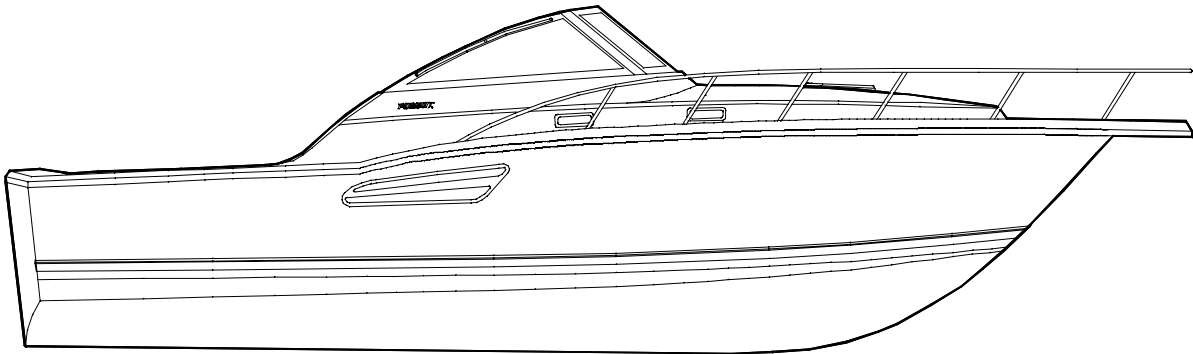


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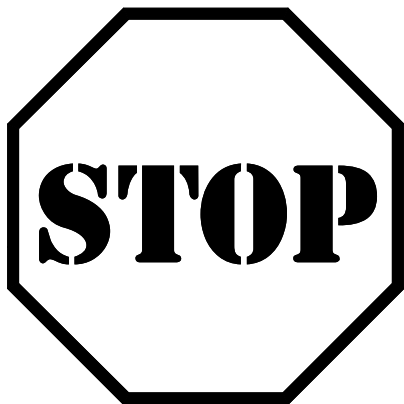
3400 EXPRESS FISHERMAN

Owner's Manual



PURSUIT FISHING BOATS
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A DIVISION OF S2 YACHTS, INC.



READ THIS FIRST

The Owner's Manual for your new **PURSUIT** 3400 Express Fisherman has been carefully prepared to include all the necessary information for the safe operation and maintenance of your boat. Before going any further, please help us to assure this by checking your manual to be sure it includes the following pages. After checking, please return this page to us in the envelope provided, and we'll send you a free gift! Please indicate any missing items so that we may send them to you. We have also included a copy of this page for your future reference. Thank you for your help.

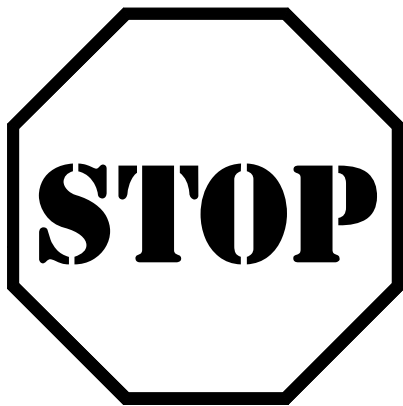
- ☐ Cover Page
- ☐ Letter from Leon Slikkers
- ☐ "Important Information" Page
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- ☐ Chapter 1: Exterior Equipment and Features . pages 1-1 to 1-26
- ☐ Chapter 2: Interior Equipment and Features . pages 2-1 to 2-8
- ☐ Chapter 3: Operating Your Boat pages 3-1 to 3-10
- ☐ Chapter 4: Electrical Systems. pages 4-1 to 4-12
- ☐ Chapter 5: Commissioning Your Boat pages 5-1 to 5-10
- ☐ Chapter 6: Routine Maintenance pages 6-1 to 6-20
- ☐ Chapter 7: Storing and Winterizing pages 7-1 to 7-12
- ☐ Appendix A: Specifications pages A-1 to A-2
- ☐ Appendix B: Glossary pages B-1 to B-8
- ☐ Appendix C: Wiring Diagrams pages C-1 to C-4, 1-33

Owner's Name _____

Address _____

Phone Number _____

Boat Serial Number _____



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IMPORTANT INFORMATION

Your **PURSUIT** 3400 Express Fisherman Owner's Manual has been written to include a number of safety instructions to assure the safe operation and maintenance of your boat. These instructions are in the form of **WARNING** and **CAUTION** statements. The following definitions apply:



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



Hazards or unsafe practices which could result in minor personal injury, or product and property damage.

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

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

If for any reason you have trouble with your Owner's Manual, or require replacement pages, please contact our Customer Service department at the address on the cover page. We will be happy to supply replacement pages at no charge.

This manual has been compiled to help you to operate your craft with safety and pleasure. It contains details of the craft, the equipment supplied or fitted, its systems, and information on its operation and maintenance. Please read it carefully, and familiarize yourself with the craft before using it.

If this is your first craft, or you are changing to a type of craft you are not familiar with, for your own comfort and safety, please ensure that you obtain handling and operating experience before assuming command of the craft. Your dealer or national sailing federation or yacht club will be pleased to advise you of local sea schools, or competent instructors.

PLEASE KEEP THIS MANUAL IN A SECURE PLACE, AND HAND IT OVER TO THE NEW OWNER WHEN YOU SELL THE CRAFT.

Owner's manuals for the installed equipment on your boat have also been provided for your reference. They have been stored in a valise that is included in your new boat. Please read this information, and also hand them over to the new owner when you sell the boat.

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Chapter 1

EXTERIOR EQUIPMENT AND FEATURES

1 . 1 . HELM AREA

1 . 1 . 1 . Steering

On boat centerline, to port of the companionway, into the cabin, is the helm of your **PURSUIT** 3400 Express Fisherman (see Figure 1-1). In the center is the steering wheel which is connected to a hydraulic pump behind the console. This hydraulic pump operates a hydraulic cylinder at the stern of your boat and controls rudders on the port and starboard sides.

1 . 1 . 2 . Engine Controls

The engine clutch and throttle controls are to each side of the steering wheel, clutches to port, throttles to starboard. The clutch handles (port handle for port engine, starboard handle for starboard engine) are vertical when the engine transmissions are in neutral. The engines are shifted into forward by pushing the handles forward from vertical and are shifted into reverse by pulling the handles aft from vertical. When shifting from forward to reverse, or vice versa, you should pause momentarily at neutral. The throttle handles are all the way aft when the engines are at idle and all the way forward at wide, open throttle.



1 - 1 : Helm Console



Only shift from forward to neutral to reverse with the engines at idle speed. Failure to do so could result in severe transmission damage.

To starboard, in the vertical face of the console, are the ignition switches (see Figure 1-2). The switch and buttons at the port edge of the panel are for the port engine, the switch and buttons at the starboard edge are for the starboard engine. Putting the ignition switch down is the OFF position. The switch in this position will shut off power to the engines and hour meter. Putting the ignition switch up is the ON position. The black button below the ignition switch is the START button. As illustrated in Figure 1-2, the ignition switch also has a red button

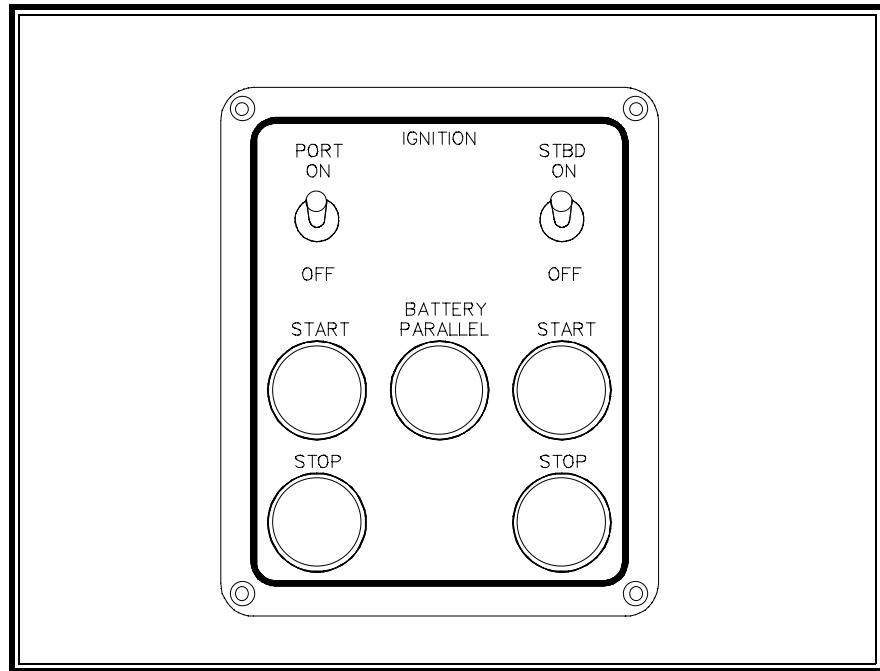


Figure 1-2: Diesel Ignition Switches

below the start button which is the STOP button. Between the two start buttons is the battery parallel switch. This switch would be activated, if needed, to use both engine and house batteries to crank the engine. The switch must be activated continuously while cranking and will return to non-parallel mode when released. Please see Section 3.1.4 for engine cranking procedures.

1 . 1 . 3 . Engine Monitoring

In the console, forward of the steering wheel, in the vertical face, is the engine gauge panel (see Figure 1-3). These gauges monitor the status of the engine(s) while they are running. The gauges to port are for the port engine, the gauges to starboard are for the starboard engine. The following gauges are provided for each engine:



- ⚓ **Tachometer** - Indicates the engine speed in RPM (revolutions per minute).
- ⚓ **Engine Hours** - Indicates the total number of hours the engine has run. Located in the tachometer.

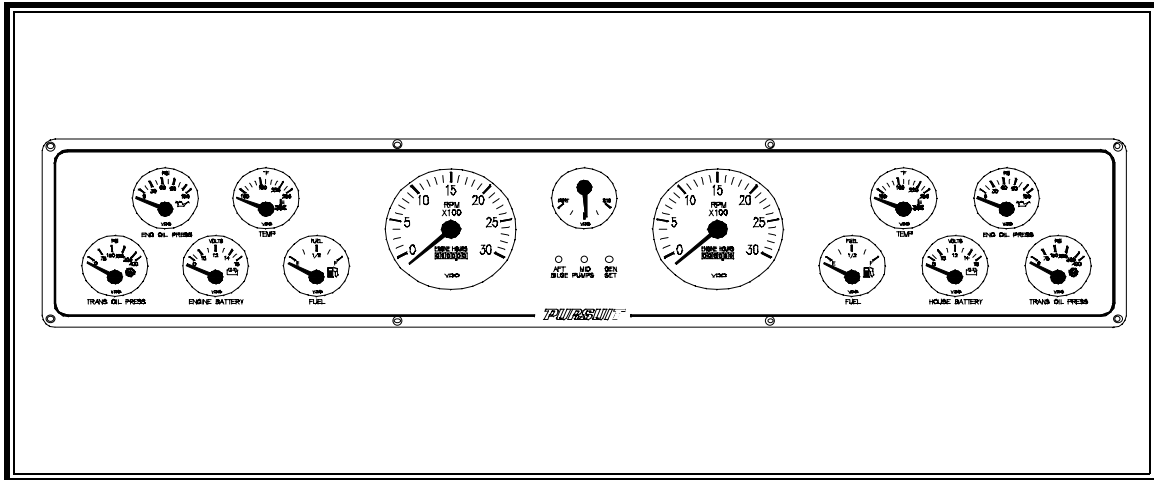


Figure 1-3: Engine Gauges

Note: This gauge senses hours that the ignition switch is in the ON position. Failure to keep these switches in OFF position when the engines are stopped will result in inaccurate readings on hour meters.



⚓ **Oil Pressure** - Indicates the engine oil pressure in PSI (pounds per square inch).



⚓ **Engine Temperature** - Indicates the engine cooling water temperature in °F (degrees Fahrenheit) and °C (degrees Celsius).



⚓ **Transmission Pressure** - Indicates the transmission oil pressure in PSI (pounds per square inch).



⚓ **Volts** - Indicates the condition of the battery bank in V (Volts).



⚓ **Fuel** - Indicates level of fuel in the fuel tank, in fractions of a full tank. The port gauge is for the port tank. The starboard gauge is for the starboard tank.

Located in the middle of the gauge panel, forward of the steering wheel, are indicator lights for the aft and mid bilge pumps. These lights indicate when the bilge pumps are running. There is a third light to indicate when the generator is running. Above these lights is the **Rudder Angle Indicator**. This indicator shows the current position of the boat's rudders. "0" indicates the rudders

are in straight ahead position. If the indicator is in the "red" area of the gauge, the rudders are turned to the port side of the boat. If the indicator is in the "green" area of the gauge, the rudders are turned to the starboard side of the boat.

Located inside the console are two groups of audible alarms, one for the port engine and one for the starboard engine. These alarms will sound for each of the following:

- ⚓ **High Temperature Alarm** - Engine's cooling temperature exceeds 210 ° F.
- ⚓ **Low Oil Alarm** - Engine oil pressure drops below 5 PSI.
- ⚓ **Low Volts Alarm** - Battery voltage falls below 11.5 V.

1 . 1 . 4 . Switch and Breaker Panels

Below the steering wheel, in the vertical face of the console, is the helm switch panel (see Figure 1-4). This panels contain the following switches:

- ⚓ **Blower** - An ON-OFF switch that, when switched ON, activates the bilge exhaust blowers.
- ⚓ **Mid Bilge Pump** - An OFF-ON switch that, when switched on, activates the mid bilge pump located in the engine room.
- ⚓ **Aft Bilge Pump** - Same as mid bilge pump only for the aft bilge pump, located under the large cockpit hatch.



The Federal Water Pollution Control Act prohibits the discharge of oil or oily waste into or upon the navigable waters of the United States or the waters of the Contiguous Zone if such discharge causes a film or sheen upon or a discoloration of the surface of the water or causes a sludge or emulsion beneath the surface of the water. Violators are subject to a penalty of \$5,000.

- ⚓ **Port Wiper** - An OFF-ON switch that, when switched ON, activates the port windshield wiper. When switched

OFF, the wiper motor automatically parks the wiper in an out of the way position.

⚓ **Center Wiper** - Same as port wiper only located in the center of the windshield.

⚓ **Starboard Wiper** - Same as port wiper only located on the starboard side of the windshield.

⚓ **Windshield Vent** - A momentary ON-OFF-ON switch that, when pressed up, opens the center windshield vent with an electric linear actuator, forward of the companionway. When pressed down, it closes the vent.

Note: Make sure the windshield vent latches are in the open position before activating the electric actuator. After closing, be certain that the latches are secured properly.

⚓ **Trim Tabs** - Reference Section 1.1.5.

⚓ **Panel Lights** - An ON-OFF-ON (red-OFF-green) switch that, when switched ON, activates lights in the helm gauge panel and switch panel for use at night.

⚓ **NAV/ANC Lights** - An ON-OFF-ON switch that when switched to one ON position, lights the bow red and green lights, the forward white light in the mast light atop

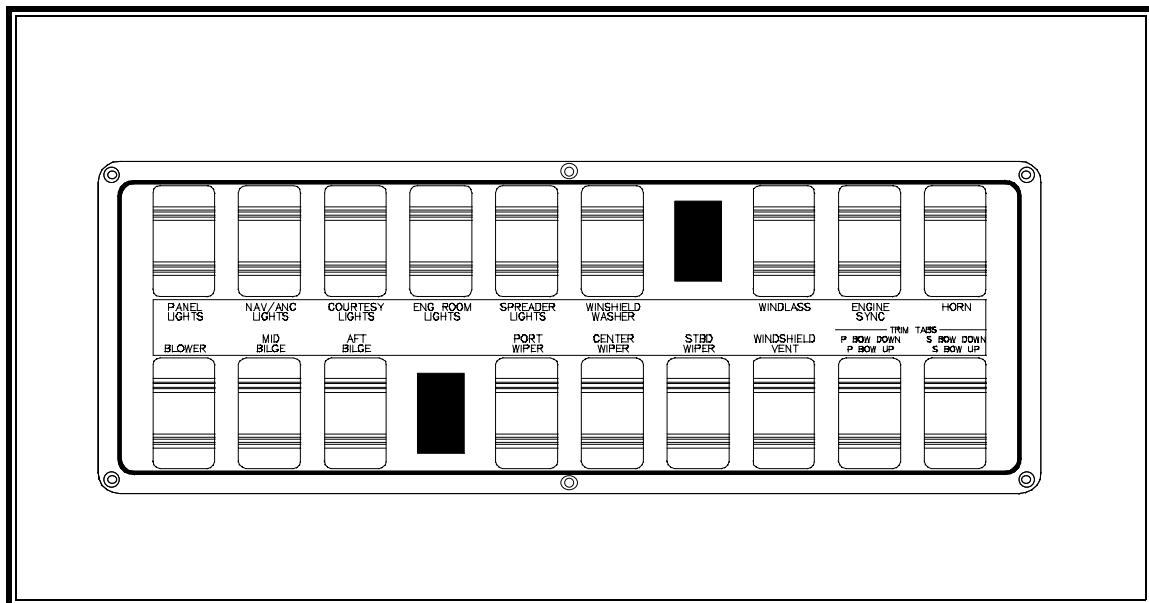


Figure 1-4: Helm Switch Panel

the wind shield, and the white stern light on the transom. This position is used when operating your boat at night or when visibility is reduced due to weather. The other ON position lights only the forward and aft white lights in the mast light atop the wind shield. This position is to be used when your boat is anchored at night.

- ⚓ **Courtesy Lights** - An OFF-ON switch that, when switched ON, activates lights located under the port and starboard covering boards and under the optional cruising radar arch. These lights make moving about the cockpit easier at night.
- ⚓ **Engine Room Lights** - An OFF-ON switch that, when switched ON, activates the engine room lights to improve visibility in the engine room.
- ⚓ **Spreader Lights** - An OFF-ON switch that, when switched ON, activates the aft lights that illuminate the cockpit from the optional hardtop.
- ⚓ **Windshield Washer** - A momentary switch that, when activated, opens a solenoid valve located on the forward engine room bulkhead and sprays fresh water on the port, center and starboard windshields. The fresh water pump must be ON for this to work.
- ⚓ **Windlass** - An UP-OFF-DOWN switch that activates the foredeck anchor windlass to either raise or lower the anchor. This switch is only operable with the optional windlass with all chain and anchor.
- ⚓ **Engine Sync** - An OFF-ON switch that, when switched ON, activates the optional engine synchronizer.
- ⚓ **Horn** - A momentary switch which, when pressed, blows the boat's horn.
- ⚓ **Access.** - Two locations for switches that are provided for later installed accessories.

