PURSUIT®



OWNER'S MANUAL

S 428 SPORT

DECEMBER 2020

CALIFORNIA
PROPOSITION 65 WARNING

⚠ WARNING

WARNING: OPERATING, SERVICING AND MAINTAINING A RECREATIONAL MARINE VESSEL CAN EXPOSE YOU TO CHEMICALS INCLUDING ENGINE EXHAUST, CARBON MONOXIDE, PHTHALATES, AND LEAD, WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. TO MINIMIZE EXPOSURE, AVOID BREATHING EXHAUST, SERVICE YOUR VESSEL IN A WELL-VENTILATED AREA AND WEAR GLOVES OR WASH YOUR HANDS FREQUENTLY WHEN SERVICING THIS VESSEL. FOR MORE INFORMATION GO TO WWW.P65WARNINGS.CA.GOV/MARINE.

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Operator Notes

Safety Information

Your Owner's Manual was written to include safety instructions to ensure safe operation and maintenance of your boat. Safety alert symbols are used to alert potential personal injury hazards.

DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

All instructions are viewed from the stern looking toward the bow, with starboard (to your right) and port (to your left). A glossary of boating terms is included.

Your boat produces carbon monoxide (CO) and uses flammable fuel. CO will cause BRAIN DAMAGE or DEATH. Carbon monoxide gas (CO) is colorless, odorless and extremely dangerous.

Every precaution has been taken by Pursuit Fishing Boats to reduce the risks associated with death, possible injury and damage from fire or explosion. Your own precaution and good maintenance procedures are necessary in order to enjoy safe operation of your boat.

DANGER

Exposure to carbon monoxide will cause death or serious injury. Avoid direct and prolonged exposure to CO.

Gasoline and other fuels are extremely flammable and highly explosive under certain conditions.

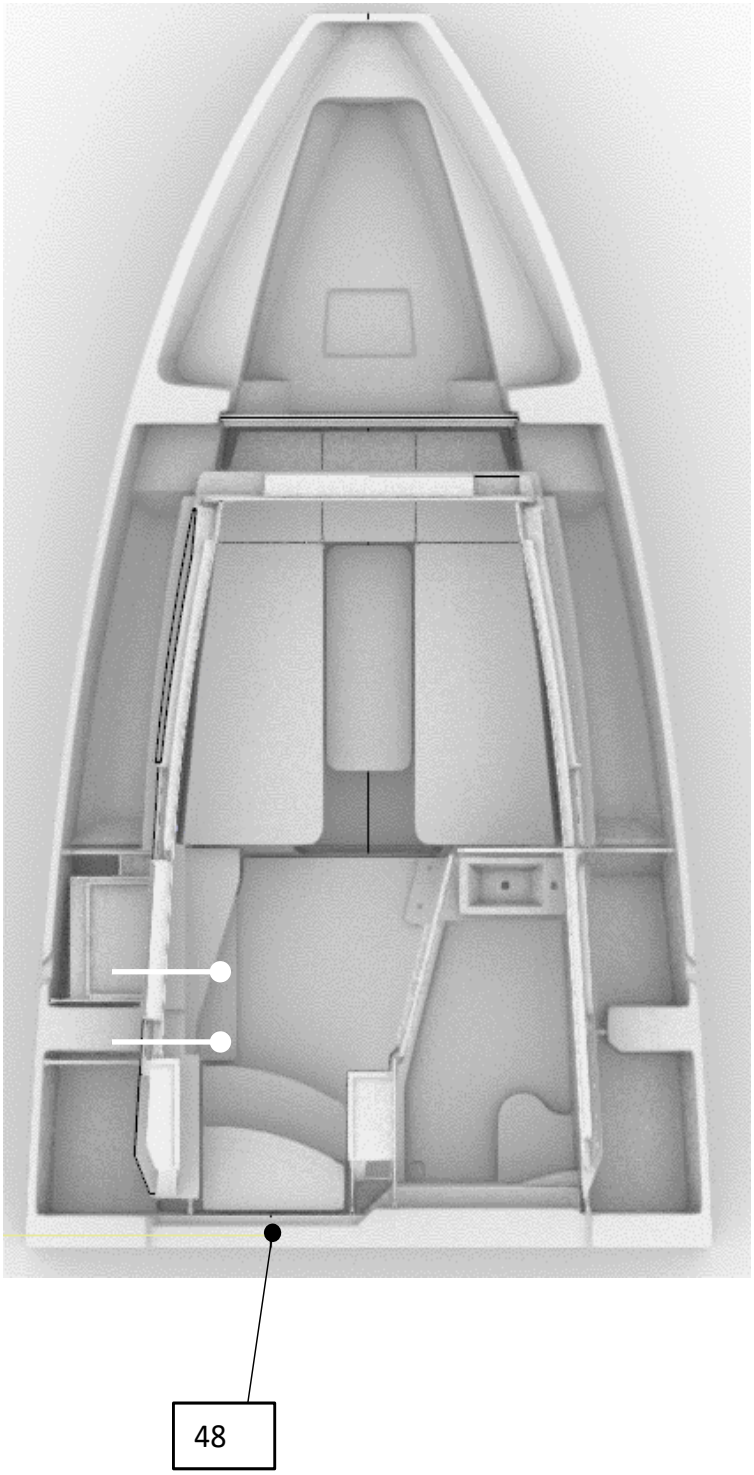
- **DO NOT smoke or allow open flame or sparks nearby when fueling.**
- **DO NOT block fuel vents.**
- **DO NOT store fuel in any containers or compartments which are not designated for storing fuel.**

Operator Notes

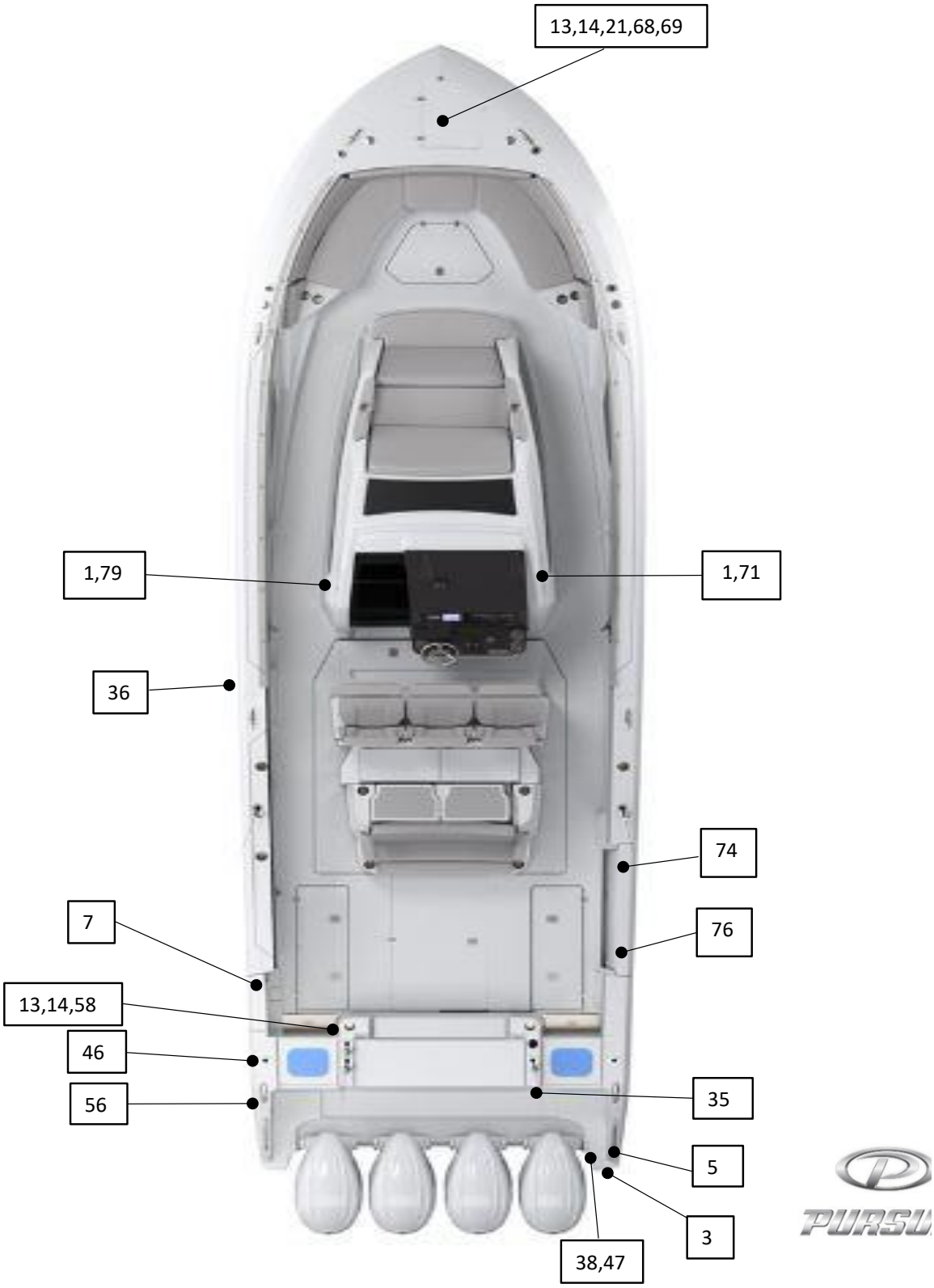
Safety Labels

The following safety labels can be found on the Pursuit S 428 Sport. The numbers correspond to the list in the table below. To obtain replacement labels refer to the part number of the label in the table and contact your Pursuit dealer.

Interior

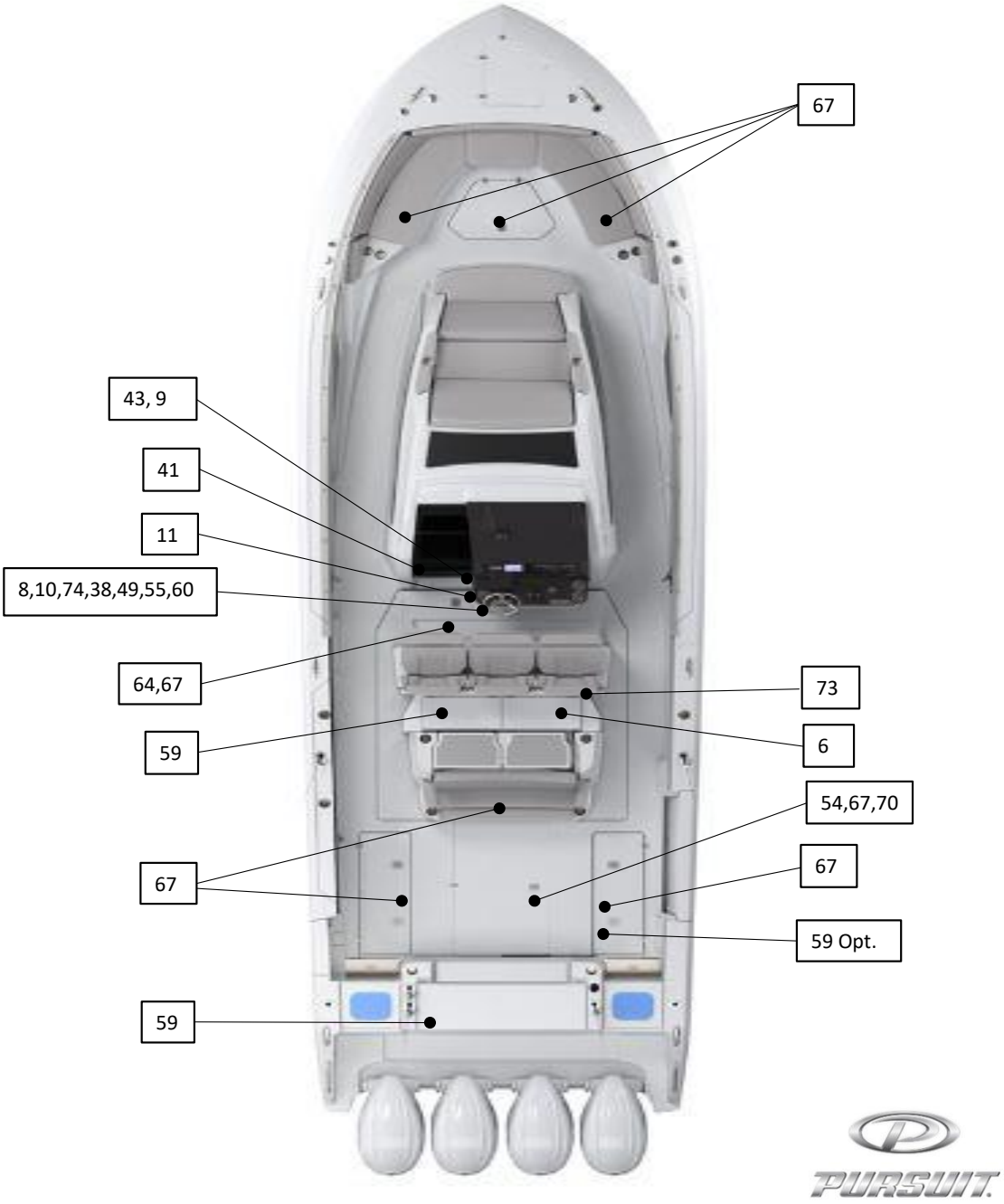


Exterior

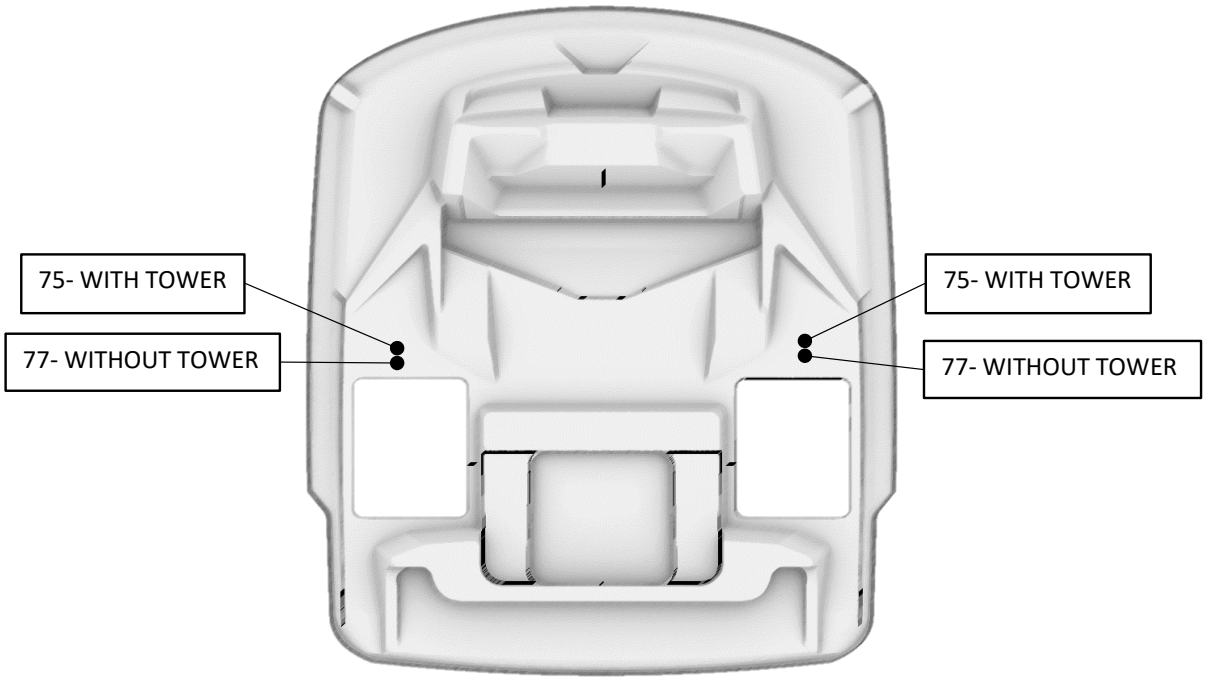


Safety Labels

Exterior

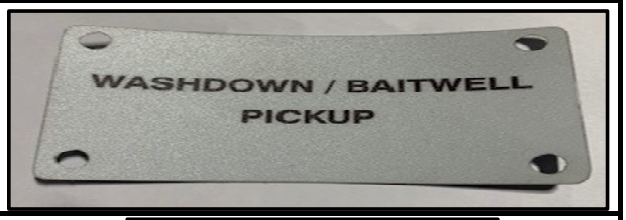
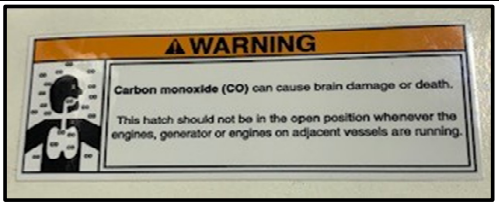
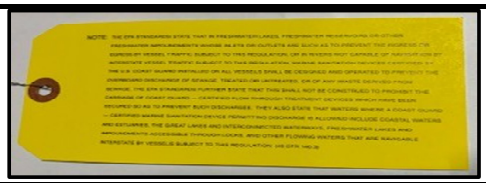


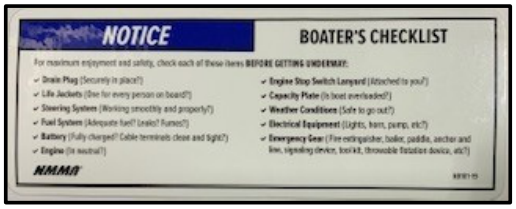
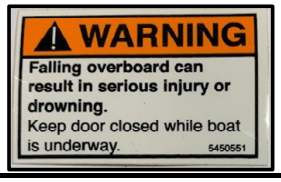
Hardtop


75- WITH TOWER
77- WITHOUT TOWER
75- WITH TOWER
77- WITHOUT TOWER

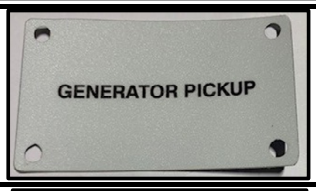
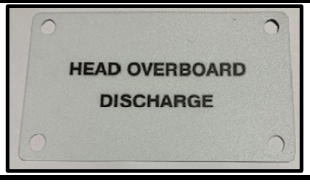
Safety Labels

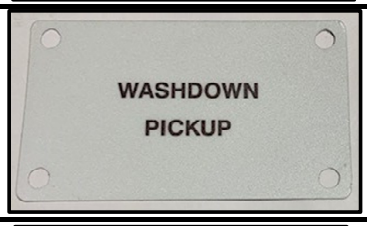
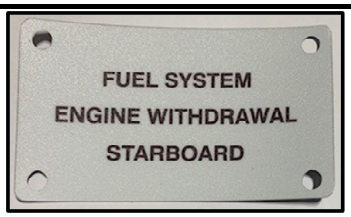
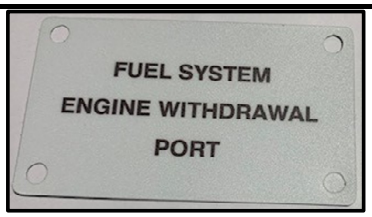
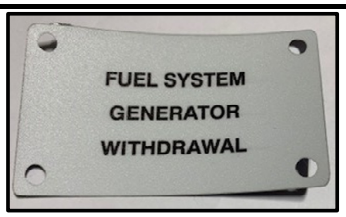
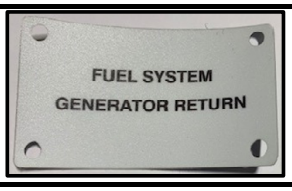
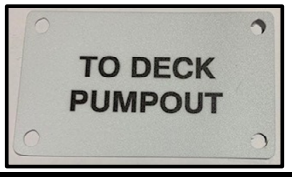
Label Table

1	LOGO: "P" 12V LED, LIGHTED P/N: 5346801	
2	LABEL, CAUTION - HOT WATER HEATER P/N: 5430190	
3	LABEL, WASHDOWN/BAITWELL PICKUP P/N: 5435220	
4	LOGO: "P" SMALL PLATINUM P/N: 5437700	
5	LABEL, WARNING CO HATCH P/N: 5437750	
6	TAG, WARNING ETHANOL FUEL P/N: 5450041	
7	TAG, OVERBOARD DISCHARGE YELLOW P/N: 5450050	
8	LABEL, WARNING SUNSHADE STOWAGE P/N: 5450054	

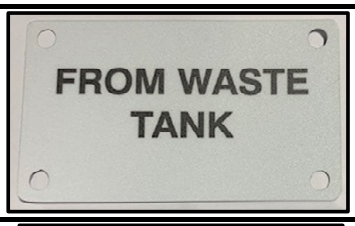
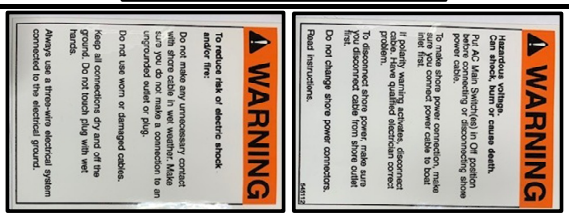
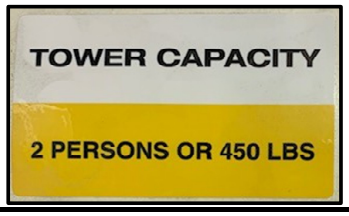
9	LABEL, NOTICE DASH PANEL CLEANING P/N: 5450055	
10	LABEL, FUEL SYSTEM WARNING MYLAR P/N: 5450060	
11	LABEL, BOATMAN'S CHECKLIST P/N: 5450120	
12	LABEL, "110 VOLTS" RED ON WHITE P/N: 5450170	
13	LABEL, "FRESH WATER" P/N: 5450260	
14	LABEL, "RAW WATER" P/N: 5450270	
15	LABEL, TRANSOM DOOR WARNING P/N: 5450550	
16	LABEL, BOARDING DOOR WARNING P/N: 5450551	

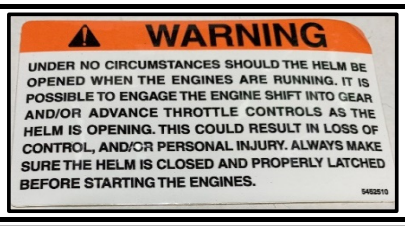
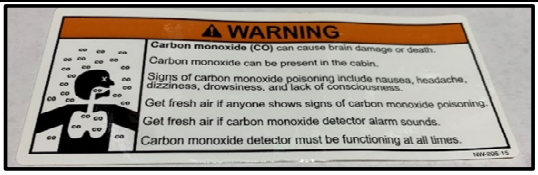
Safety Labels

17	LABEL, FISH BOX VALVE PORT P/N: 5450580	
18	LABEL, FISH BOX VALVE STBD P/N: 5450585	
19	PLATE, YACHT CERTIFICATION OVER 26' ALL P/N: 5450650	
20	LABEL, STORAGE AREA NOTICE MYLAR 3"X1-1/8 P/N: 5450710	
21	LABEL, GELCOAT DAMAGE NOTICE MYLAR 3" LONG P/N: 5450720	
22	LABEL, "FORWARD" MECHANICAL HATCH P/N: 5450730	
23	TAG, LEXAN "GENERATOR PICKUP" P/N: 5450800	
24	TAG, LEXAN "HEAD OVERBOARD DISCHARGE" P/N: 5450805	

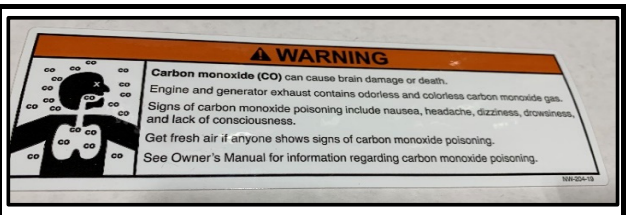
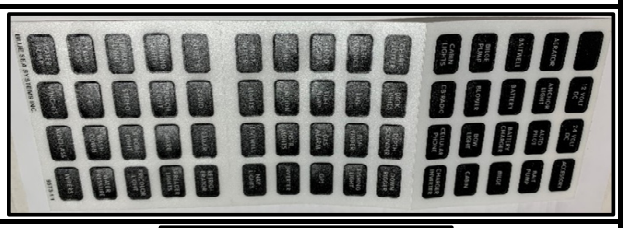
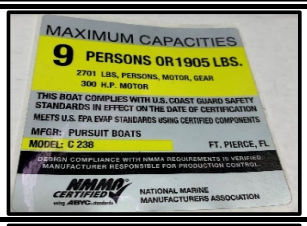
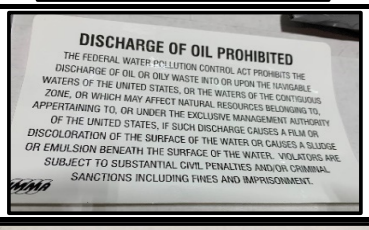
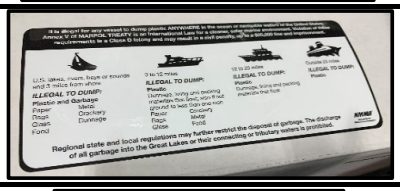
25	TAG, LEXAN "AIR CONDITIONING PICKUP" P/N: 5450810	
26	TAG, LEXAN "WASHDOWN PICKUP" P/N: 5450815	
27	TAG, LEXAN "BAITWELL PICKUP" P/N: 5450820	
28	TAG, LEXAN "FUEL SYS ENG WITHDRAWL STBD" P/N: 5450825	
29	TAG, LEXAN "FUEL SYS ENG WITHDRAWL PORT" P/N: 5450830	
30	TAG, LEXAN "FUEL SYS GENERATOR WITHDRAWL" P/N: 5450835	
31	TAG, LEXAN "FUEL SYSTEM GENERATOR RETURN" P/N: 5450840	
32	TAG, LEXAN "TO DECK PUMPOUT" P/N: 5450845	

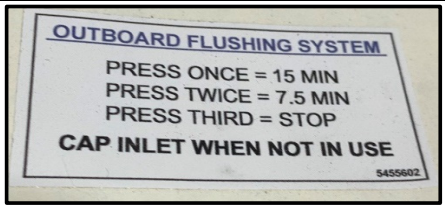
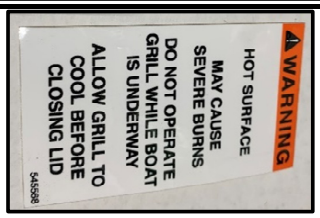
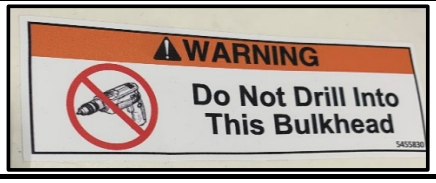
Safety Labels

33	TAG, LEXAN "FROM WASTE TANK" P/N: 5450850	
34	TAG, LEXAN, GREEN "WINTERIZED" P/N: 5450855	
35	LABEL, HAZARDOUS VOLTAGE (WRAP AROUND) P/N: 5451120	
36	LABEL, NO SMOKING P/N: 5451130	
37	LABEL, CAPACITY TOWER Y8 P/N: 5451160	
38	LABEL, WARNING PROPELLER, SWIM PLATFORM P/N: 5451180	
39	LABEL, SWIM LADDER WARNING P/N: 5451750	
40	LABEL, MANUAL DOOR OVERRIDE "UP" P/N: 5451781	

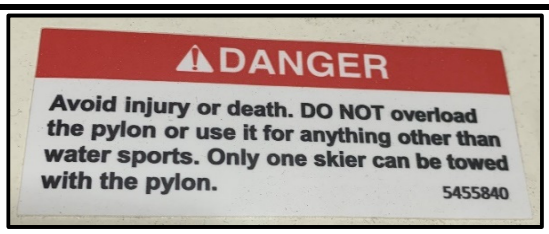
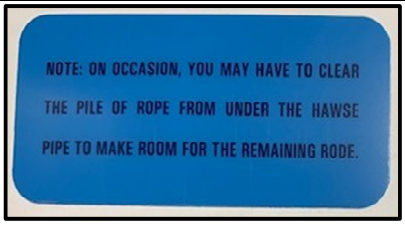
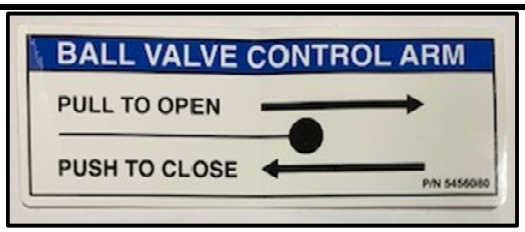
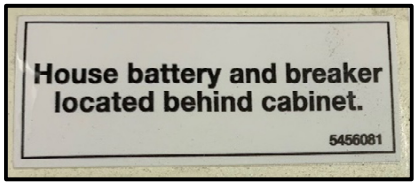
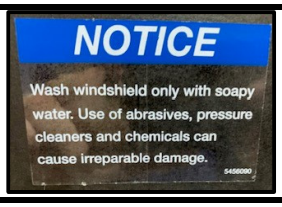
41	LABEL, "FIRE EXTINGUISHER INSIDE" P/N: 5452010	
42	LABEL, "ESCAPE HATCH" WHITE/CLEAR P/N: 5452020	
43	LABEL, WARNING "DO NOT RUN W/HELM OPEN" P/N: 5452510	
44	LABEL, WARNING HARDTOP P/N: 5453160	
45	TAG, WARNING CA CODE PROP 65 P/N: 5453551	
46	LABEL, "SLING" PS POLYESTER P/N: 5453600	
47	LABEL, TRANSOM CO CALIFORNIA P/N: 5453650	
48	LABEL, WARNING CO CABIN P/N: 5453680	

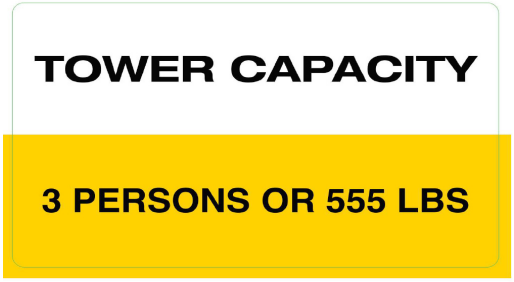
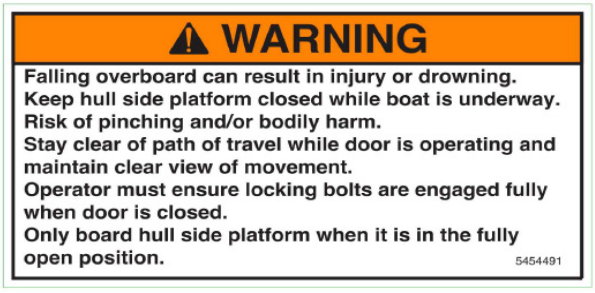
Safety Labels

49	LABEL, WARNING CO HELM P/N: 5453690	
50	LABEL, "NO STEP" 3"X8" RED/WHITE P/N: 5453970	
51	LABEL, KIT FOR FUSE BLOCK P/N: 5454010	
52	PLATE, CAPACITY C 238 MY2016 P/N: 5454215	
53	PLATE, CAPACITY DC 235 MY2017 P/N: 5454216	
54	LABEL, "DISCHARGE OF OIL PROHIBITED" P/N: 5454490	
55	LABEL, "TRASH OVERBOARD DISCHARGE" P/N: 5454500	
56	LABEL, FILL W/DIESEL ONLY P/N: 5454580	

57	LABEL, "NMMA" CERT SLVR/BLK 2IN CIRCLE P/N: 5455250	
58	LABEL, ENGINE FLUSHING SYSTEM P/N: 5455602	
59	LABEL, NOTICE CONSISTENT TEMPERATURE P/N: 5455650	
60	LABEL, NOTICE KEEP HATCHES CLOSED P/N: 5455660	
61	LABEL, WARNING HOT SURFACE - GRILL P/N: 5455680	
62	LABEL, WARNING V - BERTH TABLE P/N: 5455770	
63	LABEL, WARNING AFT FACING SEAT P/N: 5455780	
64	LABEL, WARNING "DO NOT DRILL" P/N: 5455830	

Safety Labels

65	LABEL, DANGER "DO NOT EXCEED 1000LB CAP" P/N: 5455840	
66	LABEL, WARNING SUNPAD FILLER P/N: 5455870	
67	LABEL, WARNING NO FLAMMABLE LIQUIDS P/N: 5455950	
68	LABEL, WARNING WINDLASS LEWMAR P/N: 5455960	
69	LABEL, NOTICE ANCH RODE LEWMAR P/N: 5455970	
70	LABEL, NOTICE BALL VALVE ACTUATOR P/N: 5456080	
71	LABEL, HOUSE BATTERY & BREAKER LOCATION P/N: 5456081	
72	LABEL, NOTICE WINDSHIELD CLEANING P/N: 5456090	

73	LABEL, CAUTION "SEAT ASSEMBLY" P/N: 5450215	
74	LABEL, WARNING "FALLING OVERBOARD" P/N: 5450062	
75	LABEL, "TOWER CAPACITY" P/N: 5453602	
76	LABEL, WARNING "FALLING OVERBOARD" P/N: 5454491	
77	LABEL, WARNING "FALLING FROM HARDTOP" P/N: 5453601	

Safety Labels

LABEL, GYRO PICKUP **P/N: 5450821**	
LABEL, "S 428" **P/N: 5450044**	

To obtain replacement labels, contact Pursuit Customer Relations at (772) 460-4626.

Operator Notes

General Information

Engine and General Specifications

Maximum Horsepower..... 1700 HP (1268 kW)
L.O.A. ..... 43’ 9” (13,36 meters)
Beam ..... 13’ 0” (3,96 meters)
Draft (fully loaded, motors up) ..... 2’ 10” (0,86 meters)
Draft (fully loaded, motors down)..... 3’ 9” (1,14 meters)
Clearance with Hardtop (from waterline)..... 9’ 2” (2,80 meters)
Approximate Dry Weight.....23000 lbs. (10.705 kg)
Fuel Capacity..... 547 U.S. gallons (2.070,62 liters)
Generator Diesel Capacity .....24 gal. (90,85 liters)
Water Capacity ..... 70 U.S. gallons (264,98 liters)
Livewell Capacity..... 36 U.S. gallons (136,20 liters)
Transom Fishox Capacity..... 68 U.S. gallons (257 liters)
Port Fishox Capacity ..... 42 U.S. gallons (159 liters)
Starboard Fishox Capacity ..... 24 U.S. gallons (90 liters)
Deadrise at Transom .....22 Degrees
Persons Capacity 14

Boat Information

Fill out the following information and leave it in your PURSUIT 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: Pursuit S 428 Sport	**Hull Identification #:**
Purchase Date:	**Delivery Date:**
Ignition Keys:	**Registration #:**

Engines			
Port Starboard Engine	**Port Inboard Engine**	**Starb. Inboard Engine**	**Starb. Outboard Engine**
Make:	**Make:**	**Make:**	**Make:**
Model:	**Model:**	**Model:**	**Model:**
Engine Serial Number:	**Engine Serial Number:**	**Engine Serial Number:**	**Engine Serial Number:**
Lower Unit Serial Number:	**Lower Unit Serial Number:**	**Lower Unit Serial Number:**	**Lower Unit Serial Number:**

Propellers	
Make:	**Diameter / Pitch:**
Blades:	**Other:**

Generator	
Make:	**Model:**
Serial #:	**kW:**

Dealer	Pursuit
Name:	**Phone #:**
Phone #:	**Representative:**
Sales Associate:	**Address:**
Service Manager:	
Address:	

General Information

PURSUIT Boats reserves the right to make changes and improvements in equipment, design and vendor supplied equipment at any time without notification.

Warranty & Warranty Registration Cards

The PURSUIT 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 PURSUIT Customer Relations.

PURSUIT, engine manufacturers, and the suppliers of major components maintain their own manufacturer's warranty and service facilities. It is important that you properly complete the warranty registration cards included with your boat and 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 rub rail. 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).

Federal Boat Safety Act

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 PURSUIT Customer Relations.

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 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 Limited Warranty Statement.

Owner/Operator Responsibilities

Towing

Pursuit Boats offers a custom bow tow eye on certain models as an optional feature. If your boat is equipped with this optional feature the following operational guidelines must be followed to prevent damages or injury from occurring during towing operations:

Ensure that towing tackle is properly rated/sized for the weight of your vessel.

Inspect the towing tackle prior to and at the end of every towing operation.

Prior to towing, close all seacocks which are designed to pick up raw water for air conditioning, generator, washdown pumps and live wells. Close all seacocks which are designed to discharge water through the hull bottom or hull sides for macerators, fish box pumps and deck drains. This will prevent flooding of mechanical spaces if a break in a line were to occur. Since it is assumed the vessel will be unoccupied during towing operations this is a critical step prior to beginning the towing operation.

On boats equipped with a generator, the generator exhaust outlet must be sealed to prevent water filling exhaust and flooding generator engine block/cylinders. This can be accomplished by installing an expandable plug in the exhaust outlet. Note, after a towing operation is completed and prior to starting the generator, the exhaust outlet plug must be removed. Failure to remove the exhaust outlet plug can lead to damage to the generator, it's exhaust system and/or associated components.

Sea conditions will dictate the speed at which your boat can be safely towed. Be mindful of changing conditions and adjust towing speeds accordingly.

It is the owner's responsibility to ensure these guidelines are followed during all towing operations. Failure to follow the guidelines can possibly lead to damages or injury. Damages to equipment and/or the vessel which are deemed to be caused by failure to follow the guidelines can void any warranty coverage.

On models which do not offer an optional factory installed custom bow tow eye, owner will assume all responsibility for damages to the vessel and equipment which are deemed the result of installation and or use of the non-factory tow eye.

Registration and Documentation

Federal law requires all undocumented vessels equipped with propulsion machinery be registered in the state of principal use. A certificate of documentation will be issued upon registration. These registration numbers must be displayed on your boat. The owner/operator of a boat must carry a valid certificate of registration 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 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 owner or operator 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 or uscgboating.org.

Education

If you are not an experienced boater, we recommend the boat operator and other people that normally accompany 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 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 or uscgboating.org 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 Section of this manual. For a more detailed description, obtain “Federal Requirements and Safety Tips for Recreational Boats” by visiting www.uscgboating.org or contacting your local marine dealer or retailer.

Some state and local agencies go beyond USCG regulations or impose similar equipment requirements on waters that do not fall under Coast Guard jurisdiction. Contact your dealer or local boating authority for additional information regarding the equipment requirements for that boating area.

EPA Compliant Fuel System

EPA (Environmental Protection Agency) regulations have required additional emissions related components for the fuel tank, fuel fill and fuel vent systems. It is unlawful to remove or intentionally defeat these emission related components.

Operator Notes

Propulsion Systems

1.1 General

Your Pursuit boat is designed to be powered with three outboard engines.

The manufacturer of the outboard engines provides an owner's information manual which includes its limited warranty statement with its product. It is important you read and understand the information and become familiar with the warranty, operation and maintenance of the engines and drive systems.

WARNING

MOVING PARTS HAZARD

Contact with moving parts can entangle, cut and cause death or serious injury. DO NOT get close enough to make contact with any running machinery moving parts, i.e., engine or propeller. Contact can result in loss of body parts, strangulation, burns and/or severe loss of blood resulting in death or serious injury.

NOTICE

DO NOT attempt to service any part of the outboard or boat systems unless you are familiar or qualified to do so. Do not use parts which are not designed for a marine application.

NOTICE

Use only the fuel recommended by the engine manufacturer. Use of old, contaminated fuel can cause the engine to malfunction or severe damage.

1.2 Saltwater Application

Each outboard engine is a complete drive system with the gear case (transmission) forward of the propeller and connected to the power head with a vertical drive shaft. Other than the routine maintenance outlined in the engine owner's manual, there is little to be concerned with unless the boat is to be kept in saltwater for extended periods. Marine growth will occur when components are left in the water for extended periods and can cause poor performance or permanent damage to the exposed components. The type of growth and how quickly it occurs is relative to the water conditions in your boating area. Water temperature, pollution, current, etc., can have an effect on marine growth.

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

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

CAUTION

DO NOT use copper-based coatings or any coatings not approved for use with aluminum. Some paint manufacturers claim their paints are safe for aluminum. Copper components and copper-based paints can cause severe corrosion to aluminum. DO NOT use copper-based paints. Mercury or mercury-based compounds that come into contact with aluminum will result in severe corrosion.

1.3 Engine Lubrication

Four-cycle engines have an oil sump in the crankcase. Use the oil type, grade, and level recommended by the engine manufacturer. It is normal for 4-cycle engines to consume a small amount of oil. Check the oil level before each use and change it following the engine manufacturer's recommendation.

Two-cycle outboard engines are lubricated by an oil injection system. Check the oil level before each use and use only the type specified by the engine manufacturer. Also monitor the oil level by checking the gauge on the helm or visually checking the oil level in the tank by using the reference marks on the tanks. Refer to section 3, Fuel Systems, and the engine owner's manual for oil specifications and additional information on the oil injection system.

NOTICE

Use only the oil recommended by the engine manufacturer, and monitor the oil level. Use of any other type of oil can cause severe damage or engine malfunction.

1.4 Engine Cooling System

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

CAUTION

DO NOT operate an engine out of the water, even momentarily. Water must be supplied to the cooling system of the power head and water pump, or serious damage will result. If it is necessary to run the engine out of the water, connect it to a engine flush attachment design for your specific engine.

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

1.5 Propellers

The propellers convert the power of the engines into thrust. Propellers vary in style, diameters and pitch. The best set for your needs will depend on your application and expected average load. Propeller sizes are identified by two numbers stamped on the prop in sequence; the first is the diameter and the second is the pitch (example 14 x 21). Pitch is the theoretical distance the propeller will travel in one rotation.

Repair or replace a propeller immediately if it has been damaged. A damaged propeller can cause vibration that can be felt in the boat and can damage the engine gear case. Refer to the engine owner's manual for information on propeller removal and installation.

1.6 Engine Instrumentation

The hardtop pod in the helm area is equipped with a single Yamaha multi-function display (MFD). The MFD allows the operator to monitor all engine functions (including fuel level and engine trim), operate the engines most efficiently, and prevent serious costly damage. The instrumentation is unique to the type

of outboard engines installed on your Pursuit. Your MFD may not be equipped with all of the following functions.

Some models may be equipped with the Yamaha Command Link Integrated Information System®. Refer to the Yamaha® manuals for information on the operation of this system. If equipped, the Yamaha monitor is located above the helm windshield.

Tachometer

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

NOTICE

DO NOT exceed maximum recommended engine RPM. Exceeding, maintaining or coming close to maintaining maximum RPM can reduce engine life.

Speedometer

The speedometer indicates the speed of the boat in miles per hour (MPH). Most speedometers measure the water pressure against a small hole in a pick-up tube located in the engine lower unit. In a Yamaha installation, GPS is used.

Temperature Warning

The temperature warning indicates the temperature of the engine. A sudden increase in the temperature could indicate an obstructed water inlet or an impeller failure.

NOTICE

Continued operation of an overheated engine will cause severe engine damage. If the engine overheats, shut off the engine, investigate the problem and correct it.

Fuel Gauge

The fuel gauge indicates the approximate fuel level in the fuel tanks. This gauge is a relative indication of the fuel supply available; it is not a calibrated instrument. On Yamaha-equipped boats, the fuel level is shown on the Yamaha display.

Voltmeter

The voltmeter displays the voltage for the battery and the charging system. The normal voltage for a full charged battery is 12.6 volts with the engine(s) off and 13 to 14.5 volts with the engine(s) running.

Hourmeter

The hourmeter keeps a running total of engine hours while operating.

Tilt/Trim Gauge

The tilt/trim gauge monitors the position of the outboard engine. The upper range of the gauge indicates the tilt, which is used for shallow water operation, trailering and to keep the gear case out of the water. The lower range indicates the trim position. Trim is used to adjust the hull angle while operating your boat on plane. Refer to the engine owner's manual for more information on the operation of the outboard power tilt and trim.

Engine Alarms

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

CAUTION

If an engine alarm sounds, shut off the engine, investigate the problem and correct it.

Fuel Management

Fuel management systems are standard equipment with some outboard engines. On Yamaha engines, the fuel management gauge is a multifunction gauge used to monitor fuel consumption of the engines. If your boat is equipped with this system, refer to the engine or fuel management manual.

Instrument Maintenance

Electrical system, instruments and ignition circuitry are protected by a circuit breaker or fuse located on the engine. The ignition switches and all instruments, controls, etc., must be protected from the weather when not in use. Excessive exposure can lead to gauge and ignition switch failures.

Helm Systems

2.1 General

The helm controls consist of engine throttle and shift controls, steering system, trim tab control switches, bow thruster controls and the optional spotlight.

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

2.2 Helm Access

The helm station is hinged at the bottom and opens to provide service access to the helm equipment. To open, slide the seat back to its furthest aft position, tilt the steering wheel to the full upright position and release the two cam-over type latches securing the helm in place. A strap holds the helm in the open position. To secure the helm in place, close the helm and secure the cam-over latches. The helm station must be secured before operating or transporting your boat, to prevent injury or damage. Do not open the helm station with engines running; accidental engagement of shift and throttle levers can occur.

WARNING

LOSS OF CONTROL AND UNSAFE BOAT HAZARD

Improper securing of the helm is hazardous and can cause death or serious injury from sudden loss of control. Make sure the helm is secure before getting underway and when transporting the boat.

2.3 Engine Throttle and Shift Controls

The shift and throttle controls on your boat may vary depending on the engines. The following control description is typical to most outboard remote controls. Refer to the engine or control manuals for specific information on the controls installed on your Pursuit.

The helm on your Pursuit is designed for a binnacle-style control with two throttle levers. Each throttle has a position for neutral (straight up and down), forward position (first detent forward of neutral) and reverse position (the first detent aft of neutral). Advancing the control lever beyond the shift range will advance the throttle, forward or reverse. Each control is equipped to allow the engine to be operated above idle RPM while in neutral for cold starting or warming up.

The handles of dual lever mechanical controls may not always align with each other at all RPM settings because of variations in the routing of control cables, cable length and adjustments at the engine. Usually the alignment of the handles can be optimized at a chosen RPM, but may vary at other settings.

CAUTION

To avoid possible injury or engine damage when shifting:

- **Pause in neutral before shifting from FORWARD to REVERSE, or REVERSE to NEUTRAL.**
- **DO NOT shift into reverse while the boat is traveling forward at speed.**
- **Keep area around shifter control clear of obstructions.**

See your Pursuit dealer for necessary control and cable adjustments. If the starter for either engine engages with the shift controls in any position other than neutral, the neutral safety switch is not functioning properly and must be repaired before using your boat.

2.4 Neutral Safety Switch

Every control has a neutral safety switch to prevent the engine from being started while shifted into gear. Control lever arm position or cable adjustments must be performed in order to prevent the engines from starting in forward or reverse.

Test the neutral safety switches periodically to ensure they are operating. To test the neutral safety switches, tilt the engines down and move the shift levers to the forward position, past first detent. DO NOT advance past the idle position. Turn the ignition key to the start position. The starter should not engage for any engine. Repeat the test with the shift levers in reverse and the engine throttles at idle; the starter should not engage for any engine. If an engine starts in gear during this test, immediately move the control levers to the neutral position and turn the engine off. Ejection or sudden loss of control can occur if the neutral safety switch system does not function properly and an engine can start in gear.

WARNING

Test the neutral safety switch periodically. If the switch is not operating properly, DO NOT use the boat. Contact your Pursuit Dealer and have it repaired. A neutral safety switch not operating properly can allow the boat to start in FORWARD or REVERSE causing sudden boat movement and throwing operator and passengers.

WARNING

LOSS OF CONTROL AND UNSAFE BOAT HAZARD

A neutral safety switch that does not function properly can cause death or serious injury. DO NOT operate the boat if the switch does not function properly.

2.5 Engine Power Tilt and Trim

All outboard engines used on your boat have a tilt and trim feature. The tilt and trim switches are usually built into the engine shift and throttle controls and allow the operator to control the position of the outboards from the helm. Moving the gear cases closer to the boat transom is called trimming ‘in’ or ‘down.’ Moving the gear cases away from the boat transom is called trimming ‘out’ or ‘up.’ In most cases, the boat will perform best with the outboards adjusted so the hull will run at a three to five degree angle to the water.

The term ‘trim’ generally refers to the adjustment of the outboards within the first 20 degree range of travel. This is the range used while operating your boat on plane. The term ‘tilt’ refers to adjusting the outboards further up for shallow water operation, trailering, or ‘tilting’ the outboards out of the water. Refer to the engine owner’s manual for information on the proper use and maintenance of the power tilt and trim.

CAUTION

The outboard hoses and cables or the transom gel coat can be damaged if the engine(s) are tilted to full up position or turned in the wrong direction. Turn the steering wheel completely to one direction or the other before tilting up to determine which direction is best for your boat.

2.6 Engine Stop Switch

Your Pursuit is equipped with an engine stop switch and lanyard. When the lanyard is pulled away, it will shut off the engines.



Engine stop switch lanyard (typical)

WARNING

LOSS OF CONTROL AND UNSAFE BOAT HAZARD

An engine stop switch system that does not function properly or is not used can cause death or serious injury. DO NOT operate the boat if the emergency stop switch system does not function properly.

Attach the engine stop switch lanyard to a strong piece of clothing on the operator. The engines will not start if the clip is not inserted into the stop switch. Make sure the lanyard is properly attached to the engine stop switch before attempting to start the engine.

DO NOT use the switch to stop the boat under normal operation. Test the switch periodically. If the switch is not operating properly, DO NOT use the boat. Contact your Pursuit dealer and have it repaired.

Refer to the engine stop switch information in section 9.4 Safety Equipment, and the engine owner's manual for more information on the engine stop switch.

2.7 Automatic Fire Suppression System

This system protects the generator compartment in the case of fire. The helm-mounted display provides systems status—charged (visual) or discharged (visual and audible)—and an override switch to allow engine restart.



Automatic fire extinguisher display unit

After the fire suppression system discharges, operate the generator blower and reset the system by engaging the override switch. Run the blower for five minutes before opening the generator compartment to evacuate the fire suppression agent.

For additional important information, see section 9, Safety Equipment, and the automatic fire extinguisher owner's manual.

2.8 Steering System

The steering system is electric and made of two main components: the helm assembly and the engine mounted electric actuators. Turning the steering wheel activates a signal to the powered engine actuators to turn the motors. In a system with Helm Master installed, the engines steer and tilt independently of each other. Refer to the engine system owner's manual for more information.

The outboards must be aligned with each other to provide maximum stability on straight-ahead runs and proper tracking through cor-

ners. If damage has ever occurred with the outboards or steering system, the outboards may have to be realigned.

CAUTION

Some autopilot systems have engine position sensors mounted to the hydraulic steering cylinder. The sensor bracket can contact the transom when the engines are fully tilted up and damage the autopilot, engine rigging or transom. Monitor the bracket and rigging while engines are tilting to determine the best position.

2.9 Trim Tabs

The S 428 is equipped with a Zipwake dynamic trim control system. The Zipwake system powers up when the engine ignition key switch is turned on. It can also be turned ON and OFF by pressing the power switch on the left side of the Zipwake panel.

The control panel has a pitch wheel and a roll wheel dial. The pitch wheel is in the center of the roll wheel dial. With the system in the manual mode, the boat's running attitude can be manually controlled using the control wheels. The pitch wheel controls the trim or pitch angle, while the roll wheel dial controls the list or roll angle. To trim the bow down, move the pitch wheel forward. Moving the pitch wheel rearward will result in the bow rising. To correct for a port list, rotate the roll wheel dial clockwise (away from the side that is listing down). To correct for a starboard list, rotate the roll wheel dial counter-clockwise.

Refer to the Zipwake operator's manual for information of what is displayed on the display.

The system can be operated in either the manual mode or the automatic pitch and/or roll control mode. It is advisable to become familiar with operating the pitch and roll control adjustments in the manual mode before activating the automatic mode. To activate the auto pitch and roll control, press and hold the AUTO button until AUTO PITCH and AUTO ROLL appear on the screen and display a green arch. To have only the AUTO PITCH active, press the AUTO button. The AUTO PITCH and it's green arch will remain on the display and AUTO PITCH and it's arch will disappear. To reactivate AUTO PITCH, press the AUTO button. To return to the MANUAL mode, press and hold the AUTO button.

The automatic pitch curves for your boat allow the system to adjust the running trim of the boat at all speeds. The pitch curve tells the system how much the Interceptors should be extended at each speed, thereby adjusting the boat's pitch angle as a function of speed. Refer to the Zipwake operator's manual for information on how to adjust or fine tune the pitch curve for your boat.

