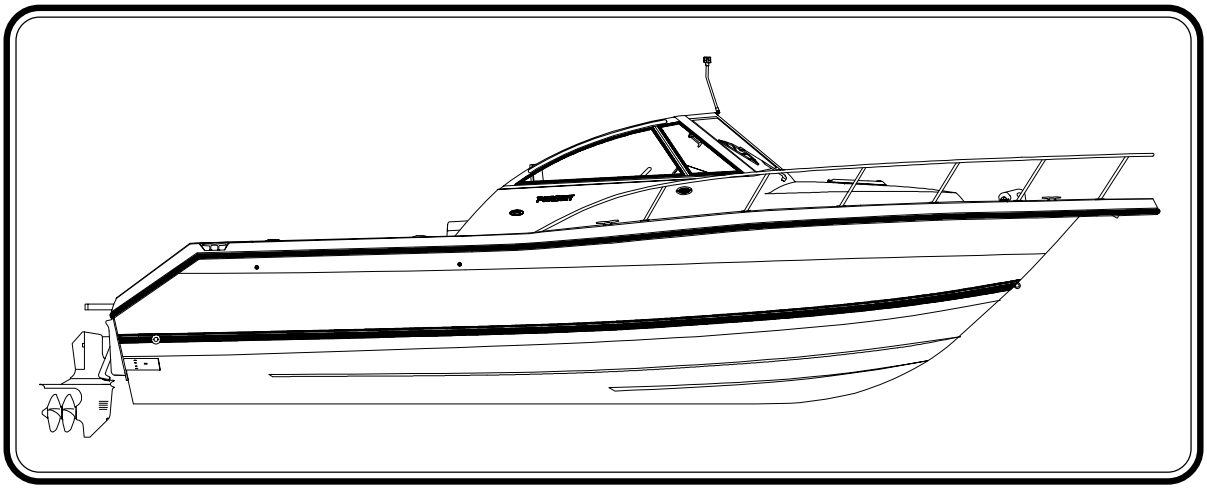
PURSUIT®

DENALI 28

OWNER'S MANUAL



PURSUIT® FISHING BOATS
3901 St. Lucie Blvd.
Ft. Pierce, Florida 34946

Print Date 3-2000

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SAFETY INFORMATION

Your PURSUIT® 2860 Denali Owner's 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 **WARNING, CAUTION** and **DANGER** statements. The following definitions apply:

IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN MINOR PERSONAL INJURY OR PRODUCT AND PROPERTY DAMAGE.

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 Pursuit Fishing Boats 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.

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Dear Pursuit Denali 28 Owner:

All of us at Pursuit are pleased that you have selected one of our products as your boat. As I'm sure you've discovered during the selection and decision process, your Denali has been designed, engineered and built with care and precision.

Please allow me to note my personal philosophy. When I started this company, my goal was to provide you, our customer, with the finest quality boat available. Everything we have achieved since that time has been with the same goal in mind.

The information in this owner's manual has been assembled to assist you with obtaining maximum enjoyment with your Denali. Please read this manual completely and always operate your boat safely and courteously.

Thank you for selecting a Pursuit. We all wish you many years of boating fun and safety.

Sincerely,

Leon R. Slikkers
Chief Executive Officer

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BOAT INFORMATION

Please fill out the following information section and leave it in your Pursuit 2860 Denali Owner's Manual. This information will be important for you and Pursuit service personnel to know, if and when you may need to call Pursuit for technical assistance or service.

BOAT	
MODEL:	HULL SERIAL #:
PURCHASE DATE:	DELIVERY DATE:
IGNITION KEYS #:	REGISTRATION #:
DRAFT:	WEIGHT:
ENGINE(S)	
MAKE:	MODEL:
PORT SERIAL #:	STARBOARD SERIAL #:
TRANSMISSION(S) (Inboard)	
MAKE:	MODEL:
PORT SERIAL #:	STARBOARD SERIAL #:
RATIO:	
OUTDRIVE(S) (Inboard/Outboard)	
MAKE:	MODEL:
PORT SERIAL #:	STARBOARD SERIAL #:
PROPELLER(S)	
MAKE:	BLADES:
DIAMETER/PITCH:	OTHER:
TRAILER	
MAKE:	MODEL:
SERIAL #:	GVRW:
DEALER	**PURSUIT**
NAME:	PHONE:
DEALER/PHONE:	REPRESENTATIVE:
SALESMAN:	ADDRESS:
SERVICE MANAGER:	
ADDRESS:	

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

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IMPORTANT INFORMATION

Warranty and Warranty Registration Cards
The Pursuit Denali 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 the Pursuit Customer Relations Department.

Pursuit, engine manufacturer's, 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 engine(s) 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 **H**ull **I**dentification **N**umber **"HIN"** which is located on the starboard side of the transom, just below the rubrail. The engine warranty registration requires the engine serial number(s). Please refer to the engine owner's manual for the location of the serial number(s).

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
Pursuit 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. **Pursuit reserves the right to change standard equipment, optional equipment and specifications without notice or obligation.** If you have questions about the equipment on your Pursuit, please contact your dealer or the Pursuit Customer Relations Department.

Transferring The Warranty
For a Transfer fee, S2 Yachts will extend warranty coverage to subsequent owners of Pursuit models for the duration of the original warranty period. Please refer to the Pursuit Denali 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 Pursuit Fishing Boats, Customer Relations Department, 3901 St. Lucie Boulevard, Ft. Pierce, Florida 34946, within 30 days of the date of resale.

S2 Yachts 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 Pursuit Denali Limited Warranty Statement.

Service

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

OWNER'S/OPERATOR'S RESPONSIBILITIES

Registration and Numbering

Federal law requires that all undocumented vessels equipped with propulsion machinery be registered in the state of principal use. A certificate of number will be issued upon registering the boat. These numbers must be displayed on your boat. The owner/operator of a boat must carry a valid certificate of number whenever the boat is in use. When moved to a new state of principal use, the certificate is valid for 60 days.

In order to be valid, the numbers must be installed to the proper specifications. Check with your dealer or state boating authority for numbering requirements. The Coast Guard issues the certificate of number in Alaska; all others are issued by the state.

Insurance

In most states the boat owner is legally responsible for damages or injuries he or someone else operating the boat causes. Responsible boaters carry adequate liability and property damage insurance for their boat. You should also protect the boat against physical damage and theft. Some states have laws requiring minimum insurance coverage. Contact your dealer or state boating authority for information on the insurance requirements in your boating area.

Reporting Boating Accidents

All boating accidents must be reported by the operator or owner of the boat to the proper marine law enforcement authority for the state in which the accident occurred. Immediate notification is required if a person dies or disappears as a result of a recreational boating accident.

If a person dies or there are injuries requiring more than first aid, a formal report must be filed within 48 hours.

A formal report must be made within 10 days for accidents involving more than $500.00 damage or the complete loss of a boat.

A Boating Accident Report form is located near the back of this manual to assist you in reporting an accident. If you need additional information regarding accident reporting, please call the Boating Safety Hotline, 800-368-5647.

Education

If you are not an experienced boater, we recommend that the boat operator and other people that normally accompanys the operator, enroll in a boating safety course. Organizations such as the U.S. Power Squadrons, United States Coast Guard Auxiliary, State Boating Authorities and the American Red Cross offer excellent boating educational programs. These courses are worthwhile even for experienced boaters to sharpen your skills or bring you up to date on current rules and

OWNER'S/OPERATOR'S RESPONSIBILITIES

regulations. They can also help in providing local navigational information when moving to a new boating area. Contact your dealer, State Boating Authority or the Boating Safety Hotline, 800-368-5647, for further information on boating safety courses.

Required Equipment

U.S. Coast Guard regulations require certain equipment on each boat. The Coast Guard also sets minimum safety standards for vessels and associated equipment. To meet these standards some of the equipment must be Coast Guard approved. "Coast Guard Approved Equipment" has been determined to be in compliance with USCG specifications and regulations relating to performance, construction, or materials. The equipment requirements vary according to the length, type of boat, and the propulsion system. Some of the Coast Guard equipment is described in the Safety Equipment chapter of this manual. For a more detailed description, obtain "Federal Requirements And Safety Tips For Recreational Boats" by contacting the Boating Safety Hotline, 800-368-5647, or your local marine dealer or retailer and read the book "Sportfish Cruisers and Yachts" included with this manual.

Some state and local agencies impose similar equipment requirements on waters that do not fall under Coast Guard jurisdiction. These agencies may also require additional equipment that is not required by the Coast Guard. Your dealer or local boating authority can provide you with additional information for the equipment requirements for your boating area.

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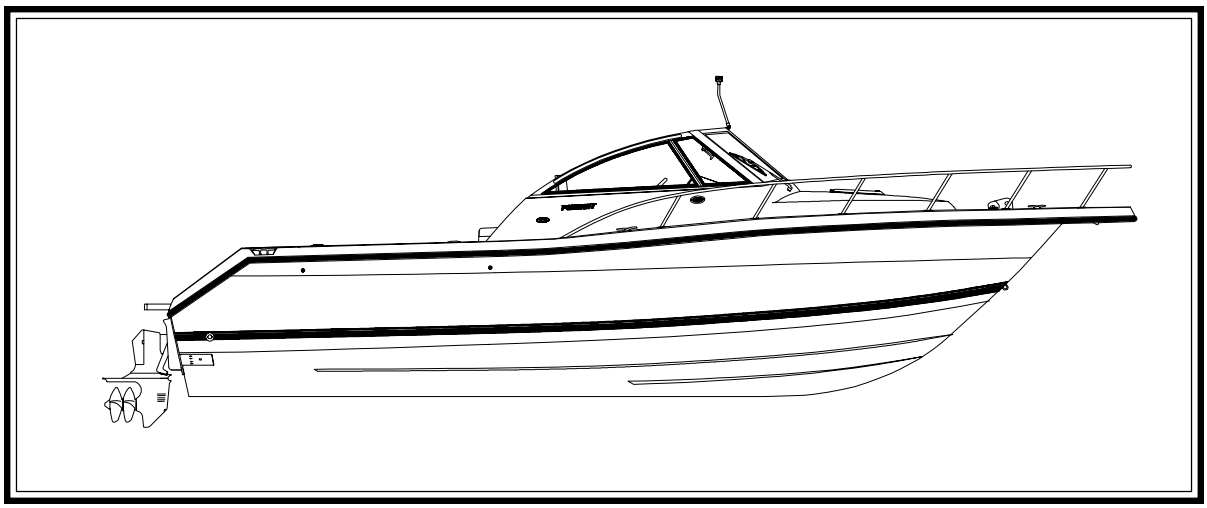
Chapter 1:
PROPULSION SYSTEM



1.1 General

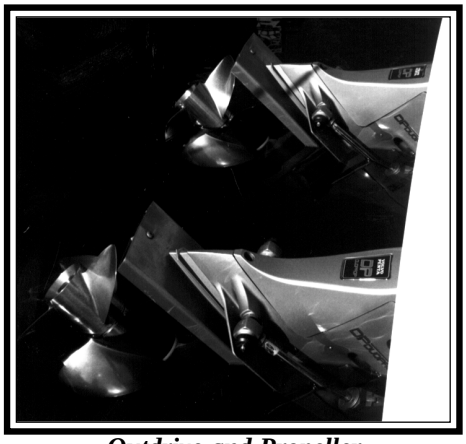
The Denali 28 is designed to be powered with a single or twin inboard/outboard engine(s) and drive system(s). Each manufacturer of the various inboard/outboard drive systems provides an owner's information manual with its product. It is important that you read the manual(s) very carefully and become familiar with the proper care and operation of the engine and drive system. 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.

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.

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

USE ONLY CLEAN, DRY FUEL OF THE TYPE AND GRADE RECOMMENDED BY THE ENGINE MANUFACTURER. THE USE OF INCORRECT OR CONTAMINATED FUEL CAN CAUSE ENGINE MALFUNCTION AND SERIOUS DAMAGE.

1.2 Drive Systems



Outdrive and Propeller

The inboard engine(s) are mounted in the stern and coupled to transom mounted outdrives which do all shifting, steering, and propulsion functions. The outdrives are supplied by the engine manufacturer and have specific lubrication and maintenance requirements.

Proper engine alignment is very important. This was done by the factory when the engine(s) were installed and should be checked at the 20 hour check and annually thereafter. If you experience excessive vibrations or suspect that the engine is out of alignment, please contact your Pursuit dealer.

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

Marine growth and galvanic corrosion is a concern if the boat is to be kept in saltwater. 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. If the boat is to be left in saltwater, the hull and outdrive must be protected with antifouling paint. It is extremely important that the proper antifouling paint is used on each component. Contact your Pursuit dealer for information on the proper paint to use in your area.

Galvanic corrosion is the corrosion process occurring when different metals are submerged in an electrolyte. Sea water is an electrolyte and submerged engine components must be properly protected. Outdrives are equipped with sacrificial anodes to prevent galvanic corrosion problems. The anodes must be monitored and replaced as necessary.

On some outdrives, the anode may not provide an acceptable level of protection when a drive is used in freshwater and a magnesium anode must be used. A magnesium anode, when used for combined operation in both fresh and saltwater, or water with a low salt content, will deteriorate

quicker and must therefore be replaced more often. For recommendations regarding corrosion protection for the engine or outdrive, please refer to the engine owner's manual.

SOME OUTDRIVES REQUIRE SPECIAL ANODES FOR FRESHWATER AND A DIFFERENT TYPE OF ANODE FOR SALTWATER. PLEASE CONTACT THE ENGINE MANUFACTURER OR YOUR PURSUIT DEALER FOR THE PROPER ANODE TO USE IN YOUR BOATING AREA.

DO NOT PAINT THE OUTDRIVE OR ALLOW THE OUTDRIVE TO COME IN CONTACT WITH ANTIFOULING PAINTS DESIGNED FOR BOAT HULLS. MANY OF THESE PAINTS CAN CAUSE SEVERE DAMAGE TO THE OUTDRIVE. CONTACT YOUR PURSUIT DEALER OR ENGINE MANUFACTURER FOR INFORMATION ON THE PROPER PAINTING PROCEDURES.

1.3 Engine Exhaust System

Inboard/outboard engines use the exhaust system to relinquish exhaust gases and cooling water. Engine exhaust exits the rear of the boat through the exhaust system. The system consists of engine exhaust manifolds, exhaust hoses and the outdrive.

A periodic inspection of the coolant hoses, exhaust hoses and related parts should be made to insure that leaks, heat deterioration or damage has not resulted. Replace them as necessary. Refer to the engine owner's manual for more information on the exhaust system in your Denali.

1.4 Engine Cooling System

All marine engines use surface water as a cooling medium. The cooling water enters the system through a water intake in the outdrive and is expelled through the exhaust system. Water is pumped through the water inlets, circulated through the engine block or heat exchanger, and relinquished with the exhaust gases through the outdrive. 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.

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

Note: If the boat is used in salt or badly polluted water, engines without freshwater cooling should be flushed after each use. Refer to the engine owner's manual for the proper engine flushing procedure.

Freshwater Cooling (Optional)

Installation of "Freshwater Cooling" provides adequate engine cooling without exposing the internal engine cooling system to the harmful effects of surface water. This system is optional with gasoline stern drive engines on the Denali 28. The engine owner's manual provides additional information regarding service and maintenance of this equipment.

SHOULD AN ENGINE INTAKE OR AN EXHAUST OR COOLING HOSE RUPTURE, TURN THE ENGINE OFF IMMEDIATELY. PROCEED UNDER TOW IF NECESSARY, TO A SERVICE FACILITY FOR APPROPRIATE REPAIRS. MAINTAIN A CLOSE VISUAL WATCH ON THE PROBLEM HOSE AND THE BILGE WATER LEVEL.

1.5 Propellers

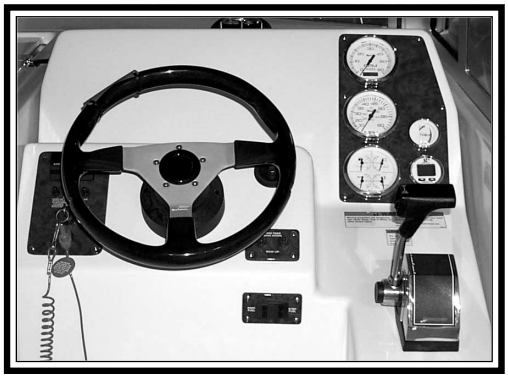
The propellers convert the engine's power into thrust. They come in a variety of styles, diameters and pitches. The props that will best suit the needs of your Denali will depend somewhat on your application and expected average load. Most propeller sizes are identified by two numbers stamped on the 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 each 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 outdrive gear assembly. Refer to the engine owner's manual for information on propeller removal and installation.

Note: Before changing propellers to correct boat performance problems, be sure other 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.

RUNNING AGROUND OR STRIKING AN UNDERWATER OBSTRUCTION CAN RESULT IN SERIOUS INJURY AND DAMAGE TO THE DRIVE SYSTEM OR BOAT. IF YOUR BOAT RUNS AGROUND, EVALUATE THE DAMAGE THEN PROCEED AT LOW SPEED TO THE NEAREST SERVICE FACILITY AND HAVE AN IMMEDIATE INSPECTION MADE BEFORE FURTHER USE OF THE CRAFT. A DAMAGED BOAT CAN TAKE ON WATER. KEEP ALL LIFE SAVING DEVICES CLOSE AT HAND WHILE DRIVING TO A DOCK AREA. IF THE BOAT CANNOT BE IMMEDIATELY REMOVED FROM THE WATER, THOROUGHLY INSPECT THE BILGE AREA FOR LEAKS SO THAT THE BOAT DOES NOT SINK WHILE MOORED.

1.6 Engine Instrumentation

The helm station is equipped with a set of engine instruments and could also be equipped with alarms. These instruments allow the pilot to monitor the engine's operational conditions. Close observation of these instruments allows the pilot to operate the engine(s) at the most efficient level and could save the engine(s) from serious costly damage. The instrumentation is unique to the type of engine(s) installed on your Denali. Some or all of the following gauges may be present.



Instrument Panel

Tachometer
The tachometer displays the speed of the engine in revolutions per minute (RPM) This speed is not the boat speed or necessarily the speed of the propeller. The tachometer may not register zero with the key in the "OFF" position.

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

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

Speedometer
The speedometer indicates the speed of the boat in miles per hour.

Temperature Gauge
The temperature gauge shows the temperature of the engine cooling system. A sudden increase in the temperature could indicate an obstructed water inlet or a water pump impeller failure.

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

Oil Pressure Gauge
The oil pressure gauge monitors the engine lubrication system pressure. A drop in oil pressure is a possible indication of oil pump problems or a leak.

OPERATION OF AN ENGINE WITH ABNORMALLY LOW, OR HIGH, OIL PRESSURE CAN LEAD TO ENGINE DAMAGE AND POSSIBLE SEIZURE. HAVE THE ENGINE SERVICED IMMEDIATELY UPON AN ABNORMAL OIL PRESSURE INDICATION.

Fuel Gauge
The fuel gauge indicates the amount of fuel in the fuel tanks.

Voltmeter
The voltmeter displays the voltage for the battery and the charging system. The normal voltage is 11 to 12 volts with the engine off and 13 to 14.5 volts with the engine running.

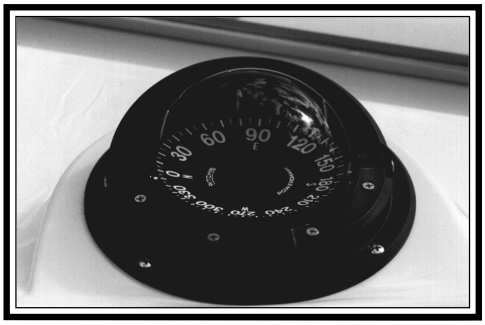
Hour Meter
The hour meter keeps a record of the operating time for the engine. The hour meter is located in the panel on the starboard side of the helm.

Tilt/Trim Gauge
The tilt/trim gauge monitors the position of the outdrive. 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. Please refer to Chapter 2 and the engine owner's manual for more information on the operation of the outdrive power tilt and trim.

Engine Alarms
Some inboard/outboard engines could be 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 engine.

IF THE ENGINE ALARM SOUNDS, IMMEDIATELY RETURN THE THROTTLE TO IDLE AND MOVE THE SHIFT CONTROL TO THE NEUTRAL POSITION. SHUT OFF THE ENGINE UNTIL THE PROBLEM IS FOUND AND CORRECTED.

Compass
The compass is on top of the helm. To adjust the compass for your area, read the instructions on "Compass Compensation" given to you in the literature packet. 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 adjusted by a professional after the electronics and additional electrical accessories are installed and before operating the boat.



Compass

Instruments Maintenance

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

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Chapter 2:
HELM CONTROL SYSTEMS

2.1 General

The helm controls consist of the following: engine throttle and shift controls, the steering system, the outdrive tilt and trim control, 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.

Helm

2.2 Engine Throttle and Shift Controls

The shift and throttle controls on your boat may vary depending on the engine(s) used. The following description is typical of most inboard/outboard remote controls. Refer to the engine or control manual for specific information on the control installed on your Denali.

The engine throttle and shift control system 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 outdrive shift linkage.

The helm on your Denali is designed for a binnacle style 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.

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.

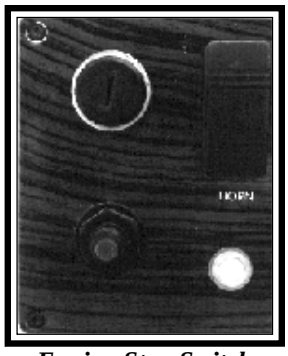
2.3 Neutral Safety Switch

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. 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 or cable adjustments may be required to correct this condition should it persist. See your Pursuit dealer for necessary control and cable adjustments.

Each neutral safety switch should be tested periodically to insure that it is operating properly. To test the neutral safety switch, make sure the outdrive is tilted down and move the shift lever to the forward position. ***Make sure the control lever is not advanced past the idle position.*** Turn the ignition key to the start position just long enough to briefly engage the starter for the engine. ***Do not hold the key in the start position long enough to start the engine.*** The starter should not engage. Repeat this test with the shift lever in reverse and the engine throttle at idle. Again, the starter should not engage. If the starter engages with the shift control in any position other than the neutral position, then the neutral safety switch for that engine is not functioning properly and you should contact your dealer and have the neutral safety switch repaired before using your boat. If the engine starts in gear during this test, immediately move the control lever to the neutral position. Turn the engine off and have the problem corrected by a qualified marine mechanic before using the boat.

IN SOME SITUATIONS, IT MAY BE POSSIBLE TO ACCIDENTALLY START THE ENGINE IN GEAR WITH THE THROTTLE 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.

2.4 Engine Stop Switch



Engine Stop Switch

Your Denali is equipped with a engine stop switch and lanyard. When the lanyard is pulled it will engage the switch and shut off the engine(s). We strongly recommend that the lanyard be attached to the driver whenever the engine is running. If the 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 engine.

Please refer to the engine owner's manual for additional information on the engine stop switch.

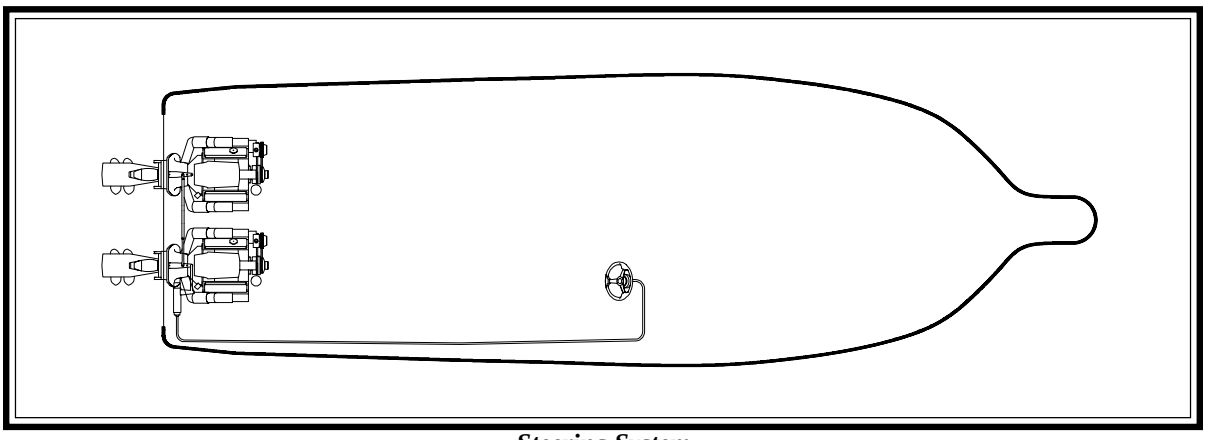
2.5 Outdrive Power Tilt and Trim

All inboard/outboard drive systems have a tilt and trim feature for the outdrive. This allows the operator to control the position of the outdrive from the helm. Moving the outdrive closer to the boat transom is called trimming "in" or "down". Moving the outdrive further away from the boat transom is called trimming "out" or "up". In most cases, the boat will run best with the drive unit 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 outdrive 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 outdrive 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.