In the aft face of the console, to port, is the helm breaker panel (see Figure 1-5). This panel contains the circuit breakers for all circuits switched by switches in the helm switch panel, and not protected by breakers on the D.C. main panel, or the D.C. cabin

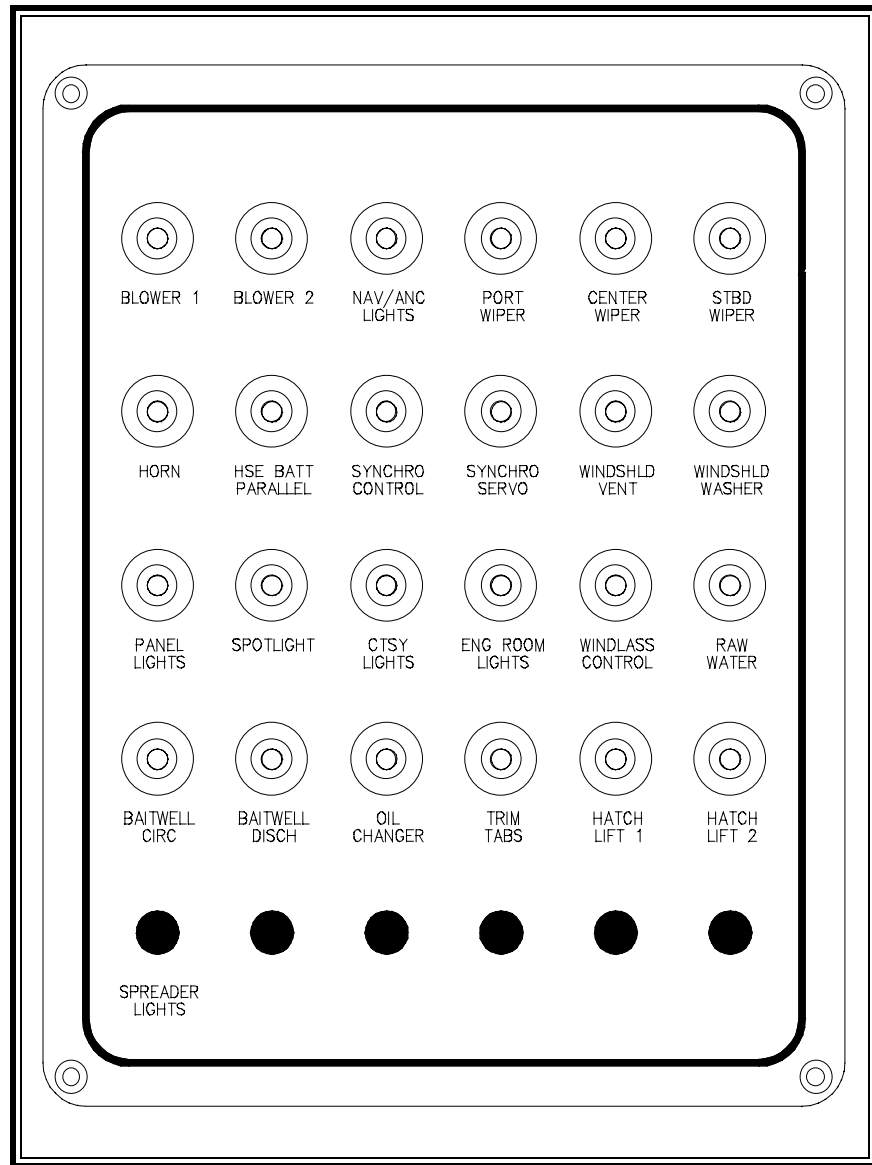


Figure 1-5: Helm Breaker Panel

panel. Please reference the wiring diagrams in the Appendix C for wiring specifics.

All breakers are covered with a waterproof boot for their protection. In the event a breaker is tripped, investigate possible causes for circuit overload and then reset by pressing in on the center of breaker.

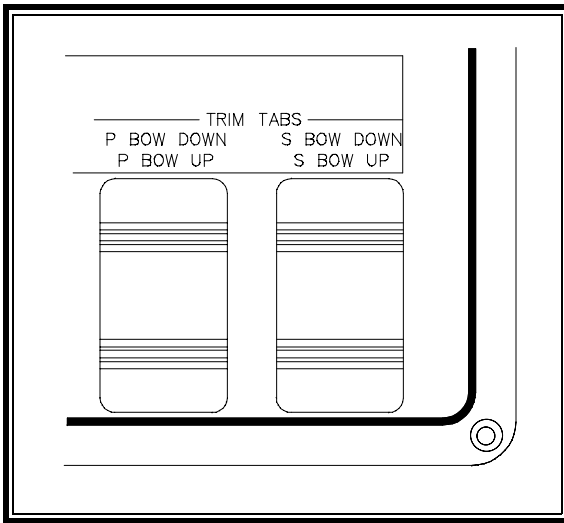
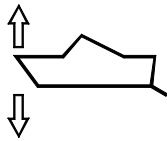


Figure 1-6: Trim Tab Switches



Figure 1-7: Compass

1.1.5. Trim Tabs



In the aft face of the console, in the starboard lower corner of the switch panel, are the trim tab rocker switches (see Figure 1-6). These switches control the operation of the port and starboard trim tabs located in the transom, at the boat bottom. The trim tabs can control the fore and aft "trim" and port and starboard "heel" of your boat while it is on plane.

To lower the starboard bow, press the starboard switch at the top. To raise the starboard bow, press the starboard switch at the bottom. The same works for the port bow up and down.

Note: Pressing the starboard switch at the top to lower the starboard bow will actually activate the port trim tab to go down. The same works for the port tab.



When backing your boat at more than idle speed (such as during fishing) press both switches at the bottom to fully retract tabs. Failure to do so could result in damage to trim tab hydraulic cylinders.

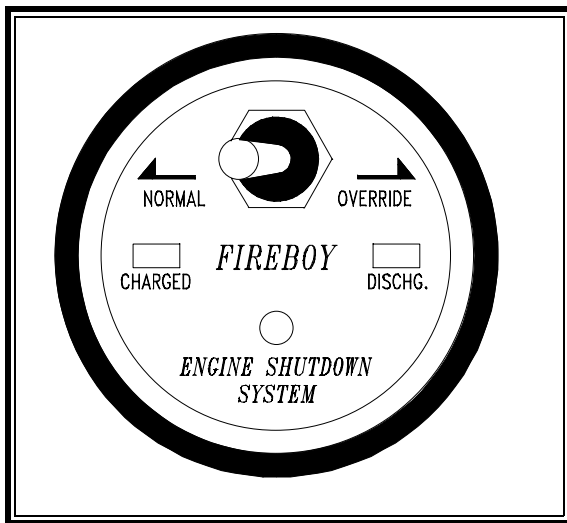


Figure 1-8: Fire System Monitor

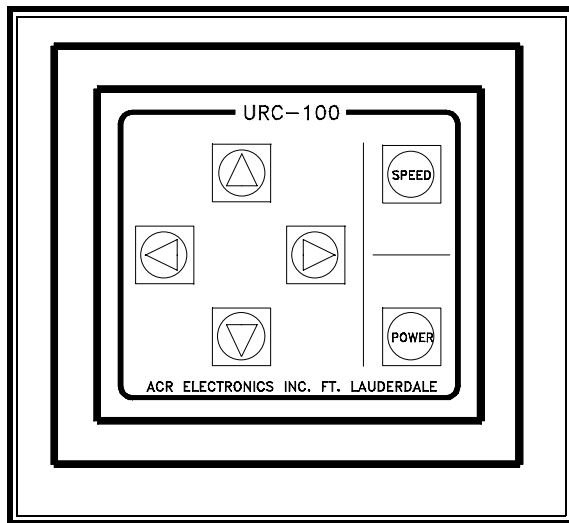


Figure 1-9: Search Light Control

1.1.6. Equipment Controls

At the top of the console is the compass (see Figure 1-7). A compass indicates the direction the bow of your boat is headed. The compass in your **PURSUIT** 3400 should be compensated by your **PURSUIT** dealer, or other qualified marine service facility, for magnetic variance associated with operating your boat in your particular location.

Below the ignition switches is the fire system indicator light (see Figure 1-8 for fire system monitor). For specific information on how the fire system works, refer to the owner's manual provided by the fire system manufacturer.



IF A FIRE SHOULD OCCUR, TURN OFF ALL MAIN ELECTRICAL SWITCHES AND SHUT DOWN THE GENERATOR. DO NOT OPEN THE ENGINE ACCESS HATCH OR LARGE ENGINE HATCH. ALLOW THE CHEMICAL TO SOAK THE ENGINE COMPARTMENT FOR AT LEAST FIFTEEN (15) MINUTES.



FIRE FIGHTING CHEMICALS, SMOKE FROM A FIRE, AND ENGINE EXHAUST DURING A FIRE GIVE OFF TOXIC GASES AND CAN CAUSE ASPHYXIATION OR OTHER SERIOUS HEALTH PROBLEMS. IF A FIRE SHOULD OCCUR, OR THE SYSTEM BE ACCIDENTALLY DISCHARGED, GET OUT INTO FRESH AIR. DO NOT BREATHE THE FUMES.

The optional remote search light control is located to starboard of the steering wheel, in the console top (see Figure 1-9). For specific operating instructions, refer to the information provided by the equipment manufacturer.

At the bottom edge of the console, a footrest has been installed for your comfort when sitting down and running your boat.

The area above the engine gauges has been left blank for installation of electronics of your choice, available at your local **PURSUIT** dealer.

1 . 1 . 7 . Miscellaneous

The console is held closed at its forward edge by two friction catches. To access the back side of all console electrical equipment, electronics, engine controls, steering system pump, and engine instrumentation, the console may be hinged aft. To do this, grasp the console on centerline, aft of the compass, and pull aft, hard.



The console must be securely fastened in the forward position while operating the boat. Failure to do so may result in unexpected movement of the console.



All repairs to items in your *PURSUIT* 3400 console should be serviced by a marine electrician or mechanic. Failure to do so could result in damage to equipment or difficulty in safely operating the boat.

Located outboard of the companionway door, to starboard, are two drink holders.

The cockpit speakers for the optional AM/FM/cassette stereo are located port and starboard, in the cabin sides, below the windshield.

To port of the console is a convenient chart storage area, covered by a clear Plexiglas cover. A handrail on the aft edge is also provided for passenger security while seated and standing. Three drink holders are also provided for your convenience.

1 . 1 . 8 . Companionway Door

The companionway door and hatch on your **PURSUIT** 3400 Express Fisherman (see Figure 1-10) is operated as follows:

To open:

1. Unlock the latch on the upper edge of the bi-fold door with the key provided.
2. Hinge the aft section of the hatch forward.
3. Slide the forward section of the hatch up further forward.
4. Release the door latch at the bottom.
5. Fold the door to starboard. Secure open with a snap that holds the two halves together and a strap, with snap, located inside the starboard drink holder.

To close, reverse the procedure.

Note: To secure the hatch from the inside, use the same key latch that is operable from the inside without the key.

1 . 1 . 9 . Seating

On centerline is the helm pedestal seat. Port and starboard are two comfortable L-lounges with footrests and storage below. Storage in the starboard seat box is provided in two ways. The interior of the seat box can be accessed via a door on the inboard



1 - 10 : Companionway Door and Hatch

face. The second door on the inboard face accesses convenient tackle boxes. In the port seat box, storage is also accessed via a door on the inboard side. Additional tackle boxes are provided on the forward face behind a hinged door. All of these doors are help closed by push button latches with key locks.

1 . 1 . 10 . Engine Hatch

Just aft of the helm pedestal seat is the engine room access hatch. It is hinged on its forward edge, and held closed with a T-handle latch. To raise the large engine hatch, an electric engine hatch lifter has been installed. The hatch is hinged along the forward edge by four hinges. The aft end is lifted and lowered by electric actuators that are controlled by a rocker switch in the cockpit. This switch is located on the starboard side, above the cockpit step.



Be certain that all loose items are removed from the engine hatch and hatch gutter before lifting or closing. Do not stand on the hatch during operation. The companionway door must be closed before raising the hatch fully. Failure to do so could result in damage to the seat upholstery.

1 . 1 . 11 . Engine Room

As you enter the engine room from the access hatch, the optional generator is located forward, on centerline. Against the forward engine room bulkhead is the remote mounted guage panel, the Fireboy automatic fire fighting system, the fresh water system pumps, and a variety of electrical system ground bars.

To starboard, outboard of the engines, are the engine and generator coolant recovery tanks, mounted on the inboard face of the air intake plenums. Below the plenum, to starboard and aft, is the optional cockpit bait center freezer compressor. To port, outboard of the engines, is the holding tank. Mounted on the inboard side of the port intake plenum is the optional engine synchronizer, and optional head system Y-valve. Beneath the plenums, port and starboard, are the batteries. The water tank is located on centerline, below the engine room floor.

Aft of the engines, port and starboard, are the engine raw water intake seacocks and strainers, and fuel filters. On centerline, against the back bulkhead, are the 6-way fuel valves.

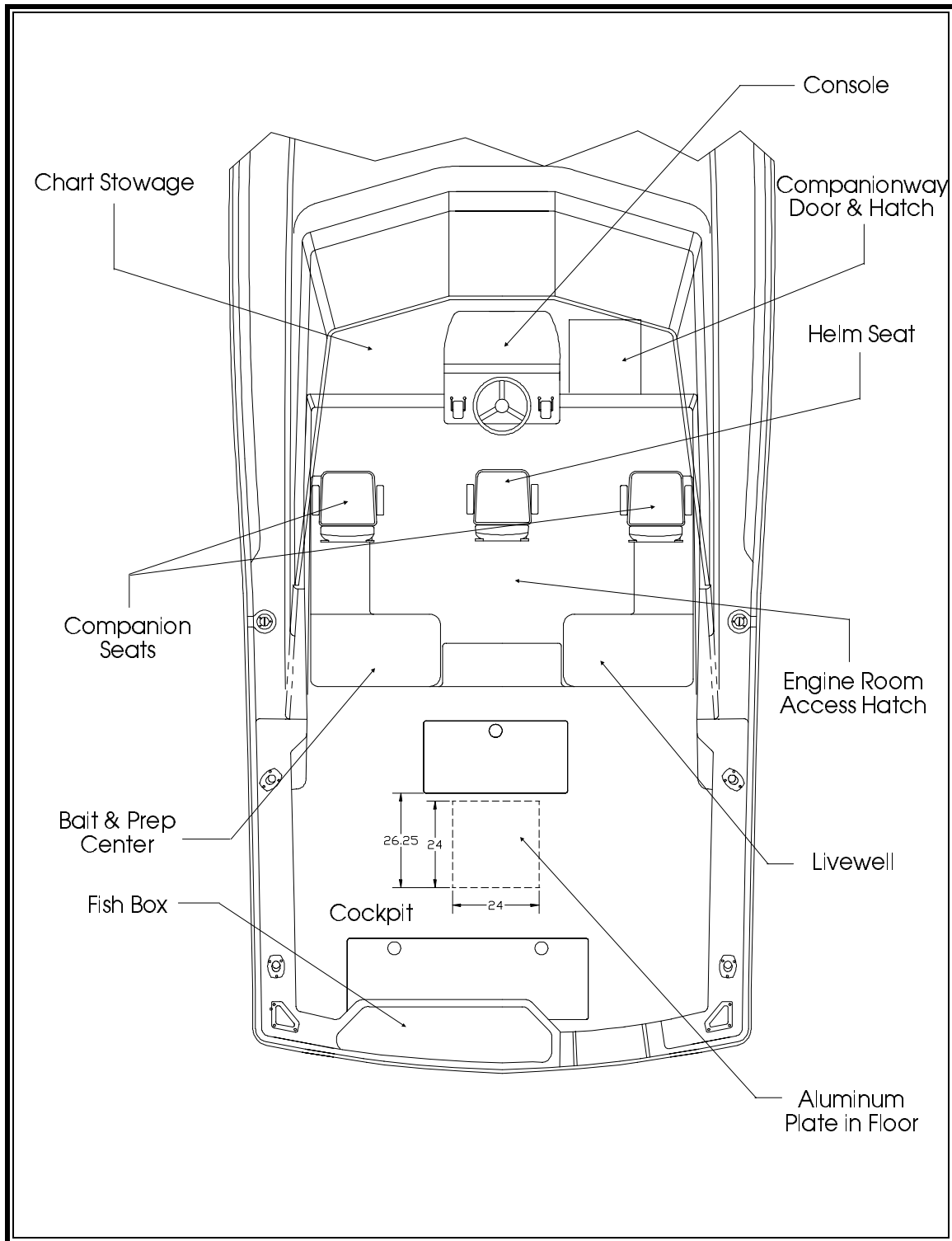


Figure 1-11: Cockpit and Seating Arrangement

The 6-way valves control both the fuel withdrawal and return lines with one handle. Which ever tank is selected to supply fuel to an engine, is also the tank that the fuel will be returned to. There is one valve for each engine. Each engine can select to operate from the port tank, starboard tank, or be shut off. The face of the fuel system valve box is labeled to indicate your selection. The recommended standard setting is the port engine running from the port tank, and the starboard engine running from the starboard tank.

Lighting in the engine room is provided by two florescent fixtures on the overhead, one forward, and one aft.

1 . 2 . COCKPIT AREA

For ease in boarding your boat from the dock, and returning to the dock from the cockpit, fixed cockpit steps have been provided port and starboard at the forward end of the cockpit.

In the aft face of the starboard cockpit step are the 110 V shore power inlets, and telephone/cable TV inlet fitting. Above the step, outboard, are the shore power inlet breakers. The breakers are there to protect your boat's wiring between the power inlet and the A.C. panel in the cabin (see Figure 1-12). Above the step to port is a 110 V A.C. GFI outlet with a weatherproof cover.

1 . 2 . 1 . 110 V Shore Power

How to hook up to shore power:

1. Turn A.C. main breaker(s) in boat cabin to OFF.
2. Turn the boat inlet breaker to OFF.
3. Turn breaker on cord power supply to OFF.
4. Plug power cable into boat inlet;
 - a. Unscrew cover over inlet,
 - b. Plug in shore power cable and twist to lock,
 - c. Tighten locking ring onto inlet fitting.
5. Plug cord into dock receptacle and twist to lock.

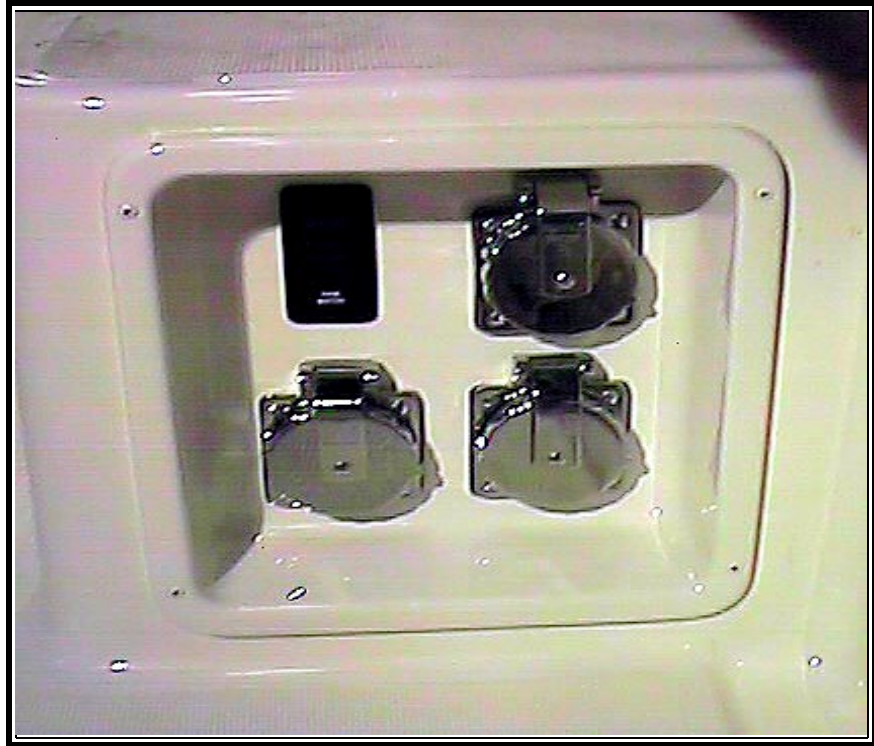


Figure 1-12: Shore Power Inlet

6. Turn on dock breaker.
7. Turn on boat inlet breaker.
8. Check polarity light on boat A.C. main panel.

IMPORTANT NOTE: If red light is lit with green light, **STOP**. Do **NOT** put boat A.C. main breaker in the ON position. Investigate cause immediately. If light is green only, put the boat A.C. main breaker in the ON position.