Refer to the Zipwake operator's manual for instructions on adjusting the manual control rate, activating the auto cleaning function, performing an Inteceptor check and adjusting display settings.

Before leaving the dock, make sure that the Interceptors are in the full UP position by rotating the pitch wheel aft.

Establish the intended heading and cruise speed before attempting to adjust the hull attitude with the trim tabs. Always make slight adjustments to reduce over-correcting. After stabilizing speed and direction, rotate the roll wheel dial to achieve a level side-to-side running attitude, being careful not to over trim. After making slight adjustments, always wait a few seconds for the change in the trim plane to take effect. When running at a speed that will result in the boat falling

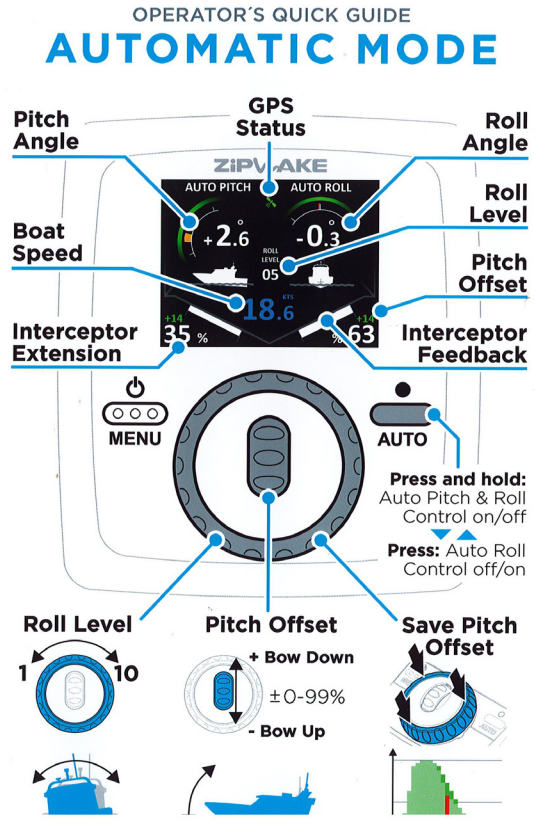
off plane, rotate the pitch wheel forward, bow down, to improve the running angle and operating efficiency.

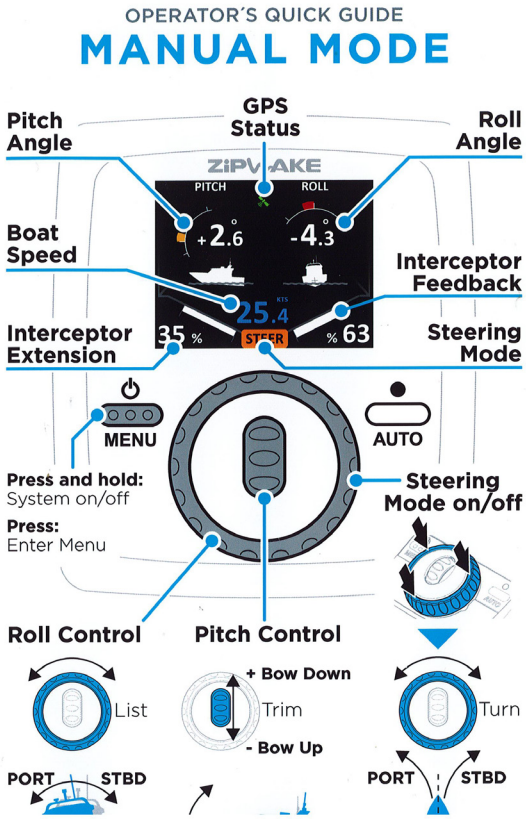
Trim Tab Control Panel

To turn the Zipwake system ON, press and hold the POWER/MENU button.

To turn the Auto Pitch & Roll Control ON/OFF, press and hold the AUTO button. When the Auto Pitch and Auto Roll functions are activated a green arc will display on the control panel. The Auto Roll level and Pitch Angle will also display numerically. The Pitch Angle displays in degrees. The port and starboard Interceptor position display on the bottom of the screen. The display is for the extension in percent.

Boat speed is displayed in the center bottom of the display. The boat speed is the current speed over ground. If no GPS signal is detected, the speed number will not be displayed.





2.10 Compass

The compass is located at the helm. To adjust the compass, read the instructions on 'Compass Compensation' provided with this manual. The compass cannot be adjusted accurately at the factory; it must be compensated for the influence of the electrical equipment and electronics unique to your boat. The compass should be adjusted by a professional after all electronics and additional electrical accessories are installed and before operating the boat.

2.11 Bow Thruster

The bow thruster is electrically driven and controlled by a joystick on the helm. Operate in short bursts of a few seconds to preserve battery life. For service access to the bow thruster, battery, and electrical control box, remove the berth mattress and open the forward berth access panel. Refer to the bow thruster owner's manual for more operation and maintenance information.



Bow Thruster

CAUTION

DO NOT operate the bow thruster out of the water, even momentarily. Water must be supplied to prevent the impeller from over-speeding, which will result in serious damage and void the warranty.

2.12 Spotlight (Optional)



Spotlight control

2.13 Control Systems Maintenance

Control Maintenance

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

If control system adjustments become necessary, see your Pursuit dealer.

Steering System Maintenance

Periodically inspect all steering system harnesses, cable connections, linkages, and helm assemblies. Signs of corrosion, cracking, loosening of fastenings, excessive wear, or deterioration must be corrected immediately. Periodic lubrication of all moving parts and connections with light waterproof grease is required. Failure to do so can lead to steering system failure and result in loss of control.

Electric steering systems require very little maintenance beyond periodic visual inspection. Refer to the steering system owner's manual for specifications and service information. Check steering operation and visually inspect for cable routing binding and loose or missing hardware before operating the boat. If you suspect the steering system is damaged, see your Pursuit dealer. DO NOT operate the boat if you suspect the steering system is malfunctioning.

WARNING

LOSS OF CONTROL AND UNSAFE BOAT HAZARD

Improper maintenance of the steering system is hazardous and can cause death or serious injury from sudden loss of control. Make sure all steering hardware, cables and fluid levels are regularly inspected and maintained. DO NOT attempt to service any part of the steering system unless you are qualified to do so. Follow all instructions regarding maintenance procedures in the steering system owner's manual.

Fuel Systems

3.1 General

The fuel system of your Pursuit boat is designed to meet the requirements of the U.S. Coast Guard, Environmental Protection Agency (EPA), National Marine Manufacturers Association (NMMA), and American Boat and Yacht Council (ABYC) in effect at the time of manufacture.

Pursuit Boats has engineered an improved, EPA-compliant fuel tank fill and vent system. The system reduces or eliminates fuel spillage when using a standard automatic shut-off fuel fill nozzle at marinas and gas stations. While this system provides a clean, consistent refueling experience, it still requires the operator's attention and must not be defeated by attempts to over-fill the tank with fuel. This system will automatically provide the proper air space (approximately 5% of total tank volume) in the fuel tank to accommodate the expansion of fuel during daily temperature cycles.

This new fuel system is engineered to vent through a carbon canister when the fuel cap is installed. This will greatly reduce fuel vapors that escape to the atmosphere and reduce the fuel odor that was present on traditional systems. For that reason, the fuel cap has been updated to help the operator verify the cap is properly closed.

The fuel system was factory-inspected and pressure-tested in accordance with regulations in effect at the time of manufacture. It is the responsibility of the boat owner to maintain the safe condition of the system. Inspect the system frequently to ensure no deterioration or loosening of connections has occurred.

DANGER

FIRE/EXPLOSION HAZARD

Fuel and its vapors are highly explosive when exposed to open flame or spark, resulting in death or serious injury.

- **Make sure no vapors are present before turning on electrical equipment or starting engines.**
- **Make sure fuel is added to the fuel tank only. DO NOT confuse other deck fills with fuel fills.**
- **DO NOT remove anti-siphon valves from the system.**
- **Turn off all electrical switches before servicing the fuel system.**
- **DO NOT drain any fuel in the bilge.**
- **Check all fuel lines and fittings for leaks before and after starting the engines and after any fuel system service.**
- **Prime fuel system and check all fittings for leaks before and after starting the engines.**
- **DO NOT block fuel vents.**
- **DO NOT store fuel in any containers or compartments not designated for fuel storage.**

NOTICE

Certain bulkhead areas are sealed in compliance with U.S. Coast Guard regulations at the date of manufacture. Any modifications must be made in accordance with the regulations.

3.2 Fuel System

All four engines draw fuel from a single fuel tank. The fill for the tank is located on the port gunwale midship.

All boats equipped with gasoline engines are required by the U.S. Coast Guard to have anti-siphon valves. The fuel delivery lines are equipped with anti-siphon valves where the lines attach to the fuel tanks. These valves help prevent gasoline from siphoning out of the fuel tank should a line rupture.

DO NOT remove anti-siphon valves from system. Anti-siphon valves prevent fuel from flowing into the bilge should a fuel hose or fitting leak. If the valve becomes clogged, clean and reinstall or replace it.

Fuel Tanks

The fuel pick-up tubes are positioned in the tank to achieve optimum fuel usage, fuel line routing, etc. At certain speeds and hull trim angles, the fuel supply at the withdrawal tube 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 trim angle of the boat may cause the fuel to flow away from the pickup tubes.

Fuel Gauge Senders

The fuel gauge senders are more accurate when the boat is stationary and level. Because of the change in attitude when the boat is underway, variations in gauge readings can occur. This system is a relative indication of the available fuel supply and not a calibrated instrument.

Fuel Fills

The gasoline fuel fill is located on the port side gunwhale midship and is marked with a gasoline pump icon. The fill feeds the single tank, which holds approximately 547 gallons (2070 liters) of fuel.



Gasoline fuel fill

The fuel fill is opened by turning it counterclockwise. After fueling, screw the cap on in a clockwise direction until an audible click is heard, indicating that the cap is seated. If the cap is lost or damaged, replace only with original equipment; contact Pursuit Customer Relations or your Pursuit dealer. During refueling, the tank vents out at both the fuel fill plate and the vent located on the side of the hull. Note: There should not be any residual fuel at the vent but there could be residual fuel at the deck fill plate. Do not block or restrict either of these vents.

Fill the fuel tank slowly and monitor the fuel gauge while filling. Once fueling is completed, wash the areas around the fuel fill(s) to help reduce discoloration of the fiberglass or striping. Use only the fuel recommended by the engine manufacturer; refer to the engine owner's manual for additional information.

If fuel is accidentally added to any other tank, DO NOT attempt to pump fuel out; these systems are not designed to pump fuel. Fuel must be removed by qualified personal only. Fuel in other systems will also require replacement of that system and/or many components.

Fuel Filters

Fuel filters are located inside the mechanical space. There is one water-separator type filter for each engine fuel line. Check all filters for water frequently to ensure an adequate supply of clean, dry fuel to the engines. The filter elements should be changed once a season.



Gasoline fuel filters

Turn off all electrical switches before servicing the fuel system and DO NOT drain any fuel into the bilge. Check all fuel lines and fittings for leaks before and after starting the engines and after any fuel system service. Prime the fuel system and check all fittings for leaks before starting the engines.

3.3 Diesel Generator Fuel System

The diesel generator is equipped with a separate 24-gallon fuel tank located outboard on the port side of the mechanical space. The generator is filled through a deck plate marked DIESEL on the port aft corner of the deck.

⚠ CAUTION

DO NOT confuse the diesel and gas fuel fills; severe engine damage will result.



Diesel fuel fill

The fuel level of the generator diesel tank is displayed on the Yamaha CL7 engine display at the steering helm. It is identified as the generator on the display.



Generator control panel

The diesel fuel system works much like the gas system. However, the diesel system is not equipped with anti-siphon valves and there is a fuel return line to return unused fuel to the fuel tank. The diesel system may require priming after servicing. Refer to the generator owner's manual for information on priming.

Make sure the fuel valve on top of the fuel tank is in the ON position before attempting to start the generator.

A water-separator type fuel filter is installed near the generator. The fuel filter has a sediment bowl that must be inspected for water frequently to ensure an adequate supply

of clean, water-free fuel is supplied to the engine. Inspect the filter periodically and change the element as needed.

3.4 Fueling Instructions

DANGER

FIRE/EXPLOSION HAZARD

Gasoline vapors are highly explosive when exposed to open flame or spark, resulting in death or serious injury.

- **Stop engines before fueling.**
- **DO NOT smoke or allow open flames or sparks nearby, within 50 ft (15 m) of the fueling area.**
- **Maintain contact between fuel nozzle and fuel tank fill to prevent electrostatic spark. DO NOT use a plastic funnel.**
- **Fill in an open area.**

DANGER

BURN HAZARD

Fuel floating on water which is ignited can cause death or serious injury. Fuel will float on top of water and can burn. If the boat is abandoned, swim upwind, far enough to avoid fuel that can spread over the surface of the water.

CAUTION

Use only the fuel recommended by the engine manufacturer. The use of old, contaminated fuel can cause severe damage or engine malfunction. Do not use fuel that contains more than 10% ethanol, harsh additives or methanol; damage to the engines and fuel system will result. Fuel system damage, related to use of alcohol-blended fuels, is not covered by the Pursuit Limited Warranty. Refer to the engine owner's manual for specific fuel requirements for your engines.

Try not to spill fuel. If fuel is spilled, wipe up all traces with dry rags and immediately dispose of the rags properly onshore. DO NOT allow fuel to stay on the finish of the boat, as discoloration and damage to trim can occur. Avoid fueling at night, except under well-lighted conditions. Also, monitor the fuel level gauge to avoid overfilling.

To fill fuel:

1. Turn all switches OFF.
2. Secure boat.
3. Remove passengers from boat.
4. Extinguish all flame-producing items.
5. Confirm the use of the correct fuel fill (gas vs diesel).
6. Open fuel fill(s) by turning counterclockwise.
7. Put nozzle in the fuel fill opening.
8. The fuel delivery system will shut off when the tank is filled to the proper capacity.
9. Remove the nozzle.
10. Install fuel cap and turn clockwise, tightening until it clicks.
11. Check the fuel compartment and below the deck for fuel odors. If you smell fuel, DO NOT start engines.

3.5 Fuel System Maintenance

DANGER

FIRE / EXPLOSION HAZARD

Fuels are extremely flammable and highly explosive under certain conditions. DO NOT smoke or allow open flames or sparks nearby when inspecting the fuel system. Check fuel lines and all system components (filters, primer bulbs, clamps and connections) frequently for leaks, damage or deterioration. If you suspect damage, replace as necessary. Surface cracking on a hose indicates wear—replace it.

Spray the valves, fuel tank gauge sender and ground connections with a metal protector.

Inspect the fuel fill cap o-ring seals frequently and lubricate with petroleum jelly or silicone grease. The o-ring seal prevents water from entering the fuel system through the fuel fill cap. If the o-ring is damaged, or you suspect it is damaged, replace it.

Old, degraded gasoline can affect engine performance and damage the engine and boat fuel system. Chemical changes occur as gasoline ages, reducing octane and causing deposits and varnish in the fuel system.

If your boat is not operated 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 degrading. Do not allow the boat to sit unused for an extended period with the fuel tanks less than 3/4 full. Changes in temperature and weather conditions can cause condensation in fuel tanks. Your Pursuit dealer or the engine manufacturer can provide additional information on fuel degrading and fuel stabilizers recommended for your engine.

Improper storage of fuel at marinas, limited boat usage, etc., can cause the fuel to become contaminated. Periodically, it may be necessary to pump accumulating water and contaminated fuel from the bottom of the fuel tanks. If the fuel system on your boat becomes contaminated, contact your dealer or marina for assistance.

Avoid using fuels with alcohol additives. Alcohol blend gasoline will absorb moisture from the air which can reach such concentrations that ‘phase separation’ can occur where the water and alcohol mixture becomes heavy enough to settle out of the gasoline to the bottom of the tank. Since the fuel pickup tubes are near the bottom of the tank, phase separation can cause the engine to run very poorly or not at all. Phase separation is more severe with methyl alcohol and will increase as the alcohol content increases. Water or a jelly-like substance in the fuel filters is an indication of phase separation from the use of alcohol-blended fuels.

Diesel engine operation requires a good supply of clean, water-free diesel fuel. Algae can grow in the accumulated water in the diesel fuel tank. This will normally occur in warm climates. Adding a high-quality diesel fuel additive containing an algaecide may be required periodically to control algae in your diesel system, depending on your boating area. Contact your Pursuit dealer or engine manufacturer for additional information regarding fuels and additives.

Operator Notes

Electrical Systems

4.1 General

Your Pursuit boat is equipped with DC and AC electrical systems. The DC system draws current from onboard batteries. The AC system can draw current from either dockside power outlets or the generator.

Electrical schematics are included in Appendix F to assist technicians in the servicing of the electrical systems. Pursuit recommends you take your boat to an authorized Pursuit dealer for service or installation of additional electrical equipment. Pursuit reserves the right to modify or update the electrical system at any time without notice to the consumer or obligation to make updates to boats built prior to the change.

Some compartments on your boat may be lighted. Lights bulbs produce heat and can ignite combustible products. Turn off all lighting before you leave the boat.

WARNING

FIRE OR EXPLOSION HAZARD
Ignited combustible products can cause fire or explosion, resulting in death or serious injury. DO NOT store combustibles near lights and turn off all lighting before leaving the boat.

4.2 DC System

Batteries

The 12-volt batteries have been selected to provide optimum performance for engine starting, house, and electronics loads. There are eight (8) batteries. Four (4) lead acid batteries are located in the port mechanical space compartment and three (3) AGM batteries for house and electronics are located in the starboard mechanical space compartment. The batteries are located on heavy duty sliding trays under the deck in the mechanical space. To inspect the battery condition remove the ¼" pull pin holding the slide in place. Slide the entire tray inboard to gain access to the batteries and their electrical connections. One (1) AGM battery for the bow thruster is located forward of the berth and may be accessed by removing the mattress and opening the forward berth access panel. The AGM batteries are maintenance-free. Refer to the engine owner's manual for information about the circuit breakers installed on your engines.

DC Distribution

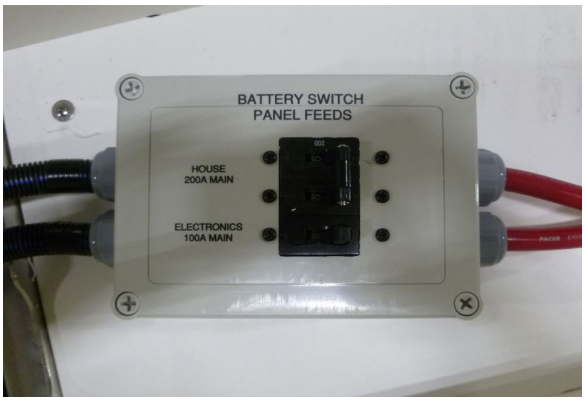
The 12-volt DC system batteries are charged by the engine charging system or the battery charger when connected to shore power or when operating the generator. 12-volt power is distributed to the battery switches and breakers on the DC Main Distribution Panel (MDP). The DC MDP is located on the starboard side of the helm seat base. Battery switches and breakers on the DC MDP protect the switch panels on the helm and in the cabin. Use the volt meters on the DC MDP to monitor the battery voltage for the house and electronics batteries. Use the multi-function display at the helm to monitor engine battery voltage.

The circuit breaker on each engine protects the engine ignition systems and gauges. Refer to the engine owner's manual for information on your engines.

Battery Switch Panel Feeds

The house and electronics breakers, located on the battery switch panel feed located in the port aft side of the machinery space (just forward of the shore power cable reel), disconnect ALL battery power to the electronics and house battery switch. If the boat is stored out of the water, turn off the house and electronics breakers to ensure there is no electrical drain from the associated batteries.

Turning off the house main will disable the CO detector, the automatic bilge pumps and high water alarm. These breakers should NEVER be turned off if the boat is kept in the water, as the automatic bilge pumps will not run. The high bilge water warning horn will sound for several seconds when the house breaker is activated.



Battery switch panel feeds

Battery Switches

There are three battery switches on the DC MDP that manage the 12-volt power distribution. One switch controls the port and starboard engine batteries. Another switch controls the center engine and generator batteries. The third switch controls the house and the electronics batteries. The port and starboard batteries, the center engine and generator batteries or the electronics and house batteries can be paralleled by switching the desired batteries' switches to the 'combine batteries' position.

Make sure the electronics and house and the engine battery switches are in the ON position whenever the engines are running to ensure that ALL 12-volt accessories will operate when they are needed. Current is supplied to the CO detector, the automatic float switches for the bilge pumps, stereo memory, high water bilge alarm and the sump when the ELECTRONICS batteries are connected and the battery switches are OFF (battery switch panel feed breakers must be ON).

⚠ CAUTION

DO NOT operate the boat with the engine battery switch in the combine batteries position.

Bow Thruster Main

This main fuse provides protection to the bow thruster and its wiring. The fuse is located in the control enclosure adjacent to the bow thruster; access by removing the berth mattress and opening the forward berth access panel. A spare fuse is stored in the enclosure.

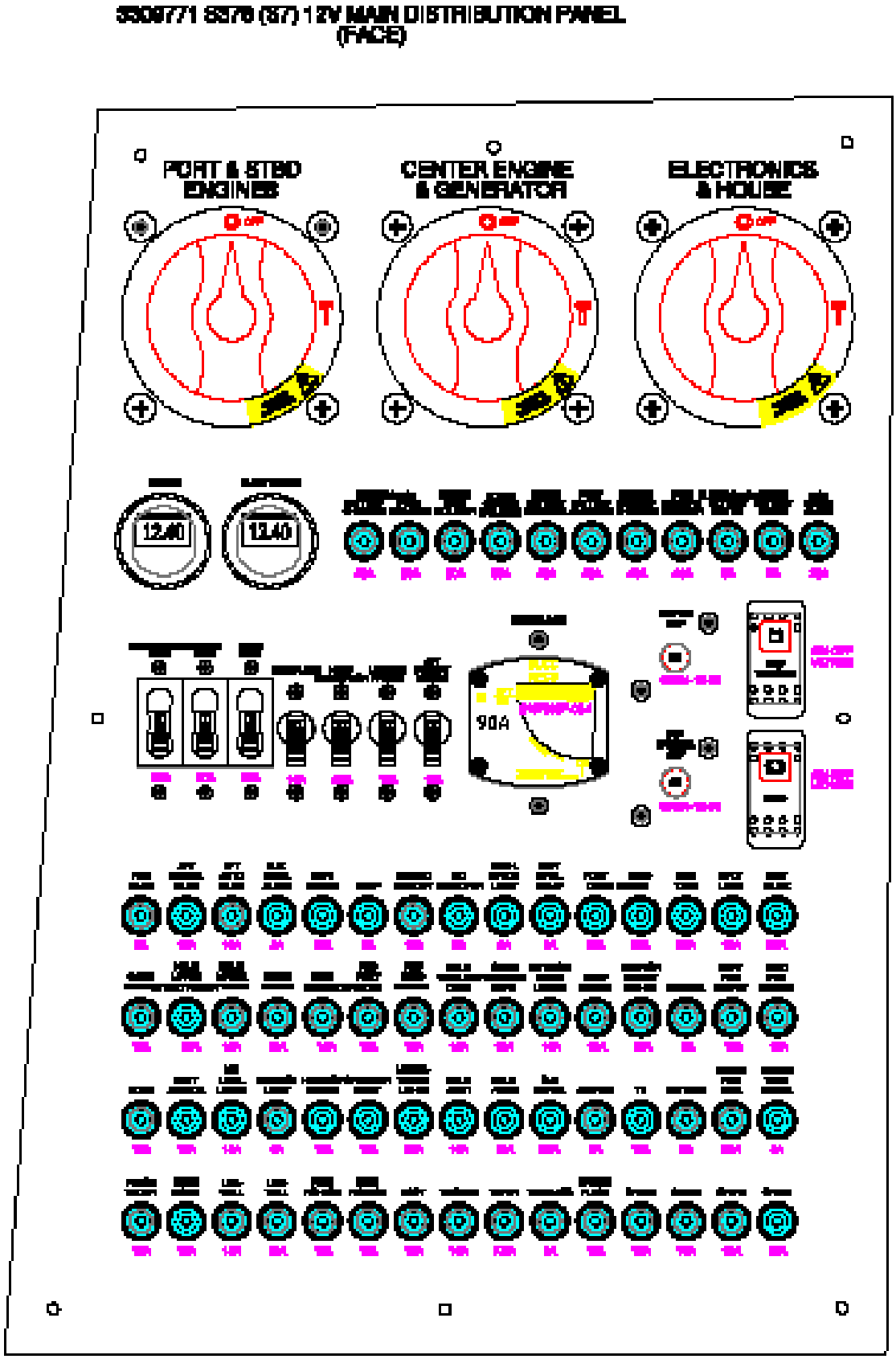


Bow thruster panel

DC Main Breakers

There are a number of breakers on the DC MDP which need to be switched ON for their corresponding components to operate.

These main breakers are on the DC MDP:



Main DC Distribution Panel (DC MDP)

Electronics Main

These are reserved for electronic accessories installation. An electronic bus is located behind the helm.

House Main

Supplies the 12-volt current to breakers for cabin equipment and the cabin switch panels.

Helm Main

Supplies the 12-volt current to helm and cockpit switch panels.

Windlass Main

The windlass main breaker is located on the DC MDP. Rotate the yellow lever to turn off and on. Turn off the breaker when the windlass is not in use to reduce the possibility of accidentally activating the windlass.

Blower

Activates the blower in the mechanical space.

CO Detector

These breakers supply current to the carbon monoxide detectors. The power indicator on the carbon monoxide detector should be lit whenever someone is occupying the cabin. If the breaker has tripped, it indicates there is a problem with the carbon monoxide detector(s), the breaker, or the wiring from the breaker panel to the detector(s). Determine the cause of the problem and correct it before resetting the breaker.

Carbon monoxide detectors are safety devices designed to sound an audible alarm when carbon monoxide is detected in the area of the detector. Carbon Monoxide (CO) gas is colorless, odorless and extremely dangerous. All engines and fuel-burning appliances produce CO as exhaust.

CO detectors are recommended in areas where CO build-up is a possibility, especially confined areas such as sleeping quarters, galleys and head compartments.

Check the condition of the CO detector regularly for proper operation. See the detector owner's manual for installation requirements and operating instructions.

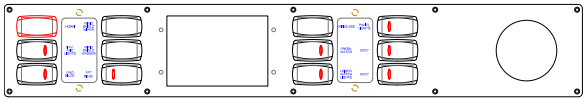
DANGER

EXTREME HAZARD

Carbon monoxide (CO) gas is colorless, odorless and extremely dangerous. All engines and fuel-burning appliances produce CO as exhaust. Direct and prolonged exposure to CO will cause brain damage or death.

4.3 12-Volt DC Switches

Helm Switch Panel



HORN

Activates the trumpet horn located on the hardtop.

NAV/ANC LIGHTS

Activates the navigation lights when the top of the rocker switch is pressed; activates the anchor light when the bottom is pressed

FWD BILGE

Activates the forward bilge pump. If the pump activates automatically, the automatic bilge pump indicator on the switch will light.

WINDSHIELD WIPER

Activates the windshield wiper. The center position is OFF, the top position is low speed, and the bottom position is high speed.

WINDSHIELD WASHER

Activates the windshield washer. The fresh water system must be on to operate the washer.

AFT BILGE

Activates the aft bilge pump. If the pump activates automatically, the automatic bilge pump indicator on the switch will light.

WINDLASS

Deploys the anchor (by pressing up) and retrieves the anchor (by pressing down). Refer to the windlass information in section 7, Exterior Equipment.

FRESH WATER

Activates the potable fresh water system. This needs to be turned on for the cockpit and cabin systems to be pressurized.

UNDERWATER LIGHTS

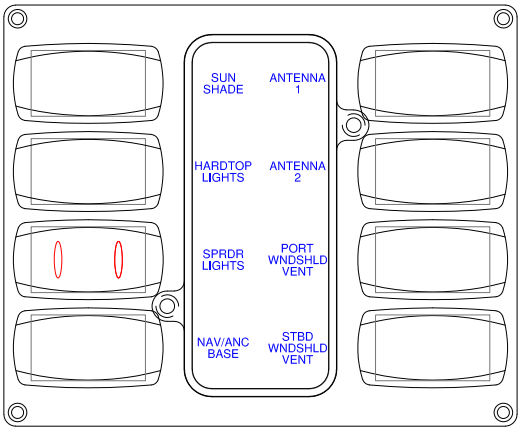
PANEL LIGHTS

Activates the panel lights for night time visibility.

ACCY

Unassigned and reserved for user-installed accessories. DO NOT install a component with an operating current that exceeds 10 amps (12V DC).

Hardtop Switch Panel



SUN SHADE

Deploys and retracts the powered aft sunshade.

HARDTOP LIGHTS

Activates the lights mounted underneath the hardtop. Pressing once activates the red lights; pressing again turns on bright white lights; pressing a third time provides blue lighting. If lights get out of sequence, depress the switch and hold for two seconds.

SPREADER LIGHTS

Activates the forward and aft facing cockpit spreader lights.

ACC

Unassigned and reserved for user-installed accessories. DO NOT install a component with an operating current that exceeds 10 amps (12V DC).

ANTENNA

Raises and lowers the electrically actuated VHF and AM/FM antennas.

NAV/ANC BASE

Raises and lowers the electrically actuated navigation light mast.

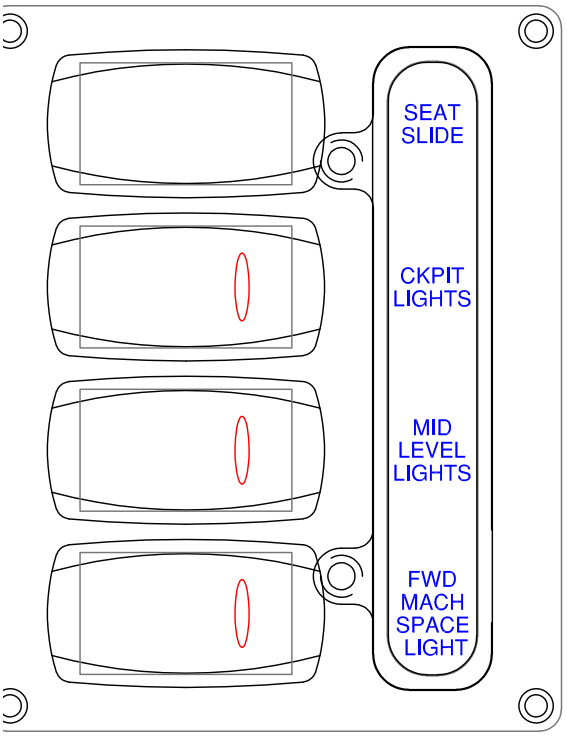
PORT WINDSHIELD VENT

Opens and closes the electrically actuated port windshield vent.

STBD WINDSHIELD VENT

Opens and closes the electrically actuated port windshield vent.

Starboard Leaning Post Switch Panel



SEAT SLIDE

Slides the seat aft to the “open” position. Slides the seat forward to the “closed” position.

COCKPIT LIGHTS

Activates the white cockpit deck accent lights.

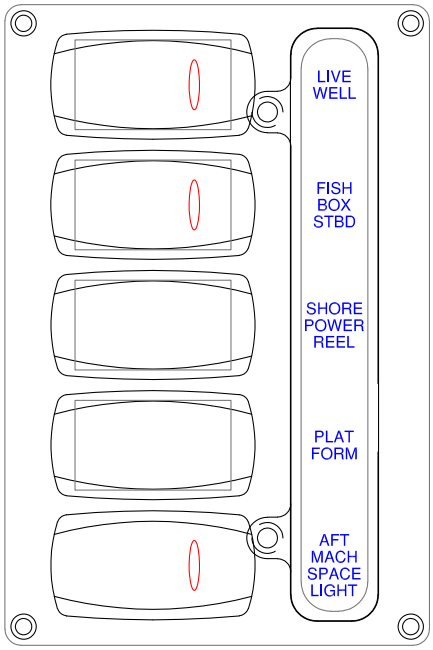
MID LEVEL LIGHTS

Activates the colored accent lights around the base of the aft facing seat and under the gunnels.

FWD MACHINERY SPACE LIGHT

Activates the work light in the midship machinery space.

Aft Starboard Cockpit Switch Panel



LIVEWELL

Activates the livewell pump for the starboard livewell.

FISHBOX STBD

Activates the diaphragm pump used to evacuate the starboard fishbox.

SHORE POWER REEL

Activates the electric shore power cord reel. Ensure that the cord is laid flat and free of obstructions before retrieving the cord.

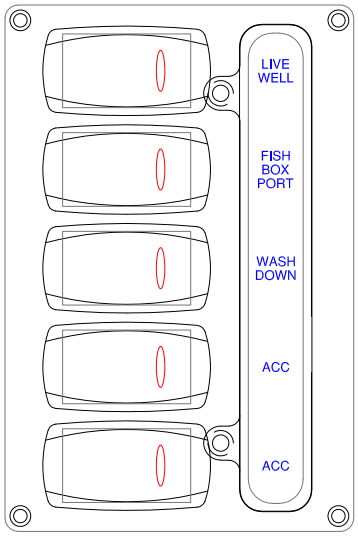
PLATFORM

Activates the hydraulic pump used to deploy and close the hull side platform. Operation of the hull side platform is discussed in Section 7.

AFT MACHINERY SPACE LIGHT

Activates the work light in the aft machinery space.

Aft Port Switch Panel



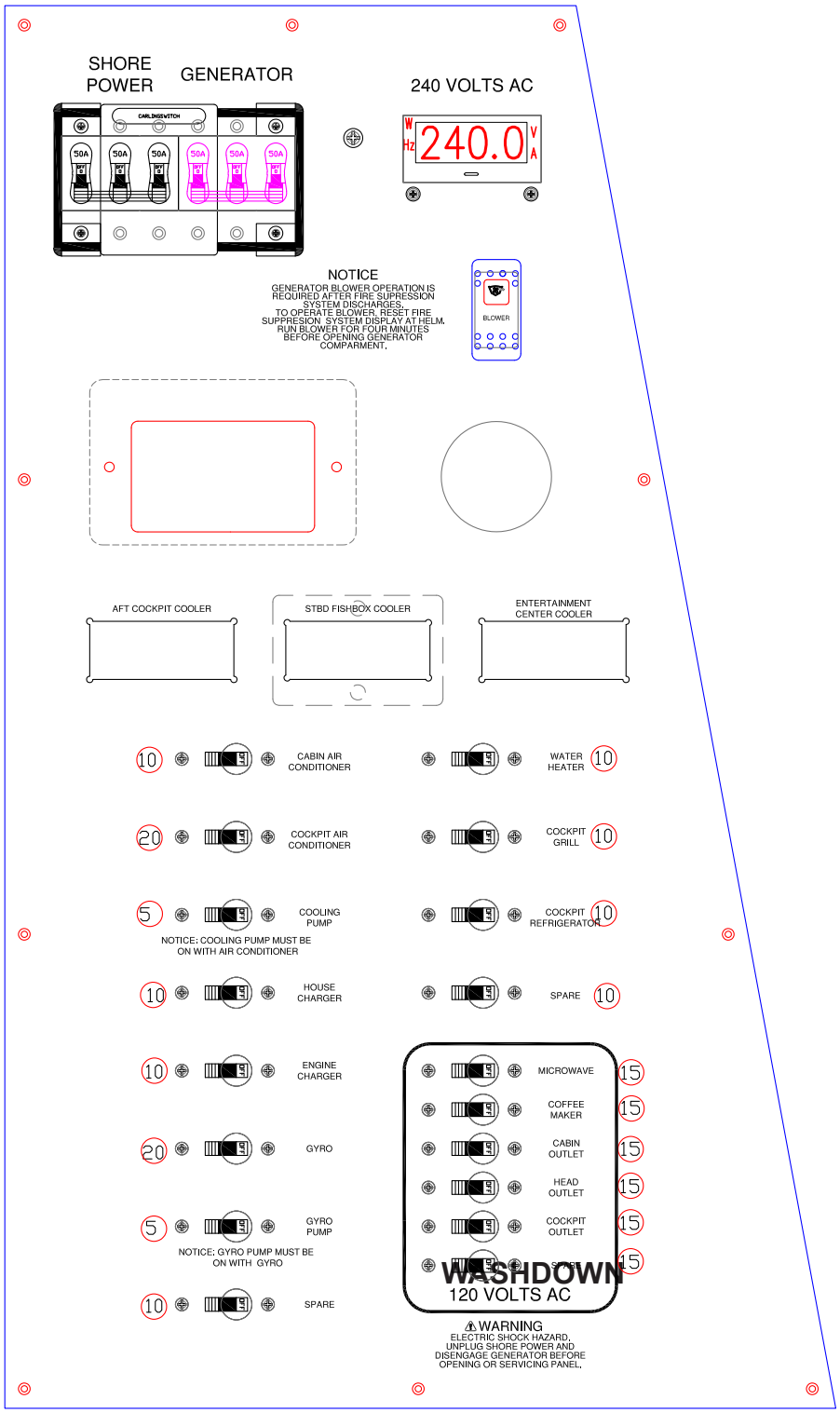
LIVEWELL

Activates the livewell pump for the port livewell.

FISHBOX PORT

Activates the diaphragm pump used to evacuate the port fishbox.

240/120V AC MAIN DISTRIBUTION PANEL 3300009 S1



Activates the seawater pump used for the raw water washdown system. This needs to be ON for the washdowns in the cockpit and the anchor locker to operate.

COCKPIT LIGHTS

Activates the white aft cockpit accent lights.

ACC

Unassigned and reserved for user-installed accessories. DO NOT install a component with an operating current that exceeds 10 amps (12V DC).

Cabin Switch Panel

There is one main cabin lighting switch panel. It is located on the AC main Distribution Panel (AC MDP) located above the AC main. The panel has two switches. One switch is for the cabin overhead lights. The second switch is for the cabin accent lights. The MDP cabinet also houses a USB charger port and a 12-Volt outlet.

Head Switch Panels

There is one head lighting switch panel. It is located on the head sink vanity cabinet below the countertop. It is close to the head door opening. The panel has two switches. One switch is for the head overhead light. The second is for the head accent light.

The holding tank monitor panel is located on the starboard outboard wall of the head. It has an indicator on the panel to display the waste holding tank level. There is also a key switch and momentary switch to activate the macerator pump and turn it on.



Holding tank monitor

4.4 AC System

The AC Main Distribution Panel (AC MDP) is located in the starboard lower cabinet in the cabin, at the companionway entrance. All AC current is distributed to the AC components through individual 120V (230V for CE) circuit breakers located in the AC MDP.

The AC electrical system operates on a 240 volt, 50 amp, 60 Hz system. Models with CE designation operate on a 230 volt, 32 amp, 50 Hz system. The AC system is fed by the shore power or by the generator. Your boat is equipped with an isolation transformer.

The main breakers in the AC Main Distribution Panel (AC MDP) protect the system. They are equipped with a selector slide to prevent the shore power source and the generator source from being energized simultaneously and thereby damaging the electrical system components.

DANGER

ELECTROCUTION, FIRE OR EXPLOSION HAZARD

Contact with live wires or working on an energized electrical system can cause electrocution. It can also cause sparks, resulting in fire and/or explosion. Both cases will result in death or serious injury. DO NOT work on an energized system or allow unqualified personnel to work on the system.

4.5 AC Main Distribution

The AC MDP is located in the cabinet to the starboard side of the companionway entrance. There are a number of breakers on the AC MDP, which need to be switched ON for their corresponding components to operate.

The AC electrical system operates on a 240 volt, 50 amp, 60 Hz system. Models with CE designation operate on a 230 volt, 32 amp, 50 Hz system. The AC system is fed by the shore power or by the generator. Your boat is equipped with an isolation transformer.

AC Multi-Meter

Use the arrow keys to scroll through digital readouts for amperage (A), voltage (V), hertz cycles (Hz) and watts (W).

- (A) Indicates the total amperage being drawn through the AC MDP. This is the total current level of all of the AC equipment in operation at the time.
- (V) Indicates the voltage supplied to the panel. Ideally the voltage should be approximately 240 volts (230 for CE) but never less than 216 volts (210 for CE).
- (Hz) Indicates cycles, which should be 60 (50 for CE).
- (W) Indicates total watts being consumed as a result (voltage x amperage).

AC Main Breakers

The shore power and generator main breakers protect the AC distribution system. These breakers are very sensitive. The resulting power surge that occurs when connecting the dockside cord or starting the generator may cause the main breaker to trip. To avoid this surge, always turn the selected main breaker to the OFF position before plugging or unplugging the shore power cord or starting or stopping the generator.

The following breakers protect the boat's AC components:

House Charger

The house battery charger charges the house, electronics and bow thruster batteries. This breaker should ALWAYS be on whenever the boat is occupied and either the shore power or generator is operating. The battery charger is automatic and equipped with an ammeter to monitor charging. See the battery charger owner's manual for more information.

Engine Charger

The engine battery charger maintains the charge on the engine batteries. It is automatic and is equipped with an ammeter to monitor charging. See the battery charger owner's manual for more information.

Gyro Charger

The Gyro Charger circuit is reserved for future expansion of the addition of a gyro option.

Gyro Pump

The gyro breaker MUST be turned ON before activating the gyro. It supplies seawater to the gyro for cooling purposes.

Cabin Air

Supplies electrical current to the cabin air conditioner. The COOLING PUMP breaker must be turned ON before operating. The thermostat for the cabin climate control is found on the AC MDP. Refer to the air conditioner owner's manual for additional information.

Cooling Pump

This breaker MUST be turned ON before operating the cabin and optional cockpit air conditioners. There is one pump that supplies raw cooling water to both air conditioning units.

Microwave

Supplies AC current directly to the microwave. See the microwave manual for more information.

Water Heater

Supplies electrical current to the water heater. The water temperature is automatically controlled by a thermostat in the water heater control panel. Do NOT turn ON without having water in the water heater. See section 5, Plumbing Systems, and the water heater owner's manual for more information.

Cockpit Air

Supplies electrical current to the helm air conditioner. The COOLING PUMP breaker must be turned ON before operating. The thermostat for the helm climate control is found on the AC MDP. Refer to the air conditioner owner's manual for additional information.

Cockpit Grill

Supplies electrical current to the cockpit grill. This breaker should ONLY be on when the grill is being used. See the grill owner's manual for more information.

Cockpit Outlets

The Cockpit Outlet breaker supplies power to the cockpit GFI outlet located on the entertainment center. The outlet is located in a waterproof outlet box.

Interior Outlets

Supplies electrical current to the cabin electrical outlets. AC electrical outlets are provided with ground fault interrupters (GFI) to protect against electric shock. There is one GFI outlet located in a waterproof outlet box in the head. A second outlet is located inside the port microwave cabinet. The microwave is plugged into this outlet. It is not accessible without removing the microwave. These outlets should be tested periodically to ensure 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.

Spare

A spare breaker is provided for user-installed components. DO NOT install a component with an operating current that exceeds 10 amps.

4.6 Battery Charger Operation

Your boat is equipped with two battery chargers. The 40 amp charger charges the house, electronics and bow thruster batteries and is calibrated to provide the proper charge levels for AGM batteries. The 25 amp charger maintains the engine batteries and is calibrated to provide the proper charge levels for lead acid batteries. Changing the battery specification will require recalibration of the battery chargers. The battery chargers are located in the midship machinery space.

At dockside, when the boat is connected to shore power, the battery chargers maintain the charge on the engine, house, electronics and bow thruster batteries. When operating on the generator, the engine and house battery chargers must be on to maintain charge to the batteries.

The wires that supply DC charging current to the batteries are protected by an internal fuse in the battery chargers and four circuit breakers, one for each battery bank output wire. The breakers protect the DC charging circuit from the batteries to the charger. They are located on the DC MDP. Push to reset the breakers. The internal fuses in the charger protect the DC charging circuit from the charger to the batteries.

4.7 Shore Power Connection

DANGER

ELECTROCUTION HAZARD

Exposure to high voltage will cause death or serious injury. DO NOT attempt to correct wiring yourself. DO NOT swim in marinas or near boats connected to shore power. Keep children away from any electrical cables or equipment and use grounded appliances onboard only.

Connecting to Shore Power

The shore power system is designed to be connected to a single 240V/50A (230V/32A for CE) dockside outlet.

- Turn OFF the AC main shore power breaker on the AC MDP panel in the cabin. Turn OFF the AC main breaker on the shore power breaker box in the aft machinery space. It is located adjacent to the isolation transformer in the machinery space. If dockside outlet(s) includes a disconnect switch(es) or circuit breaker(s), turn them OFF.

- Open the shore cord cover and plug the cord in. To avoid strain on the cable, make sure it has more slack than the mooring lines. Position 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.



Shore power cord cover and shore water inlet fitting

- Connect the cable to the dockside outlet. Tighten the lock rings on both the shore and the boat connector plugs.
- Turn the dockside disconnect switch(es) or circuit breaker(s) to the ON position. Turn ON the breaker on the shore power breaker box in the machinery space. Turn ON the main shore power breaker on the AC MDP panel in the cabin.

Disconnecting from Shore Power

Turn OFF the AC main shore power breaker on the AC MDP panel in the cabin. Turn OFF the AC main breaker on the shore power breaker box in the aft machinery space. It is located adjacent to the isolation transformer in the machinery space. If dockside outlet(s) includes a disconnect switch(es) or circuit breaker(s), turn them OFF. Disconnect the cable from the dockside outlet(s). Lay the cord out straight and undo any twists in the cable prior to retrieving it with the powered cable reel.

Powered Shore Power Cable Reel

Power to the 12-volt shore power reel is fed from a breaker on the 12-volt cockpit MDP panel. To retrieve or pay out cable from the reel, toggle the shore power reel switch up and down. The switch is located in the aft starboard cockpit switch panel.

4.8 Generator

Your Pursuit is equipped with a diesel generator. The generator is located in an enclosure in the mechanical space in the aft bilge. The generator compartment is equipped with an automatic fire extinguisher system and an automatic engine shutdown system. See section 9, Safety Equipment, for more information.

The generator is equipped with an automated start-up sequence to prevent over-cranking (which can lead to engine damage) and to ensure that the generator is up to operating temperature before the electrical load is applied. The display on the AC MDP's generator control panel provides detailed information on the operating status of the generator. Refer to the generator owner's manual for instructions on operation and interpretation of the displayed data.

Because of the number of DC systems on this boat, a significant drain on the batteries can occur. Depending on the RPM and the duration of operation of the engines, the engines' charging systems may not be able to keep up with the DC electrical demand, particularly when the engines are run at low RPM for extended periods. To ensure that the batteries remain at peak charge, Pursuit strongly recommends that the generator be run whenever the boat is in use (and not connected to shore power). It is important to activate the house battery charger (using the breaker on the AC MDP) to maintain the house, electronics and bow thruster batteries whenever the generator is running.

Fuel injected generators require bleeding of air from the fuel delivery system prior to initial start-up. Bleeding of the fuel system will also be required if the generator is allowed to run out of fuel. Continued attempts to start the generator without bleeding the fuel system under these circumstances can lead to engine damage or erratic operation. This procedure must be completed by your servicing dealer.

AC Power Selector Switch

The main breakers in the AC Main Distribution Panel (AC MDP) are equipped with a selector slide to prevent the shore power source and the generator source from being energized simultaneously and damaging the electrical system components. Turn the generator breaker to the OFF position before starting the generator. After starting the generator, monitor the generator control panel on the AC MDP to determine that the operating voltage and hertz cycles have stabilized. Then turn the breaker to the ON position.

NOTICE

DO NOT allow the generator to run out of fuel. Fuel injected generators require air to be removed from the fuel delivery system before initial start-up or if the generator is allowed to run out of fuel. Continued attempts to start the generator with air in the fuel system can lead to engine damage or erratic operation. Air must be purged by your servicing dealer only.

CAUTION

DO NOT start the generator with the selector switch in the GENERATOR position. Allow the generator to warm-up three to four minutes before transferring the electrical load. After warm-up, place switch in GENERATOR position.

4.9 Electrical System Maintenance

DC Electrical System Maintenance

At least semi-annually, spray all exposed electrical components behind the helm and in the plugs with a protector specific for electrical connections. Exterior light fixture bulbs should be removed and the metal contact areas coated with a non-water-soluble lubricant like petroleum jelly or silicone grease. The sockets should be sprayed with a protector. DO NOT get any oil or petroleum jelly on the glass portion of the bulbs; this will cause the bulb to overheat and burn out.

CAUTION

Use an exact replacement light bulb; a different bulb can cause fixture to overheat, melt or short circuit.

Make sure to check that all below-deck wiring is properly supported, the insulation is sound, and there are no loose or corroded terminals. Clean any corroded terminals thoroughly with sandpaper, or replace them. Tighten securely and spray with a metal and electrical protector. Inspect all engine wiring.

DANGER

FIRE OR EXPLOSION HAZARD

Explosion or fire from hydrogen gases produced by lead acid batteries will cause death or serious injury. DO NOT smoke or bring a flame near the battery storage area. If ignited by a spark or flame, gas may explode violently, causing spraying of battery acid or fragmentation of the battery.

Check the electrolyte level in the batteries regularly and add distilled water as necessary. If the batteries are frequently charged by a battery charger, check the electrolyte level more often. The correct fluid level in the cells is approximately 1/4 to 1/2 inch above the plates. If fluid is needed, fill to the proper level with distilled water ONLY. DO NOT overfill. Some batteries are sealed and cannot be filled.

Keep the tops of any battery clean and dry. Dirt and water can conduct electricity from one post to the other and can cause battery discharge or cause engine warnings.

Keep the battery posts free of corrosion. DO NOT use wing nuts to attach battery cables. 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 help protect them and reduce corrosion. Battery cables, both positive 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, such as when starting the engine. See the battery owner's manuals for maintenance information.

AC Electrical System Maintenance

Inspect all wiring insulation for nicks, chafing, brittleness, improper support, etc., periodically. Inspect portable appliance cords and plugs.

DANGER

ELECTROCUTION, FIRE OR EXPLOSION HAZARD

Contact with live wires or working on an energized electrical system will cause electrocution. It can also cause sparks, resulting in fire and/or explosion. Both cases will result in death or serious injury. DO NOT work on an energized system or allow unqualified personnel to work on the system.

Examine the shore power cord for cracks in the insulation and corrosion in electrical connectors. Spray receptacles and electrical connections with an electrical contact cleaner or a metal and electrical protector to help reduce corrosion and improve electrical continuity.

GENERAL PRECAUTIONS

- Whenever possible, have electrical work done by a qualified electrician or your Pursuit dealer.
- DO NOT work on an energized system; make sure all power sources are off.
- DO NOT allow unqualified personnel to perform electrical maintenance; only a qualified marine electrician should work on the electrical system.
- DO NOT work in a wet area.
- Use caution when connecting wires to avoid reversing polarity.
- DO NOT alter wires or connectors, or use inferior parts; use OEM replacement parts only.

Corrosion on the electrical connectors can cause poor connections, shorts and ground faults, and/or poor ground connections. Check at least annually and clean as required. DO NOT allow corrosion to build on connections.

Inspect all terminals and make sure they are tight.

Have the entire AC circuitry and the shore power cord tested every season by an experienced marine electrician. This will detect any shorts, open wires, or ground faults. Also, have the electrical outlets inspected for proper operation using an outlet indicator.

Test outlets periodically by pressing the test/reset buttons in the center of the face plate to ensure proper operation.

The engine maintenance required on the generator is similar to the main engines. The most important factors to the generator's longevity are proper ventilation and the maintenance of the AC alternator and the fuel, ignition, cooling and lubrication systems.

Maintenance schedules and procedures are outlined in your generator owner's manual; follow them exactly.

Operator Notes

Plumbing Systems

5.1 Fresh Water System

General

The fresh water system, located under the midship mechanical space floor hatch, consists of a potable water tank, distribution pump, distribution manifold and distribution lines. The pump is equipped with an automatic pressure switch. An in-line strainer located near the pump protects the system from debris. The tank is filled through a labeled deck fill located on the gunwale. The water system distribution manifold is located in the midship mechanical space adjacent to the water pump.

DO NOT confuse other deck fills with the fresh water fill. If toxic fluids or fuel is added to fresh water tank, the system will be contaminated. DO NOT attempt to pump fuel out; this system is not designed to pump fuel. Fuel must be removed by qualified personnel only. Fuel in the fresh water systems will also require replacement of that system and/or many components.

DANGER

FIRE OR EXPLOSION HAZARD
Fuel and their vapors are highly explosive when exposed to open flame or spark, resulting in death or serious injury. Do not confuse deck fills.

