film of moisture displacing lubricant, wax or a metal protector.
- Remove propellers and grease the propeller shafts using light waterproof grease.
- Remove the batteries and store in a cool place. Clean using clear, clean water. Be sure the batteries have sufficient water and clean terminals. Keep the batteries charged and safe from freezing throughout the storage period.

Notice:

Refer to the Electrical System chapter, for information on the maintenance of the AC and DC electrical systems.

- Coat all faucets and exposed electrical components in the cabin and cockpit with a protecting oil.
- Clean out, totally drain and completely dry the fishboxes, coolers, sinks and baitwells.
- Thoroughly clean the interior of the boat. Vacuum all carpets and dry clean drapes and upholstery.
- Remove cushions and open as many locker doors as possible. Leaving as many of these areas open as possible will improve the boat's ventilation during the storage period.

Notice:

It is recommended that a mildew preventer be hung in the cabin before it is closed for storage.

- Clean the exterior upholstery with a good vinyl cleaner and dry thoroughly. Spray the weather covers and boat upholstery with a spray disinfectant. Enclosed areas such as the shower basin, storage locker areas, etc. should also be sprayed with this disinfectant.

14.2 Winterizing Fresh Water System

The entire fresh water system must be completely drained. Disconnect all hoses, check valves, etc. and blow all the water from the system. Make sure the filters and fresh water tank are completely drained. Use only very low air pressure when doing this to prevent possible system damage. Because of the check valve mechanism built in the pump, blowing the lines will not remove the water from the fresh water pump. Remove the inlet and outlet hoses on the pump. Turn the pump on and allow it to pump out any remaining water...about a cupful. A recommended alternative to the above-mentioned procedure is the use of commercially available non toxic, fresh water system antifreeze. After draining the fresh water tank, lines and filters, pour the antifreeze mixture into the fresh water tank, prime and operate the pump until the mixture flows from all fresh water faucets. Be sure to open all water faucets, including the fresh water washdown hose. Make sure antifreeze has flowed through all of the fresh water drains.

For additional information refer to the Fresh Water System and Drainage System chapters.

Raw Water System

Completely drain the raw water systems including the sea strainers in the stern bilge. Disconnect all hoses and blow the water from the system. Use only very low air pressure when doing this to prevent possible system damage. Because of the check valve mechanism built in the raw water washdown pump, blowing the lines will not remove the water from the raw water pump. Remove the inlet and outlet hoses on the pump. Turn the pump on and allow it to pump out any remaining water...about a cupful.

A recommended alternative to the above-mentioned procedure is the use of commercially available nontoxic, potable water system antifreeze. If potable water antifreeze is used, pour the mixture into a pail and put the raw water intake lines into the solution. Run the pumps one at a time until the antifreeze solution is visible at all raw water faucets and discharge fittings and drains. Be sure antifreeze has flowed through all of the raw water drains.

Install the baitwell drain plug and pour potable water antifreeze in the baitwell until it covers the intake for the recirculation pump. Then activate

the recirculation pump until antifreeze is visible at the discharge fitting. Remove the drain plugs and wipe down the inside of the wells.

Refer to the Raw Water System chapter for additional information on the raw water system.

Marine Toilet

The marine toilet must be properly winterized by following the manufacturer's winterizing instructions in the marine toilet owner's manual. Drain the intake and discharge hoses completely using low air pressure if necessary. The head holding tank and diaphragm discharge pump must be pumped dry and one gallon of potable water antifreeze poured into the tank through the deck waste pump out fitting. After the antifreeze has been added to the holding tank, open the overboard discharge valve and activate the diaphragm pump until the antifreeze solution is visible at the discharge thru-hull.

Notice:

Make sure you follow the marine toilet manufacturer's winterizing instructions exactly.

Bilge

Coat all metal components, wire busses, and connector plugs in the bilge with a protecting oil. It is also important to protect all strainers, seacocks and steering components. The bilge pumps and bilge pump lines must be completely free of water and dried out when the boat is laid-up for the winter in climates where freezing occurs.

Compartments in the bilge that will not drain completely should be pumped out and then sponged until completely free of water. Dry the hull bilge and self-bailing cockpit troughs. Water freezing in these areas could cause damage.

Engines

The engines should be flushed with fresh water for at least 15 minutes prior to winter storage. This will remove salt, sand and other contaminants that can damage the engine. It is also important to "Fog" the cylinders, change the gear oil, fill the oil tanks (2-cycle engines) or change the oil in 4-cycle engines, coat each engine with a protector, wax the exterior and properly store and charge the batteries. You should refer to the engine owner's manual or contact your dealer for specific instructions on winterizing your engines.

Notice:

Properly winterize the engines and fuel system by following the engine manufacturer's winterizing procedures located in your engine owner's manuals or contact a Scout dealer.

Hardtop

It is imperative that all drain holes in the legs are open and that the legs are completely free of water. Remove the canvas and thoroughly clean and store in a safe, dry place. Remove all electronics. Coat all wire connectors and bus bars in the helm compartment with a protecting oil.

Clean the aluminum frame with soap and water and dry thoroughly. Apply an aluminum metal protector to the entire frame on anodized aluminum to reduce corrosion and pitting. Apply an automotive or boat wax to powder coated aluminum to protect it during storage periods.

Towers



It is imperative that all drain holes in the tower and hardtop legs are open and completely free of water. Tower basket drains should be checked and clear of debris. Remove the tower sun shade, if installed, and belly band or removable cushions. Then thoroughly clean and store in a safe, dry place. Remove all electronics. Coat all wire connectors and bus bars in the helm compartment with a protecting oil. Cover the tower basket with a tarp and secure it properly.



Clean the aluminum frame with soap and water and dry thoroughly. Apply an aluminum metal protector to anodized aluminum to reduce corrosion and pitting. Apply an automotive or boat wax to powder coated aluminum to protect it during storage periods.

Special Notes Prior To Winter Storage

If the boat will be in outside storage, properly support a storage cover and secure it over the boat. It is best to have a frame built over the boat to support the canvas. It should be a few inches wider than the boat so the canvas will clear the rails and allow passage of air. If this cover is fastened too tightly there will be inadequate ventilation and this can lead to mildew, moisture accumulation, etc. It is essential to fasten the canvas down securely so that the wind cannot remove it or cause chafing of the hull superstructure. Do not store the boat in a damp storage enclosure. Excessive dampness can cause electrical problems, corrosion, and excessive mildew.

Whenever possible, do not use the bimini top or convertible top canvas in place of the winter storage cover. The life of these canvases may be significantly shortened if exposed to harsh weather elements for long periods.

	CAUTION	
ALWAYS MAKE SURE THE LEG DRAIN HOLES ARE CLEAR WHEN THE BOAT IS LAID UP FOR THE WINTER. WATER TRAPPED INSIDE THE HARDTOP OR TOWER LEGS COULD FREEZE AND CAUSE THE LEGS TO SPLIT.		

	CAUTION	
PLACING AN ELECTRIC OR FUEL BURNING HEATING UNIT IN THE BILGE AREA CAN BE POTENTIALLY HAZARDOUS AND IS NOT RECOMMENDED.		

Proper storage is very important to prevent serious damage to the boat. If the boat is to be stored indoors, make sure the building has enough ventilation. It is very important that there is enough ventilation both inside the boat and around the boat.

Notice:



If the boat is to be stored indoors or outdoors, open all interior drawers, clothes lockers, cabinets, and doors a little. If possible, remove the upholstery, mattresses, clothing, and rugs. Then hang a commercially available mildew protector in the interior compartments.

14.3 Recommissioning

	WARNING	
<p>DO NOT OPERATE THE BOAT UNLESS IT IS COMPLETELY ASSEMBLED. KEEP ALL FASTENERS TIGHT. KEEP ADJUSTMENTS ACCORDING TO SPECIFICATIONS.</p>		

Notice:

It is important and recommended that the fitting out procedure for the marine gear be done by a qualified service person. Read the engine owner's manual for the recommended procedure.