To disconnect shore power:

1. Turn off boat A.C. main breaker.
2. Turn off boat inlet breaker.
3. Turn off dock breaker.
4. Disconnect shore power cord from dock outlet.
5. Disconnect shore power cord from boat inlet and replace cover.

6. Stow shore power cord.



TO REDUCE THE RISK OF ELECTROCUTION AND OTHER INJURY FROM ELECTRICAL SHOCK, DO NOT MAKE UNNECESSARY CONNECTIONS IN WET WEATHER, WITH WET HANDS, OR WITH WET CABLES AND CONNECTIONS. ALWAYS USE A 3-WIRE ELECTRICAL SYSTEM CONNECTED TO A GROUND. DO NOT USE WORN OR DAMAGED CABLES.



When routing electric cables and dockside water hose from boat to dock, be sure to allow sufficient slack so that as boat moves within its slip, the cables are not strained in any way.

1 . 2 . 2 . Dockside Water

Above the port cockpit step, in the aft face, is the optional dockside fresh water inlet with regulator (see Figure 1-13). When a hose from the dock is attached with pressure, your boat's fresh water system is using water from the dock, not from the onboard fresh water tank.

Note: When using dockside water, the water pressure pump breaker on the D.C. cabin panel should be switched OFF.

1 . 2 . 3 . Cockpit Prep Center/Bait Station

At the aft end of the L-lounges on the engine hatch, is the cockpit prep center/bait stations (see Figure 1-14). To port, located beneath a lid, is a sink with a fresh water faucet and raw water spray. The sink lid is held in the open position with a support stay, outboard. Also in this unit, under a second lid is a cooler tank, or an optional bait freezer.

To starboard, the unit lid accesses a bait tank with circulating system. The switch to control the circulating system is located



Figure 1-13: Dockside Water Inlet

in the vertical face, outboard of the bait tank, next to the hatch lift.

To close these hatches, simply lift the hatch to the extent of the support stay a second time and then hinge closed.

In the aft face of the prep center, to port, is another tackle tray/storage box behind a hinged door with push button/latch and key lock.

1 . 2 . 4 . Covering Boards

On the port and starboard covering boards are the four rod holders, two port and two starboard. In the aft corners are the hawse pipes which lead dock lines down to the two mooring cleats. A second smaller cleat has been provided port and starboard for tying up fenders. Below the cleats are the cockpit scuppers.

The optional fresh water washdown faucet is located under the port coaming board. The optional raw water washdown is



1 - 14 : Cockpit Prep Center

located under the starboard covering board. The switch for the washdown pump is located above the cockpit steps.

Cockpit coaming bolsters are provided port and starboard for your comfort. Courtesy lights have been installed underneath the covering boards for your safety and convenience.

1 . 2 . 5 . Transom Fish Box

Across the transom of your **PURSUIT** 3400 Express Fisherman near boat centerline is a large fish box. The fish box is accessed by two hatches on the top that each hinge inboard. A convenient drain is provided in the bottom of the box which drains overboard.

1 . 2 . 6 . *Transom Door and Gate*

To starboard, in the transom, are the transom door and gate. The gate is secured down by a latch, on the underside, at the starboard end. The door is held shut by a latch on the inboard face.



DO NOT OPERATE YOUR *PURSUIT* UNDER POWER WITH THE TRANSOM DOOR OR GATE OPEN. OPERATION OF BOAT WITH TRANSOM DOOR AND GATE MAY ALLOW PERSONS TO FALL OVERBOARD AND INTO BOAT PROPELLERS OR TO BE LOST IN OPEN WATER.

1 . 2 . 7 . *Cockpit Floor*

At the aft end of the cockpit floor are two hatches, one large to port and one small to starboard. Beneath these hatches are access to the engine mufflers, steering gear, trim tab pump, strut back-up plates, aft bilge pump with float switch, garboard drain, and optional air conditioning unit, raw water pump and strainer. The large hatch is held shut by a T-handle and hinged on the aft face. The small hatch is held shut by a T-handle on the inboard side, and hinged on the outboard edge. Optional storage boxes are available for both of these hatches.

In the forward end of the cockpit floor is a third hatch to access the top of the fuel tank, and associated fuel fittings and hoses.

Additional access plates (screw type) are provided port and starboard, in the cockpit sides, for access to the back sides of the fuel vents.

1 . 2 . 8 . *Hardtop*

Available as an option on your *PURSUIT* 3400 Express Fisherman is a fiberglass hardtop supported by an aluminum tubular frame. On the underside of the hardtop, port and starboard, are lights which are activated by the courtesy lights switch on the helm switch panel. Additionally, ON/OFF

switches are located on the lights themselves in order to operate them independently of each other.

A canvas enclosure is provided to protect the helm area from the weather. Optionally, a marlin tower is available above the fiberglass hardtop.

1 . 3 . SIDE DECKS

In the side decks, at the aft end of the cabin sides, is the fuel fill to port and starboard. The waste tank pump-out is located to port, forward of the fuel fill. To starboard, forward of the fuel fill, is the water tank fill. The waste pump-out has a green plug in the fitting.

As you continue forward on the side decks, towards the foredeck, you will find a spring line cleat on both sides. A grill on the port cabin side covers the horn. A cowl vent at the aft end of the port and starboard cabin sides is installed as part of the engine room ventilation system. A handrail has been provided on the top outboard edge of the windshield for your comfort and safety.

1 . 4 . FOREDECK

On the foredeck of your **PURSUIT** 3400 Express Fisherman you will find a cabin ventilation hatch, the rope locker hawse pipe into the rope locker for the anchor rope, a hatch into the anchor locker, two mooring cleats, red and green running lights, and the bow rail (see Figure 1-15).

THE CLEATS ON THE BOW AND STERN OF YOUR BOAT HAVE NOT BEEN DESIGNED FOR, AND ARE NOT INTENDED TO BE USED FOR TOWING. USING THEM FOR THIS PURPOSE COULD RESULT IN PERSONAL INJURY AND DAMAGE TO YOUR BOAT AND OTHERS.

An optional anchor roller is available in the bow pulpit, as well as an anchor cleat.

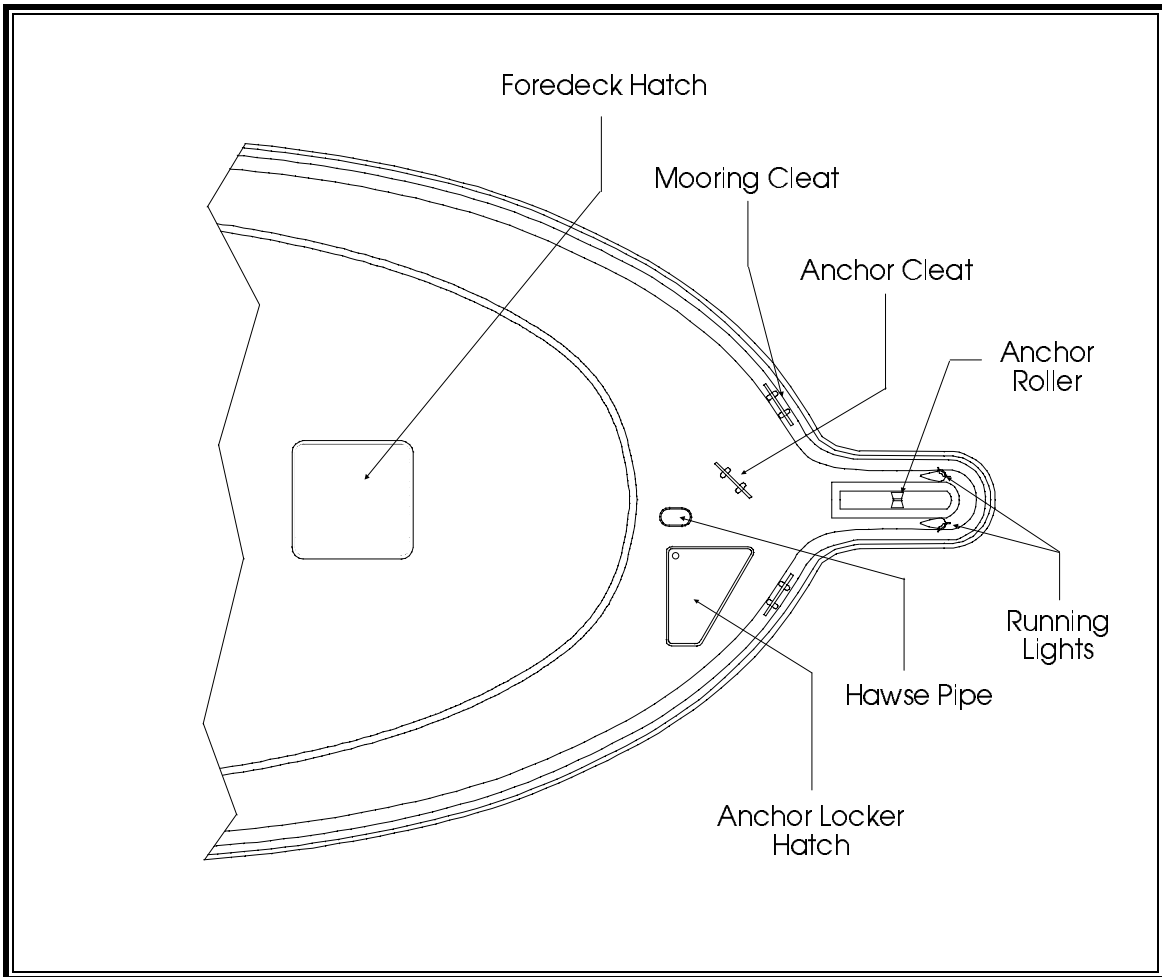


Figure 1-15: Cabin Top and Foredeck

1 . 5 . HULL SIDES AND TRANSOM

The port and starboard hull sides each have engine room vent recesses, near midships, engine exhausts near the transom, and a number of vents (see Figure 1-16) and thru-hulls. See Figures 1-17 and 1-18 for identification of each one.

Located on the transom of your **PURSUIT** 3400 Express Fisherman is the white stern light, recessed trim tabs, and two zinc plates (see Section 6.4.6).



Figure 1-16: Vent Fitting



DO NOT SWIM AROUND BOAT WITH ENGINES RUNNING, PROPELLERS MAY TURN AND CAUSE SEVERE PERSONAL INJURY EVEN WITH ENGINES IN NEUTRAL.

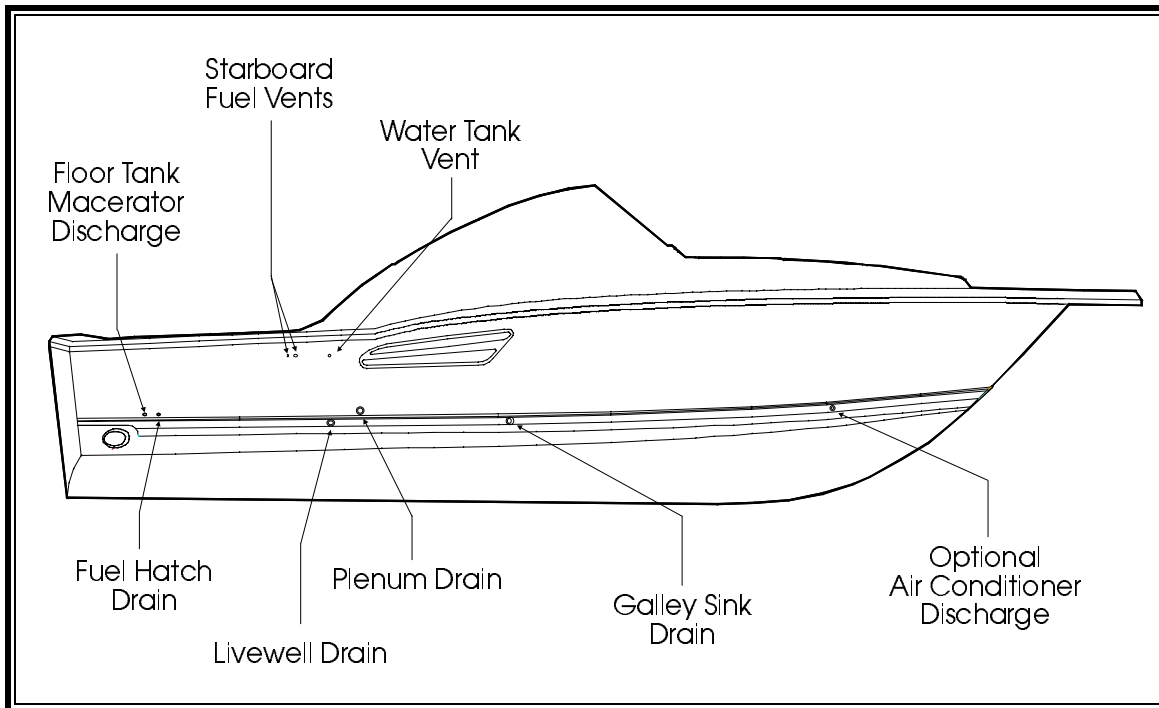


Figure 1-17: Starboard Hull Side

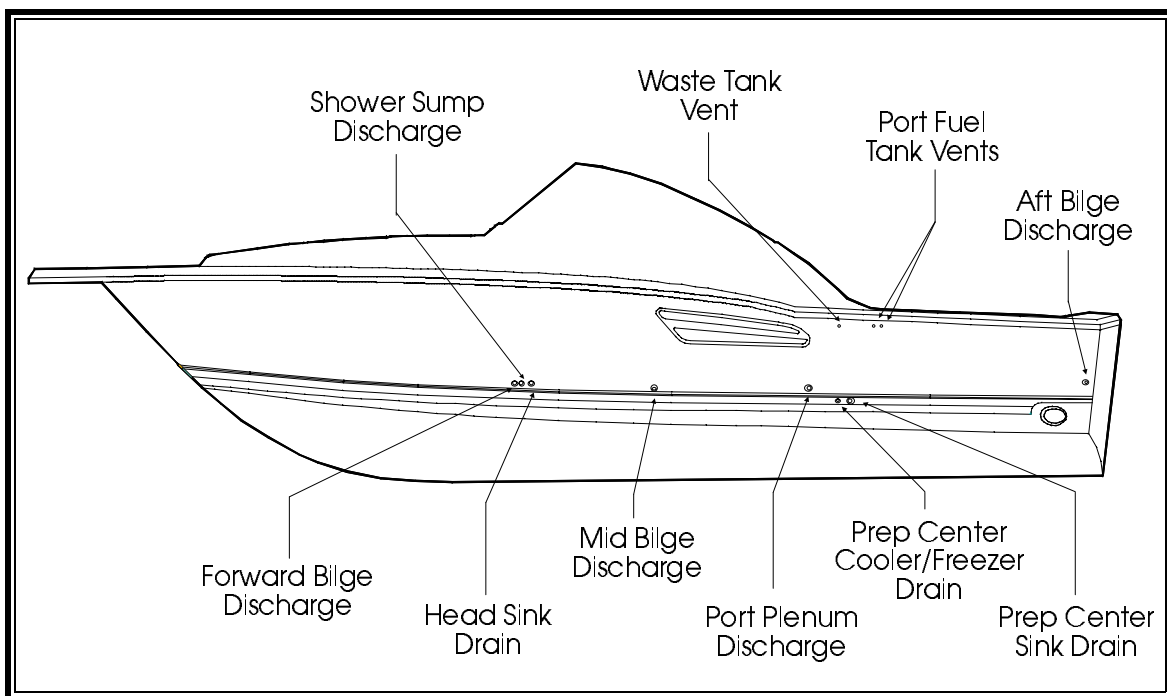


Figure 1-18: Port Hull Side

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Chapter 2

INTERIOR EQUIPMENT AND FEATURES

2 . 1 . FORWARD BERTH

The forward berth in your **PURSUIT** 3400 Express Fisherman features considerable storage under the top. Storage forward is accessed by raising the forward cushion and lifting the hatch open. A lifting strap is provided on the aft edge for your convenience. Aft storage is accessed by raising the aft cushion and lifting on the pull strap at the aft forward berth bulkhead. The hinged lid of this storage area is assisted open by two gas spring supports. There is a basket mounted under the berth top which opens by releasing the latch on the aft edge, and hinging it down. Cables are provided to limit the basket's travel. The optional air conditioner is located under the shelf in the aft storage area and is reached by removing the access hatch in the shelf.

Additional storage is provided to port of the forward berth. Outboard, to port, is a large shelf that can be used for rod stowage. Beneath this shelf are four hinged doors which open on their aft edges. Below these doors, in the counter surface, is a storage area accessed by listing on it's inboard edge. Further below this counter are two more storage doors each accessing a large storage area.

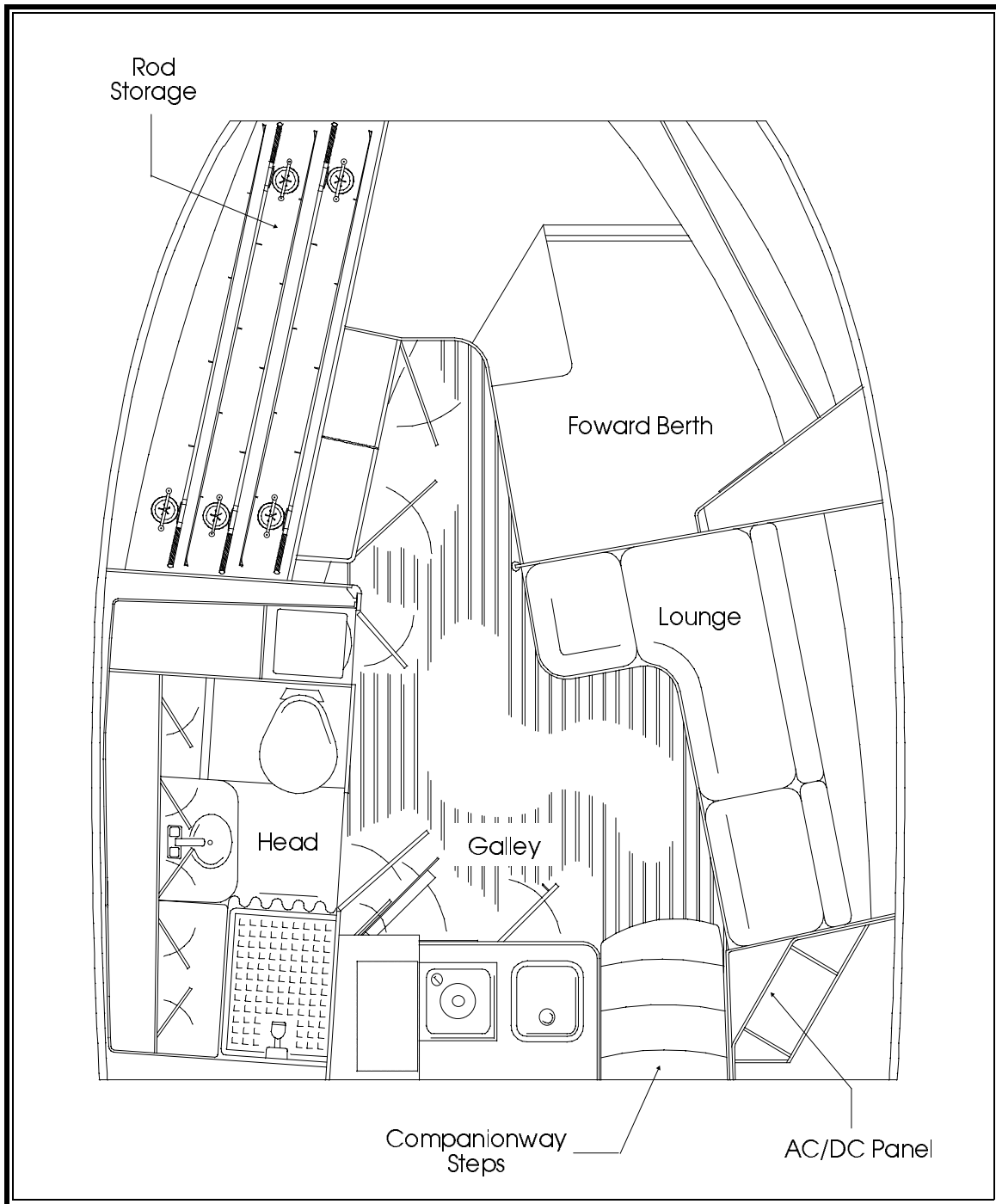


Figure 2-1: Inboard Plan View

Natural lighting and ventilation in this area is provided by a port light to port, and a large overhead hatch with screen. The overhead hatch is large enough to escape through, in the event

of an emergency. Additional lighting is provided by "accent" lights under the valence, port and starboard, activated by a switch on the inboard face of the cabinets to port. Located next to this switch is a 120 V outlet. More lighting is provided on the forward bulkhead in the form of two bullet lights, with switches included.