EXCESSIVE TRIM FOR THE OPERATING CONDITIONS, EITHER TRIM UP OR DOWN, CAN CAUSE BOAT INSTABILITY, PROPELLER CAVITATION, OR MAKE STEERING THE BOAT MORE DIFFICULT. IF THE BOAT BEGINS TO FEEL UNSTABLE OR IS HARD TO STEER, SLOW DOWN AND ADJUST THE TRIM ANGLE.

2.6 Steering System



Steering System

Your Denali is equipped with a power assisted cable steering system. Turning the wheel moves the gears in the helm, pushing or pulling the cable assembly and turning the outdrive(s). An engine driven power steering pump and cylinder assist the cable steering and reduces the effort required to turn the boat.

Dual engine sterndrive boats have two outdrives. These are coupled together at the tiller arms by a tie bar. Dual outdrives are not toed-in at the front. They are set parallel to provide maximum stability on straight ahead runs and proper tracking through corners. Outdrive or steering system damage may require the outdrives to be realigned.

Please refer to the engine owner's manual or contact your dealer for information on the power steering system.

2.7 Trim Tabs

The Denali 28 uses a dual toggle switch to control the trim tabs. The switch is labeled and 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.

Trim Tab Switch

Before leaving the dock, make sure that the tabs are in the full "UP" position by holding the control in the bow up position for ten (10) seconds.

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.

Trim Tab

After depressing a trim tab switch, always wait a few seconds for the change in 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 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 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.

2.8 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 adjustment becomes necessary, see your Pursuit dealer.

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 OUTDRIVE DAMAGE.

Steering System Maintenance

A periodic inspection of all steering hoses, linkage and helm assemblies should be made. Signs of corrosion, cracking, loosening of fastenings, excessive wear, or deterioration should be immediately corrected. Failure to do so could lead to steering system failure that would result in loss of control.

The engine driven power steering system has specific fluid and maintenance requirements. Please refer to the engine owner's manual for maintenance information on the power steering system.

Trim Tab Maintenance

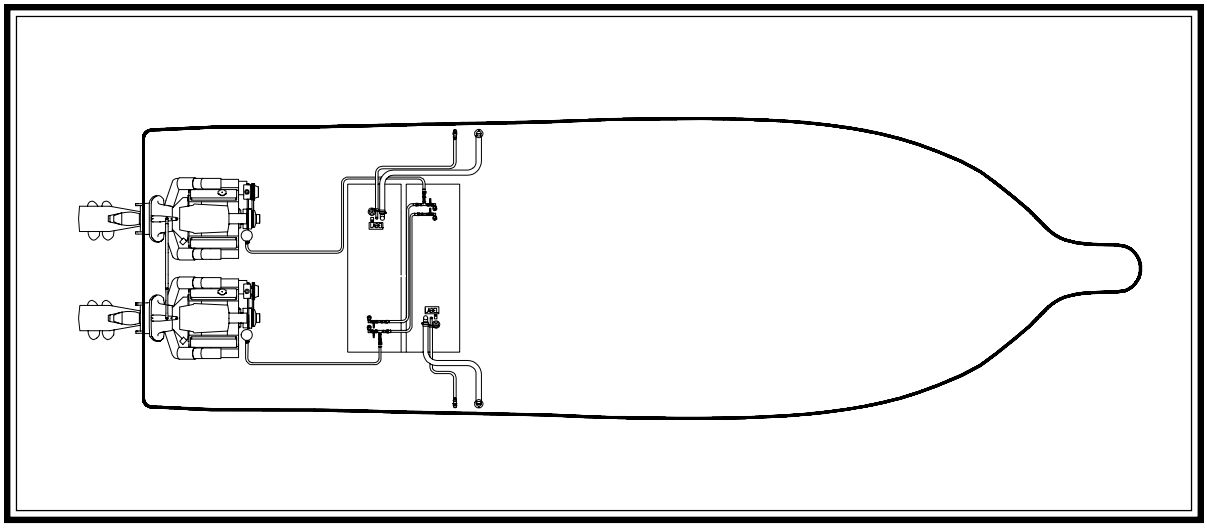
Marine growth can interfere with the proper operation of the trim tab planes and actuators. To reduce problems due to marine growth, always return the trim tabs to the full "UP" position after operating the boat and periodically inspect and clean marine growth from the actuators and planes.

The trim tab fluid should be checked often. Keep the fluid level between the marks on the trim tab pump reservoir with the trim planes in the up position.

If your Denali will be left in saltwater for extended periods it will be necessary to monitor the zinc anodes on the trim tab planes. The anodes were installed at the factory to prevent galvanic corrosion and will need to be changed when they are 75% of their original size. Refer to the trim tab owner's manual for additional maintenance information and fluid specifications.

FAILURE TO PROPERLY INSPECT AND MAINTAIN THE STEERING AND CONTROL SYSTEMS CAN LEAD TO A CONTROL SYSTEM FAILURE AND LOSS OF CONTROL. MAKE SURE YOU INSPECT AND SERVICE THE STEERING AND ENGINE CONTROL COMPONENTS FREQUENTLY.

Chapter 3:
FUEL SYSTEM



Fuel System
(For a detailed schematic, see Chapter 15)

3.1 General

The gasoline fuel system used in Pursuit boats is designed to meet or exceed 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.

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 THE ENGINE(S) AND ELECTRICAL EQUIPMENT TO INVESTIGATE AND CORRECT THE SITUATION IMMEDIATELY. HAVE ALL PASSENGERS PUT ON PERSONAL FLOTATION DEVICES AND KEEP FIRE EXTINGUISHERS READY UNTIL THE SITUATION IS RESOLVED.

Fuel Withdrawal Tubes

The fuel withdrawal tubes are positioned in the fuel tanks 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.

Fuel Gauge

This indicates the amount of fuel in the tanks. 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 indication of the available fuel supply and not a calibrated instrument.

Fuel Fills

A fuel fill deck plate is located on each gunnel, and is marked "GAS." The fuel fill is opened by turning it counter clockwise with a special key. After fueling, install the fuel cap and tighten with the key. Be sure to use the proper type and grade fuel. Refer to the engine owner's manual for additional information.

Fuel Fill

Note: 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.

DO NOT CONFUSE FUEL FILL DECK PLATES WITH THE WATER OR WASTE FILL DECK PLATES. THESE PLATES ARE ALSO LABELED ACCORDINGLY. IF GASOLINE 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 PURSUIT CUSTOMER RELATIONS DEPARTMENT FOR ASSISTANCE IN HAVING THE FUEL PROFESSIONALLY REMOVED.

Fuel Vent

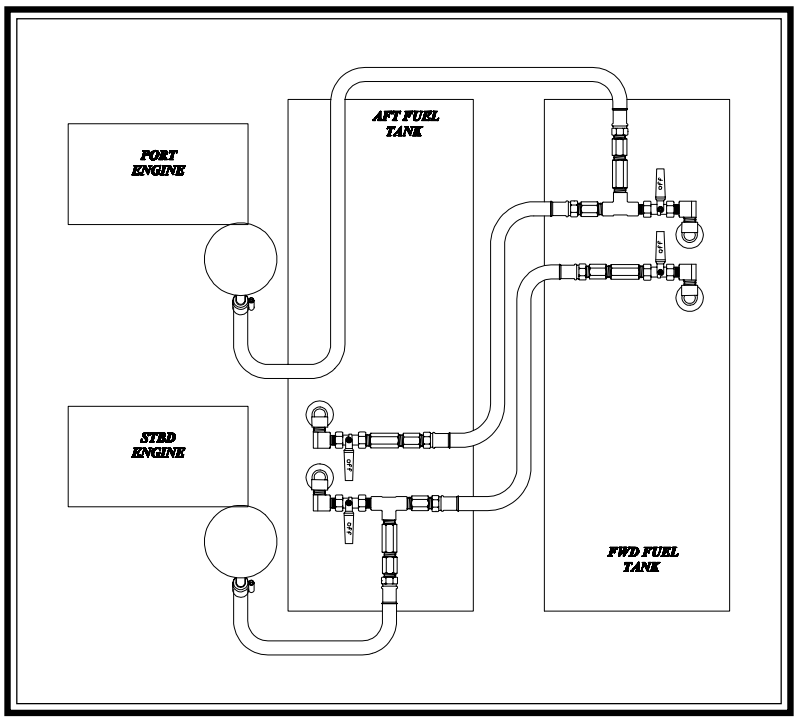
There are two fuel vent fittings, one on each side of the hull. While the tank is being filled, the air displaced by the fuel escapes through the vent. When the tank is full, fuel will be ejected from the fuel vent.

After fueling, replace the fill cap(s), and wash the areas around the fuel fill plates and below the fuel vent(s). Residual fuel left on the deck and hull sides can be dangerous, and will yellow the fiberglass or damage the striping.

3.2 Inboard/Outboard Fuel System

Twin Engine Fuel System

The fuel system on the Denali 28 has two fuel tanks and four manual fuel valves. There is one "ON/OFF" valve for each engine fuel line on each tank. The fuel valves are located on the top of the fuel tanks, below the inspection plates in the rear of the cockpit. The valves are off when the handle is perpendicular to the fuel flow. The fuel valves allow the operator to run the engines from both tanks or from either the forward tank, which fills from the starboard gunnel, or the rear tank, which fills from the port gunnel.



Twin Engine Fuel Valves

During normal operation, the engines should be supplied fuel from the rear tank first, then switched to the forward tank. It is important to switch the tanks during every trip to consume fuel from both tanks and avoid the possibility of developing stale fuel in one of the tanks.

The fuel valves on each tank are labeled port and starboard. The labels refer to the engine the valve supplies. If a fuel supply problem should occur in one of the fuel tanks, both engines can be switched to the other tank by opening both valves on that tank and closing the valves on the tank with the problem. The fuel valves on the forward tank should be off when operating both engines on the rear tank and the fuel valves on the rear tank should be off when operating both engines on the forward tank. Operating the boat with all four fuel valves open is not recommended and should be avoided.

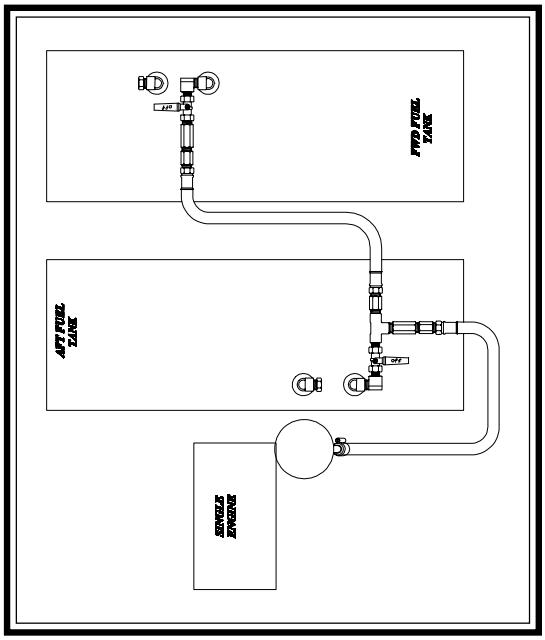
Note: The engines will not draw fuel equally from the fuel tanks when the fuel valves are set so both engines are operating from both tanks (all four fuel valves open.) This could result in one tank being exhausted of fuel while the other tank is partially full, causing fuel supply problems.

Fuel withdrawal lines are equipped with anti-siphon valves where the lines attach to the fuel tanks. These valves prevent gasoline from siphoning out of the fuel tank should a line rupture.

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

Single Engine Fuel System

The single engine fuel system on the Denali 28 has two fuel tanks and two manual fuel valves. There is one "ON/OFF" valve for each fuel line on each tank. The fuel valves are located on the top of the fuel tanks below the inspection plates in the rear of the cockpit. The valves are off when the handle is perpendicular to the fuel flow. The fuel valves allow the operator to run the engine from both tanks or from either the forward tank, which fills from the starboard gunnel, or the rear tank, which fills from the port gunnel.



Single Engine Fuel Valves

During normal operation, the engines should be supplied fuel from the rear tank first, then switched to the forward tank It is important to switch the tanks during every trip to consume fuel from both tanks and avoid the possibility of developing stale fuel in one of the tanks.

If a fuel supply problem should occur in one of the fuel tanks, the engine can be switched to the other tank by opening the fuel valve on that tank and closing the valve on the tank with the problem. The fuel valve on the forward tank should be off when operating the engine on the rear tank and the fuel valve on the rear tank should be off when operating the engine on the forward tank. Operating the boat with both fuel valves open is not recommended and should be avoided.

Note: The engine will not draw fuel equally from the fuel tanks when the fuel valves are set so the engine is operating from both tanks (both fuel valves open). This could result in one tank being exhausted of fuel while the other tank is partially full, causing fuel supply problems.

Fuel withdrawal lines are equipped with anti-siphon valves where the lines attach to the fuel tanks. These valves prevent gasoline from siphoning out of the fuel tank should a line rupture.

Fuel Filter

Each engine is equipped with a spin on, water separator type fuel filter. The filter should be checked frequently and changed at least annually to assure an adequate supply of clean, dry fuel to the engine. It is recommended that the filter is inspected after the first 25 hours of use and then serviced as needed. Follow the engine or filter manufacturer's instructions for servicing or replacing the fuel filter.

Fuel Filter

Note: Clean fuel is especially important in fuel injected engines and the engine manufacturer's recomendations for fuel filter maintenance must be followed exactly.

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

DO NOT DRAIN ANY FUEL IN THE BILGE. THIS COULD LEAD TO A FIRE OR EXPLOSION.

AFTER THE FILTER ELEMENT HAS BEEN CHANGED, PRIME THE FUEL SYSTEM AND CHECK ALL FITTINGS FOR LEAKS BEFORE AND AFTER STARTING THE ENGINE.

GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING THE ENGINE, ALWAYS OPEN ALL HATCHES, WINDOWS, AND DOORS. RUN THE BLOWER FOR AT LEAST FIVE (5) MINUTES TO COMPLETELY VENTILATE THE BOAT AFTER FUELING OR SERVICING THE FUEL SYSTEM.

3.3 Fueling Instructions

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

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

To fill the fuel tank at a marina, follow this procedure:

1. Make sure all switches are in the "Off" position.
2. Make sure the boat is securely moored.
3. Make sure all passengers leave the boat.
4. Estimate how much fuel is needed.

Note: When the fuel tank is full, fuel will come out through the fuel vent. The fuel vent is located on the side of the boat.

5. A special key to open the fuel cap is supplied.
6. Turn the key counterclockwise to open the cap.
7. Remove the cap.
8. Put the nozzle in the fuel opening.

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

SPILLED FUEL IS DANGEROUS AND CAN YELLOW FIBERGLASS OR IGNITE. MAKE SURE YOU DO NOT SPILL ANY FUEL. IF FUEL IS SPILLED ON THE DECK, USE A CLOTH TO REMOVE THE FUEL AND PROPERLY DISPOSE OF THE CLOTH. IF FUEL IS SPILLED ON THE WATER, EXERCISE EXTREME CAUTION. FUEL FLOATS ON TOP OF THE WATER AND CAN IGNITE. IF EXCESS FUEL IS SPILLED INTO THE WATER, IMMEDIATELY EVACUATE THE AREA AND NOTIFY THE MARINA AND THE PROPER OFFICIALS.

9. Fill the fuel tank to near full. Allow enough room for the fuel to expand without leaking out the vent.

10. Remove the nozzle.

11. Install and tighten the fuel cap. Be careful not to overtighten the cap.

12. Open all hatches, windows and doors. Run the blower for at least five minutes to completely ventilate the boat.

13. Check the fuel compartment and below the deck for fuel odors. If you smell fuel, do not start the engine.

BEFORE STARTING THE ENGINE, ALWAYS OPEN ALL HATCHES, WINDOWS, AND DOORS. RUN THE BLOWER FOR AT LEAST FIVE (5) MINUTES TO COMPLETELY VENTILATE THE BOAT AFTER FUELING OR SERVICING THE FUEL SYSTEM.

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

MAKE SURE ALL GASOLINE ODORS ARE INVESTIGATED IMMEDIATELY.

3.4 Fuel System Maintenance

Periodically inspect all connections, clamps and hoses for leakage and damage or deterioration. Replace as necessary. Spray the valves, fuel gauge senders and ground connections with a lubricant/protector.

Frequently inspect and lubricate the fuel fill cap O-ring seal with petroleum jelly. The O-ring 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.
Periodically, remove the fuel vents and clean corrosion and salt buildup from the vent screens. The screens will prevent insects and other foreign matter from contaminating the fuel and fuel system. Fuel vents should be replaced if the vents or screens are damaged or badly corroded. Fuel vent screens that are clogged will prevent the fuel tanks from venting properly and make filling the fuel tanks difficult or cause fuel supply problems to the engines.

Be sure the screens are secure and that the fuel tank vent hose is properly routed and attached when the vents are reinstalled or replaced. The fuel tank vent hose must be looped above the vent, secured to the hull near the vent and securely attached to the vent hose fitting with two hose clamps.

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.

Avoid using fuels with alcohol additives. Gasoline that is an alcohol blend will absorb moisture from the air which can reach such concentrations that "phase separation" can occur whereby the water and alcohol mixture becomes heavy enough to settle out of the gasoline to the bottom of the tank. Since the fuel pick up tube is very near the bottom of the tank, phase separation can cause the engine to run very poorly or not at all. This condition is more severe with methyl alcohol and will worsen as the alcohol content increases. Water or a jelly like substance in the fuel filters are an indication of possible phase separation from the use of alcohol blended fuels.

Contaminated fuel may cause serious damage to your engine. The filter must be serviced frequently. The filter element must be changed at least once a season or more frequently depending on the type of engine and the quality of the fuel. Please refer to the engine or fuel filter manufacturer's instructions for information on servicing and replacing the fuel filter element.

DO NOT DRAIN ANY FUEL IN THE BILGE. THIS COULD LEAD TO A FIRE OR EXPLOSION.

AFTER THE FILTER ELEMENT HAS BEEN CHANGED, PRIME THE FUEL SYSTEM AND CHECK ALL FITTINGS FOR LEAKS BEFORE AND AFTER STARTING THE ENGINE.

BEFORE STARTING THE ENGINE, ALWAYS OPEN ALL HATCHES, WINDOWS, AND DOORS. RUN THE BLOWER FOR AT LEAST FIVE (5) MINUTES TO COMPLETELY VENTILATE THE BOAT AFTER FUELING OR SERVICING THE FUEL SYSTEM.

Chapter 4:
ELECTRICAL SYSTEM

4.1 General

Your Pursuit is equipped with a 12-volt DC electrical system and a 110-volt AC system. The AC system draws current from shore power outlets at dockside. The DC system draws current from two on-board batteries.

The 12-volt batteries in your boat are usually the lead-acid type. They will require similar maintenance as those found in automobiles.

There are electrical schematics included in this manual to aid in following an individual circuit of the boat.

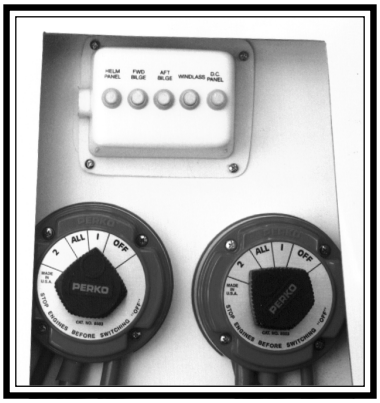
4.2 12-Volt DC System

The 12-volt system is a fairly standard system. On twin engine boats, there are two batteries, one for the starboard engine and one for the port engine. The batteries are controlled by two battery selector switches. The batteries can be charged by either engine separately, both engines simultaneously, or by the battery charger when hooked to shore power. On single engine boats, the batteries are controlled by one battery selector switch and one on/off main accessory switch. The batteries can be charged separately or simultaneously, by the engine, or by the battery charger when hooked to shore power.

All 12-volt power is distributed to the 12-volt accessories through individual circuit breakers located in the 12-volt switch panels or the cabin circuit breaker panel. A main circuit breaker, located near the battery selector switch, protects the system from an overload. Other circuit breakers, located near the selector switch, protect the circuit for the automatic float switch for the aft bilge pump, windlass and cabin DC panel. Most 12-volt accessories are operated directly by switches in the helm and accessory switch panels.

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 Battery Selector Switches



Twin Engine Battery Switches

There are two battery selector switches located in the engine compartment. One battery switch feeds the starboard engine and the 12-volt accessory panel. The other battery switch feeds the port engine. 12-volt power can be supplied by either battery #1 or battery #2 separately or by both batteries simultaneously. The selector switches also direct the charging current when the engines are operating.

For example: When both selector switches are on battery #1, both engines and the 12-volt panels will be powered by battery #1. Battery #2 will be isolated and in reserve. Battery #1 will be charged by both alternators. When both selector switches are on battery #2, both engines and the 12-volt panels will be powered by battery #2. Battery #1 will now be isolated and in reserve. Battery #2 will then be charged by both alternators.

When both selector switches are on "ALL," the batteries are connected in parallel. Thus, both batteries are used by both engines and all 12-volt equipment. Both batteries will then be charged by both alternators.

The "ALL" positions should only be used when starting the engines, as this requires extra electrical power, or in case of a charging system malfunction on one engine. Operating the boat with both selector switches in the "ALL" position with fully charged batteries could cause voltage fluctuations in the 12-volt electrical system that may adversely affect the electronic engine controls. Therefore, it is recommended that one selector switch be set on battery #1 and the other switch be on battery #2 when the engines are operating.

When in port or at anchor, the switch that supplies the port engine should be off and the switch that supplies the starboard engine should be on either the battery #1 or the battery #2 position. This will keep one battery in reserve for starting the engines. Both switches should be in the "OFF" position when leaving the boat unattended.

Single Battery Selector Switch

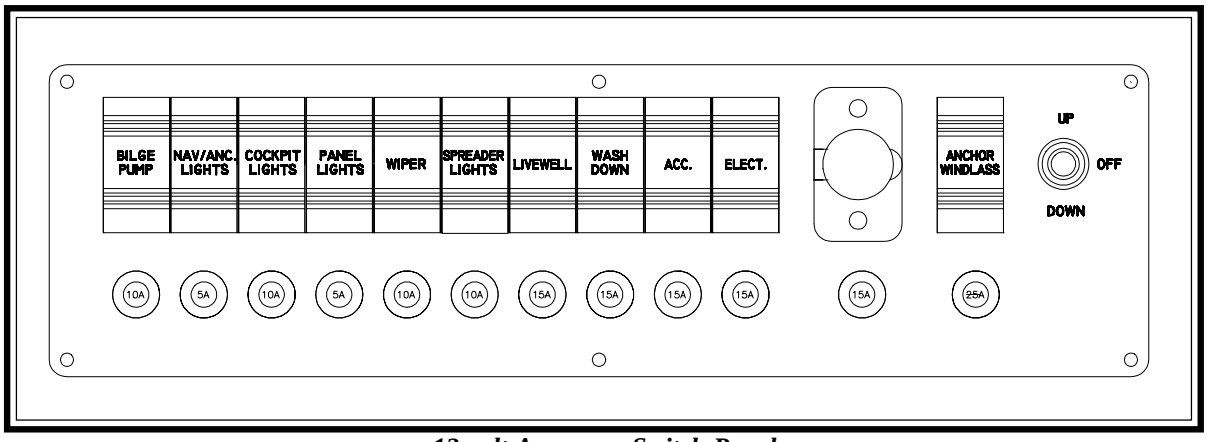
The battery selector switch is located in the engine compartment. The selector switch feeds the engine, ignition switch, gauges and all engine related accessories. An on/off main accessory switch, located next to the battery selector switch, supplies current to the 12-volt accessory switch panel, the cabin accessory breaker panel and the other 12-volt accessories in your boat. 12-volt power can be supplied by either battery # 1 or battery # 2 separately or by both batteries simultaneously. The selector switch also directs the charging current when the engine is operating. Additionally, the battery selector switch must be on to supply current to the on/off main accessory switch.

For example: When the battery selector switch is on battery # 1, the engine and the 12-volt accessory main switch will be supplied power by battery # 1. Battery # 2 will be isolated and in

reserve. Battery # 1 will be charged by the alternator. When the selector switch is on battery # 2, the engine and the 12-volt accessory main switch will be supplied power by battery # 2. Battery # 1 will be isolated and in reserve. Battery # 2 will then be charged by the alternator.

When the selector switch is on "ALL," the batteries are connected in parallel so the engine and the 12-volt system will be supplied power by both batteries. Both batteries will be charged by the alternator. The "ALL" position should only be used when starting the engine, as this requires extra electrical power, or when both batteries are low and need charging. Otherwise, it is recommended that the selector switch be set on battery # 1 or battery # 2 when the engine is operating. While in port, or at anchor, the battery selector switch should be on either the battery # 1 or the battery # 2 position. This will keep one battery in reserve for starting the engine. The battery switch should be turned to the "OFF" position when leaving the boat unattended.

Note: Current is supplied to the automatic float switches for the bilge pumps when the batteries are connected and the battery selector switches are off.



12-volt Accessory Switch Panel

12-volt Accessory Switch Panels

The main accessory switch panel is located in the starboard side panel at the helm. The circuit breakers that protect the accessories are located near the switches.

The following is a description of the accessories controlled by the main accessory switch panel:

Note: Please refer to the DANGER and CAUTION notations in the Ventilation System Chapter 8.