WARNING

HEALTH HAZARD
Disinfect the entire fresh (potable) water system prior to use and yearly at the beginning of each season. Failure to do so can result in developing coliform bacteria or other disease-causing organisms (pathogens) in the water system. Consumption of contaminated water could result in severe personal injury or death.

Operation

Fill the water supply tank slowly through the FRESH WATER FILL deck plate. After filling the tank, partially open all faucets. Switch ON the FRESH WATER switch at the helm. Allow the pump to run until all of the air is purged from the system and a steady stream of water is flowing from each outlet. Next, turn off the faucets one by one. As the pressure builds, the pump will automatically shut off.

When properly primed and activated, the water system will operate 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 may accumulate at the pump and the system may have to be re-primed.

Water System Manifold



Water system manifold

The water system manifold provides a shutoff valve for each fixture in the boat. The manifold may be accessed by lifting the midship mechanical space floor hatch. Each red (hot) and blue (cold) line is a “home run” to the fixture it is supplying. There are no fittings between the manifold and the fixture to leak or fail. Water is not run from one section of the boat to another and then “teed off” to multiple fixtures. Should a problem occur with any plumbing fixture in the boat, shut off the appropriate valve to isolate it while leaving the remainder of the system operational. Note that you should shut of both the hot and cold valves.

Whenever the boat is left unattended, turn the fresh water system switch OFF.

CAUTION

DO NOT allow the fresh water pump to run dry; damage to the pump can occur. The fresh water pump works on demand and WILL NOT shut off when the tank is empty. Turn the water pump switch OFF when the system is not in use. Operating any pump from a low-charged battery can lead to a pump failure. Keep the batteries properly charged. The fresh water system must be properly winterized prior to winter lay-up. Refer to winterizing directions in section 12, Seasonal Maintenance.

Sink and Shower Operation

To use the aft cockpit sink, head sink, or shower, switch ON the FRESH WATER switch at the helm. Some minor variations in the water temperature and pressure may occur as the pump cycles.

The sinks drain overboard. Water drains from the shower to a sump pump system located in the bilge below the cabin floor. An automatic float switch in the shower sump controls the pump. After showering, let the cold water flow for a period of time to flush the drainage system of soap residue. It is essential that the shower drain strainer is cleaned regularly and the sump is inspected periodically for accumulated debris that needs to be removed.

Water Heater

The water heater is located in the midship mechanical space. It is accessed through the midship mechanical space hatch. The water heater uses an AC element that is thermostatically controlled at the heater and activated by a circuit breaker located in the AC Main Distribution Panel (MDP). A high pressure relief valve protects the system from excessive pressure. Make sure all air is purged from the water heater and lines before activating the water heater breaker. Refer to the water heater manual for additional information.

CAUTION

DO NOT turn on the water heater until it is filled and primed; damage to the heater will result.

Shore Water Connection

The 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 fresh water and minimizes the pressure pump operation.

The shore water inlet fitting is mounted in the transom splashwell area, to starboard. To use shore water, connect a hose from the dockside faucet to the shore water inlet fitting, then turn on the dockside faucet. The pressure pump will not run and the water in the water tank of the boat will not be used. Note: the water tank will not be filled by connecting to shore water.

CAUTION

DO NOT change or modify the shore water inlet connector without contacting Pursuit Customer Relations or your dealer. Modification to or use of the wrong type of connector can damage the fresh water system.

Fresh Water System Commissioning

The fresh water system must be disinfected before first use and yearly at the beginning of each season. A clean sanitized fresh water system will greatly reduce the risk of developing coliform bacteria or other disease-causing organisms (pathogens) and will help protect the health of everyone onboard.

WARNING

HEALTH HAZARD

Disinfect the entire fresh (potable) water system prior to use and yearly at the beginning of each season. Failure to do so can result in developing coliform bacteria or other disease-causing organisms (pathogens) in the water system. Consumption of contaminated water could result in severe personal injury or death.

Follow this procedure to disinfect the fresh water system, kill bacteria that may be present, and prepare the system for operation:

Note: The fresh water system may be filled with nontoxic potable water antifreeze. If antifreeze was not used, skip to step 8.

1. Open the hot and cold water heater valves on the water system manifold to the normal operation position.
2. Open all faucets (hot & cold), setting single faucets to the warm position.
3. Switch ON the fresh water pump breaker, located on the DC MDP. The pump is self-priming.
4. When anti-freeze stops flowing out of the faucets, switch the pump breaker OFF. Do not close faucets.
5. Fill the fresh water tank with clean, fresh water. The fill fitting for the water tank is on the deck amidships, labeled WATER. The tank should be filled until water runs out of the vent located on the hull side just below the fill.
6. Keeping all faucets open, switch ON the fresh water pump breaker and empty the water tank. When the water tank is empty turn the pump breaker OFF.
7. Repeat steps 5 and 6 until all nontoxic potable water antifreeze is removed from the system.
8. Ensure the water system, including the water heater and pump, is drained completely.
9. Close all faucets.

CAUTION

Notify all persons aboard that the fresh water system is being sanitized. Do not allow anyone to drink from the fresh water system during the sanitizing process.

10. Prepare a chlorine sanitizing solution: in a container with 1 gallon of fresh water, mix 1/4 cup of Clorox® or Purex® regular unscented household bleach (5% sodium hypochlorite solution) for each 15 gallons of water tank capacity (**Table A-1**).
11. Fill the fresh water tank halfway with clean, fresh water.
12. Pour the sanitizing solution into the water tank through the deck WATER fill fitting.

Table A-1: Tank capacity vs. cups of bleach

Water Tank Capacity	Cups of Bleach
15 Gal	1/4 Cup
30 Gal	1/2 Cup
45 Gal	3/4 Cup
60 Gal	1 Cup
75 Gal	1-1/4 Cups
90 Gal	1-1/2 Cups
105 Gal	1-3/4 Cups
120 Gal	2 Cups
135 Gal	2-1/4 Cups
150 Gal	2-1/2 Cups

13. Fill the remainder of the tank with clean, fresh water. The tank should be filled until water runs out of the vent. (See step 5.)

14. Switch ON the fresh water pump breaker.

15. At each faucet, run about 1/2 gallon of water out of each tap (hot and cold), then close the tap. You should be able to smell chlorine out of each tap.

16. Switch OFF the fresh water pump breaker.

17. **Allow the chlorine sanitizing solution to sit in the system for three (3) hours.** A shorter time period will require a greater concentration of chlorine sanitizing solution to disinfect the water system.

18. Switch ON the fresh water pump breaker.

19. Drain the chlorine sanitizing solution by opening all faucets (hot & cold), setting single faucets to the warm position, and empty the water tank. When the water tank is empty turn the pump breaker OFF.

20. Ensure the water system, including the water heater and pump, is drained completely.

21. Fill the fresh water tank with clean, fresh water. The tank should be filled until water runs out of the vent. (See step 5.)

22. Keeping all faucets open, switch ON the fresh water pump breaker(s) and empty the water tank. When the water tank is empty turn the pump breaker OFF.

23. Repeat steps 21 and 22.

24. Final fill: Fill the fresh water tank with clean, fresh water. The tank should be filled until water runs out of the vent. (See step 5.)

25. Switch ON the fresh water pump breaker.

26. Open each faucet. When a smooth flow of water is observed from each hot and cold tap, close the faucet. When all faucets are closed, the pump(s) will shut off as the system pressure increases. Any air should now be purged from the system. Leave the fresh water pump breaker ON.

The fresh water system is now commissioned and ready for use.

To remove excessive chlorine taste or odor that might remain in the system, do the following:

1. Ensure the water tank has enough available capacity to accept 10 additional gallons. If there is ample room in the tank, proceed to step 3, below. If not, continue to step 2.

2. Drain at least 10 gallons of water out of the system so the following vinegar solution will have room to be added. To do this switch ON the fresh water pump breaker(s) and open a faucet. When at least 10 gallons has been drained, close the faucet and turn the pump breaker OFF.

3. Prepare a solution of one (1) quart vinegar to five (5) gallons fresh water.

4. Pour the vinegar solution into the water tank through the deck WATER fill fitting.

5. Repeat steps 3 and 4.

6. Allow the vinegar solution to agitate in the tank for 24 hours.

7. Switch ON the fresh water pump breaker.

8. Drain the vinegar solution by opening all faucets (hot & cold), setting single faucets to the warm position, and empty the water tank. When the water tank is empty turn the pump breaker OFF.

9. Close all faucets.

10. Fill the fresh water tank with clean, fresh water. The fill fitting for the water tank is on the deck amidships, labeled WATER. The tank should be filled until water runs out of the vent located on the hull side just below the fill.

11. Switch ON the fresh water pump breaker.

12. Open each faucet. When a smooth flow of water is observed from the hot and cold tap, close the faucet. When all faucets are closed, the pump will shut off as the system pressure increases. Any air should now be purged from the system. Leave the fresh water pump breaker ON.

13. Repeat if necessary.

5.2 Raw Water Washdown

The raw water wahshdown system pump is supplied by hoses connected to a ball valve and thru hull fitting located in the midship machinery space. The supply hose is labeled WASHDOWN PICKUP at the ball valve. There are three speed tap outlets on the boat for raw water. One is in the anchor locker and can be used to rinse the bow area, anchor and anchor rode. (The second outlet in the anchor locker is a pressurized fresh water outlet.) Two speed taps are located in the aft port and starboard corners and can be used for rinsing the cockpit. (A second fresh water outlet is located adjacent to the raw water outlet on the starboard side.) Pursuit provides a supercoil hose and sprayer that can be used with these speed taps in the boat owner's shipping kit.

Operation

Make sure the ball valve is open before attempting to operate the raw water washdown system. Activate the pump by turning ON the washdown switch on the aft starboard cockpit switch panel. When activated, the pressure switch will automatically control the pump. As 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. Turn the switch off when the washdown is not in use. The raw water washdown is equipped with a sea strainer on the intake side of the pump, located in the midship machinery space; check it frequently and clean as necessary.

Priming the System

Open the ball valve and hose connector, and switch ON the WASHDOWN switch at the helm. Run the pump until all air is purged from the system. Close the thru-hull ball valve before the boat is hauled from the water to eliminate an air lock in the system. It may be necessary to re-prime the raw water system if the system is not used for an extended period.

⚠ CAUTION

DO NOT operate the high-pressure pump when dry, or damage to the pump will result. Turn the raw water pump switch OFF when leaving the boat unattended.

5.3 Livewell

Seawater is provided to the port and starboard livewells by 12-volt circulating pumps. These pumps are designed to carry a constant flow of water to the livewells. The pumps are activated by the livewell switches on the port and starboard aft cockpit switch panels. An overflow built into the livewell automatically controls livewell water level. Always turn the LIVEWELL pump switches OFF when not in use.

To fill the livewell, plug the drain fitting at the bottom of the livewell. Make sure the ball valve at the intake thru-hull fitting is open and turn ON the LIVEWELL switch. When the water level reaches the overflow, it will begin to circulate.

To drain, turn off the pump and remove the plug. When the livewell has drained, use the washdown hose to flush the livewell and drain debris.

Close the livewell thru-hull ball valve whenever the livewell is not in use to prevent water from entering while the boat is cruising. The livewell pump is equipped with a sea strainer on the intake side of the pump located in the aft bilge. Check it frequently and clean as necessary.

Do not use the livewell for stowage. Seawater can enter the livewell when it is not in use and damage stowed equipment.

5.4 Drainage

General

Some drain thru-hull fittings are equipped with ball valves that are always open under normal operating conditions. Check and operate the drain valves at least once a month to make sure they are in good condition and operating properly. Also, check the drain system to ensure it is free flowing and that the hoses on the thru-hull fittings are secure and not leaking.

Review and become familiar with the drainage schematic and location of the thru-hull drain valves. Refer to Appendix F.

In the event of an emergency, close the valves to prevent sea water from entering the boat through the drainage system. NOTE: Having one or more drain valves closed can be dangerous to the boat and all onboard. If this occurs, distribute PFD's and take all necessary safety precautions, including notifying the Coast Guard or local agency, until the problem is determined and corrected.

Bilge Drainage

The aft 1500 GPH bilge pumps are located in the stern bilge, and the forward 900 GPH pump is located at the forward end of the aft machinery space. All bilge pumps pump water out of thru-hulls located above the waterline in the hull. A high water bilge alarm monitors excessive bilge water levels and signals a high water condition through a visual and audible alarm. Under this condition, the aft manual bilge pump will be activated and the boat horn will sound until the bilge water falls to a safe level. See section 4, Electrical Systems, for additional information on bilge pump and high water bilge alarm operations.

The aft bilge pump system consists of two pumps, an electronic water level switch, and a high bilge water alarm system. The float switch activates the pump that is fully automatic. The manual aft pump is activated by turning ON the AFT BILGE switch at the helm. The forward pump has both automatic and manual functions; to activate manually, turn ON the FWD BILGE switch at the helm.

Current is supplied to the automatic float switches whenever the batteries are connected. The BILGE pump switches at the helm are supplied current when the house

battery switch is in the ON position. Breakers for both the manual and the automatic bilge functions are located on the DC MDP.



Bilge pump (typical)

The manual pump is connected to a high bilge water alarm that operates from the starboard engine battery. Should the house battery become discharged or the automatic bilge pump fail, high water in the bilge will activate the alarm, then the manual bilge pump will be activated and the boat's horn will sound.

Activate the manual bilge pump briefly each time the boat is used to ensure pumps are operating properly. There is a delay built into the switch before the pump will activate. Refer to the bilge pump owner's manual for more information.

Inspect the bilge areas frequently for evidence of excessive water. Continuous operation of the bilge pump can indicate that there is excess water in the bilge. Test the bilge pump at regular intervals. Debris can also prevent the pump from operating or make it operate continuously. Make sure no debris is blocking the bilge pump float.

Bilge pumps and bilge pumping systems are not designed for damage control. Continuous operation of the bilge can mean a leak or a drain plug is installed incorrectly; make sure all drain plugs are installed.

Excess water in the bilge area will adversely affect the handling and maneuverability of the boat and can cause personal injury. DO NOT allow the bilge pump to operate after all the water has been cleared from the bilge area, or damage to the pump will occur. When water has been cleared, turn OFF the BILGE switches at the forward helm.

When the boat is out of the water, the bilge can be drained by unplugging the thru-hull drain located in the transom, near the bottom of the hull. 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 cause the boat to sink. Check the drain plug frequently to make sure it is secure.

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

NOTICE

The US federal water pollution control act prohibits the discharge of oil or oily waste into or upon the navigable waters of the United States or the waters of the contiguous zone if such discharge causes a film or sheen upon, or a discoloration of the surface of the water, or causes a sludge or emulsion beneath the surface of the water. Violators are subject to a penalty of $10,000.

Exterior Drains

Your Pursuit has four scupper drains located in the rear of the cockpit. The drain rails for the fishboxes, aft machinery space and mid-ship mechanical space drain overboard by gravity.

The below-floor fishboxes are equipped with separate macerator pumps and are supplied with drain plugs for each box. Remove the fishbox drain plugs to allow the fishboxes to be pumped overboard. To pump the boxes out, activate the switches on the port and starboard aft cockpit switch panels labeled PORT FISHBOX and STBD FISHBOX. The fishboxes should be flushed out and cleaned after each use.

The exterior sink drains by gravity to overboard thru-hulls.

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

5.5 Plumbing System Maintenance

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

Fresh Water System

CAUTION

Turn the DC MDP fresh water breaker OFF when leaving the boat unattended or when the fresh water system is not in use.

Perform these routine maintenance procedures to maintain your fresh water system:

- Remove filter screens from faucet spouts and eliminate any accumulation of debris. A debris build-up can cause the pump to cycle excessively.
- Check and clean the fresh water system strainer located on the intake line near the pump at least annually.
- Remove the lid on the shower sump assembly, located under the cabin floor, periodically. Clean debris from the sump and flush with clean water. Activate the float switch to test the pump. Spray the pumps and metal components with a metal protector periodically.
- Add a commercially available potable water conditioner to the water tank to keep it fresh.

CAUTION

Maintain a proper charge on the batteries. Operating the pressure pump from a battery with a low charge could lead to pump failure.

- Make sure the FRESH WATER breaker on the DC MDP is switched OFF when leaving the boat unattended or when not in use.

The water system must be winterized before storage. Refer to section 12, Seasonal Maintenance.

Raw Water System

CAUTION

If a hose ruptures, turn the DC MDP washdown breaker OFF immediately. Close the thru-hull valve before performing maintenance on the sea water pump. Operating any pump from a low-charged battery can lead to a pump failure. Keep the batteries properly charged. The raw water system must be properly winterized prior to winter lay-up. Refer to section 12, Winterizing.

Perform these routine maintenance procedures to maintain your raw water system:

- Check all hoses, and especially the sea water hoses, for signs of deterioration.
- Remove and clean the livewell, air conditioner and washdown pump sea water strainers, as needed. Spray the pumps and thru-hull valves with a metal protector periodically.
- Drain and clean the fishboxes and livewells after each use.
- Operate all thru-hull valves at least once a month to keep them operating properly.

If a hose ruptures or leaks, turn off the washdown pump, using the WASHDOWN switch at the helm or the WASHDOWN breaker on the DC MDP, immediately. Keep the thru-hull valve closed when performing service on a sea water system.

CAUTION

Maintain a proper charge on the batteries; operating the pressure pump from a battery with a low charge could lead to pump failure.

The raw water system must be winterized before storage. For more information, refer to section 12, Seasonal Maintenance.

Drainage Systems

Perform these routine maintenance procedures to maintain your drainage system:

- Clean the cockpit drain rails with a hose and water to remove all debris.
- Clean the hardtop leg drain holes, especially before winter storage.
- Clean the bilge pump and automatic float switch strainers of any debris.
- Check the bilge for debris that can block the function of the automatic switch.
- Test the rear automatic bilge pump switch and the high water alarm float switch each time the boat is used, for proper operation. Operate the knob or lever on the side of the switch until the pump is activated, or add water to the bilge until the water level is high enough to activate the pump.
- Flush all gravity drains with fresh water periodically, to keep them clean and free flowing.
- Clean and inspect the shower and sink drain sump system periodically. Remove accumulated debris and flush with fresh water. Test the automatic sump pump switch for proper operation frequently.
- Clean and flush the fishbox and cooler/storage boxes with a mild soap or a bilge cleaner and fresh water after each use to keep them clean and fresh.
- Operate the thru-hull valves once a month and service as required.
- Check the drain system regularly to ensure it is free flowing and that the hoses on the thru-hull fittings are secure and not leaking.

Operator Notes

Ventilation Systems

6.1 Cabin Ventilation

Ventilation is provided to the cabin by running the cabin air conditioning system.

6.2 Carbon Monoxide and Proper Ventilation

Read about carbon monoxide, its hazards, and the carbon monoxide detector in section 9, Safety Equipment.

6.3 Bilge Compartment Ventilation

Air flow into the bilge compartment is supplied by a vent on the transom and through the use of a blower. To activate, turn ON the BLOWER breaker on the cockpit DC Main Distribution Panel (MDP). The switch to turn on the blower is located on the AC Main Distribution Panel inside the cabin.

6.4 Maintenance

- Periodically lubricate all hinges and latch assemblies with a light oil. Clean and coat gasket materials with silicone to help keep them pliable.
- Carbon monoxide detectors have a limited life span. The End of Life (EOL) date, five (5) years after the manufactured date, can be found on a sticker adhered to the body of the unit. Plan on replacing this unit prior to the EOL date. See the carbon monoxide detector manual for more information.

Operator Notes

Exterior Equipment

7.1 Forward Deck

CAUTION

Unsecured open exterior doors and/or hatches can slam closed and cause injury or damage the boat. Most doors and hatches are equipped with fasteners, hatch lifters, snaps and/or straps to secure them open; make sure they are properly secured while they are open.

Rails and Deck Hardware

Rails and deck hardware perform specific functions. Do not use for securing fenders or mooring lines, which must be secured to the cleats. Make sure mooring lines are clear of rails or stanchions, or damage can result.

Cleats are flush-mounted and must be raised prior to use.

DO NOT use cleats or any other hardware for the purpose of towing or being towed. Inspect all hardware periodically for loosening, wear or damage. Repair or replace immediately.

Anchor/Rope Locker

The anchor locker at the bow of the boat can be accessed through the forward deck hatch. An anchor chute and roller assembly is integrated into the bow stem. The chute and roller assembly is designed for a Delta® plow type anchor. A chain snubber is provided to secure the anchor during storage. Use the snubber to make sure the anchor chain is secured before getting underway. The anchor locker is drained by a thru-hull fitting in the hull side near the bottom of the locker. Check it frequently and keep it clean and free flowing.

The anchor must be securely stowed when not in use.



CAUTION

Secure the anchor when it is stored in its locker and make sure it does not rest against the hull sides. If the anchor is loose, it will bounce and damage the boat. Damage from the anchor bouncing in the locker is not covered by the Pursuit warranty.

Windlass

The windlass is located under the forward deck hatch in the anchor locker. The anchor is stored in the chute through the bow and is raised and lowered by the windlass. The anchor line is stored below the windlass and routed out through the windlass to the chain and anchor. The anchor locker is equipped with a receptacle for the windlass remote control.

WARNING

MOVING PARTS OR ENTANGLEMENT HAZARD

Contact with moving parts can entangle and cut, resulting in loss of body parts, strangulation, and/or severe loss of blood, causing serious injury or death. Stay clear of moving parts.

The anchor is lowered by releasing the anchor from the cleat or chain snubber in the anchor locker and activating the windlass using the WINDLASS DEPLOY switch at the helm. After the anchor is set, do not allow the windlass to take the force from the anchor line; secure the rode to the cleat in the anchor locker.



Become familiar with the safe operation of the windlass before using it. Refer to the windlass owner's manual for use of the windlass and remote control.

CAUTION

DO NOT use the windlass as the only method of securing the anchor in the bow pulpit. Secure the anchor line to a cleat or chain snubber before operating your boat.

The anchor is retrieved by releasing the line from the bow cleat and activating the windlass using the WINDLASS RETRIEVE switch at the helm. Once the anchor is retrieved, secure the anchor to the chain snubber or bow cleat to prevent it from being released while underway.

Boats at anchor in high swell conditions will snub on the anchor line. This can cause slippage or apply excessive loads to the windlass.

DO NOT use the windlass as a winch to move the boat over the anchor. Move the boat under its own power to the anchor and to break the anchor loose.

Forward Mediterranean Sunshade (Optional)

An optional forward Mediterranean sunshade provides shade over the forward lounge. To use, install the support poles into the base receptacles. Attach the aft end of the shade to the fittings located on the forward corner edges of the hardtop. The support poles can be stored in the soft storage areas directly above the hull side windows.

Do not operate the boat with the sunshade deployed as it can impair visibility.

Foredeck Lounge



The foredeck lounge features electrically actuated port and starboard flip-out backrests, which are operated using the switch located below each side seatback cushion. USB charging ports are located below the port and starboard seatback cushions. A stereo remote control panel is located below the

port seatback cushion. Storage is available under the port and starboard lounge seat cushions.

Console Forward Seating

The console forward seating has both adjustable backrests and a footrest. The backrests can be rotated forward for a more comfortable position for cruising and tiled aft for lounging. The leg rest has a gas assisted shock to aid in rotating it up.

Windshield

Your Pursuit boat is equipped with a custom powder coated aluminum windshield frame with tempered front windshield glass. The console side glass is also tempered glass.

⚠ CAUTION

Care should be exercised to prevent damage to powder coated surfaces. If the surface is scratched, chipped or worn exposing the aluminum, it should be resealed to prevent corrosion from forming. If corrosion is allowed to form, it could cause the powder coating to bubble and lift away. Contact your dealer for repair service.

7.2 Cockpit

Console



The helm console is the main operating position on your Pursuit. For increased visibility a step is integrated into the bottom of the console. Flip the step up or down to use or store. A top loading glove box is located on top of the helm console. Inside the glovebox is a wireless contact phone charger. There is a single USB charging port. This USB is also connected to the stereo to allow for connectivity between your phone and the stereo. A 12-volt power outlet is also located on the helm.

Helm Seat

The helm seat can be manually adjusted fore and aft and up and down. To move the seat, use the two seat levers located on the anodized aluminum helm seat base.



Helm seating

Stereo

The stereo head unit is located on the steering helm console. The stereo may also be controlled using the stereo remote control panel located below the port foredeck lounge seat backrest cushion. An optional satellite radio system, made up of a receiver and an antenna installed on the deck, is available.

Refer to the stereo owner's manual for additional operating information.

Cockpit Entertainment Center and Second Row Seating

CAUTION

Keep hands away from the seat mechanism when opening and closing the seat.

The second-row seating with the aft facing seat is mounted on an electrically actuated slide mechanism. The slide is a 12-volt system and does not require the generator to be running to operate. There is a breaker on the cockpit MDP panel labeled SEAT SLIDE. The switch to operate the slide is on the starboard side of the seat. It can be toggled forward to retract the seat and toggled aft to extend the seat out. The second-row seating can be slid aft to move the aft facing seat closer to the fold out aft cockpit seat.

Sliding the second-row seating aft also provides forward access to the cockpit grill on the starboard side and the top loading refrigerator/freezer on the port side. The control for the grill is located directly below the grill on the aft side of the entertainment center. Open the storage drawer to access the grill control. A GFI 120-volt AC outlet is adjacent to the grill control. A utensil drawer is located on the aft side of the entertainment center.



Storage for the aft cockpit table is behind the backrest of the aft facing cockpit seat. Fold the backrest down to access or store the table. Storage for the two aft cockpit table legs is in the aft facing seat base. The table legs screw into sockets fit into the aft deck. The table will then drop onto the legs. To secure the table in place, tighten the clamps on the bottom side of the table-top brackets.

Cockpit Air Conditioning

The cockpit air conditioning system is cotrolled using the thermostat on the AC MDP. Refer to the climate control information in section 8, Interior Equipment.

The cold air return is located under the helm seat. Do not obstruct this area in order to obtain maximum efficiency for the air conditioning unit.



Tackle Storage

Tackle storage is provided in the tackle locker located on the port side of the second-row seating base. Four tackle trays to fit in the locker are provided with the boat.

Cockpit Shower

Tackle storage is provided in the tackle locker located on the port side of the second-row seating base. Four tackle trays to fit in the locker are provided with the boat.

Fresh and Raw Water Washdowns

Connections for the fresh water and raw water washdowns are located in the port aft corner of the cockpit. To use either washdown connection, the respective breaker must be turned ON on the DC Main Distribution Panel and at the helm. The fresh water washdown uses water from your boat's fresh water tank. The raw water washdown draws water from a thru-hull installed in the hull bottom. Refer to section 5, Plumbing Systems, for more information.

Port and Starboard Fishboxes

The fishboxes located in the cockpit floor are drained by macerator pumps housed in the mechanical space. Pump out and clean the fishboxes after each use. To operate the macerators, use the PORT FISHBOX and STBD FISHBOX switches on the aft cockpit switch panels.

Downriggers (Dealer Installed)

Downriggers must be installed only **on the deck area aft of the gunwale boards**. DO NOT install or insert downriggers in the rod holders mounted in the gunwale boards; damage can occur.

Side Boarding Door

Your Pursuit is equipped with a port side boarding door with a stowable boarding ladder. The ladder is stored in the aft machinery space.

DO NOT use the side boarding door or ladder while an engine is running. The engines must be OFF before allowing anyone to enter or exit the boat or when they are in the water. To secure the ladder in place at the door, insert the two pins on the ladder base into the ladder base plate at the door. Slide the ladder aft to lock it in place. To remove the ladder, slide it forward and lift it out of the base plate.

Stow the ladder before starting an engine. The door must be closed and securely latched before starting an engine. DO NOT operate the boat with the side boarding door open. This can result in passengers being thrown overboard and flooding.

DANGER

CARBON MONOXIDE POISONING AND/OR ROTATING PARTS HAZARD
Poisonous CO gases are present at the rear of the boat when an engine is running. A rotating propeller can cut or entangle swimmers. Both of these hazards will cause death or serious injury. DO NOT use the swim/boarding platform when the engine is running.

Starboard Side Boarding Platform

Your Pursuit is equipped with a hydraulically actuated starboard side boarding/beach platform. The platform has e retractable swim ladder. The ladder is stored in the aft machinery space.

DO NOT use the side boarding platform or ladder while an engine is running. The engines must be OFF before allowing anyone to enter or exit the boat or when they are in the water.

Stow the ladder before starting an engine. The platform must be closed and securely latched before starting an engine. DO NOT operate the boat with the side boarding platform deployed. This can result in passengers being thrown overboard and flooding.

To operate the platform, turn the HOUSE MAIN breaker ON on the cockpit 12-volt MDP panel. The switch for the platform is located on the aft starboard cockpit switch panel.

Visibly ensure there are no obstructions inside the boat or outside before operating the platform. Deploying it near a dock or pilings could result in damage to the platform. DO NOT partially deploy the platform to get it close to a dock to stand on top of it to access the dock.

To open the platform, press and hold the PLATFORM switch. It will take several seconds for the locking pins to disengage before the platform starts to open. Be aware of this time as it takes the same amount of time to engage the locking pins when closing the platform. Continue to hold the switch until the platform is fully deployed.

The swim ladder can now be installed onto the platform. Insert the two pins on the ladder base into the ladder base plate in the platform. Slide it to lock in place.

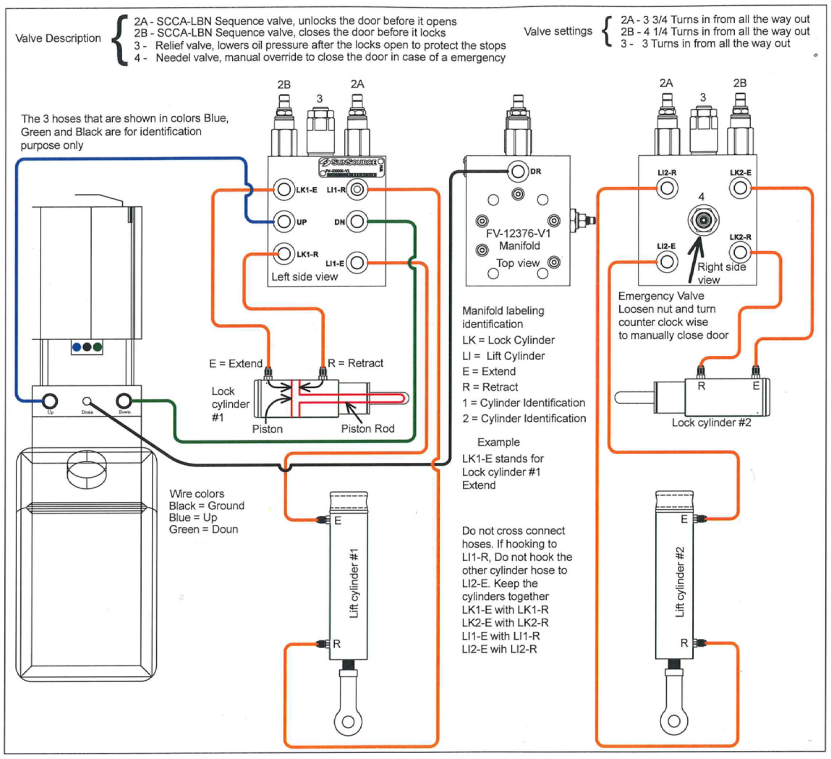
To close the platform, remove the swim ladder. Do not close the platform with the swim ladder in place. Press and hold the PLATFORM switch until the platform is fully retracted. It will also take several seconds for the locking pins to engage. Visually verify that the locking pins are engaged before starting the engine and getting underway.

DANGER

CARBON MONOXIDE POISONING AND/OR ROTATING PARTS HAZARD
Poisonous CO gases are present at the rear of the boat when an engine is running. A rotating propeller can cut or entangle swimmers. Both of these hazards will cause death or serious injury. DO NOT use the swim/boarding platform when the engine is running.

CAUTION

Periodically inspect boarding platform fittings for wear, damage or loose fit. Repair or replace before using your boat.


Valve Description
2A - SCCA-LBN Sequence valve, unlocks the door before it opens
2B - SCCA-LBN Sequence valve, closes the door before it locks
3 - Relief valve, lowers oil pressure after the locks open to protect the stops
4 - Needel valve, manual override to close the door in case of a emergency
Valve settings
2A - 3 3/4 Turns in from all the way out
2B - 4 1/4 Turns in from all the way out
3 - 3 Turns in from all the way out
The 3 hoses that are shown in colors Blue, Green and Black are for identification purpose only
2B
3
2A
LK1-E
LI1-R
UP
DN
LK1-R
LI1-E
Left side view
E = Extend
R = Retract
Lock cylinder #1
Piston
Piston Rod
Wire colors
Black = Ground
Blue = Up
Green = Doun
E
Lift cylinder #1
R
DR
FV-12376-V1
Manifold
Top view
Manifold labeling identification
LK = Lock Cylinder
LI = Lift Cylinder
E = Extend
R = Retract
1 = Cylinder Identification
2 = Cylinder Identification
Example
LK1-E stands for Lock cylinder #1 Extend
Do not cross connect hoses. If hooking to LI1-R, Do not hook the other cylinder hose to LI2-E. Keep the cylinders together
LK1-E with LK1-R
LK2-E with LK2-R
LI1-E with LI1-R
LI2-E wih LI2-R
2A
3
2B
LI2-R
LK2-E
4
LI2-E
LK2-R
Right side view
Emergency Valve
Loosen nut and turn counter clock wise to manually close door
R
E
Lock cylinder #2
E
Lift cylinder #2
R

BLEEDING PROCEDURE

First purge system using pump:
Open emergency valve by loosening lock nut and using allen key to loosen needle valve set screw all the way until it stops. Run hydraulic pump both directions. Reengage needle valve screw and lock nut.

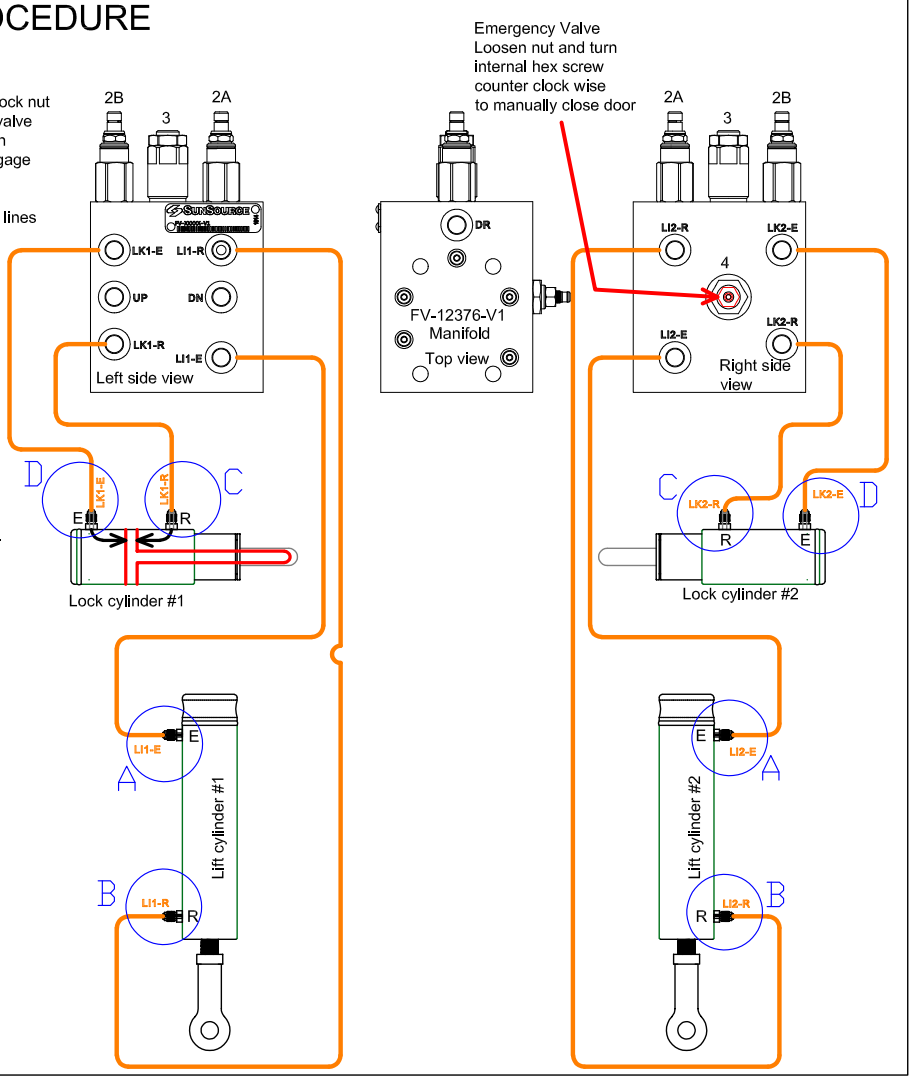
If issues not resolved, purge hydraulic lines individually.

A: Door in fully down position disconnect LI1-E and LI2-E. Actuate door up until fluid purges from both lines. Reconnect lines.

B: Door in fully up position with lock not extended (about just starting to extend) disconnect LI1-R and LI2-R. Actuate door down. Reconnect.

C: Door in fully up position and locked. Disconnect LK1-R and LK2-R. Actuate door down. Reconnect

D: Door in fully up position (or just before fully up position) disconnect LK1-E and LK2-E. Actuate door up.



SEAKEEPER 6 GYRO (OPTIONAL)

Your Pursuit may be equipped with an optional Seakeeper 6 gyro stabilizer. On the S 428 the gyro is powered by AC power. Refer to the provided Seakeeper Owner's Guide to operate the system.

To start the gyro, start the generator and engage the generator side of the shore power switch. Ensure that the raw water supply thru hull fitting is open. Turn the GYRO PUMP breaker ON on the cabin interior AC panel. This activates the raw water pump to supply cooling water to the gyro. Turn the GYRO breaker ON on the cabin interior AC panel. Turn on the GYRO breaker on the cockpit DC MDP panel.

To start-up, turn ON the power switch on the Seakeeper panel. The display will initialize, and the home screen will display. The power button will turn blue when the Seakeeper is ON.

The system will begin to spool up. The progress bar will appear on the bottom right of the display. It will indicate when the Seakeeper is ready for stabilization.

When the Seakeeper reaches its minimum speed for stabilization, the stabilize button will appear on the display. When the Seakeeper reaches its maximum operating speed, where maximum stabilization is available, the progress bar will disappear. At this point, the Seakeeper is available for maximum stabilization.

To initiate stabilization, press the stabilize button. The button will turn blue indicating that the Seakeeper is stabilizing the roll motion of the boat. The roll angle indicator in the center of the display indicates how far the boat is allowed to roll.

To shut the Seakeeper down, press the ON/OFF button. The power button will turn from blue to gray. It may take several hours for the Seakeeper flywheel to wind down and stop. When the flywheel has stopped, the display will show zero (0) RPM on the service screen.

To access the Seakeeper information screen, press the menu button. The information is displayed by pressing the "i" button on the bottom of the display. The screen will display the model, serial number, run hours, sea hours and more.

Pursuit has provided you with a Seakeeper recreational Gold warrant on the Seakeeper. This is a 2-year extension and additional 1,000 hours of coverage. Visit seakeeper.com/extended-warranty for more details.

Cockpit Grill

A 120/230V electric grill is installed in the entertainment center base on the starboard side. When the fiberglass cover over the grill is fully opened, the grill can be turned on. There is a magnetic switch in the entertainment center that prevents the grill from being on when the cover is closed. The control for the grill is on the front of the entertainment center adjacent to the 120-volt GFI outlet. Open the utensil drawer to access the grill control. To use the grill, the cockpit GRILL breaker on the AC MDP must be ON. Turn the breaker OFF whenever the grill is not being used. The grill must be allowed to cool before closing the fiberglass cover, to avoid damage to the grill. Never clean the grill with any form of pressurized water or other types of cleaners. Use only a cloth and a stainless steel or glass surface cleaner. This grill, like all appliances, has the potential to create safety hazards through careless or improper use. Refer to and observe all the safety precautions listed in the grill owner's manual.

WARNING

Severe burns can occur from the improper use of this device. Do not leave the grill unattended when it is hot. Close supervision is required when the grill is being used or is hot. Do not use the grill while underway.

Cockpit Refrigerator System

The S 428 is equipped with a cockpit refrigeration system. It consists of an insulated cooler/freezer 68-gallon transom fishbox and an insulated cooler/freezer in the entertainment center. There is also the option to add the cooler/freezer function to the 24-gallon starboard side fishbox. The system uses a raw water-cooled condenser, seawater pump and digital controller to chill the storage units. The KRA condensing unit is in the aft machinery space. The raw water pump is shared with the cabin and cockpit air conditioning systems. There is one pump for the three systems. There are two digital controllers in the cabin AC MDP panel. There will be a third if the optional starboard fishbox cooler option is selected.

Starting the System

Open the seacock for the air conditioning unit pump.

Turn ON the COOLING PUMP and COCKPIT REFRIGERATION breakers on the cabin AC MDP panel. Verify that cooling water is being discharged through the hull side thru hull fitting.

Set the digital thermostat to the desired temperature for each box. There will be a 3-minute delay before the condenser starts to run. Approximately ten minutes after startup, open each box to visually confirm frost is forming on the walls of the box. Close the box lids tightly against their gaskets. Watch for the temperature to decrease on the corresponding box thermostat.

Powering On the System

When the control is powered up by turning ON the COCKPIT REFRIGERATION breaker the Dometic digital thermostat control will light up showing all the icons and 888. This is followed by a display of r5.2 then ---.

After --- displays, depending on the mode it was in when it was last powered OFF, the display could flash between OFF and the box temperature, or start the cooling process by flashing the compressor delay icon for approximately 3 minutes, then the compressor will start, and cooling will begin.

If the KRA unit was in OFF mode, the control display alternates between OFF and the temperature reading. To turn on the compressor, press and hold the upper right power button for 2-3 seconds.

The control display from OFF and alternating temperature display to a constant temperature display. If the temperature setpoint is lower than the box temperature now displayed, the compressor icon will flash indicating a call for cooling, and there will be a 3-minute delay before starting the compressor. If the compressor icon is on but not flashing, the compressor is running. If the temperature set point is higher than the box temperature, the compressor will NOT turn on but will indicate box temperature.

Setting Temperature

Press and hold the set button until SET flashes in the display followed by numbers flashing and the cold icon. The cold icon looks like a star or snowflake. Use the power button for UP and the aux button for DOWN to change the temperature. Press the SET button again to save the new setting.

Livewell

The S 428 has two livewell located at the transom. To operate the livewell, place the plug into the drain in the bottom of the tank. Open the livewell thru hull fitting ball valve in the aft machinery space. There are separate seacocks and raw water pumps for each livewell. Turn the LIVEWELL breaker ON on the DC MDP. Turn the PORT LIVEWELL and STARBOARD LIVEWELL switches ON on the aft cockpit port and starboard switch panels. The livewell will fill with raw water to the level up the upper overflow drain. To drain, turn the aft cockpit switches OFF and remove the plug from the bottom of the tank. Clean the livewell thoroughly after each use.

7.3 Transom

DANGER

CARBON MONOXIDE POISONING AND/OR ROTATING PARTS HAZARD
Poisonous CO gases are present at the rear of the boat when an engine is running. A rotating propeller can cut or entangle swimmers. Both of these hazards will cause death or serious injury. DO NOT use the swim/boarding platform when the engine is running.

Transom Door

Do not use the transom door when the boat is in motion. DO NOT leave the transom door unlatched. Always latch it in the fully CLOSED position while the boat is underway. Latch it in the fully OPEN position or fully CLOSED position when the boat is not underway.

WARNING

UNSAFE BOAT HAZARD
Failure to close and secure transom door/gate while underway can expose passengers to rotating propellers, throw them overboard, or swamp the boat which can cause death or serious injury. Close and secure door/gate before getting underway.

CAUTION

Periodically inspect transom door/gate fittings for wear, damage or loose fit. Repair or replace before using your boat.

Swim Platform

Your Pursuit boat is equipped with an integral swim platform. A foldaway boarding ladder is located on the port side of the transom under the rub rail.

DO NOT use the swim platform or ladder while an engine is running. All engines must be OFF before allowing anyone to enter or exit the boat or when they are in the water. Stow the ladder before starting an engine.

7.4 Hardtop

Hardtop

The hardtop consists of a fiberglass top supported by the windshield in the front and powder-coated aluminum legs in the back. It is designed to accommodate radio antennas, radar antennas, navigation lights and the horn. It could also be equipped with optional outriggers and/or rod holders.

CAUTION

Care should be exercised to prevent damage to powder coated surfaces. If the surface is scratched, chipped or worn exposing the aluminum, it should be resealed to prevent corrosion from forming. If corrosion is allowed to form, it could cause the powder coating to bubble and lift away. Contact your dealer for repair service.

The hardtop is not designed to support the additional weight of items like an instrument locker or a life raft. Radar and electronics antennas must be mounted to the top between the windshield and rear legs. Do not mount any antennas or equipment to the brow area. The hardtop frame is not designed to support the weight of accessories in this area and can be damaged.

The hardtop warranty will be voided if the top is modified in any way or heavy accessories are mounted to the top. Also, if items like radar antennas, spotlights and other accessories are mounted in the wrong location, the warranty can be voided. If you intend to add equipment or make modifications to the hardtop, contact Pursuit Customer Relations to make sure the equipment you would like to add or the intended modification will not void the hardtop warranty.

Electric Sunshade (Optional)

The S 428 has two livewell located at the transom. To operate the livewell, place the plug into the drain in the bottom of the tank. Open the livewell thru hull fitting ball valve in the aft machinery space. There are separate seacocks and raw water pumps for each livewell. Turn the LIVEWELL breaker ON on the DC MDP. Turn the PORT LIVEWELL and STARBOARD LIVEWELL switches ON on the aft cockpit port and starboard switch panels. The livewell will fill with raw water to the level up the upper overflow drain. To drain, turn the aft cockpit switches OFF and remove the plug from the bottom of the tank. Clean the livewell thoroughly after each use.

NOTICE

Failure to stow the sunshade while underway could result in damage to the shade and the surrounding area.

Hardtop Canvas (Optional)

If selected as an option, the side curtains and drop curtain are custom made for the boat since aluminum frames vary slightly. Slide the side curtains into the slide tracks installed on the underside of the hardtop.

Snap the side curtains to the hardtop legs. The side curtains will have to be stretched slightly to pull out the wrinkles and reach the snaps.

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

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

There is a hole drilled in one of the leg bases to prevent water from being trapped within the leg and provide wire routing for accessories. A smaller hole is drilled in the tubing at the base of the other legs to allow water to drain. Keep the hardtop leg drains clean, especially before winter lay-up.

7.5 Tower (Dealer Installed)

Your boat may be equipped with a dealer-installed aluminum tower. Towers are normally equipped with full engine controls, compass, engine alarms, restart buttons and tachometers. This allows for complete operation of the boat from the tower.

NOTICE

To prevent gelcoat, gunwales or deck damage, supporting extensions to the stringers may be required. Damage resulting from installation of a tower is not covered by the Pursuit Limited Warranty. Also, equipping a boat with a tower may require lower pitched propellers to compensate for the wind resistance and weight of the tower.

Operator Notes

Interior Equipment

8.1 Companionway Door

The cabin is accessed through a sliding door. Behind the companionway door is a screen door. Lockable latches secure the doors in the closed position. A vinyl-covered latch secures the doors in the open position. DO NOT leave the door unlatched. Latch it in the full OPEN or full CLOSED position.

The doors are made of acrylic plastic. Acrylic plastic scratches easily and can chip. Refer to section 11, Routine Maintenance, for proper care of acrylic plastic.

⚠ CAUTION

Keep the cabin door latched in the open or closed position. The door is heavy and slides easily. If the door is unlatched, it could slide unexpectedly as the boat rocks, causing injury or damage.

8.2 Main Cabin



Cabin interior arrangement

Microwave

To operate the microwave, turn ON the MICROWAVE breaker on the AC Main Distribution Panel (MDP). Refer to the microwave owner's manual for additional operating and maintenance information.

8.3 Carbon Monoxide Detector

Read about carbon monoxide, its hazards, and the carbon monoxide detector in section 9, Safety Equipment.

8.4 Climate Control

The reverse cycle air conditioner can be operated to cool or heat. The cabin air conditioner is located outboard of the companionway steps and just aft of the microwave. Access this unit by removing the companionway steps and removing the panel in the microwave cabinet. Do not store items in this compartment. Items stored on or immediately next to the air conditioning unit could cause damage to the air conditioner or be damaged by heat or condensation. The unit is controlled using the thermostat on the AC MDP. To operate the unit first turn ON the COOLING PUMP breaker and then the CABIN AIR breaker on the AC MDP.

The cold air return is located on the face of the microwave cabinet. Do not obstruct the air return in order to obtain maximum efficiency from the air conditioner.

The air conditioner is self-contained and sea water cooled. The cooling pump supplies sea water to the unit, which cools the condensing unit and is discharged overboard. The pump is located in the aft cockpit machinery space. This pump also supplies cooling water to the optional cockpit air conditioner.

Sea water is supplied to the pump from a thru-hull fitting located in the hull near the pump. A sea strainer between the pump and thru-hull fitting protects the system from contaminants that can damage the pump or the air conditioning system. Periodically clean the sea strainer basket to make sure the sea water pump receives adequate water.

Air locks can occur in the cooling pump water supply at the time of launching. If your boat has been recently launched and water is not flowing from the overboard thru-hull when the COOLING PUMP breaker on the AC MDP is ON, air may have to be purged from the system. This can be achieved by making sure the valve at the cooling pump intake thru-hull is open. Then run the boat at cruise speed for several minutes. A scoop attached to the intake thru-hull will pressurize the system and force the air through the pump. Refer to the air conditioner owner's manual for additional operating and maintenance information.

NOTICE

Air conditioners use surface water to cool. DO NOT operate the air conditioner out of the water or without the raw water supply, or damage to the system will occur. Make sure there is a water supply before operating the air condition. The lack of a water supply can also trip the circuit breaker.

8.5 Head Compartment

The head compartment is equipped with a fresh water sink with a hot and cold faucet and shower. When the FRESH WATER switch in the DC MDP is on, the water system will operate much like a home water system. Refer to section 5, Plumbing Systems, for more information on operating the system. For care and cleaning information, refer to section 11, Routine Maintenance.

Secure the head compartment door in the closed position whenever the boat is underway to prevent damage to the door.

An AC GFI duplex outlet is provided in the head. It is installed in a waterproof outlet box with an opening cover. Close the cover completely when the outlet is not being used, to prevent corrosion.

The countertop may be made of Corian®. Refer to section 11, Routine Maintenance, for Corian care information.

Marine Head System

Your boat is equipped with a VacuFlush® marine head system. This system uses a small amount of water and a vacuum, which is generated by the 12-volt vacuum pump, to flush. The toilet is connected to the pressurized fresh water system. Fresh water is used to reduce odor in the head compartment.

Before using the toilet, ensure the VacuFlush breaker on the DC MDP is ON. To use the toilet, lift the foot flush lever slightly to wet the bowl with the desired water level. Depress the flush lever all the way for approximately three seconds or until the bowl is clear. A sharp popping noise is normal when the vacuum seal is broken and flushing action begins. It is also normal for a small amount of water to remain in the bowl after flushing.

The waste is directed to the holding tank, located outboard of the starboard hull stringer in the aft mechanical space, until it is pumped out by a waste dumping station or the overboard macerator discharge system. The waste moves through a small opening in the toilet base. Incoming air mixes with and fragments the waste as it passes through the base opening. This process eliminates the need for a macerator or mechanical motors in the toilet base. When the tank is full, the indicators on the tank monitor (located just above the toilet in the outboard panel of the head wall) will show full and the vacuum pump will not run.

NOTICE

DO NOT operate the macerator dry; damage to the pump can occur.
In some waters it is illegal to discharge waste overboard. Remove the seacock handle or use another method to prevent accidental discharge.

The vacuum generator, located behind the shower outboard of the toilet, contains a stored vacuum and is connected to the holding tank. The system vacuum is monitored by a vacuum switch, which is located on the vacuum generator tank. When the switch senses a drop in vacuum pressure in the system, it automatically signals the pump to energize and bring the vacuum back to operating level. This process is normally completed in less than a couple minutes.

It is normal for the stored vacuum to leak down slightly between flushes, causing the vacuum pump to run for a short period. After the last flush, the pump should not run more than once every three hours to recharge the system. Refer to the head owner's manual for more information on the operation of the marine head system.