In the face of the aft berth bulkhead, to starboard, is the forward berth discharge for the optional air conditioning unit. The return air grill is located on the vertical face of the berth, to starboard, near the floor. A carbon monoxide detector (see Figure 2-2) is also located on the aft berth bulkhead, near the overhead. A privacy curtain, running on a track in the overhead, stows to port, and can be stretched across the forward berth entrance for privacy.

To port, at the entrance to the forward berth area, is the hanging locker. Inside the lower, large door is the closet rod for hanging clothes. The smaller, upper door accesses additional storage on a shelf. If your boat is equipped with the optional TV/ VCR, it will be located above the hanging locker, in lieu of the upper storage compartment. A second carbon monoxide detector is located on the aft face of this locker, near the overhead.

2 . 1 . 1 . Carbon Monoxide Monitoring System



THE CARBON MONOXIDE MONITORING SYSTEM IS ONLY A SUPPLEMENTAL SAFETY AID. MAKE SURE YOU FOLLOW ALL SAFETY PROCEDURES GIVEN IN THIS MANUAL. CARBON MONOXIDE IS A LETHAL, TOXIC GAS THAT WILL CAUSE DEATH IN CERTAIN LEVELS.

If excess carbon monoxide fumes are detected, an audible beeping will sound indicating the presence of the toxic gas.

Please read the owner's manual supplied by the detector manufacturer for operation instructions and additional information regarding the hazards of carbon monoxide gas.

2 . 2 . HEAD

The head in your **PURSUIT** 3400 Express Fisherman is located to port, aft of the forward berth area. It is accessed through a door, hinged aft, and opening into the cabin area. Provided in the head are a marine toilet, a sink with hot/cold fresh water faucet, a telephone shower, a mirror, and a non-slip floor.

When using the shower, a shower curtain which runs on an overhead track has been provided. A drain is located in the floor beneath a grating and runs to a shower sump. The shower sump is operated automatically by a float switch, in the sump, and requires no other switch to operate.

Storage is provided under the counter top, accessed by a door in the vanity face, under the sink. A toilet paper holder is provided outboard of the toilet. Two large storage areas with keepers are located fore and aft in the head area. Between these two areas, above the vanity top, are two hinged mirror doors which access additional storage outboard. A towel bar / hand-rail has been installed on the forward and aft head bulkheads, about waist high.

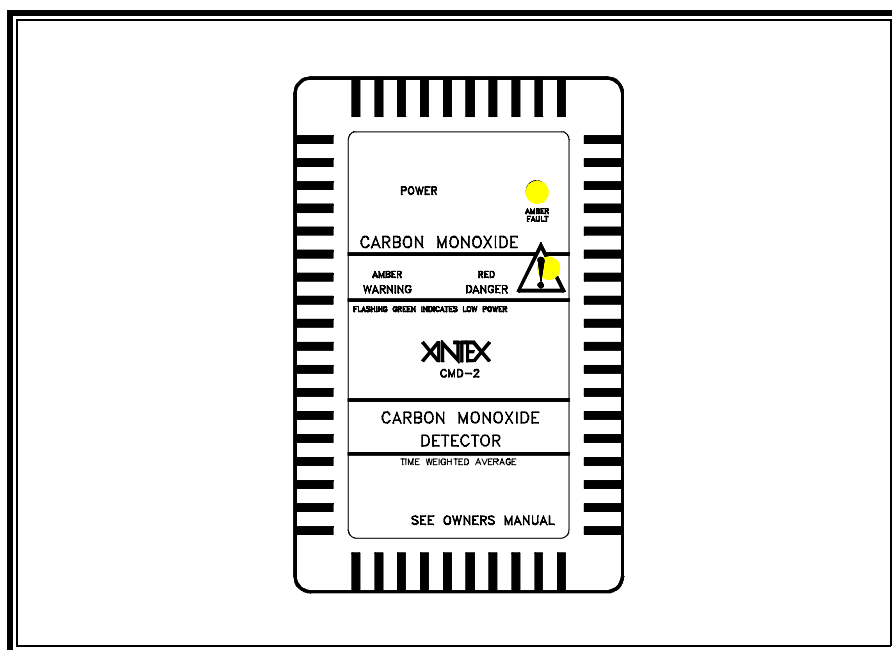


Figure 2-2: Carbon Monoxide Monitor

Natural lighting is provided by a portlight in the deck, outboard. Artificial lighting is created by two overhead lights, as well as by two under deck spotlights located above the sink. These lights are operated by a switch above the vertical top, forward. A 120V GFI outlet is also provided in the face of the vanity, below the sink.

The marine toilet is covered by a grate seat that is hinged on the inboard edge. This seat cover is held in the up position by a strap located on the bulkhead. Please read the owner's manual from the head system manufacturer included in your owner's packet, and reference schematics of the various systems provided in Section 6.7 of this manual. The head system that was installed by **PURSUIT** is listed under the boat specific section of Appendix A.

2 . 3 . GALLEY

The galley in your **PURSUIT** 3400 Express Fisherman is equipped with an A.C. / D.C. refrigerator, with freezer, in the forward face, a one burner electric cook top recessed into the counter top, and a microwave located in a locker above. The one burner electric cook top is located beneath a removable cover.



Do not close the counter top range cover until the burners are cool. Failure to do so could result in damage to the cover, range, or both.



DO NOT ALLOW WATER TO OVERFLOW FROM THE SINK INTO THE STOVE RECESS. THIS MAY CAUSE AN ELECTRICAL FIRE OR ELECTROCUTION.

The galley also features a sink with a hot and cold fresh water faucet, and cover.

Storage in the galley area comes from a storage area above the microwave, outboard, which is held closed by a push-pull latch. Storage is also available under the counter, behind a louvered

door. This storage is enhanced by a wire basket system that pulls out on tracks. Also located inside this compartment is the 120V A.C. battery charger.

Lighting in the galley is provided by two over counter spotlights. The switch for these lights is located on the starboard face of the galley, beneath the counter top, in the companionway. Two 120 V GFI outlets, and a telephone jack, are located above the galley counter top, in the aft bulkhead.

2 . 4 . STARBOARD LOUNGE

The lounge area in your **PURSUIT** 3400 Express Fisherman is located to starboard as you come down the companionway steps. It features a table, seating that converts to an upper and lower berth, as well as considerable storage.

To convert to the lounge into an upper and lower berth:

1. Remove the forward lounge cushion from the bulkhead.
2. Lift up the berth back rest to a horizontal position.
3. Unsnap the support straps from the underside of the back rest and hook into the two padeyes, one located aft in the overhead, and the other located forward, on the aft face of the aft forward berth bulkhead.

To close, reverse the procedure.

Rod stowage is provided in this area, under the seat bottom cushion, beneath a large access hatch that is hinged outboard. At the forward end of the lounge area, beneath the seat bottom cushion, is additional storage, and additional access to the optional air conditioning unit.

Natural lighting and ventilation is provided by two port holes in the deck, with screens. Artificial lighting is provided by lights behind the valence, outboard, as well as by bullet lights located on the fore and aft bulkheads. Switches for the bullet lights are located on the lights themselves. The switch for the indirect lighting behind the valence is located on the aft bulkhead, to starboard, as you come down the companionway.

Located on the forward bulkhead in the lounge, outboard, is one of the cabin stereo speakers, as well as a discharge grill for the optional air conditioning system. Located on the back bulkhead, in the lounge area, is another telephone jack.

2 . 5 . COMPANIONWAY

The cabin of your **PURSUIT** 3400 Express Fisherman is entered through the companionway door, to starboard. A handrail has been provided, to starboard, for your safety and convenience. The steps into the cabin area contain several items. All three steps area hinged for easy access to this area. Opening the top step activates a built-in light, and provides access to the 12 V D.C. main panel (see Section 4.2.3) See Chapter 4 for details on the electrical system. Beneath the second step is access to the water heater fittings. Beneath the third step is a small storage area.

To starboard, as you come below, is a light switch which activates the overhead spotlight, and the courtesy lights on the companionway steps. Below these switches is the optional air conditioning *Environmental Control Unit* (see Figure 2-3), the cabin stereo system, as well as one of the two cabin speakers. Beneath

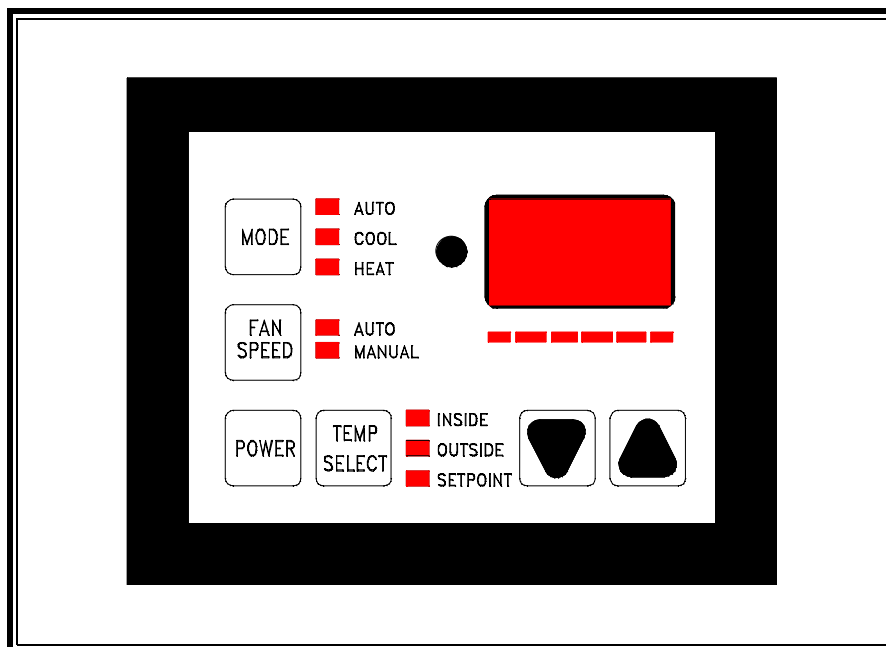


Figure 2-3: Air Conditioning Control Panel

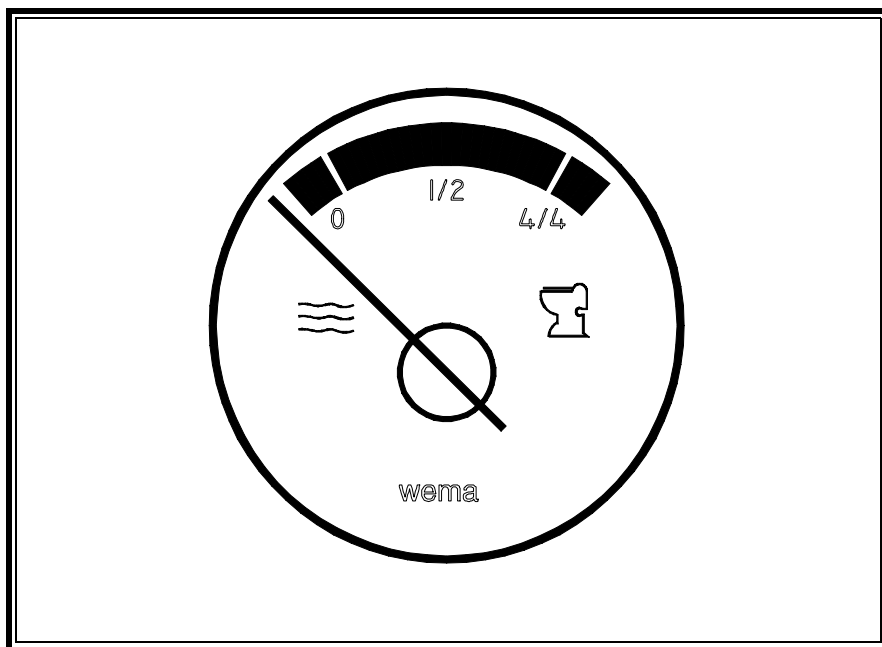


Figure 2-4: Waste / Water Tank Monitor

the stereo is the 12 V D.C. and 120 V A.C. cabin panels. For operation of these panels, and the electrical system in general, see Chapter 4.

In the D.C. cabin distribution panel, is the waste/water tank monitor gauge (see Figure 2-4). In the overhead, outboard of the companionway, is an installed smoke detector. Please refer to the owner's manuals provided by the equipment manufacturers for specific instructions on the usage and care of these items.

Located in the cabin floor, forward of the companionway steps, is a large access hatch. Beneath this hatch is a large storage area, the forward bilge pump, the head system vacuum pump and tank, and the shower sump. This bilge pump runs intermittently to detect water, and will continue to run if water is detected. To disable, turn the breaker on the main D.C. panel labeled FWD BILGE to the OFF position.

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Chapter 3

OPERATING YOUR BOAT

3 . 1 . WHEN ARRIVING AT YOUR BOAT

When you arrive at your boat to take a trip, the first thing you should do is go below and turn on the 12 V D.C. main battery switches (below the companionway steps) and the necessary A.C. and D.C. breakers on the main distribution panel, to starboard, as you go down the companionway. This will allow you to operate any equipment you might need. While at the D.C. main panel, check the condition of your batteries with the test switch and the D.C. voltmeter. If the battery(s) reads below 10 volts, investigate the D.C. system for the cause.

The second thing that you should do is check the bilge areas of your boat, forward, aft, and in the engine room, for unexpected water or debris. While doing this, it's a good time to check and open any seacocks for equipment that may have been shut off when you last left your boat. While in the engine room, you should check the engine oil, engine coolant, transmission oil, and generator oil and coolant. Also, smell for any fuel fumes or other unusual smells, and investigate if detected.

While at the helm area, check to see that all equipment is functioning by testing each one with its switch.

3 . 1 . 1 . Shore Power / Shore Water

Please refer to Section 1.2.1. for how to hook up and disconnect shore power and Section 1.2.2. for how to hook up and disconnect the shore water.

3 . 1 . 2 . Fueling Your Boat



FUEL IS FLAMMABLE. NO SMOKING. NEVER FILL THE TANK WHILE THE ENGINES, BLOWERS, GENERATOR, OR OTHER EQUIPMENT IS OPERATING. DO NOT FILL NEAR OPEN FLAMES.

Fuel fills are located port and starboard, for the port and starboard tanks, just forward of the aft end of the windshield, in the side decks (see Figure 3-1). To fill the fuel tank (port or starboard) follow this procedure:

1. Turn off all switches on the A.C. / D.C. main panel so that any equipment that can make sparks can not run.
2. If your boat is equipped with a generator, make sure the generator switch is in the OFF position.
3. Make sure that your boat is securely moored.



Figure 3-1: Fuel Fill

4. Estimate how much fuel is needed.
5. Using the special key provided for this purpose, insert the key into the slot in the fuel fill, turn the key counterclockwise, and remove the cap.



BE SURE THAT THE FUEL FILL IS IN CONTACT WITH THE FUEL NOZZLE TO PREVENT ANY STATIC SPARKS DURING THE FUELING OPERATION.



To prevent damage to your fuel system, use only a good grade of fuel as recommended by the engine manufacturer. Do not use a fuel which contains harsh additives or alcohol. Damage done to your fuel system as a result of using these fuels will not be covered by your warranty.

6. Insert the fuel nozzle into the fuel fill and dispense the fuel until the tank is full. Verify that the tank is full by reading the fuel gauge and/or by the sound of the fuel fill port. If your tank takes significantly more fuel than expected, investigate the cause immediately.



Be careful to not spill any fuel on the boat. If you do, be sure to clean up any spilled fuel immediately with a disposable cloth.



Be careful not to spill any fuel outside the boat into the water. If you do, clean up the fuel immediately in the manner prescribed by your local regulations.

7. Remove the nozzle and replace the fuel fill cap. Tighten securely with the provided key.
8. Open all ports, hatches and doors.

9. Put the switch for the blowers in the ON position. The switch is located on the helm switch panel.



To reduce the risk of fire, investigate all fuel odors immediately and do not start the engines, or other electrical equipment, other than the blowers.

10. Check the engine room and bilge areas for fuel odors. If you smell fuel, do not start the engines or other electrical equipment. Investigate the cause, correct, and completely ventilate the bilge area before proceeding.

3 . 1 . 3 . Filling Your Water Tank

The fill fitting for the water tank is located on the starboard side deck, near the aft spring line cleat. To fill:

1. Open fill fitting with special key provided.
2. Insert hose from dockside water supply and turn on.
3. Stop filling when water overflows fitting and comes out of the vent fitting on the hull side below fill fitting.
4. Replace cap and tighten.

3 . 1 . 4 . Starting Your Engines

Before starting your engines, be sure that you have performed all the maintenance checks listed under Section 3.1, *When Arriving at Your Boat*. To start your engines, follow these steps:

1. Turn the ignition switches, located on the D.C. main distribution panel, to the ON position.
2. Open all hatches to the bilge area and operate the blower for at least four minutes. Investigate and remedy any fuel vapors that are detected.



DO NOT START THE ENGINES UNTIL YOU ARE SURE THERE ARE NO FUEL FUMES IN THE BILGE, OR ENGINE COMPARTMENT, OF YOUR BOAT. FUEL VAPORS ARE EXPLOSIVE AND MAY IGNITE DURING ENGINE START-UP CAUSING SERIOUS INJURY OR DEATH.

3. Make sure that the engine clutch levers are in the neutral position, straight up and down.
4. Push the throttle levers to the 1/4 open position.
5. Flip the ignition switches to the ON position.

Note: When the ignition system is activated, the engine alarm will sound for a short period.

6. Press and hold START button and release when engine starts. If the battery for that engine is low on voltage, press and hold the battery parallel switch, between the port and starboard START switches, during the cranking operation.



If engines fail to start after 70 seconds of cranking, cease cranking operation. Before attempting to crank engines again, the water must be drained from the muffler. Failure to do so could result in raw water contamination of the engines' cylinders.

Note: For procedure on how to drain the muffler see Chapter 7, *Storing and Winterizing*, Section 7.6.2.

7. Let the engines run at idle several minutes to fully distribute the oil inside, before leaving the slip.
8. The volt meter should read between 11 and 14.5 volts. If the reading is below 11, or above 14.5, stop the engines and investigate the cause before proceeding.

3 . 1 . 5 . Starting the Generator

Check the generator manufacturer's owner's manual for starting instructions. The generator control panel is located in the D.C. cabin distribution panel.



THE SAME PRECAUTIONS REGARDING FUEL VAPORS FOLLOWED DURING MAIN ENGINE START-UP SHOULD BE TAKEN WHEN STARTING YOUR GENERATOR.

3 . 2 . LEAVING AND RETURNING TO THE DOCK

Before leaving on a short cruise or an extended trip, you should leave information regarding your trip with someone who will be staying ashore. Particularly information regarding who is aboard, where you intend to cruise, and when you plan to return. This information will be extremely valuable should you run into trouble while away from the dock.