Bilge Pump

The aft bilge pump is installed in the rear center of the bilge. The pump moves water out through the thru-hull fittings in the hull side. To start the pump manually, put the switch in the "ON" position.

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

A forward bilge pump is installed in the center of the bilge below the rear berth. The pump moves water out through a fitting near the water line on the hull side. The pump is completely automatic and there is no manual switch in the panel. It will cycle to check for bilge water every few minutes for approximately 2 seconds. If the pump senses water, it will continue to pump until the water is completely discharged, if it does not sense water, it will immediately shut off. The electrical drain during the check cycle is negligible and will not affect the battery condition under normal circumstances. The pump is always supplied current when the batteries are connected and is protected by a circuit breaker located in the rear breaker panel.

Anchor/Nav Lights
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.

Cockpit Lights
Activates the lights that illuminate the cockpit area.

Panel Lights
Activates the engine gauge and compass lights.

Wiper
Activates the windshield wipers.

Interior Lights
Activates the lights in the cuddy cabin.

Livewell Switch
This switch activates the livewell circulating pump that supplies water to the livewell.

Washdown Pump
This switch activates the raw water washdown pump. The pump is the pressure demand type and is protected by a circuit breaker in the panel and an automatically resetting breaker on the pump motor.

Note: Please refer to Chapter 6 for more information on the baitwell and washdown systems.

Freshwater
Activates the freshwater pump pressure switch located on the pump. The pressure switch automatically controls the water pump when the system is activated and properly primed. It is protected by a circuit breaker in the panel and an automatically resetting breaker on the pump motor.

Electronics Switch
This switch supplies 12-volt electrical current to the electronics.

12-volt Receptacle
Provides electrical current for portable 12-volt equipment.

Windlass Safety Switch
The windlass safety switch is located on the helm switch panel next to the windlass switch. Turn the safety switch on to activate the windlass control switch and turn it off whenever the windlass is not in use. This switch is provided to reduce the possibility of accidentally activating the windlass. It is protected by the type and size circuit breaker recommended by the windlass manufacturer.

Windlass Switch
This switch controls the optional windlass which is mounted to the deck directly above the rope locker. It is activated by the windlass safety switch and protected by the windlass safety switch breaker. Please refer to Chapter 11 and the windlass owner's manual for additional information on the operation of the windlass.

Additional Accessory Switch Panels
Additional switch panels are located in various locations in the cockpit and helm area of the boat. The following is a description of additional panels that may be on your Pursuit and the accessories they control:

Horn
Activates the boat horn.

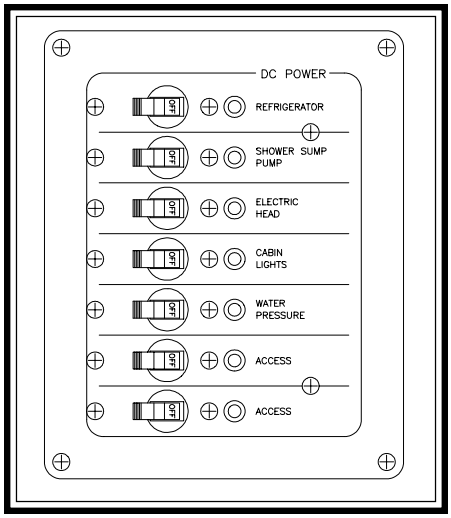
Bilge Blower
This switch supplies electrical current to the blowers that provide ventilation to the engine compartment prior to start up and while operating below cruise speed.

Trim Tab Switch
Located in the helm. This switch controls the trim tab planes located on the transom of the boat. It is protected by the 12-volt receptacle plug breaker. Please refer to Chapter 2 for detailed information on the operation of the trim tab controls.

Engine Trim and Tilt Switches
Located in the helm. These switches may be installed in the engine control handle or on the helm console, depending on the engines installed in your boat. They control the trimming and tilting of the outdrives. Please refer to Chapter 2 and the engine owners manual for information regarding the proper use of the tilt and trim switches.

Cabin DC Accessory Breaker Panel

Power is distributed to the 12-volt cabin accessories through individual circuit breakers located in the DC panel. A main breaker located near the battery selector switch and the panel protects the system from an overload. Some 12-volt accessories are operated directly by the circuit breaker in the panel while others are operated by switches fed by the panel breakers.



DC Breaker Panel

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 accessories controlled by the cabin DC breaker panel:

Refrigerator

Supplies 12-volt electrical current directly to the optional refrigerator when 110-volt power is not available or chosen over the 12-volt supply.

Shower Sump Pump

Supplies 12-volt electrical current directly to the cabin/shower sump pump automatic float switch which automatically controls the shower and cabin drain sump pump. Make sure this breaker is on before using the shower or the cabin sinks.

Head

Supplies electrical current directly to the switch which controls the optional electric head. Also supplies electrical current to the optional macerator over board discharge pump.

Cabin Lights

Supplies 12-volt electrical current to the cabin light switches.

Water Pressure

Supplies 12-volt electrical current directly to the freshwater pump pressure switch located on the pump. The pressure switch automatically controls the water pump when the system is activated and properly primed.

Accessory
Reserved for additional 12-volt equipment.

Accessory
Reserved for additional 12-volt equipment.

4.3 110-Volt AC System

The 110-volt AC system is fed by the shore power outlet. It is wired totally separate from the 12-volt DC system and is equipped with an on-board isolation transformer to protect the boat from stray current. All 110-volt current is distributed to the 110-volt accessories through individual circuit breakers located in the 110-volt panel. The main breaker in the panel protects the system from an overload and the reverse polarity light indicates any problems due to an improper shore power supply. All AC outlets in the cabin are protected by ground fault interrupts to protect against electrical shock. A cord set is provided to supply power from the shore power outlet to the boat's 110-volt AC system.

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.

TO REDUCE THE POSSIBILITY OF AN ELECTRICAL SHOCK, IT IS IMPORTANT THAT THE 110-VOLT 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 110-VOLT AC SHOULD BE DISCONNECTED UNTIL THE NECESSARY REPAIRS ARE COMPLETED.

Recommended procedure for making a shore connection
Turn the AC main breaker to the "OFF" position. If the dockside outlet includes a disconnect switch, turn it to the "OFF" position also.

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. Then connect the cable in the boat plug inlet and the dockside outlet, making sure the connection plug includes a three-prong plug with a ground wire. Tighten the lock rings on both the shore and the boat connector plugs.

Shore Power Inlet

Turn the dock side disconnect switch or circuit breaker to the "ON" position and check for proper polarity. If reverse polarity has been achieved, the red polarity indicator in the 110-volt panel will light. If this should happen, make sure the main breaker on the panel is in the "OFF" position and turn the dock power switch or breaker off. A special relay attached to the main breaker should automatically turn the main breaker off whenever reverse polarity is achieved. Notify a qualified electrician to check the wiring at the dock outlet.

If the red polarity light does not illuminate when power is supplied to the panel, the polarity is correct and the AC main switch can be moved to the "ON" position.

DO NOT OPERATE THE AC ELECTRICAL SYSTEM FROM SHORE POWER WITH REVERSE POLARITY. REVERSE POLARITY WILL DAMAGE THE SYSTEM AND EXPOSE PASSENGERS TO ELECTROCUTION HAZARDS. THIS CONDITION COULD ALSO CAUSE A FIRE IN THE ELECTRICAL SYSTEM.

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 AND ALWAYS USE GROUNDED APPLIANCES ON BOARD YOUR BOAT.

UNDETECTED FAULTS IN THE AC ELECTRICAL 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 110-VOLT AC SYSTEM IS ACTIVATED BY THE SHORE POWER CONNECTION.

Disconnecting procedure for shore power connection

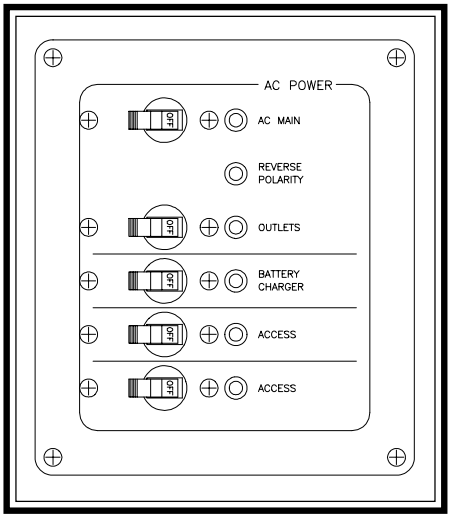
Turn the main breaker on the 110-volt AC panel to the "OFF" position.

Turn the disconnect switch on the dockside outlet to the "OFF" position.

Disconnect the cable from the dockside outlet and replace the outlet caps. Disconnect the cable from the boat and replace the inlet cap. Store cable.

110-Volt AC Panel and Accessory Operation

The AC panel is located in the cabin. The following is a description of the AC panel equipment and the breakers that protect the accessories:



AC Breaker Panel

AC Main Breaker

Protects the general distribution network. This breaker is very sensitive. The resulting power surge that occurs when connecting the dockside cord may cause the main breaker to trip. To avoid this surge, always turn the main breaker to the "OFF" position before plugging or unplugging the shore power cord.

Polarity Light

The red light indicates reverse polarity current supplied to the panel. This situation will cause the red light to remain lit. Additionally, a special relay attached to the main breaker will automatically turn the main breaker off whenever reverse polarity is achieved. If reverse polarity is achieved, immediately turn off all cabin 110-volt breakers and dockside outlet breakers. Disconnect the power cable from the dockside outlet and notify a qualified electrician to check the dockside wiring.

Outlets

Supply electrical current to the cabin ground fault interrupter (GFI) electrical outlets.

Note: All AC electrical outlets are provided with ground fault interrupts to protect against electric shock. These outlets should be tested periodically to insure proper operation by pressing the test/reset buttons in the center of the face plate. GFI outlets do not protect against short circuits and overloads. This is done by the outlet breakers on the AC panel.

GFI OUTLETS DO NOT PROVIDE 100% PROTECTION FROM ELECTRIC SHOCK. EVEN THOUGH GROUND FAULT INTERRUPTERS PROVIDE PROTECTION BY REDUCING EXPOSURE TIME FROM LINE TO GROUND SHOCK HAZARDS, IT IS STILL POSSIBLE TO RECEIVE AN ELECTRIC SHOCK FROM DEFECTIVE APPLIANCES OR POWER TOOLS AND MISUSED ELECTRICAL EQUIPMENT.

Refrigerator
Supplies 110-volt electrical current directly to the optional refrigerator when 110-volt power is available and chosen over the 12-volt power supply. See the refrigerator manual for more information.

Battery Charger
Supplies electrical current directly to the automatic battery charger. The battery charger is located behind the access hatch in port side of the aft berth and automatically charges and maintains the 12-volt batteries simultaneously when activated. The charger is fully automatic and is equipped with a volt or amp meter.

Charging can also be monitored by using the volt meter in the engine gauge cluster. With the charger activated, turn the ignition key switch that activates the volt meter in the helm to the "ON" position. **(DO NOT START THE ENGINES)** Then select the batteries one at a time and read the voltage on the volt meter. If the batteries are in good condition and charging properly, the volt meter 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 switch off immediately after the monitoring is complete. See the battery charger manual for more information.

Accessory
Reserved for additional 110-volt equipment. An air conditioner or a water heater are optional accessories that may be connected to the accessory breaker. See the air conditioner or water heater manual for more information.

4.4 Electrical System Maintenance

12-Volt DC Electrical System Maintenance
At least once a year, spray all exposed electrical components behind the helm and in the plugs, with a protector. Exterior light fixture bulbs should be removed and the metal contact areas coated with a non-water soluble lubricant like petroleum jelly. 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.

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.

Check the electrolyte level in the batteries regularly and add distilled water as necessary. If the batteries are frequently charged by the automatic battery charger, the electrolyte level will have to be checked more often. The correct fluid level in the cells is usually 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!** Please note that some batteries are sealed and cannot be filled.

Keep the 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 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 petroleum jelly 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.

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.

110-Volt AC Electrical System Maintenance

Periodically inspect all wiring for nicks, chafing, brittleness, improper support, etc. Examine the shore power cord closely for cracks in the insulation and corrosion in electrical connectors. Spraying receptacles and electrical connections with an electrical contact cleaner or a metal and electrical protector will reduce corrosion and improve electrical continuity.

Inspect all wiring for proper support, sound insulation, and tight terminals, paying particular attention to portable appliance cords and plugs.

The entire 110-volt circuitry, especially the shore power cord, should be seasonally tested for proper continuity by an experienced electrician. This will detect any shorts, open wires, or ground faults. Ground fault interrupts should be tested periodically to insure proper operation by pressing the test/reset buttons in the center of face plate. The polarity indicator system also should be inspected for proper operation.

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

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

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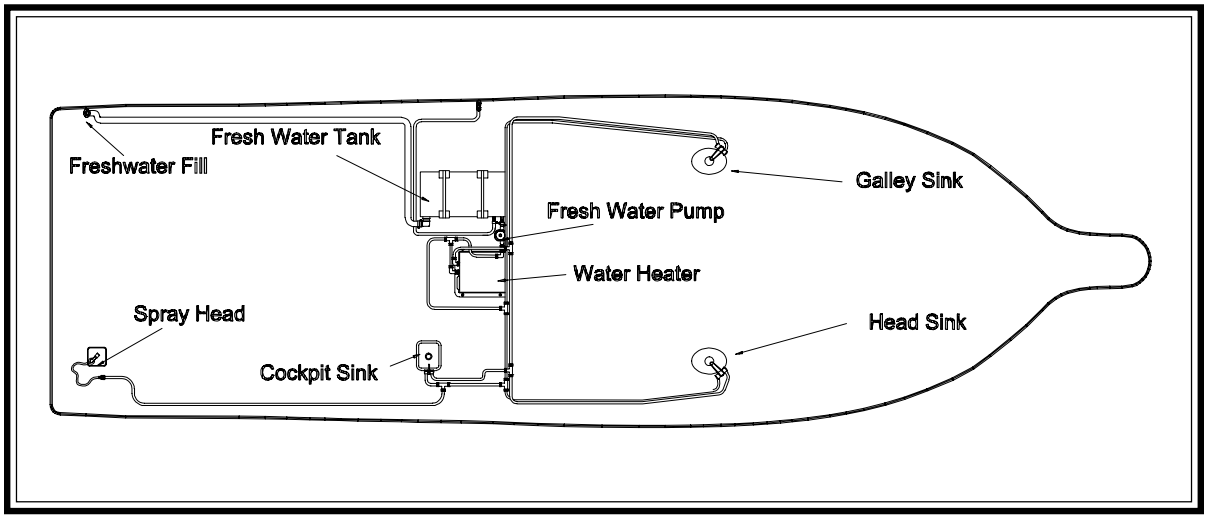
Chapter 5:
FRESHWATER SYSTEM



Freshwater System

5.1 General

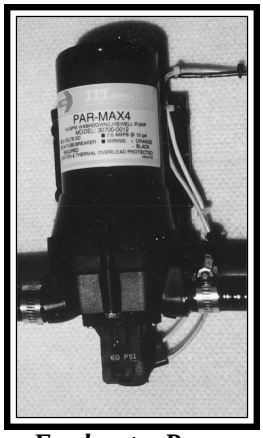
The freshwater system consists of a potable water tank, distribution lines, a distribution pump and could be equipped with a hot water tank. The water tank is filled through a labeled deck plate located on the side of the gunnel.

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

DO NOT CONFUSE FUEL FILL DECK PLATES WITH THE WATER OR WASTE FILL DECK PLATES. THESE PLATES ARE ALSO LABELED ACCORDINGLY. IF GASOLINE OR DIESEL 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 PURSUIT CUSTOMER RELATIONS DEPARTMENT FOR ASSISTANCE IN HAVING THE FUEL PROFESSIONALLY REMOVED AND COMPONENTS OF THE FRESHWATER SYSTEM REPLACED AS NECESSARY.

5.2 Freshwater System Operation

Fill the water supply tank slowly through the labeled deck plate.



Freshwater Pump

After filling the water tank, partially open the freshwater faucets. The freshwater switch on the 12-volt panel should be on. Allow the pump to run until all of the air is purged from the system and a steady stream of water is flowing from the outlet. Next, turn off the faucets. 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. Whenever the boat is left unattended, the freshwater pump switch or breaker should be placed in the "OFF" position.

Note: Always make sure the shower sump pump is activated before operating the cabin faucets.

DO NOT ALLOW THE FRESHWATER PUMP TO RUN DRY. THE FRESHWATER 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 PRESSURE WATER BREAKER OFF WHEN THE FRESHWATER SYSTEM IS NOT IN USE.

5.3 Water Heater (optional)

The water heater is located in the bilge. All heaters have a 110-volt element that is thermostatically controlled at the heater and activated by a circuit breaker located in the 110-volt panel. A high pressure relief valve protects the system from excessive pressure. Always make sure all air is purged from the water heater and lines before activating the water heater breaker. Refer to the water heater owner's manual for additional information.

DO NOT SUPPLY CURRENT TO AN EMPTY WATER HEATER. DAMAGE TO THE HEATER WILL RESULT. THE SYSTEM MUST BE FILLED AND PRIMED BEFORE USING THE WATER HEATER.

5.4 Shower Operation

To obtain the most consistent temperature, fully open the cold water faucet. Gradually open the hot water faucet until the desired temperature is obtained. Some minor variations in the water temperature may occur as the pressure pump cycles.

Shower and cabin sink water is drained from the boat by a sump pump system connected to the shower and sink drains. An automatic float switch in the shower sump controls the pump. The pump is protected by the shower sump pump circuit breaker in the panel. After showering, let the cold water flow for a period of time to flush the drainage system of soap residue.

Note: The shower drain strainer must be cleaned regularly. It is also essential that the sump be inspected periodically for accumulated debris that needs to be removed.

5.5 Shore Water Connection (Dealer Installed Option)

A shore water connection allows the direct connection of the water system to a shore side water supply. This provides the system with a constant supply of freshwater and minimizes the pressure pump operation.

A female inlet fitting is mounted in the cockpit. A pressure reducer is installed in the system along with two check valves. One check valve keeps water from running out of the shore water inlet fitting when the pressure pump operates. The second provides protection for the pressure pump when the shore power is connected.

To use shore water, connect a hose from the shore water faucet to the shore water fitting on the boat. Next, turn on the shore water. The pressure pump will not run and the water in the boat's water tank will not be used.

Note: The water tank will not be filled by connecting to shore water.

DO NOT MODIFY OR CHANGE THE SHORE WATER INLET CONNECTOR WITH ANOTHER TYPE WITHOUT CONSULTING PURSUIT CUSTOMER RELATIONS OR YOUR DEALER. THE USE OF THE WRONG TYPE OF INLET CONNECTOR CAN DAMAGE THE FRESHWATER SYSTEM.

5.6 Freshwater 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 freshwater system:

- Periodically, remove the water tank vent and clean corrosion and salt buildup from the vent screens. The screens will prevent insects and other foreign matter from contaminating the water system. The vent should be replaced if the vent or screens are damaged or badly corroded. Vent screens that are clogged will prevent the water tank from venting properly and make filling the tank difficult.

  Be sure the screens are secure and that the vent hose is properly routed and attached when the vent is reinstalled or replaced. The vent hose must be looped above the vent, secured to the hull near the vent and securely attached to the vent hose fitting with a hose clamp.

- Remove the filter screens from the faucet spouts and eliminate any accumulation of debris. A build up of debris can cause the pump to cycle excessively.

- Periodically spray the pumps 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.

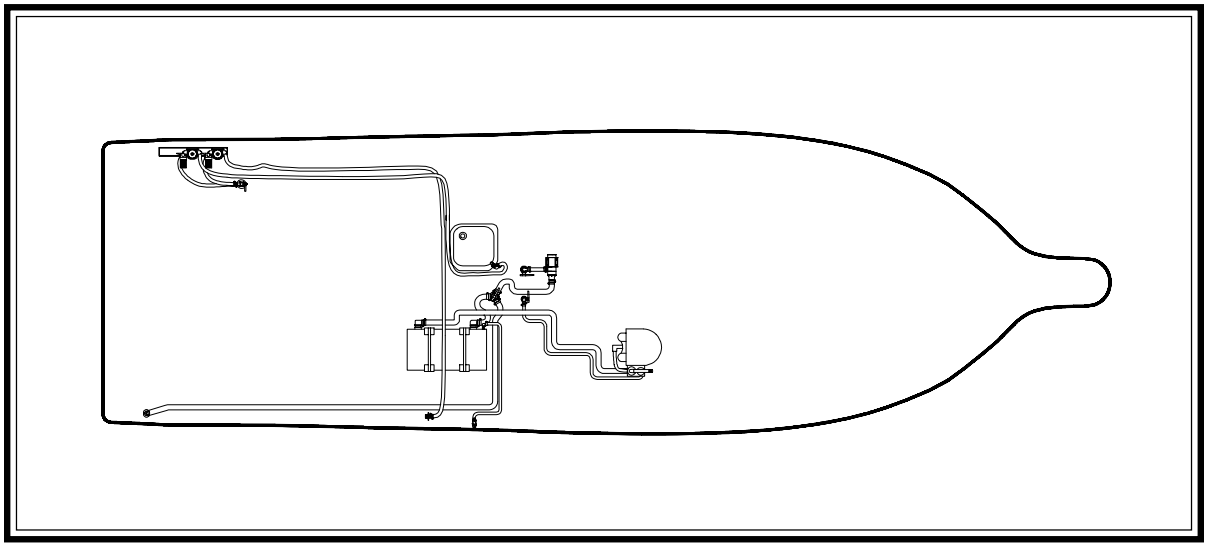
- Add a commercially available potable water conditioner to the water tank to keep it fresh.

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

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

THE WATER PRESSURE BREAKER SHOULD BE PLACED IN THE "OFF" POSITION WHENEVER LEAVING THE BOAT UNATTENDED OR WHEN THE FRESHWATER SYSTEM IS NOT IN USE.

Chapter 6:
RAW WATER SYSTEM



Raw Water System

6.1 General

In the raw or sea water systems, each water pump is supplied by a hose connected to a ball valve and thru hull fitting located in the bilge compartment. Always make sure the ball valves are open before attempting to operate any component of the raw water system.

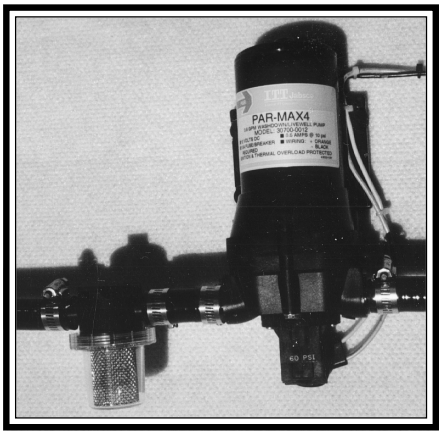
12-volt pumps supply sea water to most of the various accessories. If the dealer installs an air conditioner, it uses a 110-volt AC. sea water supply pump. This would be the only 110-volt AC pump in the system and is automatically activated when the air conditioning or heating system is in use.

Priming the System
Make sure the thru hull ball valves are open. Open the hose connector for the raw water washdown and activate the pressure pump by turning the washdown pump switch to the "ON" position. Run the pump until all of the air is purged from the system and then turn the switch off. Turn the livewell switch to the "ON" position. Run the pump until all of the air is purged from the system and then turn the switch to the "OFF" position.

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

6.2 High Pressure Washdown

A saltwater high pressure pump, controlled by a pressure sensor, supplies the raw water hose connector located in the cockpit. The pump is activated by the washdown switch located in the helm. This switch should be turned to the "ON" position just before using the washdown and be turned to the "OFF" position when the washdown is not in use.



Washdown Pump

When activated, the pressure switch will automatically control the pump. As the pressure builds in the washdown hose, the pump will shut off. When the washdown hose is in use and the pressure drops, the pump will turn on.

The raw water washdown system is equipped with a sea strainer located on the intake side of the pump. This should be checked frequently and cleaned as necessary.

The Washdown Pump Connection

The washdown pump hose connection is located in the cockpit and uses a standard garden hose connection.

Washdown Hose Connector

ALWAYS TURN THE RAW WATER PUMP SWITCH TO THE "OFF" POSITION WHEN LEAVING THE BOAT UNATTENDED.

DO NOT RUN THE HIGH PRESSURE PUMP DRY FOR EXTENDED PERIODS AS DAMAGE TO THE PUMP WILL RESULT.

6.3 Livewell

Sea water is provided to the livewell by a 12-volt circulation pump. This pump is designed to carry a constant flow of water to the livewell. The pump is not equipped with a pressure sensor and is activated by the livewell switch in the 12-volt panel or a separate switch in the cockpit. If there is a light in the livewell, it is also activated by the livewell switch.

An overflow built into the livewell automatically controls the water level in the livewell. Always turn the pump off at the switch panel when the livewell is not in use.

Livewell

To fill the livewell, insert the plug into the drain fitting at the bottom of the livewell. Make sure the valve in the intake thru hull fitting is open and activate the livewell switch. When the water level reaches the overflow, it will automatically be regulated.

To drain the livewell, turn off the livewell pump and pull out the plug in the drain fitting at the bottom of the livewell. When the livewell has completely drained, use the washdown hose to flush the livewell and drain of debris.

The livewell supply thru hull valve should be closed whenever the livewell is not in use. This will prevent water from entering the livewell while the boat is cruising.