	CAUTION	
<p>BEFORE LAUNCHING THE BOAT, MAKE SURE THE HULL DRAIN PLUG IS INSTALLED.</p>		

Reactivating The Boat After Storage:

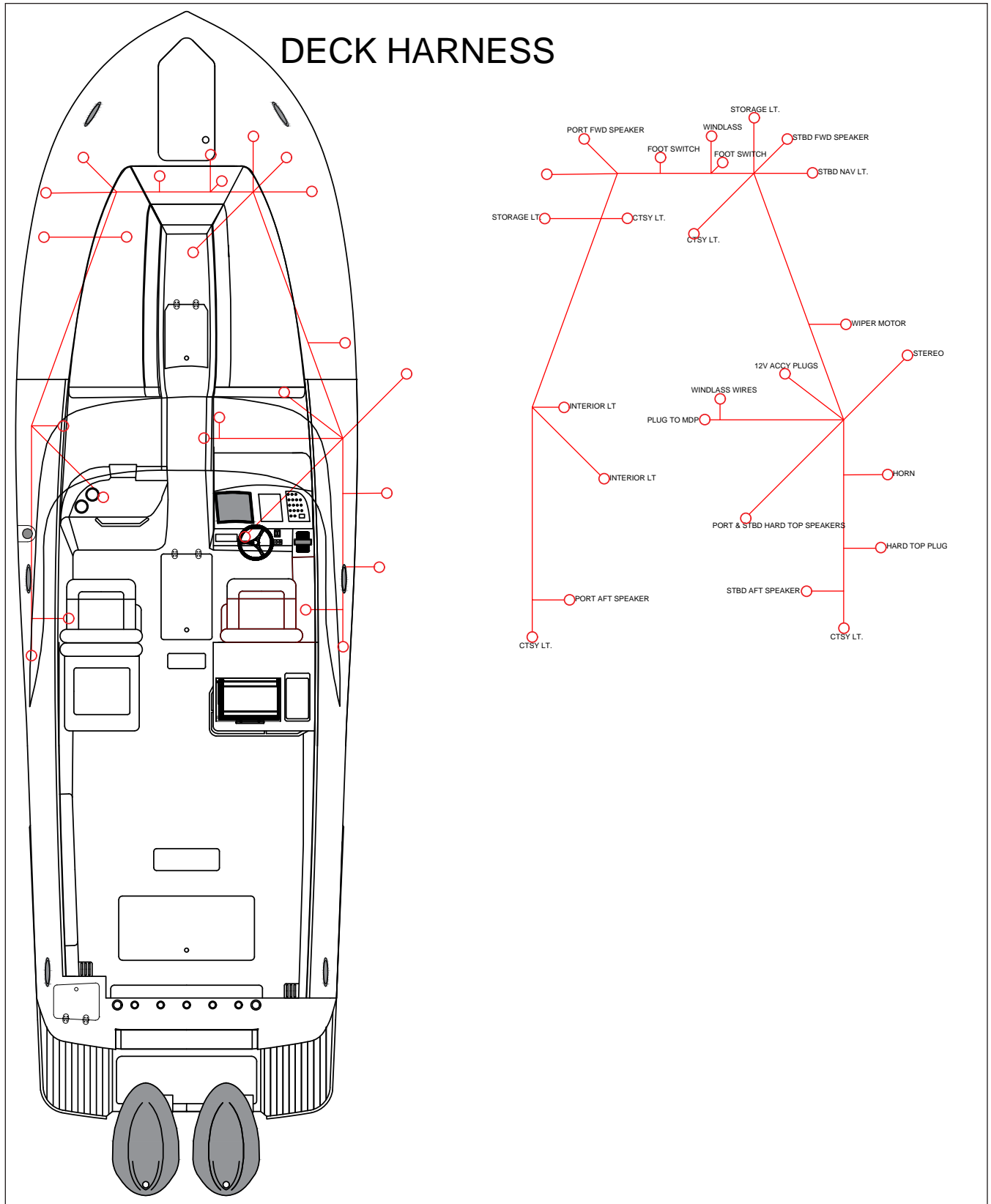
- Charge and install the batteries.
- Install the drain plug in the hull.
- Check the engines for damage and follow the manufacturer's instructions for recommissioning.
- Check the mounting bolts for the engines to make sure they are tight.

- Perform all routine maintenance.
- Check all hose clamps for tightness.
- Pump the antifreeze from the fresh and raw water systems and flush several times with fresh water.
- Check and lubricate the steering system.
- Clean and wash the boat.
- Install all upholstery, cushions and canvas.

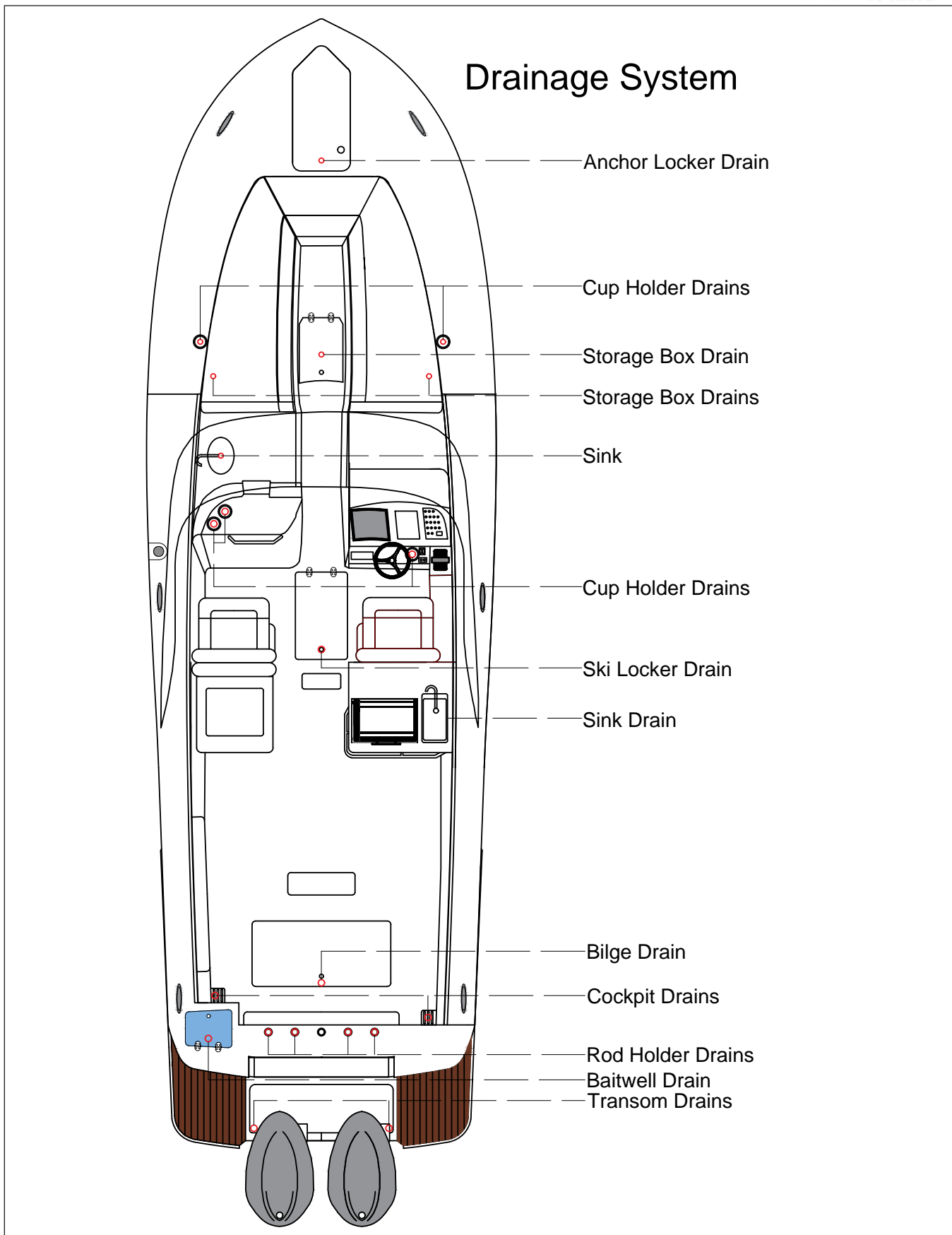
After Launching:

- Carefully check all water systems and the engine bolts for leaks. Operate each system one at a time checking for leaks and proper operation.
- Check the bilge pump manual and automatic switches.
- When each engine starts, check the cooling system port below the engine cowling for a strong stream of water. This ensures that the cooling pump is operating.
- Carefully monitor the gauges and check for leakage and abnormal noises.
- Operate the boat at slow speeds until the engine temperature stabilizes and all systems are operating normally.