Before you cast off, be certain that you have planned your trip so that you know when to expect to need fuel and where you will purchase it. Marinas are not always as convenient as gas stations in your car! You should also do a last minute double check to see that all necessary safety items are on board, especially a coast guard approved life vest, of the proper size, for everyone on board.

Specific procedures as to the maneuvers needed to leave the dock and return to the dock smoothly vary with each situation. Information on the best procedures can be found in *Chapman's* (see Glossary), and through safe boating classes offered in your area, through the Coast Guard Auxiliary and the Power Squadron. For information on the courses offered in your area, call the "Boating Course Hotline" at 1-800-336-2628.

Note: Refer to Section 1.1.2 for specific information on your engine controls.



While maneuvering around the dock, have all guests on board remain in the cockpit, or cabin areas, if they are not involved in the handling of mooring lines.

3 . 3 . WHILE UNDERWAY

As the skipper of your boat, everyone on board is your responsibility. Their safety and enjoyment of the trip depends on your ability to operate your boat properly. You must stay aware of the weather and sea conditions, surrounding boating traffic, navigation of area waters, and the condition of your boat and its equipment and engines.

When operating your boat at night, or when visibility is significantly reduced, you should display the proper running lights. For specific information on which lights and signals are needed for different conditions, refer to information in *Chapman's* or from the Coast Guard.

Remember:

- 1. Alcohol severely reduces the ability to react to several different signals at once.**
- 2. Alcohol makes it difficult to correctly judge speed and distance, or track moving objects.**
- 3. Alcohol reduces night vision and the ability to distinguish red from green.**



DO NOT OPERATE YOUR BOAT WHILE UNDER THE INFLUENCE OF ALCOHOL. THIS MAY CAUSE SERIOUS PERSONAL INJURY, PROPERTY DAMAGE, AND/OR DEATH. SMART SKIPPERS STAY SOBER!

You must also keep a watchful eye on the wake that your boat produces when underway. When boating around or near docks and seawalls it is important to operate near idle RPMs in order to minimize your boat's wake. Most local governments hold you

responsible for damage caused by your boat's wake. When boating around smaller craft you must also take care with your wake in order to avoid capsizing the smaller vessel.

Please also keep in mind that your engines produce both noise and exhaust gas emissions. While your boat is equipped with the latest in diesel engine technology, and has an excellent exhaust system muffler, it still emits noise and gasses that may be an annoyance to your fellow boaters, or people on shore. As the operator you are responsible for these factors, and must consider them when operating your boat.

3 . 3 . 1 . Waste Disposal

While away from the dock, it is important that you endeavor to preserve our natural resources and maintain our waterways by properly disposing of all trash. The federal government has mandated:

1. The discharge of plastic or garbage mixed with plastic into any waters is prohibited. The discharge of all garbage is prohibited in the navigable waters of the United States and, in all other waters, within three nautical miles of the nearest land.
2. The discharge of dunnage, lining, and packing materials that float is prohibited within 25 nautical miles from the nearest land.
3. Other unground garbage may be discharged beyond 12 nautical miles from the nearest land.
4. Other garbage ground to less than one inch may be discharged beyond three nautical miles of the nearest land.



Any person who violates the above requirements is liable for a civil penalty of up to \$25,000, a fine of up to \$50,000, and imprisonment for up to five years for each violation. Regional, state, and local restrictions on garbage discharges also may apply.

3.3.2. Anchoring

Anchoring your boat while away from the dock is possible by using the anchor and anchor line provided for this purpose. The standard boat has an anchor locker accessed via a hatch located in the foredeck, just aft of the bow pulpit. This locker is large enough to store all of the anchor line. The bow pulpit includes a bow anchor roller (see Figure 1-15, Chapter 1), where your anchor can stow while underway and can be used to lower and retrieve the anchor into/from the water.

Specifics regarding the proper techniques, equipment, and conditions for safe anchoring, refer to *Chapman's*, or a safe boating course.

Switches for the raising and lowering of the anchor line via the anchor windlass are located on the foredeck. Please refer to the information provided by the windlass manufacturer in the Owner's Packet. The main breaker is mounted on the D.C. main breaker panel, under the companionway steps. For operating instructions, refer to the windlass manufacturer's owner's manual.



WHEN OPERATING AN ELECTRIC WINDLASS, BE CAREFUL TO KEEP HANDS AND FEET AWAY FROM THE WINDLASS DURING OPERATION. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY WHEN THEY ARE TRAPPED BETWEEN THE WINDLASS AND ROPE OR CHAIN.

To secure the anchor into the bow roller while underway, a rope lanyard with "s" hook on the end has been provided. To use, attach the hook to the anchor shackle and cinch the anchor tight into the bow roller. Wraps may be taken around the windlass to pull tight, and then secured to the anchor cleat. The lanyard must be removed before anchoring.

A cable, with a shackle on the free end, is attached to the foredeck for a secondary positive means to hold the anchor in the UP position. This must also be removed before anchoring.

3 . 4 . AFTER RETURNING TO THE DOCK

When you have returned to the dock, in order to maintain the finish and function of your boat, it is necessary to thoroughly wash it with a mild detergent soap and fresh water. After washing, in order to reduce spotting and maximize your boats appearance, dry all non-fiberglass surfaces with a dry towel or chamois.

When leaving your boat you should do the following:

1. Check the bilge areas for debris that might clog your bilge pumps while you are away.
2. Close all unnecessary seacocks.
3. Turn off all unnecessary electrical breakers.
4. Check to see that the bilge auto breakers are not tripped.
5. Check the security of all hatches and doors.
6. Check to see that all mooring lines are secure and that your boat is properly positioned in the slip so as to not interfere with the dock during tidal changes and storms.
7. Check to see that shore power cords and dockside water hoses have sufficient slack, if left attached.
Dockside water supplies should be turned off.

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Chapter 4

ELECTRICAL SYSTEMS

4 . 1 . GENERAL

The electrical systems in your **PURSUIT** 3400 Express Fisherman have been designed and built to the recommendations of the American Boat and Yacht Council (ABYC), the requirements of the United States Coast Guard, and have received NMMA Yacht Certification. It has been developed to supply all the boat's electrical needs at the dock, at anchor, and underway. While we are not attempting to describe all of the electrical engineering that went into the system, we believe some understanding of the basics of it's operation would help assure trouble free operation.



ALL SERVICE WORK ON THE ELECTRICAL SYSTEMS IN YOUR *PURSUIT* 3400 SHOULD ONLY BE PERFORMED BY YOUR *PURSUIT* FISHING BOATS DEALER, OR OTHER AUTHORIZED MARINE ELECTRICAL SERVICE FACILITY.

All of the electrical functions on your boat are a part of three basic systems, 12 V D.C., 120 V A.C., and bonding.

4 . 2 . 12 V D.C. SYSTEM

4 . 2 . 1 . Power Supply

Power is supplied to the 12 V D.C. system from two banks of batteries, an engine bank, and a house bank. Each bank is comprised of gel cell batteries, each with an 80 amp hour capacity, connected together to form a bank.

The intent of your 12 V D.C. system design is to provide a source of the basic needed battery power to operate your vessel safely while underway, and a second source for convenience and comfort items. It is expected that the engine bank will provide that basic operating power, and that the house bank will provide the convenience and comfort power, as well as power for other owner installed convenience items and electronics. It is important that the engine bank load be carefully determined so as to never result in a condition where the boat will not be able to be started, and operated safely in any weather or sea condition.



All owner installed items should be done by your *PURSUIT* Fishing Boats dealer, or other authorized marine electrical service facility. They must also only be installed to be powered from the house battery bank.

Battery power is replenished by two sources. The first utilizes the engine installed alternators. The port engine alternator charges the engine battery bank. The starboard engine alternator charges the house bank. This charging takes place whenever the engines are running.

The second source of battery bank charging comes from the installed 120 V A.C. battery charger. For this to operate the boat must be connected to shore power, or have the generator running and powering the 120 V A.C. panel (see Figure 4-3) in the cabin (see Section 4.3.2). The battery charger breaker on the 120 V A.C. panel must also be in the ON position.

It is important that your batteries be kept in a state of full charge as often as possible. Fully charged batteries will indicate a voltage

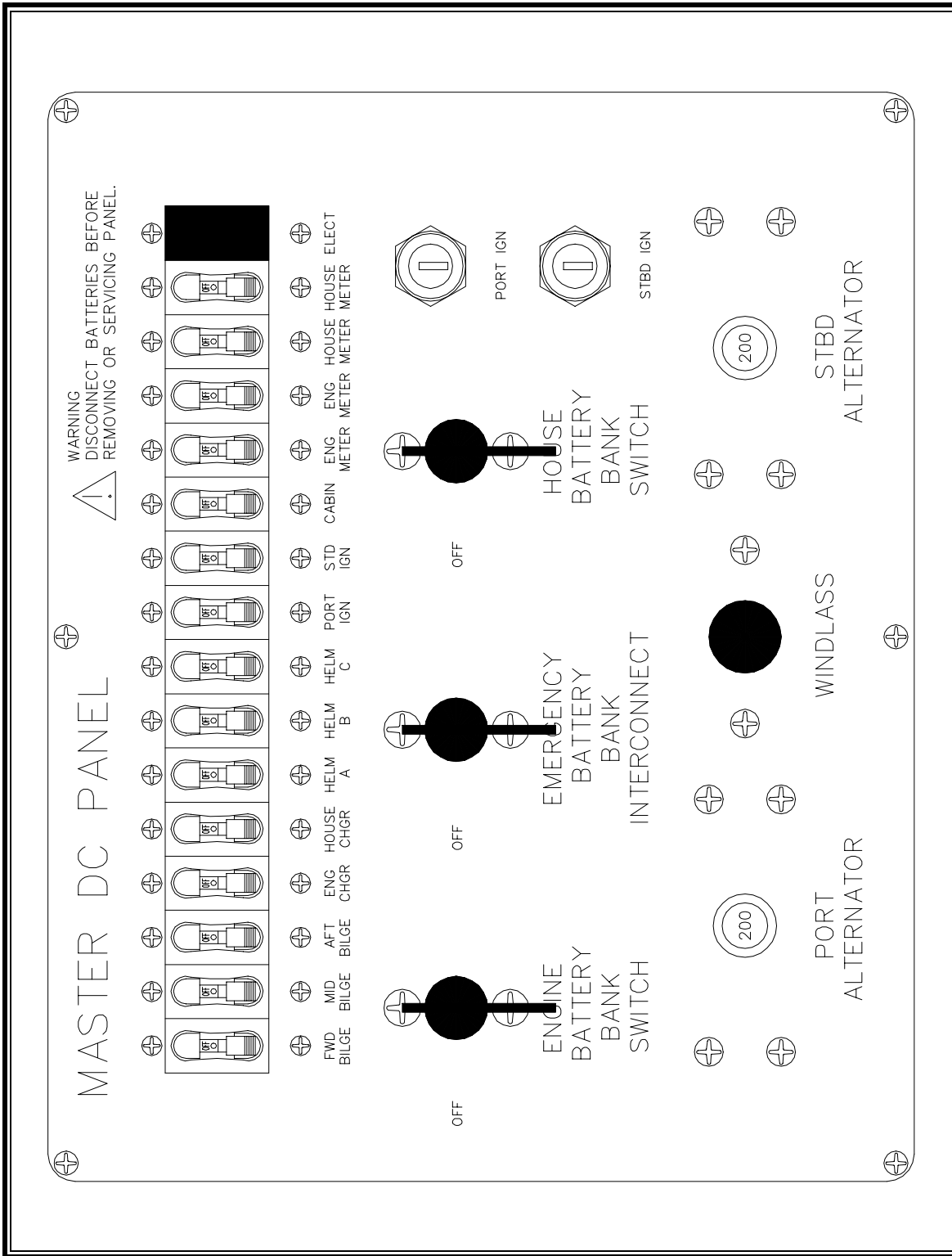


Figure 4-1: 12 V D.C. Main Panel

in excess of 12.6 volts with no load, or while being charged. Prolonged periods of discharge below 12.2 volts (indicated with no load on the bank) will cause the batteries to deteriorate rapidly, and will result in their inability to hold a charge for the expected amount of time. This can happen easily if your boat is left unattended for an extended period of time, has D.C. loads on, such as lights, and the battery charger is not left ON.

4 . 2 . 2 . Gel Cell Batteries

Gel cell batteries have been selected as the battery type for your **PURSUIT** 3400 for several reasons. The biggest benefit to the owner is that they require no maintenance of the electrolyte. In fact, the caps covering the electrolyte in the cells should **never** be removed by the owner. No maintenance, or testing, of this material is possible. Keeping the terminals clean on the top of the battery is all that is required for several years of trouble free operation.

If you notice the battery case swelling, or hear a hissing sound when charging, this may indicate a breakdown of the gel material. You should contact your local **PURSUIT** Fishing Boats dealer, or qualified marine electrical service center for inspection as soon as possible.

4 . 2 . 3 . Distribution

Power from both battery banks supplies the 12 V D.C. main panel under the steps into the cabin (see Figure 4-1). Power from the engine bank is connected to the engine main disconnect switch, and power from the house bank is connected to the house main disconnect switch. When these switches are in the OFF position, all D.C. power to the rest of the boat is stopped, with one exception:

Note: Power is supplied to the forward, mid and aft automatic bilge pumps before the main disconnect switches. Therefore these switches will not disconnect power to these items.

A third main disconnect switch is provided to cross connect the powered side of both battery banks. This switch should only be



used (turned ON) in conditions such as those described in Section 4.2.4. Otherwise, it should remain in the OFF position.

From these main disconnect switches power is distributed to the helm (see Section 1.1.4) and cabin distribution panels (see Figure 4-2). Power to all D.C. components is further distributed from these panels. For information on which circuit powers which components, please refer to the wiring schematics provided in Appendix C, and the comments under Section 4.2.4, *Operating Notes*.

4.2.4. Operating Notes

As mentioned in Section 4.2.3, a third disconnect switch has been provided for use in certain conditions.



Use of the Emergency Cross Connect Switch defeats the built in separation of operational and safety items from comfort and convenience items. This may allow greater load on the engine bank than it is designed for, thus causing engine cranking and safety functions to not operate correctly. This switch should only be used with the following understanding of it's operation and risks.

The conditions under which this third disconnect switch should be used are:

1. **Long term trolling on the starboard engine, with the port engine not operating.** When the port engine is not operating, the engine battery bank is not being charged. Operational loads on this bank will gradually reduce it's capacity, and could do so to the point where critical operational and safety items do not operate as expected. The engines may also be difficult to start, even with the battery parallel feature. Use of the *emergency cross connect switch* will allow the starboard engine to charge both battery banks. Charging of the engine bank can also be accomplished via the 120 V A.C. battery charger, if power is

available from the on board generator. Careful monitoring of battery bank voltages is advised while using this switch, to detect abnormal battery bank conditions early.

2. **Failure of one battery bank.** In this condition, some circumstance has caused the failure of one battery bank so that it can no longer supply any power to the components. To power all loads from one battery bank you must first turn the the failed bank's disconnect switch to the OFF position, and then turn the *emergency cross connect switch* to the ON position. All D.C. components will now be powered from the good battery bank.



WHEN OPERATING ALL D.C. LOADS FROM ONE BATTERY BANK, ALL NON-ESSENTIAL LOADS SHOULD BE DISCONTINUED UNTIL THE PROBLEM WITH THE FAILED BANK IS CORRECTED, AND TWO BATTERY BANKS ARE AVAILABLE FOR USE AGAIN. FAILURE TO DO SO CAN RESULT IN RAPID DEPLETION OF BATTERY CAPACITY NEEDED TO SAFELY OPERATE THE BOAT, AND PUT THE BOAT AND PERSONS ON BOARD IN JEOPARDY.

When leaving the boat for any extended period, turn the engine and house battery bank main disconnect switches OFF. You should also leave the boat connected to shore power with the 120 V A.C. battery charger ON. This will maintain the battery voltage in the proper state, and allow for the operation of the automatic bilge pumps. Turning off the main disconnects also disables power to the helm, preventing operation of the engines and other helm functions. If you are leaving the boat for a shorter period of time and wish to keep D.C. power supplied to other components, switching the ignition breakers on the engine room 12 V D.C. main disconnect panel to the OFF position will prevent the engines from being operated.

When you first arrive at your boat for a trip, and periodically when using your boat, it is a good idea to monitor your battery voltages. Battery voltages below 11.5 volts (with a load on the

bank) indicate a problem condition preventing battery replenishment, and should be investigated, and corrected, immediately.

To check the condition of your battery banks, select which battery bank you wish to check with the selector switch in the center of the D.C. cabin panel, at the top. The voltmeter will indicate the present voltage of that bank, and the ammeter will indicate the load presently being applied to that bank. An OFF position is provided on this switch to allow eliminating the meter loads from your D.C. system if desired. Power consumed by the bilge pumps, stereo memory, and remote control lights is not indicated on the ammeter.

A panel lights switch is provided at the bottom of the D.C. cabin panel, near centerline. This switch turns the switch identification label back lighting on and off, for both the D.C. and A.C. cabin panels, as well as the indicator lights next to each D.C. breaker. Again, this is provided to minimize the D.C. load if desired.

4 . 3 . 120 V A.C. SYSTEM

4 . 3 . 1 . Power Supplies

A.C. power is supplied to the A.C. cabin panel in three ways:

1. Connecting to 120 V 30 A dockside power via the dockside inlet (see Section 1.2.1 for hook-up directions).
2. Connecting to 120 V 30 A dockside power via the optional second dockside inlet (see Section 1.2.1 for hook-up directions).
3. Running the on board generator.

4 . 3 . 2 . Distribution

Power from the three sources above are supplied to the A.C. cabin panel where they are selected with the main disconnect breakers. Due to the slide bar arrangement, only the shore power **or** generator can power the panel at one time.