The livewell system is equipped with a sea strainer on the intake side of the pump located in the bilge behind the stern access hatch. This should be checked frequently and cleaned as necessary.

Note: Do not use the livewell as a dry storage area when it is not in use. Sea water could accidently be delivered to the livewell from the thru hull fitting and damage equipment stored there.

ALWAYS TURN THE LIVEWELL PUMP SWITCH TO THE "OFF" POSITION WHEN LEAVING THE BOAT UNATTENDED.

DO NOT RUN THE LIVEWELL PUMP DRY FOR EXTENDED PERIODS AS DAMAGE TO THE PUMP WILL RESULT.

6.4 Raw Water System Maintenance

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

- Check hoses, particularly the sea water supply line, for signs of deterioration. Replace as necessary.
- Remove and clean the sea water strainers.
- Spray pumps with a protective oil periodically.
- The fishboxes and livewell should be drained and cleaned after each use.
- Operate all thru hull valves at least once a month to keep them operating properly.

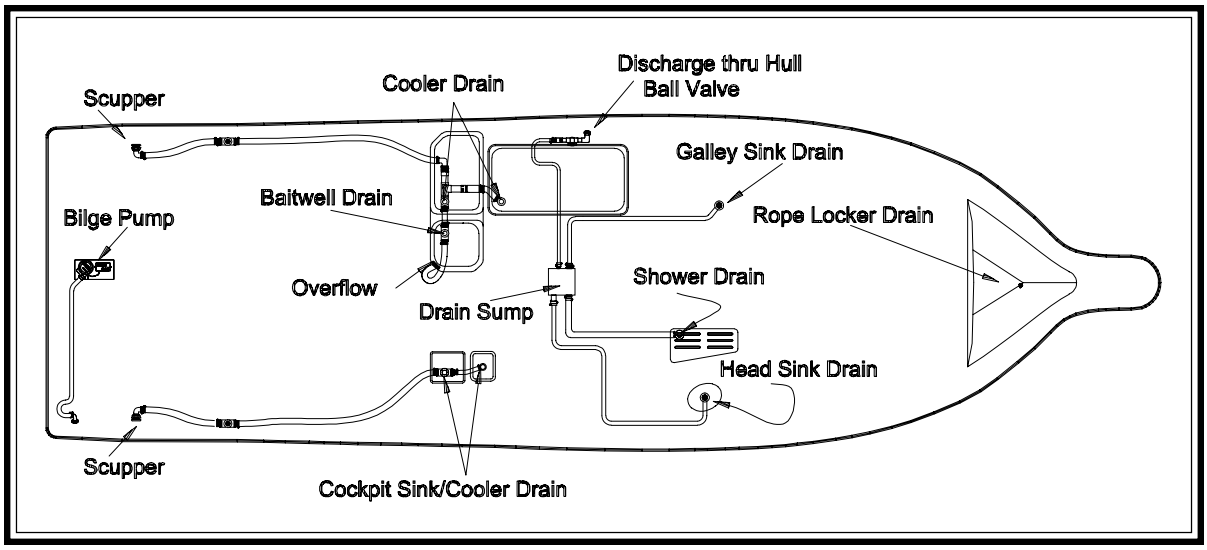
If a light is installed in the livewell, the light assembly is accessed from below the cockpit and through the center cockpit hatch located near the livewell. If the bulb needs replacing, open the hatch and carefully work the socket out of the light assembly. The wire should be long enough to pull the socket and bulb out of the light assembly. Apply a thin layer of petroleum jelly to the base of the new bulb and insert it into the socket. Care must be taken not to get any oil or petroleum jelly on the glass portion of the bulbs as this will cause the bulb to overheat and burn out. Insert the bulb and socket into the light assembly.

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

Chapter 7:
DRAINAGE SYSTEMS



Drainage System

7.1 General

All water is drained by gravity to overboard thru hull fittings located in the hull sides above the water line. All drains in the cockpit are connected to the scupper thru hull fittings. It is important to check the drain system frequently to insure it is free flowing and that the hoses on the 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.

SITUATIONS REQUIRING ONE OR MORE DRAIN VALVES TO BE CLOSED CAN BE POTENTIALLY DANGEROUS TO THE BOAT AND YOUR CREW. IF THIS OCCURS, DISTRIBUTE PERSONAL FLOTATION DEVICES TO THE CREW AND TAKE ALL NECESSARY SAFETY PRECAUTIONS, INCLUDING NOTIFYING THE COAST GUARD, UNTIL THE PROBLEM IS FOUND AND CORRECTED.

7.2 Cockpit Drains

Your Denali has two scupper drains located in the rear of the cockpit. Water is channeled away from all hatches by a gutter or drain rail system. The water then drains overboard through the scupper drain system.

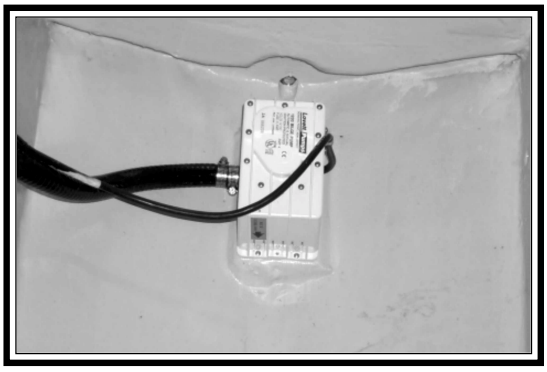
Scupper

7.3 Drink Holder Drains

Your Denali 28 is equipped with drink holders at the helm and passenger seats. Water is channeled from the drink holders to the cockpit sole and then overboard through the scuppers.

7.4 Bilge Drainage

The stern bilge pump is activated both manually, by a switch in the helm station, and automatically, by a float switch built into the pump. The automatic float switch remains activated when the battery switches are in the "OFF" position and the batteries are connected. All bilge pumps pump water out of thru hulls located above the waterline in the hull.



Bilge Pump

A forward bilge pump is installed in the center of the bilge below the aft berth. The pump moves water out through a fitting near the water line on the hull side. The pump is completely automatic and there is no manual switch in the panel. It will cycle to check for bilge water every few minutes for approximately 2 seconds. If the pump senses water, it will continue to pump until the water is completely discharged, if it does not sense water, it will immediately shut off. The electrical drain during the check cycle is negligible and will not affect the battery condition under normal circumstances. The pump is always supplied current when the batteries are connected and is protected by a circuit breaker located in the rear breaker panel.

Note: The bilge pumps will start automatically when there is sufficient water in the bilge to activate the automatic switch. The automatic circuit is always supplied current when the batteries are connected.

When the boat is out of the water the bilge can be drained by a thru hull drain located in the transom near the bottom of the hull. The plug should be removed 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.

A LOOSE DRAIN PLUG WILL ALLOW SEA WATER TO ENTER THE BILGE AND COULD CAUSE THE BOAT TO SINK. IT IS VERY IMPORTANT TO CHECK THE DRAIN PLUG FREQUENTLY TO INSURE IT IS PROPERLY TIGHTENED.

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

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 $5,000.

CERTAIN BULKHEAD AREAS ARE SEALED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS THAT WERE IN EFFECT AT THE DATE OF MANUFACTURE OF THE BOAT. ANY MODIFICATIONS TO THESE BULKHEADS SHOULD BE IN ACCORDANCE WITH THE U.S. COAST GUARD REGULATIONS.

7.5 Radar Arch Drains

There is a hole drilled in one of the 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, that allows water to drain.

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.

7.6 Cooler/Fishbox Drains

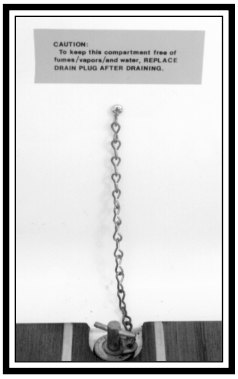
There are two cooler/fishboxes. One is under the passenger lounge seat and another is built into the engine hatch. Both are drained by gravity. Water drains out of the lounge cooler/fishbox through the scuppers. The engine hatch cooler/fishbox drains overboard through a drain in the side of the engine hatch. The cooler/fishboxes should be flushed out and cleaned after each use.

7.7 Water System Drains

All exterior sinks and livewells, provided with fresh or raw water, drain by gravity to overboard thru hulls located in the hull sides just above the waterline. The overflow in the optional livewell also drains overboard.

7.8 Shower and Cabin Drains

The shower and cabin sinks are drained from the boat by a sump pump system connected to the shower and sink drains. The sump system is located in the bilge below the aft berth in the cabin. An automatic float switch in the shower sump controls the pump which is protected by the shower sump circuit breaker in the panel. **Make sure the shower sump pump breaker is on before using the shower or the cabin sinks.** After showering, let the cold water flow for a period of time to flush the drainage system of soap residue. The sump has a removable hatch to allow the system to be inspected and serviced. It is essential that the sump system be inspected periodically and any accumulated debris removed. There is a PVC ball valve on the thru hull fitting for the shower sump pump discharge hose. Operate all thru hull valves at least once a month to keep them operating properly.



Cabin Drain Plug

A drain plug in the cabin sole is provided to drain water that may accumulate on the cabin floor. This plug keeps the engine compartment and bilge isolated from the cabin and should be removed only to drain water from the cabin floor and reinstalled when the draining is complete.

TO KEEP THE CABIN FREE OF FUMES, VAPORS AND WATER, ALWAYS REPLACE AND PROPERLY SECURE THE DRAIN PLUG IN THE CABIN SOLE AFTER DRAINING.

7.9 Rope Locker Drain

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

7.10 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 and radar arch 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 automatic bilge pump switch for proper operation. This is accomplished by inserting a stiff wire or small rod through one of the slots in the float chamber of the pump and lifting the float switch 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.
- Flush all gravity drains with freshwater to keep them clean and free flowing.
- Clean and inspect the cabin and shower drain sump system. Remove accumulated debris and flush with freshwater. Frequently test the automatic pump switch for proper operation.
- Clean and flush the fishbox and cooler storage boxes with soap or a bilge cleaner and freshwater after each use to keep them clean and fresh.

ALL DRAINS AND PUMPS MUST BE PROPERLY WINTERIZED BEFORE WINTER LAY-UP.

NEVER USE HARSH CHEMICAL DRAIN CLEANERS IN MARINE DRAIN SYSTEMS. PERMANENT DAMAGE TO THE HOSES AND FITTINGS MAY RESULT.

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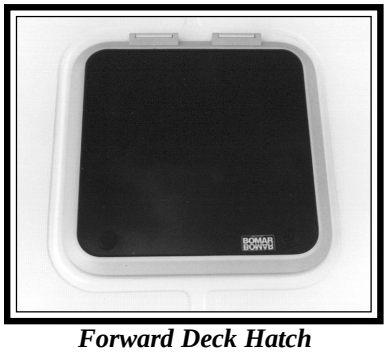
Chapter 8:
VENTILATION SYSTEM

8.1 Cabin Ventilation

Ventilation to the cabin area is provided by a deck hatch, and louvers in the cabin doors.

Cabin Door



Forward Deck Hatch

Deck Hatch

The deck hatch is supported in the open position by an adjustable hatch adjuster. To close the hatch, loosen the hatch adjuster and lower the hatch. Secure in the closed position with the two cam levers on the inside of the hatch.

8.2 Windshield Ventilation

The windshield is equipped with an opening vent panel on each side of the windshield. To open the vent, release the locking T-handle and open the vent to the desired position. Lock the vent in place by turning the T-handle 1/4 turn. The friction of the T-handle in the guide will hold the vent in that position.

Windshield Vent

8.3 Engine Compartment Ventilation

All Pursuit inboard/outboard boats are equipped with engine compartment ventilation. The ventilation system is designed to meet or exceed the requirements of the United States Coast Guard in effect at the time of manufacture.

Bilge Blower

Free Air System

A flow of air into the engine compartment is provided by vents located on the engine box. Exhaust vents, located on either side of the engine hatch, provide a flow of air out of the engine compartment. The exhaust vents have ducts that reach to the lower part of the engine compartment. This provides adequate air movement while operating at or near cruise speeds.

Forced Ventilation

All Pursuit inboard/outboard boats are equipped with electric blowers that provide ventilation to the engine compartment prior to start up and while operating below cruise speed. The blowers should be operated for five (4) minutes prior to the operation of the engine or any electrical accessory. When the boat is operated below cruise speed, there may not be enough air pressure at the vents to provide adequate ventilation in the engine compartment. Therefore, it is extremely important to operate the blowers whenever the boat is not on plane. Always check the blower exhaust vents for airflow when the blower is operating. If the blowers are running and there is little or no airflow at the exhaust vents, then the system is not operating properly and should be serviced.

GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING THE ENGINE, OPERATE THE ENGINE COMPARTMENT BLOWER FOR FIVE (4) MINUTES, OPEN THE ENGINE HATCH, INSPECT THE FUEL SYSTEM AND CHECK THE ENGINE COMPARTMENT FOR THE ODOR OF GASOLINE VAPORS. ALWAYS OPERATE THE BLOWER WHILE THE ENGINES ARE AT IDLE AND BELOW CRUISE SPEED. UNDER NO CIRCUMSTANCES SHOULD THIS PROCEDURE BE OVERLOOKED.

FAILURE TO PROPERLY VENTILATE THE BOAT WHILE THE ENGINES ARE RUNNING MAY PERMIT CARBON MONOXIDE TO ACCUMULATE WITHIN THE CABIN.. CARBON MONOXIDE IS A COLORLESS AND ODORLESS GAS THAT IS LETHAL WHEN INHALED. CARE MUST BE TAKEN TO PROPERLY VENTILATE THE BOAT AND TO AVOID CARBON MONOXIDE FROM ACCUMULATING IN THE BOAT WHENEVER THE ENGINE IS RUNNING.

8.4 Carbon Monoxide and Ventilation

FAILURE TO PROPERLY VENTILATE THE BOAT WHILE THE ENGINE IS RUNNING MAY PERMIT CARBON MONOXIDE TO ACCUMULATE WITHIN THE CABIN. CARBON MONOXIDE IS A COLORLESS AND ODORLESS GAS THAT IS LETHAL WHEN INHALED AND CAN CAUSE SERIOUS INJURY AND DEATH. CARE MUST BE TAKEN TO PROPERLY VENTILATE THE BOAT AND TO AVOID CARBON MONOXIDE FROM ACCUMULATING IN THE BOAT WHENEVER THE ENGINE IS RUNNING.

A by-product of combustion, carbon monoxide (CO) is invisible, tasteless, odorless, and is produced by all engines, heating and cooking appliances. The most common sources of CO on boats are gasoline engines, auxiliary generators and propane or butane stoves. These produce large amounts of CO and should never be operated while sleeping. The hazard also may be created by a boat nearby whose exhaust fumes are entering your boat. Boats also have a problem do to the "station wagon effect" where engine exhaust fumes are captured in the vacuum or low pressure area, usually the cockpit, bridge deck and cabin, that can be created by the forward speed of the boat.

Boats underway should close all aft facing hatches and doors. The forward facing deck hatches should be open whenever possible to help pressurize the living spaces of the boat. No sleeping in the cabin should be permitted while underway. Proper ventilation should be maintained on the bridge deck by opening windshield vents as far as possible to help pressurize the cockpit area. The canvas drop or aft curtain must be removed and the side curtains should be opened or removed to increase air flow and maintain proper ventilation whenever the engines are running. ***Under no circumstances should the engines be operating with side curtains closed and the aft or drop curtain installed.***

Extreme caution must be taken while at anchor or in a slip when an auxiliary power generator is operating. Wind still nights can easily allow exhaust fumes, containing high concentrations of CO, from the generator on your boat or from an adjacent boat's generator to enter the boat. The exhaust fumes may enter your boat through open hatches or windows.

A carbon monoxide detector has been installed in your cabin as standard equipment. While a CO detector enhances your protection from CO poisoning, it does not guarantee it will not occur. Do not use the carbon monoxide detector as a replacement for ordinary precautions or periodic inspections of equipment. Never rely on alarm systems to save your life, common sense is still prudent and necessary. Remember, the operator of the boat carries the ultimate responsibility to make sure the boat is properly ventilated and the passengers are not exposed to dangerous levels of carbon monoxide. You always should be alert to the symptoms and early warning signs of carbon monoxide poisoning. You also should read the book entitled "Sportfish, Cruisers, Yachts" included with this manual, the "Carbon Monoxide Detector" in the Safety Equipment Chapter of this manual, and the owner's manual supplied by the CO detector manufacturer, for operation instructions and additional information regarding the hazards and symptoms of carbon monoxide poisoning.

ACTUATION OF THE CARBON MONOXIDE DETECTOR INDICATES THE PRESENCE OF CARBON MONOXIDE (CO) WHICH CAN BE FATAL. EVACUATE THE CABIN IMMEDIATELY. DO A HEAD COUNT TO CHECK THAT ALL PERSONS ARE ACCOUNTED FOR. DO NOT REENTER THE CABIN UNTIL IT HAS BEEN AIRED OUT AND THE PROBLEM FOUND AND CORRECTED.

8.5 Maintenance

- Periodically lubricate all hinges and latch assemblies with a light oil.
- Periodically clean and coat gasket material with silicone to help keep them pliable.
- Periodic inspection and cleaning of the engine compartment ventilation ducts is necessary to ensure adequate air circulation. A build up of leaves, twigs, or other debris can severely reduce ventilation. It is also important to be sure that the bilge water level does not accumulate to a level that could restrict the ventilation ducts.
- The bilge blowers are permanently lubricated and require no maintenance. Blower operation can and should be tested by placing a hand over the exhaust vents. Do not rely on the sound of the blower. A substantial amount of air should be exhausted by the blower. Frequently check the intake vents for obstructions, preferably before each cruise.

SHOULD BLOWER NOISE BECOME EXCESSIVE, THE SOURCE OF THE NOISE SHOULD BE FOUND AND CORRECTED BEFORE OPERATING THE BOAT.

Chapter 9:
SAFETY EQUIPMENT

9.1 General

Your boat and inboard/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. You should also read the book entitled "Sportfish Cruisers and Yachts" included with this manual.

The Denali 28 model could be equipped with engine alarms, an optional automatic fire extinguishing system or cabin monitoring equipment. These systems are designed to increase your boating safety by alerting you to potentially serious problems in the primary power systems, the engine compartment, and the cabin. Alarm systems are not intended to lessen or replace good maintenance and precruise 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.

9.2 Engine Alarm

Some inboard/outboard engines 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 alarm installed with your engine.

If the alarm sounds:

- Immediately throttle the engines back to idle.
- Shift the transmissions 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.

9.3 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 or cable adjustments may be required to correct this condition should it persist. See your Pursuit dealer for necessary control and cable adjustments. Please refer to the Helm Control Systems chapter for more information on the neutral safety switch.

9.4 Engine Stop Switch

Your Denali is equipped with a engine stop switch and lanyard. When the lanyard is pulled it will engage the switch and shut off the engine(s). We strongly recommend that the lanyard be attached to the driver whenever the engine(s) is running. If the engine(s) 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 engine(s).

9.5 Required Safety Equipment

Besides the equipment installed on your boat by Pursuit, 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 can also contact the U.S. Coast Guard Boating Safety Hotline, 800-368-5647 or 800-336-2628 and 800-245-2628 in Virginia, 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 Pursuit 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).

Visual Distress Signals

All Pursuit 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.

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 S.O.S. 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

At least one fire extinguisher is required on all Pursuit boats. 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 the extinguishers be mounted in a readily accessible position.

Fire Extinguisher

Fire extinguishers require regular inspections to insure that:

- Seals & 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 contact the U.S. Coast Guard Boating Safety Hotline, 1-800-368-5647, 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.

INFORMATION FOR HALON OR AGENT FE-241 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.

Bilge and Fuel Fires

Fuel compartment and bilge fires are very dangerous because of the presence of gasoline 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.

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.

9.6 Automatic Fire Extinguishing System

The Denali engine compartment is equipped with an optional automatic fire extinguishing system. The equipment has been chosen and located to provide sufficient volume and coverage of the entire engine compartment area. While the system ensures excellent bilge fire protection, it does not eliminate the U.S. Coast Guard requirement for hand held fire extinguishers.

The automatic fire extinguishing system is automatically activated when the temperature in the engine compartment reaches a specific temperature, usually around 165 ^{0}F. The system is equipped with an indicator light. Under normal circumstances, whenever the ignition key is turned on, the indicator light will glow. This indicates that the system is operating and ready for activation if necessary. If the indicator light does not glow when the ignition switch is turned on, either the system has discharged or there is a problem that should be corrected before using the boat. Should the unit discharge during the operation of the boat, the lamp will go off.

IF ACTIVATION SHOULD OCCUR, IMMEDIATELY SHUT DOWN ALL ENGINES, ELECTRICAL SYSTEMS, POWERED VENTILATION AND EXTINGUISH ALL SMOKING MATERIALS. DO NOT OPEN THE ENGINE COMPARTMENT HATCH IMMEDIATELY!! THIS FEEDS OXYGEN TO THE FIRE AND FLASH BACK COULD RESULT. ALLOW THE EXTINGUISHING AGENT TO SOAK THE ENGINE COMPARTMENT FOR AT LEAST 15 MINUTES AND WAIT FOR HOT METALS OR FUELS TO COOL BEFORE CAUTIOUSLY INSPECTING FOR CAUSE OR DAMAGE. HAVE AN APPROVED PORTABLE FIRE EXTINGUISHER AT HAND AND READY FOR USE. DO NOT BREATH FUMES OR VAPORS CAUSED BY THE FIRE!!

IF THE AUTOMATIC FIRE EXTINGUISHING SYSTEM IS INSTALLED IN YOUR BOAT, THE OWNER'S MANUAL PROVIDED BY THE SYSTEM MANUFACTURER SHOULD BE INCLUDED. IT IS ESSENTIAL THAT YOU READ THE INFORMATION CAREFULLY AND COMPLETELY UNDERSTAND THE SYSTEM IN THEORY AND OPERATION BEFORE USING YOUR BOAT. IF YOU DID NOT RECEIVE THE FIRE EXTINGUISHING SYSTEM OWNER'S MANUAL, PLEASE CONTACT YOUR DEALER OR THE PURSUIT CUSTOMER RELATIONS DEPARTMENT.

9.7 Carbon Monoxide Monitoring System

CARBON MONOXIDE IS A LETHAL, TOXIC GAS THAT IS COLORLESS AND ODORLESS. IT IS A DANGEROUS GAS THAT WILL CAUSE DEATH IN CERTAIN LEVELS.

CO Detector

The carbon monoxide (CO) detector is installed in the cabin as standard equipment and warns the occupants of dangerous accumulations of carbon monoxide gas. If excess carbon monoxide fumes are detected, the detector will sound an alarm indicating the presence of the toxic gas.

Should a very high level of carbon monoxide exist, the alarm will sound in a few minutes. However, if small quantities of CO are present or high levels are short-lived, the alarm will accumulate the information and determine when an alarm level has been reached. The carbon monoxide detector is automatically activated whenever the battery selector switch and the main accessory switches are in the "ON" position. The power light on the carbon monoxide dectector should be lit to indicate that the carbon monoxide detector is activated. ***Always make sure the battery switch is "ON" and the power light on the carbon monoxide detector is lit whenever the cabin is occupied.***

A by-product of combustion, carbon monoxide (CO) is invisible, tasteless, odorless, and is produced by all engines, heating and cooking appliances. The most common sources of CO on boats are gasoline engines and auxiliary generators and propane or butane stoves. These produce large amounts of CO and should never be operated while sleeping.

A slight buildup of carbon monoxide over several hours causes headache, nausea and other symptoms that are similar to food poisoning, motion sickness or flu. High concentrations can be fatal within minutes. Many cases of carbon monoxide poisoning indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the area or calling for help. Also, young children, elderly persons, and pets may be the first affected.

Drug or alcohol use increases the effect of CO exposure. Individuals with cardiac or respiratory conditions are very susceptible to the dangers of carbon monoxide. CO poisoning is especially dangerous during sleep when victims are unaware of any side effects. The following are symptoms which may signal exposure to CO: (1) Headache (2) Tightness of chest or hyperventilation (3) Flushed face (4) Nausea (5) Drowsiness (6) Fatigue or Weakness (7) Inattention or confusion (8) Lack of normal coordination.

Persons who have been exposed to carbon monoxide should be moved into fresh air immediately. Have the victim breath deeply and seek immediate medical attention. To learn more about CO poisoning, contact your local health authorities.

Low levels of carbon monoxide over an extended period of time can be just as lethal as high doses over a short period. Therefore, low levels of carbon monoxide can cause the alarm to sound before the occupants of the boat notice any symptoms of carbon monoxide poisoning. CO detectors are very reliable and rarely sound false alarms. If the alarm sounds, always assume the hazard is real and move persons who have been exposed to carbon monoxide into fresh air immediately. Never disable the CO detector because you think the alarm may be false. Always contact the detector manufacturer or your local fire department for assistance in finding and correcting the situation.

Remember, carbon monoxide detectors do not guarantee that CO poisoning will not occur. Do not use the CO detector as a replacement for ordinary precautions or periodic inspections of equipment. Never rely on alarm systems to save your life, common sense is still prudent and necessary.