NOTES

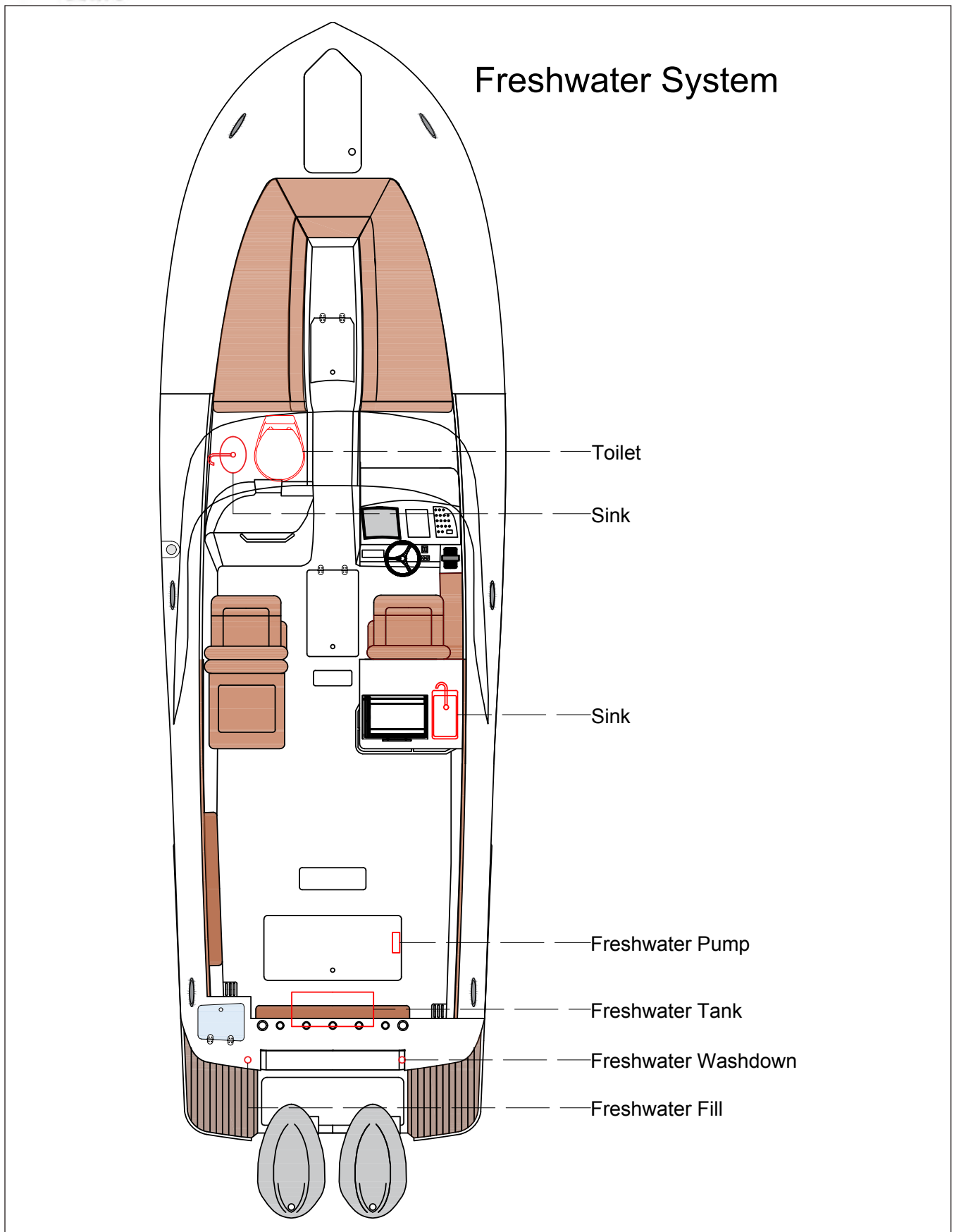


Deck Harness



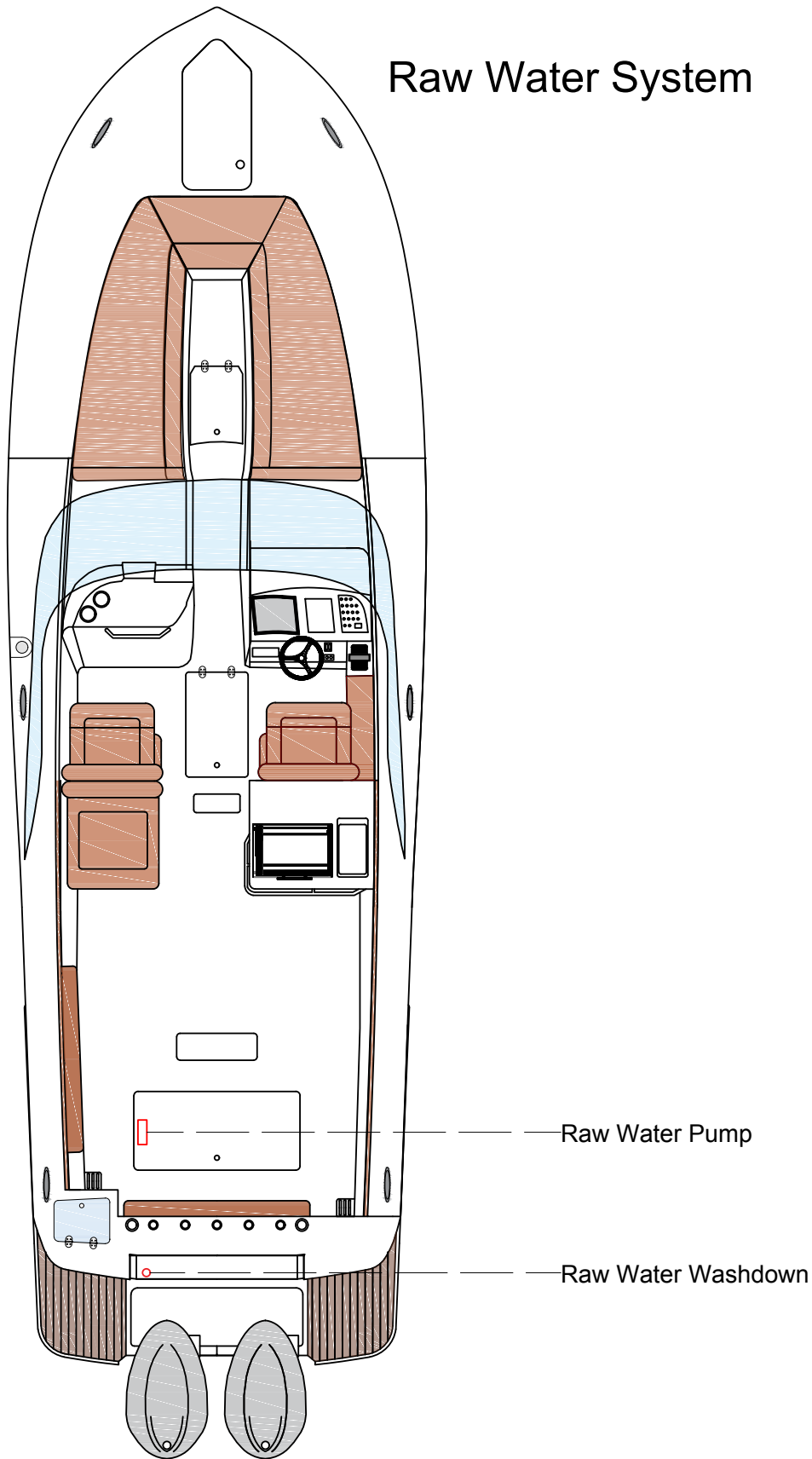
Drainage System

Drainage System



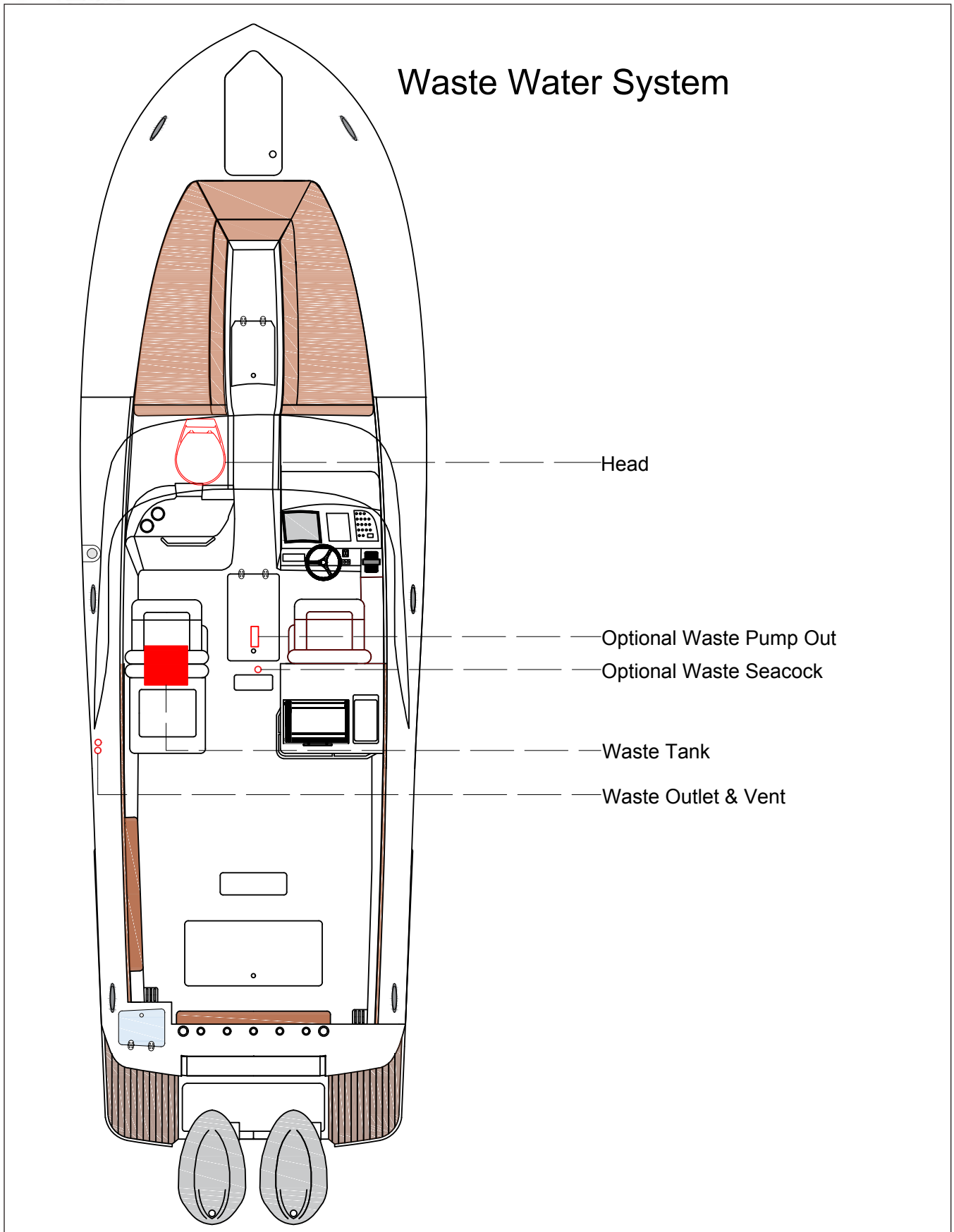