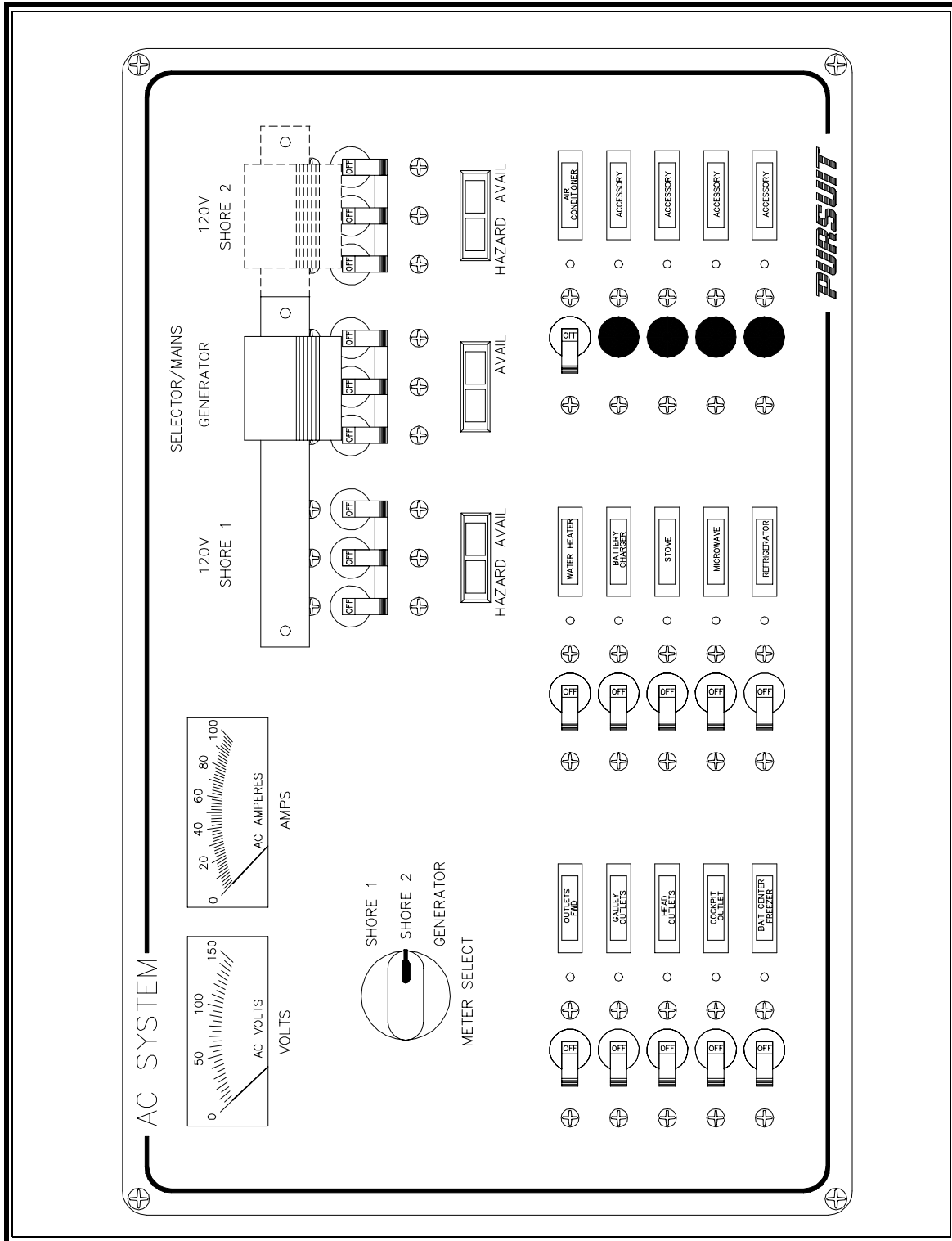


Figure 4-3: A.C. Cabin Panel

Power is supplied from the selected main breaker(s) to the individual circuits, via the circuit breakers in the panel. For a description of the individual circuits, and which components they supply, please refer to the wiring schematics in Appendix C.

4 . 3 . 3 . *Operating Notes*

The greatest amount of A.C. power is available when connected to both 120 V 30 A shore powers, or the onboard generator. If too much load is applied when connected to the single 120 V 30 A shore power, it is possible to trip the shore power inlet breaker. This should not happen while connected to both 120 V 30 A shore powers, or while running the generator, unless extraordinary A.C. loads are applied via the 120 V outlets in the cabin, cockpit, and engine room.

When using A.C. power, it is a good idea to monitor the voltage available, and load applied, periodically, to detect abnormal operating conditions early. To check the voltage and amperage, select which power source you wish to check with the selector switch below the volt and amp meters, in the A.C. cabin panel. The volt meter will indicate the current voltage of that source, and the amp meter will indicate the load presently being applied to that source. If voltage supplied is lower than 105 V or higher than 130 V, discontinue use, and correct the problem as soon as possible.



Operating your A.C. electrical system with low, or high, voltage may damage some on-board A.C. electrical appliances.

4 . 4 . BONDING SYSTEM

The purpose of the bonding system on your boat is to provide a low resistance electrical path between otherwise isolated metallic objects, particularly those in common contact with sea water and potentially subject to galvanic corrosion.

The bonding system is connected to two large zincs mounted to the transom of your boat. These zincs are provided to purposely

ELECTRICAL SYSTEMS

BONDING SYSTEM

deteriorate over time, to assure that the other components do not. These zincs must be checked periodically to determine their status, and be replaced as needed.

Zincs are also provided on the propeller shafts to protect them since they are not connected to the bonding system, and are made of stainless steel.



Owner installed components that are below the waterline must also be connected to the bonding system. Comparable wire sizes and terminals must be used, and should be connected directly to the nearest bonding system terminal strip. Failure to do so may result in severe galvanic corrosion of the item, and possible premature failure, resulting in a water leak.

The bonding system is connected to the main D.C. ground buss along with the A.C. grounding buss. This establishes the water as ground potential and helps prevent the existence of electrical potential on exposed metallic hardware and electrical equipment.



THE A.C. GROUNDING BUSS MUST REMAIN CONNECTED TO THE MAIN D.C. GROUND BUSS AT ALL TIMES. DO NOT CUT THE GREEN WIRE IN THE SHORE POWER CORD, OR RELATED EQUIPMENT. TO DO SO CAN CAUSE LETHAL VOLTAGE TO BE PRESENT ON BOAT EQUIPMENT, OR IN THE WATER AROUND THE BOAT.

A galvanic isolator is installed to help prevent galvanic corrosion when connected to shore power.

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Chapter 5

COMMISSIONING YOUR BOAT

5 . 1 . BEFORE LAUNCHING YOUR BOAT

The very first thing you should do when you get your new **PURSUIT** 3400 Express Fisherman is **fill out the warranty registration card** and return it to the factory. This will make it easier to correspond with your dealer in the event of a problem with your boat. The following items are best accomplished by your **PURSUIT** Fishing Boats dealer, or another qualified marine service facility. Your engine and transmission should be prepared according to the information provided from the engine manufacturer.

Before launching your boat for the first time the following items should be done:

5 . 1 . 1 . Bottom Paint

If your boat has come equipped with factory applied bottom paint, the second coat should be applied over the first, just before launching. The second coat is left off until this time so as to maximize the anti-fouling properties of the paint. Be sure that the bottom is clean and dry before applying the second coat. A gallon of paint has been provided by the factory for this purpose.

If your boat has not been ordered with factory applied bottom paint, and your boat will be kept in the water for an extended

period of time (three weeks or more), we recommend you have the bottom painted. When painting the bottom, we recommend that the paint system you use **not** involve sanding or abrading the gelcoat surface in any way. Your **PURSUIT** comes with a five year warranty against blistering that may be voided by breaking the gelcoat surface. Whatever the system you choose, we recommend that you follow the paint manufacturer's recommendations for preparation and application, and that you consider having your **PURSUIT** Fishing Boats dealer, or other qualified marine service facility, apply the paint. Remember, never sand the gelcoat surface, use a primer type of paint system.

5 . 1 . 2 . Bilge Areas

Install the garboard drain plug (see Figure 5-1). The drain plug is located on the boat's centerline, near the transom. Be sure that it is installed tight.

Close all seacocks.

5 . 1 . 3 . Electrical Systems

Check to see that the batteries are fully charged. If not, the batteries may be charged by hooking up the shore power cord

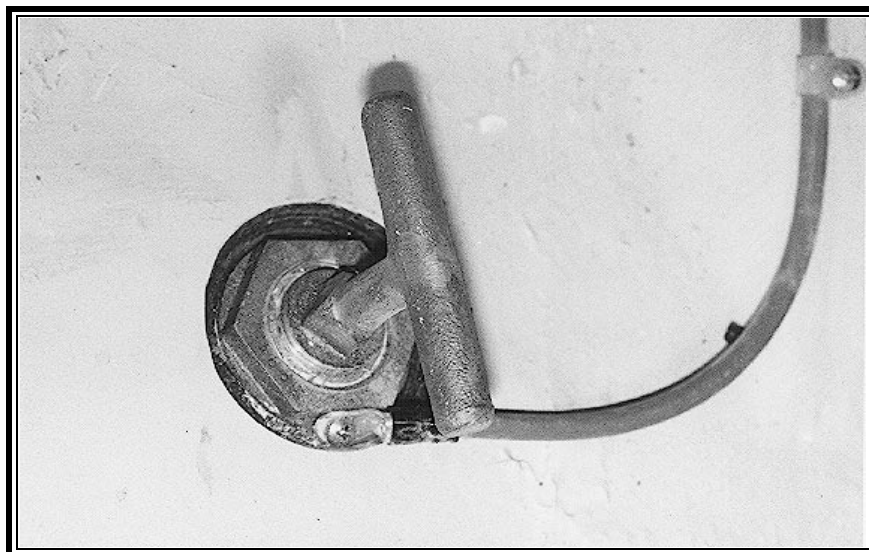


Figure 5-1: Garboard Drain Plug

(see Section 1.2.1) through the 120 V A.C. battery charger.

5 . 1 . 4 . *Installing the Propellers*

To install the propellers (see Figure 5-2), the following procedure should be followed:

1. Check the keyway slot in both the propeller and the shaft for burrs, and make certain that the key will slide freely in the slots.
2. Slide the propeller onto the shaft, without the key in the slot, until it is fully engaged on the taper, and mark the forward face of the propeller on the shaft with a pencil.
3. Remove the propeller. Place the key in the propeller shaft keyway and again slide the propeller onto the shaft. Check to be sure that the propeller will still engage to the same place with the key in, as it did with the key out. If not, remove the propeller and key, and modify the key so that it will allow the propeller to fully engage on the shaft.



Do not install the propeller with a poorly fitted key in the keyway. A poorly fitting key may cause vibration underway, unexpected propeller shaft stress, and possible shaft failure.

4. After assuring the propeller, key, and shaft fit, remove the propeller and key, apply a lithium type grease to the shaft taper, place the key in the shaft keyway, and slide the propeller onto the shaft until it is fully engaged.



Do not allow the key to slide forward in the shaft keyway and ride up on the radius at the forward end of the shaft keyway. Failure to prevent this may cause unacceptable shaft stresses and possible shaft and/or propeller failure.

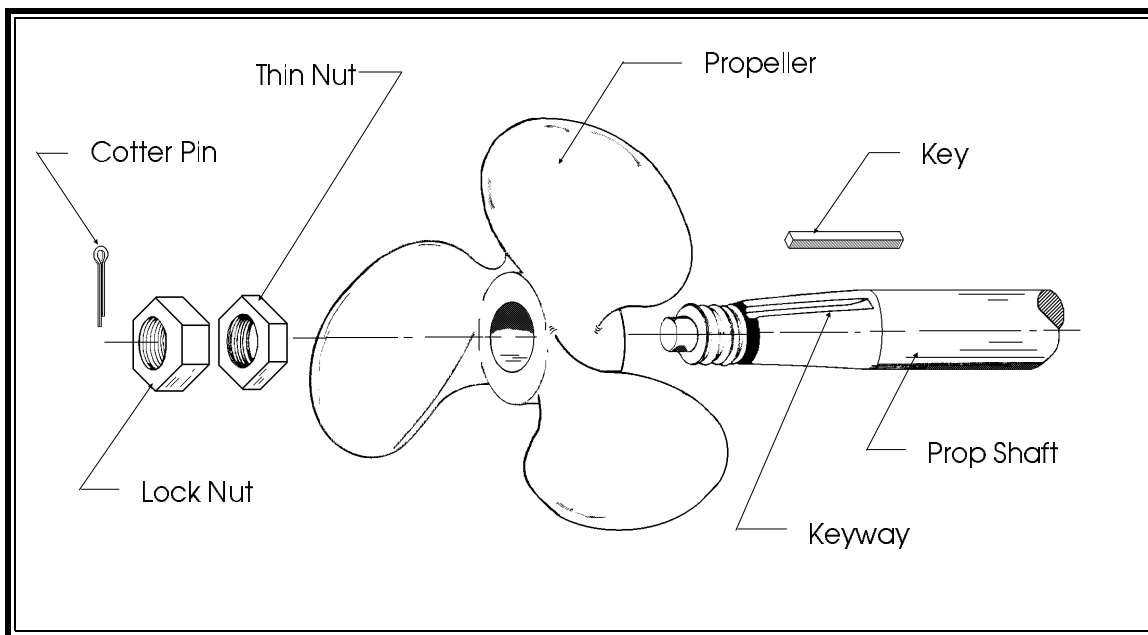


Figure 5-2: Propeller Installation

5. Thread the thin propeller nut onto the shaft threads and tighten against the propeller with a wrench, while holding the propeller from turning. Next, thread the thick propeller nut onto the shaft threads and tighten against the thin nut with a wrench, while holding the propeller from turning. Slide the cotter pin into the hole at the end of the shaft and spread both halves around and against the shaft.

Repeat for the other propeller.

Be sure that the propellers are installed on the correct shaft. If they are on the wrong shaft, the boat will move in reverse when shifted into forward.

5 . 2 . LIFTING YOUR BOAT

Now that your boat is ready to launch, it is necessary to lift it into the water with a marine hoist or travel lift. This should only be done by your **PURSUIT** Fishing Boats dealer or a qualified marine service facility and personnel.

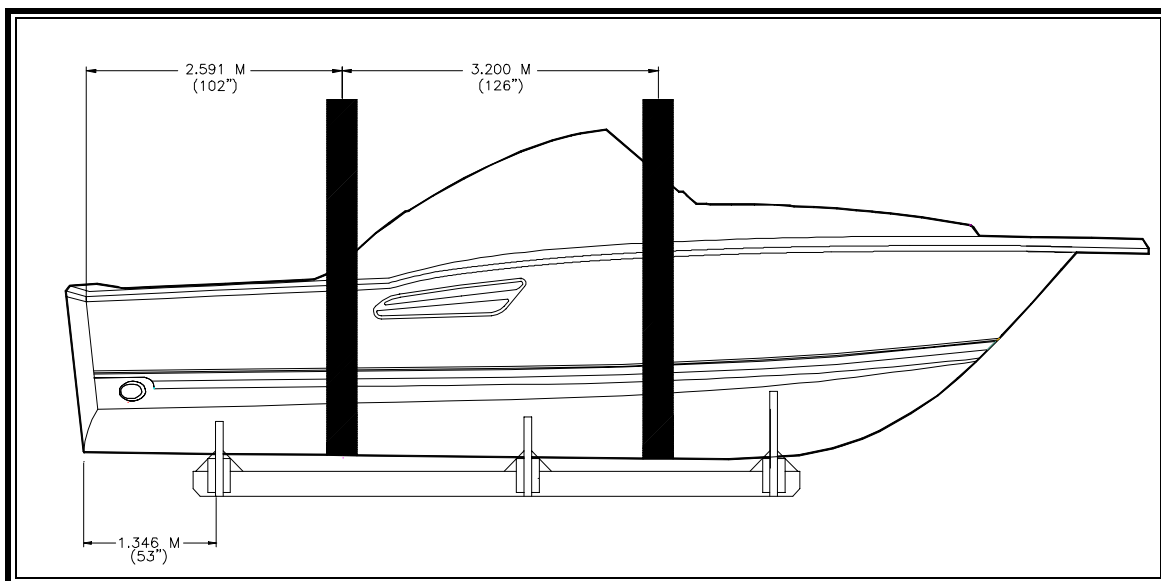


Figure 5-3: Sling Locations

Lifting your boat should only be done with slings located where indicated by sling tags on the hull side, port and starboard (see Figure 5-3), and with the slings held at least the same beam as the boat with the hoist or spreader bars. Pads should be placed at the chine corners to ease the pressure while lifting.



Failure to follow the above procedures while lifting your boat may result in structural damage to the hull and deck or underwater gear.

5 . 3 . AFTER LAUNCHING YOUR BOAT

The first thing to check is the bilge area and all thru-hulls, seacocks, rudder shaft logs, and propeller shaft logs to be sure they are not leaking. Open all seacocks and make certain that the hoses and fittings are not leaking.

5 . 3 . 1 . Fresh Water System

Prepare the fresh water system for operation. To prepare the system follow this procedure:

1. Turn on the fresh water pump.
2. Open both faucets (hot and cold) at the galley sink.
3. When the pink potable water anti-freeze stops flowing from the faucets, turn off the faucets.
4. Turn off the fresh water pump.
5. Fill the fresh water tank with fresh water. The fill is located on the starboard side deck, near the aft spring line cleat (see Figure 5-4). The tank should be filled until water runs out of the vent on the hull side, just below the fill.
6. Switch on the fresh water pump. Open all the faucets in the galley, the head, the cockpit prep center, the cockpit shower, and the fresh water washdown in the cockpit, if installed.
7. Leave all faucets open until the water tank is empty.
Note: If anti-freeze was not used, this step is not necessary.
8. Turn off the fresh water pump and close all the faucets.
9. Close/open the valves at the water heater bypass and re-connect the cockpit ice maker water supply, to allow water into the water heater and ice maker.
10. Fill the fresh water tank 1/2 full with clean water.
11. Turn on the fresh water pump and open all the faucets until the tank is empty.
12. Turn off the fresh water pump and close all the faucets.
13. Fill the fresh water tank full with clean water.

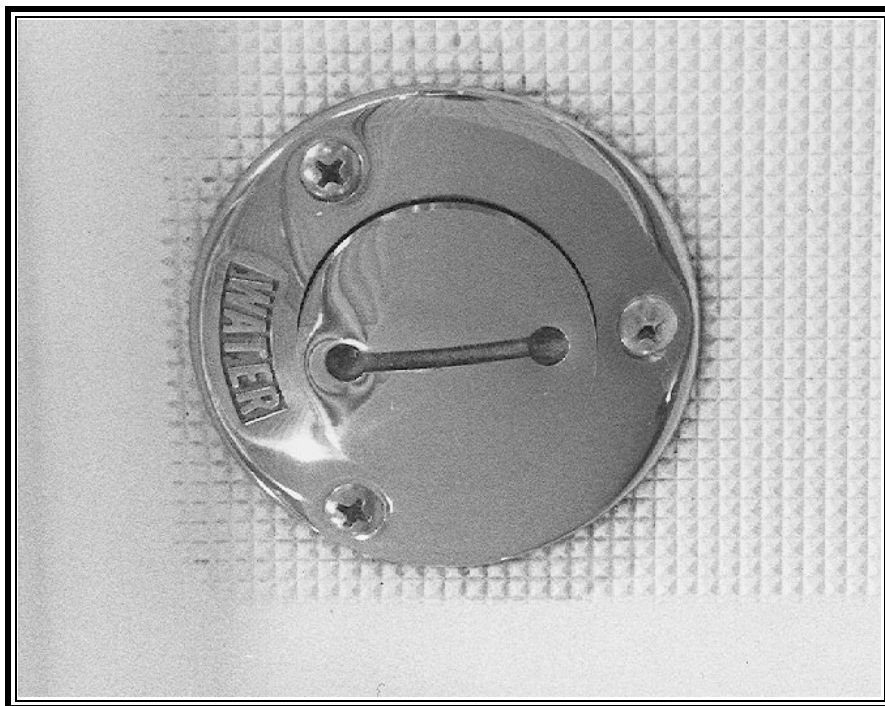


Figure 5-4: Water Fill

14. Turn on the pump and purge air from the system, at all the faucets. The pump will shut off as the system pressure increases.

5.3.2. Electrical Systems

Hook the shore power system up to a source of power and test all A.C. powered systems and circuits. Test all D.C. systems and circuits. Report all problems and questions to your **PURSUIT** Fishing Boats dealer at once.



INVESTIGATION OF PROBLEMS WITH ELECTRICAL SYSTEMS AND CIRCUITS ON YOUR BOAT SHOULD ONLY BE DONE BY QUALIFIED MARINE ELECTRICAL REPAIR PERSONNEL. FAILURE TO DO SO CAN RESULT IN EQUIPMENT DAMAGE, FIRES IN BOAT WIRING, SEVERE ELECTRICAL SHOCK AND DEATH.