Please read the owner's manual supplied by the CO detector manufacturer and included with this manual for operation instructions and additional information regarding the hazards of carbon monoxide gas. Refer to the Ventilation chapter for information on ventilating your boat properly while underway and other precautions while at anchor or in a slip. This is especially essential if your boat is equipped with a generator. The book entitled "Sportfish, Cruisers, Yachts - Owner's Manual," included with this manual, also has additional information and cautions regarding carbon monoxide poisoning.

Many manufacturers of carbon monoxide detectors offer a testing and recertification program. We recommend that you contact the manufacturer of your carbon monoxide detector and have it tested and recertified periodically.

ACTUATION OF THE CARBON MONOXIDE DETECTOR INDICATES THE PRESENCE OF CARBON MONOXIDE (CO) WHICH CAN BE FATAL. EVACUATE THE CABIN IMMEDIATELY. DO A HEAD COUNT TO CHECK THAT ALL PERSONS ARE ACCOUNTED FOR. DO NOT REENTER THE CABIN UNTIL IT HAS BEEN AIRED OUT AND THE PROBLEM FOUND AND CORRECTED.

9.8 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.

9.9 Additional Safety Equipment

Besides meeting the legal requirements, prudent boaters 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 Atmospheric and Oceanic 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
Heaving Line	Fenders	First Aid Kit
Flashlight	Mirror	Searchlight
Sunburn Lotion	Tool Kit	Ring Buoy
Whistle or Horn	Anchor	Chart and Compass
Boat Hook	Spare Propeller	Mooring Lines
Food & Water	Binoculars	Sunglasses
Marine Hardware	Extra Clothing	Spare Parts

Chapter 10:
OPERATION

10.1 General

Before you start the engine(s) on your Denali, you should have 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 Pursuit 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 Flotation Device" (PFD) for each person. Nonswimmers 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 his 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 operators view, particularly to the front.

Overloading and improper distribution of weight can cause the boat to become unstable and are a significant cause of accidents. Do not overload your boat. **Remember, it is the responsibility of the operator to use good common sense and sound judgement in loading and operating the boat.**

10.2 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 situation 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. A book entitled "Sportfish Cruisers and Yachts" is included with this manual. It contains valuable navigation and safety information. Other books on this subject are also available from your local library.

Note: Sailboats not under power, paddle boats 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 vessel 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.

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.

STORMS AND WAVE ACTION CAN CAUSE BUOYS TO MOVE. YOU SHOULD NOT RELY ON BUOYS ALONE TO DETERMINE YOUR POSITION.

10.3 Pre-Cruise System Check

Before Starting the Engine(s):

- 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, etc. Please refer to Chapter 9 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 tell authorities where to look and the type of boat to look for in the event you fail to arrive.
- Check the amount of fuel on board. Observe the "rule of thirds": 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.
- The engine fuel filters should also be checked for leaks or corrosion.
- Check the oil in the engine(s).
- Set the battery selector switches as desired.
- Check the bilge water level. Look for other signs of potential problems. Monitor for the scent of fuel fumes.
- Turn on the bilge blower. Check the blower output and operate five (5) minutes before starting the engines.
- Test the automatic and manual bilge pump switches to make sure the system is working properly. The bilge pump automatic float switch can be tested by inserting a stiff wire or small rod through one of the slots in the float chamber of the pump and lifting the float switch until the pump turns on.

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	Lubricating Oil
Pliers	Jackknife
Adjustable Wrench	Vise grip Pliers
Needle Nose Pliers	Wire Crimping Tool
End Wrench Set	Wire Connector Set

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 the following spare parts on board:

Extra light bulbs	Spark plugs
Fuses and circuit breakers	Flashlight and batteries
Drain plugs	Engine oil
Propeller(s)	Fuel filters
Propeller nut	Fuel hose and clamps

- Make sure all fire extinguishers are in position and in good operating condition.

VAPORIZING LIQUID EXTINGUISHERS GIVE OFF TOXIC FUMES; USE ONLY COAST GUARD APPROVED FIRE EXTINGUISHERS.

10.4 Operating Your Boat

GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING THE ENGINE, OPERATE THE ENGINE COMPARTMENT BLOWER FOR FIVE (5) MINUTES, OPEN THE ENGINE HATCH, INSPECT THE FUEL SYSTEM AND CHECK THE ENGINE FOR THE ODOR OF GASOLINE VAPORS. ALWAYS OPERATE THE BLOWER WHILE THE ENGINES ARE AT IDLE. DO NOT START OR OPERATE THE ENGINES IF FUEL FUMES ARE PRESENT. UNDER NO CIRCUMSTANCES SHOULD THIS PROCEDURE BE OVERLOOKED.

After Starting the Engines:

- Visibly check the engines to be sure there are no apparent water, fuel or oil leaks.

- Check the engine gauges. Make sure they are reading normally.
- Check the controls for proper operation.
- Make sure all lines, cables, anchors, etc. for securing the 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.

- Alcohol or drugs can severely reduce your reaction time and affect your better judgement.
- 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.

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

MAKE SURE ONE OTHER PERSON ON THE BOAT IS INSTRUCTED IN THE OPERATION OF THE BOAT.

MAKE SURE THE BOAT IS OPERATED 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.

- Avoid sea conditions that are beyond the skill and experience of you and your crew.

- 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 engine. The manual is in the literature packet.

- As different types of engines could be 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 installed in your boat.

Note: For more instructions on safety, equipment and boat handling, enroll in one of the several free boating courses offered. For information on the courses offered in your area, call the "Boating Safety Hotline", 800-368-5647 or the "Boat U.S. Foundation Course Hotline," 800-336-2628 for further information on boating safety courses.

Note: If the drive unit hits an underwater object, stop the engine. 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:

- Allow the engines to drop to the idle speed.

- Make sure the shifting levers are in the neutral position.

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

- Turn the ignition key(s) to the "OFF" position.

<u>After Operation:</u>

- If operating in saltwater, wash the boat and all equipment with soap and water.

- Check the bilge area for debris and excess water.

- Fill the fuel tank to near full to reduce condensation.

- Check that the boat is properly moored.

- Turn off all electrical equipment except the 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 sea cocks.

- Make sure the boat is securely moored.

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

10.5 Water Skiing

Your Denali could be equipped for water skiing. If you have never driven skiers before, you should spend some hours as an observer and learning 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. 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.

- 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.

- Always carry a second person on board to observe the skier so that your full attention can be given to the safe operation of the boat.

- Approach a skier in the water from the downwind 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.

For additional information on water skiing, including hand signals and water skiing manuals, contact the American Water Skiing Association in Winter Haven, Florida, 813-324-4341.

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, SWIMMERS OR SKIERS ARE ATTEMPTING TO BOARD. ALWAYS REMOVE AND PROPERLY STORE THE LADDER BEFORE STARTING THE ENGINES.

10.6 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.

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 the seals in the outdrive lower unit.

10.7 Grounding and Towing

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 has 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.

THE MOORING CLEATS ON PURSUIT 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 GROUNDED 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.

RUNNING AGROUND OR STRIKING AN UNDERWATER OBSTRUCTION CAN RESULT IN SERIOUS INJURY TO PASSENGERS AND DAMAGE TO THE MOTOR OR BOAT. IF YOUR BOAT SHOULD BECOME GROUNDED, 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.

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

Important Note:
Your Pursuit 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 Pursuit Warranty.

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

Choosing and Setting-up a Trailer

- 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, engine 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, fuel, 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.

- 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.

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

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 DENALI WARRANTY.

Before Going Out On The Highway

- The BIMINI TOP, 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 COUPLER are the same size and bolts 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 Pursuit dealer or the trailer manufacturer for the correct weight on the hitch for your trailer.

- The SAFETY CHAINS must be attached crisscrossing 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.

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.

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Chapter 11:
EXTERIOR EQUIPMENT

11.1 Deck

Rails and Deck Hardware

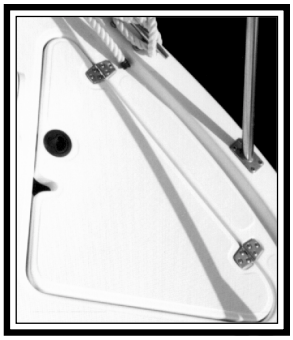
The rail system and hardware fittings have been selected and installed to perform specific functions. Fenders or mooring lines should be secured to the cleats and not to rails or stanchions. Be sure a clear lead exists when running dock lines or anchor lines. A line inadvertently run around a stanchion or over the rail could cause damage.

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

PURSUIT 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.

Anchor/Rope Locker

The anchor locker is in the bow of the boat and accessed through a hatch in the deck. The anchor line is always stored in the locker. The anchor can be mounted on the deck, on the bow roller, or stored in the anchor locker. If the anchor is stored in the anchor locker, it must be properly secured to prevent it from bouncing in the locker and causing damage to the hull or anchor locker.



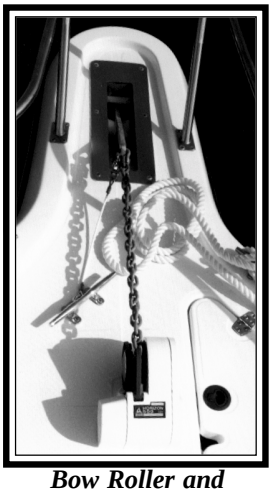
Rope Locker

The anchor locker drains overboard through a drain in the bottom of the locker. It is very important to check the drain frequently to make sure it is clean and free flowing.

THE ANCHOR MUST BE POSITIONED SO IT DOES NOT REST AGAINST THE HULL SIDES AND BE PROPERLY SECURED AT ALL TIMES WHEN IT IS STORED IN THE ANCHOR LOCKER. A LOOSE ANCHOR IN THE ANCHOR LOCKER WILL BOUNCE AND CAN DAMAGE THE BOAT. DAMAGE RESULTING FROM THE ANCHOR BOUNCING IN THE ANCHOR LOCKER IS NOT COVERED BY THE DENALI WARRANTY.

Bow Pulpit and Roller

The bow pulpit is built into the hull and is equipped with a roller assembly that allows the anchor to be operated and stored at the pulpit. The pulpit roller is designed for a Delta® plow or a Danforth® style anchor. The anchor line is stored in the rope locker and routed out the rope locker hatch, through the roller and connected to the anchor chain. A cleat or safety cable is provided on the deck near the pulpit to secure the anchor. Always make sure the anchor is properly secured when it is in the stored position on the pulpit.



Bow Roller and Windlass

Windlass (Optional)

The optional windlass is mounted to the deck above the rope locker. 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 safety cable and operating a "down" control at the helm. The windlass control switch is activated by a safety switch located on helm switch panel next to the windlass switch. Turn the safety switch on to activate the windlass control and turn it off whenever the windlass is not in use.

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

The anchor is hauled in by releasing the line from the bow cleat and operating the "up" control at the helm. Once the anchor is retrieved, independently secure the anchor to a safety cable or a cleat to prevent it from being accidentally released. This is especially important while the boat is under way.

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.

A WINDLASS MUST BE USED WITH CARE. IT IS EXTREMELY IMPORTANT THAT YOU READ THE 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.

DO NOT USE A WINDLASS AS A SOLE MEANS OF SECURING AN ANCHOR IN THE BOW ROLLER. ALWAYS SECURE THE ANCHOR LINE TO A CLEAT OR ANCHOR SAFETY CABLE BEFORE OPERATING YOUR BOAT.

Aluminum Arch with Bimini Top and Side Curtains

The canvas for Pursuit boats is custom fit to each boat. The bimini 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 legs to the deck hinges using the quick release pins and attach the rear of the bimini canvas to the radar arch. Next, open the bimini and attach the front straps to the metal eye straps on the top of the windshield frame. Use your body weight on the front corner of the bimini to pull down and stretch the fabric until the strap can be attached to the metal eye. The bimini canvas should be stretched tight when both sides of the front bow are secured to the windshield frame.

Note: The front straps are adjusted at the factory. If they are loosened to make the straps easier to attach, the bimini top will be too loose and the clear connector and side curtains will not fit properly and appear to be too short.

Attach the clear connector to the zipper at the front of the top and snap it to the snaps at 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, deck and outboard snaps on the arch 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 arch.

Attach the drop curtain to the arch near the back of the top and to the inboard snaps on the arch. Snap the drop curtain to the deck and cockpit.

If you have an aft curtain, it is installed by attaching it to the arch near the back of the bimini and to theinboard snaps on the arch. Then snap the curtain to the deck and arch beginning with the front snaps and work towards the stern.

Note: Cold weather can make the clear vinyl material 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 whether.

The warranty for the arch will be void if it is modified in any way or heavy accessories like life rafts, are mounted to it. Additionally, if items like radar antennas spotlights and other accessories are mounted incorrectly, the warranty could be void. If you intend to add equipment or make modifications to the arch, you should contact Pursuit Customer Relations to make sure the equipment you would like to add or the intended modification will not void the warranty on the arch.

11.2 Hull

Swim Platform and Transom Door

Your Denali is equipped with an integral swim platform located in the stern of the boat. A transom door is provided to allow easy access to the swim platform. The transom door should only be operated when the boat is not in motion. The door must be latched in either the full "OPEN" or full "CLOSED" position. Never leave the transom door unlatched.

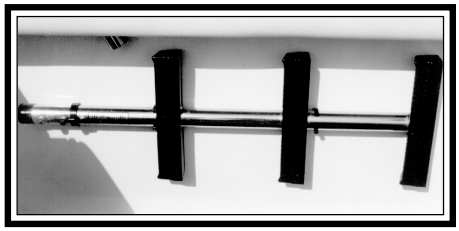
Note: Periodically inspect the transom door fittings for wear, damage, or loose fit. Any problems should be inspected and corrected immediately.

THE TRANSOM DOOR SHOULD BE CLOSED AND PROPERLY LATCHED WHENEVER THE ENGINE(S) ARE RUNNING. NEVER OPEN THE TRANSOM DOOR WHILE UNDERWAY OR IN ROUGH SEA CONDITIONS. IN CERTAIN SITUATIONS, AN OPEN TRANSOM DOOR COULD ALLOW A SUBSTANTIAL AMOUNT OF WATER TO ENTER THE COCKPIT CREATING A POTENTIALLY DANGEROUS CONDITION.

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.

Boarding Ladder

The boarding ladder is mounted in the cockpit when it is in the stored position. To use the ladder, remove it from the storage clips and slide the studs into the special bracket on the port side of the transom. The ladder floats and must be secured in the boarding position by turning the cam lock on the ladder so it catches the bottom of the transom ladder bracket. The ladder must be removed from the transom bracket and properly secured to the storage clips before starting the engine(s).



Boarding Ladder

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 SKIERS, DIVERS, OR SWIMMERS ARE ATTEMPTING TO BOARD. ALWAYS REMOVE AND PROPERLY STORE THE LADDER BEFORE STARTING THE ENGINES.

Trim Tabs

The trim tabs are recessed into the hull below the swim platform. The trim tabs are an important part of the control systems. Please refer to chapter 2 for detailed information on the trim tabs.

11.3 Cockpit

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. MOST 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.

Cockpit Storage

The helm seat is mounted on a storage compartment that is equipped with a sink, top loading cooler, storage locker, drink holder and a tackle locker. The sink is supplied by the freshwater system and the cooler is insulated. Both drain overboard.

The companion lounge seat is mounted on a storage compartment that includes a livewell, a large storage compartment, and an insulated fishbox/cooler. The storage compartment, fishbox/cooler, and livewell drain overboard. A chart compartment and drink holder is located in the deck near the windshield just forward of the companion seat.

A hatch in the center of the cockpit provides access to the batteries, water tanks and additional storage.

Helm

The helm and engine controls are located on an opening helm station. The helm station is hinged at the bottom and opens to provide access to service the helm equipment or to install electronics.

Helm

To open the helm station, release the clamps at the top of the helm. A strap holds the helm in the open position and prevents it from opening too far. Always make sure the helm station clamps are properly secured when the helm is closed.

ALWAYS MAKE SURE THE HELM STATION CLAMPS ARE PROPERLY SECURED BEFORE OPERATING OR TRAILERING YOUR BOAT. IF THE HELM STATION IS NOT PROPERLY SECURED, IT COULD OPEN UNEXPECTEDLY AND DAMAGE THE BOAT OR CAUSE LOSS OF CONTROL.

UNDER NO CIRCUMSTANCES SHOULD THE HELM BE OPENED WHEN THE ENGINES ARE RUNNING. IN SOME SITUATIONS IT IS POSSIBLE TO ACCIDENTALLY ENGAGE THE ENGINE SHIFT AND THROTTLE CONTROLS INTO GEAR AS THE HELM IS OPENING. THIS COULD RESULT IN LOSS OF CONTROL, DAMAGE TO THE BOAT, AND INJURY TO PASSENGERS.

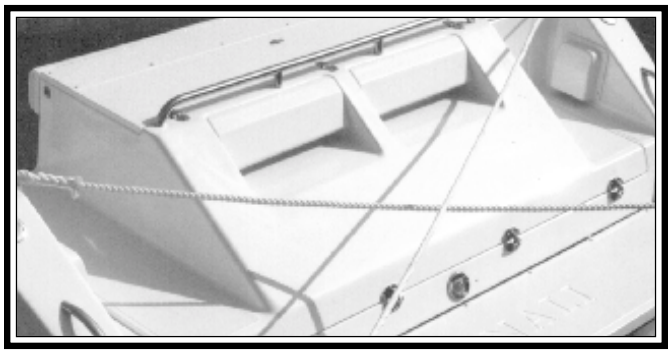
Helm Seat

The helm seat is a pedestal seat that swivels and adjusts fore and aft. There are two levers and one tension knob on the seat base. Lifting the lever located at the front of the seat base allows the seat to be adjusted fore and aft. Releasing the lever locks the seat in that position. Lifting the lever on the port side of the seat base releases the pivot lock and allows the helm seat to be swiveled on the pedestal. The helm seat will automatically lock when it is swiveled back to the operating position. The friction knob adjusts the tension of seat base on the pedestal and is also located on the port side of the seat. It should be adjusted to allow the seat to be swiveled when the swivel lock is released and tight enough to eliminate play between the seat base and the pedestal.

Engine Compartment Hatch and Stern Seat

A stern bench seat is built into the engine compartment hatch. The engine compartment hatch is hinged at the rear and opens to provide access to service the engine and related components.

A storage box is built into the engine compartment hatch. It is insulated and drains overboard through a drain in the side of the hatch.



Engine Hatch

To open the engine hatch, release the clamps at the front of the hatch. Gas hatch lifters hold the hatch in the open position and prevent it from opening too far. Always make sure the engine hatch clamps are properly secured when the hatch is closed. The engine hatch should be opened to inspect the engine and related systems before loading the storage box.

ALWAYS MAKE SURE THE ENGINE HATCH CLAMPS ARE PROPERLY SECURED BEFORE OPERATING OR TRAILERING YOUR BOAT. IF THE ENGINE HATCH IS NOT PROPERLY SECURED, IT COULD OPEN UNEXPECTEDLY CAUSING DAMAGE TO THE BOAT AND THE ENGINE HATCH.

Freshwater Sink and Shower

A freshwater sink is located in the engine hatch next to the storage compartment. It is equipped with shower head and a retractable hose. The sink is supplied water by the freshwater system and drains overboard through a drain in the engine hatch.

Refer to Chapter 5 for additional information on the freshwater systems.

Cockpit Sink and Cooler

A sink and cooler is located behind the helm and is equipped with a freshwater sink and a top loading cooler. The sink is also supplied with hot water when this option is installed. The hatch lid is supported in the open position by a spring hatch support. The spring automatically supports the hatch when it is opened.

To close the hatch, support the hatch lid with one hand and push slightly on the center of the spring with the other hand. This will release the spring tension and allow the hatch to close. The sink and cooler drain overboard.

Cockpit Sink and Cooler

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Chapter: 12
INTERIOR EQUIPMENT

12.1 Marine Head System

Marine Head

The Denali 28 is equipped with china head and holding tank as standard equipment. The flush water is supplied by a thru hull fitting located below the aft berth in the cabin and a raw water line. Before using, open the inlet valve on the head and pump to wet the inside of the bowl. After use, pump to discharge the waste to the holding tank, then close the inlet valve and pump the bowl dry. The waste remains in the holding tank until it is pumped out by a waste dumping station.

Holding Tank

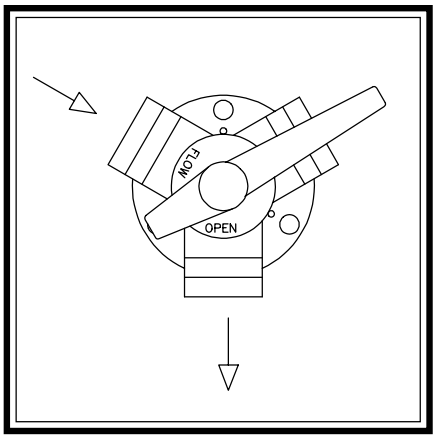
The holding tank is located in the bilge. When the tank is full, it must be pumped out by an approved waste dumping station through the “waste" deck fitting or the optional overboard macerator discharge system..

Monitor the waste level in the holding tank and have it pumped out before it is completely full. If the holding tank is allowed to overfill, the waste will overflow into the tank vent and then overboard.

Optional Y-Valve and Macerator Discharge Pump

A Y-valve and overboard discharge system, with or without a macerator discharge pump, can be installed as optional equipment. Waste can be directed either into the holding tank or overboard, when legal to do so. This is accomplished by an optional Y-valve located in the bilge below the aft berth in the cabin. Labels attached to the hoses indicate where the wasted is being directed.

Waste Deck Fitting



Y-Valve

In the overboard discharge position, the waste exits the boat through a large thru hull fitting located in the bilge near the Y-valve. The thru hull fitting is equipped with a ball valve. Always open this valve when the overboard discharge is selected and close it when the holding tank is selected.

In the holding tank position, the waste is pumped directly into the holding tank where it remains until it is pumped out by a waste dumping station or the optional overboard macerator discharge system.

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.

Holding Tank and Macerator Discharge Pump

When the holding tank is full it must either be pumped out by an approved waste dumping station through the waste deck fitting or be pumped overboard with the optional macerator discharge pump, when legal to do so. When the macerator discharge pump option is installed, the Y-valve is used to select the waste deck fitting or the overboard macerator discharge pump.

To operate the macerator discharge pump, move the Y-valve handle to the macerator pump-out position, open the ball valve at the overboard discharge thru hull fitting. Then activate the macerator switch until the tank is emptied. The ball valve and the macerator switch are located in the bilge near the Y-valve below the aft berth. Release the switch and close the discharge ball valve when pumping is complete.

Note: The macerator discharge pump can only be run dry for ten seconds. Allowing the macerator pump to run after the holding tank is empty will cause damage to the pump.

Maintenance

The head should be cleaned and inspected for leaks regularly. Periodically, remove the covers from the holding tank vent and clean the vent of any debris. Be sure the cover is replaced securely after cleaning. The cover helps prevent foreign matter from contaminating the vent system. If the vent cover is damaged or lost, it should be replaced as soon as possible.

The holding tank should be pumped out and flushed as needed. Periodically add chemical to the head and holding tank to help control odor and to chemically break down the waste. The macerator pump should be sprayed with a metal protector periodically to reduce corrosion. See the head manufacturer owner's manual for additional operating and maintenance information.

THE HEAD SYSTEM MUST BE PROPERLY WINTERIZED BEFORE WINTER LAY-UP. SEE SECTION ON WINTERIZING.

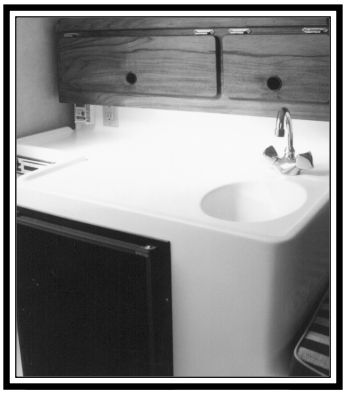
12.2 Refrigerator

A dual voltage refrigerator is supplied as standard equipment. This unit will operate on 110-volt AC or 12-volt DC power. The refrigerator switches to 12-volt DC automatically when the AC power is disconnected and the refrigerator breaker is activated on the cabin DC panel. When 110-volt AC current is provided by the refrigerator circuit breaker on the 110-volt panel, the refrigerator automatically switches to AC power.

Care should be exercised while operating the refrigerator on 12-volt power without the engine running. It draws a substantial amount of current and can severely drain a battery through extended use. The refrigerator door has a special latch to secure the door while under way, make sure the door is properly secured whenever the boat is moving.

Refer to the refrigerator owner's manual for additional operating and maintenance instructions.

12.3 Galley and Sink



Galley and Sink

The galley is equipped with storage and a fresh water sink. Water is supplied to the sink by a 12-volt pump located behind the stern access hatch in the cockpit. When activated by the water pressure breaker in the 12-volt panel, the water system will operate much like the water system in a home. An automatic pressure sensor keeps the system pressurized. The sink is drained from the boat by a sump pump system connected to the shower and sink drains.

See Chapter 5 and Chapter 7 for more information on the fresh water and drainage systems.

12.4 Stove

The portable single burner gas stove is fueled by butane gas. Butane is a flammable gas that is heavier than air and stored in disposable pressurized fuel canisters. A manual for the stove is included with your boat. It is extremely important that you read the manual and become familiar with the proper care and operation of the stove before attempting to use it. The stove and butane fuel must be properly stowed when not in use.