Freshwater System

Raw Water System



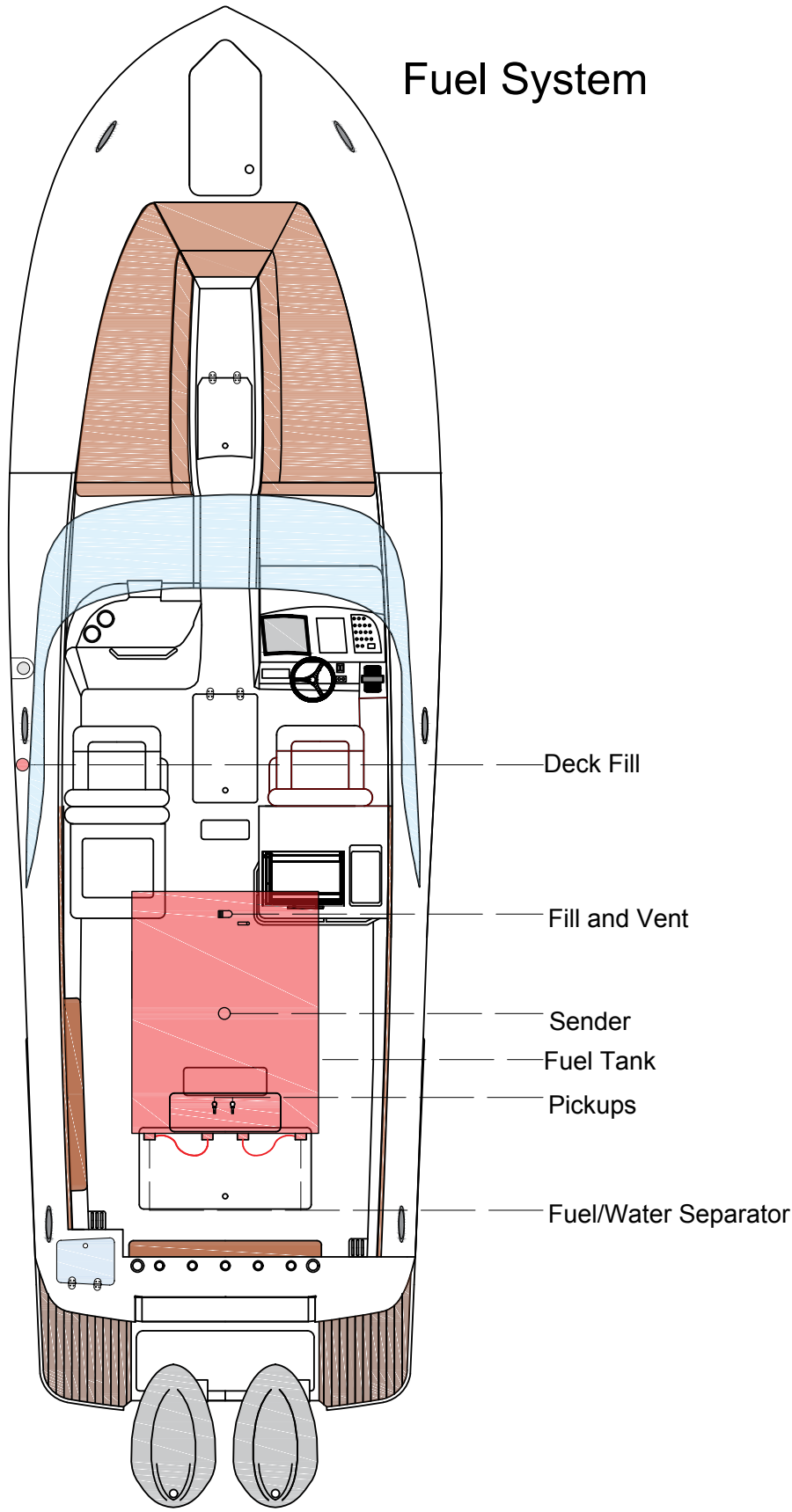
Raw Water System

Waste Water System

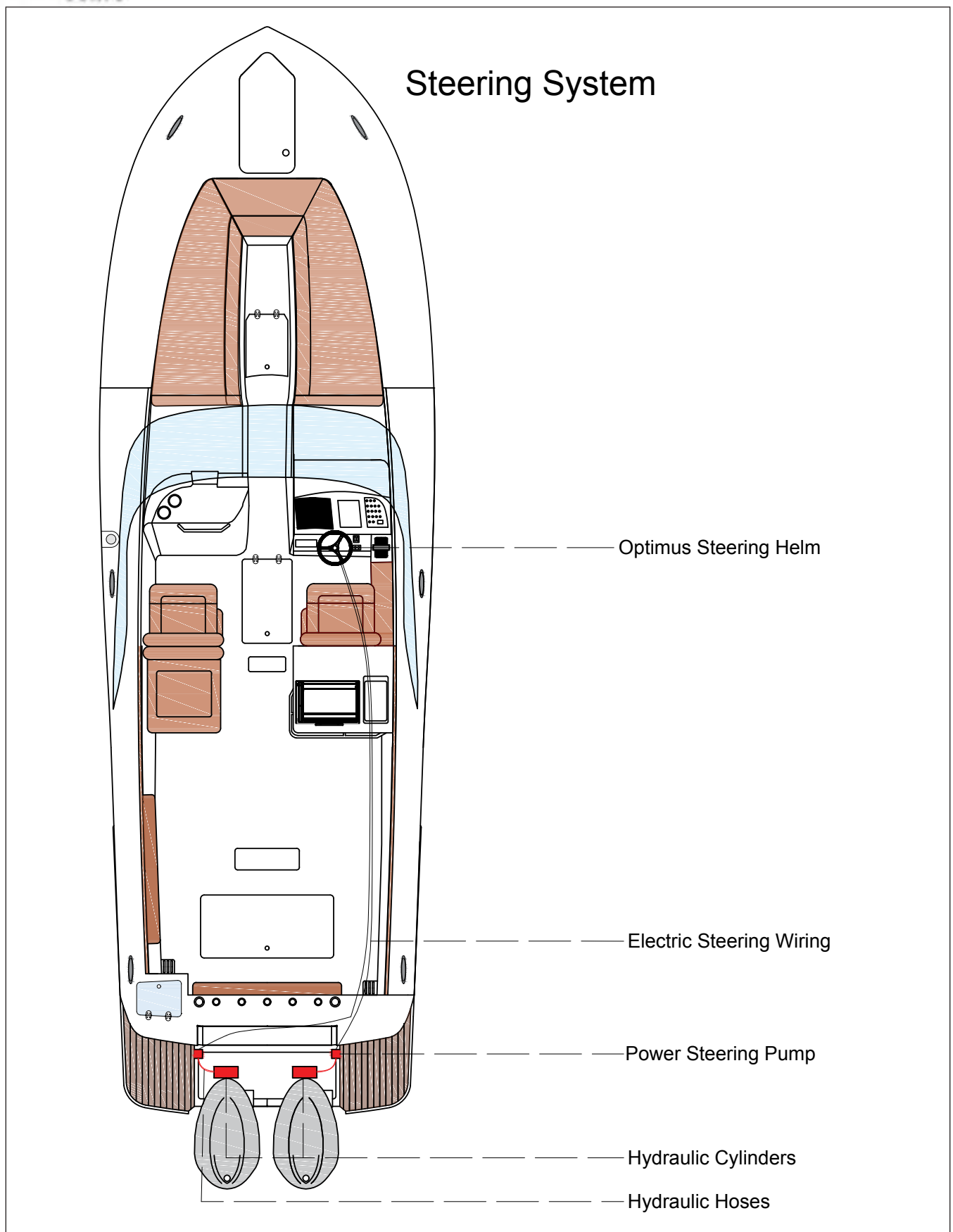


Waste System

Fuel System