Check the generator fluids. Start your generator and test all A.C. systems connected to the generator. Follow any start-up proce-

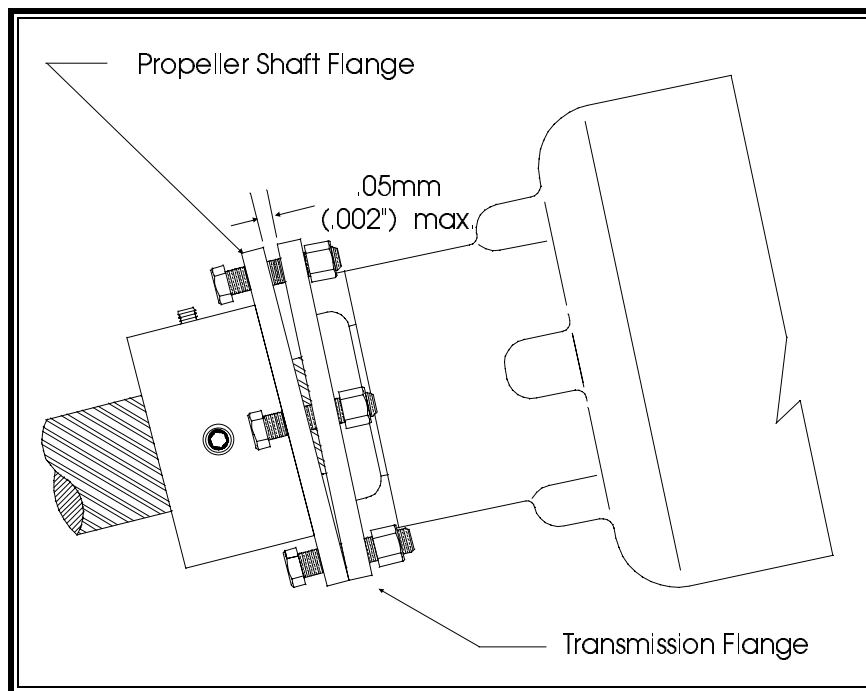


Figure 5-5: Propeller Shaft / Transmission Coupling

dures recommended by the generator manufacturer in their owner's manual.

5.3.3. Engines and Transmissions

The alignment between the transmission flange and propeller shaft flange must be checked before leaving the dock for the first time (see Figure 5-5). While this alignment is set before the boat leaves the factory, the boat may settle after shipment and then again when being put in the water. This must be checked and adjusted, if necessary, by your **PURSUIT** Fishing Boats dealer or a qualified marine service facility. The alignment should also be checked seasonally.

The alignment should also be checked again at 25 hours, whenever the boat has been out of the water for an extended period, or at least once a year. If it is not within tolerances indicated in Figure 5-5, you must have it adjusted.

Check the engines and transmissions for proper oil and coolant fluid levels. Start your engines and check to see that they are operating properly. Check your engine manufacturer's owner's

manual for any start-up and break-in procedures. See Section 3.1.4. for engine starting procedures.

5 . 3 . 4 . Interior Equipment

Operate the head systems, per instructions in the information provided by the head manufacturer, to be certain that they are operating properly.

5 . 3 . 5 . Exterior Equipment

Set up any canvas and vinyl enclosures to be certain of their fitting properly. Clean and wax the boat (hull sides are best done before launch). Also be certain that your boat is secured in its slip properly. Report all problems that are encountered in the process to your ***PURSUIT*** Fishing Boats dealer at once so that they may be taken care of promptly.

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Chapter 6

ROUTINE MAINTENANCE

The various systems and products that make up your **PURSUIT** 3400 Express Fisherman will require routine maintenance from time to time and many will require scheduled maintenance. For information about maintaining the items purchased by the factory and included in your boat, refer to the various products' owner's manuals from their manufacturers.

6 . 1 . FUEL SYSTEM

The fuel system in your **PURSUIT** 3400 Express Fisherman begins with two fuel tanks located under the cockpit floor, port and starboard. These tanks are filled via fuel fill fittings, port and starboard, on the side decks, and vented via vent fittings on the hull sides, below the fuel fills. These hoses need to be inspected seasonally to assure that the clamps that attach the hoses to the tanks, and fill and vent fittings, are tight, and that the hoses are in good condition.

The fuel goes from the tanks to the engines and generator through a 6-way valve system (see Section 1.1.11.), as indicated in the schematic for the fuel system (Figure 6-1). These hoses and their crimped fittings need to be inspected annually for deterioration. If any suspect areas are found, they should be taken care of immediately, before the boat is used again.

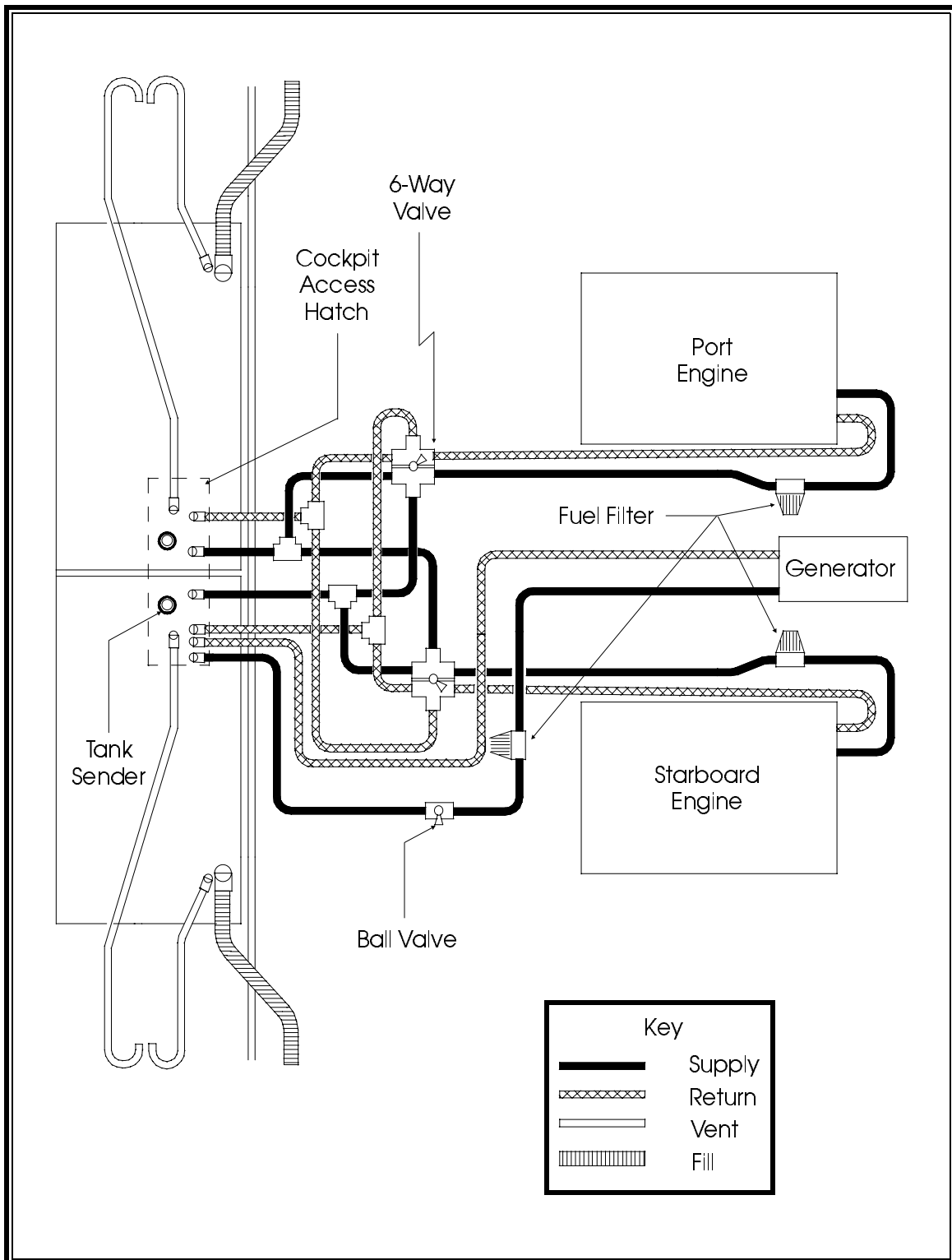


Figure 6-1: Diesel Fuel System Schematic



FUEL IS EXTREMELY FLAMMABLE. ANY PROBLEMS WITH THE FUEL SYSTEM IN YOUR BOAT MUST BE CORRECTED IMMEDIATELY. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.

The fuel filters/water separators are located outboard of the outboard main stringers in the engine room, aft, and should be cleaned every 25 hours, or twice a season. To clean the filters, follow this procedure:

1. Turn all electrical switches to the OFF position.
2. Close the valves in the fuel system.



Figure 6-2: Fuel Filters

3. Remove the top by removing the fastener on the top of the filter.
4. Remove the filter element from the filter body and clean thoroughly. If damaged or unable to clean, replace.
5. Wipe the inside of the container with a clean cloth.
6. Check all O-ring seals in the top of the filter for wear, and replace if necessary.
7. Install the fuel filter into the filter body.
8. Replace the filter top and attach with the fastener.
9. Re-open fuel system valves.



MAKE SURE ALL CONNECTIONS ARE TIGHT, AND THAT THERE ARE NO FUEL LEAKS.

6 . 2 . FRESH WATER SYSTEM

The fresh water system requires very little maintenance (see Figure 6-3). The biggest problem many boat owners have is that the water in the water tanks (located under the floor, forward) is not used up and replenished often enough, and becomes stale. To combat this problem, you can drain the tank periodically and refill, or add a water conditioner to the tank periodically. Water conditioners are available at your **PURSUIT** Fishing Boats dealer or R.V. supply stores.

The two pieces of equipment in the fresh water system that may require maintenance are the water heater and the fresh water pumps. Refer to the owner's manuals supplied by the equipment manufacturers for specifics.

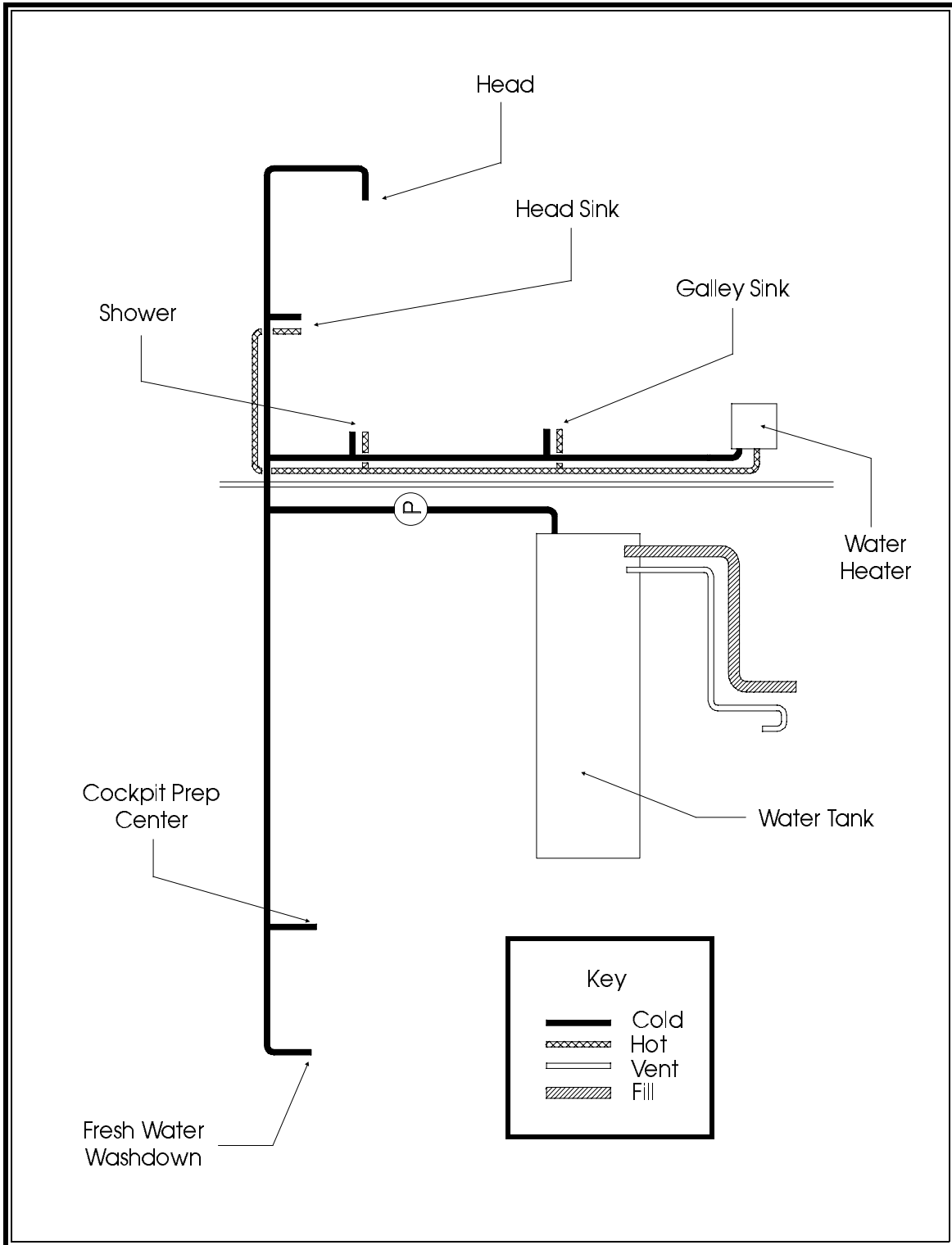


Figure 6-3 : Fresh Water System Schematic

6 . 3 . ELECTRICAL SYSTEM

6 . 3 . 1 . 12 V D.C. System



IN ORDER TO AVOID ELECTRICAL SHOCK, THE ELECTRICAL SYSTEM SHOULD ONLY BE REPAIRED BY A QUALIFIED MARINE ELECTRICIAN.

Your boat comes equipped standard with several gel cell batteries. Twice a season, the batteries need to be cleaned. To do this:

1. Turn the main D.C. switches OFF and disconnect the battery.
2. Use a cloth and a solution of bicarbonate of soda and water to wipe the tops.
3. Clean the battery terminals.
4. Reconnect the battery cables to the terminals and tighten.

Please refer to the owner's manual supplied by the battery manufacturer for any additional maintenance instructions.

The batteries in your boat are kept charged when the engines are running, by alternators on the engines. If equipment in the 12 V D.C. system is used without the engines running, the batteries may lose their charge. The charge may be maintained with the 120 V A.C. battery charger while connected to shore power, or running the optional generator (see Chapter 4, *Electrical Systems*). If you have trouble getting them charged, or to hold a charge after charging, contact your **PURSUIT** Fishing Boats dealer or a marine electrical service to investigate the cause.

Every time you use your boat, it is a good idea to check all the D.C. equipment on your boat. If you find something that does not work properly, contact your **PURSUIT** Fishing Boats dealer or a qualified marine electrical service to repair.

6 . 3 . 2 . 120 V A.C. System



IN ORDER TO AVOID ELECTRICAL SHOCK, THE ELECTRICAL SYSTEM SHOULD ONLY BE REPAIRED BY A QUALIFIED MARINE ELECTRICIAN.

The terminals on each end of the shore cord should be checked for corrosion every time it is used, before using. The outside should also be checked for cracks and chafing of the insulation each time it is used.

The generator requires regular maintenance and you should refer to the owner's manual supplied by the generator manufacturer for specifics.

Every time you use your boat, it is a good idea to check all the A.C. equipment on your boat. If you find something that does not work properly, contact your **PURSUIT** Fishing Boats dealer or a qualified marine electrical service to repair.

6 . 4 . EXTERIOR EQUIPMENT AND FIBERGLASS

The exterior of your **PURSUIT** 3400 Express Fisherman, like most fiberglass boats, requires very little maintenance to keep in top shape, but some is necessary. Any installed electronics should be kept clean and dry, and should be maintained according to the owner's manuals supplied by the equipment manufacturer.

6 . 4 . 1 . Fiberglass Surfaces

The rest of the exterior should be maintained after each use of the boat as follows:

1. Rinse the boat with clean fresh water.
2. Wash all exterior surfaces and hardware with a sponge, or soft bristle brush, and a solution of fresh water and detergent. Non-skid areas may be scrubbed with a stiff bristle brush.



Do not use abrasive cleaners on smooth fiberglass surfaces. They will dull the surface and allow dirt to penetrate the surface.

3. Rinse the boat with fresh water.

At least once a year, apply a good grade automotive or marine wax to the smooth fiberglass surfaces. Follow the directions supplied with the wax. After a period of time, when your boat has been exposed to the sunlight, the gelcoat surface will fade, dull, or chalk. This will require a heavier buffing to bring back to its original luster. To accomplish this, a fine cleaning compound such as Mirror Glaze® #1 and a power buffer will be required. Follow all directions supplied with the cleaner. After buffing, apply a coat of wax to all smooth surfaces.

Hull sides and transom should receive the same cleaning as the other fiberglass surfaces.

A pamphlet called, *Congratulations, Welcome To The Fiberglass Fleet*, is included in the literature packet. Read this pamphlet for more information on the care of fiberglass.

If the fiberglass or gelcoat surface should need repair, contact your **PURSUIT** Fishing Boats dealer or another qualified marine service facility.

6 . 4 . 2 . Plexiglass

The hatches and portholes in your boat are made of plexiglass and must only be cleaned with mild soap and water, or plexiglass cleaner.



Keep all strong solvents such as acetone, and strong window cleaners such as Windex®, away from plexiglass surfaces. They can cloud and cause crazing in the plexiglass surface.

6 . 4 . 3 . Hardware

All exterior chrome hardware may be cleaned with any available chrome cleaner. If the exterior stainless hardware begins to show signs of "bleeding", scrubbing with a mild, non-abrasive cleaner such as Soft Scrub® will remove any tarnish. Follow with a coat of wax, as you would the fiberglass surfaces.

6 . 4 . 4 . Canvas and Upholstery

The upholstery on the exterior of your boat, such as the helm and companion seats, and cockpit coaming bolsters, should also be cleaned with a solution of mild detergent and water, or vinyl shampoo, and rinsed well with clean fresh water. An application of vinyl conditioner may also help restore them to their original condition.

The canvas on your boat should be cleaned the same as the exterior, with a mild soap and clean water. The underside should be brushed frequently, as this will help prevent the combination of dirt and moisture, from condensation, from staining the fabric. The clear side curtains, and forward clear connector (between the top and windscreen), should never come in contact with soap and water, and may be kept clear and pliable with a periodic application of lemon Pledge®. Wax the zippers occasionally to keep them working well.

6 . 4 . 5 . Hull Bottom

The portion of the hull that is below the water line should be kept clean and free of marine growth with the use of an anti-fouling paint. Refer to the paint manufacturer for recommended periodic cleaning procedures. Typically, the bottom will need to be repainted once a year and then cleaned a few times during the year. Contact your local **PURSUIT** Fishing Boats dealer for recommended local cleaning procedures and services. Failure to keep the bottom clean will result in loss of boat performance and fuel economy.

6.4.6. Underwater Gear

The underwater gear (shafts, struts, propellers, rudders) do not come painted with the anti-fouling paint, if that option is purchased (see Figure 6-4). Consequently, regular scrubbing is required, depending on where your boat is stored, in order to keep them clean. Fouled underwater gear can greatly effect your boat's performance, especially growth on the propeller.

Sacrificial zincs have been installed on the propeller shafts, and on the transom of your boat, to prevent electrolysis of underwater hardware. Depending on local conditions where your boat is stored, they will need to be replaced annually, or more often. Regular inspection is recommended to monitor their condition. See your **PURSUIT** dealer or local qualified marine service facility for replacement.

Annually, the strut cutlass bearings should be checked for wear. If the bearings are worn, they will cause excessive shaft vibration while running, and therefore should be replaced. To replace, see your **PURSUIT** dealer or other qualified marine service facility.