If you did not receive a manual for your stove, please contact the Pursuit Customer Relations Department.

THE STOVE IS DESIGNED AS AN APPLIANCE FOR COOKING FOOD. DO NOT ATTEMPT TO USE THE STOVE TO HEAT THE CABIN. USING THE STOVE TO HEAT THE CABIN COULD CAUSE THE STOVE TO OVER HEAT RESULTING IN DAMAGE TO THE STOVE OR A CABIN FIRE.

ALWAYS MAKE SURE THE CABIN IS PROPERLY VENTILATED BEFORE USING THE STOVE. THE STOVE EXHAUST CONTAINS CARBON MONOXIDE THAT IS COLORLESS AND ODORLESS. CARBON MONOXIDE IS A DANGEROUS GAS THAT IS POTENTIALLY LETHAL.

12.5 Air Conditioner (Dealer Option)

The air conditioning unit is the reverse cycle type and operates on 110-volt AC power. The unit is usually equipped with reverse cycle heat and can be operated as a cooling or heating unit. It is protected by the accessory breaker in the 110-volt breaker panel. To operate, make sure the thru hull valve for the air conditioner raw water supply pump is on. Turn the air conditioner breaker to the "ON" position. The unit will then be controlled by the air conditioning control panel in the cabin. When activated, water should continuously flow from the overboard drain thru hull. See the air conditioner owner's manual for additional operating and maintenance instructions.

Note: Air conditioners use surface water as a cooling medium. The boat must be in the water and the raw water supply system must be properly activated prior to use. Operation without proper cooling will cause the air conditioning circuit breaker to trip and could cause system damage. Always check for proper water flow out of the air conditioning pump discharge thru hull when the air conditioner is operating.

12.6 Carbon Monoxide Detector

A carbon monoxide (CO) detector is installed in the cabin on the rear bulkhead. If excess carbon monoxide fumes are detected, an audible beeping will sound indicating the presence of the toxic gas.

A by product of combustion, carbon monoxide is invisible, tasteless, odorless, and is produced by all engines, heating and cooking appliances. The most common sources of CO on boats are gasoline engines and auxiliary generators and propane or butane stoves. These produce large amounts of CO and should never be operated while sleeping.

Please read the owner's manual supplied by the detector manufacturer for operation instructions and additional information regarding the hazards of carbon monoxide gas. Also read more about carbon monoxide, carbon monoxide detectors, and proper ventilation in the Ventilation Systems and Safety Equipment chapters in this manual. If you did not receive a manual for your carbon monoxide detector, please contact the Pursuit Customer Relations Department.

ACTUATION OF THE CARBON MONOXIDE DETECTOR INDICATES THE PRESENCE OF CARBON MONOXIDE (CO) WHICH CAN BE FATAL. EVACUATE THE CABIN IMMEDIATELY. DO A HEAD COUNT TO CHECK THAT ALL PERSONS ARE ACCOUNTED FOR. DO NOT REENTER THE CABIN UNTIL IT HAS BEEN AIRED OUT AND THE PROBLEM FOUND AND CORRECTED.

CO POISONING PRODUCES FLUE-LIKE SYMPTOMS: WATERY AND ITCHY EYES, HEADACHES, AND FATIGUE. YOU CAN'T SEE IT AND YOU CAN'T SMELL IT. IT'S AN INVISIBLE KILLER.

CO DETECTORS ARE VERY RELIABLE AND RARELY SOUND FALSE ALARMS. IF THE ALARM SOUNDS, ALWAYS ASSUME THE HAZARD IS REAL AND MOVE PERSONS WHO HAVE BEEN EXPOSED TO CARBON MONOXIDE INTO FRESH AIR IMMEDIATELY. NEVER DISABLE THE CO DETECTOR BECAUSE YOU THINK THE ALARM MAY BE FALSE. ALWAYS CONTACT THE DETECTOR MANUFACTURER, THE PURSUIT CUSTOMER RELATIONS DEPARTMENT OR YOUR LOCAL FIRE DEPARTMENT FOR ASSISTANCE IN FINDING AND CORRECTING THE SITUATION.

12.7 Convertible V-Berth and Table

The v-berth is equipped with a table that will seat two people when the table is in the up position. There is storage below a hatch under each v-berth cushion. The table is mounted on an adjustable pedestal that allows the dinette to be converted to a double berth.

To convert the dinette to a double berth, loosen the knob on the pedestal base. Then carefully lower the table until it seats on the teak table supports on each side of the v-berth. Secure the table in the down position by tightening the knob on the pedestal base. Place the separate berth cushion on the table top to complete the berth conversion. The table should be lowered to the berth position whenever the boat is run offshore or in heavy sea conditions to prevent damage to the pedestal assembly.

Daylight and fresh air is provided to this area by an overhead opening hatch. Additional lighting is provided by 12-volt lights on the bulkheads.

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Chapter 13:
ROUTINE MAINTENANCE

13.1 Exterior Hull and 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.

If the hull bottom has been painted with antifouling paint, contact your dealer for the recommended maintenance procedures.

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, your dealer and/or 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.

SANDING OR SANDBLASTING THE HULL BOTTOM WILL DAMAGE THE FIBERGLASS. USE ONLY STANDARD ANTIFOULING PAINTS AND FIBERGLASS WAX REMOVERS AND PRIMERS RECOMMENDED BY THE ANTIFOULING PAINT MANUFACTURER WHEN PREPARING THE HULL FOR BOTTOM PAINT. SANDING OR SANDBLASTING AND THE USE OF A COATING OTHER THAN STANDARD ANTIFOULING PAINT OR EPOXY BARRIER COATINGS ARE NOT RECOMMENDED AND WILL VOID THE FIVE YEAR HULL BLISTER WARRANTY.

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

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 for the recommended maintenance procedures.

Sacrificaial Anodes

Sacrificial anodes are installed on the outdrive units and the trim tabs. 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, shinny metal and free of paint and corrosion. Never paint over the anode.

Boats stored in salt water 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. Contact your dealer for the proper size and type of zinc anodes to be used and the specific installation procedure.

Note: Some outdrives require a different anode for freshwater than for saltwater. Using the recommended anode is more critical when stainless steel propellers are installed. Consult your dealer or the engine manufacturer for information on the proper anode for your outdrive and boating area.

Fiberglass Gelcoat Surfaces

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 gelcoat, 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 gelcoat.

After the boat is exposed to the direct sunlight for a period of time, the color in the gelcoat tends to fade, dull or chalk. A heavier buffing is required to bring the gelcoat 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.

If the fiberglass should become damaged and need repair, contact your dealer for an authorized repair person to do the work.

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 stainless can normally be cleaned and protected by using a high quality boat or automotive wax or a commercial metal cleaner and protectant.

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.

Hard tops with aluminum frames, Bimini tops and towers 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 and 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 salt water. The anodized aluminum used on your Pursuit was coated with a metal protector called Aluma Guard at the factory. Aluma Guard is a nonabrasive marine metal protector that protects anodized aluminum, stainless steel, brass, and chrome. It also protects color anodizing from fading and discoloring due to harmful ultraviolet rays. It is available from Rupp Marine Inc., 4761 Anchor Avenue, P.O. Drawer F, Port Salerno, FL 34992.

ONE DRAWBACK TO ALUMA GUARD AND OTHER 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 a caulking compound to bed hardware and fasteners mounted to aluminum fabrications. If the anodized coating is badly scratched it can be touched up with paint. With proper care, anodized aluminum will provide many years of service.

Note: You should contact Pursuit Customer Relations 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 plastic glass scratches easily. Never use a dry cloth or glass cleaning solutions on acrylic glass. Use a soft cloth and mild soap and water for routine cleaning. Solvents and products containing ammonia can permanently damage acrylic 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 plastic glass:

Abrasive cleaners	Acetone
Solvents	Alcohol
Glass cleaners	Cleaners containing ammonia

Simulated Wood grain Panels

The simulated wood grain instrument and switch panels are made using a special process. Each panel is clear coated with a special exterior finish and hand buffed to obtain a rich deep high gloss wet look. The clear coat is formulated for the marine environment, but basic precautions and regular care are necessary to protect it.

DON'T:

- Drill or cut any holes through the clear coat.
- Rub the finish using a lot of pressure.
- Use any solvent of any kind on the finish.
- Use rubbing compound of any kind on the finish.
- Use any cleaners with ammonia or an abrasive on the finish.
- Use any Scotchbrite™ type product on the finish.
- Use any powder abrasive such as Ajax™ or Soft Scrub™ on the finish.

Preventative Care:

Waxing the panels will protect against water spots. The rain water is contaminated and if the panels are not waxed, water spots will be apparent. Before using your boat and at regular intervals thereafter, we recommend waxing the panels with one of the following products:

- Premium marine Polish with Teflon
- Starbrite ® #85714 for Paste Wax
- Starbrite ® #85732 for Liquid Wax

Note: Use normal high gloss care products. For best results we recommend Teflon wax manufactured by Starbrite®.

To remove water spots, wipe with mineral spirits and wax using one of the recommended products mentioned above. **Do not use use laquer thinner, acetone or any other solvent on the finish.**

13.2 Upholstery, Canvas and Enclosures

Vinyl Upholstery

The vinyl upholstery used on the exterior seats and 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

Acrylic canvas should be cleaned periodically by using a mild soap and water. Scrub lightly and rinse thoroughly to remove the soap. Do not use detergents. The top or accessories should never be folded or stored wet.

After several years, the acrylic canvas may lose some of its ability to shed water. If this occurs, wash the fabric and treat it with a commercially available water proofing designed for this purpose.

Note: Some leakage at the seams is normal and unavoidable with acrylic enclosures.

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.

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 or silicone grease. Zippers should be lubricated with silicone spray or paraffin.

The bimini top, 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.

Do not operate engines, fuel consuming heaters or burners with the canvas enclosures closed. The cockpit must be open for legal ventilation and to prevent the possible accumulation of carbon monoxide fumes, which could be lethal.

CARBON MONOXIDE IS A LETHAL, TOXIC GAS THAT IS COLORLESS AND ODORLESS. IT IS A DANGEROUS GAS THAT WILL CAUSE DEATH IN CERTAIN LEVELS.

13.3 Cabin Interior

The cabin interior can be cleaned just like you would clean a home interior. To preserve the teak woodwork, use teak oil. To maintain the 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.

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.

ALWAYS READ THE LABEL CAREFULLY ON MILDEW PROTECTORS. REMOVE THE PROTECTOR AND ALLOW THE CABIN TO VENTILATE COMPLETELY BEFORE USING THE CABIN.

13.4 Bilge and Engine Compartment

To keep the bilge clean and fresh, use a commercial bilge cleaner regularly. Follow the directions carefully. The engines and engine room should be kept clean and free of oil accumulation and debris. All exposed pumps and metal components, including the engines and drive gear, should be sprayed periodically with a protector to reduce the corrosive effects of the high humidity always present in these areas.

Maintenance intervals are outlined in the engine owner's manuals. Their recommendations should be followed exactly.

Periodically check the bilge pumps 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.

A flow of air into the bilge is provided by vents located in the hull. Periodic inspection and cleaning of the ventilation ducts is necessary to ensure adequate air circulation.

Engines

Proper engine maintenance is essential to the proper performance and reliability of your sterndrive engine. Maintenance schedules and procedures are outlined in your engine owner's manual. They should be followed exactly.

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.

Avoid using fuels with alcohol additives. Gasoline that is an alcohol blend will absorb moisture from the air which can reach such concentrations that "phase separation" can occur whereby the water and alcohol mixture becomes heavy enough to settle out of the gasoline to the bottom of the tank. Since the fuel pick up tube is very near the bottom of the tank, phase separation can cause

the engine to run very poorly or not at all. This condition is more severe with methyl alcohol and will worsen as the alcohol content increases. Water or a jelly like substance in the fuel filters are an indication of possible phase separation from the use of alcohol blended fuels.

If the engines are raw water cooled and used in saltwater, flush the cooling system after each daily use. To flush the system when the boat is out of the water, follow the procedure outlined in your engine owner's manual.

Chapter 14:
SEASONAL MAINTENANCE

14.1 Lay-up and Storage

Before Storing

- Pump out the head. Flush the holding tank using clean soap, water and a deodorizer. Pump out the cleaning solution.

- The fuel tank should be left nearly full to reduce condensation that can accumulate in the fuel 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 gasoline to the bottom of the tank. Since fuel pick-up tubes are located near the bottom of the tank, this accumulated moisture can cause the engine 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 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 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 sabilizer to allow the treated fuel to reach the engine.

  Your dealer or the engine manufacturer can provide additional information on fuel degradation and fuel stabilizers recommended for your engine. For more recommendations for your specific area, check with your local Pursuit dealer.

- Drain water from the freshwater and raw water systems.

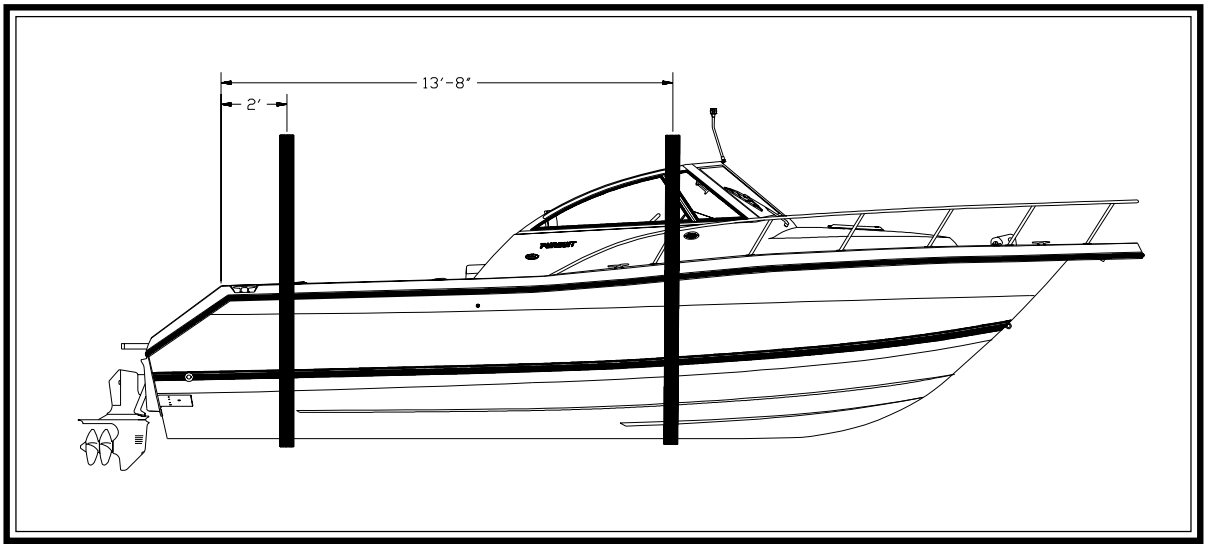
- Consult the engine owner's manual for detailed information on preparing the engines for storage.

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. Put the slings in position. The positions are marked with small labels on each side of the boat under the rubrails.

BOATS HAVE BEEN DAMAGED FROM IMPROPER LIFTING AND ROUGH HANDLING WHEN BEING TRANSPORTED BY LIFT TRUCKS. CARE AND PROPER HANDLING PROCEDURES MUST BE USED WHEN USING A LIFT TRUCK TO MOVE THE BOAT. NEVER ATTEMPT TO LIFT THE BOAT WITH A SUBSTANTIAL AMOUNT OF WATER IN THE BILGE.

SEVERE GELCOAT CRAZING OR MORE SERIOUS HULL DAMAGE CAN OCCUR DURING HAULING AND LAUNCHING IF PRESSURE IS CREATED ON THE GUNWALES (SHEER) BY THE SLINGS. SPREADERS ARE NOT REQUIRED IF BELTS ARE NOT CREATING PRESSURE (CABLE DRUMS FURTHER APART THAN BEAM OF BOAT). 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.



Sling Locations

Supporting The Boat For Storage

Your trailer or a well-made cradle is the best support for your boat during storage.

When storing the boat on a trailer for a long period:

- Make sure the rollers and pads properly support the hull of the boat and do not put pressure on the hull lifting strakes.
- Make sure the trailer is on a level surface and the bow is high enough so that water will drain from the cockpit and bilge.
- Make sure the outdrives are in the down position.
- Check the tires once each season. Add enough air for the correct amount of inflation for the tires.

Note: Read the owner's manual for the trailer for the correct amount of inflation for the tires.

When storing the boat on a cradle:

- The cradle must be specifically for boat storage.
- Make sure the cradle is well supported and placed on a level surface with the bow high enough to provide proper drainage of the cockpit and bilge.
- Make sure the ourdrives are in the down position.
- The cradle must be in the proper fore and aft position to properly support the hull. When the cradle is in the correct location, the bunks should match the bottom of the hull and should not be putting pressure on the lifting strakes.

BOATS HAVE BEEN DAMAGED BY TRAILERS AND CRADLES THAT DO NOT 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 TRAILER OR CRADLE SUPPORT IS NOT COVERED BY THE DENALI WARRANTY.

Preparing The Boat For Storage

- Remove the bilge drain plug, if installed.
- 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.

- Remove the 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.

- Refer to Chapter 4, Electrical System, for information on the maintenance of the electrical systems.

- Coat all faucets and exposed electrical components in the cockpit with a protecting oil.

- Clean out, totally drain and completely dry the fishboxes, sinks and livewells.

- 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 refrigerator, shower basin, storage locker areas, etc. should also be sprayed with this disinfectant.

- Thoroughly clean the interior of the boat. Vacuum all carpets and dry clean drapes and upholstery.

- Remove as many 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.

14.2 Winterizing

Freshwater System

The entire freshwater system must be completely drained. Disconnect all hoses, check valves, etc. and blow all the water from the system. Make sure the water heater and freshwater 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 freshwater pump. Remove the outlet hose 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, freshwater system antifreeze. After draining the potable water tank, lines and water heater, pour the antifreeze mixture into the freshwater tank, prime and operate the pump until the mixture flows from all freshwater faucets. Be sure to open all hot and cold water faucets, including the freshwater spray head in the stern bait station sink. Make sure antifreeze has flowed through all of the freshwater drains.

The shower and cabin drain sump system must be properly winterized. Clean debris from the drain and sump and flush for several minutes with fresh clean water. After the system is clean, pump

the drain sump as dry as possible. Then pour a potable water antifreeze mixture into the shower drain until antifreeze has been pumped through the entire system and out of the thru hull. For additional information on the freshwater system refer to Chapter 5.

Raw Water System

Completely drain the raw water systems. 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 and livewell pumps, blowing the lines will not remove the water from those raw water pumps. 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, 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.

Drain all of the sea strainers and raw water supply and discharge lines for the engine raw water supply pump. Make sure all water has drained from the exhaust system. Once this is accomplished please follow the engine manufacturer's winterizing procedures located in your engine owner's manual or contact a Pursuit dealer.

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 must be pumped dry and one gallon of potable water antifreeze poured into the tank through the deck waste pump out fitting.

Note: 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, sea cocks, pumps, 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.

Air Conditioner

Disconnect and drain the air conditioner intake and discharge hoses. Remove all water from the sea strainer and thru hull fitting. Allow all water to drain from the system. The air conditioner components must be properly winterized by following winterizing procedure in the air conditioner owner's manual.

Hard Top and Radar Arch

It is imperative that all drain holes in the legs are open and 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.

ALWAYS MAKE SURE THE LEG DRAIN HOLES ARE CLEAR WHEN THE BOAT IS LAID UP FOR THE WINTER. WATER TRAPPED INSIDE THE HARDTOP OR RADAR ARCH LEGS COULD FREEZE AND CAUSE THE LEGS TO SPLIT.

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 winds 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.

PLACING AN ELECTRIC OR FUEL BURNING HEATING UNIT IN THE BOAT 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.

14.3 Recommissioning

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

Note: 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.

BEFORE LAUNCHING THE BOAT, MAKE SURE THE DRAIN PLUG IS INSTALLED.

Reactivating The Boat After Storage

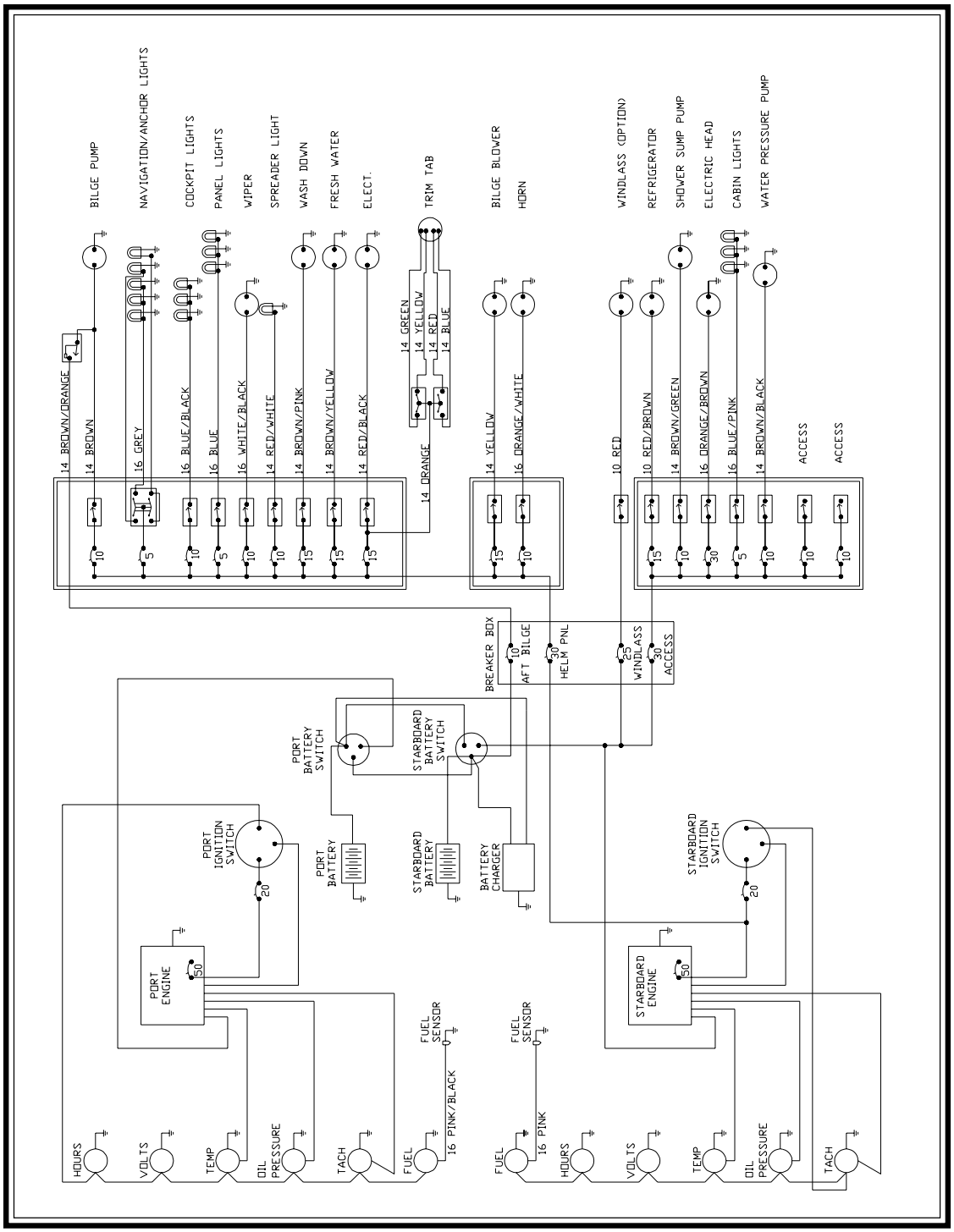
- Charge and install the batteries.
- Install the drain plug in the hull.
- Check the engines for damage and follow the manufacturer's instructions for recommissioning.
- Check the engine mounting bolts to make sure they are tight.
- Perform all routine maintenance.
- Check all hose clamps for tightness.
- Pump the antifreeze from the fresh and raw water systems and flush several times with freshwater. Make sure all antifreeze is flushed from the water heater and it is filled with freshwater before it is activated.
- Check and lubricate the steering and control systems.
- Clean and wash the boat.
- Install all upholstery, cushions and canvas.