Holding Tank

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

Emptying the Holding Tank

When the tank is full, pump it out at an approved waste dumping station through the waste deck fitting or, when it is legal to do so, use the macerator overboard discharge pump.

To operate the macerator overboard discharge pump, open the ball valve at the thru-hull fitting located in the mechanical space of the aft bilge area, and activate the macerator switch until tank is empty. Release the switch and close the discharge ball valve when pumping is complete.

Maintenance

Clean and inspect the head for leaks regularly. Periodically add chemicals to the head to help control odor and to chemically break down the waste. Refer to the head owner's manual for additional operating and maintenance information.

NOTICE

The head and macerator systems must be winterized before winter lay-up; refer to section 12, Seasonal Maintenance.

Operator Notes

Safety Equipment

9.1 General

Your boat and outboard engines have been equipped with safety equipment designed to enhance the safe operation of the boat and to meet U.S. Coast Guard safety standards. The Coast Guard and 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. Most of the accessory equipment required by the Coast Guard is described in this section. 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, Yachts - Owner's Manual* included with this manual.

Your Pursuit boat may be equipped with engine alarms and 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 a Pre-Cruise System Check described in section 10.4.

This section describes safety-related equipment that could be installed on your boat, depending on the type of engines and other options installed by you or your dealer.

9.2 Engine Alarms

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

If the alarms sounds:

- Throttle the engines back to idle immediately.
- Shift to neutral.
- Monitor the engine gauges to determine the cause of the problem.
- If necessary, shut off the engines and investigate until the cause of the problem is found.
- If the boat is equipped with water sensors in the fuel filters, make sure to check them for excessive water.

9.3 Neutral Safety Switch

Every throttle/shift control system has a neutral safety switch. The switch allows the engines to be started in NEUTRAL only. If engines will not start, make sure controls are in NEUTRAL. Control or cable adjustments may be required to correct this condition should it persist. See your Pursuit Dealer for necessary control and cable adjustments. Refer to section 2.4 Neutral Safety Switch, for more information.

9.4 Engine Stop Switch

Your Pursuit boat is equipped with an engine stop switch, clip and lanyard. When the lanyard is pulled, it will shut off the engines.

WARNING

LOSS OF CONTROL AND UNSAFE BOAT HAZARD

An engine stop switch system that is not used or does not function correctly can cause death or serious injury. DO NOT operate the boat if the stop switch system does not function properly.

The stop switch will stop an engine whenever the lanyard is pulled far enough to disconnect the clip from the switch. Attach the lanyard to the boat operator whenever an engine is running, but be aware of loss of engine power if the switch is activated.

If the operator is thrown from the seat, or moves too far from the helm, the lanyard will disconnect the clip from the switch, shutting off the engine.

To attach a lanyard, connect the clip to the emergency stop switch and the hook to a strong piece of clothing on the operator, such as a belt loop.

If the engines will not start, the clip may not be inserted into the engine stop switch properly or the control is not in neutral. Make sure the clip is properly attached to the engine stop switch before attempting to start the engine.

Always carry a spare stop switch clip and lanyard and instruct at least one other person onboard regarding the operation of the stop switch and location of the spare.

9.5 Automatic Fire Extinguishing System

WARNING

FIRE/EXPLOSION HAZARD

The gas of the fire extinguisher system displaces oxygen to "smother" the fire. DO NOT open the hatch. Oxygen can feed a fire and flashback can occur which can cause death or serious injury. If the onboard fire system discharges, wait at least 15 minutes before opening engine hatch.

The generator is equipped with an automatic fire extinguishing system. The extinguisher has been chosen and located to provide sufficient coverage of the generator compartment. While the system helps ensure bilge fire protection, it does not eliminate the U.S. Coast Guard requirement for hand held fire extinguishers.

The system is equipped with an engine shutdown circuit to automatically shut down the generator. The red light on the fire extinguisher control panel will light and an alarm will sound if this should occur. When sufficient time has elapsed for the fire to be extinguished and a flashback is no longer possible, find and fix the problem, then the override switch on the control panel can be moved to the OVERRIDE position and the engines can be restarted. Refer to the Automatic Fire Extinguisher information in section 2, Helm Systems.

If the extinguisher system is activated, shut down all engines immediately. Turn off all electrical systems and powered ventilation ,and extinguish all smoking materials. DO NOT open the engine compartment hatch, because this will feed oxygen to the fire and a flashback can occur. Allow the extinguishing agent to soak the generator compartment for at least 15 minutes and wait for hot metals or fuels to cool before inspecting for cause or damage. Have an approved portable fire extinguisher at hand and ready for use and DO NOT breathe fumes or vapors caused by the fire. It is extremely important that you read, understand and know how this system works; refer to the manufacturer's owner's manual.

9.6 Carbon Monoxide Hazards

DANGER

CARBON MONOXIDE (CO) HAZARD

Exposure to CO will cause death or serious injury. CO is colorless, odorless and extremely dangerous. Avoid CO exposure and make sure the CO detector is working properly.

Carbon monoxide (CO) poisoning is lethal and should not be confused with seasickness, intoxication or heat exhaustion. If someone complains of irritated eyes, headache, nausea, weakness or dizziness, or you suspect carbon monoxide poisoning, immediately move the person to fresh air, investigate the cause, and take corrective action. Seek medical attention if necessary.

All engines and fuel burning appliances produce CO as exhaust. Direct and prolonged exposure to CO will cause BRAIN DAMAGE or DEATH.

Other symptoms that may signal exposure to CO: dizziness, flushed face, ears ringing, headaches, tightness of chest or hyperventilation, drowsiness, fatigue or weakness, inattention or confusion, lack of normal coordination, nausea and unconsciousness. The victim's skin also may turn red. A slight buildup of CO in the human body over several hours causes headache, nausea and other symptoms similar to food poisoning, motion sickness or the flu. Anyone with these symptoms should immediately be moved to an area of fresh air. Have the victim breath deeply and seek immediate medical attention. To learn more about CO poisoning, contact your local health authorities.

Carbon Monoxide Detector

If a carbon monoxide detector is activated, this indicates the presence of CO, which can be fatal. Evacuate the cabin immediately. Make sure all passengers are accounted for. DO NOT enter the cabin until you know it is safe and the problem found and corrected.

CO detectors warn occupants of dangerous accumulation of CO gas. It is automatically activated whenever the house battery switch panel feed breaker is ON. When powered, the green indicator will flash for ten to fifteen minutes, indicating the unit is in its warm-up stage. The green power indicator will stop flashing when the sensor has reached optimum operating temperature. The indicator will then switch from flashing green to solid green, indicating the detector is on.

Make sure the battery switch is on and the power light is lit whenever the cabin is occupied.

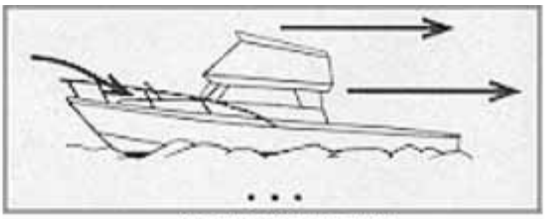
This device uses a micro controller to continuously measure and accumulate CO levels. Should a very high level of CO exist, the alarm will sound within a few minutes. If small quantities are present or high levels are short-lived, the detector will accumulate the information and determine when an alarm level has been reached.

While a CO detector enhances your protection from CO poisoning, it does not guarantee it will not occur. Do not use CO detectors as a replacement for ordinary precautions or periodic inspections of equipment. Never rely on alarm systems to save lives; common sense is still the best form of protection. Remember, the boat operator carries the ultimate responsibility to make sure the boat is properly ventilated and passengers are not exposed to dangerous levels of CO. Be alert to the symptoms and early warning signs of carbon monoxide.

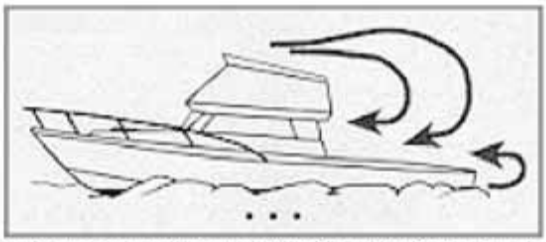
CO detectors are very reliable and rarely sound false alarms. If the alarm sounds, DO NOT think it is false. If anyone has been exposed to CO, move them into fresh air immediately. Never disable the CO detector because you think the alarm may be false.

Carbon Monoxide Poisoning

Carbon monoxide (CO) is a by-product of combustion, is invisible, tasteless, odorless and is produced by all engines and most heating and cooking appliances. It exists wherever fuels are burned to generate power or heat. The most common sources of CO on boats are combustion engines, auxiliary generators and propane or butane stoves.



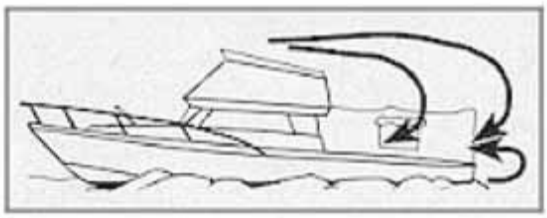
OPERATING SAFELY



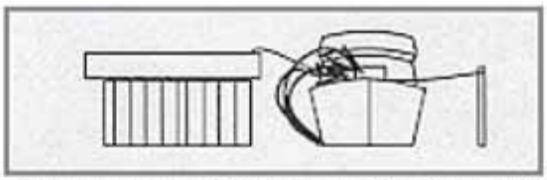
BACK DRAFTING / STATION WAGON EFFECT



NEARBY BOAT GENERATOR EXHAUST



BACK DRAFTING / STATION WAGON EFFECT



ONBOARD BOAT GENERATOR EXHAUST

These produce large amounts of CO and should never be operated while sleeping. High concentrations of CO can be fatal within minutes. Many cases of CO 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. 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 CO. CO poisoning is especially dangerous during sleep while victims are unaware of any side effects.

Low levels of CO over an extended period of time can be just as lethal as high doses over a short period. Therefore, low levels of CO can cause the alarm to sound before persons notice any symptoms.

Contact the detector manufacturer, the Pursuit Customer Relations Department or your local fire department for assistance in finding and correcting the situation.

In certain situations, boats can have a problem due to the “station wagon effect” where engine exhaust fumes are captured in the vessel by 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 that are underway should close all aft facing portholes, hatches and doors. The forward facing deck hatches should be open whenever possible to help pressurize living spaces of the boat. Sleeping, particularly in aft cabins, should not be permitted while underway. Proper ventilation must be maintained on the bridge deck by opening a forward window or windshield to drive fumes away from the occupants. The canvas drop or aft curtain must be removed and side curtains should be opened or

removed to increase airflow and maintain proper ventilation whenever the engines are running.

DO NOT operate the engines with side curtains closed and the aft or drop curtain installed.

Use extreme caution when operating an auxiliary power generator while anchored or in a slip. Calm wind nights can easily allow fumes to enter the boat. Inspect the exhaust systems of propulsion and the auxiliary generators, if equipped, frequently for possible leaks. High concentrations of CO in your boat can originate from an adjacent boat through open hatches or windows.

Failure to properly ventilate the boat while the engines are running can cause CO to accumulate within the cabin. Make sure to ventilate the boat and to avoid CO from accumulating in the boat whenever an engine is running.

Read the pamphlet entitled *Carbon Monoxide Poisoning: What You Can't See* and the owner's manual supplied by the CO detector manufacturer for additional information regarding the hazards and symptoms of CO gas, CO poisoning, and operation instructions. If you did not receive these manuals, contact the Pursuit Customer Relations Department.

Many manufacturers of carbon monoxide detectors offer a testing and recertification program. We recommend that you contact the manufacturer of your CO detector and have it tested and re-certified periodically. Certain electronic equipment have a limited life span; follow the CO detectors manufacturers recommendations on when the detector must be replaced.

9.7 First Aid

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



Equip your boat 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. Keep it accessible so each person onboard knows where it is located. As supplies are used, replace them. Some common drugs and antiseptics can 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 you carry. Replace 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.

9.8 Required Safety Equipment

In addition to items installed 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, or a line permanently secured to your ring buoy 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, 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 inspection that will help ensure 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 (PFD's)

PFD's must be Coast Guard approved, in good and serviceable condition, and of appropriate size for the intended user. Wearable PFD's 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 PFD's 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 onboard, plus one throw-able 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 handled properly. 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. Make sure you are careful and follow the manufacturer's instructions when using pyrotechnic distress signals.

WARNING

FIRE/EXPLOSION HAZARD

Pyrotechnic signaling devices can cause fire and/or explosion, death, serious injury and property damage if misused. Follow the manufacturer's directions in the use of these signaling devices.

Non-Pyrotechnic Devices

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

Orange Distress Flag, day use only

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

Electric Distress Light, night use only

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

Sound Signaling Devices

The navigation rules require sound signals to be made under certain circumstances. Recreational vessels are also required to sound fog signals during periods of reduced visibility. Therefore, you must have some means of making an efficient sound signal.

Navigation Lights

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

Fire Extinguishers

Pursuit Boats provides locations for two fire extinguishers on boats under 26 feet. Boats over 26 feet have provisions for up to three fire extinguishers. Boats equipped with cabins have one fire extinguisher located in the cabin, cockpit and helm areas. Center console boats have fire extinguishers mounted in the vicinity of the helm and passenger cockpit. 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 extinguishers require regular inspections to ensure:

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

For information on the type and size fire extinguisher required for your boat, 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 instructions on the proper maintenance and use of your fire extinguisher, refer to the information provided by the fire extinguisher manufacturer.

Information for halon or agent FE-241 extinguishers is provided by the manufacturer. It is extremely important that you read, understand and know how this system works; refer to the manufacturer's literature.

Bilge And Fuel Fires

Fuel compartment and bilge fires or explosions are dangerous because of the presence of fuel. 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. You must consider your safety, the safety of your passengers, the intensity of the fire and the possibility of an explosion in your decision.

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, to keep 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 and account for all passengers who were onboard. Give whatever assistance you can to anyone in need or in the water without a buoyant device. Keep everyone together for morale and to aid rescue operations.

WARNING

BURN HAZARD

Fuel floating on water which is ignited can cause death or serious injury. Fuel will float on top of water and can burn. If the boat is abandoned, swim upwind, far enough to avoid fuel that can spread over the surface of the water.

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

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

Safety Equipment

Additional Equipment to Consider:

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

Operator Notes

Operation

10.1 General

Before you start, become familiar with the various component systems and their operation, and perform the Pre-Cruise System Check found in section 10.4. A thorough understanding of the component systems and their operation is essential to operate the boat safely. This manual and the associated manufacturers' owner's manuals have been provided to enhance your knowledge of your boat. Read them carefully, and also read the provided book titled *Sportfish, Cruisers, Yachts - Owner's Manual*.

Your boat must have the necessary safety equipment onboard 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. Non-swimmers and small children should wear PFD's 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.

WARNING

DROWNING OR LOSS OF CONTROL HAZARD

Ejection or sudden loss of control can cause death or serious injury from improper use of seating. DO NOT stand while driving above engine idle speeds and make sure the cockpit seat is locked/secured and all passengers are seated when boat is underway.

DO NOT allow passengers to sit on the seat backs, gunwales, bows, transoms or on fishing seats when the boat is underway. Passengers should be seated to properly balance the load and must not obstruct the operator's view, particularly to the front.

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

WARNING

OVERLOAD HAZARD

Overloading the boat beyond maximum load or altering the stability, buoyancy or center-of-gravity can result in death or serious injury. DO NOT exceed the maximum load or alter the center-of-gravity of the boat.

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

WARNING

SLIPPERY SURFACE HAZARD

Wet surfaces can generate slippery conditions which can result in death or serious injury. Use caution on wet surfaces.

10.2 Homeland Security Restrictions

Recreational boaters have a role in keeping our waterways safe and secure. Violators of the restrictions below can expect a quick and severe response:

- Do not approach within 100 yards, and slow to minimum speed within 500 yards of any U.S. Naval vessel. If you need to

pass within 100 yards of a U.S. Naval vessel, for safe passage you must contact the U.S. Naval vessel or the Coast Guard escort vessel on VHF-FM channel 16.
- Observe and avoid all security zones.
- Avoid commercial port areas, especially those that involve military, cruise-line or petroleum facilities.
- Observe and avoid other restricted areas near dams, power plants, etc.
- Do not stop or anchor beneath bridges or in channels.

America's Waterway Watch

America's Waterway Watch, a combined effort of the Coast Guard and its Reserve and Auxiliary, wants your help in keeping America's waterways safe and secure. America's Waterway Watch urges you to adopt a heightened sense of sensitivity toward unusual events or individuals you may encounter in or around ports, docks, marinas, riversides, beaches or waterfront communities. To report suspicious activities, call the National Response Center at 1-877-24WATCH or 1-800-424-8802. If there is immediate danger to life or property call 911 or call the Coast Guard on Marine channel 16.

10.3 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. Books on this subject are also available from your local library.

Crossing situations

CAUTION

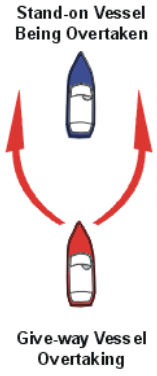
Avoid collisions by following navigation rules. If a collision appears unavoidable, both vessels must act. Prudence takes precedence over right-of-way rules if a crash is imminent. Less maneuverable boats generally have the right of way. Steer clear of the right-of-way boat and pass to its stern.

In the illustration below, the boat on the right has the right of way and should maintain its course and speed. The other vessel should slow down and permit it to pass. Both boats should sound appropriate signals.



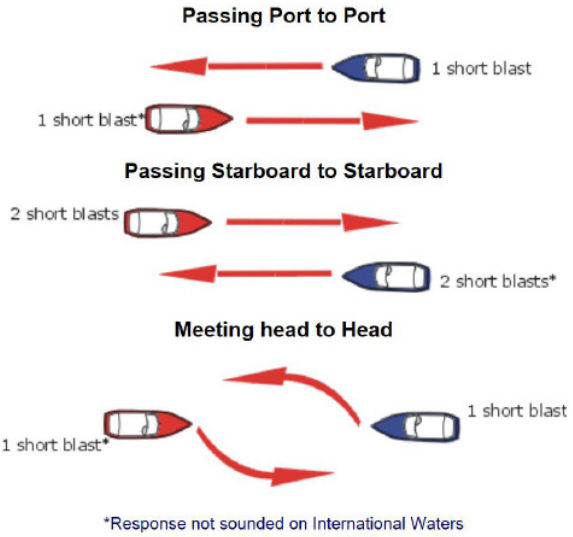
Overtaking Situations

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



Meeting Head-On Or Nearly-So Situations

When two motorboats 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, passing port side to port side and provide enough clearance for safe passage. Both boats should sound appropriate signals.



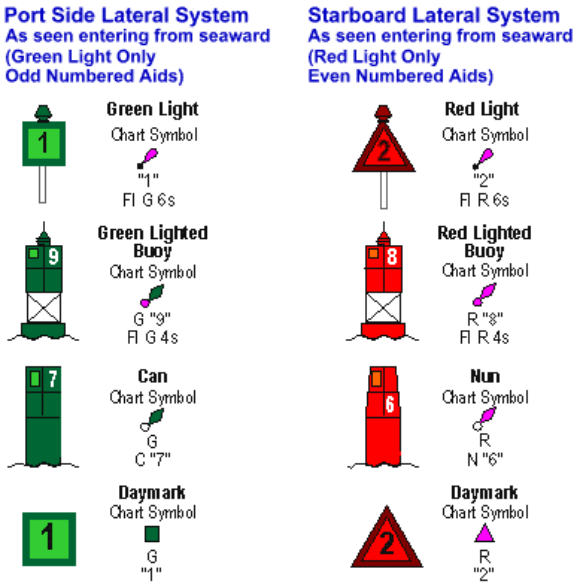
*Response not sounded on International Waters

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. Become familiar with these and any other markers used in your boating area.



CAUTION

Storms and waves can move buoys, do not rely on buoys alone to determine your position.

10.4 Pre-Cruise Check

Before Starting The Engines:

- Check the weather forecast. Decide if your planned cruise can be made safely.
- Make sure all required documents are onboard.
- Make sure all necessary safety equipment is onboard and operative; items like running lights, spotlight, life saving devices, etc. Refer to section 9, Safety Equipment, for additional information.

Each person onboard must have at least one personal flotation device. Check the U.S. Coast Guard standards for the correct type required for your boat.

- Make sure signal kits are onboard and are in good operating condition and are not expired.
- Make sure you have sufficient water and

other provisions for the planned cruise.
- Leave a written message listing details of your planned cruise (Float Plan) with a close friend ashore. Include a description of your boat, where you intend to cruise, schedule of your arrival 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 can tell authorities where to look and your boat type in the event you fail to arrive.
- Check the amount of fuel onboard. 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.
- Check the water separating fuel filters for water.
- Turn on the battery switches.
- Check for bilge water and for other signs of potential problems. Monitor for the scent of fuel fumes.
- Test the automatic and manual bilge pump switches to make sure the system is working properly.
- Have a tool kit and spare parts onboard.

The kit should include 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

The spare parts kit should include:

- ❑ Extra light bulbs
- ❑ Spark plugs
- ❑ Fuses and circuit breakers
- ❑ Flashlight and batteries
- ❑ Drain plugs
- ❑ Engine oil
- ❑ Propellers
- ❑ Fuel filters
- ❑ Propeller nuts
- ❑ Fuel hose and clamps

- Make sure all fire extinguishers are in position and in good operating condition.
- Make sure the shift control is in NEUTRAL.
- Make sure the emergency engine stop lanyard is attached to the operator and the stop switch.

10.5 Operating your Boat

The operator must be seated, and ready with the controls (steering/throttle) when the engine is started or running.

After Starting the Engines:

- Check engine gauges. Make sure all are reading normally.
- Visibly check engines to be sure there are no apparent water, fuel or oil leaks.
- Check operation of engine cooling systems.
- Check controls and steering for smooth and proper operation.
- Allow engines to warm up for 10 to 15 minutes before operating them above idle speeds.
- Make sure all lines, cables, anchors, etc. for securing the boat are onboard 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 operating a boat, you accept the responsibility for the boat, and the safety of passengers and others out enjoying the water.

- Alcohol and any mind-altering chemicals can severely reduce your reaction time and affect your better judgment.
- Alcohol reduces the ability to react.
- Alcohol makes it difficult to judge speed and distance or track moving objects.
- Alcohol reduces night vision and ability to distinguish red from green.

STAY ALERT. The use of alcohol or any other mind-altering chemicals that impair judgment pose a serious threat to you and others. The boat operator is responsible for their consequences and behavior of passengers.

WARNING

IMPAIRED OPERATION HAZARD
Operating any boat while intoxicated or under the influence of other drugs can cause death or serious injury. DO NOT operate any boat under the influence of any mind-altering chemical.

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

Make sure at least one other person onboard is instructed in the operation of the boat and it is operated in compliance with all state and local laws.

DO NOT operate the boat unless it is completely assembled. Make sure all fasteners are tight and adjustments are to specifications.

Before operating the boat for the first time, read the engine break-in procedures. Refer to the engine owner's manual and have your dealer describe the operating procedures for your boat. For more information, refer to the engine owner's manuals.

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, 1-800-368-5647.

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

Stopping the Boat

- Allow engines to drop to idle speed.
- Shift controls to NEUTRAL.

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

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

CAUTION

Turn off engines at idle speed. Racing the engine before switching it off can draw water into the engine through the exhaust, resulting in internal damage.

After operation:

- If operated in saltwater, wash the boat and all equipment with soap and water. Flush the engines using fresh water. Refer to the engine owner's manual for instructions on flushing.
- Check the bilge area for debris and excess water.
- Fill the fuel tanks to near full to reduce condensation. Allow room in the tanks for the fuel to expand without being

forced out the vent.
- Turn off all electrical equipment except the automatic bilge pumps.
- If you are going to leave the boat unattended for a long period of time, put the battery main switches to OFF and close all seacocks.
- Make sure the boat is securely moored.

CAUTION

To prevent damage, close all seacocks before leaving the boat.

10.6 Fishing

Fishing can be very exciting and distracting for the operator of the boat when the action gets intense. Be conscious that your primary responsibility is operating the boat safely to protect yourself, your passengers and other boats around you. Make sure the helm is properly manned and is never left unattended while trolling.

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. Be courteous and exercise good common sense. Avoid trying to assert your right of way and stay clear to prevent tangled or cut lines and other unpleasant encounters. Also, keep in mind that fishing line wrapped around a propeller shaft can cause damage to the lower unit seal.

10.7 Tower Operation (Optional Equipment)

Operation of the Tower Controls

Start engines at the lower helm. Monitor gauges to make sure all systems are normal and engines are warmed up before proceeding to the tower helm. The ignition or restart switches on the tower are only used to restart an engine in the event it should stall. The shift controls must be in neutral for the restart switches to be functional.

Safety precautions for tower operation:

- Do not operate the boat from the tower in rough sea conditions. Motions of the boat are exaggerated in the tower and may become excessive in rough seas.
- Be careful when using the trim tabs from the tower. The reaction of the trim tabs will be exaggerated in the tower. Use small tab corrections and wait ten (10) seconds for the tabs to react. Keep making small corrections until the hull is at the desired attitude.
- Do not overload the tower. Most towers are designed for two average-sized people and weight in the tower affects the center of gravity. Motion of the boat is greatly exaggerated for the people in a tower, and too much weight can make the boat unstable.
- Do not operate the boat in tight quarters, such as marinas, from the tower. The operator is isolated from the boat while in the tower and will not be able to assist in docking procedures.
- Avoid using the tower in wet or rough weather, since your grip and footing on the tower ladders is reduced.
- Operating the boat from the tower in unfamiliar waters increases your risk of running aground and subsequently ejecting the driver or passengers.
- Be alert for waves and boat wakes; the motion of the boat is exaggerated in the tower.
- Exercise good common sense and judgment when operating a boat from the tower.
- If the engine alarm sounds, put the boat in NEUTRAL and shut OFF the engine immediately until the problem is found.
- Always put the boat in NEUTRAL before moving to and from the tower helm and cockpit.

Use common sense and sound judgment, and exercise caution, when operating the boat with someone in the tower. DO NOT allow anyone in the tower when the water is rough or when operating in unfamiliar waters where running aground is a possibility. Remember, weight in the tower affects center of gravity, and the motion of the boat is greatly exaggerated for people in the tower.

10.8 Docking, Anchoring and Mooring

Docking and Docklines

Maneuvering a boat near a dock and securing it requires skill and techniques that are unique to water and wind conditions, and the dock layout. If possible, position a crew member at the bow and stern to assist with the lines and docking. While maneuvering close to the dock, compensate for wind and current, and anticipate how you can use them to help docking. Practice in open water using an imaginary dock to develop a sense for how the boat handles in different scenarios. You must be able to understand docking techniques before problems occur.

Approaching a dock or backing into a slip in high winds or strong currents requires skill. If you are new to handling a boat, take lessons from an experienced pilot and learn to maneuver in tight quarters in less-than-ideal conditions. Also, practice away from the dock during windy conditions.

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

Maneuvering to the Dock

Approach the dock slowly at a 30-to-40 degree angle. When possible, approach against the wind or current. Turn the engines straight and shift to neutral when you feel you have enough momentum to reach the dock. Use reverse to slow the boat and pull the stern toward the dock as the boat approaches. If you approached properly, the boat will lightly touch the pilings at the same time forward momentum is stopped. Have the dock lines ready and secure the boat as soon at it stops. Use fenders to protect the boat while it is docked. Keep the engines running until the lines are secured.

Backing into a Slip

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

Securing Docklines

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

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

Leaving the Dock

Start the engines and let them warm up for 10 to 15 minutes before releasing the lines. Boats steer from the stern and it is important you achieve enough clearance at the stern to maneuver the boat as quickly as possible. Push the stern off and maneuver to gain stern clearance quickly. Proceed slowly until the boat has cleared the dock and other boats.

Mooring

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

Leaving a Mooring

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

Anchoring

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

WARNING

SINKING OR DROWNING HAZARD
Anchoring at the stern can pull a boat under water. DO NOT anchor at the stern.

Releasing the Anchor

Release the anchor by traversing to the point where the anchor line becomes vertical. It should release when you pass that point. If the anchor does not release, stop the boat directly above the anchor and tie the line to a cleat as tight as possible. The up and down movement of the boat will usually loosen the anchor. Make sure the anchor is secured and stowed before getting underway.

10.9 Controls, Steering or Propulsion System Failure

The engine covers are machinery guards and must be in place whenever the engines are running. DO NOT operate the boat without the covers in place unless you are performing a check or maintenance.

WARNING

MOVING PARTS HAZARD

Contact with moving parts can entangle, cut and cause death or serious injury. DO NOT come close enough to make contact with any running machinery moving parts, i.e., engine or propeller. Contact can result in loss of body parts, strangulation, burns and/or severe loss of blood resulting in serious injury or death.

If the propulsion, control, or steering system fails while you are operating the boat, bring both throttles to idle and shift to neutral. Determine if the boat should be anchored to prevent the boat from drifting or to hold the bow into the seas. Investigate and correct the problem if possible. Make sure the engines are off before investigating the problem. If you are unable to correct the problem, call for help.

If only one engine has failed, you can operate on one engine. Do not to apply too much power to the running engine. When running one engine to power a twin- or triple-engine boat, the engine will be 'over propped' and can be overloaded if too much throttle is applied. Contact your dealer or the engine manufacturer for the maximum power settings when running on one engine.

10.10 Collision

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

10.11 Grounding, Towing and Rendering Assistance

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

If the boat should become disabled, or if another craft that is disabled requires assistance, be careful. The stress applied to a boat during towing can become excessive. Excessive stress can damage the structure and create a safety hazard for all onboard.

Freeing a grounded vessel, or towing a disabled boat requires specialized equipment and knowledge. Line failure and structural damage caused by improper towing have resulted in fatal injuries. To safely accomplish the towing task, we recommend this to be reserved for those with the right equipment and knowledge, e.g., the U.S. Coast Guard or a commercial towing company.

The mooring cleats or bow/stern eyes on Pursuit boats are not designed or intended to be used for towing or lifting. These cleats are designed as mooring cleats for securing the boat to a dock, pier, etc. only. DO NOT use these fittings for towing, lifting or attempting to free a grounded vessel.

When towing operations are underway, have everyone on both vessels stay clear of the tow line and surrounding area. DO NOT allow anyone to be in line with the tow rope; a dangerous recoil can occur if the rope should break or pull free.

Running aground can cause serious injury to passengers and damage the boat and its underwater gear.

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. A damaged boat can also take on water; keep all life saving devices close while heading to a dock area. If the boat cannot be immediately removed from the water, thoroughly inspect the bilge area for leaks.

10.12 Flooding or Capsizing

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

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

10.13 Transporting your Boat

Your Pursuit boat is a large boat and should only be trailered by professionals with the right equipment and knowledge to transport large boats without causing damage. Contact your dealer or the Pursuit Customer Relations Department if you are planning to transport your boat and have any questions in regard to the proper equipment and support for the hull.

Damage from trailers can occur if the boat hull is not supported properly. Make sure the trailer bunks and pads are adjusted so they provide enough support for the hull and are not putting excessive pressure on the lifting strakes. Hull damage resulting from improper trailer support is not covered by the Pursuit warranty.

10.14 Man Overboard

DANGER

CARBON MONOXIDE POISONING AND/OR ROTATING PARTS HAZARD
Poisonous CO gases are present at the rear of the boat when an engine is running. A rotating propeller can cut or entangle swimmers. Either of these hazards will cause death or serious injury. DO NOT use the swim/boarding platform when the engine is running.

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

- Immediately stop the boat and sound a ‘man overboard’ alarm and have all passengers point to the person in the water.

- Circle around quickly and throw a throwable PFD, cushion, or life jacket to the person and if possible, throw another to use as a marker.
- Keep the person on the driver side of the boat to keep them in sight.
- Approach the person from the downwind side and maneuver the boat so the propellers are well clear of the person in the water.
- Turn off the engines when person is alongside and use a ring buoy or a boat cushion with a line attached, a paddle or boathook to assist person to the boat; make sure you do not hit them with the ring buoy or the boat.
- Pull person to the boat and assist onboard.
- Check the person for injuries and administer first aid if necessary. If the injuries are serious, call for help immediately.

Refer to section 9, Safety Equipment, for more information on first aid and requesting emergency medical assistance.

10.15 Trash Disposal

The discharge of plastic trash or trash mixed with plastic is illegal anywhere in the marine environment. It is also illegal to discharge garbage in the navigable waters of the United States including the Great Lakes.

Regional, state, and local restrictions on garbage discharges also may apply. Vessels of 26 feet or longer must display in a prominent location, a durable placard at least 4 by 9 inches notifying the crew and passengers of the discharge restrictions.

Responsible boaters store refuse in bags and dispose of it properly on shore. Make sure your passengers are aware of the local waste laws and the trash management procedure on your boat.

Operator Notes

Routine Maintenance

11.1 General

WARNING

FIRE/EXPLOSION/ASPHYXIATION HAZARD

Cleaning agents and paint ingredients can be flammable and/or explosive, or dangerous to inhale. Make sure ventilation is adequate, wear proper personal protection and dispose of rags properly ashore.

Vapors from flammable solvents can cause fire, explosion or asphyxiation resulting in death or serious injury. Keep open flame or spark away from work area. DO NOT paint unless in a well-ventilated area.

Before using a cleaning product, refer to the product directions and specifications.

If urethane foam was used in the construction of your boat, be careful with high temperatures or flames in these areas. Urethane foam can ignite. DO NOT smoke, weld or burn. Avoid the use of space heaters and lights in areas where urethane foam is present. If ignited, urethane foam burns rapidly, produces extreme heat, releases hazardous gases and consumes much oxygen.

11.2 Exterior Hull and Deck

Hull Cleaning - Below the Waterline

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

Bottom Painting

If the boat is to be left in saltwater for extended periods, protect it from marine growth by applying an 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, because pollution and marine growth can damage fiberglass hulls.

Sanding or sandblasting the hull bottom will damage the fiberglass. Only use 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 hull blister warranty.

DO NOT allow antifouling paint to contact the outboard engine. Most antifouling paints contain copper which will cause severe galvanic damage to the motor. Leave a 1/2” (12.7 mm) barrier between the hull bottom paint and outboard engine.

Most bottom paints require maintenance, especially when the boat is in saltwater or 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.

Sacrificial Anodes

Sacrificial zinc anodes are installed on the trim tabs, transom and outboard engines. The transom anode is connected to the bonding system and protects the underwater hardware that is bonded.

The anodes are less noble than copper-based alloys and aluminum and will deteriorate first, protecting the more noble underwater hardware against galvanic corrosion. Anodes

should be checked monthly and changed when they are 75% of their original size. When replacing the anodes, make sure the contact surfaces are clean, shiny metal and free of paint and corrosion. Never paint over the anode or protect it.

Boats stored in saltwater will require anodes to be replaced at least 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 anodes to be used and the specific installation procedure.

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. DO NOT use harsh abrasive and chemical cleaners 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, wash it thoroughly with soap and water after each use.

Sudden changes in temperature can affect gelcoat. When planning on moving your boat from outdoors to a heated location, allow the change of temperature to be gradual. Warm the location slowly after the boat is brought inside to allow the boat to change temperature slowly as the location is warmed. Or, if you are moving your boat from a warmer area to a colder one, wait for the temperature to be closer to the temperature of the warmer area or allow the warmer area and the boat to cool down.

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.

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 which help 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 from oxidation of the gel. This condition will be more apparent with dark colors, which require more frequent maintenance. 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 or an authorized repair person.

WARNING

SLIPPERY SURFACE HAZARD
Cleaning surfaces can generate slippery conditions which can result in death or serious injury. Use caution when cleaning with detergents. Rinse thoroughly.

Be careful when walking on wet gelcoat surfaces.

DO NOT wax nonskid surfaces, which could make them slippery and increase the possibility of injury.

Stainless Steel Hardware

When using the boat in saltwater, wash hardware with soap and water after each use. When your boat is used in a more highly corrosive environment—such as saltwater, water with a higher sulfur content, or polluted

water—stainless steel may develop surface rust stains. This is normal under these conditions.

Clean and protect by using a high quality boat or automotive wax or a commercial metal cleaner and protectant.

DO NOT use citrus-based or abrasive materials such as sandpaper, bronze wool, or steel wool on stainless steel as damage will result.

Anodized Aluminum Surfaces

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

Hardtops 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 often overlooked when the boat is washed and will not be rinsed by the rain. The aluminum just below the top is more likely to become pitted than the exposed aluminum on the structure. Make sure these areas are washed frequently with soap and water and rinsed thoroughly.

Pay particular attention to places where the top material and lacing contact the frame. Coat the entire frame with a metal protector made for anodized aluminum once a month to protect against pitting and corrosion caused by the harsh effects of saltwater. The anodized aluminum used on your Pursuit was coated with a metal protector called Aluma Guard® at the factory. Aluma Guard is a non-abrasive 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. Aluma Guard is available from your dealer or Rupp Marine Inc., www.ruppmarine.com.

Aluma Guard and other metal protectors can make the metal slippery and should not be used on tower ladders, steering wheels and other areas for gripping or stepping.

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.

Contact Pursuit Customer Relations before making any modifications to aluminum fabrications. Unauthorized modifications can void the warranty.

Powder Coated (Painted) Aluminum Surfaces

Regular care is necessary to maintain the appearance of the powder coat finish. Build-up of salt and grime can hold moisture and damage powder coatings. This buildup can cause a corrosive condition that can damage the coating, especially in a salt air or coastal environment.

- Wash the finish regularly with warm water containing a pH neutral detergent (i.e. mild dish soap).
- Use a non-abrasive fiber cloth.
- Rinse thoroughly after cleaning.

Chrome Hardware

Rinse with fresh water and wipe dry with a towel or chamois after each use. Use a good chrome cleaner and polish on all chrome hardware. Clean and wax chrome prior to extended storage. In saltwater or other harsh environments, clean and wax more often.

Acrylic Plastic

Acrylic plastic scratches easily. DO NOT use a dry cloth or glass cleaning solutions on acrylic. Use a soft cloth and mild soap and water for routine cleaning. Solvents and products containing ammonia can permanently damage acrylic plastic.

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:

- Abrasive cleaners
- Acetone
- Solvents
- Alcohol
- Glass cleaners
- Cleaners containing ammonia

Engines

Proper engine maintenance is essential to performance and reliability of your outboard engines. Maintenance schedules and procedures are outlined in your engine owner's manual; follow them exactly.

Flush the system when the boat is out of the water. If the boat is used in saltwater, flush daily.

The age of gasoline can affect engine performance. Chemical changes occur as the gasoline ages, causing deposits and varnish in the fuel system and reduces the octane rating of the fuel. Degraded fuel can damage the engine and boat fuel tank and lines. If your boat does not require at least one full tank of fresh fuel a month, add a fuel stabilizer to the gasoline to protect the fuel from degradation. Use only a fuel stabilizer recommended by your dealer or the engine manufacturer. Operate the boat at least 15 minutes after adding the stabilizer to allow the treated fuel to reach the engine. Your dealer or engine manufacturer can provide additional information on fuel degradation. For more recommendations for your specific area, check with your local Pursuit dealer.

Avoid using fuels with alcohol additives. Gasoline, extended with an alcohol blend, will absorb moisture from the air which can reach such concentrations that "phase separation" can occur where 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 near the bottom of the tank, phase separation can cause the engine to run 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 is an indication of possible phase separation from the use of alcohol blended fuels.

Contact your Pursuit dealer or engine manufacturer for additional information regarding fuels and additives.

Corian® Surfaces

Corian® is resistant to heat, but you should always use a hot pad or a trivet with rubber feet to protect it. Avoid exposing Corian to strong chemicals, such as paint removers, oven cleaners, etc. If contact occurs, flush the surface with water immediately. Soapy water or ammonia-based cleaners will remove most dirt and stains from all types of finishes.

DO NOT use the Corian countertop as a cutting board.

Minor damage, scratches, general or chemical stains, scorches or burns and minor impact marks can be repaired on-site with a light abrasive cleanser and a product such as a Scotch-Brite® pad. For heavier damage, light sanding may be necessary. Heavy damage should be repaired by a Corian licensed professional.

Tempered Glass Sink

For best results:

- DO NOT use strong/abrasive cleaner. Test your cleaning solution on an unnoticeable area first, before applying to the entire surface.
- Wipe surfaces clean immediately after applying cleaner.
- DO NOT allow cleaner to sit or soak on the surface.
- DO NOT use an abrasive brush or scouring pad to clean surfaces as damage will occur. Use only a soft, dampened sponge and cloth.
- Rinse and wipe the fixtures to prevent soap build-up.

11.3 Seats, Upholstery, Canvas and Enclosures

Seat Slides and Swivel Bases

Perform the following periodically:

- Inspect and tighten mounting screws between seat slides and seat bottom.
- Inspect and tighten the mounting screws attaching the seat bases to the boat.
- Keep a light film of grease on manual seat slides.
- Keep a light film of grease on manual seat adjusting mechanisms.
- Clean electric seat slides. DO NOT use harsh chemicals or abrasives. Lubrication is not required.

Vinyl Upholstery

The vinyl upholstery used on the exterior seats and bolsters and headliner in the cabin should be cleaned with soap and water periodically. Stains, spills or soiling should be cleaned up immediately to prevent the possibility of permanent staining. When cleaning, rub gently. DO NOT use products containing ammonia, powdered abrasive cleaners, steel wool, strong solvents, acetone and lacquer solvents or other harsh chemicals as they can permanently damage or shorten the life of vinyl. Never use steam heat, heat guns or hair dryers.

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 with a clean absorbent cloth immediately. Rinse with clean water.
- Food grease and oily stains - spray with either Fantastik Cleaner or Tannery Car Care Cleaner, wiping with a soft cloth immediately. Be careful not to extend the area of contamination beyond its original boundary. Rinse with clean water.

Water that becomes trapped between the cushion and foredeck may cause the gelcoat to blister. Blistering is not covered by the Pursuit Limited Warranty. Remove the cushions every two – three weeks and allow them to dry out on the bottom side. For longer life we recommend that the cushions be stored out of the elements when not in use.

⚠ CAUTION

Leaving foredeck cushions installed for an extended period of time may result in gelcoat damage.

Canvas and Side Curtains

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. Canvas tops 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 agent designed for this purpose. 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. Do not allow them 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 plastic 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 or lemon scents; lemon juice attacks vinyl and shortens its life.

Lubricate snaps periodically with petroleum jelly or silicone grease. Lubricate zippers with silicone spray or paraffin.

Remove the bimini top, side curtains, clear connector, back drop and aft curtain when trailering. Canvas enclosures are not designed to withstand the extreme wind pressure encountered while trailering and will be damaged. Always remove and store properly before trailering.

11.4 Cabin Interior

Clean the cabin interior just like you would clean a home interior.

- Teak woodwork - use teak oil
- Carpeting - use a vacuum cleaner
- Vinyl headliner - clean as previously described

Air and sunlight are very good cleansers. Periodically, place cushions, sleeping bags, etc. on deck, under the sun and in the 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.

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.

Read the label carefully on mildew protectors, remove the protector, and allow the cabin to ventilate completely before using the cabin.

11.5 Bilge

To keep the bilge clean and fresh, use a commercial bilge cleaner regularly. Follow the directions carefully. All exposed pumps and metal components should be sprayed with a protector periodically to reduce the corrosive effects of the high humidity present in these areas.

WARNING

FIRE/EXPLOSION OR ASPHYXIATION HAZARD

Fumes from flammable solvents can cause fire, explosion or asphyxiation resulting in death or serious injury. DO NOT use flammable solvents to clean the bilge.

11.6 Generator

The engine maintenance required on the generator is similar to an inboard engine. The engine incorporates a pressure-type lubrication system and a fresh-water-cooled engine block which is thermostatically controlled. The most important factors to the longevity of the generator is proper ventilation and maintenance of the fuel system, ignition system, cooling system, lubrication system and the AC alternator.

Maintenance schedules and procedures are outlined in the generator owner's manual; follow them exactly.

Operator Notes

Seasonal Maintenance

12.1 Storage and Lay-up

Before Hauling:

- Pump out the head. Flush the holding tank using clean soap, water, deodorizer and pump-out cleaning solution.
- Leave the fuel tank nearly full to reduce condensation that can accumulate in the tank. Allow enough room for fuel to expand without leaking from the vents.
- Algae can grow in the accumulated water in diesel fuel tanks, especially in warm climates. Adding a high quality diesel fuel additive containing an algaecide may be required to control algae during storage in your area.
- Drain the fresh water system.
- Refer to 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. Refer to the drawing in Appendix F for the correct position of the lifting slings. The positions are marked with small labels on each side of the boat under the rubrails. Tie fore and aft slings together to prevent slings from sliding on the hull.

Elevating lifts are commonly used to store boats for extended periods. To provide proper support, the bunks that support the hull should be aligned with and run parallel to the hull stringers. The bow and stern eyes, if equipped, should not be used as sole support for storage.

Your boat can be 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 your boat. DO NOT attempt to lift boat with a substantial amount of water in the bilge.

Severe gelcoat cracking or more serious hull damage can occur during hauling and launching if pressure is created on the gunwales (sheer) by the slings. Use flat, wide slings and spreaders long enough to keep pressure from the gunwales. DO NOT allow your boat to be hauled when the spreaders on the lift are not wide enough to take the pressure off the gunwales.

Supporting the Boat for Storage

A trailer, elevating lift 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 support the hull of the boat and the trailer is on a level surface with the bow high enough so water will drain from the bilge and cockpit. The trailer must properly support the hull. The bunks and rollers should match the bottom of the hull and should not be putting pressure on the lifting strakes.
- Make sure the hitch is properly supported.
- Check the tires once each season. Add enough air for the correct amount of inflation for the tires.
- Make sure the engines are in the down position.

When storing the boat on a lift or cradle:

- The cradle must be specific for boat storage. Make sure the lift or cradle is well supported with the bow high enough to provide proper drainage of the bilge. The cradle or lift must be in the proper fore and aft position to properly support the hull. When the cradle or lift is in the

correct location, the bunks should match the bottom of the hull and should not be putting pressure on the lifting strakes.
- Make sure the engines are in the down position.
- Make sure bunks and rollers are adjusted so they are not putting pressure on the lifting strakes and are providing enough support for the hull. Hull damage resulting from improper cradle or trailer support is not covered by the Pursuit warranty.

Preparing The Boat For Storage:

- Remove the bilge drain plug(s), 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 propellers and grease the propeller shafts using light waterproof grease.
- Remove batteries and clean using clear, clean water. Make sure batteries have sufficient water and terminals are clean. Keep the batteries charged and stored in a cool, dry place and safe from freezing throughout the storage period.
- Refer to section 4, Electrical Systems, for information on the maintenance of the AC and DC electrical systems.
- Coat all faucets and exposed electrical components in the cabin and cockpit with a protecting oil.
- Clean, drain and completely dry the fishboxes, sinks and livewells.
- Thoroughly clean the interior of the boat; vacuum all carpets and dry-clean drapes and upholstery.
- Remove cushions
- Open the refrigerator/cooler door and as many locker doors as possible. Leaving as many of these areas open as possible will improve fresh air ventilation during the storage period.
- Place a mildew preventive system in the cabin area before it is closed for storage.
- Clean the exterior upholstery with a good vinyl cleaner, and dry thoroughly. Spray the weather covers and boat upholstery with a spray disinfectant. Enclosed areas such as the refrigerator, shower basin, storage locker areas, etc. should also be sprayed with a disinfectant.

12.2 Winterizing

Fresh Water System

The entire fresh water system must be completely drained. Disconnect all hoses, check valves, etc., and blow all the water from the system. Make sure the water heater and fresh water tank are completely drained. Use very low air pressure only when blowing water from the system to prevent damage to components. The check valve mechanism built in the fresh water pump will not remove the water from the pump. Remove the outlet hose on the pump, turn it on and allow it to pump out any remaining water (approximately a cupful).

An alternate method is to use commercially available nontoxic, fresh water system antifreeze. After draining the potable water tank, lines and water heater, pour the antifreeze mixture into the fresh water tank, then prime and operate the pump until the mixture flows from all fresh water faucets. Be sure to open ALL faucets, including the fresh water spray head in the stern bait station sink and the water supply valve for the head. Make sure antifreeze has flowed through all of the fresh water drains. Allow the antifreeze to fill the sink traps.

The shower/cabin drain sump system must be winterized also. 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, refer to section 5, Plumbing Systems.

Raw Water System

Drain the raw water systems completely. Disconnect all hoses and blow the water from the system. Use very low air pressure only when blowing water from the system to prevent damage to components. The check valve mechanism built in the raw water washdown pump will not remove the water from the pump. Remove the outlet hose on the pump, turn it on and allow it to pump out any remaining water (approximately a cupful).

An alternate method is to use commercially available nontoxic, potable water system antifreeze. If 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, discharge fittings and drains. Make sure antifreeze has flowed through all of the raw water drains.

Run the stern fishbox macerator pump until all the water is removed from the n and the pump. To avoid damage to the pump, DO NOT run pump dry for more than ten seconds.

Generator Raw Water Systems

Drain the sea strainer, heat exchangers and raw water supply and discharge lines for the optional generator raw water supply pumps. Make sure all sea water has drained from the exhaust system. Some generator engine mufflers have a drain plug that must be removed to properly drain the muffler.

Once the exhaust system has been drained, pour a nontoxic marine engine antifreeze mixture into a large pail and put the generator raw water intake lines into the solution. Run the generator until the antifreeze solution is visible at the exhaust port, then shut the engine off.

Winterize the generator engine and fuel system by following the generator manufacturer's winterizing procedures. Refer to generator's owner's manuals or contact a Pursuit dealer.

Marine Toilet

Refer to the toilet owner's manual and winterize the toilet following the procedures exactly. Drain the intake and discharge hoses completely using low air pressure if necessary. The head holding tank and macerator discharge pump must be pumped dry. Pour one gallon of potable water antifreeze poured into the tank through the deck waste pumpout fitting. After the antifreeze has been added to the holding tank, open the overboard discharge valve and activate the macerator pump until the antifreeze solution is visible at the discharge thru-hull.

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. An alternate method is the use of commercially available nontoxic, potable water system antifreeze. If antifreeze is used, drain the sea strainer and pour the mixture into a pail and put the raw water intake line into the solution. Run the air conditioner until the antifreeze solution is visible at the discharge fitting on the hull side.

Air conditioner components must be winterized also; follow winterizing procedure in the air conditioner owner's manual.

The air conditioning, engine control system, head, and steering systems have specific lay-up requirements. Refer to the owner's manuals for recommended winterizing procedures.

Bilge

Coat all metal components, wire busses, connector plugs (in the bilge), all strainers, seacocks and steering components with a protecting oil. 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.

Hardtop

Make sure all drain holes in the hardtop legs are open and legs are completely free of water. Remove the canvas and thoroughly clean and store in a safe, dry place. Remove all electronics. Coat all wire connectors and bus bars in the helm compartment with a protecting oil.

Clean the aluminum frame with soap and water and dry thoroughly. Apply an aluminum metal protector to the entire frame to reduce corrosion and pitting.

NOTICE

Make sure the leg drain holes are clear when the boat is laid up for the winter. Water trapped inside the hardtop, tower or radar arch legs can freeze and cause the legs to split.

Tower (if installed)

Make sure all holes in the tower and hardtop legs are open and completely free of water. Check and clear tower basket drains of debris. Remove the tower sun shade, if installed, the belly band or other upholstery, 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. Cover the tower basket with a tarp and secure it properly.

Clean the aluminum frame with soap and water and dry thoroughly. Apply an aluminum metal protector to the entire frame to reduce corrosion and pitting.

Covering for Winter Storage

Proper storage is very important to prevent serious damage to the boat. If the boat is stored outside, support and secure a storage cover properly 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 can lead to mildew, moisture accumulation, etc. Fasten the canvas down securely so wind cannot remove it or cause chafing of the hull superstructure. DO NOT store the boat in a damp storage enclosure. Excessive dampness can cause electrical problems, corrosion, and excessive mildew.

DO NOT use the bimini top or convertible top canvas in place of the winter storage cover. The life of these tops can be shortened if exposed to harsh weather elements for long periods.

DO NOT use an electric or fuel burning heating unit in the bilge area.

If the boat is to be stored indoors, make sure the building has enough ventilation and there is enough ventilation both inside the boat and

around the boat. If the boat is to be stored indoors or outdoors, open all drawers, clothes lockers, cabinets, and doors a little. If possible, remove the upholstery, mattresses, clothing, and rugs.