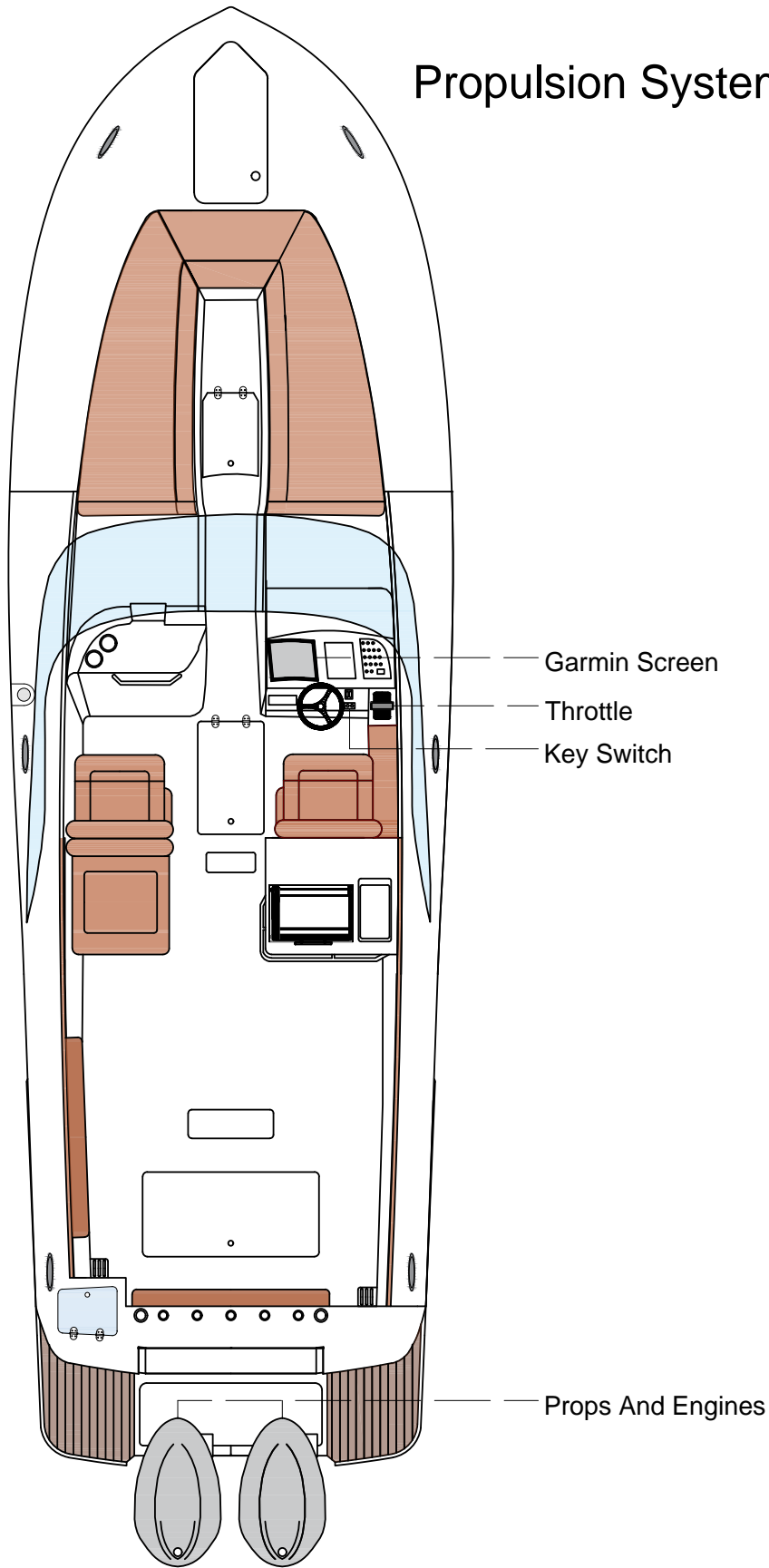


Fuel System



Steering System

Propulsion System



Propulsion System

Glossary of Terms

Aft: In, near, or toward the stern of a boat.