After Launching

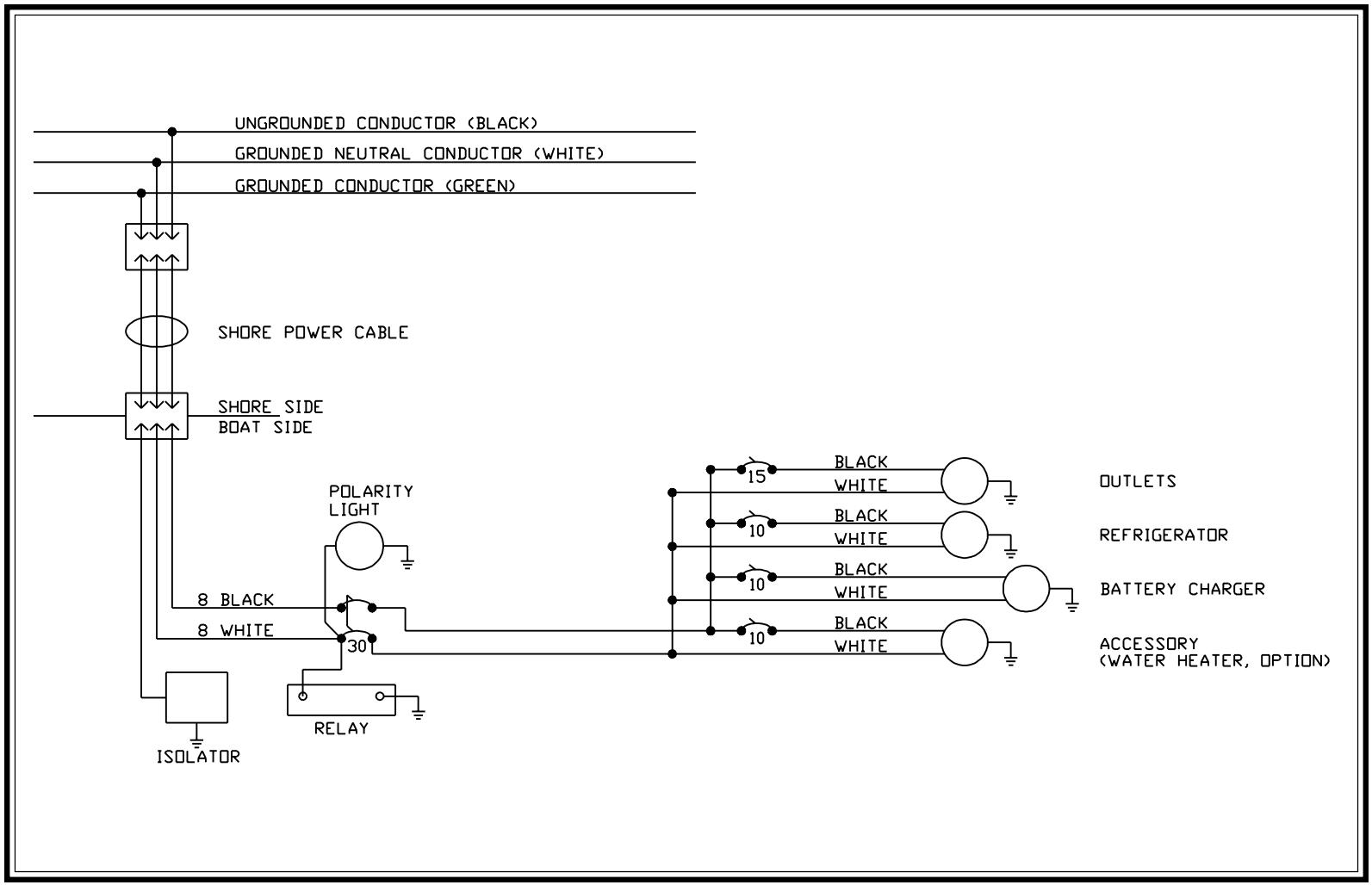
- Carefully check all water systems and the engine hoses for leaks. Operate each system one at a time checking for leaks and proper operation.

- Check the bilge pump manual and automatic switches.
- Check the engines for proper alignment.
- Prime the fuel system and start the engines.
- 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.