12.3 Recommissioning

DO NOT operate the boat unless it is completely assembled. Keep all fasteners tight. Keep adjustments according to specifications.

Before launching the boat, make sure to install hull drain plug(s).

Recommissioning the Boat after Storage

- Charge and install the batteries.
- Install hull drain plug(s).
- Check the engines and generator for damage and follow the manufacturer's instructions for recommissioning.
- Check the mounting bolts of engines to make sure they are tight.
- Perform all routine maintenance.
- Check all hose clamps for tightness.
- Pump antifreeze from any systems winterized with antifreeze and flush several times with fresh water. Make sure all antifreeze is flushed from the water heater and it is filled with fresh water before it is activated.
- Disinfect the fresh water system. Refer to section 5, Plumbing Systems, for instructions.
- Check and lubricate the steering system.
- Clean and wash the boat.
- Install all upholstery, cushions, and canvas.

After Launching:

- Check all water systems and the engine mounting bolts for leaks. Operate each system one at a time and check for leaks and proper operation.
- Make sure all BILGE pump switches are ON
- When the engines start, check the cooling system port below the engine cowling for a strong stream of water to ensure cooling pump is operating.
- Carefully monitor the gauges and check for leakage and abnormal noises.
- Operate the boat at slow speeds until the engine temperature stabilizes and all systems are operating normally.

Operator Notes

Glossary of Terms

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

Aground: A boat stuck on the bottom.

Amidships: In or toward the part of a boat midway between the bow and stern.

Anchor: A specially shaped heavy metal device designed to dig efficiently into the bottom under a body of water and hold a boat in place.

Anchorage: An area specifically designated by governmental authorities in which boats may anchor.

Ashore: On shore.

Astern: Behind the boat, to move backwards.

Athwartship: At right angles to the center line of the boat.

Barnacles: Small, hard-shelled marine animals which are found in salt water attached to pilings, docks and bottoms of boats.

Beam: The breadth of a boat usually measured at its widest part.

Bearing: The direction of an object from the boat, either relative to the boat's direction or to compass degrees.

Berth: A bunk or a bed on a boat.

Bilge: The bottom of the boat below the flooring.

Bilge Pump: A pump that removes water that collects in the bilge.

Boarding: Entering or climbing into a boat.

Boarding Ladder: Set of steps temporarily fitted over the side of a boat to assist persons coming aboard.

Boat Hook: Short shaft of wood or metal with a hook fitting at one end shaped to aid in extending one's reach from the side of the boat.

Bow: The front end of a boat's hull.

Bow Line: A line that leads forward from the bow of the boat.

Bow Rail: Knee high rails of solid tubing to aid in preventing people from falling overboard.

Bridge: The area from which a boat is steered and controlled.

Bridge Deck: A deck forward and usually above the cockpit deck.

Broach: When the boat is sideways to the seas and in danger of capsizing; a very dangerous situation that should be avoided.

Bulkhead: Vertical partition or wall separating compartments of a boat.

Cabin: Enclosed superstructure above the main deck level.

Capsize: When a boat lays on its side or turns over.

Chock: A deck fitting, usually of metal, with inward curving arms through which mooring or anchor lines are passed so as to lead them in the proper direction both onboard and off the boat.

Cleat: A deck fitting, usually of metal with projecting arms used for securing anchor and mooring lines.

Closed Cooling System: A separate supply of fresh water that is used to cool the engine and circulates only within the engine.

Coaming: A vertical piece around the edges of cockpit, hatches, etc. to stop water on deck from running below.

Cockpit: An open space, usually in the aft deck, outside of the cabin.

Companionway: Opening in the deck of a boat to provide access below.

Compartment: The interior of a boat divided off by bulkheads.

Cradle: A framework designed to support a boat as she is hauled out or stored.

Cutlass Bearing: A rubber bearing in the strut that supports the propeller shaft.

Deck: The floor-like platform of a boat that covers the hull.

Displacement: The volume of water displaced by the hull. The displacement weight is the weight of this volume of water.

Draft: The depth of water a boat needs to float.

Dry Rot: A fungus attack on wood areas.

Dry-dock: A dock that can be pumped dry during boat construction or repair.

Electrical Ground: A connection between an electrical connector and the earth.

Engine Beds: Sturdy structural members running fore and aft on which the inboard engines are mounted.

EPIRB: Emergency Position Indicating Radio Beacon. Operates as a part of a worldwide satellite distress system.

Even Keel: When a boat floats properly as designed.

Fathom: A measure of depth. One Fathom = 6 feet.

Fender: A soft object of rubber or plastic used to protect the topsides from scarring and rubbing against a dock or another vessel.

Fend off: To push or hold the boat off from the dock or another boat.

Flying Bridge: A control station above the level of the deck or cabin.

Flukes: The broad portions of an anchor which dig into the ground.

Following Sea: A sea that comes up from the stern and runs in the same direction that the boat is going.

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.

Glossary of Terms

Hand Rail: Rail mounted on the boat, for grabbing with your hand, to steady you while walking about the boat.

Harbor: An anchorage which provides reasonably good protection for a boat, with shelter from wind and sea.

Hatch: An opening in the deck with a door or lid to allow for access down into a compartment of a boat.

Head: A toilet on a boat.

Heat Exchanger: Used to transfer the heat that is picked up by the closed cooling system to the raw cooling water.

Helm: The steering and control area of a boat.

Hull: The part of the boat from the deck down.

Inboard: A boat with the engine mounted within the hull of the boat. Also refers to the center of the boat away from the sides.

Inboard/outboard: Also stern drive or I/O. A boat with an inboard engine attached to an outboard drive unit.

Keel: A plate or timber plate running lengthwise along the center of the bottom of a boat.

Knot: Unit of speed indicating nautical miles per hour. 1 knot = 1 nautical mile per hour (1.15 miles per hour). A nautical mile is equal to one minute of latitude: 6076 feet. Knots times 1.15 equals miles per hour. Miles per hour times .87 equals knots.

Lay-up: To decommission a boat for the winter (usually in northern climates).

Leeward: The direction toward which the wind is blowing.

Length On The Waterline (l.w.l.): A length measurement of a boat at the waterline from the stern to where the hull breaks the water near the bow.

Limber Hole: A passage cut into the lower edges of floors and frames next to the keel to allow bilge water to flow to the lowest point of the hull where it can be pumped overboard.

Line: The term used to describe a rope when it is on a boat.

Lists: A boat that inclines to port or starboard while afloat.

L.O.A.: Boat length overall.

Locker: A closet, chest or box aboard a boat.

Loran: An electronic navigational instrument which monitors the boat's position using signals emitted from pairs of transmitting stations.

Lunch hook: A small light weight anchor typically used instead of the working anchor. Normally used in calm waters with the boat attended.

Midships: The center of the boat.

Marina: A protected facility primarily for recreational small craft.

Marine Ways or Railways: Inclined planes at the water's edge onto which boats are hauled.

Moored: A boat secured with cables, lines or anchors.

Mooring: An anchor permanently embedded in the bottom of a harbor that is used to secure a boat.

Nautical Mile: A unit of measure equal to one minute of latitude. (6076 feet)

Nun Buoy: A red or red-striped buoy of conical shape.

Outboard: A boat designed for an engine to be mounted on the transom. Also a term that refers to objects away from the center line or beyond the hull sides of a boat.

Pad Eye: A deck fitting consisting of a metal eye permanently secured to the boat.

Pier: A structure which projects out from the shoreline.

Pile or Piling: A long column driven into the bottom to which a boat can be tied.

Pitching: The fore and aft rocking motion of a boat as the bow rises and falls.

Pitch: The measure of the angle of a propeller blade. Refers to the theoretical distance the boat travels with each revolution of the propeller.

P.F.D: Personal Flotation Device.

Port: The left side of the boat when facing the bow.

Porthole (port): The opening in the side of a boat to allow the admittance of light and air.

Propeller: A device having two or more blades that is attached to the engine and used for propelling a boat.

Propeller Shaft: Shaft which runs from the back of the engine gear box, aft, through the stuffing box, shaft log, struts, and onto which the propeller is attached.

Pyrotechnic Distress Signals: Distress signals that resemble the brilliant display of flares or fireworks.

Raw Water Cooled: Refers to an engine cooling system that draws 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 movable 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.

Glossary of Terms

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.

Maintenance Schedule

Maintenance	Each Use	Weekly	Monthly	Semi Annually	Yearly	As Needed
Clean hull below the waterline				X		
Bottom paint					X	X
Check sacrificial anodes			X			
Replace sacrificial anodes					X	
Wash boat canvas & hardware	X		X			
Wax exterior gelcoat				X		X
Clean & protect hardware						X
Polish & protect plastic glass					X	X
Clean exterior upholstery	X					X
Clean cabin & interior upholstery						X
Flush engine with fresh water	X					
Spray metal components in bilge with a protector			X			
Clean bilge				X		X
Check bilge for leaks	X		X			
Inspect & operate thru-hull valves			X			
Inspect steering & control systems	X					
Service steering & control systems				X		
Inspect fuel system for leaks	X					
Inspect & service fuel system				X		
Inspect fuel tank vents & screens					X`	
Replace fuel filters					X	
Lubricate fuel fill O-rings			X			
Inspect fire extinguisher			X			
Test bilge pump auto switches	X					
Inspect & protect electrical components, wire & battery connections				X		
Check battery electrolyte & service			X			
Test and inspect AC electrical system & shore power cord				X		
Inspect water systems for leaks				X		
Check neutral safety switch	X					
Check trim tab fluid level			X			

Date	Hours	Dealer	Service / Repairs

Maintenance Schedule

Date	Hours	Dealer	Service / Repairs

Date	Hours	Dealer	Service / Repairs

Boating Accident Report

DEPARTMENT OF HOMELAND SECURITY
U.S. Coast Guard
OMB Control Number: 1625-0003
RECREATIONAL BOATING ACCIDENT REPORT
Expires: 03/31/2019

INSTRUCTIONS: Use "Report required because" section below to determine if a report is required for your accident. If required, please have each vessel owner or operator involved in the accident submit a report to their state reporting authority. Each boat operator/owner involved in an accident should submit a separate report. For each question below, please provide answers if applicable and if known; otherwise leave blank.

Privacy Act Notice

Authority: 46 U.S.C. 6102 and 33 CFR 173 & 174 authorize the collection of information on boating accidents.
Purpose: The Coast Guard uses this information for statistical purposes, chiefly to inform the public, to measure the Program's efforts, and to regulate issues relating to boating safety.
Routine Uses: The Coast Guard shares this information within the agency, and if state and federal law permit it, to the public.

REPORT SUBMISSION

Report required because *(select all that apply)*:

- ☐ At least one person in this accident *died*: If so, how many? _____
- ☐ At least one injured person in this accident *required or was in need of treatment beyond first aid*: If so, how many? _____
- ☐ At least one person in this accident *disappeared* and has not yet been recovered: If so, how many? _____
- ☐ *All* boat and other property *damage (e.g., fishing/hunting gear)* caused by this accident *totaled (or likely totaled)* $2,000 or more:
  - Approximate value of damage to *your* boat: $_____
  - Approximate value of damage to *your* other property: $_____
- ☐ Your or another *boat* in this accident was *(or likely was)* a *total loss*

Report submitted by *(select all that apply)*:

- ☐ Boat Operator *(required if possible)*
- ☐ Boat Owner *(if operator unable, or same as operator)*
- ☐ Other *(describe)*: _____

To be submitted within:
48 hours *(if injury, disappearance or death)*
10 days *(if boat/property damage only)*

To be submitted to: *(Local State Reporting Authority)*

Phone:

You may submit any comments concerning the accuracy of the burden estimate or any suggestions for reducing the burden to: Commandant (CG-BSX-21), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington, DC 20503. Questions relating to the collection of this data should be sent to the Coast Guard.

For State Agency Use Only

First Name	*Last Name*
Phone:	
Primary Cause of Accident	

First Name	Last Name	Phone

ACCIDENT SUMMARY

WHEN

Date: *(mm/dd/yyyy)* Time: am ☐ pm ☐ *(select one)*

WHERE

Body of Water Name

Location *(on water)* description

Nearest city/town

County: State:

***YOUR* BOAT – PEOPLE**

# people *on board (including operator)*:	
# people *being towed (e.g., on tubes, skis)*:	
# people *wearing lifejackets (on board or towed)*:	

***OTHER* BOATS INVOLVED IN ACCIDENT**

# of *other* boats involved:	

ACCIDENT DESCRIPTION: *Briefly* describe this accident *(attach extra pages if necessary)*

DAMAGE TO *YOUR* BOAT: *Briefly* summarize any damage to your boat

DAMAGE TO *YOUR* OTHER PROPERTY: *(NOT BOAT)*
Briefly summarize any damage to your other property *(not boat)*

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For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

YOUR BOAT

BOAT IDENTIFICATION

Your Boat Name:	Manufacturer:
Model Name:	Model Year:
Registration #:	Documentation #:
Hull Identification # *(HIN)*	Rented: ☐ Yes ☐ No

SIZE ESTIMATES

Length: ft.	Depth from transom *(stern)* to keel *(bottommost point)*: ft. in.	Beam width at widest point: ft.

HULL MATERIAL

Type of Hull Material *(select one)*

☐	Fiberglass	☐	Wood	☐	Rubber/vinyl/canvas	☐	Other *(describe)*:
☐	Aluminum	☐	Steel	☐	Plastic		

BOAT TYPE

Boat Type *(select one)*

☐	Cabin motorboat	☐	Inflatable	☐	Canoe	☐	Personal watercraft *(PWC)* *(e.g., Wave Runner™, Jet Ski™, Sea-Doo™)*		
☐	Open motorboat	☐	Houseboat	☐	Rowboat				
☐	Auxiliary sail	☐	Sail *(only)*	☐	Air boat	☐	Other *(describe)*		
☐	Pontoon boat	☐	Kayak						

Available Propulsion *(select all that apply)*

☐	Propeller	☐	Air thrust
☐	Sail	☐	Other *(describe)*:
☐	Manual		
☐	Water jet		

ENGINE

# Engines	**Engine type and horsepower** *(select one)*								**Fuel type** *(select all that apply)*		
Manufacturer	☐	Outboard	☐	Sterndrive *(I/O)*	☐	Inboard	☐	None	☐ Gasoline	☐ Diesel	☐ Electric
	Total horsepower: **hp**										

SAFETY MEASURES

Organizations that have conducted a vessel safety check *(VSC)* on board your boat within the past year *(including carriage of safety equipment, e.g., lifejackets, anchor and line, fire extinguishers)*:

US Coast Guard Auxiliary:	VSC Decal?	☐ Yes	☐ No	☐	Federal Agency *(Name)*
US Power Squadrons:	VSC Decal?	☐ Yes	☐ No	☐	State Agency *(Name)*
				☐	Other Agency *(Name)*

# Life jackets on board:		# Fire extinguishers on board:		Type of fire extinguishers *(e.g., ABC)*:	
		# Fire extinguishers used:		Amount of fire extinguishers used:	

ACCIDENT DETAILS – EXTERNAL CONDITIONS

WEATHER

Overall weather was *(select one)*				**It was** *(select one)*		**Visibility was** *(select one)*		**Wind was** *(select one)*	
☐	Clear	☐	Raining	☐	Day	☐	Good	☐	0 mph *(none)*
☐	Cloudy	☐	Snowing	☐	Night	☐	Fair	☐	Over 0, up to 12 mph *(light)*
☐	Foggy	☐	Hazy			☐	Poor	☐	Over 12, up to 25 mph *(moderate)*
☐	Other *(describe)*:			Approximate air temperature:	°F			☐	Over 25, up to 55 mph *(strong)*
								☐	Over 55 mph (stormy)

WATER

Overall water conditions *(select one)*:		**Other water conditions:**				
☐	Up to 6 in. waves *(calm)*	Approximate water temperature:	°F			
☐	Over 6 in., up to 2 ft. waves *(choppy)*	Strong current?	☐	Yes	☐	No
☐	Over 2 ft., up to 6 ft. waves *(rough)*	Hazardous waters? *(e.g., rapid tidal flow, currents)*	☐	Yes	☐	No
☐	Over 6 ft. waves *(very rough)*	Congested waters?	☐	Yes	☐	No

Boating Accident Report

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

ACCIDENT DETAILS – ACTIVITIES AND OPERATIONS ON *YOUR* BOAT

OPERATOR/PASSENGER ACTIVITIES

Operator/passenger activities on *your* boat at time of accident:

Activities were *(select one)*

- ☐ Recreational
- ☐ Commercial

Operator/Passenger activities *(select all that apply)*

☐ Fishing	☐ Tubing	☐ Starting engine	
☐ Hunting	☐ Water Skiing	☐ Making repairs	
☐ White water activity *(e.g., rafting)*	☐ Relaxing	☐ Other *(list):*	

BOAT OPERATIONS

***Your* boat operations at time of accident** *(select all that apply)*

☐ Cruising *(underway under power)*	☐ Drifting	☐ Racing	☐ Towing another vessel
☐ Changing direction	☐ At anchor	☐ Rowing/paddling	☐ Launching
☐ Changing speed	☐ Being towed	☐ Docking/undocking	☐ Tied to dock/mooring
☐ Sailing	☐ Other *(list)*		

ACCIDENT DETAILS – CONTRIBUTING FACTORS ON *YOUR* BOAT

CONTRIBUTING FACTORS

Indicate factors on *your* boat which may have contributed to this accident *(select all that apply)*

☐ Alcohol use	☐ Improper lookout	☐ Dam/lock	☐ Starting in gear
☐ Drug use	☐ Operator inattention	☐ Force of wake/wave	☐ Sharp turn
☐ Excessive speed	☐ Operator inexperience	☐ Hazardous waters	☐ Restricted vision *(e.g., fog)*
☐ Improper anchoring	☐ Language barrier	☐ Heavy weather	☐ Mission/inadequate aids to navigation *(e.g., buoy, daymarker)*
☐ Improper loading	☐ Navigation rules violation	☐ Ignition of fuel or vapor	☐ Inadequate on-board navigation lights
☐ Overloading	☐ Failure to vent	☐ Hull failure	☐ People on gunwale, bow or transom

☐ Other *(describe):*

ACCIDENT DETAILS – *YOUR* BOAT

MACHINERY/EQUIPMENT FAILURE

Failure of the following machinery/equipment on *your* boat contributed to this accident *(select all that apply)*

☐ Engine	☐ Onboard lights	☐ Shift	☐ Sound equipment *(e.g., horn, whistle)*
☐ Electrical system	☐ Seats	☐ Radio	☐ Auxiliary equipment
☐ Fuel system	☐ Steering	☐ Fire extinguisher	☐ Other *(list)*:
☐ Sail/mast	☐ Throttle	☐ Ventilation	

☐ Onboard navigation aids *(e.g., GPS)*

ACCIDENT DETAILS – EVENTS ON *YOUR* BOAT

ACCIDENT EVENTS

Types of events occurring to/on *your* boat during accident *(select all that apply)*

☐ Collision with recreational boat	☐ Flooding/swamping	☐ Person fell overboard
☐ Collision with commercial boat *(e.g., tug, barge)*	☐ Fire/explosion – fuel	☐ Person fell on/within boat
☐ Collision with fixed object *(e.g., dock, bridge)*	☐ Fire/explosion – non-fuel	☐ Sudden medical condition
☐ Collision with submerged object *(e.g., stump, cable)*	☐ Carbon monoxide exposure	☐ Person struck by boat
☐ Collision with floating object *(e.g., log, buoy)*	☐ Mishap of skier, tuber, wake boarder, etc.	☐ Person struck by propeller or propulsion unit
☐ Capsizing	☐ Person left boat voluntarily	☐ Person electrocuted
☐ Grounding	☐ Person ejected from boat *(caused by collision or maneuver)*	
☐ Sinking	☐ Other *(describe)*	

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For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

ACCIDENT DETAILS – *YOUR* BOAT- INJURED PEOPLE RECEIVING *OR IN NEED OF* TREATMENT BEYOND FIRST AID

Report only injured people on, struck by, or being towed by *your boat*, receiving *or in need of* treatment beyond first aid. *Do not report* injured people on, struck by, or being towed by *another boat or no boat* (e.g., swimmers, people on a dock). *If more than one* injured person to report, attach additional copies of this page. *If none*, SKIP INJURED PEOPLE section.

INJURED PERSON

First Name	MI	Last Name
Street		
City	State	Zip
Phone	Date of Birth *(mm/dd/yyyy)*	Age

INJURY DETAILS

Injury caused when person *(select all that apply)*

- ☐ Struck the *(e.g., boat, water)*:
- ☐ Was struck by a *(e.g., boat, propeller)*:
- ☐ Was exposed to carbon monoxide poisoning
- ☐ Received an electric shock
- ☐ Other *(describe)*:

Nature of most serious injury *(select one)*

- ☐ Scrape/bruise
- ☐ Cut
- ☐ Sprain/strain
- ☐ Concussion/brain injury
- ☐ Spinal cord injury
- ☐ Broken/fractured bone
- ☐ Dislocation
- ☐ Internal organ injury
- ☐ Amputation
- ☐ Burn
- ☐ Other *(describe)*:

Person was wearing lifejacket?	☐ Yes	☐ No
Person received treatment beyond first aid?	☐ Yes	☐ No
Person was admitted to a hospital?	☐ Yes	☐ No

Body part of *most serious* injury *(e.g., head, trunk, leg)*:

ACCIDENT DETAILS – *YOUR* BOAT – DEATHS/DISAPPEARANCES

Only report deaths/disappearances of people on, struck by, or being towed by *your boat*.
If more than one death/disappearance to report, attach additional copies of this page.
If none, SKIP DEATHS/DISAPPEARANCES section.

PERSON WHO DIED/DISAPPEARED

First Name	MI	Last Name
Street		
City	State	Zip
Phone	Date of Birth *(mm/dd/yyyy)*	Age

DETAILS OF DEATH/DISAPPEARANCE

Injury caused when person *(select all that apply)*

- ☐ Struck the *(e.g., boat, water)*:
- ☐ Was struck by a *(e.g., boat, propeller)*:
- ☐ Was exposed to carbon monoxide poisoning
- ☐ Received an electric shock
- ☐ Other *(describe)*:

Nature of death/disappearance *(select one)*

- ☐ Death – by drowning
- ☐ Death – other likely cause *(describe)*
- ☐ Disappeared and not yet recovered

Person was wearing lifejacket? ☐ Yes ☐ No

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Boating Accident Report

For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

ACCIDENT DETAILS – *YOUR* BOAT OPERATOR

OPERATOR INSTRUCTION

Boating safety instruction completed *(select all that apply)*

- ☐ None
- ☐ State course
- ☐ USCG Auxiliary course
- ☐ US Power Squadrons course
- ☐ Internet *(name of sponsoring organization)*
- ☐ Other *(describe)*

OPERATOR SAFETY MEASURES

On board, prior to accident, was operator wearing:

A lifejacket?	☐	Yes	☐	No
An engine cut-off switch *(Lanyard or wireless device)* if equipped?	☐	Yes	☐	No
On board, prior to accident, was operator using:				
Alcohol?	☐	Yes	☐	No
Drugs?	☐	Yes	☐	No
Operator arrested for Boating Under the Influence?	☐	Yes	☐	No
Weather reports consulted prior to accident?	☐	Yes	☐	No

OPERATOR EXPERIENCE

Experience operating this type of boat *(select one)*

☐ 0 to 10 hours ☐ Over 10, up to 100 hours ☐ Over 100, up to 500 hours ☐ Over 500 hours

ACCIDENT DETAILS – OTHER KEY PEOPLE

Only report other key people *not already documented* as injured, died, disappeared or operator/owner of *your* boat.
If more than two other key people to report, attach additional copies of this page.

NAME/ADDRESS

This other key person was a(n) *(select all that apply)*

☐ *Other* boat operator ☐ *Other* boat owner ☐ Owner of *other* damaged property ☐ Passenger on *your* boat ☐ Witness

First Name	MI	Last Name	
Street			
City	State	Zip	Phone
Other boat name *(if any)*		*Other* boat registration # *(if any)*	

NAME/ADDRESS

This other key person was a(n) *(select all that apply)*

☐ *Other* boat operator ☐ *Other* boat owner ☐ Owner of *other* damaged property ☐ Passenger on *your* boat ☐ Witness

First Name	MI	Last Name	
Street			
City	State	Zip	Phone
Other boat name *(if any)*		*Other* boat registration # *(if any)*	

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For each question below, please provide answers IF APPLICABLE AND IF KNOWN, otherwise leave blank.

YOUR BOAT OPERATOR

NAME/ADDRESS

First Name	MI	Last Name
Street		
City	State	Zip

AGE/GENDER/PHONE

Date of Birth *(mm/dd/yyyy)*	Age	Gender		Male		Female	Phone

YOUR BOAT OWNER

If same as *your* boat *operator* SKIP rest of YOUR BOAT OWNER section.

NAME/ADDRESS/PHONE

First Name	MI	Last Name	
Street			
City	State	Zip	Phone

PERSON SUBMITTING THIS REPORT

If same as *your* boat *operator* OR *owner*, SKIP rest of PERSON SUBMITTING THIS REPORT section.

NAME/ADDRESS/PHONE/ROLE

First Name	MI	Last Name	
Street			
City	State	Zip	Phone

I **was a(n)** *(select one)*

- ☐ Other person on board *this* boat
- ☐ Accident witness *not* on board *this* boat
- ☐ Other *(describe):*

SIGNATURE OF PERSON SUBMITTING THIS REPORT

Your signature	**Date** *(mm/dd/yyyy)*

An Agency may not conduct or sponsor and a person is not required to respond to an information collection, unless it displays a currently valid OMB Control Number.

The Coast Guard estimates that the average burden for this report form is 30 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (CG-BSX-21), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0003), Washington, DC 20503.

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Float Plan

FLOAT PLAN

www.cgaux.org

INSTRUCTIONS: Complete this plan before you go boating and leave it with a reliable person who can be depended upon to notify the Coast Guard, or other rescue agency, should you not return or check-in as planned. If you have a change of plans, or will be delayed, notify the person holding your Float Plan. Finally, close your plan by notifying the holder you have arrived home safely and if the holder has reported you overdue, notify all applicable rescue authorities of your safe return.

Do NOT file this plan with the Coast Guard

www.uscgboating.org

VESSEL

IDENTIFICATION:

Name & Hailing Port _____

Document / Registration No. _____ HIN _____

Year, Make & Model _____

Length ____ Type _____ Draft ____ Hull Mat. _____

Hull & Trim Colors _____

Prominent Features _____

PROPULSION:

Primary – Type _____ Eng. ___ Fuel Capacity _____

Auxiliary – Type _____ Eng. ___ Fuel Capacity _____

COMMUNICATION:

Radio Call Sign / Number _____

DSC MMSI No. _____

Radio-1: Type _____ Ch. / Freq. Monitored _____

Radio-2: Type _____ Ch. / Freq. Monitored _____

Cell / Satellite _____

Email _____

NAVIGATION: (Check all onboard)

☐ Compass ☐ Radar ☐ GPS / DGPS ☐ Depth Sounder

☐ Charts ☐ Maps ☐ _____

SAFETY & SURVIVAL

VISUAL DISTRESS SIGNALS:

☐ Electric Distress Light (night only)

☐ Flag (day only)

☐ Flare, Aerial (day & night)

☐ Flare, Handheld (day & night)

☐ Signal Mirror (day only)

☐ Smoke (day only)

AUDIBLE DISTRESS SIGNALS:

☐ Bell

☐ Horn

☐ Whistle

EPIRB:

UIN* _____

ADDITIONAL GEAR:

☐ Anchor - Line length _____

☐ Dewatering device

☐ Exposure suits

☐ Fire Extinguisher

☐ Flashlight / Searchlight

☐ Raft / Dinghy

☐ Food for ____ days / person

☐ Water for ____ days / person

☐ _____

☐ _____

☐ _____

☐ _____

PERSONS ONBOARD

OPERATOR:

Name _____

Address _____

City _____ State ___ Zip Code _____

Age ___ Gender ___ PFD ☐ PLB UIN* _____

Note _____

Has experience with: ☐ this vessel; ☐ the boating area(s).

Home Phone _____

Vehicle (Year, Make & Model) _____

Vehicle License No. _____ Trailer ☐

Vehicle parked at _____

Float Plan Note _____

PASSENGERS / CREW: (Identify all on board)

	Name	Home Phone	Age	Gender	PFD	Note	Passenger PLB UIN* (Not listed in a specific order)
1.					☐		
2.					☐		
3.					☐		
4.					☐		
5.					☐		
6.					☐		
7.					☐		
8.					☐		
9.					☐		
10.					☐		
11.					☐		
12.					☐		

If you have a genuine concern for the safety or welfare of the persons onboard this vessel that have not returned or checked-in, in a reasonable amount of time, then follow the step-by-step instructions on the Boating Emergency Guide™ located on the last page of this Float Plan.

(*) EPIRB and PLB registration required by Federal regulations. www.beaconregistration.noaa.gov

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www.cgaux.org

FLOAT PLAN continued

INSTRUCTIONS: Complete this plan before you go boating and leave it with a reliable person who can be depended upon to notify the Coast Guard, or other rescue agency, should you not return or check-in as planned. If you have a change of plans, or will be delayed, notify the person holding your Float Plan. Finally, close your plan by notifying the holder you have arrived home safely and if the holder has reported you overdue, notify all applicable rescue authorities of your safe return.

Do NOT file this plan with the U.S. Coast Guard

www.uscgboating.org

CONTACTS

Contact 1 _____ Phone Number _____

Contact 2 _____ Phone Number _____

Rescue Authority _____ Phone Number _____

ITINERARY

		DATE	TIME	LOCATION / WAYPOINT	MODE OF TRAVEL	REASON FOR STOP	CHECK-IN TIME
1	Depart						
2	Arrive						
	Depart						
3	Arrive						
	Depart						
4	Arrive						
	Depart						
5	Arrive						
	Depart						
6	Arrive						
	Depart						
7	Arrive						
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8	Arrive						
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	Depart						
17	Arrive						
	Depart						
18	Arrive						
	Depart						
19	Arrive						
	Depart						
20	Arrive						
	Depart						
21	Arrive						

If you have a genuine concern for the safety or welfare of the persons onboard this vessel that have not returned or checked-in, in a reasonable amount of time, then follow the step-by-step instructions on the Boating Emergency Guide™ located on the last page of this Float Plan.

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USCG Float Plan - BOATING EMERGENCY GUIDE™

BEFORE YOU BEGIN – This guide is designed to work either with or without a Float Plan. You will need the following items: 1) the Float Plan, if one was given to you; 2) a pen or pencil; 3) a clean sheet of paper or writing tablet; and 4) your local telephone directory.

Step 1: Do you have a genuine concern for the safety or welfare of any persons who have not returned or checked-in, in a reasonable amount of time?

If yes, then continue with **Step 2**. Otherwise STOP – no further action is required at this time.

Step 2: Were you given a prepared Float Plan by anyone on board the vessel?

If yes, then continue with **Step 3**. Otherwise, go to **Step 5**.

Step 3: Locate the Contacts at the top of page 2 on the Float Plan. Call Contact number 1...

IF CONTACT #1	THEN
Answers phone	Take notes during your conversation. 1. Let the person know you are responding to a late return or check-in by the individuals designated on the Float Plan. 2. Determine if the person you are talking to, or anyone else at that location, has recently had contact with anyone on the vessel, and when and where that contact occurred. 3. Are you still concerned about the safety or welfare of any persons on board the vessel? IF: Yes – THEN: Continue with **Step 4**. IF: No – THEN: STOP. No further action is required.
Does not answer phone	Continue with **Step 4**.

Step 4: Call Contact number 2...

IF CONTACT #2	THEN
Answers phone	Take notes during your conversation. 1. Let the person know you are responding to a late return or check-in by the individuals designated on the Float Plan. 2. Determine if the person you are talking to, or anyone else at that location, has recently had contact with anyone on the vessel, and when and where that contact occurred. 3. Are you still concerned about the safety or welfare of any persons on board the vessel? IF: Yes – THEN: Continue with **Step 6**. IF: No – THEN: STOP. No further action is required.
Does not answer phone	Continue with **Step 6**.

Step 5: Using the checklist below, jot down only what you know about each item:

DO NOT SPECULATE. Incorrect information may mislead Search and Rescue personnel; add to the overall search and rescue time; and adversely affect the outcome.

- ☐ Period of time the vessel has been overdue.
- ☐ Purpose of the trip or voyage.
- ☐ Description of vessel. (Type, size, color, features, etc.)
- ☐ Vessel's departure point and destination.
- ☐ Places the vessel planned to stop during transit.
- ☐ Navigation equipment aboard. (Examples: GPS, radar, compass, sounder, etc.)
- ☐ Number of persons aboard. Relevant characteristics such as dependability, reliability, etc.
- ☐ Was the vessel initially docked or moored or did a vehicle tow it to a launch point?
- ☐ License plate number and description of the tow vehicle p and/or the passenger's transport vehicle.
- ☐ Communications equipment aboard, including type of radio and frequencies monitored, cellular or satellite telephone numbers of individuals, etc.
- ☐ Additional points of contact along the vessel's planned route.
- ☐ Operator and/or a passenger/crew member absolutely had to be back at the scheduled return time.
- ☐ Call your local Rescue Authority that responds to marine emergencies (Police. Sheriff, Constable, First responder, etc.).

Go to **Step 6–2**.

Step 6:

1. Call the Rescue Authority contact at the top of page 2 on the Float Plan.
2. Tell the dispatcher you are responding to a late return or check-in by the persons on board the vessel
3. The dispatcher will instruct you from there.

Note: The dispatcher will provide you with the necessary contact or agency connection to get a search and rescue mission started. This puts you in direct contact with the agency conducting the actual search and rescue, eliminating unnecessary middlemen.

The dispatcher will tell you if he/she desires a follow-up call on the outcome of the rescue.

4. Continue with **Step 7**.

Step 7: Be patient... you've done everything you can possibly do for now. It is important to keep the telephone available so emergency personnel can contact you with additional information and/or questions concerning the search and rescue effort.

STOP -- End of Guide

Provided as a courtesy by:

S2 Yachts, Inc.
Holland, MI
(616) 392-7163

Get a Vessel Safety Check before you go boating.

The USCG Float Plan is the official Float Plan of the U.S. Coast Guard and U.S. Coast Guard Auxiliary. For more information visit:

www.floatplancentral.org

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Operator Notes

Troubleshooting Guide

Problem	Cause and Solution
Control Systems	
Hydraulic Steering is slow to respond and erratic.	• Steering system is low on fluid. Fill and bleed system. • Steering system has air in it. Fill and bleed system. • A component in the steering system is binding. Check and adjust or repair binding component. • Engine steering cylinder is binding. Grease spindle.
The boat wanders and will not hold a course at cruise speeds.	• There could be air in the steering system. Fill & bleed the system. • The engine steering tab is corroded or out of adjustment. Replace or adjust steering tab. • Engine steering cylinder is binding. Grease spindle.
The engine will not start with the shift control lever in neutral.	• The control cable is out of adjustment & not activating the neutral safety cut out switch. • The shift control lever is not in the neutral detent. Try moving the shift lever slightly. • There is a loose wire on the neutral safety switch on the transmission. Inspect wires and repair loose connections. • The starter or ignition switch is bad.
Performance Problems	
Boat is sluggish and has lost speed and RPM.	• The boat may be need to have marine growth cleaned from hull and running gear. • Propeller may be damaged & need repair. • Weeds or line around the propeller. Clean propeller. • Boat is overloaded. Reduce load. • Check for excessive water in the bilge. Pump out bilge & find & correct the problem. • The throttle adjustments has changed and the engine is not getting full throttle. Adjust the throttle cable.
The boat vibrates at cruising speeds.	• Propeller may be damaged and need repair. • The propeller or propeller shaft is bent. Repair or replace damaged components. • The running gear is fouled by marine growth or rope. Clean running gear. • The engine is not trimmed properly. Trim the engine.

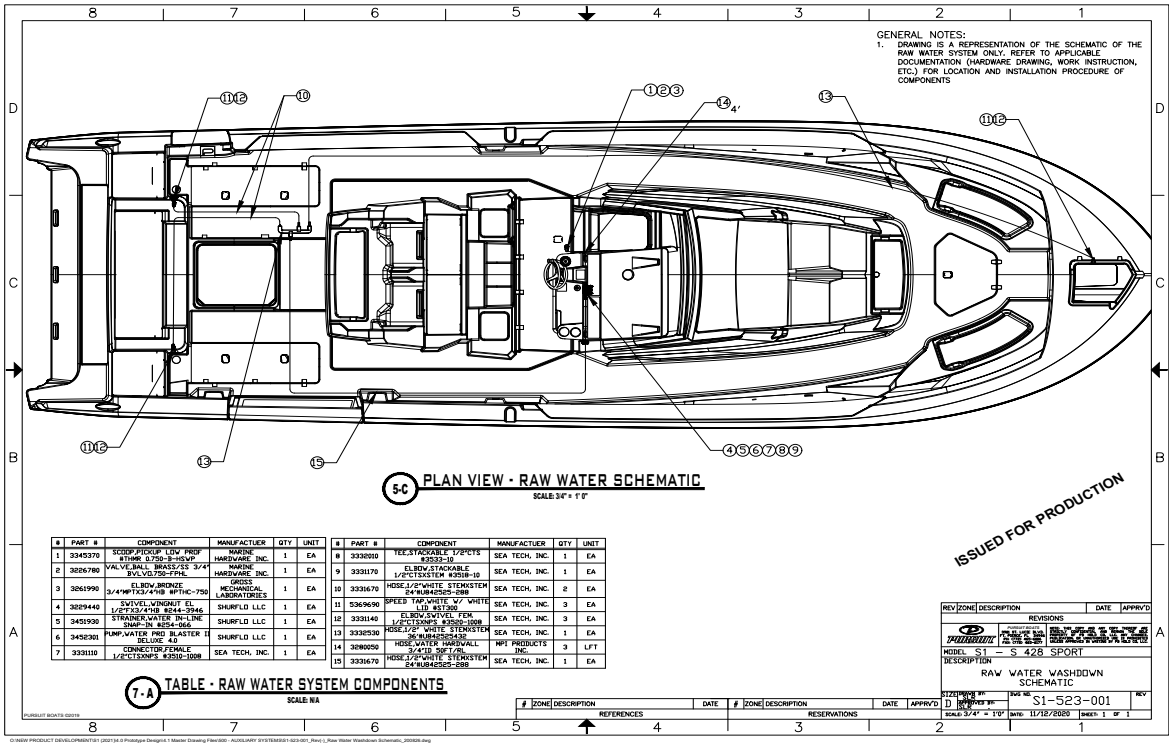
Problem	Cause and Solution
Engine Problems	
The engine is running too hot.	• The engine raw water pick-up strainer up is clogged with marine growth. Clean pick-up. • The engine raw water pump impeller is worn or damaged. Repair the pump. • The engine thermostat is faulty and needs to be replaced.
The engine alternator is not charging properly.	• The battery cable is loose or corroded. Clean and tighten battery cables. • The alternator is not charging and must be replaced. • The engine battery isolator in the charging system is not working properly. Replace the isolator. • The battery is defective. Replace the battery.
The engine suddenly will not operate over 2000 RPM.	• The engine emergency system has been activated. The onboard computer has sensed a problem and has limited the RPM to protect the engine. Find & correct the problem. • The tachometer is bad and needs to be replaced.
The engine is loosing RPM. The boat is not overloaded and the hull bottom and running gear are clean and in good condition.	• The engine may be having a problem with a sticky anti-siphon valve, located in the fuel line near the fuel tank, that is restricting the fuel flow. Remove & clean or replace the anti-siphon valve. • The remote gasoline fuel filter could be dirty. Inspect and replace the fuel filter. • The primary fuel filter on the engine may be dirty. Inspect and replace the fuel filter. • The electronic engine control system on the engine is malfunctioning. Repair the engine control system. • The fuel injection system on the engine is malfunctioning. Repair the fuel injection system.

Troubleshooting Guide

Problem	Cause and Solution
Accessory Problems	
The livewell pump runs, but does not pump water.	• The strainer on the intake scoop is clogged preventing the water from getting to the pump. Put the boat in reverse to clean the strainer. • There is an air lock in the system. Run the boat above 15 m.p.h. and the pick-up scoop will force the air lock past the pump and prime the system. • The thru-hull valve is not open. Open valve. • The valve in the livewell is not open. Open the valve in the livewell.
The automatic float switch on the bilge pump raises but does not activate the pump.	• The in-line fuse near the battery switch has blown. Replace the fuse. • The pump impeller is jammed by debris. Clean pump impeller housing. • The pump is defective. Replace pump.

Operator Notes

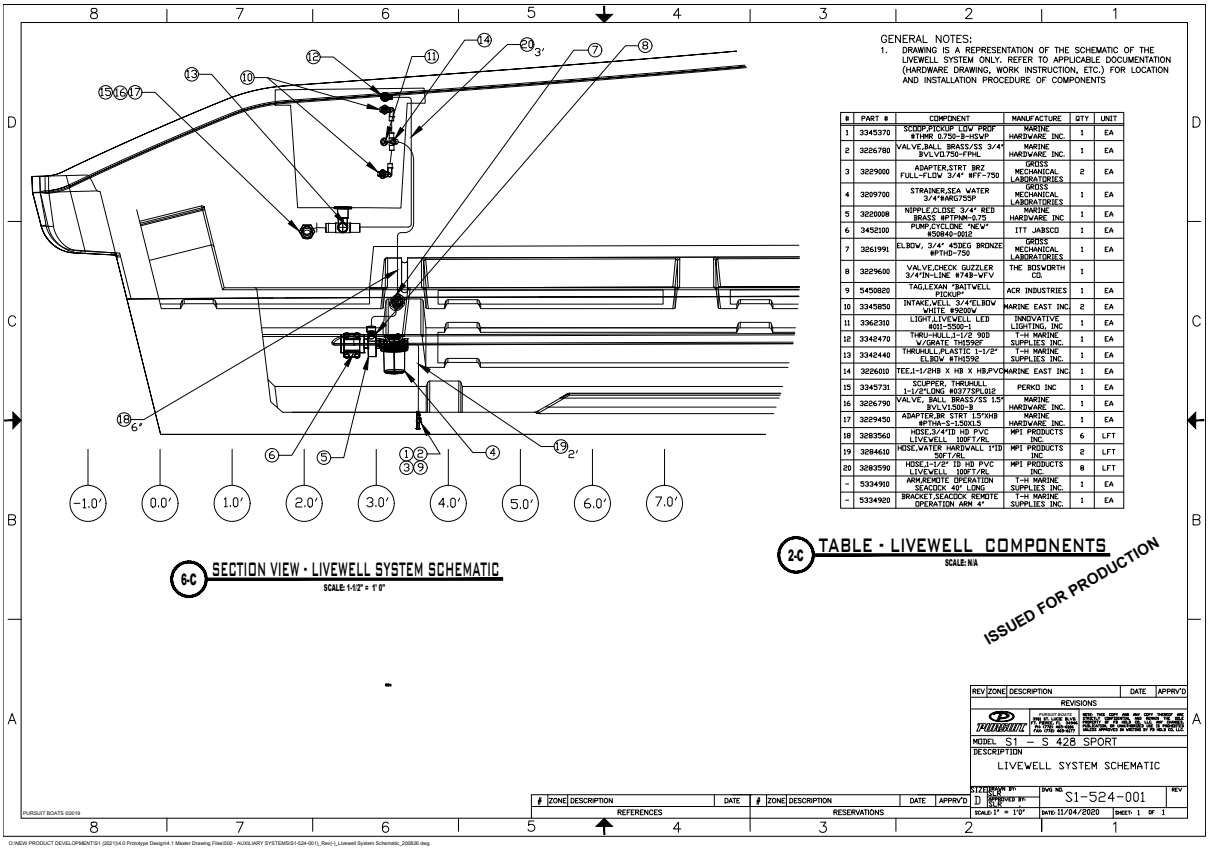
Schematics



#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
1	3345370	SCOOP,PICKUP LOW PROF 6THMB 0.750-B-HSWP	MARINE HARDWARE INC.	1	EA
2	3226780	VALVE,BALL BRASS/SS 3/4" BVL,VS/SS-FPHL	MARINE HARDWARE INC.	1	EA
3	3261990	ELBOW,BRONZE 3/4"MPT X3/4"HB MPTHC-750	GROSS MECHANICAL LABORATORIES	1	EA
4	3229440	SWIVEL,WINGNUT EL 1/2"FPT X3/4"HB 8244-3946	SHURFLO LLC	1	EA
5	3451930	STRAINER,WATER IN-LINE SNAP-IN #254-066	SHURFLO LLC	1	EA
6	3452301	PUMP,WATER PRO BLASTER II DELUXE 4.0	SHURFLO LLC	1	EA
7	3331110	CONNECTOR,FEMALE 1/2"CTSXNPS #3510-1008	SEA TECH, INC.	1	EA

#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
8	3332010	TEE,STACKABLE 1/2"CTS #3533-10	SEA TECH, INC.	1	EA
9	3331170	ELBOW,STACKABLE 1/2"CTSXSTEM #3518-10	SEA TECH, INC.	1	EA
10	3331670	HOSE,1/2"WHITE STEMXSTEM 24"#U842525-288	SEA TECH, INC.	2	EA
11	5369690	SPEED TAP,WHITE W/ WHITE LID #ST300	SEA TECH, INC.	3	EA
12	3331140	ELBOW,SWIVEL FEM. 1/2"CTSXNPS #3509-1008	SEA TECH, INC.	3	EA
13	3332530	HOSE,1/2" WHITE STEMXSTEM W/MARKER STRIPE	SEA TECH, INC.	1	EA
14	3280050	HOSE,WATER MARSEWALL #4418 5/8" I.D.	MPI PRODUCTS INC.	3	LFT
15	3331670	HOSE,1/2"WHITE STEMXSTEM 24"#U842525-288	SEA TECH, INC.	1	EA

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#	PART #	COMPONENT	MANUFACTURE	QTY	UNIT
1	3345370	SCOOP,PICKUP LOW PROF #THMK 0.750-B-HSWP	MARINE HARDWARE INC.	1	EA
2	3326780	VALVE,BALL BRASS/SS 3/4" BVLV0.750-FPHL	MARINE HARDWARE INC.	1	EA
3	3329000	ADAPTER,STRT BRZ FULL-FLOW 3/4" #FF-750	GROSS MECHANICAL LABORATORIES	2	EA
4	3329700	STRAINER,SEA WATER 3/4"#ARG755P	GROSS MECHANICAL LABORATORIES	1	EA
5	3320008	NIPPLE,CLOSE 3/4" RED BRASS #PTHM-0.75	MARINE HARDWARE INC.	1	EA
6	3452100	PUMP,CYCLONE "NEW" #50845-0012	ITT JABSCO	1	EA
7	3261991	ELBOW, 3/4" 45DEG BRONZE #PTHD-750	GROSS MECHANICAL LABORATORIES	1	EA
8	3329600	VALVE,CHECK GUZZLER 3/4"IN-LINE #748-WFV	THE BOSWORTH CO.	1	
9	5450820	TAG,LEXAN "BAITWELL PICKUP"	ACR INDUSTRIES	1	EA
10	3345850	INTAKE,WELL 3/4"ELBOW WHITE #9200W	MARINE EAST INC.	2	EA
11	3362310	LIGHT,LIVEWELL LED #011-5500-1	INNOVATIVE LIGHTING, INC.	1	EA
12	3342470	THRU-HULL,1-1/2 90D W/GRATE TH1592P	T-H MARINE SUPPLIES INC.	1	EA
13	3342440	THRUHULL,PLASTIC 1-1/2" ELBOW #TH1592	T-H MARINE SUPPLIES INC.	1	EA
14	3326010	TEE,1-1/2HB X HB X HB,PVC	MARINE EAST INC.	1	EA
15	3345731	SCUPPER, THRUHULL 1-1/2"LONG #03775PL012	PERKO INC	1	EA
16	3326790	VALVE, BALL BRASS/SS 1.5" BVLV1.500-B	MARINE HARDWARE INC.	1	EA
17	3329450	ADAPTER,BR STRT 1.5"XHB #PTHA-S-1.50X1.5	MARINE HARDWARE INC.	1	EA
18	3283560	HOSE,3/4"ID HD PVC LIVEWELL 100FT/RL	MPI PRODUCTS INC.	6	LFT
19	3284610	HOSE,WATER HARDWALL 1"ID 50FT/RL	MPI PRODUCTS INC.	2	LFT
20	3283590	HOSE,1-1/2" ID HD PVC LIVEWELL 100FT/RL	MPI PRODUCTS INC.	8	LFT
-	5334910	ARM,REMOTE OPERATION SEACOCK 40" LONG	T-H MARINE SUPPLIES INC.	1	EA
-	5334920	BRACKET,SEACOCK REMOTE OPERATION ARM 4"	T-H MARINE SUPPLIES INC.	1	EA

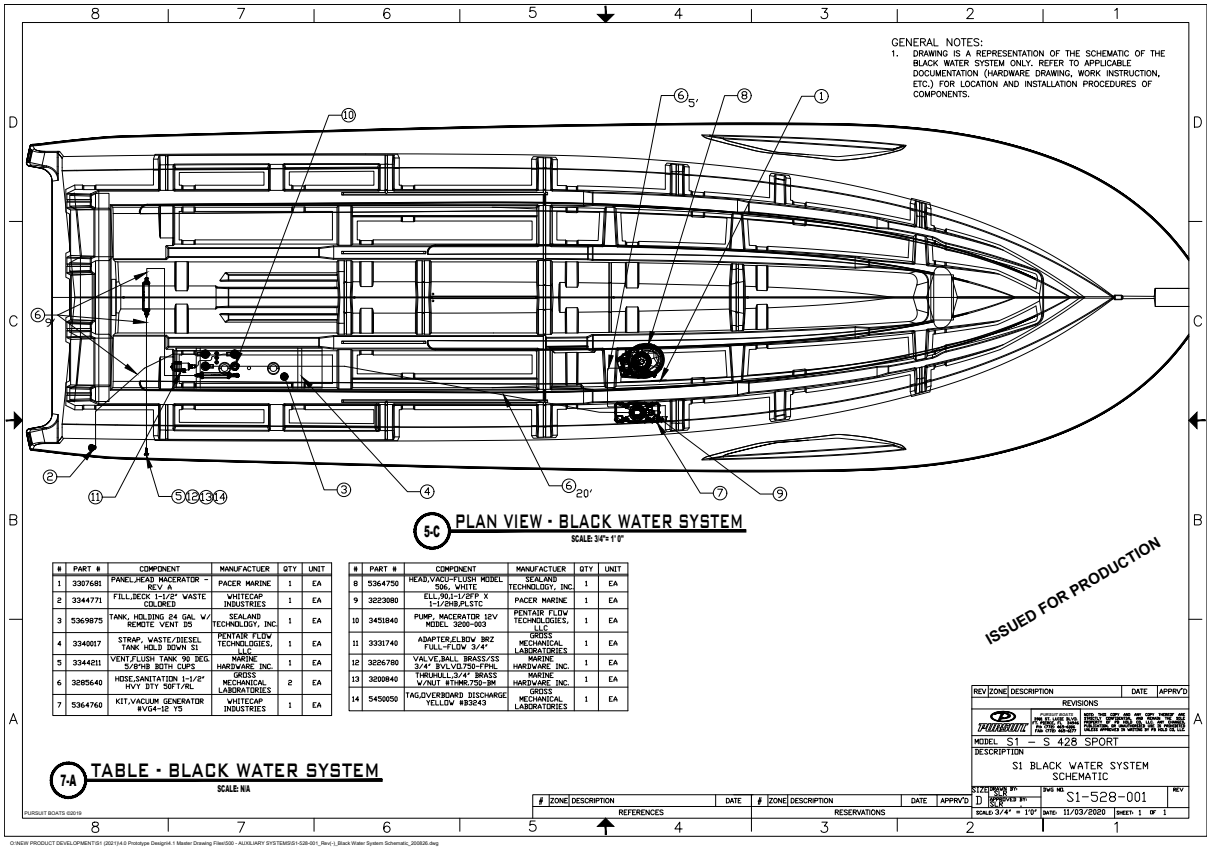
REV	ZONE	DESCRIPTION	DATE	APPRV'D
REVISIONS				

#	ZONE	DESCRIPTION	DATE	APPRV'D
REFERENCES				

#	ZONE	DESCRIPTION	DATE	APPRV'D
RESERVATIONS				

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D:\NEW PRODUCT DEVELOPMENT\S1 (2021)\4.0 Prototype Design\4.1 Master Drawing Files\500 - AUXILIARY SYSTEMS\S1-524-001_Rev(-)_Livewell System Schematic_200826.dwg