Aground: A boat stuck on the bottom.

Amidships: In or toward the part of a boat midway between the bow and stern.

Anchor: A specially shaped heavy metal device designed to dig efficiently into the bottom under a body of water and hold a boat in place.

Anchorage: An area specifically designated by governmental authorities in which boats may anchor.

Ashore: On shore.

Astern: Behind the boat, to move backwards.

Athwartship: At right angles to the center line of the boat.

Barnacles: Small, hard-shelled marine animals which are found in salt water attached to pilings, docks and bottoms of boats.

Beam: The breadth of a boat usually measured at its widest part.

Bearing: The direction of an object from the boat, either relative to the boat's direction or to compass degrees.

Berth: A bunk or a bed on a boat.

Bilge: The bottom of the boat below the flooring.

Bilge Pump: A pump that removes water that collects in the bilge.

Boarding: Entering or climbing into a boat.

Boarding Ladder: Set of steps temporarily fitted over the side of a boat to assist persons coming aboard.

Boat Hook: Short shaft of wood or metal with a hook fitting at one end shaped to aid in extending one's reach from the side of the boat.

Bow: The front end of a boat's hull

Bow Line: A line that leads forward from the bow of the boat.

Bow Rail: Knee high rails of solid tubing to aid in preventing people from falling overboard.

Bridge: The area from which a boat is steered and controlled.

Bridge Deck: A deck forward and usually above the cockpit deck.

Broach: When the boat is sideways to the seas and in danger of capsizing; a very dangerous situation that should be avoided.

Bulkhead: Vertical partition or wall separating compartments of a boat.

Cabin: Enclosed superstructure above the main deck level.

Capsize: When a boat lays on its side or turns over.

Chock: A deck fitting, usually of metal, with inward curving arms through which mooring or anchor lines are passed so as to lead them in the proper direction both on board and off the boat.

Cleat: A deck fitting, usually of metal with projecting arms used for securing anchor and mooring lines.

Closed Cooling System: A separate supply of fresh water that is used to cool the engine and circulates only within the engine.

Coaming: A vertical piece around the edges of cockpit, hatches, etc. to stop water on deck from running below.

Cockpit: An open space, usually in the aft deck, outside of the cabin.

Companionway: Opening in the deck of a boat to provide access below.

Compartment: The interior of a boat divided off by bulkheads.

Cradle: A framework designed to support a boat as she is hauled out or stored.

Cutlass Bearing: A rubber bearing in the strut that supports the propeller shaft.

Deck: The floor-like platform of a boat that covers the hull.

Displacement: The volume of water displaced by the hull. The displacement weight is the weight of this volume of water.

Draft: The depth of water a boat needs to float.

Dry Rot: A fungus attack on wood areas.

Dry-dock: A dock that can be pumped dry during boat construction or repair.

Electrical Ground: A connection between an electrical connector and the earth.

Engine Beds: Sturdy structural members running fore and aft on which the inboard engines are mounted.

EPIRB: Emergency Position Indicating Radio Beacon. Operates as a part of a worldwide satellite distress system.

Even Keel: When a boat floats properly as designed.

Fathom: A measure of depth. One Fathom = 6 feet.

Fender: A soft object of rubber or plastic used to protect the topsides from scarring and rubbing against a dock or another vessel.

Fend off: To push or hold the boat off from the dock or another boat.

Flying Bridge: A control station above the level of the deck or cabin.

Flukes: The broad portions of an anchor which dig into the ground.

Fore: Applies to the forward portions of a boat near the bow.

Foundering: When a boat fills with water and sinks.

Freeboard: The height from the waterline to the lowest part of the deck.

Galley: The kitchen of a boat.

Grab Rail: Hand-hold fittings mounted on cabin tops or sides for personal safety when moving around the boat, both on deck and below.

Ground Tackle: A general term including anchors, lines, and other gear used in anchoring.

Grounds: A boat touches the bottom.

Gunwale: The upper edge of a boat's side.

Hand Rail: Rail mounted on the boat, for grabbing with your hand, to steady you while walking about the boat.

Harbor: An anchorage which provides reasonably good protection for a boat, with shelter from wind and sea.

Hatch: An opening in the deck with a door or lid to allow for access down into a compartment of a boat.

Head: A toilet on a boat.

Heat Exchanger: Used to transfer the heat that is picked up by the closed cooling system to the raw cooling water.

Helm: The steering and control area of a boat.

Hull: The part of the boat from the deck down.

Inboard: A boat with the engine mounted within the hull of the boat. Also refers to the center of the boat away from the sides.

Inboard/outboard: Also stern drive or I/O. A boat with an inboard engine attached to an outboard drive unit.

Keel: A plate or timber plate running lengthwise along the center of the bottom of a boat.

Knot: Unit of speed indicating nautical miles per hour. 1 knot = 1 nautical mile per hour (1.15 miles per hour). A nautical mile is equal to one minute of latitude: 6076 feet. Knots times 1.15 equals miles per hour. Miles per hour times .87 equals knots.

Lay-up: To decommission a boat for the winter (usually in northern climates).

Leeward: The direction toward which the wind is blowing.

Length On The Waterline (l.w.l.): A length measurement of a boat at the waterline from the stern to where the hull breaks the water near the bow.

Limber Hole: A passage cut into the lower edges of floors and frames next to the keel to allow bilge water to flow to the lowest point of the hull where it can be pumped overboard.

Line: The term used to describe a rope when it is on a boat.

Lists: A boat that inclines to port or starboard while afloat.

L.O.A.: Boat length overall.

Locker: A closet, chest or box aboard a boat.

Loran: An electronic navigational instrument which monitors the boat's position using signals emitted from pairs of transmitting stations.

Lunch hook: A small light weight anchor typically used instead of the working anchor. Normally used in calm waters with the boat attended.

Midships: The center of the boat.

Marina: A protected facility primarily for recreational small craft.

Marine Ways or Railways: Inclined planes at the water's edge onto which boats are hauled.

Moored: A boat secured with cables, lines or anchors.

Mooring: An anchor permanently embedded in the bottom of a harbor that is used to secure a boat.

Nautical Mile: A unit of measure equal to one minute of latitude. (6076 feet)

Nun Buoy: A red or red-striped buoy of conical shape.

Outboard: A boat designed for an engine to be mounted on the transom. Also a term that refers to objects away from the center line or beyond the hull sides of a boat.

Pad Eye: A deck fitting consisting of a metal eye permanently secured to the boat.

Pier: A structure which projects out from the shoreline.

Pile or Piling: A long column driven into the bottom to which a boat can be tied.

Pitching: The fore and aft rocking motion of a boat as the bow rises and falls.