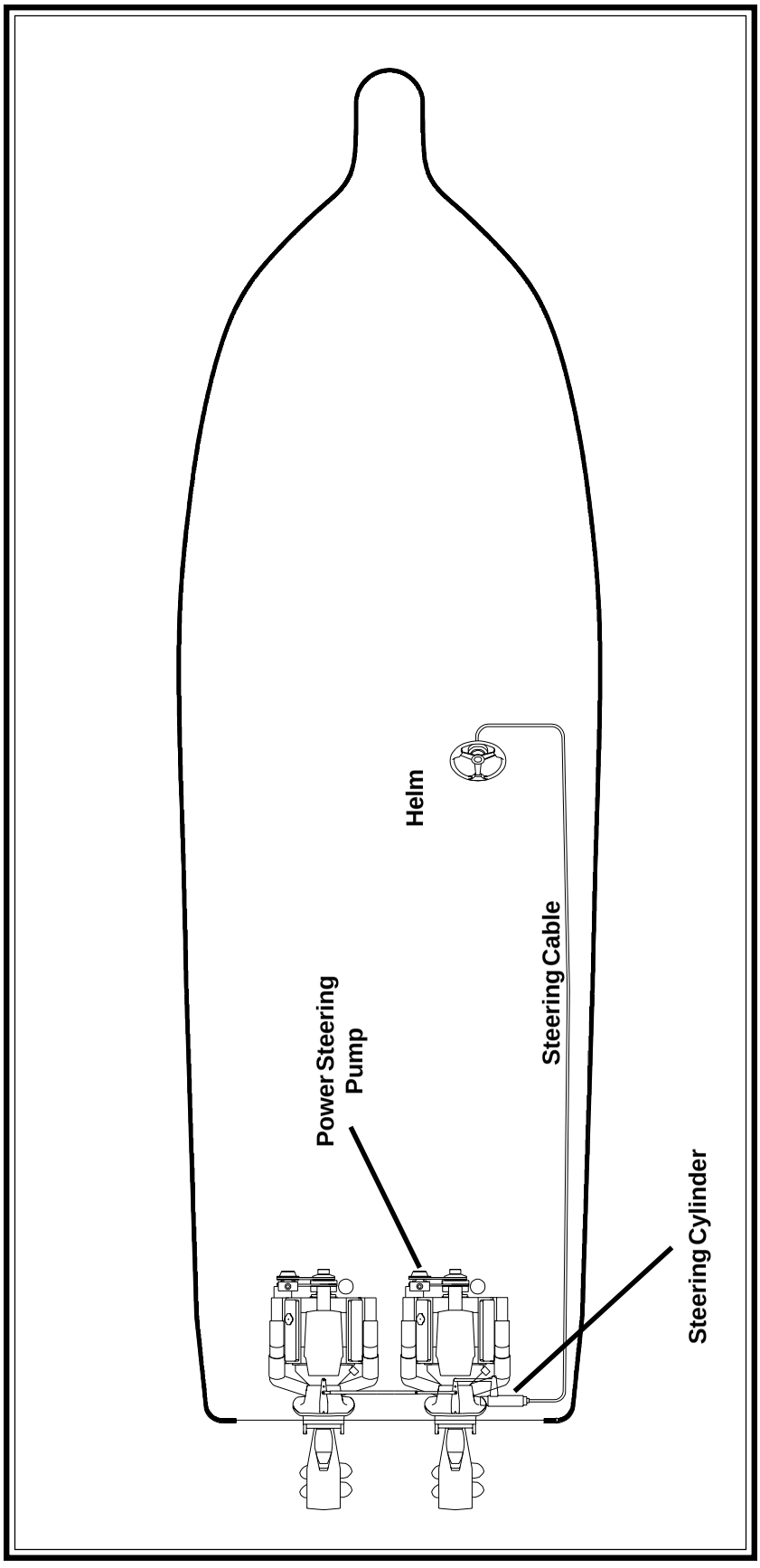
Chapter 15:
SCHEMATICS



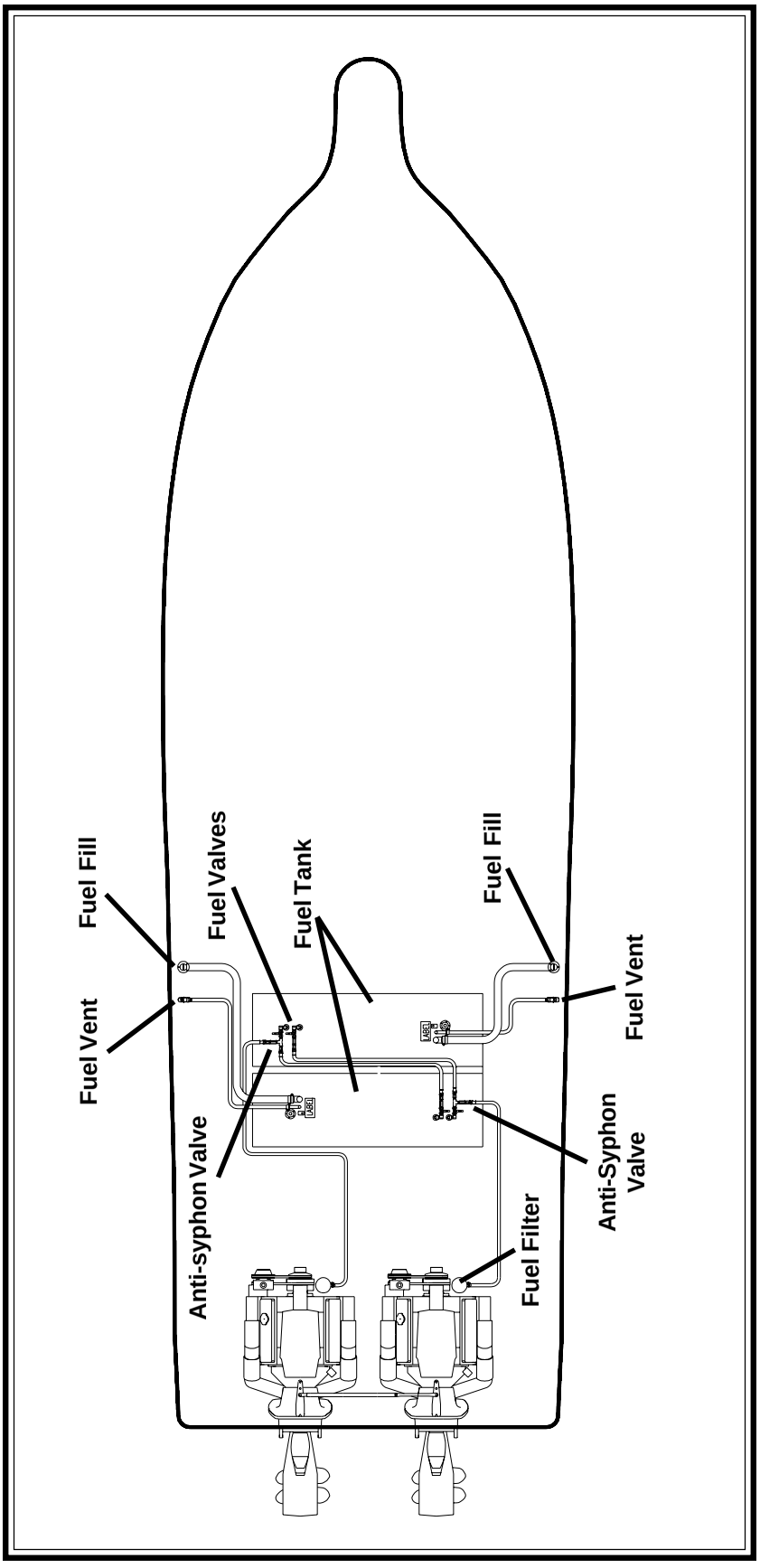
12-Volt Wiring Schematic



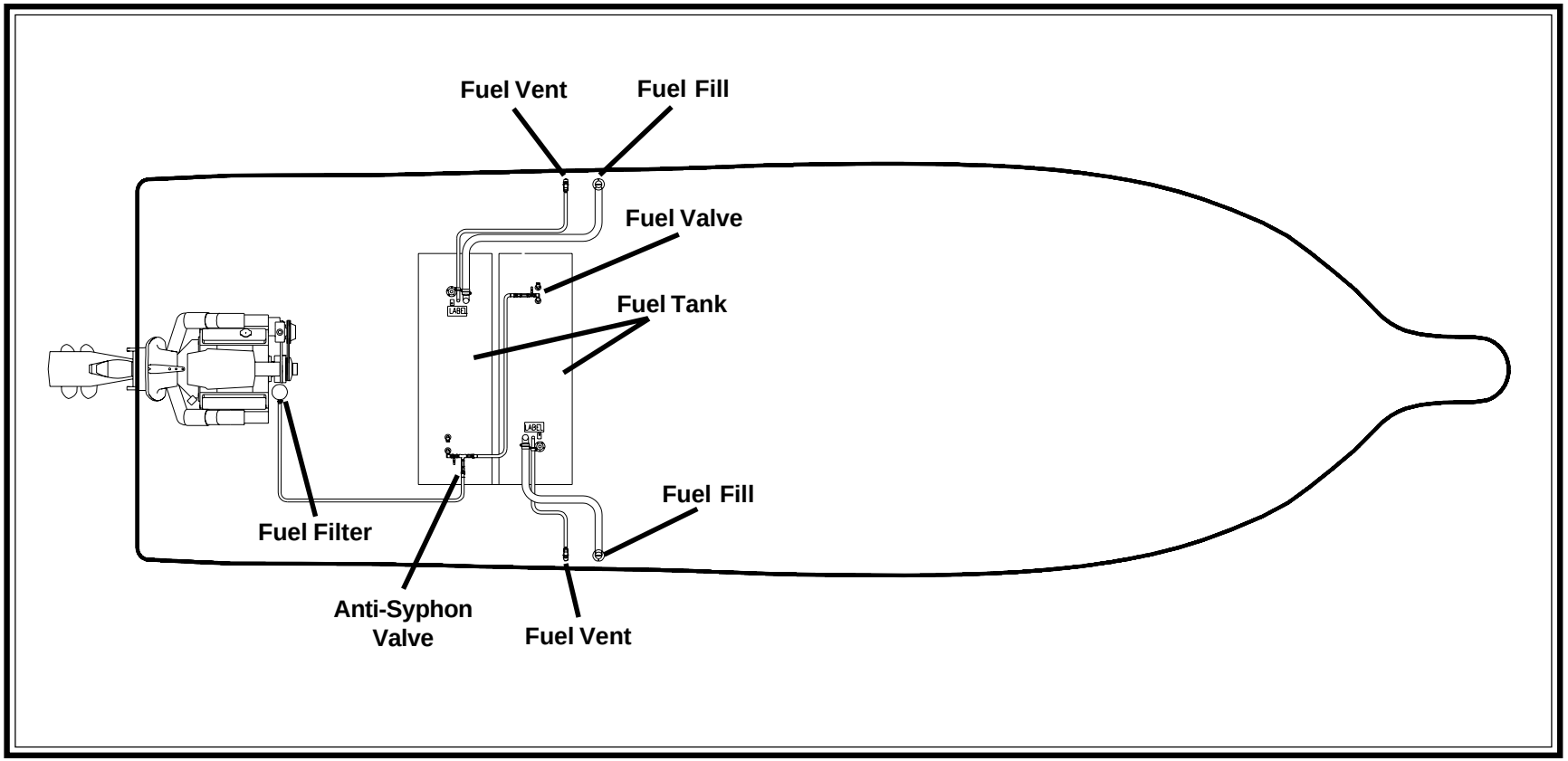
110-Volt AC Wiring Schematic



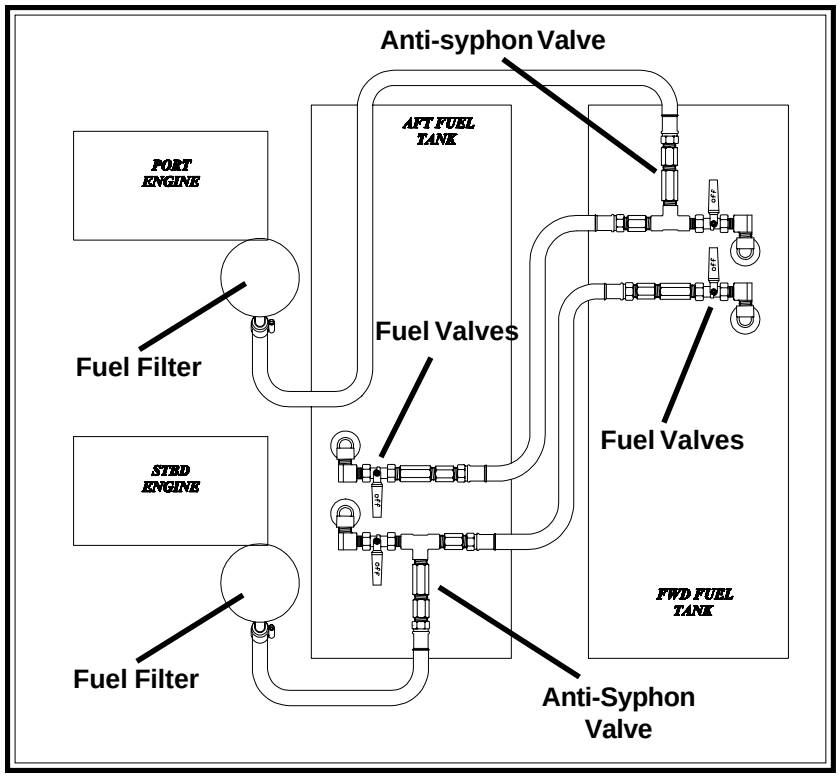
Steering System



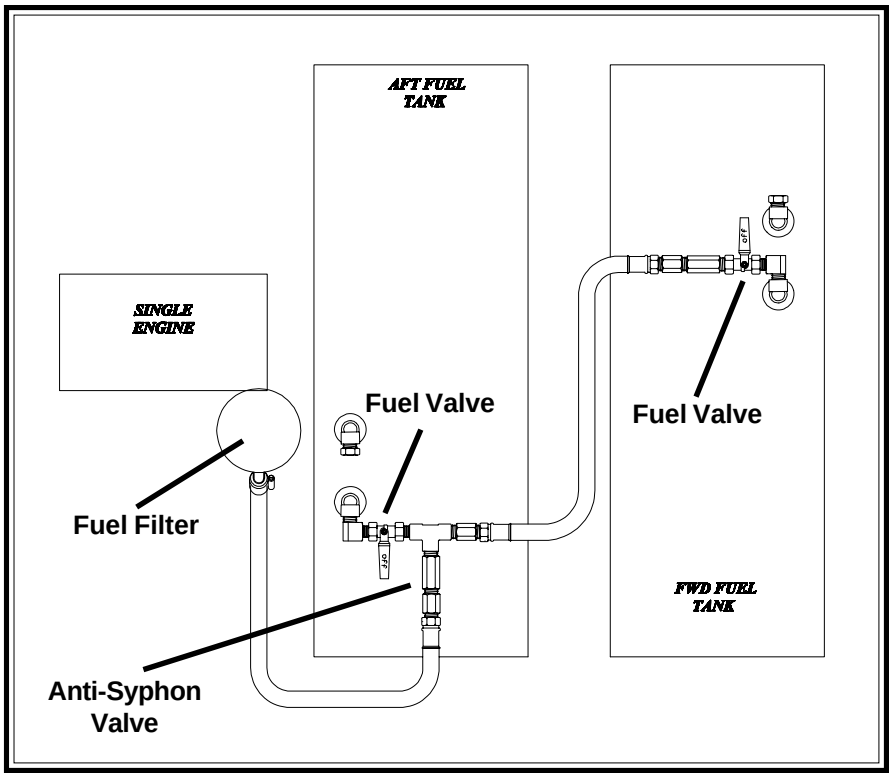
Twin Engine Fuel System



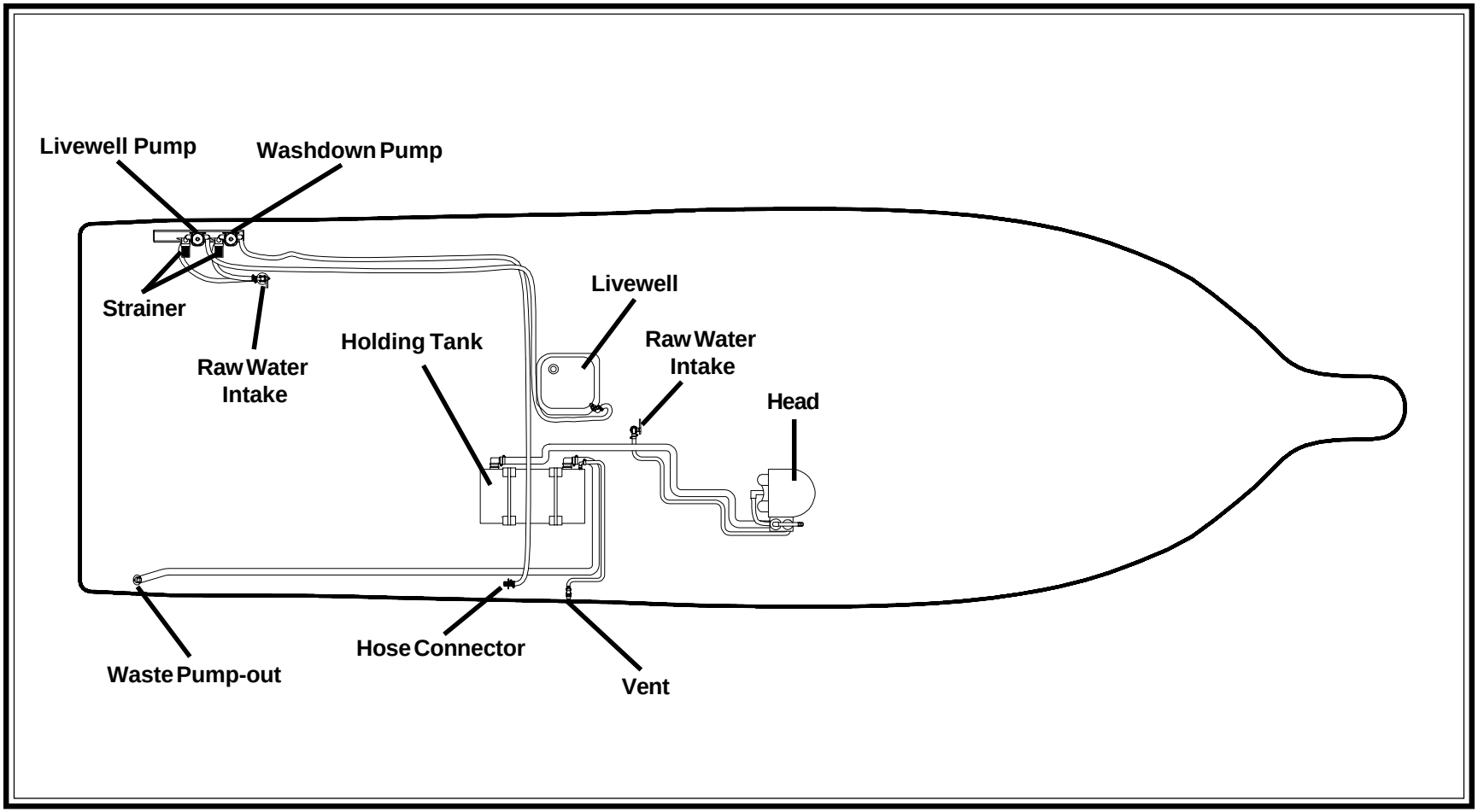
Single Engine Fuel System



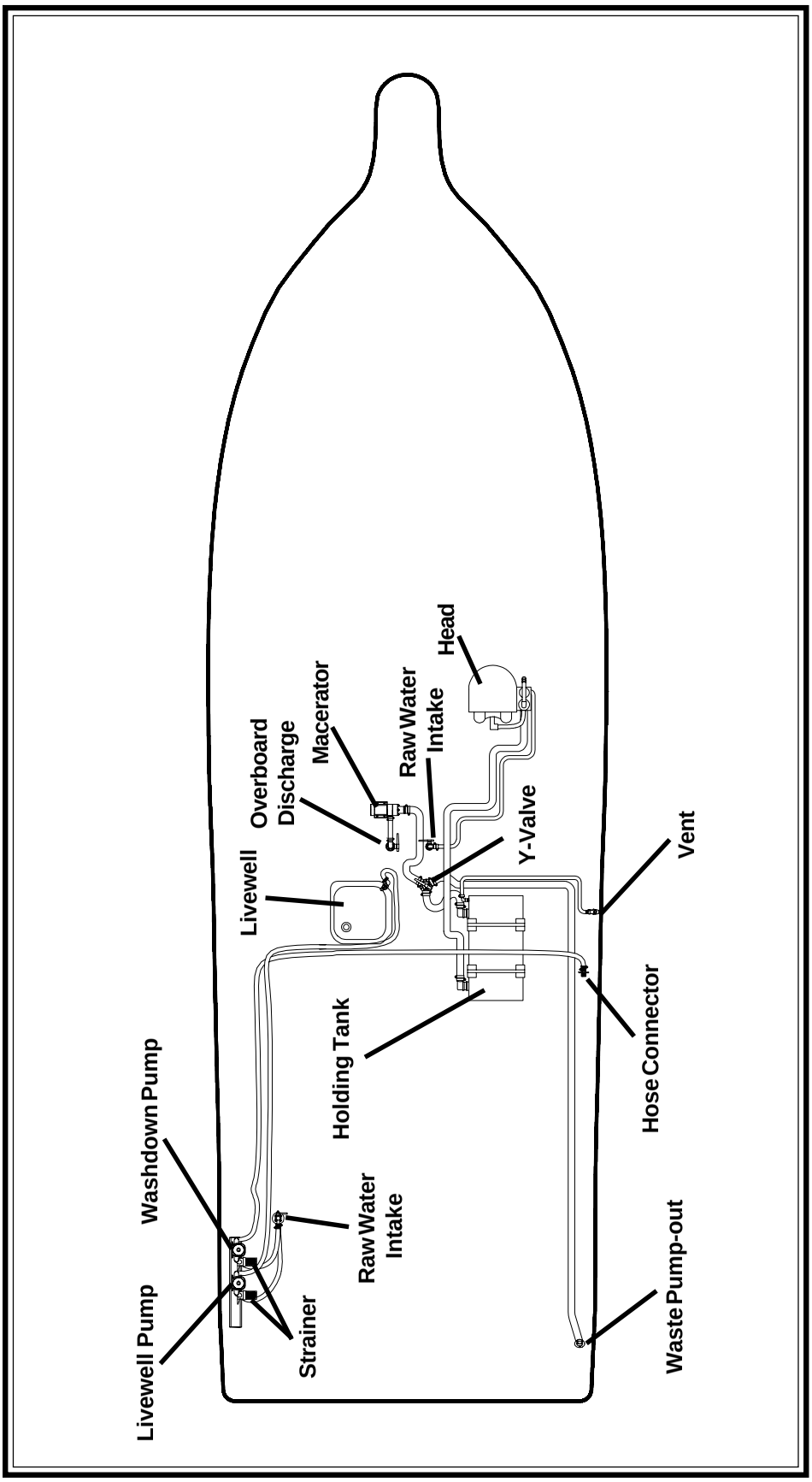
Twin Engine Fuel Valves



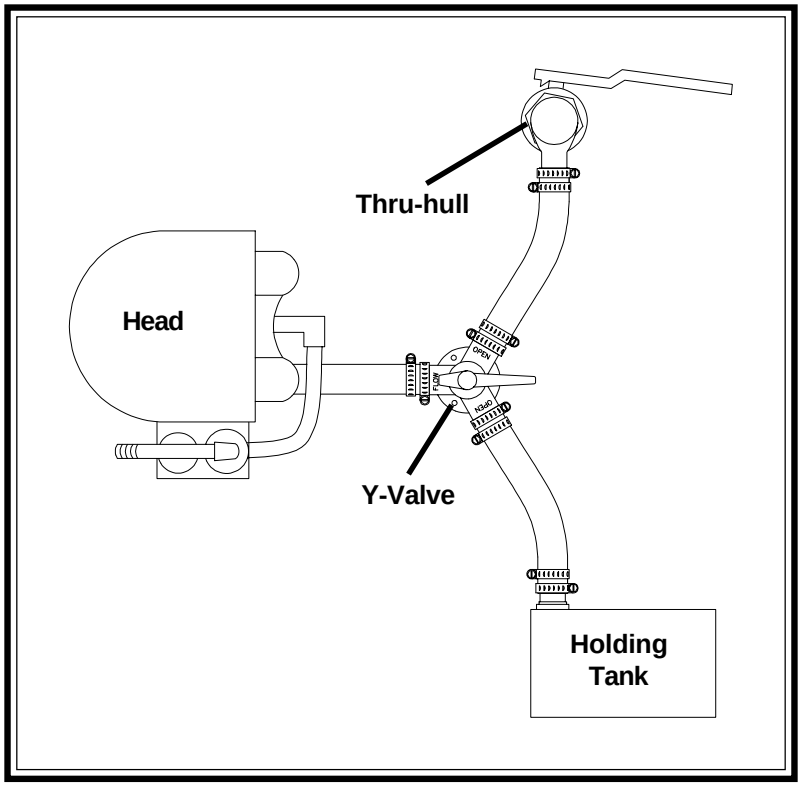
Single Engine Fuel Valves



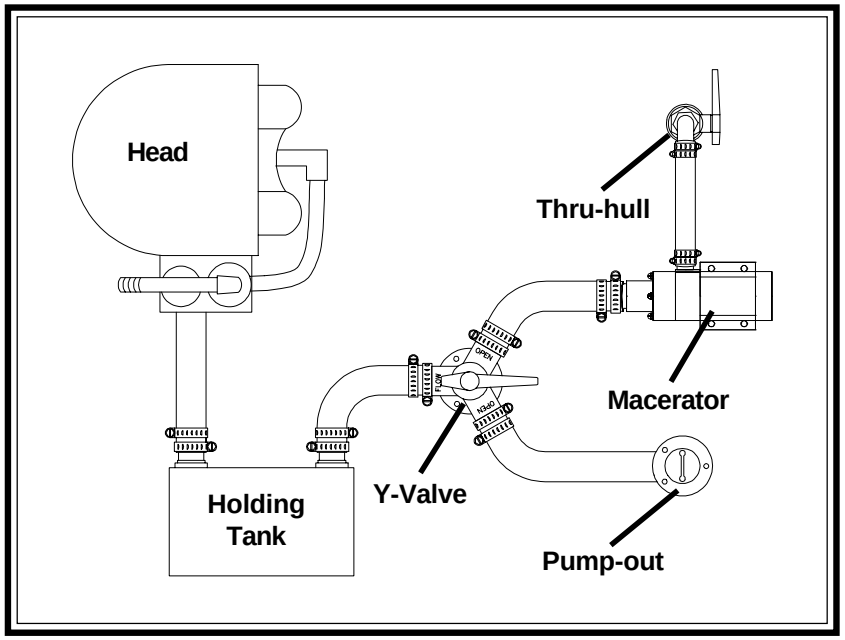
Raw Water System(W\O Y-Valve and Macerator)



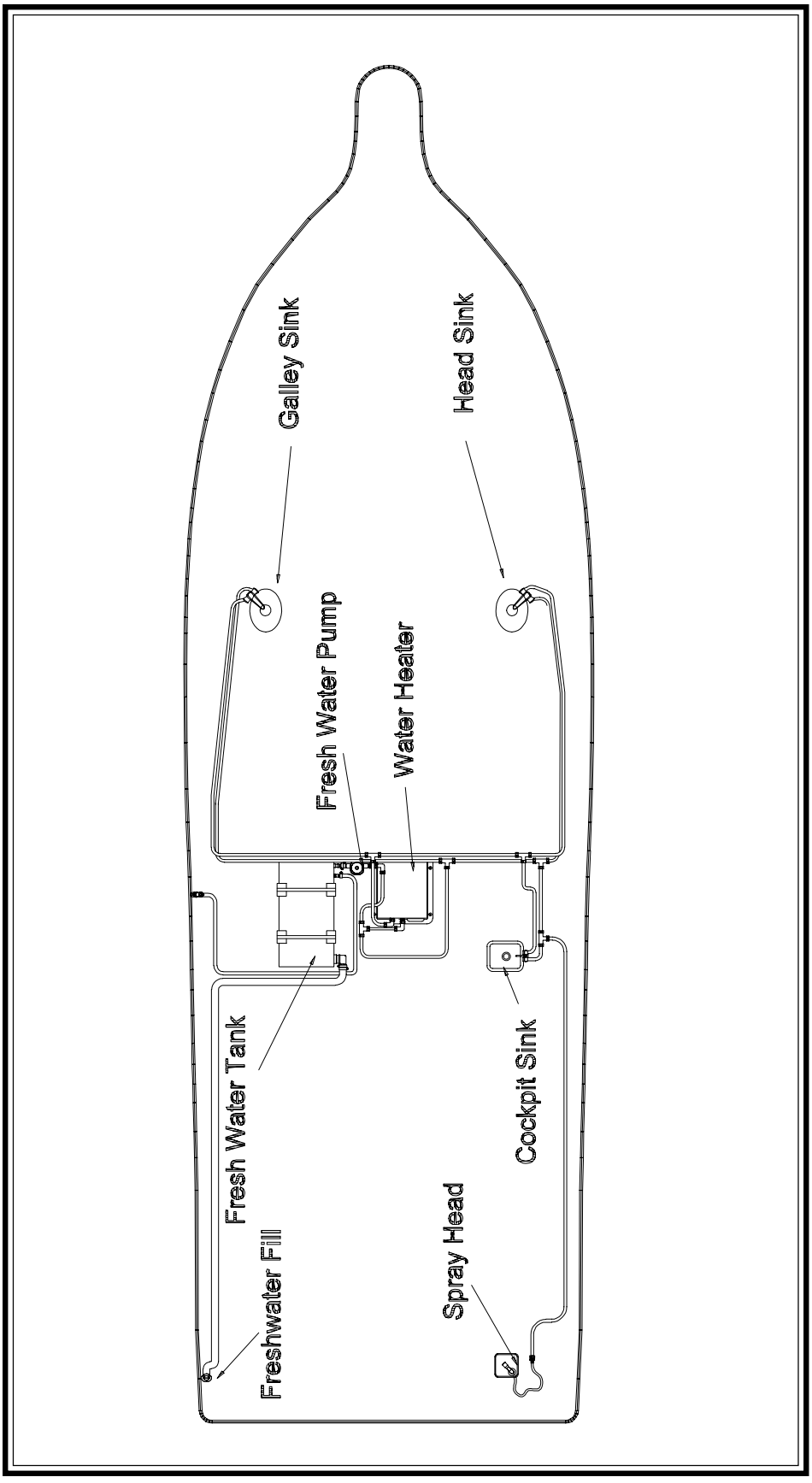
Raw Water System (With Y-Valve and Macerator)



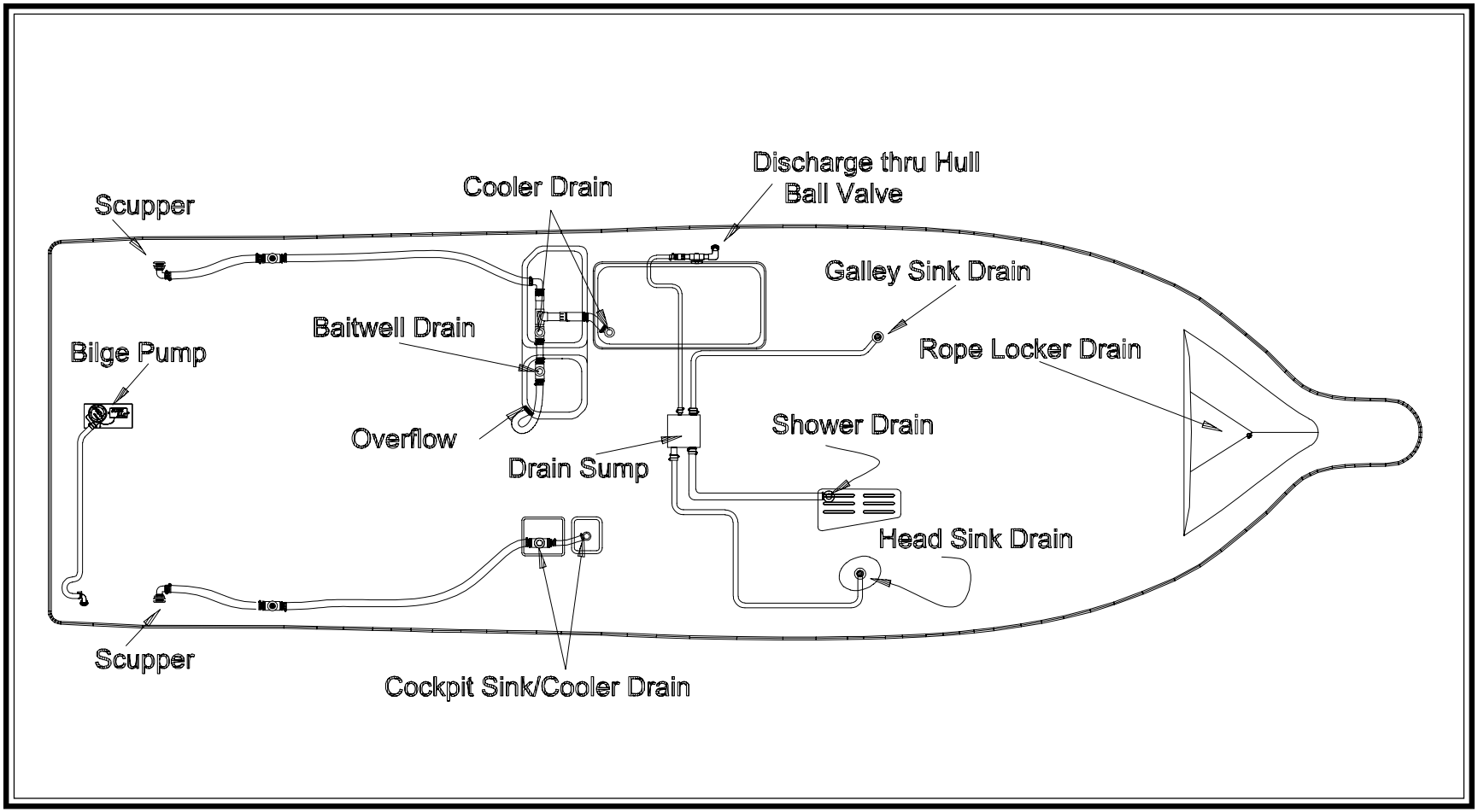
Y-Valve w/o Macerator



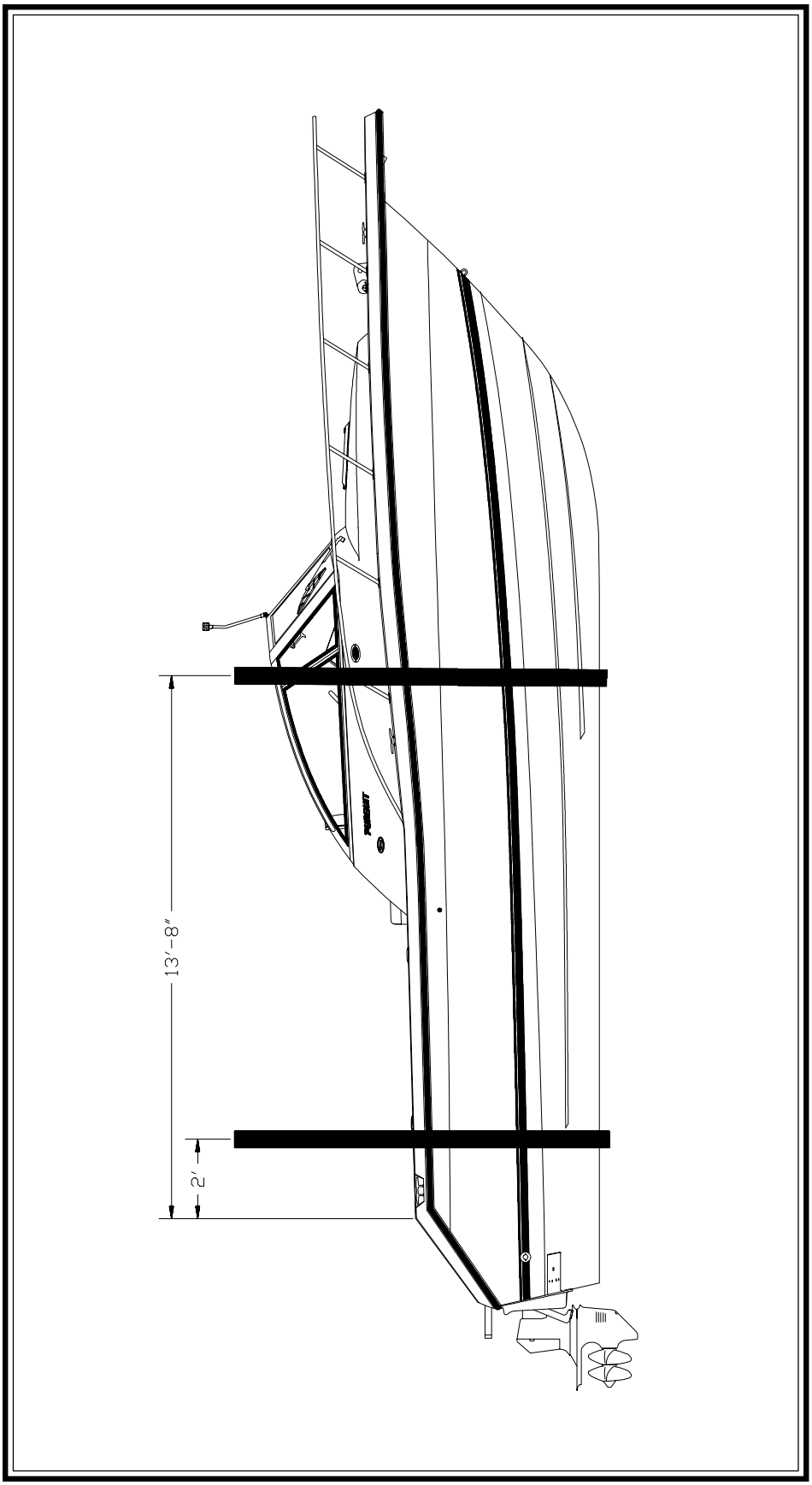
Y-Valve with Macerator



Freshwater System



Drainage System



Sling Locations

Appendix A:
GLOSSARY OF TERMS

Aft: In, near, or toward the stern of a boat.

Aground: A boat stuck on the bottom.

Amidship: 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 freshwater 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.

Piles 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 sea water 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.

Appendix B:

MAINTENANCE LOG

Date	Hours	Dealer	Service/Repairs

MAINTENANCE LOG

Date	Hours	Dealer	Service/Repairs

MAINTENANCE LOG

Date	Hours	Dealer	Service/Repairs

MAINTENANCE LOG

Date	Hours	Dealer	Service/Repairs

MAINTENANCE LOG

Date	Hours	Dealer	Service/Repairs

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Appendix C:

DEPARTMENT OF TRANSPORTATION
U.S. COAST GUARD
C.G. 1865 (REV. 1/88)

BOATING ACCIDENT REPORT

FORM APPROVED
OMB NO.211-0010

The operator/owner of a vessel used for recreational purposes is required to file a report in writing whenever an accident results in: loss of life or disappearance from a vessel, or an injury which requires medical treatment beyond first aid: or property damage in excess of $200 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 reporting authority in the state where the accident occurred. This form is provided to assist the operator in filing the required written report.

COMPLETE ALL BLOCKS (indicate those not applicable by "NA")

NAME AND ADDRESS OF OPERATOR	AGE OF OPERATOR DATE OF BIRTH	OPERATOR'S EXPERIENCE This type of boat / Other boat operating Exp. [ ] Under 20 Hours / [ ] Under 20 Hours [ ] 20 to 100 Hours / [ ] 20 to 100 Hours [ ] 100 to 500 Hours / [ ] 100 to 500 Hours [ ] Over 500 Hours / [ ] Over 500 Hours
OPERATOR TELEPHONE NUMBER	OWNER TELEPHONE NO.	
NAME AND ADDRESS OF OWNER	RENTED BOAT [ ] YES [ ] NO / NUMBER OF PERSONS ON BOARD	FORMAL INSTRUCTION IN BOATING SAFETY [ ] None [ ] State [ ] U.S. Power Squadrons [ ] USCG Auxiliary [ ] American Red Cross [ ] Other (Specify) _____

VESSEL NO. (this vessel)

BOAT REGISTER. NO.	BOAT NAME	BOAT MAKE	BOAT MODEL	MFR HULL IDENTIFICATION NO.
TYPE OF BOAT [ ] Open Motorboat [ ] Cabin Motorboat [ ] Auxiliary Sail [ ] Sail (only) [ ] Rowboat [ ] Canoe [ ] Other (Specify)	HULL MATERIAL [ ] Wood [ ] Aluminum [ ] Steel [ ] Fiberglass [ ] Rubber/vinyl [ ] Other (Specify)	ENGINE [ ] Outboard [ ] Inboard gasoline [ ] Inboard diesel [ ] Inboard-outdrive [ ] Jet [ ] Other (Specify)	PROPULSION No. of engines _____ Horse Power (total) _____ Type of fuel _____ Has boat had a Safety Examination? [ ] Outboard [ ] NO For current year? [ ] YES [ ] NO Year _____ Indicate whether [ ] USCG Auxiliary Courtesy Marine Exam [ ] State/local examination [ ] Other	CONSTRUCTION Length _____ Year built (boat) _____

ACCIDENT DATA

DATE OF ACCIDENT	TIME am pm	NAME OF BODY OF WATER	LOCATION (Give location precisely) Lat Long
STATE	NEAREST CITY OR TOWN		COUNTY

WEATHER	WATER CONDITIONS	TEMPERATURE (Estimate)	WIND	VISIBILITY
[ ] Clear [ ] Rain [ ] Cloudy [ ] Snow [ ] Fog [ ] Hazy	[ ] Calm (waves less than 6") [ ] Choppy (waves 6" to 2') [ ] Rough (greater than 6') [ ] Strong Current	Air _____ F° Water _____ F°	[ ] None [ ] Light (0 - 6mph) [ ] Moderate (7 - 14 mph) [ ] Strong (15 - 25 mph) [ ] Storm (Over 25 mph)	DAY / NIGHT [ ] Good [ ] [ ] Fair [ ] [ ] Poor [ ]

OPERATION AT TIME OF ACCIDENT (Check all applicable)		TYPE OF ACCIDENT (Check all applicable)		WHAT IN YOUR OPINION CONTRIBUTED TO THE ACCIDENT (Check all applicable)	
[ ] Commercial Activity	[ ] Drifting	[ ] Grounding	[ ] Collision with Fixed Object	[ ] Weather	[ ] Alcohol use
[ ] Cruising	[ ] At Anchor	[ ] Capsizing		[ ] Excessive speed	[ ] Drug use
[ ] Maneuvering	[ ] Tied to Dock	[ ] Flooding	[ ] Collision with Floating Object	[ ] No Proper Lookout	[ ] Fault of Hull
[ ] Approaching Dock	[ ] Fueling	[ ] Sinking		[ ] Restricted Vision	[ ] Fault of Machinery
[ ] Leaving Dock	[ ] Fishing	[ ] Fire or explosion (fuel)	[ ] Falls Overboard	[ ] Overloading	[ ] Fault of Equipment
[ ] Water Skiing	[ ] Hunting	[ ] Fire or explosion (Other than fuel)	[ ] Falls in boat	[ ] Improper Loading	[ ] Hunting
[ ] Racing	[ ] Shin Diving/ Swimming	[ ] Fallen Skier	[ ] Hit by Boat or Propeller	[ ] Racing	[ ] Operator Inexperience
[ ] Towing		[ ] Collision with Vessel	[ ] Other (Specify)	[ ] Hazardous Waters	[ ] Operator Inattention
[ ] Other (Specify)	[ ] Being Towed			[ ] Other (Specify)	

PERSONAL FLOTATION DEVICES (PFDS)

Was the boat adequately equipped with COAST GUARD APPROVED FLOTATION DEVICES? [ ] Yes [ ] No
Were they accessible? [ ] Yes [ ] No
Were they serviceable? [ ] Yes [ ] No
Were they used by survivors? [ ] Yes [ ] No
What type? [ ] I, [ ] II, [ ] III, [ ] IV, [ ] V (specify) _____
Were PFD's properly used? [ ] Yes [ ] No
Adjusted [ ] Yes [ ] No
Sized [ ] Yes [ ] No

Was the vessel carrying NON approved flotation devices? [ ] Yes [ ] No
Were they accessible? [ ] Yes [ ] No
Were they used? [ ] Yes [ ] No
If Yes, indicate kind.

Include any comments of PFD's under ACCIDENT DESCRIPTION on other side of form

PROPERTY DAMAGE

Estimated amount
This boat $
Other boat $
Other Property $

FIRE EXTINGUISHERS

Were they used? (If yes, list Type(s) and number used.)
[ ] Yes [ ] No [ ] NA
Types:

DESCRIBE PROPERTY DAMAGE

NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY

BOATING ACCIDENT REPORT

If more than 3 fatalities and/or injuries, attach additional form(s)

DECEASED

NAME	ADDRESS	DATE OF BIRTH	WAS VICTIM?	DEATH CAUSED BY	WAS PFD WORN?
			[ ] Swimmer [ ] Non Swimmer	[ ] Drowning [ ] Other [ ] DISAPPEARANCE	[ ] Yes [ ] No What Type?
			[ ] Swimmer [ ] Non Swimmer	[ ] Drowning [ ] Other [ ] DISAPPEARANCE	[ ] Yes [ ] No What Type?
			[ ] Swimmer [ ] Non Swimmer	[ ] Drowning [ ] Other [ ] DISAPPEARANCE	[ ] Yes [ ] No What Type?

INJURED

NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY	MEDICAL TREATMENT

ACCIDENT DESCRIPTION

DESCRIBE WHAT HAPPENED (Sequence of events. Include Failure of Equipment. If diagram is needed, attach separately. Continue on additional sheets if necessary. Include any information regarding the involvement of alcohol and/or drugs in causing or contributing to the accident. Include any descriptive information about the use of PFD's.)

VESSEL NO. 2 (if more than 2 vessels, attach additional form (s)

Name of Operator	Address	Boat Number
Telephone Number		Boat Name
Name of Owner	Address	

WITNESSES

Name	Address	Telephone Number

WITNESSES

SIGNATURE	Address	Telephone Number
QUALIFICATION (Check One) [ ] Operator [ ] Owner [ ] Investigator [ ] Other		Date Submitted

(do not use) **- FOR REPORTING AUTHORITY REVIEW** (use agency date stamp)

Causes based on (check one) [ ] This report [ ] Investigation and this report [ ] Investigation [ ] Could not be determined	Name of Reviewing Office	Date Received
Primary Cause of Accident	Secondary Cause of Accident	Reviewed By

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