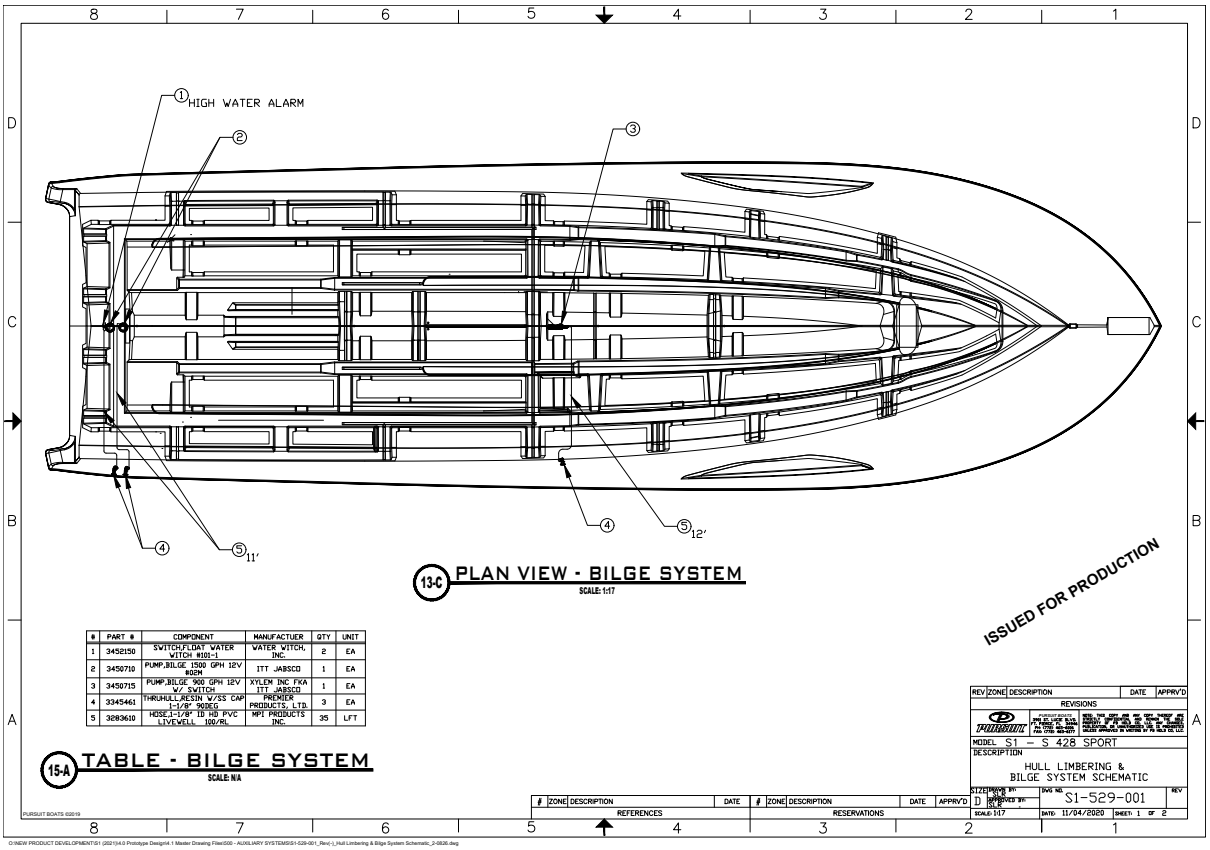
#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
1	3307681	PANEL,HEAD MACERATOR - REV A	PACER MARINE	1	EA
2	3344771	FILL,DECK 1-1/2" WASTE COLORED	WHITECAP INDUSTRIES	1	EA
3	5369875	TANK, HOLDING 24 GAL W/ REMOTE VENT DS	SEALAND TECHNOLOGY, INC.	1	EA
4	3340017	STRAP, WASTE/DIESEL TANK HOLD DOWN S1	PENTAIR FLOW TECHNOLOGIES, LLC	1	EA
5	3344211	VENT,FLUSH TANK 90 DEG. 5/8"HB BOTH CUPS	MARINE HARDWARE INC.	1	EA
6	3285640	HOSE,SANITATION 1-1/2" HVY DTY 50FT/RL	GROSS MECHANICAL LABORATORIES	2	EA
7	5364760	KIT,VACUUM GENERATOR #VG4-12 Y5	WHITECAP INDUSTRIES	1	EA

#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
8	5364750	HEAD,VACU-FLUSH MODEL 506, WHITE	SEALAND TECHNOLOGY, INC.	1	EA
9	3223080	ELL,90,1-1/2FP X 1-1/2HB,PLSTC	PACER MARINE	1	EA
10	3451840	PUMP, MACERATOR 12V MODEL 3200-003	PENTAIR FLOW TECHNOLOGIES, LLC	1	EA
11	3331740	ADAPTER,ELBOW 3#Z FULL-FLOW 3/4"	GROSS MECHANICAL LABORATORIES	1	EA
12	3226780	VAL,VE,BALL BRASS/SS 3/4" BVL,VI,750-FPHL	MARINE HARDWARE INC.	1	EA
13	3200840	THRUHULL,3/4" BRASS W/NUT #THMK,750-3M	MARINE HARDWARE INC.	1	EA
14	5450050	TAG,OVERBOARD DISCHARGE YELLOW #83243	GROSS MECHANICAL LABORATORIES	1	EA

REV	ZONE	DESCRIPTION	DATE	APPRV'D
REVISIONS				

#	ZONE	DESCRIPTION	DATE	APPRV'D
REFERENCES				

#	ZONE	DESCRIPTION	DATE	APPRV'D
RESERVATIONS				



13-C PLAN VIEW - BILGE SYSTEM
SCALE: 1:17

ISSUED FOR PRODUCTION

#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
1	3452150	SWITCH,FLOAT WATER WITCH #110-1	WATER WITCH, INC.	2	EA
2	3450710	PUMP,BILGE 1500 GPH 12V 802M	ITT JABSCO	1	EA
3	3450715	PUMP,BILGE 900 GPH 12V W/ SWITCH	XYLEM INC FKA ITT JABSCO	1	EA
4	3345461	THRUHULL,RESIN W/SS CAP 1-1/8" 90DEG	PREMIER PRODUCTS, LTD.	3	EA
5	3283610	HOSE,1-1/8" ID HD PVC LIVEWELL 100/RL	MPI PRODUCTS INC.	35	LFT

15-A TABLE - BILGE SYSTEM
SCALE: N/A

REV	ZONE	DESCRIPTION	DATE	APPRV'D
REVISIONS				

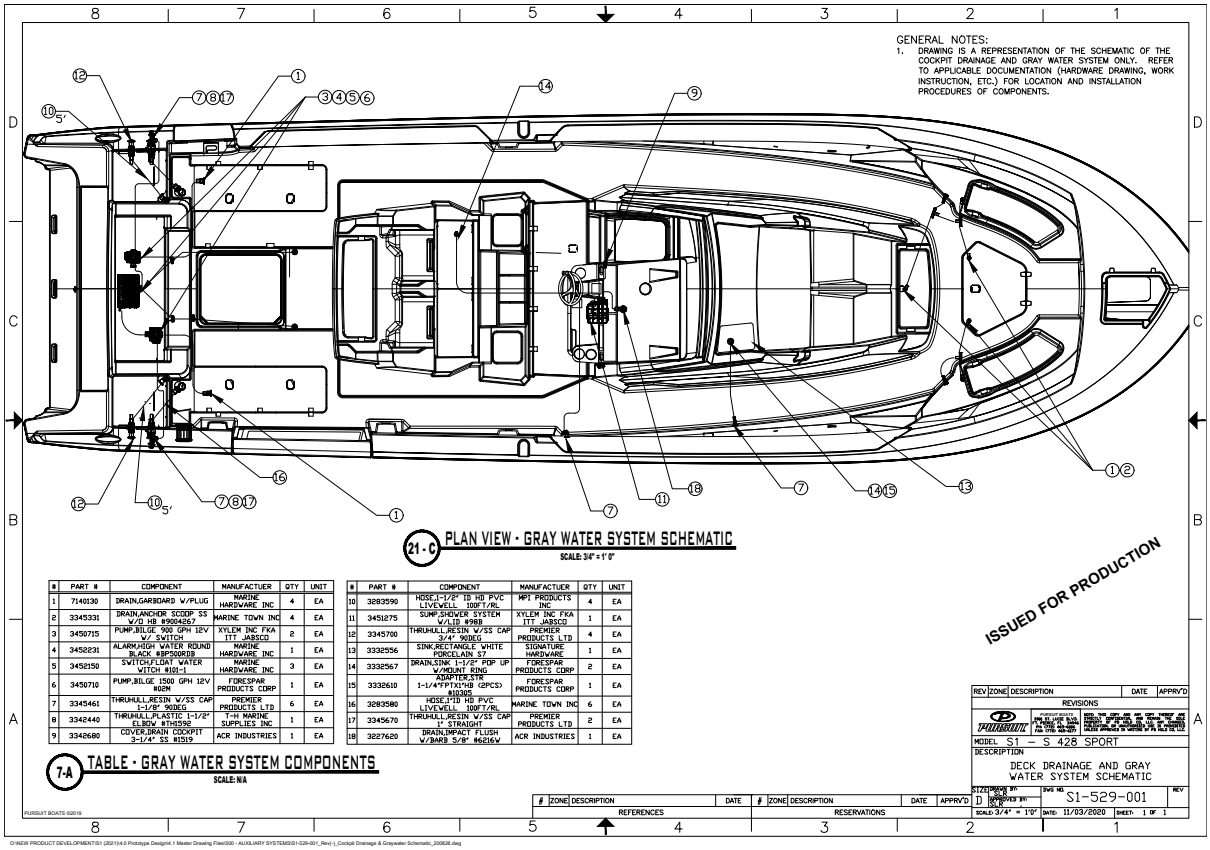
MODEL S1 - S 428 SPORT
DESCRIPTION
HULL LIMBERING & BILGE SYSTEM SCHEMATIC
SIZE D | DWG NO. S1-529-001 | REV
SCALE: 1:17 | DATE: 11/04/2020 | SHEET: 1 OF 2

#	ZONE	DESCRIPTION	DATE	APPRV'D
REFERENCES				

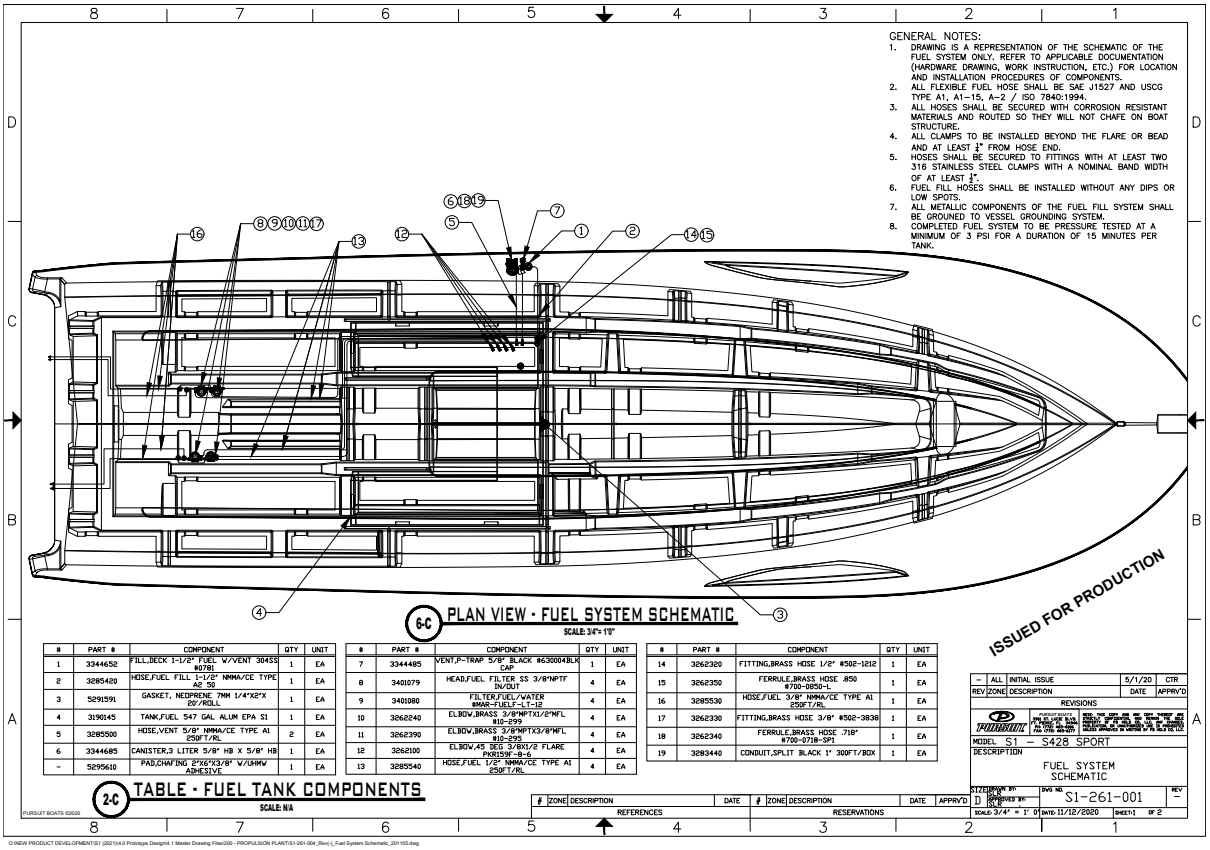
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RESERVATIONS				

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D:\NEW PRODUCT DEVELOPMENT\S1 (2021)\4.0 Prototype Design\4.1 Master Drawing Files\500 - AUXILIARY SYSTEMS\S1-529-001_Rev(-),Hull Limbering & Bilge System Schematic_2-0826.dwg



#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
1	7140130	DRAIN,GARBOARD W/PLUG	MARINE HARDWARE INC	4	EA
2	3345331	DRAIN,ANCHOR SCOOP SS W/O HB #9004267	MARINE TOWN INC	4	EA
3	3450715	PUMP,BILGE 900 GPH 12V W/ SWITCH	XYLEM INC FKA ITT JABSCO	2	EA
4	3452231	ALARM,HIGH WATER ROUND BLACK #BPS00R01B	MARINE HARDWARE INC	1	EA
5	3452150	SWITCH,FLOAT WATER WITCH #101-1	MARINE HARDWARE INC	3	EA
6	3450710	PUMP,BILGE 1500 GPH 12V #02M	FORESPAR PRODUCTS CORP	1	EA
7	3345461	THRUHULL,RESIN W/SS CAP 1-1/2" 90DEG	PREMIER PRODUCTS LTD	6	EA
8	3342440	THRUHULL,PLASTIC 1-1/2" ELBOW #TH1590	T-H MARINE SUPPLIES INC	1	EA
9	3342680	COVER,DRAIN COCKPIT 3-1/4" SS #1519	ACR INDUSTRIES	1	EA
10	3283590	HOSE,1-1/2" ID HD PVC LIVEWELL 100FT/RL	MPI PRODUCTS INC	4	EA
11	3451275	SUMP,SHOWER SYSTEM W/LID #988	XYLEM INC FKA ITT JABSCO	1	EA
12	3345700	THRUHULL,RESIN W/SS CAP 3/4" 90DEG	PREMIER PRODUCTS LTD	4	EA
13	3332556	SINK,RECTANGLE WHITE PORCELAIN S7	SIGNATURE HARDWARE	1	EA
14	3332567	DRAIN,SINK 1-1/2" POP UP W/MOUNT RING	FORESPAR PRODUCTS CORP	2	EA
15	3332610	ADAPTER,STR 1-1/4"FPTX1"HB (2PCS) #180105	FORESPAR PRODUCTS CORP	1	EA
16	3283580	HOSE,1"ID HD PVC LIVEWELL 100FT/RL	MARINE TOWN INC	6	EA
17	3345670	THRUHULL,RESIN W/SS CAP 1" STRAIGHT	PREMIER PRODUCTS LTD	2	EA
18	3227620	DRAIN,IMPACT FLUSH W/BARB 5/8" #6216W	ACR INDUSTRIES	1	EA



GENERAL NOTES:
1. DRAWING IS A REPRESENTATION OF THE SCHEMATIC OF THE FUEL SYSTEM ONLY. REFER TO APPLICABLE DOCUMENTATION (HARDWARE DRAWING, WORK INSTRUCTION, ETC.) FOR LOCATION AND INSTALLATION PROCEDURES OF COMPONENTS.
2. ALL FLEXIBLE FUEL HOSE SHALL BE SAE J1527 AND USCG TYPE A1, A1-15, A-2 / ISO 7840:1994.
3. ALL HOSES SHALL BE SECURED WITH CORROSION RESISTANT MATERIALS AND ROUTED SO THEY WILL NOT CHAFE ON BOAT STRUCTURE.
4. ALL CLAMPS TO BE INSTALLED BEYOND THE FLARE OR BEAD AND AT LEAST 1/2" FROM HOSE END.
5. HOSES SHALL BE SECURED TO FITTINGS WITH AT LEAST TWO 316 STAINLESS STEEL CLAMPS WITH A NOMINAL BAND WIDTH OF AT LEAST 1/2".
6. FUEL FILL HOSES SHALL BE INSTALLED WITHOUT ANY DIPS OR LOW SPOTS.
7. ALL METALLIC COMPONENTS OF THE FUEL FILL SYSTEM SHALL BE GROUNED TO VESSEL GROUNDING SYSTEM.
8. COMPLETED FUEL SYSTEM TO BE PRESSURE TESTED AT A MINIMUM OF 3 PSI FOR A DURATION OF 15 MINUTES PER TANK.

6-C PLAN VIEW - FUEL SYSTEM SCHEMATIC
SCALE: 3/4"= 1'0"

ISSUED FOR PRODUCTION

#	PART #	COMPONENT	QTY	UNIT
1	3344652	FILL,DECK 1-1/2" FUEL W/VENT 304SS #0781	1	EA
2	3285420	HOSE,FUEL FILL 1-1/2" NMMA/CE TYPE A2 50	1	EA
3	5291591	GASKET, NEOPRENE 7MM 1/4"X2"X 20'/ROLL	1	EA
4	3190145	TANK,FUEL 547 GAL ALUM EPA S1	1	EA
5	3285500	HOSE,VENT 5/8" NMMA/CE TYPE A1 250FT/RL	2	EA
6	3344685	CANISTER,3 LITER 5/8" HB X 5/8" HB	1	EA
-	5295610	PAD,CHAFING 2"X6"X3/8" W/UHMW ADHESIVE	1	EA

#	PART #	COMPONENT	QTY	UNIT
7	3344485	VENT,P-TRAP 5/8" BLACK #630004BLK CAP	1	EA
8	3401079	HEAD,FUEL FILTER SS 3/8"NPTF IN/OUT	4	EA
9	3401080	FILTER,FUEL/WATER 8MAR-FUELF-LT-12	4	EA
10	3262240	ELBOW,BRASS 3/8"MPTX1/2"MFL #10-299	4	EA
11	3262390	ELBOW,BRASS 3/8"MPTX3/8"MFL #10-295	4	EA
12	3262100	ELBOW,45 DEG 3/8X1/2 FLARE PX0159F-8-6	4	EA
13	3285540	HOSE,FUEL 1/2" NMMA/CE TYPE A1 250FT/RL	4	EA

#	PART #	COMPONENT	QTY	UNIT
14	3262320	FITTING,BRASS HOSE 1/2" #502-1212	1	EA
15	3262350	FERRULE,BRASS HOSE .850 #700-0850-L	1	EA
16	3285530	HOSE,FUEL 3/8" NMMA/CE TYPE A1 250FT/RL	1	EA
17	3262330	FITTING,BRASS HOSE 3/8" #502-3838	1	EA
18	3262340	FERRULE,BRASS HOSE .718" #700-0718-SP1	1	EA
19	3283440	CONDUIT,SPLIT BLACK 1" 300FT/BOX	1	EA

2-C TABLE - FUEL TANK COMPONENTS
SCALE: N/A

REV	ZONE	DESCRIPTION	DATE	APPRV'D
-	ALL	INITIAL ISSUE	5/1/20	CTR

REVISIONS

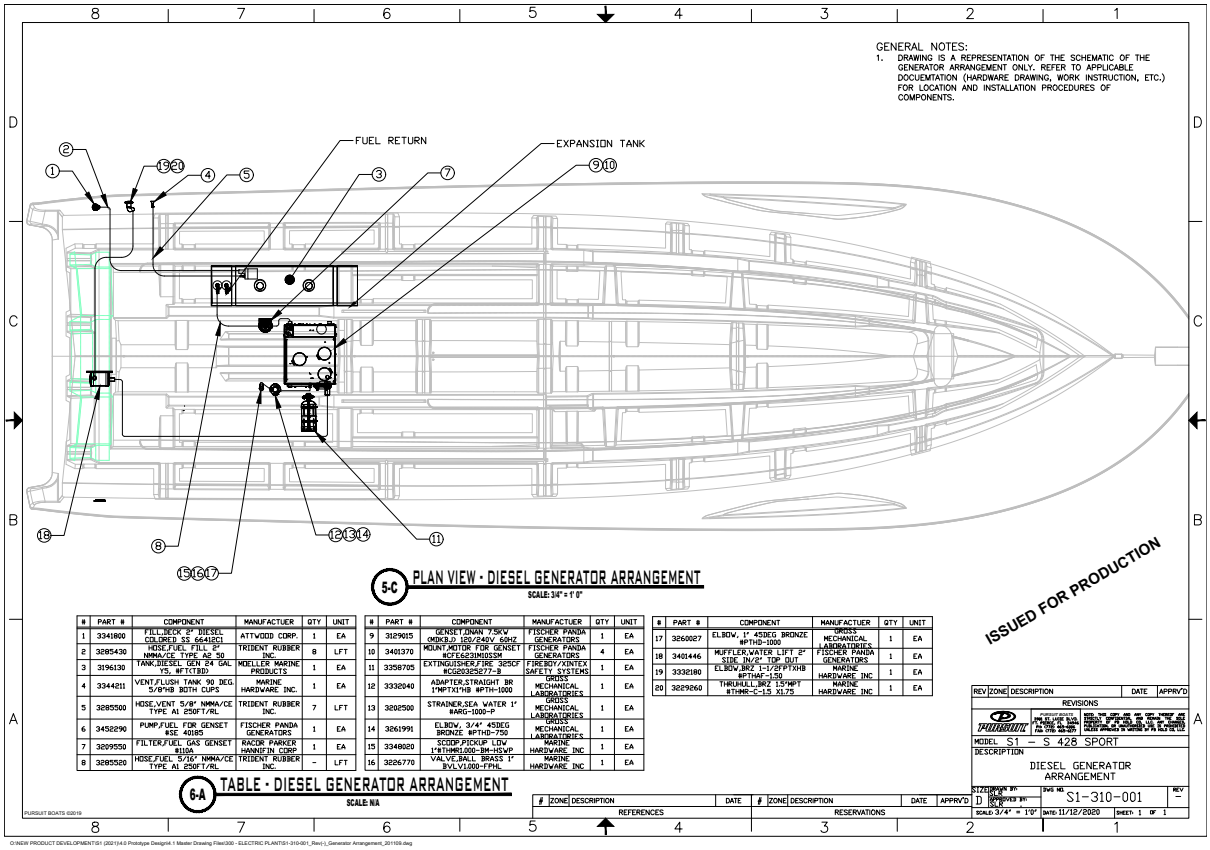
MODEL S1 - S428 SPORT
DESCRIPTION
FUEL SYSTEM SCHEMATIC
SIZE D | DRAWN BY: BLK | APPROVED BY: MLK | DWG NO. S1-261-001 | REV -
SCALE: 3/4" = 1' 0" | DATE: 11/12/2020 | SHEET 1 OF 2

REFERENCES | RESERVATIONS

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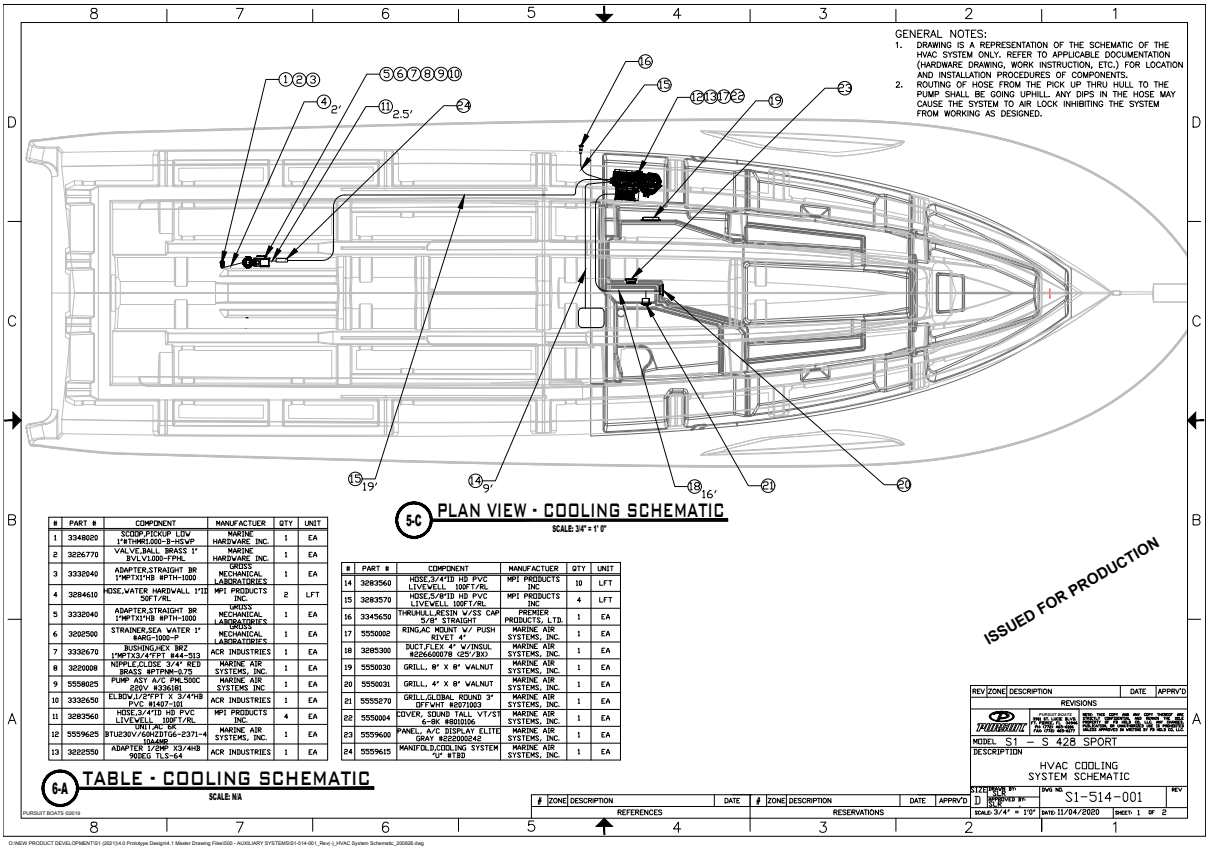
Schematics



#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
1	3341800	FILL,DECK 2" DIESEL COLORED SS 6641DC1	ATTWOOD CORP.	1	EA
2	3285430	HOSE,FUEL FILL 2" NMMA/CE TYPE A2 50	TRIDENT RUBBER INC.	8	LFT
3	3196130	TANK,DIESEL GEN 24 GAL YS, WFCTBDD	MOELLER MARINE PRODUCTS	1	EA
4	3344211	VENT,FLUSH TANK 90 DEG. 5/8"HB BOTH CUPS	MARINE HARDWARE INC.	1	EA
5	3285500	HOSE,VENT 5/8" NMMA/CE TYPE A1 250FT/RL	TRIDENT RUBBER INC.	7	LFT
6	3458290	PUMP,FUEL FOR GENSET #SE 40185	FISCHER PANDA GENERATORS	1	EA
7	3289550	FILTER,FUEL GAS GENSET #110A	RACOR PARKER HANNIFIN CORP	1	EA
8	3285520	HOSE,FUEL 5/16" NMMA/CE TYPE A1 250FT/RL	TRIDENT RUBBER INC.	-	LFT

#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
9	3129015	GENSET,DNAN 7.5KW OMDKBJD 120/240V 60HZ	FISCHER PANDA GENERATORS	1	EA
10	3401370	MOUNT,MOTOR FOR GENSET #CFSE23MUSSM	FISCHER PANDA GENERATORS	4	EA
11	3358705	EXTINGUISHER,FIRE 325CF #CG2032SS277-3	FIREBOY/XINTEX SAFETY SYSTEMS	1	EA
12	3332040	ADAPTER,STRAIGHT BR 1"NPTX1"HB #PTH-1000	GROSS MECHANICAL LABORATORIES	1	EA
13	3282500	STRAINER,SEA WATER 1" #ARG-1000-F	GROSS MECHANICAL LABORATORIES	1	EA
14	3261991	ELBOW, 3/4" 45DEG BRONZE #PTHD-750	GROSS MECHANICAL LABORATORIES	1	EA
15	3348020	SCOOP,PICKUP LOW 1"#THM01.000-BM-HSWP	MARINE HARDWARE INC	1	EA
16	3226770	VALVE,BALL BRASS 1" BVLVL1000-FPHL	MARINE HARDWARE INC	1	EA

#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
17	3260027	ELBOW, 1" 45DEG BRONZE #PTHD-1000	GROSS MECHANICAL LABORATORIES	1	EA
18	3401446	MUFFLER,WATER LIFT 2" SIDE IN/2" TOP OUT	FISCHER PANDA GENERATORS	1	EA
19	3332180	ELBOW,BRZ 1-1/2FPTXHB #PTHAF-150	MARINE HARDWARE, INC	1	EA
20	3229260	THRUHULL,BRZ 1.5"MPT #THMR-C-1.5 X1.75	MARINE HARDWARE, INC	1	EA



#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
1	3348020	SCOOP,PICKUP LOW 1"BTHMM0.000-B-HSVP	MARINE HARDWARE INC.	1	EA
2	3266770	VALVE,BALL BRASS 1" BVLV1.000-FPHL	MARINE HARDWARE INC.	1	EA
3	3332040	ADAPTER,STRAIGHT BR 1"MPTX1"HB #PTH-1000	GROSS MECHANICAL LABORATORIES	1	EA
4	3284610	HOSE,WATER HARDWALL 1"II 50FT/RL	MPI PRODUCTS INC.	2	LFT
5	3332040	ADAPTER,STRAIGHT BR 1"MPTX1"HB #PTH-1000	GROSS MECHANICAL LABORATORIES	1	EA
6	3202500	STRAINER,SEA WATER 1" BARG-1000-P	GROSS MECHANICAL LABORATORIES	1	EA
7	3332670	BUSHING,HEX BRZ 1"MPTX3/4"FPT #44-513	ACR INDUSTRIES	1	EA
8	3200008	NIPPLE,CLOSE 3/4" RED BRASS #PTPNK-0.75	MARINE AIR SYSTEMS, INC.	1	EA
9	5558025	PUMP ASY A/C PKL300C 220V #336181	MARINE AIR SYSTEMS INC	1	EA
10	3332650	ELBOW,1/8"FPT X 3/4"HB PVC #1407-101	ACR INDUSTRIES	1	EA
11	3283560	HOSE,3/4"ID HD PVC LIVEWELL 100FT/RL	MPI PRODUCTS INC.	4	EA
12	5559625	VALV,A/C BTU230V/60HZDTG6-2371-4 10AMP	MARINE AIR SYSTEMS, INC.	1	EA
13	3222550	ADAPTER 1/2MP X3/4HB 90DEG TLS-64	ACR INDUSTRIES	1	EA

6-A TABLE - COOLING SCHEMATIC
SCALE: N/A

#	PART #	COMPONENT	MANUFACTUER	QTY	UNIT
14	3283560	HOSE,3/4"ID HD PVC LIVEWELL 100FT/RL	MPI PRODUCTS INC.	10	LFT
15	3283570	HOSE,5/8"ID HD PVC LIVEWELL 100FT/RL	MPI PRODUCTS INC.	4	LFT
16	3345650	THRUHULL,RESIN W/ES CAP 5/8" STRAIGHT	PREMIER PRODUCTS, LTD.	1	EA
17	5550092	RING,AC MOUNT W/ PUSH RIVET 4"	MARINE AIR SYSTEMS, INC.	1	EA
18	3285300	DUCT,FLEX 4" W/INSUL #226600078 GPS/BIO	MARINE AIR SYSTEMS, INC.	1	EA
19	5550030	GRILL, 8" X 8" WALNUT	MARINE AIR SYSTEMS, INC.	1	EA
20	5550031	GRILL, 4" X 8" WALNUT	MARINE AIR SYSTEMS, INC.	1	EA
21	5555270	GRILL,GLOBAL ROUND 3" OFF-WHT #2971003	MARINE AIR SYSTEMS, INC.	1	EA
22	5550004	COVER, SOUND TALL VT/ST 6-BK #8010106	MARINE AIR SYSTEMS, INC.	1	EA
23	5559600	PANEL, A/C DISPLAY ELITE GRAY #2220024Z	MARINE AIR SYSTEMS, INC.	1	EA
24	5559615	MANIFOLD,COOLING SYSTEM "U" #TBD	MARINE AIR SYSTEMS, INC.	1	EA

REV	ZONE	DESCRIPTION	DATE	APPRV'D
REVISIONS				

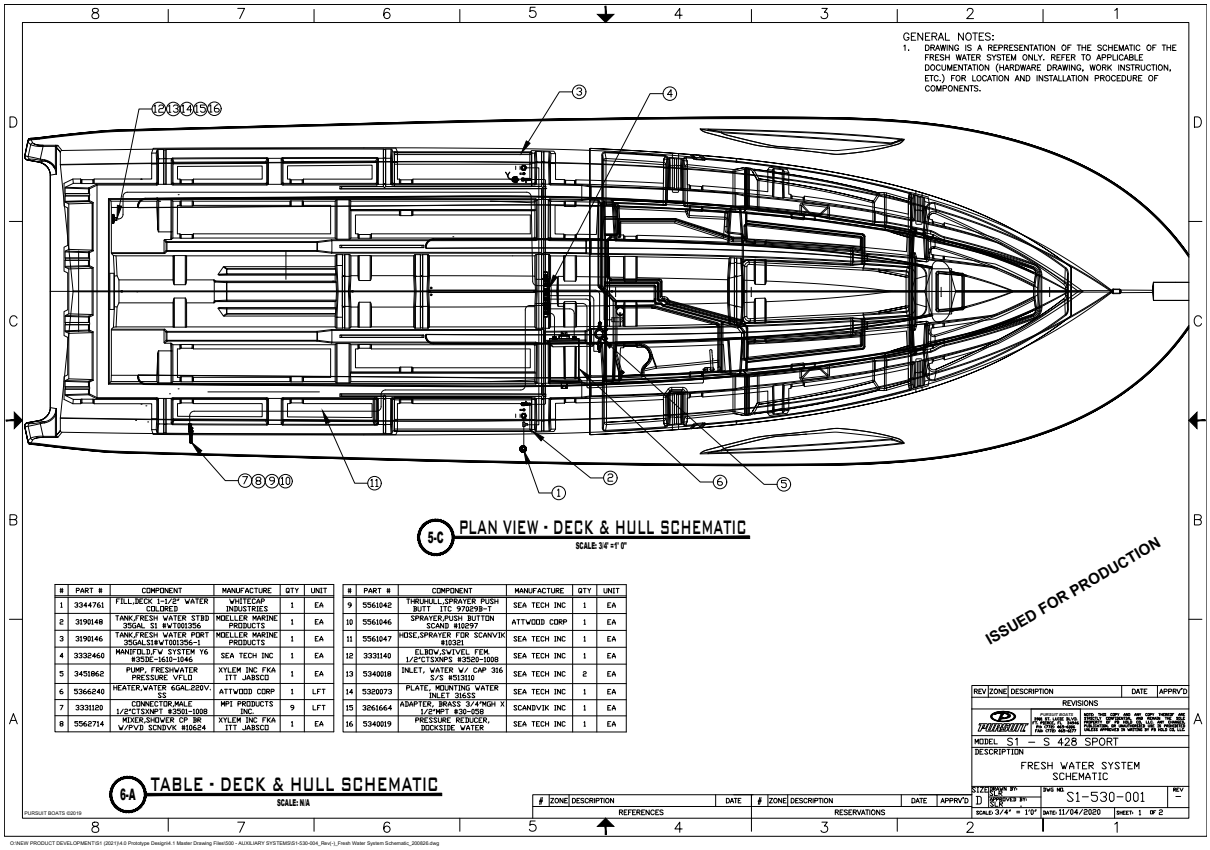
MODEL S1 - S 428 SPORT
DESCRIPTION
HVAC COOLING SYSTEM SCHEMATIC
SIZE D | DWG NO. S1-514-001 | REV
SCALE: 3/4" = 1'0" | DATE: 11/04/2020 | SHEET 1 OF 2

#	ZONE	DESCRIPTION	DATE	APPRV'D
REFERENCES				
RESERVATIONS				

PURSUIT BOATS ©2019

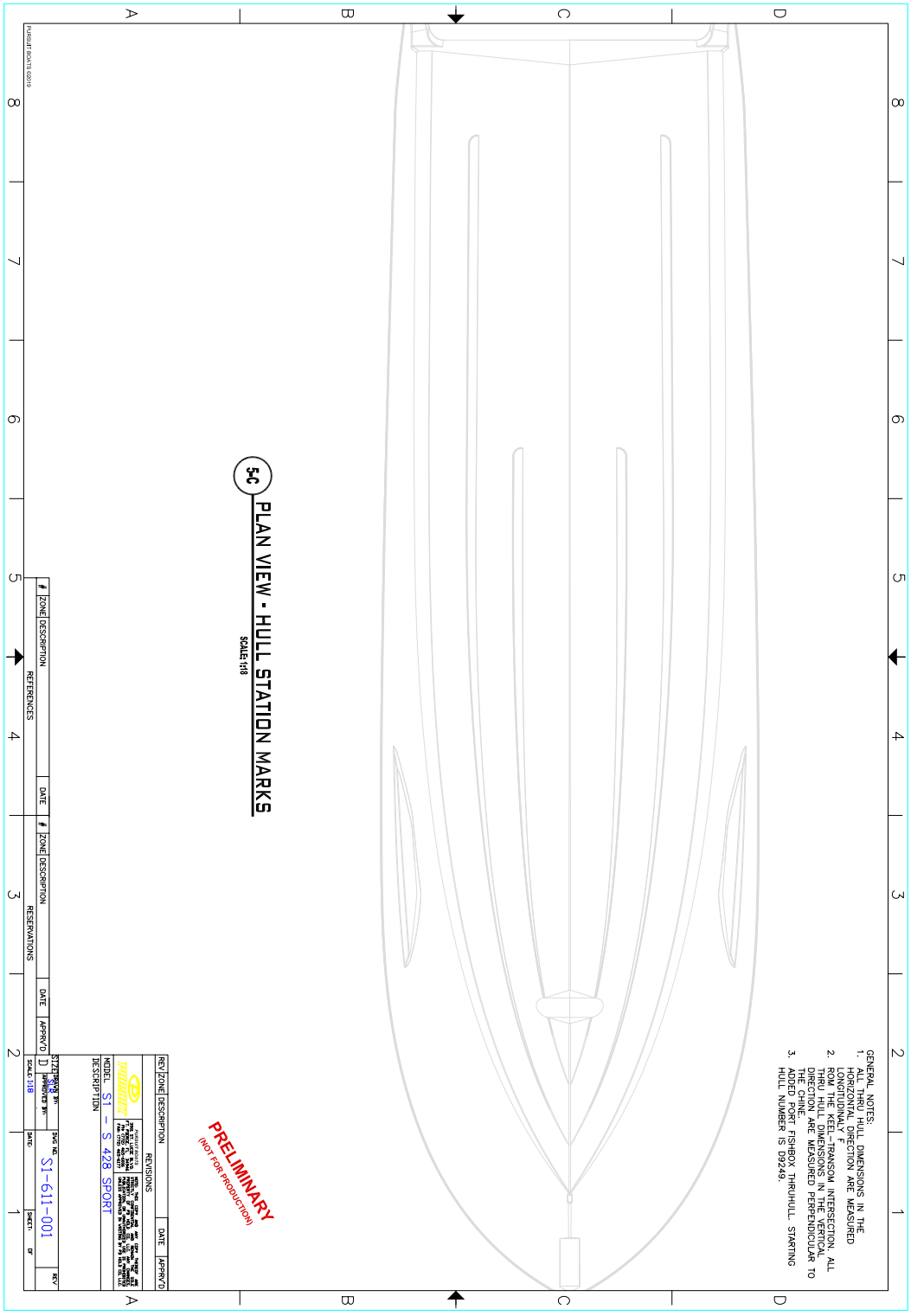
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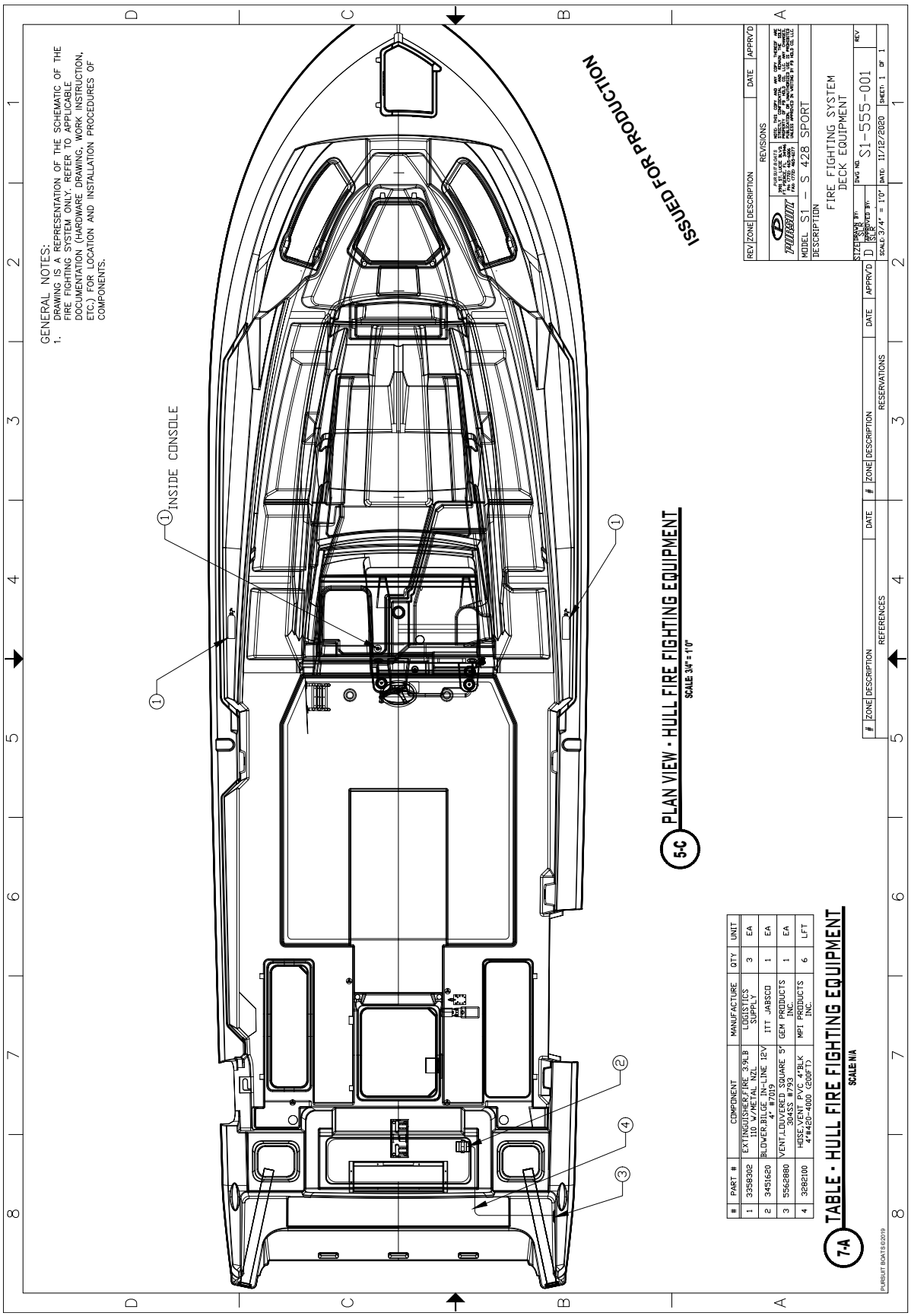
Schematics

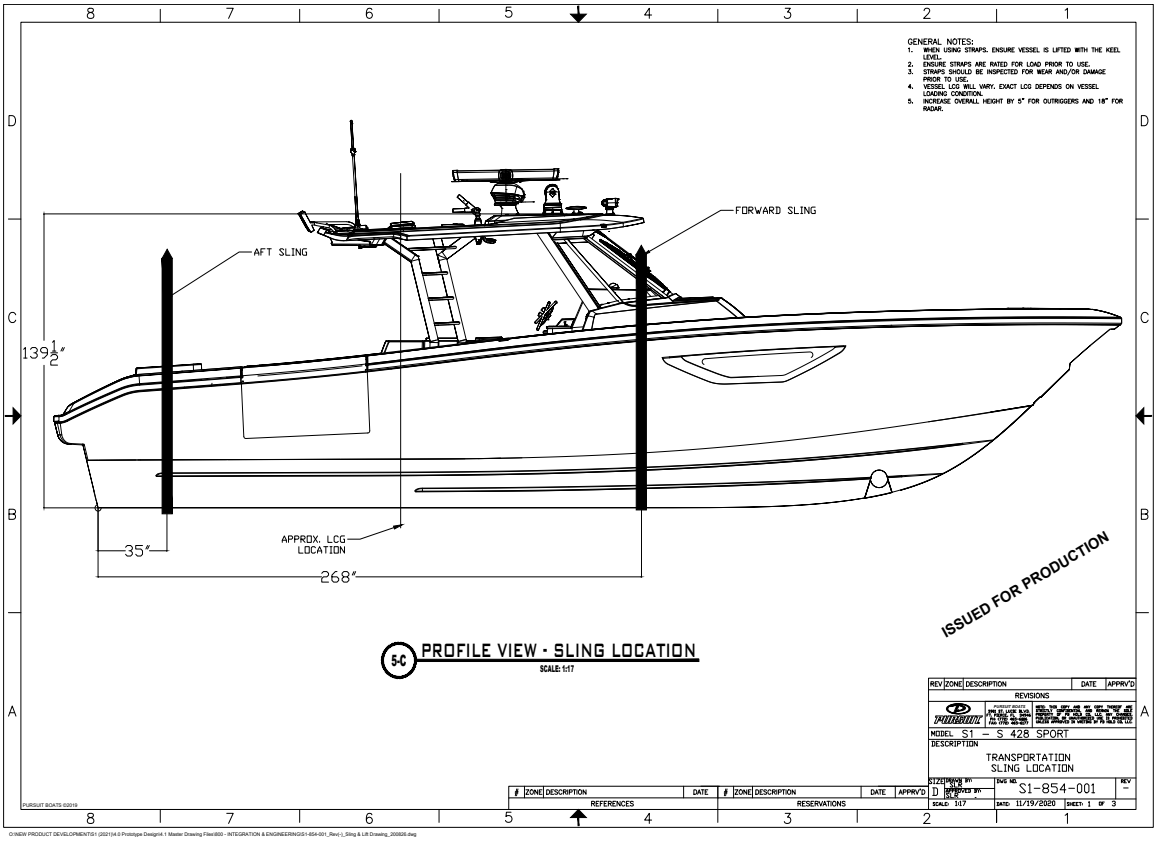


#	PART #	COMPONENT	MANUFACTURE	QTY	UNIT
1	3344761	FILL,DECK 1-7/8" WATER COLORED	WHITECAP INDUSTRIES	1	EA
2	3190148	TANK,FRESH WATER STBD 35GAL S1 #WT001356	MOELLER MARINE PRODUCTS	1	EA
3	3190146	TANK,FRESH WATER PORT 35GAL S1#WT001356-1	MOELLER MARINE PRODUCTS	1	EA
4	3332460	MANIFOLD,FW SYSTEM Y6 #350E-1610-1046	SEA TECH INC	1	EA
5	3451862	PUMP, FRESHWATER PRESSURE VFLD	XYLEM INC FKA ITT JABSCO	1	EA
6	5366240	HEATER,WATER 6GAL,220V, SS	ATTWOOD CORP	1	LFT
7	3331120	CONNECTOR,MALE 1/2"CTSXNPT #3501-1008	MPI PRODUCTS INC.	9	LFT
8	5562714	MIXER,SHOWER CP BR W/PVD SCNDVK #10624	XYLEM INC FKA ITT JABSCO	1	EA

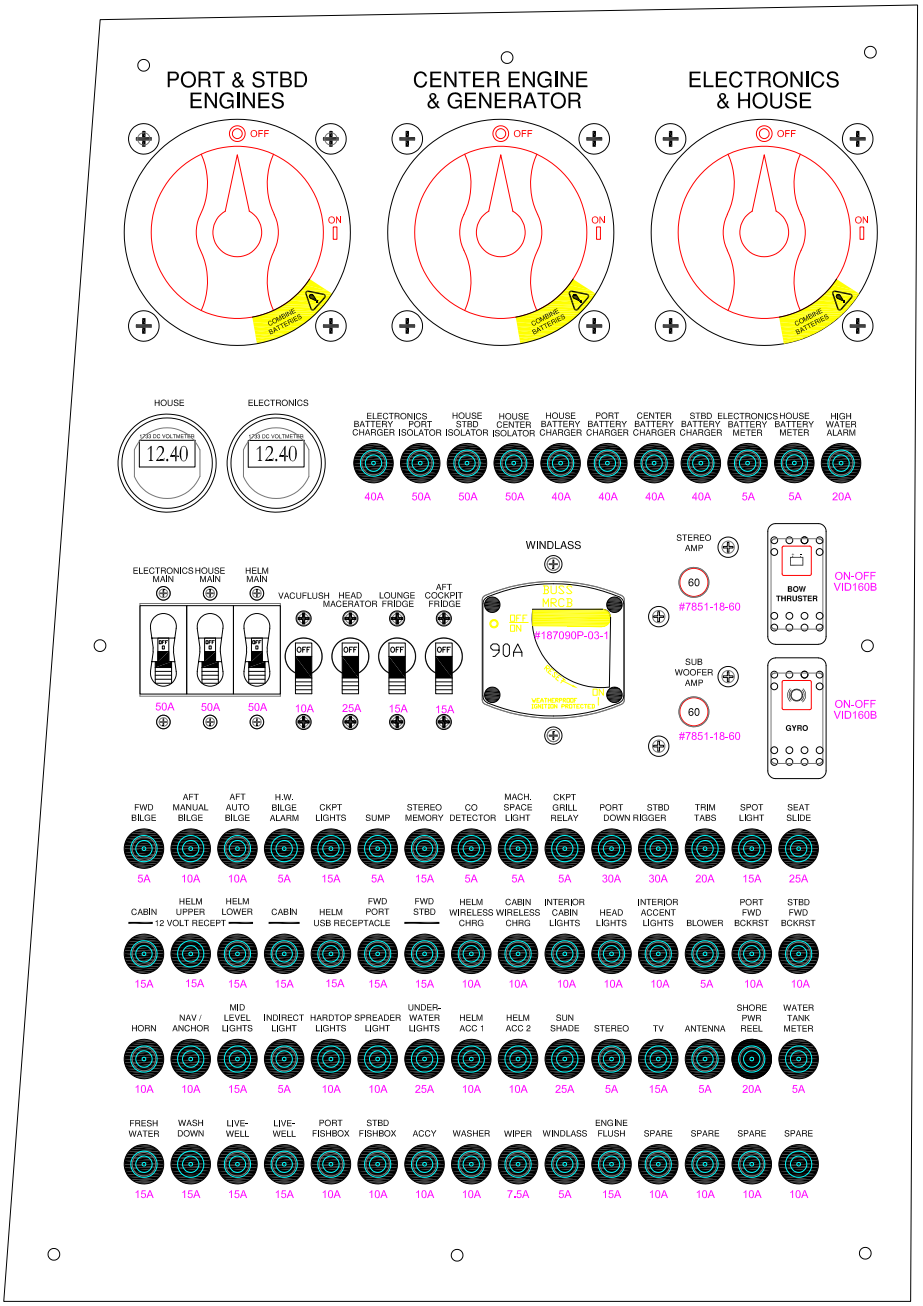
#	PART #	COMPONENT	MANUFACTURE	QTY	UNIT
9	5561042	THRUHULL,SPRAYER PUSH BUTT ITC 970298-T	SEA TECH INC	1	EA
10	5561046	SPRAYER,PUSH BUTTON SCAND #10297	ATTWOOD CORP	1	EA
11	5561047	HOSE,SPRAYER FOR SCANVIK #10301	SEA TECH INC	1	EA
12	3331140	ELBOV,SWIVEL FEM. 1/2"CTSXNPS #3520-1008	SEA TECH INC	1	EA
13	5340018	INLET, WATER W/ CAP 316 S/S #513110	SEA TECH INC	2	EA
14	5320073	PLATE, MOUNTING WATER INLET 316SS	SEA TECH INC	1	EA
15	3261664	ADAPTER, BRASS 3/4"MGH X 1/2"MPT #30-058	SCANDVIK INC	1	EA
16	5340019	PRESSURE REDUCER, DOCKSIDE WATER	SEA TECH INC	1	EA