Pitch: The measure of the angle of a propeller blade. Refers to the theoretical distance the boat travels with each revolution of the propeller.

P.F.D: Personal Flotation Device.

Port: The left side of the boat when facing the bow.

Porthole (port): The opening in the side of a boat to allow the admittance of light and air.

Propeller: A device having two or more blades that is attached to the engine and used for propelling a boat.

Propeller Shaft: Shaft which runs from the back of the engine gear box, aft, through the stuffing box, shaft log, struts, and onto which the propeller is attached.

Pyrotechnic Distress Signals: Distress signals that resemble the brilliant display of flares or fireworks.

Raw Water Cooled: Refers to an engine cooling system that draws seawater in through a hull fitting or engine drive unit, circulates the water in the engine, and then discharges it overboard.

Reduction Gear: Often combined with the reverse gear so that the propeller turns at a slower rate than the engine.

Reverse Gear: Changes the direction of rotation of the propeller to provide thrust in the opposite direction for stopping the boat or giving it sternway.

Roll: A boat's sideways rotational motion in rough water.

Rope Locker: A locker, usually located in the bow of a boat, used for stowing the anchor line or chain.

Rubrail: Railing (often rubber or hard plastic) that runs along the boat's sheer to protect the hull when coming alongside docks, piers, or other boats.

Rudder: A moveable flat surface that is attached vertically at or near the stern for steering.

Sea anchor: An anchor that does not touch the bottom. Provides drag to hold the bow in the most favorable position in heavy seas.

Scupper: An opening in the hull side or transom of the boat through which water on deck or in the cockpit is drained overboard.

Seacock: Safety valves installed just inside the thru-hull fittings and ahead of the piping or hose running from the fittings.

Shaft Log: Pipe through which the propeller shaft passes.

Sheer: The uppermost edge of the hull.

Sling: A strap which will hold the boat securely while being lifted, lowered, or carried.

Slip: A boat's berth between two pilings or piers.

Sole: The deck of a cockpit or interior cabin.

Spring Line: A line that leads from the bow aft or from the stern forward to prevent the boat from moving ahead or astern.

Starboard: The right side of a boat when facing the bow.

Steerageway: Sufficient speed to keep the boat responding to the rudder or drive unit.

Stem: The vertical portion of the hull at the bow.

Stern: The rear end of a boat.

Stow: To pack away neatly.

Stringer: Longitudinal members fastened inside the hull for additional structural strength.

Strut: Mounted to the hull which supports the propeller shaft in place.

Strut Bearing: See "cutlass bearing."

Stuffing Box: Prevents water from entering at the point where the propeller shaft passes through the shaft log.

Superstructure: Something built above the main deck level.

Swamps: When a boat fills with water from over the side.

Swimming Ladder: Much the same as the boarding ladder except that it extends down into the water.

Taffrail: Rail around the rear of the cockpit.

Thru-hull: A fitting used to pass fluids (usually water) through the hull surface, either above or below the waterline.

Topsides: The side skin of a boat between the waterline or chine and deck.

Transom: A flat stern at right angles to the keel.

Travel Lift: A machine used at boat yards to hoist boats out of and back into the water.

Trim: Refers to the boat's angle or the way it is balanced.

Trough: The area of water between the crests of waves and parallel to them.

Twin-Screw Craft: A boat with two propellers on two separate shafts.

Underway: When a boat moves through the water.

Wake: Disrupted water that a boat leaves astern as a result of its motion.

Wash: The flow of water that results from the action of the propeller or propellers.

Waterline: The plane of a boat where the surface of the water touches the hull when it is afloat on even keel.

Watertight Bulkhead: Bulkheads secured so tightly so as not to let water pass.

Wharf: A structure generally parallel to the shore.

Working Anchor: An anchor carried on a boat for most normal uses. Refers to the anchor used in typical anchoring situations.

Windlass: A winch used to raise and lower the anchor.

Windward: Toward the direction from which the wind is coming.

Yacht Basin: A protected facility primarily for recreational small craft.

Yaw: When a boat runs off her course to either side.

DEPARTMENT OF TRANSPORTATION U.S. COAST GUARD CG-3865 (Rev. 9/95)		BOATING ACCIDENT REPORT		FORM APPROVED OMB NO. 2115-0010	
STATE ASSIGNED CASE NO. _____					
<p>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.</p>					
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 TELEPHONE NUMBER ()			OPERATOR ADDRESS		
OPERATOR TELEPHONE NUMBER ()		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
[] MALE [] FEMALE		NAME OF OWNER			
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)		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)	
ESTIMATED SPEED [] NONE [] UNDER 10 MPH [] 10 - 20 MPH [] 21 - 40 MPH [] OVER 40 MPH		[] 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)	

Boating Accident Report



DECEASED (IF MORE THAN 2 FATALITIES, ATTACH ADDITIONAL FORMS)			
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	[] MALE [] FEMALE	DEATH CAUSED BY [] DROWNING [] OTHER	WAS PFD WORN? [] YES [] NO
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	[] MALE [] FEMALE	DEATH CAUSED BY [] DROWNING [] OTHER	WAS PFD WORN? [] YES [] NO
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	
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	
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 ADDITIONAL IDENTIFYING 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 []
PRIMARY CAUSE	COMMERCIAL [] SECONDARY CAUSE		

Call the Coast Guard Infoline 1-800-368-5647 for information on **Federal Requirements for Recreational Boats**



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.)

An agency may not conduct or sponsor and a person is not required to respond to an information collection, unless it displays a currently valid OMB Control Number. The Coast Guard estimates that the average burden for this report form is 30 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (G-OPB-1), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (2115-0010), Washington, DC 20503.

NOTES

Float Plan

Scout recommends filling out a float plan each time you use your boat for an offshore day trip or a long cruise. Leave this information with a responsible person ashore, like a close friend or relative that you know well.

1. Name of person reporting and telephone number.

2. Description of boat.

Type _____ Color _____ Trim _____

Registration No. _____ Length _____

Name _____ Make _____ Other Info _____

3. Engine type _____ H.P. _____

No. of Engines _____ Fuel Capacity _____

4. Survival equipment: (Check as appropriate)

<input type="checkbox"/> PFDS	<input type="checkbox"/> Flares	<input type="checkbox"/> Mirror
<input type="checkbox"/> Smoke Signals	<input type="checkbox"/> Flashlight	<input type="checkbox"/> Food
<input type="checkbox"/> Paddles	<input type="checkbox"/> Water	<input type="checkbox"/> Others
<input type="checkbox"/> Anchor	<input type="checkbox"/> Raft or Dinghy	<input type="checkbox"/> EPIRB

5. Radio Yes No Type _____

6. Automobile license _____

Type _____ Trailer License _____

Color _____ and make of auto _____

7. Persons aboard _____

Name _____ Age _____ Address & telephone No. _____

8. Do any of the persons aboard have a medical problem?

Yes No If yes, what? _____

9. Trip Expectations: Leave at _____

From _____ Going to _____

Expect to return by _____ (time)

and no later than _____

10. Any other pertinent info. _____

11. If not returned by _____ (time)

call the COAST GUARD, or (Local authority) _____

12. Telephone Numbers.

NOTES

Troubleshooting Guide

PROBLEM	CAUSE AND SOLUTION
CONTROL SYSTEMS	
Hydraulic Steering is slow to respond & erratic and/or the steering wheel feels bumpy.	<ul style="list-style-type: none"> • Steering system is low on fluid. Fill and bleed system. • Steering system has air in it. Fill and bleed system. • A component in the steering system is binding. Check and adjust or repair binding component. • Engine steering spindle is binding. Grease spindle.
The boat wanders and will not hold a course at cruise speeds with hydraulic steering.	<ul style="list-style-type: none"> • There could be air in the steering system. Fill & bleed the system. • The engines are not aligned properly. Align engines. • Engine steering spindle is binding. Grease spindle.
Hydraulic Steering is unusually hard.	<ul style="list-style-type: none"> • The fuse for the power steering circuit has blown. Replace the fuse. • An internal fuse in the power steering pump system has blown. Refer to the steering owners manual for fuse location and replace the fuse or contact your dealer for assistance. • A steering line is kinked or collapsed. Replace kinked or collapsed line.
An engine will not start with the shift control lever in neutral.	<ul style="list-style-type: none"> • The shift control lever is not in the neutral detent. Try moving the shift lever slightly. • There is a loose wire on the neutral safety switch in the control. Inspect wires and repair loose connections. • The starter or ignition switch is bad. • There is a problem with the electronic control system at the helm control, module or at the engine. Have the system serviced by a qualified marine technician.
PERFORMANCE PROBLEMS	
Boat is sluggish and has lost speed & RPM.	<ul style="list-style-type: none"> • The boat may need to have marine growth cleaned from hull and running gear. • Propellers may be damaged & need repair. • Weeds or line around the propellers. Clean propellers. • Boat is overloaded. Reduce load. • Check for excessive water in the bilge. Pump out bilge & find & correct the problem. • One of the throttles is not responding properly and the engine is not getting full throttle. Have the throttle control system checked by a qualified marine technician.
The boat vibrates at cruising speeds.	<ul style="list-style-type: none"> • A propeller may be damaged & need repair. • A propeller or propeller shaft is bent. Repair or replace damaged components. • The running gear is fouled by marine growth or rope. Clean running gear. • The engines are not trimmed properly. Trim engines.

PROBLEM	CAUSE AND SOLUTION
ENGINE PROBLEMS	
<p>An engine is running too hot.</p>	<ul style="list-style-type: none"> • The engine raw water pick up strainer is clogged with marine growth. Clean pick up. • The engine raw water pump impeller is worn or damaged. Repair the pump. • The engine thermostat is faulty and needs to be replaced.
<p>An engine alternator is not charging properly.</p>	<ul style="list-style-type: none"> • The battery cable is loose or corroded. Clean and tighten battery cables. • The alternator is not charging and must be replaced. • The alternator drive belt is loose or worn. Tighten or replace belt. (Not all engines are equipped with alternator drive belts) • The battery is defective. Replace the battery.
<p>An engine suddenly will not operate over 2000 RPM.</p>	<ul style="list-style-type: none"> • The engine emergency system has been activated. The on board computer has sensed a problem and has limited the RPM to protect the engine. Find & correct the problem. • The tachometer is bad and needs to be replaced. • A throttle control is not responding properly. Have the throttle setting checked by a qualified technician.
<p>An engine is loosing RPM. The boat is not overloaded and the hull bottom and running gear are clean and in good condition.</p>	<ul style="list-style-type: none"> • The engine may be having a problem with a faulty anti-siphon valve, located in the fuel line near the fuel tank, that is restricting the fuel flow. Remove & clean or replace the anti-siphon valve. • The remote gasoline fuel filter could be dirty. Inspect and replace the fuel filter. • The primary fuel filter on the engine may be dirty. Inspect and replace the fuel filter. • The electronic engine control system on the engine is malfunctioning. Repair the engine control system. • The fuel injection system on the engine is malfunctioning. Repair the fuel injection system.

PROBLEM	CAUSE AND SOLUTION
ACCESSORY PROBLEMS	
Baitwell pump runs, but does not pump water.	<ul style="list-style-type: none"> • The thru-hull valve is not open. Open valve. • The pump is not fully clamped to the base on the thru-hull fitting. Properly install the pump to the base. • The intake scoop strainer for the raw water system is clogged with weeds or debris. Back down the boat to clear debris or clean the scoop strainer. • There is an air lock in the system. Prime the system.
The fresh water pump runs, but will not pump water.	<ul style="list-style-type: none"> • The water tank is empty. Fill the tank. • The water pump strainer is clogged. Clean strainer. • The intake hose is damaged and sucking air. Replace or repair the hose. • The pump is defective. Repair or replace the pump.
The fresh water pump fails to turn off after all outlets are closed.	<ul style="list-style-type: none"> • There is a leak in a pressure line or outlet. Repair the leak. • There is an air leak in the intake line. Repair the air leak. • The pressure switch is defective. Replace the pressure switch. • The voltage to the pump is low. Check for corroded or loose wiring connections or low battery. • The strainer is clogged. Clean strainer. • The pump is defective. Repair or replace the pump.
The washdown pump runs, but the pump will not pump water.	<ul style="list-style-type: none"> • The thru-hull valve is not open. Open valve. • There is an air leak in the intake line. Repair the air leak. • The intake scoop strainer for the raw water system is clogged with weeds or debris. Back down the boat to clear debris or clean the scoop strainer. • The in-line sea strainer for the pump is clogged. Clean the sea strainer.
The washdown or fresh water pump fails to turn off after all outlets are closed.	<ul style="list-style-type: none"> • The intake hose is damaged and sucking air. Replace hose. • The pump is defective. Repair or replace the pump. • There is a leak in a pressure line or outlet. Repair the leak. • There is an air leak in the intake line. Repair the air leak. • The pressure switch is defective. Replace the pressure switch. • The voltage to the pump is low. Check for corroded or loose wiring connections or low battery.
Reduction in water flow from the bilge pump.	<ul style="list-style-type: none"> • The pump strainer is clogged. Clean strainer. • The pump is not fully clamped to the base. Properly install the pump to the base. • The pump is defective. Repair or replace the pump. • The discharge hose is pinched or clogged. Check discharge hose and clean or repair. • Low voltage to the pump. Check the battery and wire connections.

PROBLEM	CAUSE AND SOLUTION
ACCESSORY PROBLEMS	
<p>The automatic switch on the bilge pump does not activate the pump .</p>	<ul style="list-style-type: none"> • The fuse or circuit breaker for the automatic switch has tripped or blown. Replace the fuse or reset the circuit breaker. • The battery is dead. Charge or replace the battery. • The pump impeller is jammed by debris. Clean pump impeller housing. • The wire connections in the bilge have corroded. Replace connectors and secure above the bilge waterline. • The automatic switch is defective. Replace the switch. • The pump is defective. Replace pump.
<p>The bilge pump will not run when the manual switch is activated.</p>	<ul style="list-style-type: none"> • The fuse or circuit breaker supplying the switch has tripped. Replace the fuse or reset the circuit breaker. • The battery switch is off. Turn on the battery switch. • The pump impeller is jammed by debris. Clean pump impeller housing. • The wire connections in the bilge have corroded. Replace connectors and secure above the bilge waterline. • The switch is defective. Replace the switch. • The pump is defective. Replace pump.
<p>Head will not flush.</p>	<ul style="list-style-type: none"> • The holding tank is full. Pump out the holding tank. • The flush valve is defective. Replace the flush valve.
<p>Excessive odor from marine head.</p>	<ul style="list-style-type: none"> • Back pressure in the holding tank. Pump out holding tank and clean the vent and vent hose or replace the in-line filter. • No deodorizer in the holding tank. Add deodorizer to the holding tank each time it is pumped out. • The waste in the tank is over two weeks old. Pump the holding tank if it has contained waste for two weeks or more.
<p>Holding tank will not empty.</p>	<ul style="list-style-type: none"> • Holding tank vent or filter is clogged. Clean the vent and vent hose or replace the filter. • There is a vacuum leak in the hose from the holding tank to the deck pump out fitting. Tighten loose fittings or replace damaged hoses.
<p>No AC power to the battery charger and shore cord is properly connected.</p>	<ul style="list-style-type: none"> • The breaker at the shore outlet is off. Activate breaker. • The shore power cord is damaged or defective. Replace the cord. • The shore inlet connection is corroded or defective. Replace the inlet connection.



Spearheading the Future of Fishing.

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