GENERAL NOTES:
1. ALL THRU HULL DIMENSIONS IN THE HORIZONTAL DIRECTION ARE MEASURED LONGITUDINALLY FROM THE RELEVANT TRANSOM INTERSECTION. ALL THRU HULL DIMENSIONS IN THE VERTICAL DIRECTION ARE MEASURED PERPENDICULAR TO THE CHINE.
3. ADDED PORT FISHBOX THRUHULL STARTING HULL NUMBER IS 09249.
5C
PLAN VIEW - HULL STATION MARKS
SCALE: 1:18
PRELIMINARY
(NOT FOR PRODUCTION)
REV ZONE DESCRIPTION DATE APPRV'D
REVISIONS
MODEL S1 - S 428 SPORT
DESCRIPTION
SIZE S1-611-001 REV
SCALE: 1:18 DATE SHEET OF
ZONE DESCRIPTION DATE APPRV'D
REFERENCES
ZONE DESCRIPTION DATE APPRV'D
RESERVATIONS


GENERAL NOTES:
1. DRAWING IS A REPRESENTATION OF THE SCHEMATIC OF THE FIRE FIGHTING SYSTEM ONLY. REFER TO APPLICABLE DOCUMENTATION (HARDWARE DRAWING, WORK INSTRUCTION, ETC.) FOR LOCATION AND INSTALLATION PROCEDURES OF COMPONENTS.
ISSUED FOR PRODUCTION
INSIDE CONSOLE
5-C PLAN VIEW - HULL FIRE FIGHTING EQUIPMENT
SCALE: 3/4" = 1'0"
7-A TABLE - HULL FIRE FIGHTING EQUIPMENT
SCALE: N/A
PART # COMPONENT MANUFACTURE QTY UNIT
1 3358302 EXTINGUISHER,FIRE 3.9LB 110 W/METAL NZL LOGISTICS SUPPLY 3 EA
2 3451620 BLOWER,BILGE IN-LINE 12V 4" #7019 ITT JABSCO 1 EA
3 5562880 VENT,LOUVERED SQUARE 5" BRASS #792 GEM PRODUCTS INC. 1 EA
4 3282100 HOSE,VENT PVC 4"BLK 4"#420-4000 (200FT) MPI PRODUCTS INC. 6 LFT
REFERENCES
ZONE DESCRIPTION DATE
RESERVATIONS
ZONE DESCRIPTION DATE APPRV'D
REVISIONS
REV ZONE DESCRIPTION DATE APPRV'D
PURSUIT
MODEL S1 - S 428 SPORT
DESCRIPTION
FIRE FIGHTING SYSTEM
DECK EQUIPMENT
SIZE D
DWG NO S1-555-001
REV
SCALE 3/4" = 1'0"
DATE 11/12/2020
SHEET 1 OF 1
PURSUIT BOATS ©2019
O:\NEW PRODUCT DEVELOPMENT\S1 (2021)\4.0 Prototype Design\4.1 Master Drawing Files\500 - AUXILIARY SYSTEMS\S1-555-001_Rev-_Fire Fighting Schematic_200828.dwg


GENERAL NOTES:
1. WHEN USING STRAPS, ENSURE VESSEL IS LIFTED WITH THE KEEL LEVEL.
2. ENSURE STRAPS ARE RATED FOR LOAD PRIOR TO USE.
3. STRAPS SHOULD BE INSPECTED FOR WEAR AND/OR DAMAGE PRIOR TO USE.
4. VESSEL LCG WILL VARY. EXACT LCG DEPENDS ON VESSEL LOADING CONDITION.
5. INCREASE OVERALL HEIGHT BY 5" FOR OUTRIGGERS AND 18" FOR RADAR.
FORWARD SLING
AFT SLING
139½"
35"
APPROX. LCG LOCATION
268"
ISSUED FOR PRODUCTION
5-C PROFILE VIEW - SLING LOCATION
SCALE: 1:17
REVISIONS
MODEL S1 - S 428 SPORT
DESCRIPTION
TRANSPORTATION
SLING LOCATION
DWG NO. S1-854-001
SCALE: 1:17
DATE: 11/19/2020
SHEET 1 OF 3
REFERENCES
RESERVATIONS

3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(FACE)



3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(TERMINATIONS 2)

PORT DOWNRIGGER

8GA RED #37

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SEI - STBD ENGINE ISOLATOR

4GA RED #53

1WAY DEUTSCH 6 - 4 DTHD RECPT
CONNECTOR (DTHD04-1-4P)

CC - CENTER CHARGER

10GA ORANGE #59

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

STBD DOWNRIGGER

8GA RED #38

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

HC - HOUSE CHARGER

10GA ORANGE / BLACK #54

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SL - SPOT LIGHT

10GA BLUE/ORANGE #67

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

CKF - CKPT FRIDGE

8GA RED #50

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

EC - ELECTRONICS CHARGER

10GA ORANGE / WHITE #55

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

CF - CBN FRIDGE

10GA RED #78

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

CEI - CENTER ENGINE ISOLATOR

4GA RED #51

1WAY DEUTSCH 6 - 4 DTHD RECPT
CONNECTOR (DTHD04-1-4P)

PC - PORT CHARGER

10GA ORANGE / RED #56

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SR - SHORE REEL

10GA RED #81

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

PEI - PORT ENGINE ISOLATOR

4GA RED #52

1WAY DEUTSCH 6 - 4 DTHD RECPT
CONNECTOR (DTHD04-1-4P)

SC - STBD CHARGER

10GA ORANGE / GREEN #57

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SS - SEAT SLIDE

10GA RED #91

1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

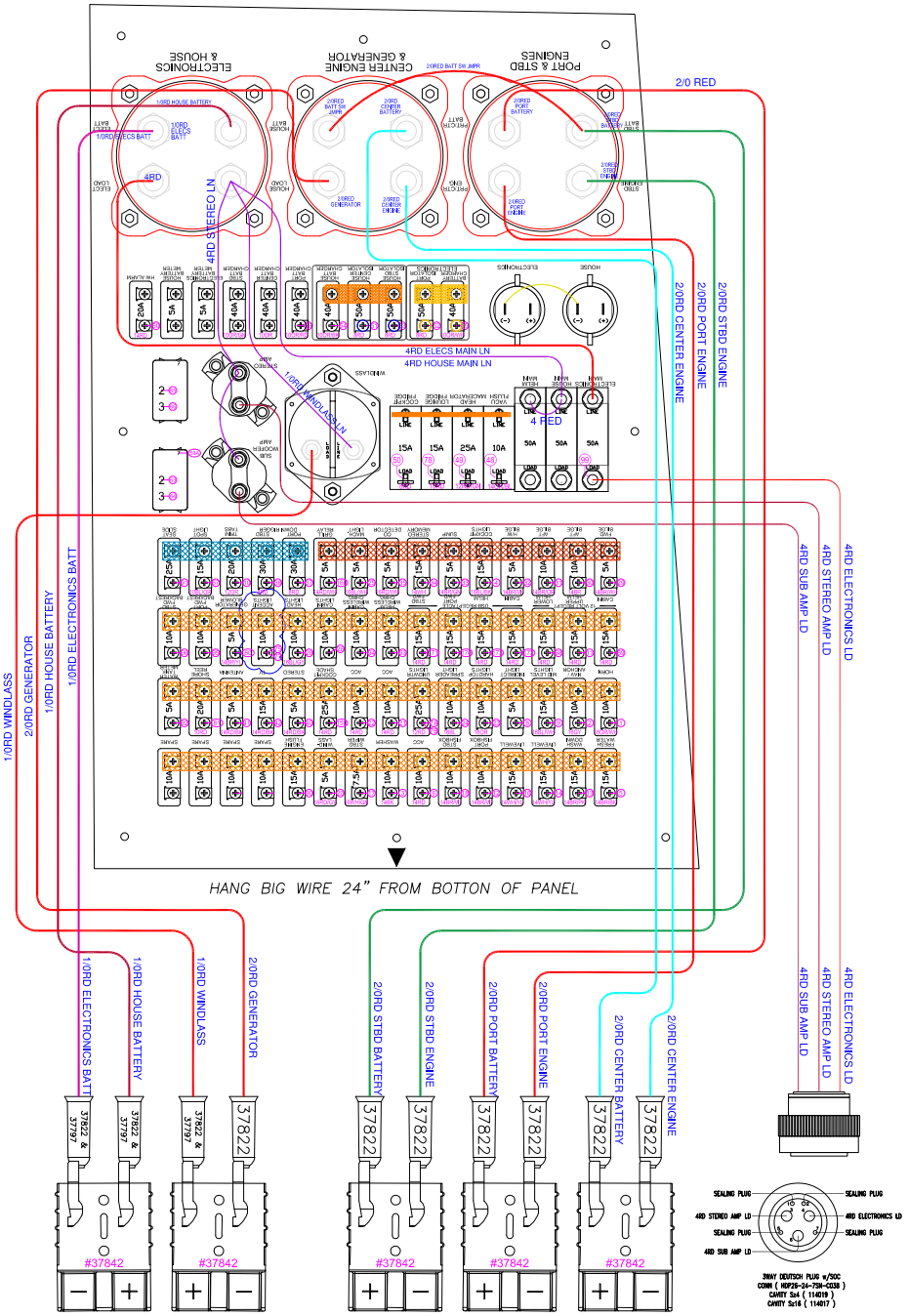
ELC - ELECTRONICS

8GA RED #99

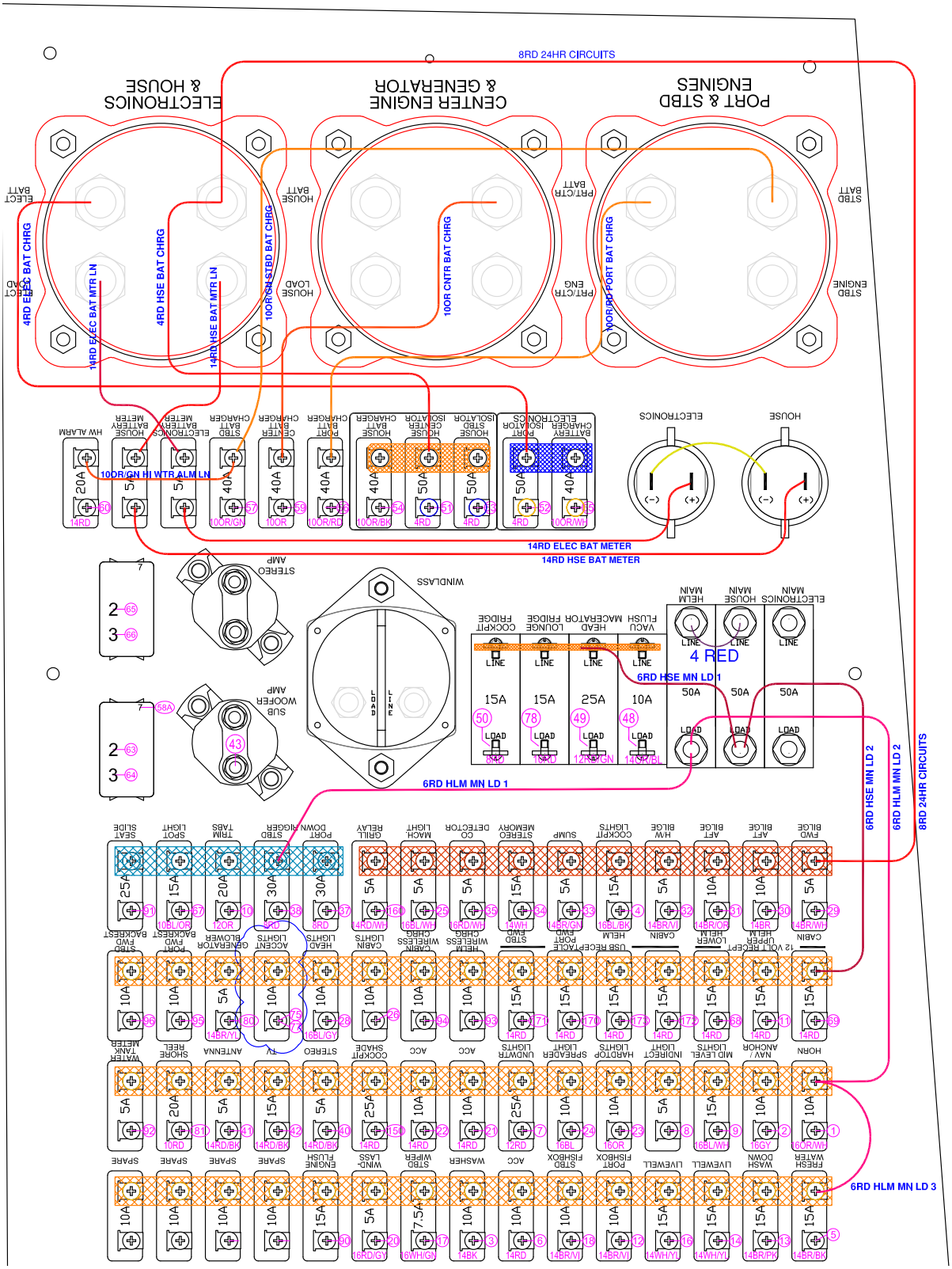
1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

Schematics

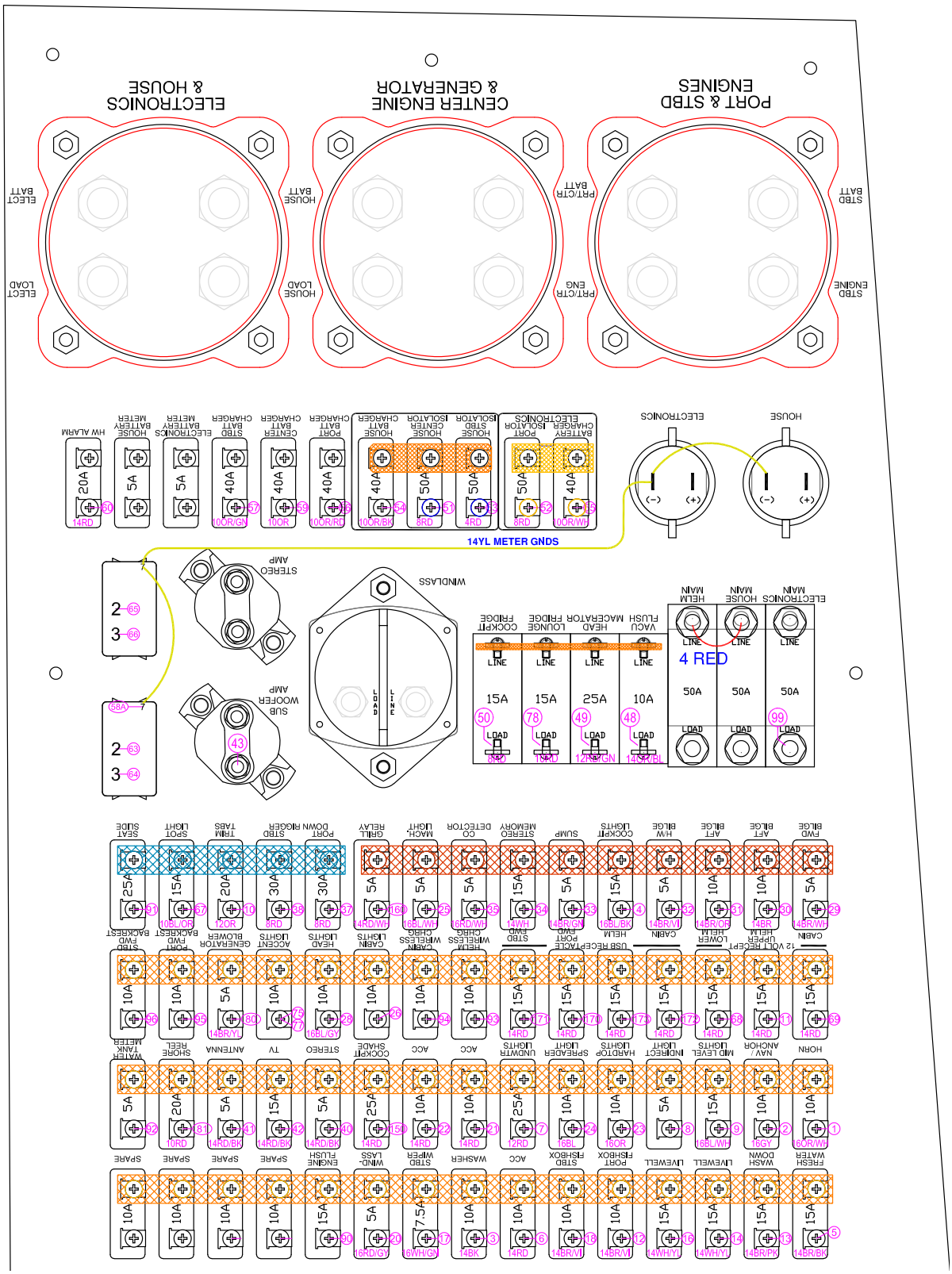
3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(LARGE GA WIRE DETAIL)



3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(MEDIUM GA WIRE DETAIL)

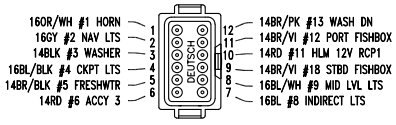


3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(SMALL GA WIRE DETAIL)



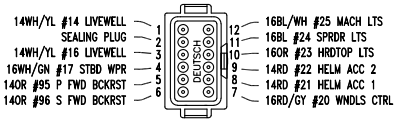
3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL (TERMINATIONS 1)

HC1 – HARNESS CONNECT #1 (GRAY)



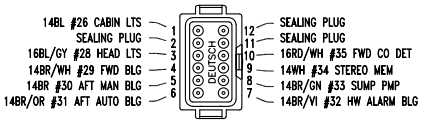
12WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)

HC2 – HARNESS CONNECT #2 (BLACK)



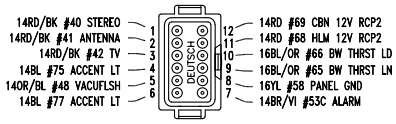
12WAY DEUTSCH DT RECEPTACLE
BLACK CONNECTOR (DT04-12PB)
WEDGE LOCK (W12P)

HC3 – HARNESS CONNECT #3 (GREEN)



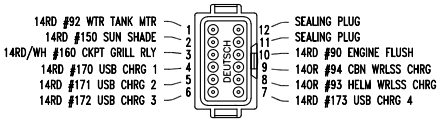
12WAY DEUTSCH DT RECEPTACLE
LT. GREEN CONNECTOR (DT04-12PC)
WEDGE LOCK (W12P)

HC4 – HARNESS CONNECT #4 (BROWN)



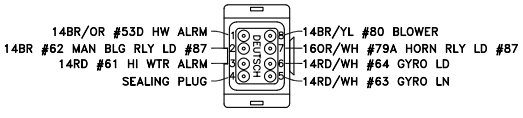
12WAY DEUTSCH DT RECEPTACLE
BROWN CONNECTOR (DT04-12PD)
WEDGE LOCK (W12P)

HC6 – HARNESS CONNECT #6(GRAY)



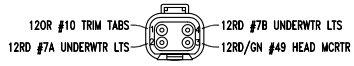
12WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)

HC5 – HARNESS CONNECT #5

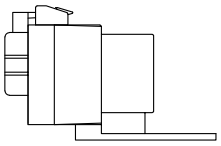


8WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-8PA)
WEDGE LOCK (W8P)

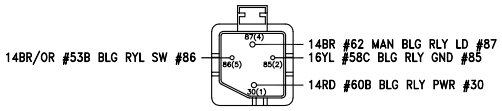
HC7 – HARNESS CONNECT #7



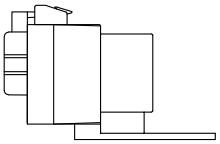
4WAY DEUTSCH DTP RECEPTACLE
CONNECTOR (DTP04-4P)
LOCKING WEDGE (WP4P)



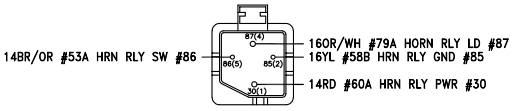
BILGE RELAY



4-WAY PLUG 630 BASE W/RELAY
PULL-TO-SEAT TERMINALS
CONN (12065686)
RELAY 87411
TERM 14-16 (12066614)
TERM 10-12 (12033997)

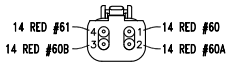


HORN RELAY



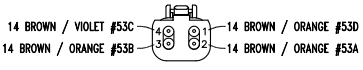
4-WAY PLUG 630 BASE W/RELAY
PULL-TO-SEAT TERMINALS
CONN (12065686)
RELAY 87411
TERM 14-16 (12066614)
TERM 10-12 (12033997)

NOTE:
ADD DT04-4P-EP13
HW ALARM FEEDBACK



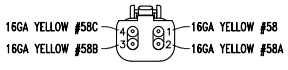
4WAY DEUTSCH DT PLUG
CONNECTOR (DT06-4S)
WEDGE LOCK (W4S)

ADD DT04-4P-EP13
HW BILGE FEEDBACK



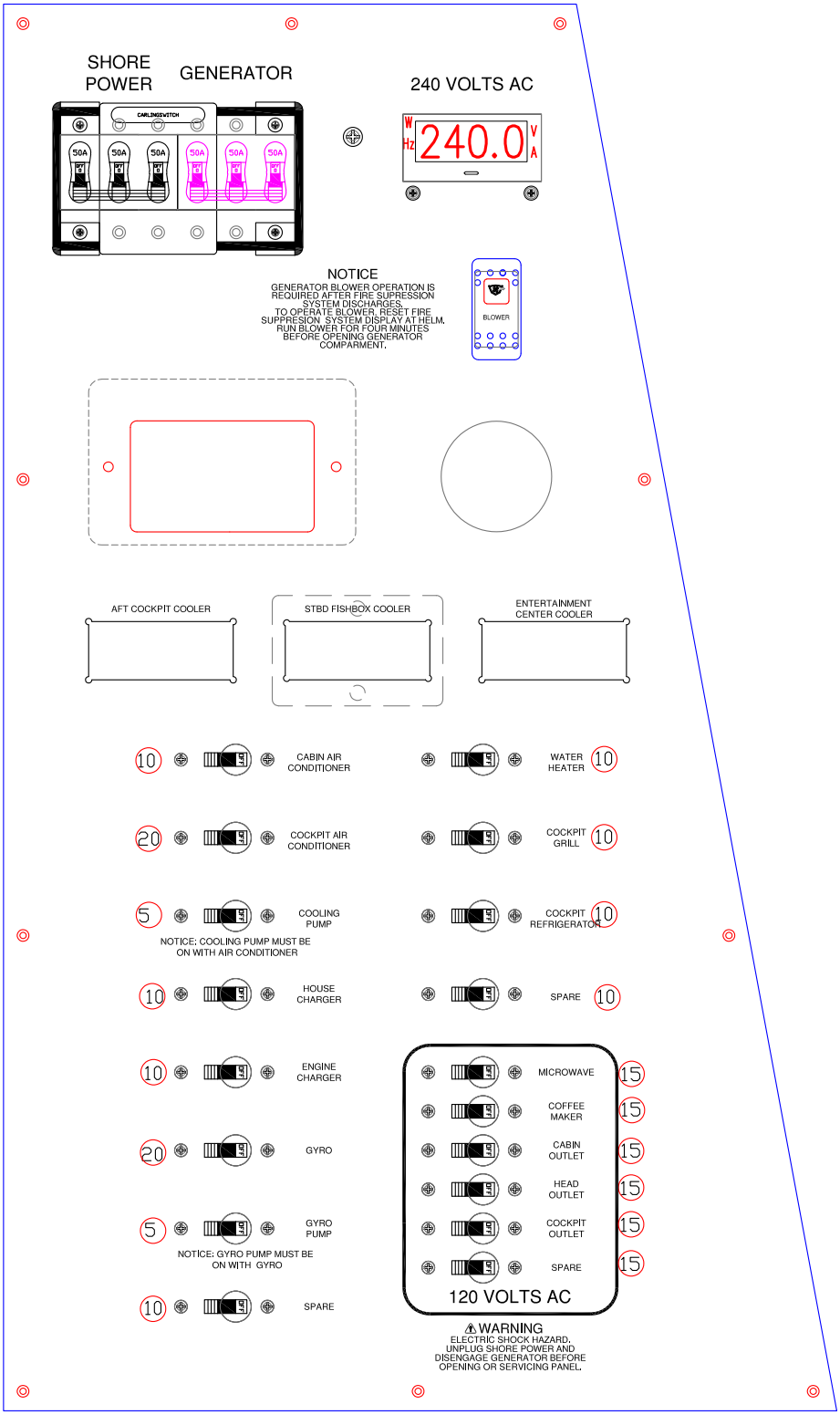
4WAY DEUTSCH DT PLUG
CONNECTOR (DT06-4S)
WEDGE LOCK (W4S)

ADD DT04-4P-EP13
GROUND FEEDBACK

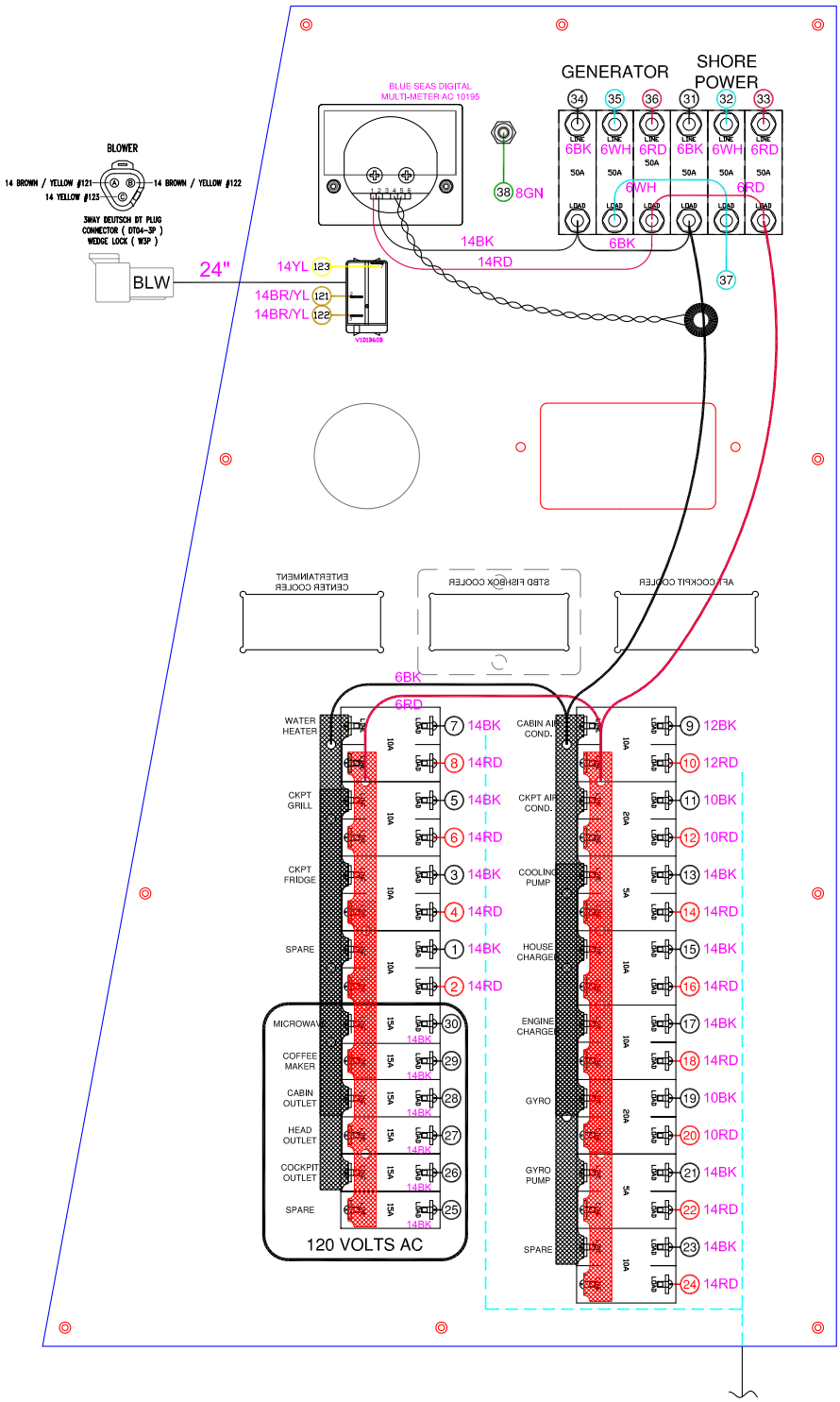


4WAY DEUTSCH DT PLUG
CONNECTOR (DT06-4S)
WEDGE LOCK (W4S)

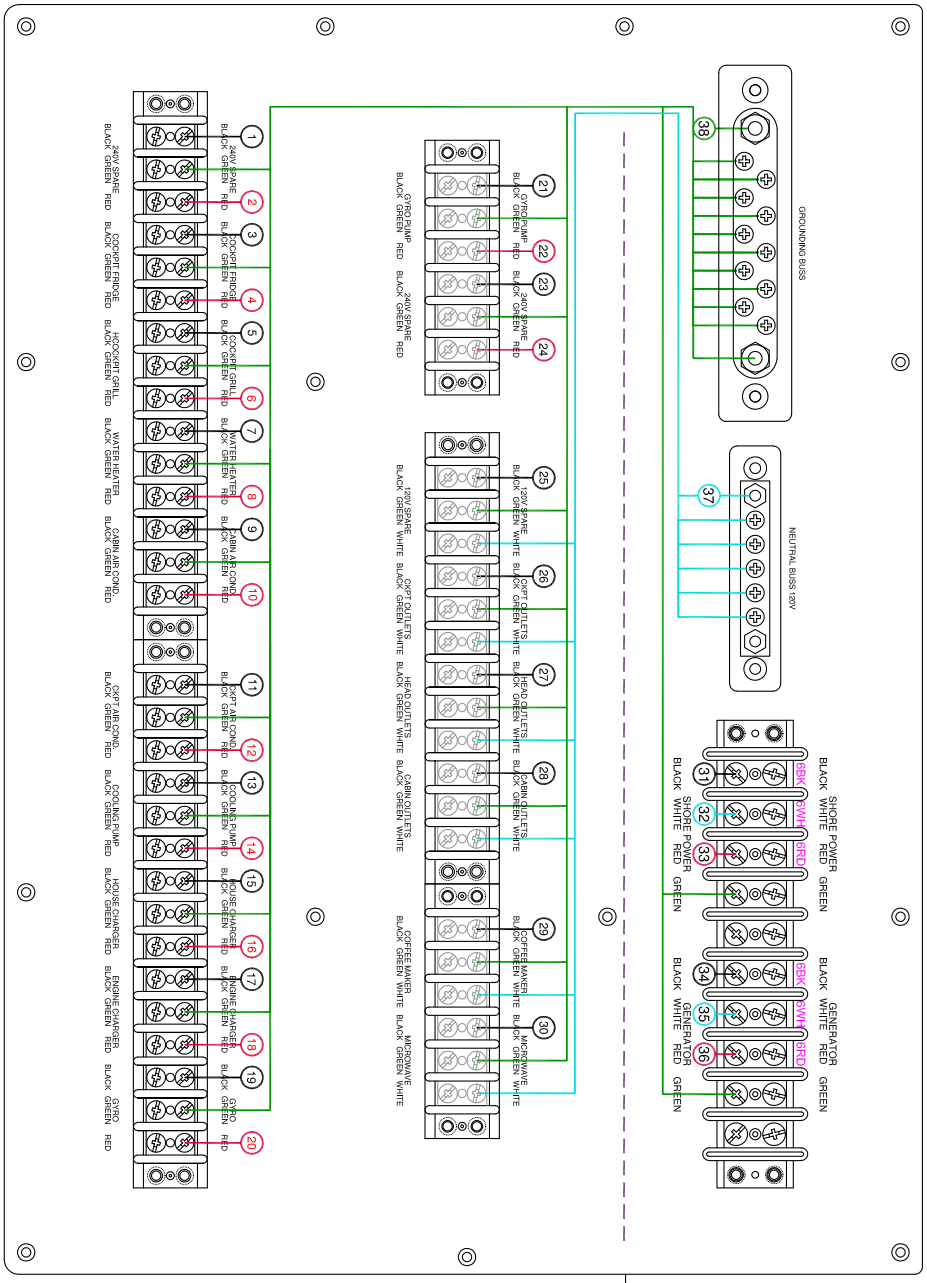
240/120V AC MAIN DISTRIBUTION PANEL 3300009 S1



240/120V AC MAIN DISTRIBUTION PANEL BACKSIDE DETAIL 3300009 S1

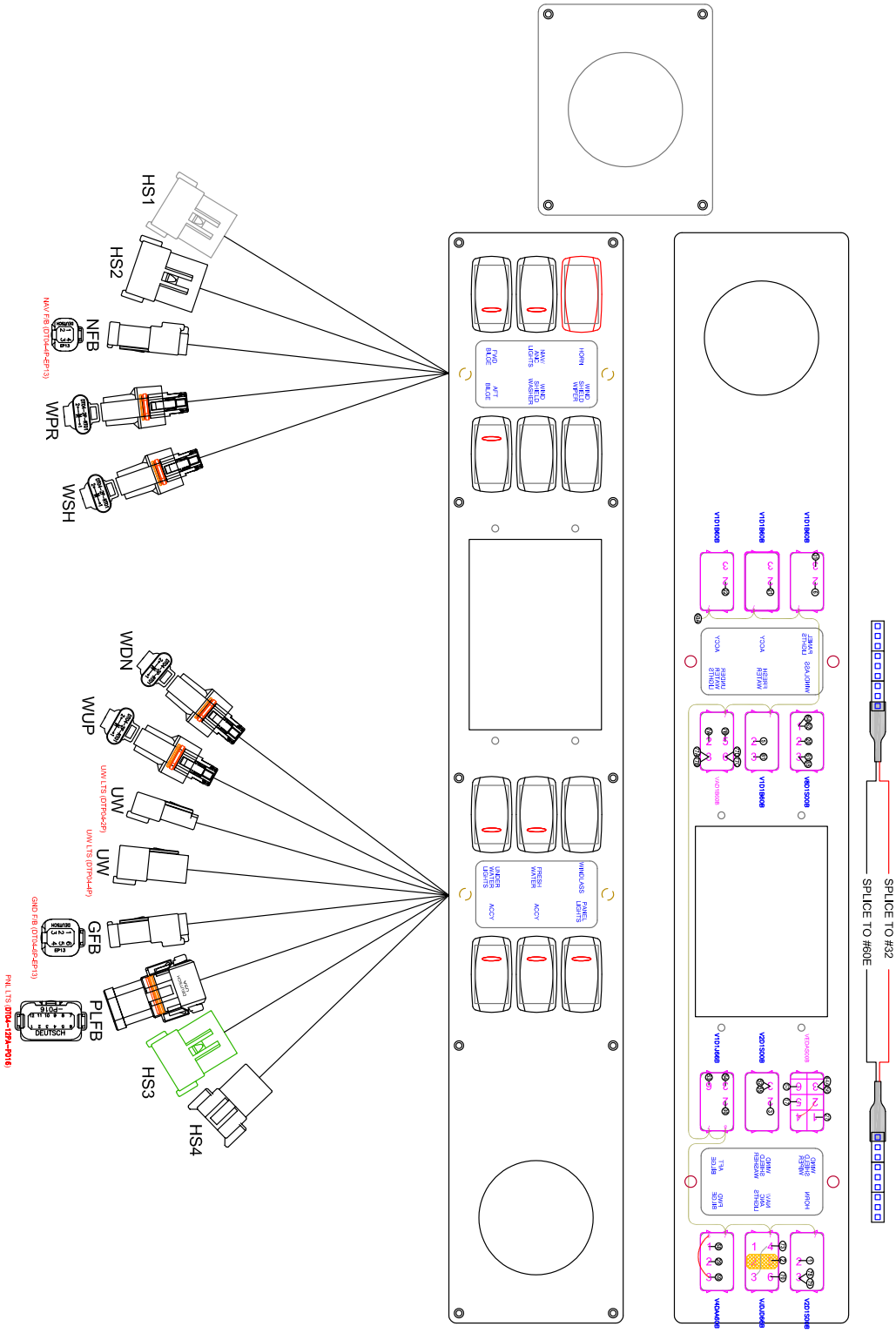


240/120V AC MAIN DISTRIBUTION PANEL TERMINATION DETAIL 3300009 S1



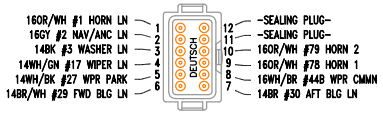
CONTINUES TO PAGE 1 OF 3

HELM FACE AND BACKSIDE WIRE DETAIL 3300012 S1



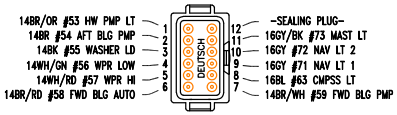
HELM PLUG DETAIL
3300012 S1

HS1 – HELM SWITCH (PORT)



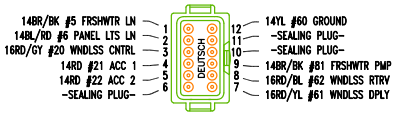
12WAY DEUTSCH DT RECEPT KEY "A"
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)
CAVITY PLUG (114017)

HS2 – HELM SW (PORT)



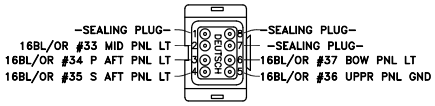
12WAY DEUTSCH DT RECEPT KEY "B"
CONNECTOR (DT04-12PB)
WEDGE LOCK (W12P)
CAVITY PLUG (114017)

HS3 – HELM SWITCH (STBD)



12WAY DEUTSCH DT RECEPT KEY "C"
CONNECTOR (DT04-12PC)
WEDGE LOCK (W12P)
CAVITY PLUG (114017)

HS4– HELM SWITCH (STBD)



8WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-08PA)
WEDGE LOCK (W8P)

WPR–WAY DEUTSCH DIODE
CONN – DT04–2P–RT01
CONN – DT06–2S–P012
LOCK – W2S–P012

#	WIRE DESCRIPTION
1	16WH/BR #44A WPR CMMN
2	16WH/BR #44B WPR CMMN

WSH–WAY DEUTSCH DIODE
CONN – DT04–2P–RT01
CONN – DT06–2S–P012
LOCK – W2S–P012

#	WIRE DESCRIPTION
1	16BK #52 WASHER DIODE
2	16YL #60D WASHER DIODE

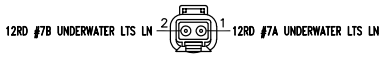
WUP–WAY DEUTSCH DIODE
CONN – DT04–2P–RT01
CONN – DT06–2S–P012
LOCK – W2S–P012

#	WIRE DESCRIPTION
1	16RD/BL #64 WNDLS RTRV DIODE
2	16YL #60B WNDLS RTRV DIODE

WDN–WAY DEUTSCH DIODE
CONN – DT04–2P–RT01
CONN – DT06–2S–P012
LOCK – W2S–P012

#	WIRE DESCRIPTION
1	16RD/YL #65 WNDLS DPLY DIODE
2	16YL #60C WNDLS DPLY DIODE

UW – UNDERWATER LTS LN

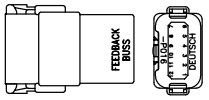


2WAY DEUTSCH DTP RECEPTACLE
CONNECTOR (DTP04-2P)
LOCKING WEDGE (WP2P)

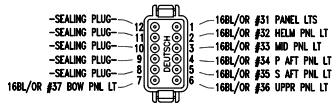
UW – UNDERWATER LTS LD



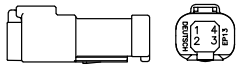
4WAY DEUTSCH DT PLUG
CONNECTOR (DTP04-4P)
WEDGE LOCK (WP4P)



PLFB – PANEL LTS FEEDBACK

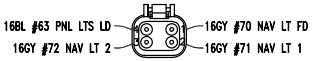


12WAY DEUTSCH DT PLUG
CONNECTOR (DT06-12SA-P012)
WEDGE (W12S-P012)

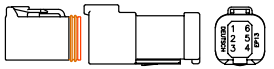


4WAY DT ENHANCED PLUG WITH RECPT FEEDBACK BUSS
CONN (DT06-4S-P012)
DIODE (DT04-4P-EP13)

NFB – NAV FEED BUSS

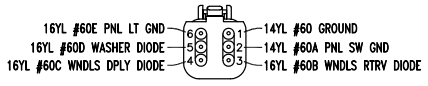


4WAY DEUTSCH DT PLUG
CONNECTOR (DT06-4S-P012)
LOCKING WEDGE (W4S-P012)



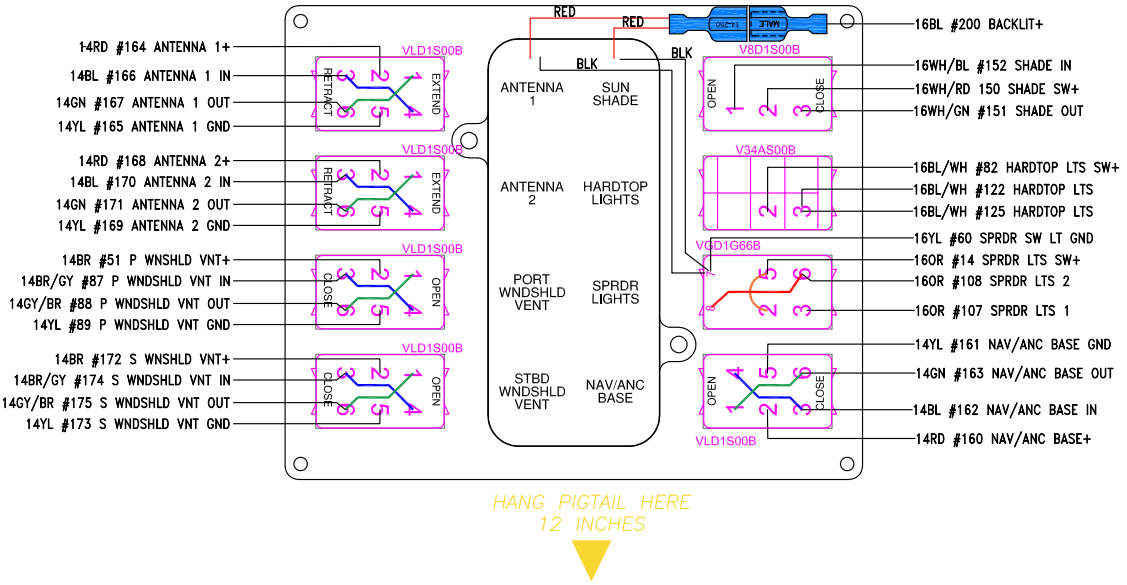
RECPT FEEDBACK BUSS
CONN (DT04-6P-EP13)

GFB–GROUND FEEDBACK



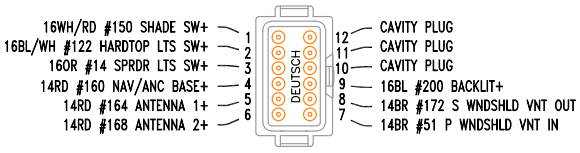
6WAY DEUTSCH DT PLUG
CONNECTOR (DT06-6S)-P012
WEDGE LOCK (W6S) -P012

UPPER HELM 3300013 S1



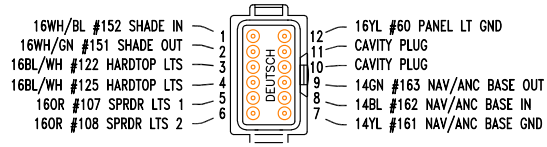
HANG PIGTAIL HERE
12 INCHES

HC1 – HARNESS CONNECT #1 (GREY)



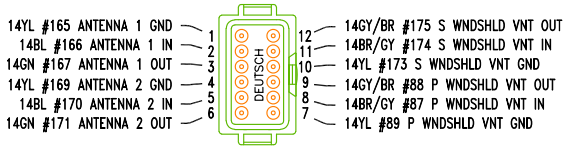
12WAY DEUTSCH DT RECEPT KEY "A"
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)
CAVITY PLUG (114017)

HC2 – HARNESS CONNECT #2 (BLACK)



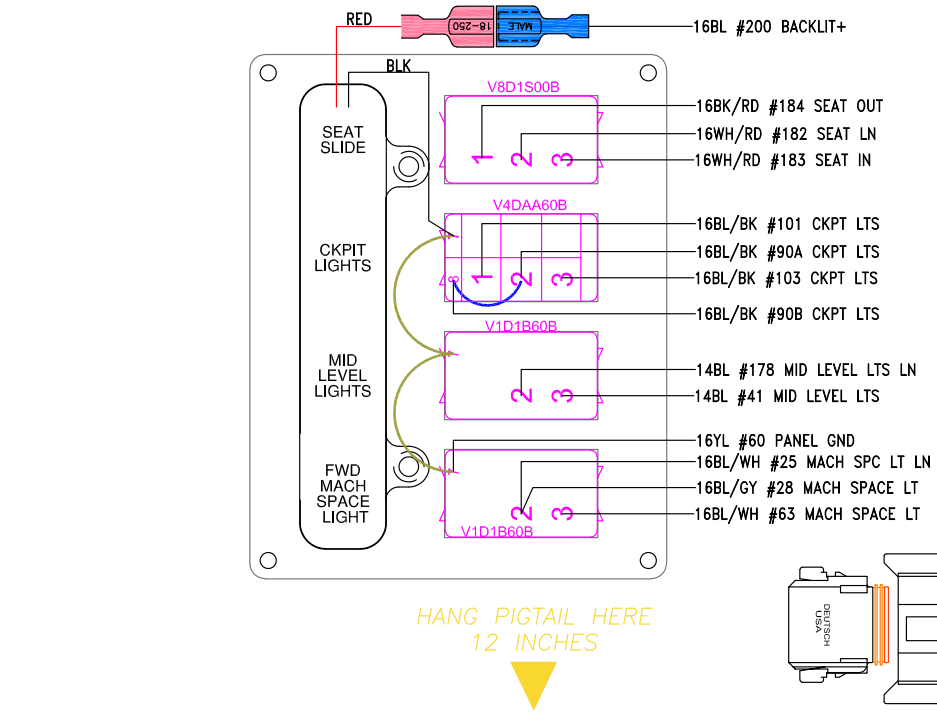
12WAY DEUTSCH DT RECEPT KEY "B"
CONNECTOR (DT04-12PB)
WEDGE LOCK (W12P)
SEALING PLUG (114017)

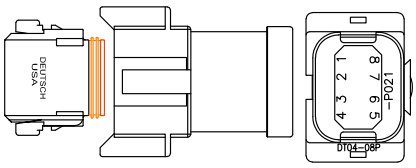
HC3 – HARNESS CONNECT #3 (GREEN)



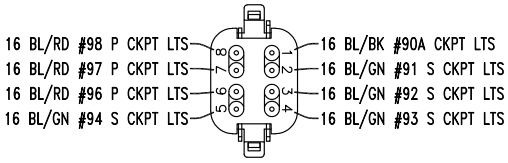
12WAY DEUTSCH DT RECEPT KEY "C"
CONNECTOR (DT04-12PC)
WEDGE LOCK (W12P)
CAVITY PLUG (114017)

MIDSHIP 3300190 S1



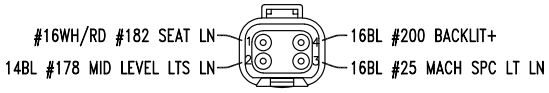


CKPT LT FEEDBACK

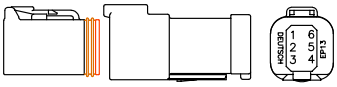


8WAY DEUTSCH DT PLUG
CONNECTOR (DT06-8SA)
WEDGE LOCK (W8S)

HC1 - HARNESS CONNECT #1

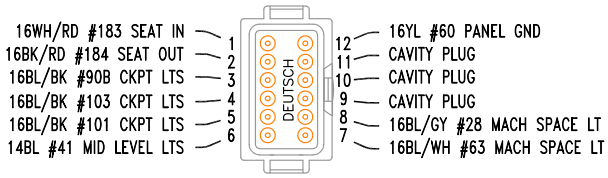


4WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-4P)
LOCKING WEDGE (W4P)



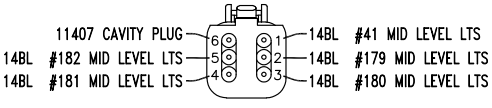
RECPT FEEDBACK BUSS
CONN (DT04-6P-EP13)

HC2 - HARNESS CONNECT #2 (GREY)



12WAY DEUTSCH DT RECEPT KEY "A"
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)
CAVITY PLUG (114017)

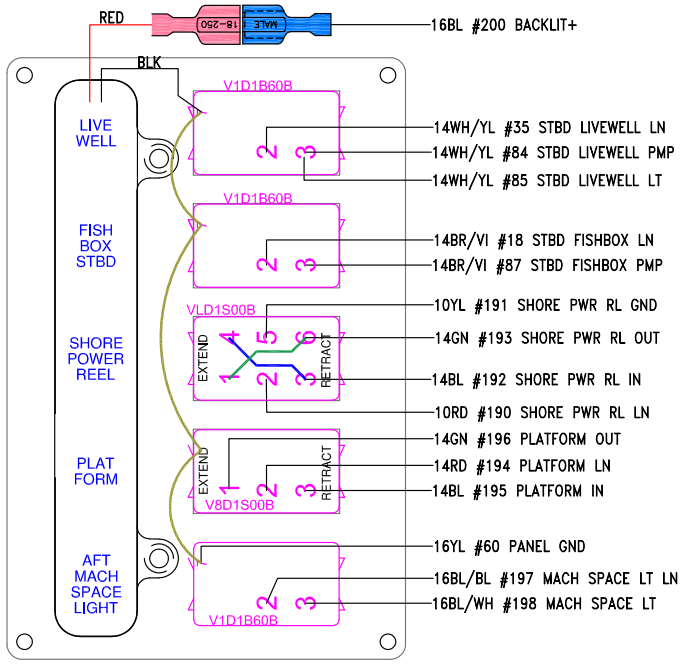
MID LEVEL FEEDBACK



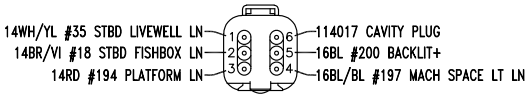
6WAY DEUTSCH DT PLUG
CONNECTOR (DT06-6S)
WEDGE LOCK (W6S)

P012
P012

STBD AFT 3300193 S1

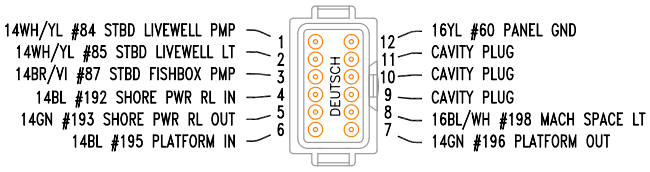


HC1 – HARNESS CONNECT #1



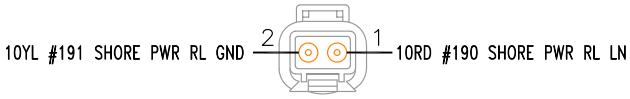
6WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-6P)
WEDGE LOCK (W6P)

HC2 – HARNESS CONNECT #2 (GREY)



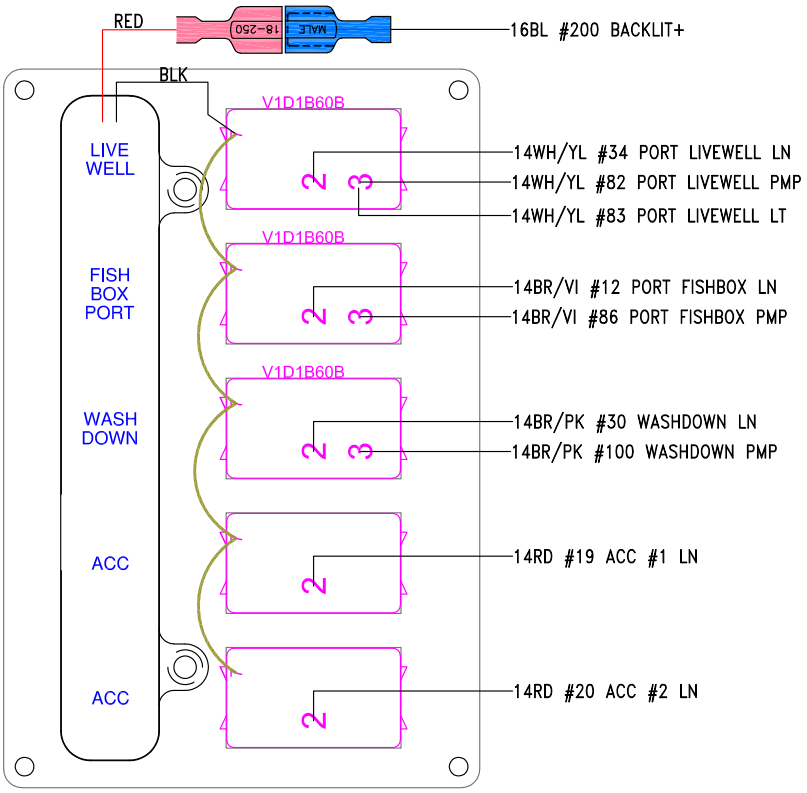
12WAY DEUTSCH DT RECEPT KEY "A"
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)
CAVITY PLUG (114017)

HC3 – HARNESS CONNECT #3



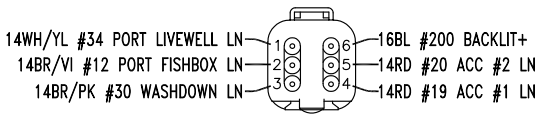
2WAY DEUTSCH DTP RECPT W/PINS
CONNECTOR GRY (DTP04-2P)
LOCKING WEDGE ORG (WP2P)

PORT AFT 3300195 S1



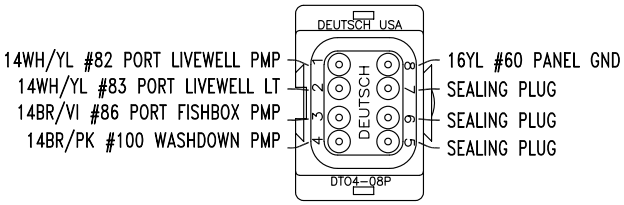
HANG PIGTAIL HERE
12 INCHES

HC1 – HARNESS CONNECT #1



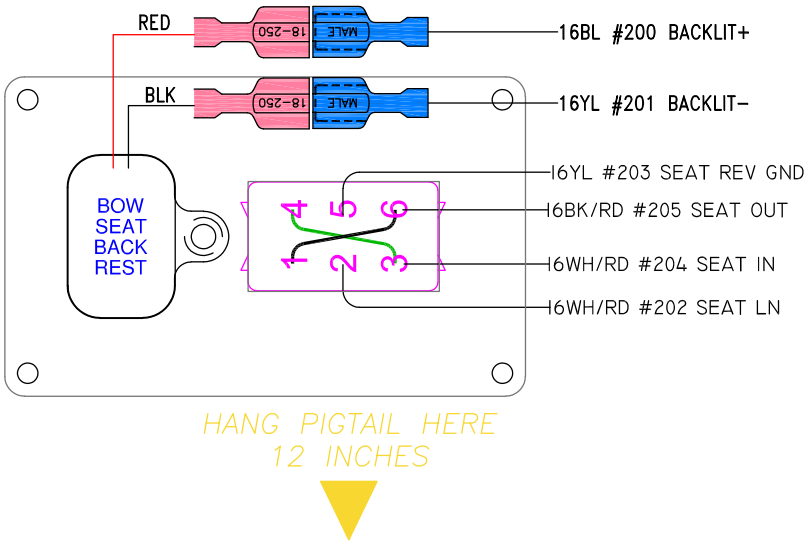
6WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-6P)
WEDGE LOCK (W6P)

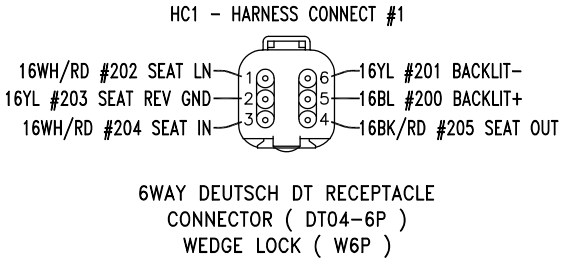
HC2 – HARNESS CONNECT #2



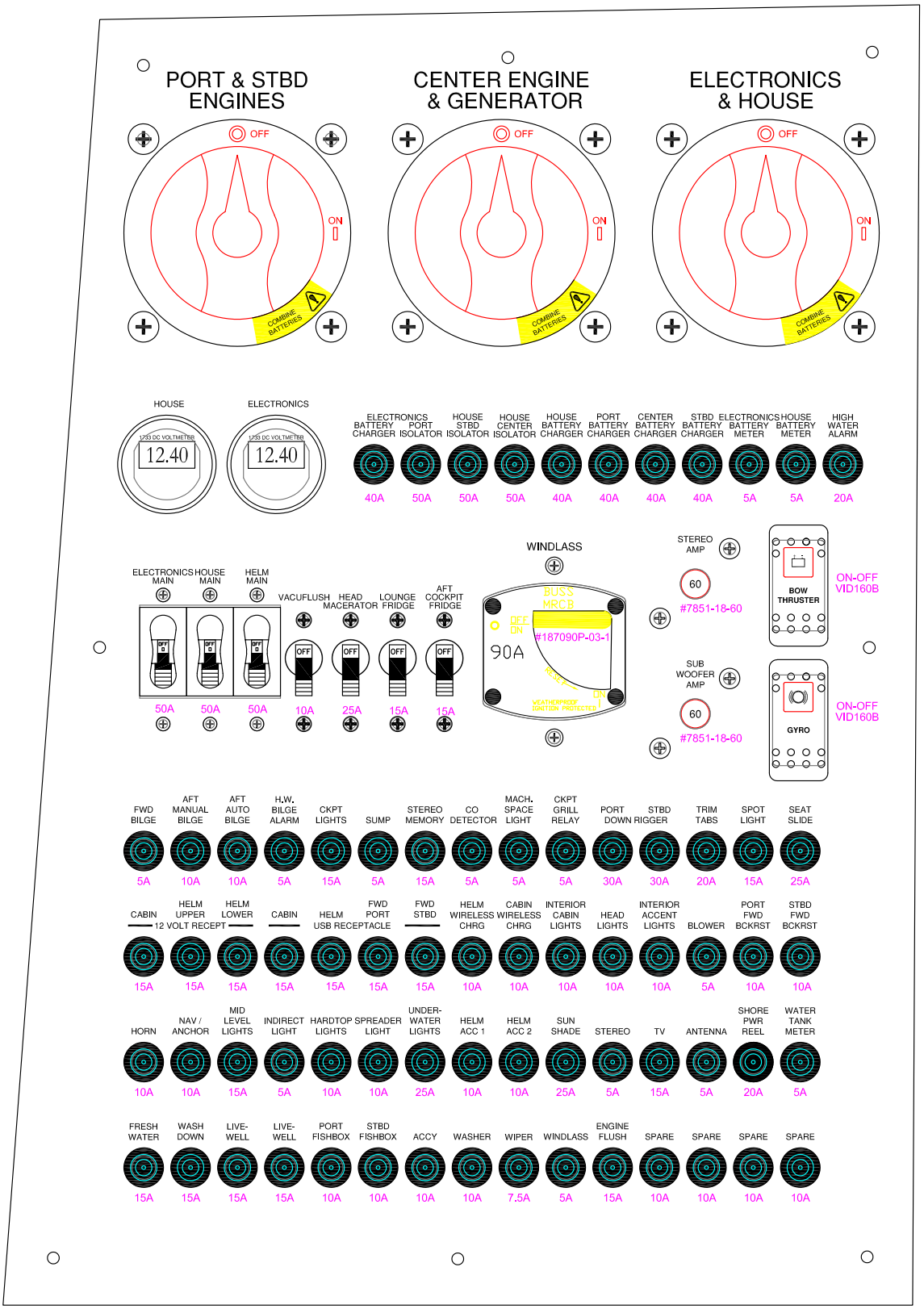
8-WAY DEUTSCH DT RECPT
CONNECTOR (DT04-08PA)
WEDGE LOCK (W8P)
CAVITY SEAL (114017)

BOW SEAT
PORT & STBD 3300197
S1





3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(FACE)



3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL (TERMINATIONS 2)

PORT DOWNRIGGER

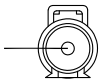
8GA RED #37



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SEI - STBD ENGINE ISOLATOR

4GA RED #53



1WAY DEUTSCH 6 - 4 DTHD RECPT
CONNECTOR (DTHD04-1-4P)

CC - CENTER CHARGER

10GA ORANGE #59



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

STBD DOWNRIGGER

8GA RED #38



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

HC - HOUSE CHARGER

10GA ORANGE / BLACK #54



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SL - SPOT LIGHT

10GA BLUE/ORANGE #67



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

CKF - CKPT FRIDGE

8GA RED #50



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

EC - ELECTRONICS CHARGER

10GA ORANGE / WHITE #55



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

CF - CBN FRIDGE

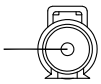
10GA RED #78



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

CEI - CENTER ENGINE ISOLATOR

4GA RED #51



1WAY DEUTSCH 6 - 4 DTHD RECPT
CONNECTOR (DTHD04-1-4P)

PC - PORT CHARGER

10GA ORANGE / RED #56



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SR - SHORE REEL

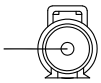
10GA RED #81



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

PEI - PORT ENGINE ISOLATOR

4GA RED #52



1WAY DEUTSCH 6 - 4 DTHD RECPT
CONNECTOR (DTHD04-1-4P)

SC - STBD CHARGER

10GA ORANGE / GREEN #57



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

SS - SEAT SLIDE

10GA RED #91



1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

ELC - ELECTRONICS

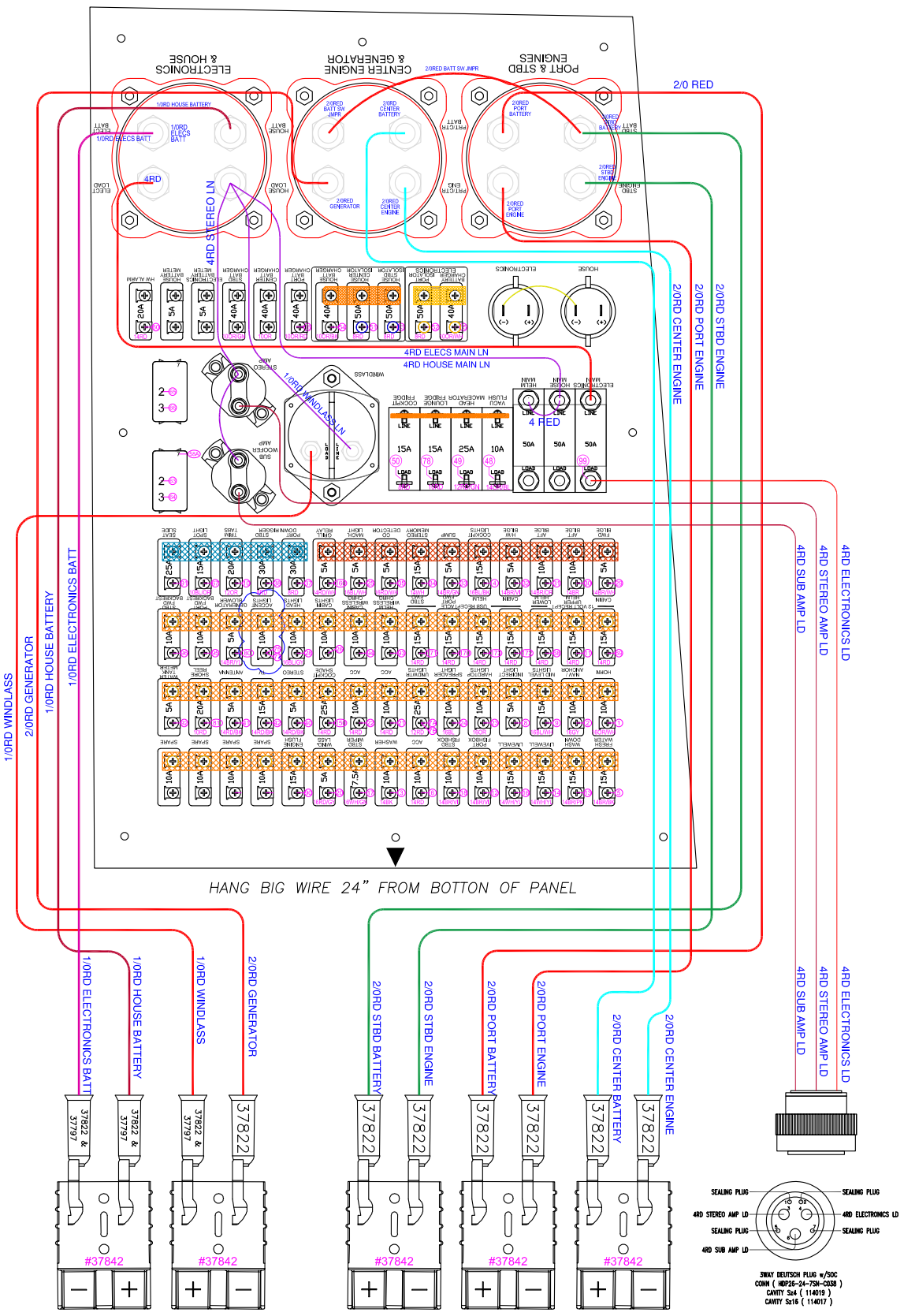
8GA RED #99



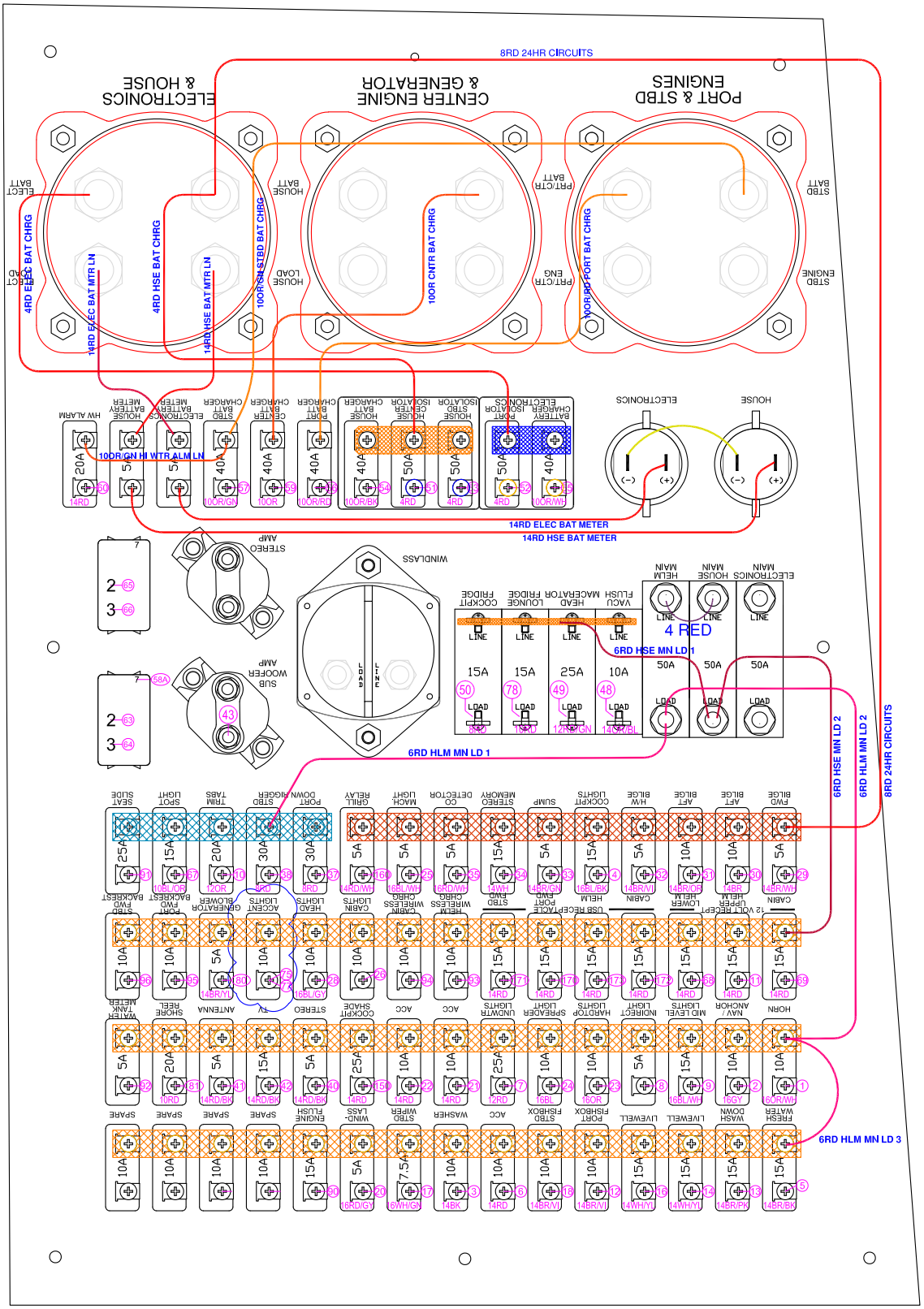
1WAY DEUTSCH 8-10 DTHD RECPT
CONNECTOR (DTHD-04-1-8-P)

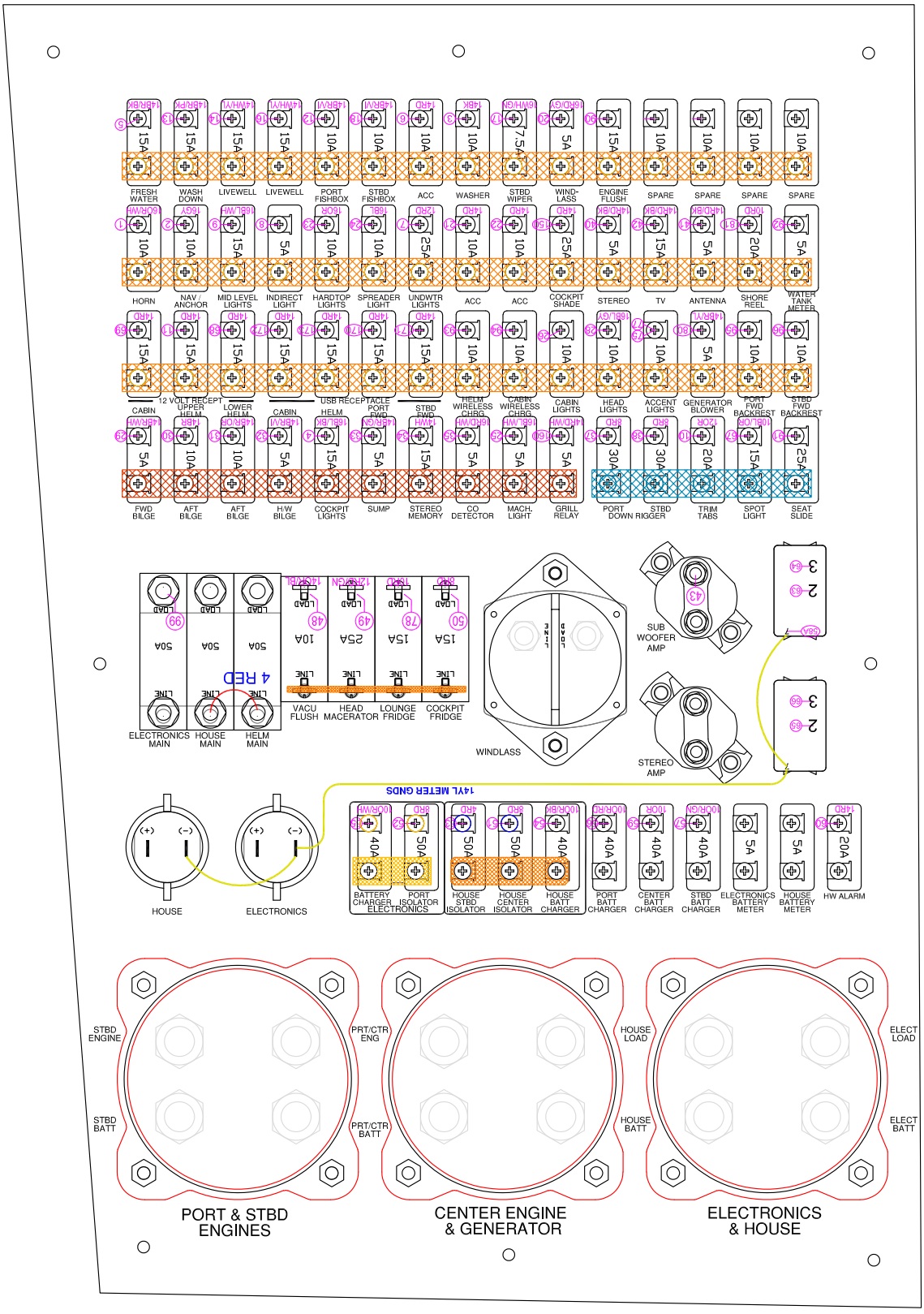
Schematics

3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(LARGE GA WIRE DETAIL)



3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(MEDIUM GA WIRE DETAIL)

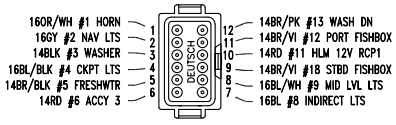




3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL
(SMALL GA WIRE DETAIL)

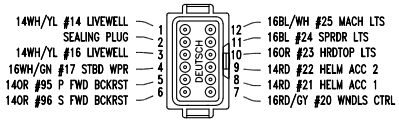
3309771 S378 (S7) 12V MAIN DISTRIBUTION PANEL (TERMINATIONS 1)

HC1 – HARNESS CONNECT #1 (GRAY)



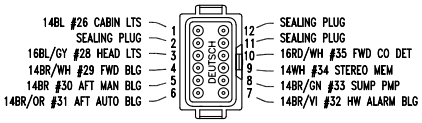
12WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)

HC2 – HARNESS CONNECT #2 (BLACK)



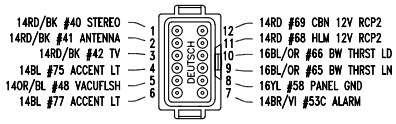
12WAY DEUTSCH DT RECEPTACLE
BLACK CONNECTOR (DT04-12PB)
WEDGE LOCK (W12P)

HC3 – HARNESS CONNECT #3 (GREEN)



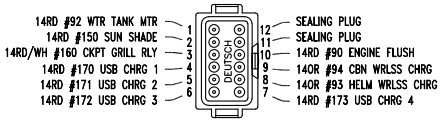
12WAY DEUTSCH DT RECEPTACLE
LT. GREEN CONNECTOR (DT04-12PC)
WEDGE LOCK (W12P)

HC4 – HARNESS CONNECT #4 (BROWN)



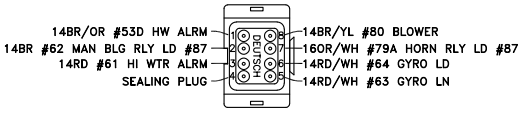
12WAY DEUTSCH DT RECEPTACLE
BROWN CONNECTOR (DT04-12PD)
WEDGE LOCK (W12P)

HC6 – HARNESS CONNECT #6(GRAY)



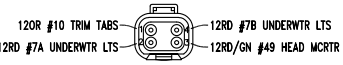
12WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-12PA)
WEDGE LOCK (W12P)

HC5 – HARNESS CONNECT #5

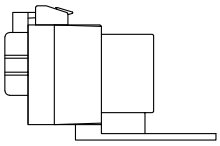


8WAY DEUTSCH DT RECEPTACLE
CONNECTOR (DT04-8PA)
WEDGE LOCK (W8P)

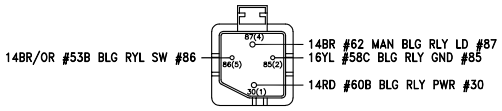
HC7 – HARNESS CONNECT #7



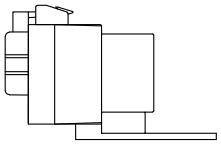
4WAY DEUTSCH DTP RECEPTACLE
CONNECTOR (DTP04-4P)
LOCKING WEDGE (WP4P)



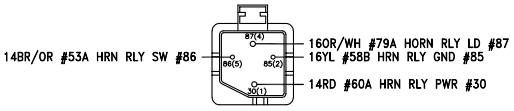
BILGE RELAY



4-WAY PLUG 630 BASE W/RELAY
PULL-TO-SEAT TERMINALS
CONN (12065686)
RELAY 87411
TERM 14-16 (12066614)
TERM 10-12 (12033997)



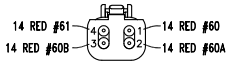
HORN RELAY



4-WAY PLUG 630 BASE W/RELAY
PULL-TO-SEAT TERMINALS
CONN (12065686)
RELAY 87411
TERM 14-16 (12066614)
TERM 10-12 (12033997)

NOTE:
ADD DT04-4P-EP13

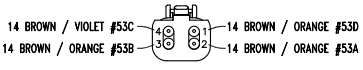
HW ALARM FEEDBACK



4WAY DEUTSCH DT PLUG
CONNECTOR (DT06-4S)
WEDGE LOCK (W4S)

ADD DT04-4P-EP13

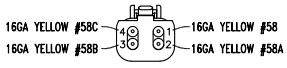
HW BILGE FEEDBACK



4WAY DEUTSCH DT PLUG
CONNECTOR (DT06-4S)
WEDGE LOCK (W4S)

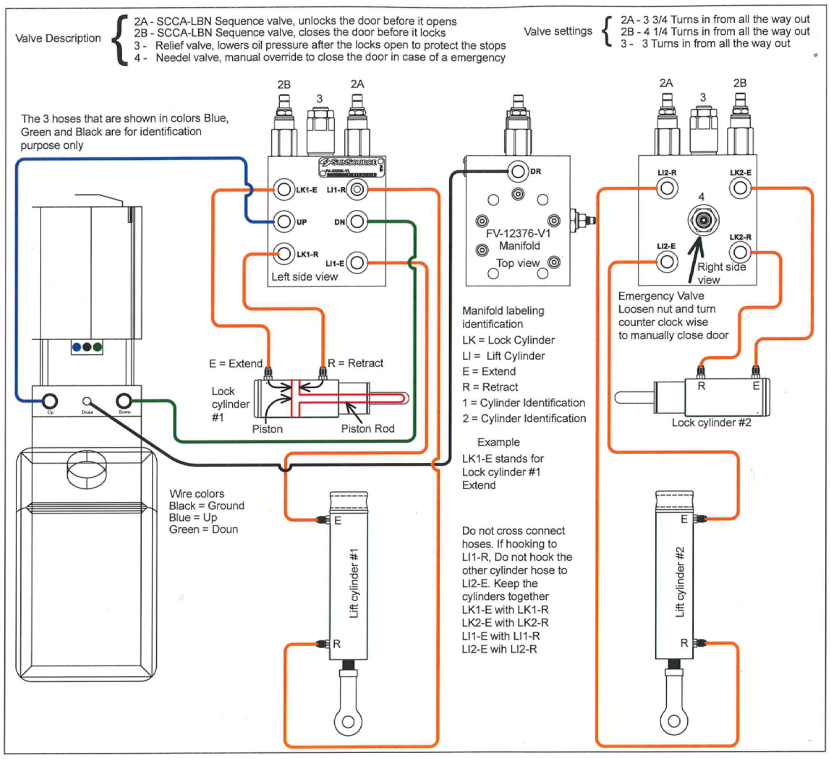
ADD DT04-4P-EP13

GROUND FEEDBACK



4WAY DEUTSCH DT PLUG
CONNECTOR (DT06-4S)
WEDGE LOCK (W4S)

Schematics


Valve Description
2A - SCCA-LBN Sequence valve, unlocks the door before it opens
2B - SCCA-LBN Sequence valve, closes the door before it locks
3 - Relief valve, lowers oil pressure after the locks open to protect the stops
4 - Needel valve, manual override to close the door in case of a emergency
Valve settings
2A - 3 3/4 Turns in from all the way out
2B - 4 1/4 Turns in from all the way out
3 - 3 Turns in from all the way out
The 3 hoses that are shown in colors Blue, Green and Black are for identification purpose only
2B
3
2A
LK1-E
LI1-R
UP
DN
LK1-R
LI1-E
Left side view
E = Extend
R = Retract
Lock cylinder #1
Piston
Piston Rod
Wire colors
Black = Ground
Blue = Up
Green = Doun
Lift cylinder #1
E
R
DR
FV-12376-V1
Manifold
Top view
Manifold labeling identification
LK = Lock Cylinder
LI = Lift Cylinder
E = Extend
R = Retract
1 = Cylinder Identification
2 = Cylinder Identification
Example
LK1-E stands for Lock cylinder #1 Extend
Do not cross connect hoses. If hooking to LI1-R, Do not hook the other cylinder hose to LI2-E. Keep the cylinders together
LK1-E with LK1-R
LK2-E with LK2-R
LI1-E with LI1-R
LI2-E wih LI2-R
2A
3
2B
LI2-R
LK2-E
4
LI2-E
LK2-R
Right side view
Emergency Valve
Loosen nut and turn counter clock wise to manually close door
R
E
Lock cylinder #2
Lift cylinder #2

BLEEDING PROCEDURE

First purge system using pump:
Open emergency valve by loosening lock nut and using allen key to loosen needle valve set screw all the way until it stops. Run hydraulic pump both directions. Reengage needle valve screw and lock nut.

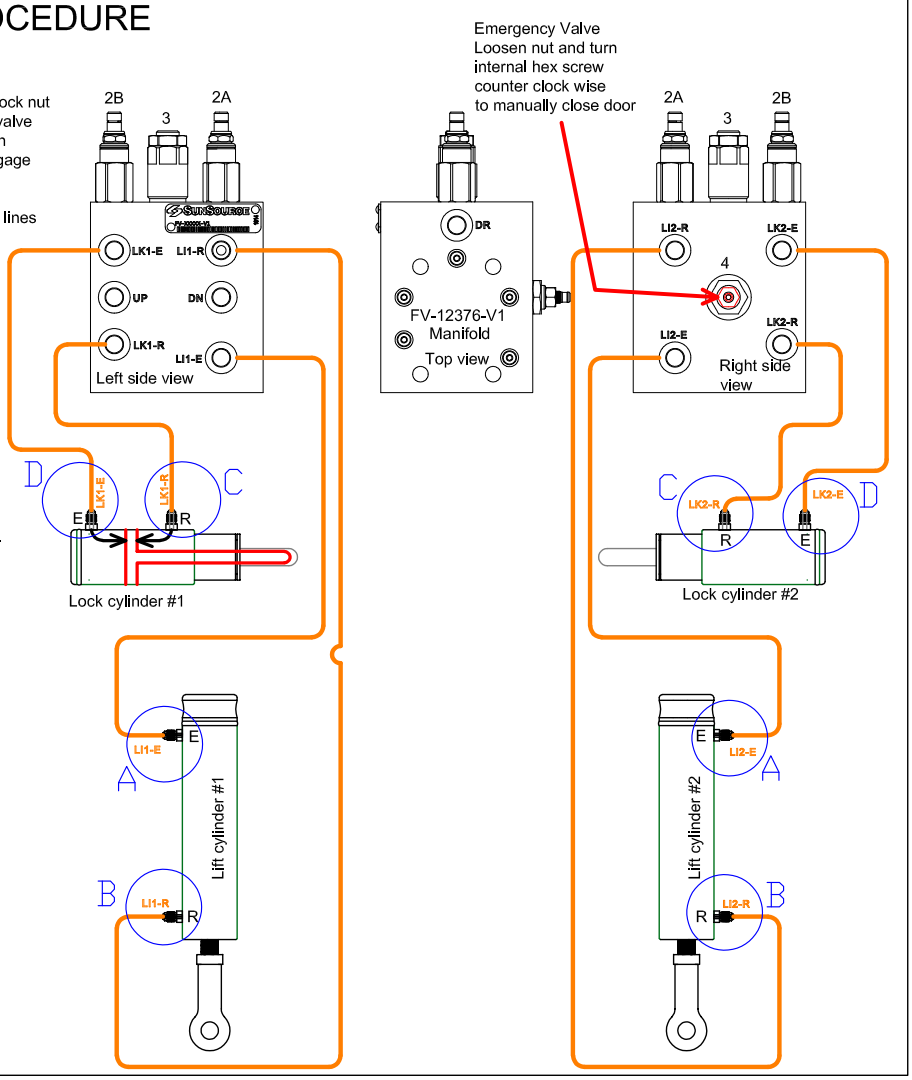
If issues not resolved, purge hydraulic lines individually.

A: Door in fully down position disconnect LI1-E and LI2-E. Actuate door up until fluid purges from both lines. Reconnect lines.

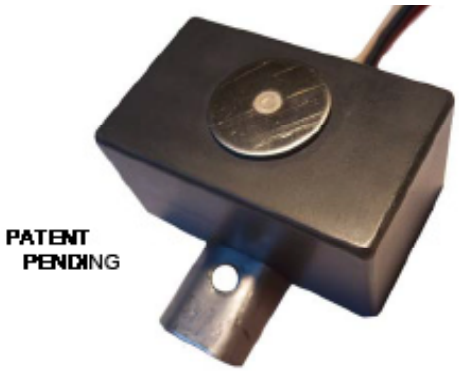
B: Door in fully up position with lock not extended (about just starting to extend) disconnect LI1-R and LI2-R. Actuate door down. Reconnect.

C: Door in fully up position and locked. Disconnect LK1-R and LK2-R. Actuate door down. Reconnect

D: Door in fully up position (or just before fully up position) disconnect LK1-E and LK2-E. Actuate door up.



WATER WITCH®



PATENT PENDING

Float Switch Replacement

Model 101
101-24

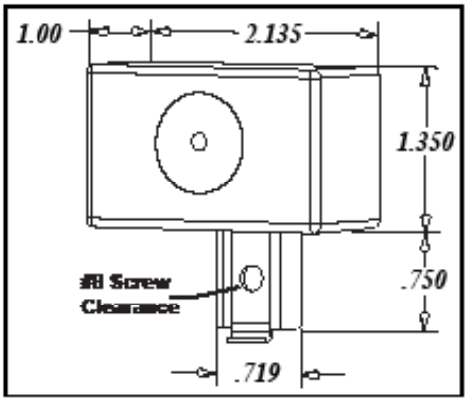
- MERCURY FREE
- OILS AND FUELS — Will not activate switch
- SIMPLE INSTALLATION — Mounts at any angle
- DELAY ON — To avoid false pump cycles
- DELAY OFF — Controls standing water level
- ELECTRONIC — No wear, sticking, or electrolysis
- STAINLESS STEEL METAL PARTS
- EXCEEDS BOTH U.S. COAST GUARD & U.L. STANDARDS
- 20 YEARS — Marine experience

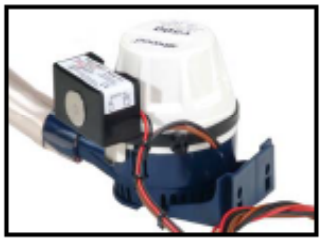
5 YEAR LIMITED WARRANTY

MEMBER ABYC
Setting Standards for Safer Boating

SPECIFICATIONS:

Power Required:	12 Vdc (Model 101) 24 Vdc (Model 101-24)
Power used:	.004 Amps.
Size:	2.135" W x 1.350" H x 1"D
Weight:	3 Ounces
Delay on:	6-8 Seconds
Delay off:	14-16 Seconds
Max load:	15 Amps. (Model 101) 10 Amps. (Model 101-24)





TOP MOUNT



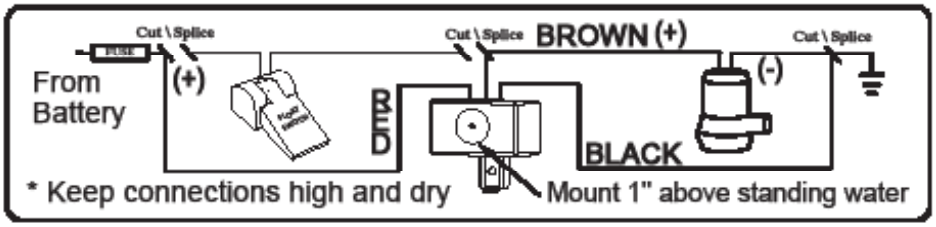
HOSE MOUNT



Replacing your old float switch

Confirm float being replaced is on the positive (+) side of the pump.

1. Cut and splice the RED wire on the model 101 to the (+) wire coming from the battery .
2. Cut and splice the BROWN wire from the model 101 to the positive pump wire.
3. Cut and splice the BLACK wire on the model 101 to common ground (-).



CAUTION:

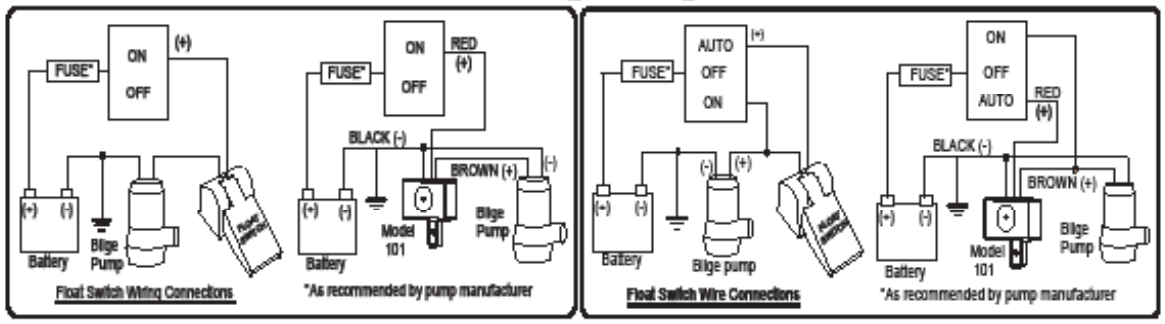
- Connecting the BROWN wire to ground, as this may damage the switch.
- Mount the Model 101 with sensor about 1" above standing water in your bilge.
- Make all wire connections sealed and above any water contact.

TESTING:

Test the Water Witch by placing a wet rag across the sensor and the metal mounting bracket for the 8 second delay period required to turn on the pump.

Every time power is applied, the Water Witch will operate the pump for several seconds in a self calibrate mode.

Common Wiring Configurations



2-way switch **3-way switch**

NOTE:

If large amounts of rain water can enter the bilge, it may dilute the normal, fresh or salt, water outside our sensitivity window. Corrective action can be to switch pump on manually to remove diluted water or to add minerals such as salt, baking soda, bilge cleaners, etc.... NORMAL FRESH WATER HAS AMPLE MINERAL CONTENT FOR PROPER OPERATION.

LIMITED WARRANTY

WATER WITCH, INC. warrants this control for a period of 5 years from the date of purchase against defects in material and workmanship providing it has not been subject to physical or electrical abuse or misuse. If it ceases to operate, return control, freight prepaid, with a copy of your sales receipt. Water Witch, Inc. reserves the right to repair or replace the control at its option. IN NO EVENT WILL WATER WITCH, INC. BE LIABLE FOR MORE THAN THE REPLACEMENT COST OF THE CONTROL UNDER THIS WRITTEN WARRANTY OR UNDER ANY IMPLIED WARRANTY OR MERCHANTABILITY. This warranty gives you specific legal rights. However, you may also have other rights which vary from state to state and country to country.

Water Witch, Inc. PO Box 710447 Santee, California 92072
1-800-654-4783 e-mail: info@WaterWitchInc.com www.WaterWitchInc.com

Phone (772) 220-6652

MARINE PRODUCTS BY BAUSCH ENTERPRISES, INC.

Fax (772) 220-6653

Location: 3171 SE Waaler St., Stuart, FL 34997

Mailing: P.O. Box 326, Port Salerno, FL 34992

WARRANTY - O.E.M. ALUMINUM PRODUCTS

EFFECTIVE JANUARY 1, 1998

1) ALL ALUMINUM PRODUCTS DESIGNED AND FABRICATED BY BAUSCH ENTERPRISES ARE WARRANTED FOR A PERIOD OF TWO YEARS AGAINST BREAKAGE UNDER NORMAL CONDITIONS AND PROPER MAINTENANCE.

2) PRODUCT DESIGNS SUBMITTED TO BAUSCH ENTERPRISES BY O.E.M. CUSTOMERS MUST PASS BAUSCH ENTERPRISES TESTING PROCEDURES TO BE ELIGIBLE FOR WARRANTY COVERAGE.

3) WARRANTY DOES NOT INCLUDE FINISHES OR ACCESSORY ITEMS SUCH AS OUTRIGGERS, ROD HOLDERS, ETC. NOT MANUFACTURED BY BAUSCH ENTERPRISES.

4) INSTALLATION OF AFTERMARKET ACCESSORIES SUCH AS OUTRIGGERS, ELECTRONICS BOXES, ETC. BY A DEALER OR BOAT OWNER WILL VOID WARRANTY UNLESS APPROVED BY BAUSCH ENTERPRISES.

5) UNLESS OTHERWISE APPROVED, ALL WARRANTY REPAIRS TO BE PERFORMED AT BAUSCH ENTERPRISES. IN THE EVENT A "FIELD" REPAIR IS NECESSARY A WRITTEN QUOTE MUST BE SUBMITTED FOR APPROVAL BY BAUSCH ENTERPRISES PRIOR TO WORK BEING PERFORMED.

6) WELD CRACKS OR ANY OTHER SUSPECT PROBLEMS SHOULD BE ATTENDED TO IMMEDIATELY. FAILURE TO DO SO MAY RESULT IN FURTHER UNNECESSARY DAMAGE.

7) BAUSCH ENTERPRISES RESERVES THE RIGHT TO REFUSE ANY WARRANTY CLAIM IN THE EVENT OF OBVIOUS ABUSE, INCORRECT INSTALLATION AND/OR IMPROPER MAINTENANCE.

8) CLAIMS TO BE SUBMITTED TO BAUSCH ENTERPRISES BY THE BOAT MANUFACTURER.

Phone (772) 220-6652

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Mailing: P.O. Box 326, Port Salerno, FL 34992

MAINTENANCE GUIDELINES FOR BAUSCH ENTERPRISES ALUMINUM PRODUCTS

BAUSCH ENTERPRISES IS PROUD TO BE PROVIDING HIGH QUALITY ALUMINUM MARINE PRODUCTS TO THE BOATING INDUSTRY.

ALL BAUSCH PRODUCTS ARE MANUFACTURED WITH ONLY THE HIGHEST QUALITY MATERIALS AVAILABLE TO INSURE NOT ONLY LASTING STRUCTURAL INTEGRITY, BUT ALSO LONG LASTING ATTRACTIVE APPEARANCE.

TO KEEP YOUR ALUMINUM PRODUCTS LOOKING GOOD AND PERFORMING WELL, WE SUGGEST THE FOLLOWING GUIDELINES.

1. ROUTINE CLEANING - THOROUGHLY WASH AND CHAMOIS ALL ANODIZED ALUMINUM PARTS WITH FRESH WATER AFTER EACH USE. PARTICULAR ATTENTION MUST BE PAID TO TOPS WITH ALUMINUM FRAMES EQUIPPED WITH CANVAS OR FIBERGLASS TOPS. THE AREAS DIRECTLY UNDER THE TOPS COLLECT MOISTURE, SALT AND DIRT AND ARE MORE PRONE TO PITTING IF NOT CLEANED OFTEN. CLEANING OF STORED BOATS AT LEAST WEEKLY IS RECOMMENDED ESPECIALLY IF STORED OUTSIDE AND SUBJECT TO SALT SPRAY, ROAD FILM, ETC.

2. PROTECTION - ANODIZED ALUMINUM PARTS SHOULD BE COATED WITH A METAL PROTECTOR AT LEAST ONCE EVERY TWO MONTHS. BAUSCH ENTERPRISES RECOMMENDS RUPP ALUMA GUARD OR SIMILAR NON ABRASIVE METAL PROTECTOR.

3. WHITE SPOTS AND STAINS MAY BE CAUSED BY SOAP DRYING ON THE ALUMINUM AND/OR WATER IMPURITIES.

4. ROUTINELY CHECK ALL BOLTS AND FASTENERS. ROUTINE BOAT OPERATION CAN CAUSE LOOSENING OF FASTENERS AND MAY RESULT IN WELD FATIGUE IF NOT CORRECTED.

5. MAIN LEGS AND BRACES MAY COLLECT WATER INSIDE THE PIPE. DRAIN HOLES ARE DRILLED NEAR THE MOUNTING PADS AND MUST BE KEPT CLEAN TO PREVENT WATER FROM COLLECTING AND POSSIBLY FREEZING IN NORTHERN CLIMATES. WATER FREEZING IN THE PIPE CAN RESULT IN PIPE SPLITTING AND/OR WELD CRACKING.

FOR ANY QUESTIONS, PLEASE CALL DANA OR TODD BAUSCH AT 772-220-6652 OR E-MAIL DANA@BAUSCHENTERPRISES.COM

Aquatic Invasive Species

Aquatic invasive species (AIS) are plants and animals that occur in waters in which they are not native and whose introduction causes or is likely to cause economic or environmental damage or harm to human health. AIS have a negative impact on the waterway, its native species, and recreational and commercial uses of the waterway. As responsible boaters and citizens, each boat owner should do their r part to prevent the spread of these aquatic hitchhikers. In many cases, it is also required by law. Check local regulations for any waterway where you will boat. After each boating trip, follow these three simple steps before you leave the water access to stop the spread of AIS: Clean, Drain, and Dry. This is the boater's way to help protect the environment from the damage that AIS can cause.



STOP AQUATIC HITCHHIKERS!™

Be A Good Steward.
Clean. Drain. Dry.
StopAquaticHitchhikers.org

PATHWAYS OF AQUATIC INVASIVE SPECIES

We are living in a very different era where goods, people and services are being shipped around the world. Because of this globalized economy, different species are hitchhiking through many different pathways. Species can be moved to new locations in many ways, and most are a result of human activity, including recreational activities. Some common ways that species may be moved during recreational boating and other activities include:

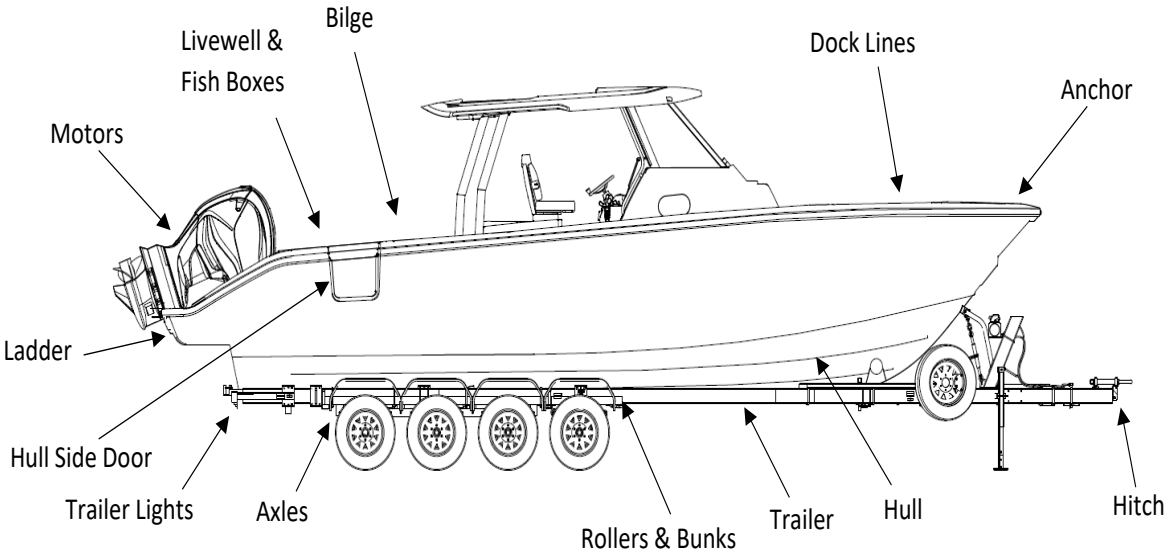
- Attaching to watercraft, trailers, motor and fishing gear.
- Transport by water ballast water, bilge, and other water containing devices.
- Dumping of unwanted live bait.
- Tangled in fishing lines and downrigger cables
- Sticking to the soles of waders
- Trapped in mud on a dog's paws

Just one organism, or in some case a piece of a plant, is enough to start a new invasion.

GENERAL CLEAN DRAIN DRY PROCEDURE

Clean, Drain, Dry… In every waterbody, every time.

Preventing the spread of aquatic invasive species starts with you. A cooperative effort is necessary by all persons and agencies involved with recreational activities to achieve the best results and protect our aquatic resources and recreational opportunities. The general Clean Drain Dry procedure is described below:



CLEAN

Clean off visible aquatic plants, animals, and mud from all equipment before leaving water access. Inspect and clean motor or engine, including the lower unit and motor mounts; trailer, including axles, bunks, and rollers; anchors; dock lines; and equipment before leaving the water body.

- Rinse equipment and boat hulls (with high pressure, hot water when possible)
- Rinse interior compartments of boats with low pressure, hot water (120°F) for a minimum of 130 seconds contact time.
- Flush motor with hot water (120°F) for 2 minutes (or according to owner's manual)

DRAIN

Drain the motor, motor cooling system, bilge, live well, fish box, and other water containing devices before leaving water access.

DRY

Allow the boat to completely dry OR wipe with a towel before reuse, before visiting any other bodies of water. For ANGLERS, the additional step of DISPOSE is recommended.

DISPOSE

Dispose of unwanted bait, worms, and fish parts in the trash. When keeping live bait, drain bait container and replace with spring or dechlorinated tap water. Never dump live fish or other organisms from one water body into another. Together the three steps of Clean Drain Dry greatly minimizes the risk of spreading Aquatic Hitchhikers into new locations.

- Cleaning will remove visible large-bodied organisms attached to or in watercraft or recreational equipment. Rinsing with water removes organisms, while hot water often kills them. Water at least 120°F is recommended; be sure to avoid contact with skin and check manufacturers' recommendations to ensure equipment can withstand high temperatures. If hot water is not available or may cause damage, rinsing with tap water and completely drying will help prevent spread of aquatic invasive species.
- Draining removes small and nearly invisible organisms such as zebra mussel larvae (veligers) potentially entrained in water containing devices.
- Drying is necessary as many organisms can survive in standing water.

A note about chemicals. The use of chemical prophylactics or disinfectants (e.g., bleach) are not recommended for treating watercraft and recreational equipment. Chemicals may:

- Damage equipment or components
- Cause environmental damage
- Harm human health
- May not be effective against many aquatic invasive species

Report new sightings. If you think you have found an invasive species, note its exact location and, if possible, take a photo. Report new sightings to the appropriate authorities or use the USGS Sighting Report Form.

Know the rules! Specimens are needed to confirm sightings, but some jurisdictions prohibit possession and transport of invasive aquatic plants and animals. Before collecting specimens, contact your local natural resource management agency for instructions. Unauthorized introduction of plants, fish, or invertebrates into the wild is illegal in most states. Protect your property and our waters.

Remember that AIS Threaten the Environment, Recreation, Economy, and Human Health. Refer to the Stop Aquatic Hitchhikers! Website for more details (www.StopAquaticHitchhikers.org).

Operator Notes

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PURSUIT