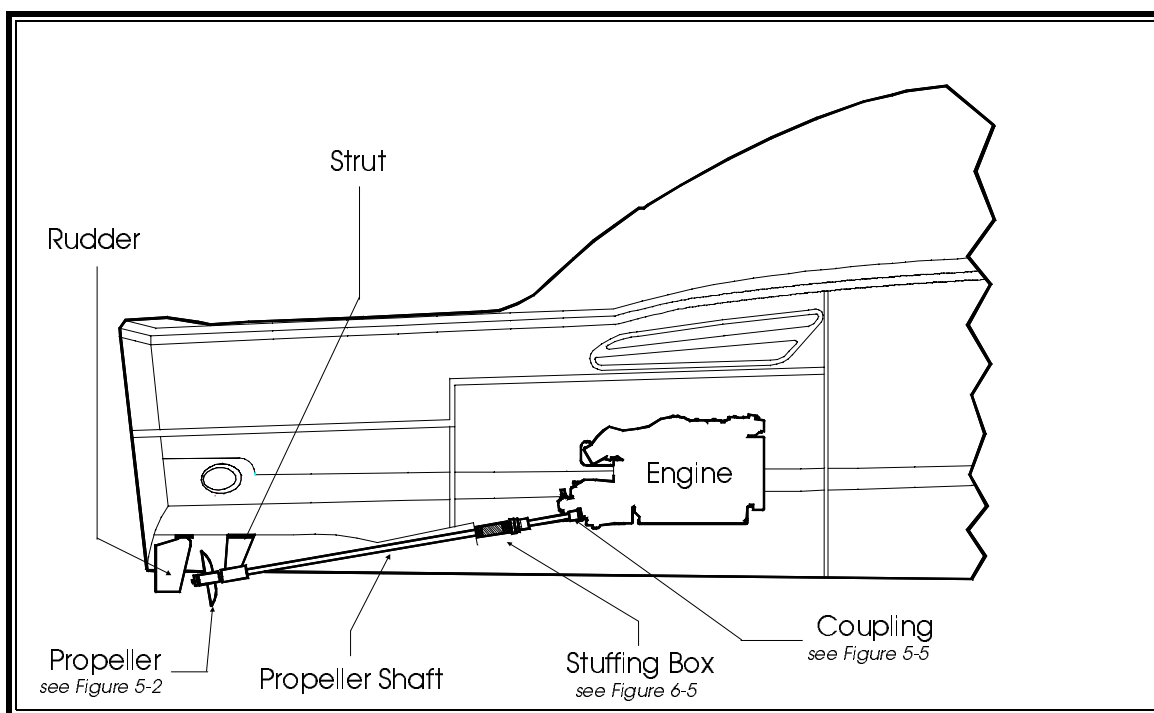


Figure 6-4: Propulsion System

6 . 5 . INTERIOR EQUIPMENT AND DECOR

The interior of your boat should be maintained much like the inside of your home. The fabrics that the cushions are made of should be treated much like the fabrics in home upholstery. The major difference is that the interior may be subjected to moisture not found at home. Periodically, put the cushions, blankets, sheets, etc. out in the sun to allow them to dry thoroughly and air out well. If they get wet with salt water, due to a hatch or porthole being left open, be sure to rinse them with fresh water to remove the salt crystals and then dry thoroughly. Salt crystals retain moisture and will damage the material.

The carpet should be vacuumed periodically and cleaned just the same as a home carpet.

The teak, or optional ash, bulkheads were coated with polyurethane varnish before leaving the factory and should only need dusting periodically with furniture polish. The formica and cultured marble surfaces should be cleaned with a mild soap and water, or a non-abrasive cleaner, such as Soft Scrub[®], for difficult stains.

Plexiglass surfaces should be cleaned as in Section 6.4.2.

6 . 6 . ENGINE ROOM

The engine room should be kept clean and free of any debris. A clean engine room assures that the engines (and generator, if installed) will receive a clean supply of air while running, and any problems or leaks will be immediately obvious during routine engine fluid checks.

6 . 6 . 1 . Engines, Transmissions and Generator

As mentioned in Section 3.1., it is important to check your engine, transmission, and generator fluids every time you use the boat, and daily on long trips. If the engines and transmissions are kept clean, leaks and other problems are easier to spot. Oil, coolant, and filter change intervals are outlined in the engine and generator manufacturer's owner's manual. Please read

them and follow their recommendations exactly. Have all engine, transmission, and generator maintenance performed by your **PURSUIT** dealer or other qualified marine service facility.

Your main engine exhaust system is comprised of an exhaust riser at the engine turbo charger outlet, hoses connecting the riser to a horizontal lift style muffler under the cockpit sole, and hoses connecting the muffler to the hull side outlet near the transom. The only maintenance these components should require is to periodically check the hose clamps for proper tightness.

6 . 6 . 2 . Optional Oil Change System

For your convenience during regular maintenance intervals, an oil change system for the main engines and generators has been installed in the engine room, at the forward engine room bulkhead. Please read the instructions provided from the system manufacturer for operation.



Always use the correct amount and type of engine oil recommended by the equipment manufacturer. Failure to do so can result in premature equipment failure, and loss of equipment warranty.



Always return the oil change system valves to the closed position after using the system. Failure to do so can result in transfer of oil between engines and/or generator due to crankcase pressures.

Note: Be certain to clean up any oil spilled in the bilge during oil changing operations. Failure to do so can allow the bilge pumps to transfer the oil into the surrounding water. Properly dispose of any oil contaminated rags per the local environmental requirements.

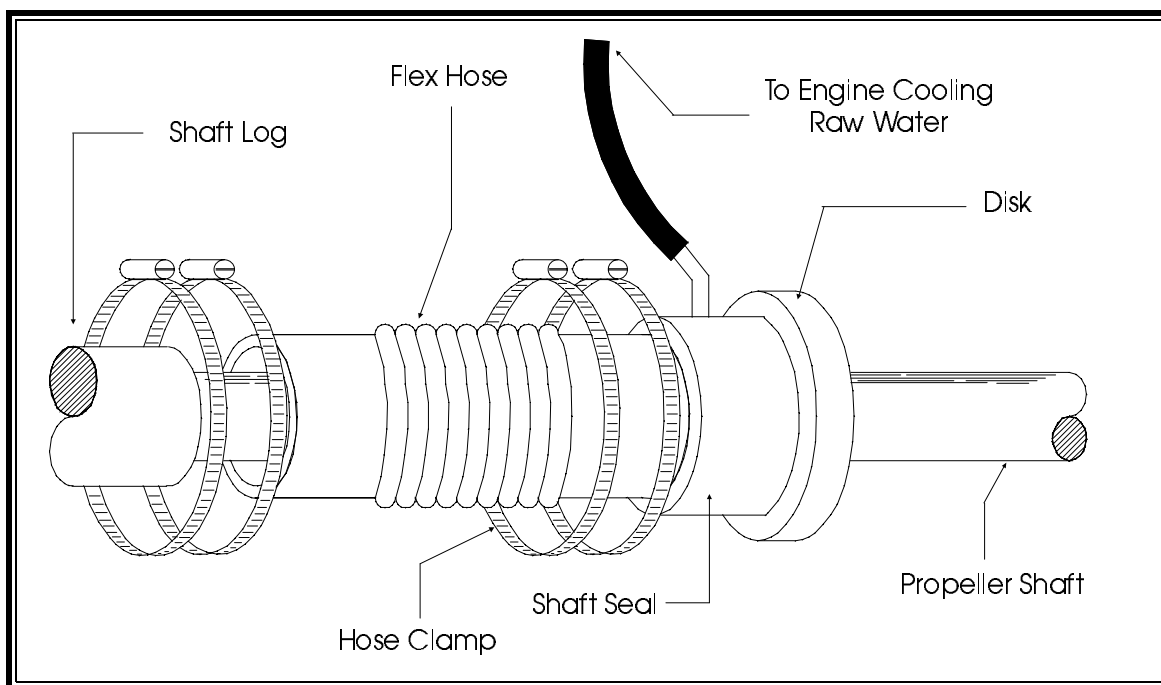


Figure 6-5: Stuffing Box

6 . 6 . 3 . Stuffing Boxes

Your **PURSUIT** 3400 Express Fisherman comes equipped with PSS (packless sealing system) propeller shaft seals for stuffing boxes (see Figure 6-5). These shaft seals use engine raw cooling water for lubricant and have a hose running from the shaft seal to the engine. The system should not leak water into your boat. If you notice leakage of the seal during, or after, a trip, contact your local **PURSUIT** dealer or qualified marine service facility. Additional information from the shaft seal manufacturer is provided in the owner's packet.

6 . 6 . 4 . Ventilation System

The engine room ventilation system is comprised of large hull side air inlets, port and starboard, and two powered exhaust blowers that exhaust under clam shell vents on each cabin side.

The exhaust blowers are permanently lubricated and should require no maintenance. The hoses that run from the blowers, into the bilge, should be checked periodically to be sure that they



Figure 6-6: Engine Raw Water Intake

are in the lowest part of the bilge so as to ventilate the engine room properly.

The engine room intake plenums are designed so as to remove moisture from the incoming air and drain it overboard. The drain fittings and hose should be kept clean and free flowing.

6 . 6 . 5 . *Raw Water Intake Strainers*

The engine raw water intakes (see Figure 6-6), generator raw water intake, air conditioning raw water intake, and raw water washdown pump intake are equipped with strainers. The strainers should be checked each time you use the boat to assure that no debris has accumulated that may block the flow.

If they are clogged and need cleaning, follow this procedure:

1. With the related equipment not operating, close the seacock, at the hull bottom, to stop the flow of water.
2. Remove the top of the filter by unscrewing counterclockwise. A spanner wrench has been provided for this purpose.
3. Lift the strainer out by the handle on the top.
4. Remove any debris from the strainer screen and rinse with clean water. Check to be sure that the O-ring under the top is intact and replace if necessary.
5. Install the strainer, replace the cover, and tighten with the spanner wrench.
6. Open the seacock, start the related equipment, and check the system for leaks.

6 . 7 . HEAD SYSTEM

The head in your **PURSUIT** 3400 Express Fisherman comes supplied with operating and maintenance instructions from the manufacturer. Schematics of the three head systems available are shown in Figures 6-7 thru 6-9.

When the holding tank (located under the floor, forward) is full, it is necessary to pump it out. To do this:

1. Take your boat to a marine facility where a pump out station is located.
2. Remove the cap from the waste deck fitting, located on the starboard side deck, at the front of the side

windshield, with the special wrench provided. Turn counterclockwise until loose and remove.

3. Insert the pump out hose into the opening.
4. Remove all waste from the holding tank.
5. Fill the tank with clean water and pump out again.
6. Replace the cap and tighten.
7. Open the flushing valve on top of the holding tank (near the level sender) and flush the sender for five (5) seconds. Close the valve.

Note: The Y-valve handle position must be checked carefully. The direction of flow is printed in the face of the valve and may **not** be the same as indicated by the handle.

Note: If your boat is equipped with the optional overboard pump out you must first check the local regulations to see if this practice is allowed.

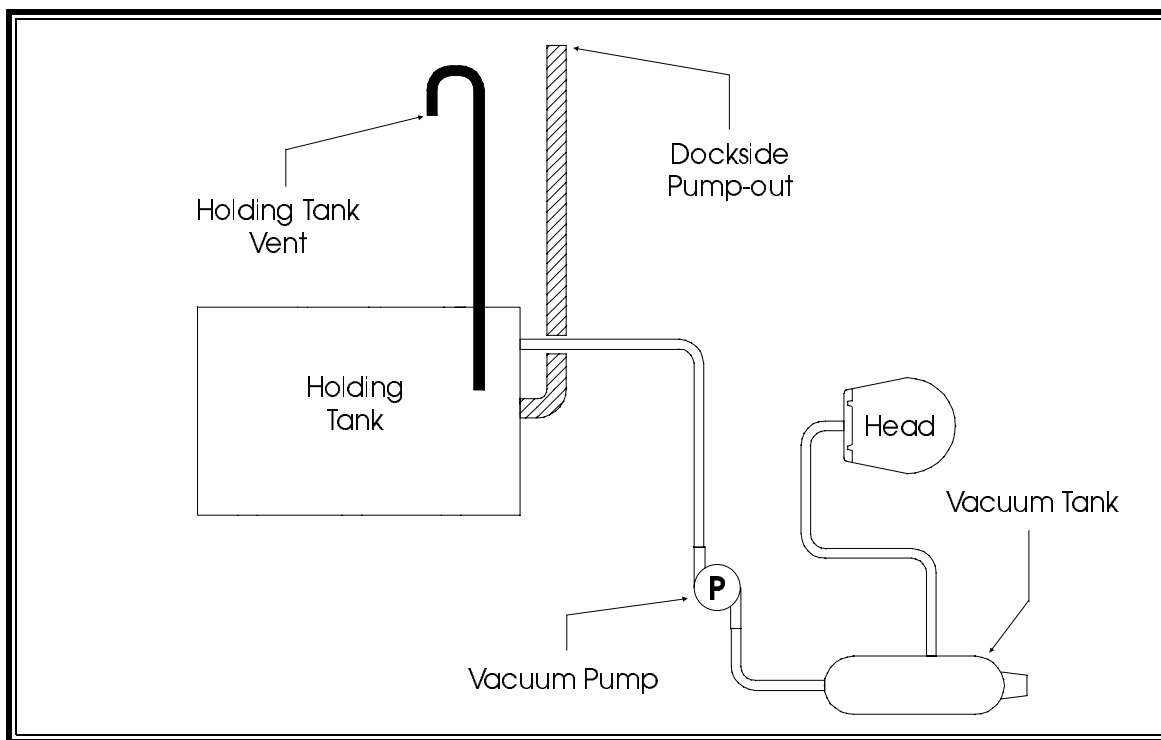


Figure 6-7 : Standard Head System

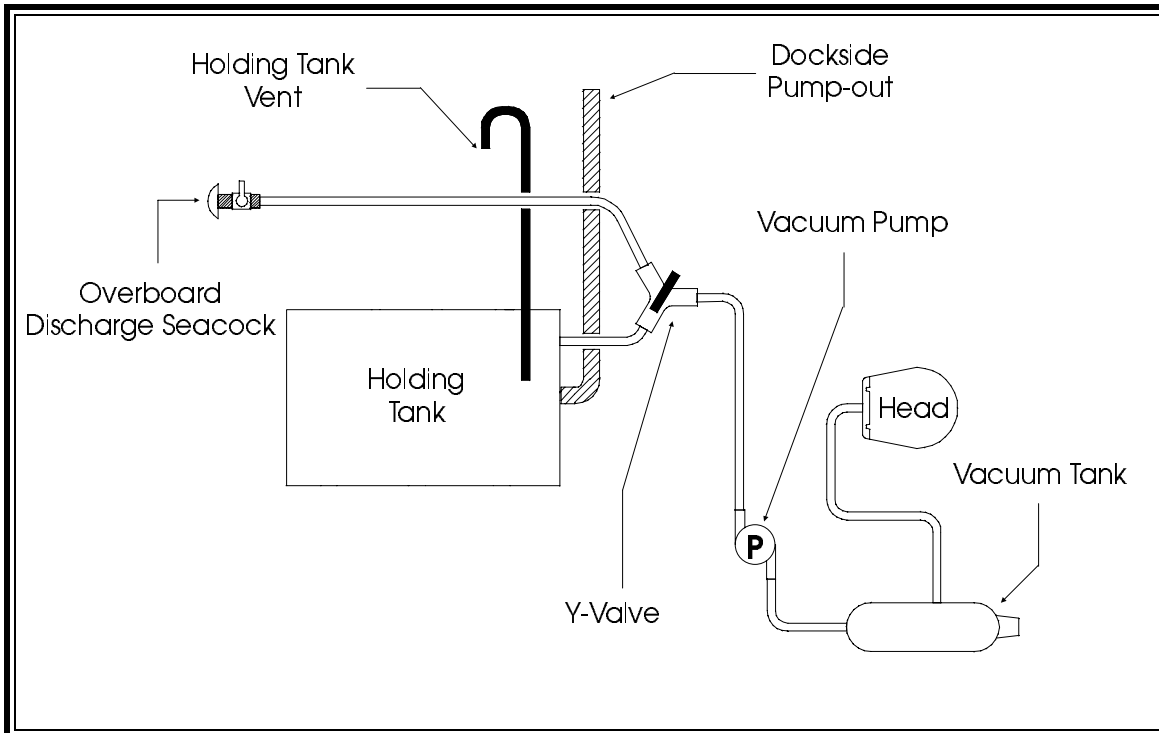


Figure 6-8 : Y-Valve Head System

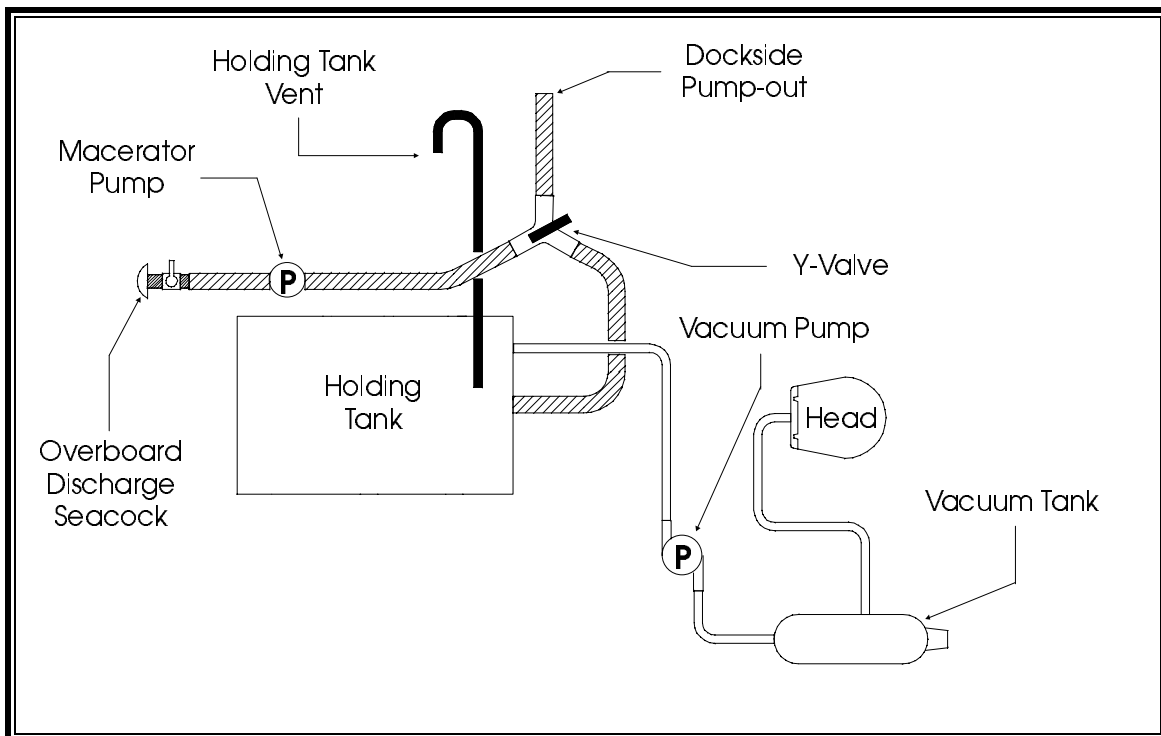


Figure 6-9 : Macerator Head System

Note: Before operating the overboard discharge pump, make certain the Y-valve and seacock are open to prevent damage to the check valves (duckbill valves).

6 . 8 . DRAINAGE SYSTEM

The drainage system (see Figure 6-10) consists of the forward, mid, and aft bilge pumps, the shower sump, the cockpit floor drains, the head sink drain, shower drain, air conditioning condensate drains, hatch drains, fish box drains, and the engine room air intake plenum drains.

The bilge pumps and shower sump areas need to be checked, before leaving the boat, for debris that might clog the pump. The float switches must also be checked to see that they are turning the pumps on and off properly. To check, just lift the float until the pump comes on, and lower until it stops. If they are not working, do not leave your boat unattended until they are fixed.

The other hoses should only need to be checked every other month to be sure that they are draining properly. If clogged, pressurized water should be sufficient to clear.

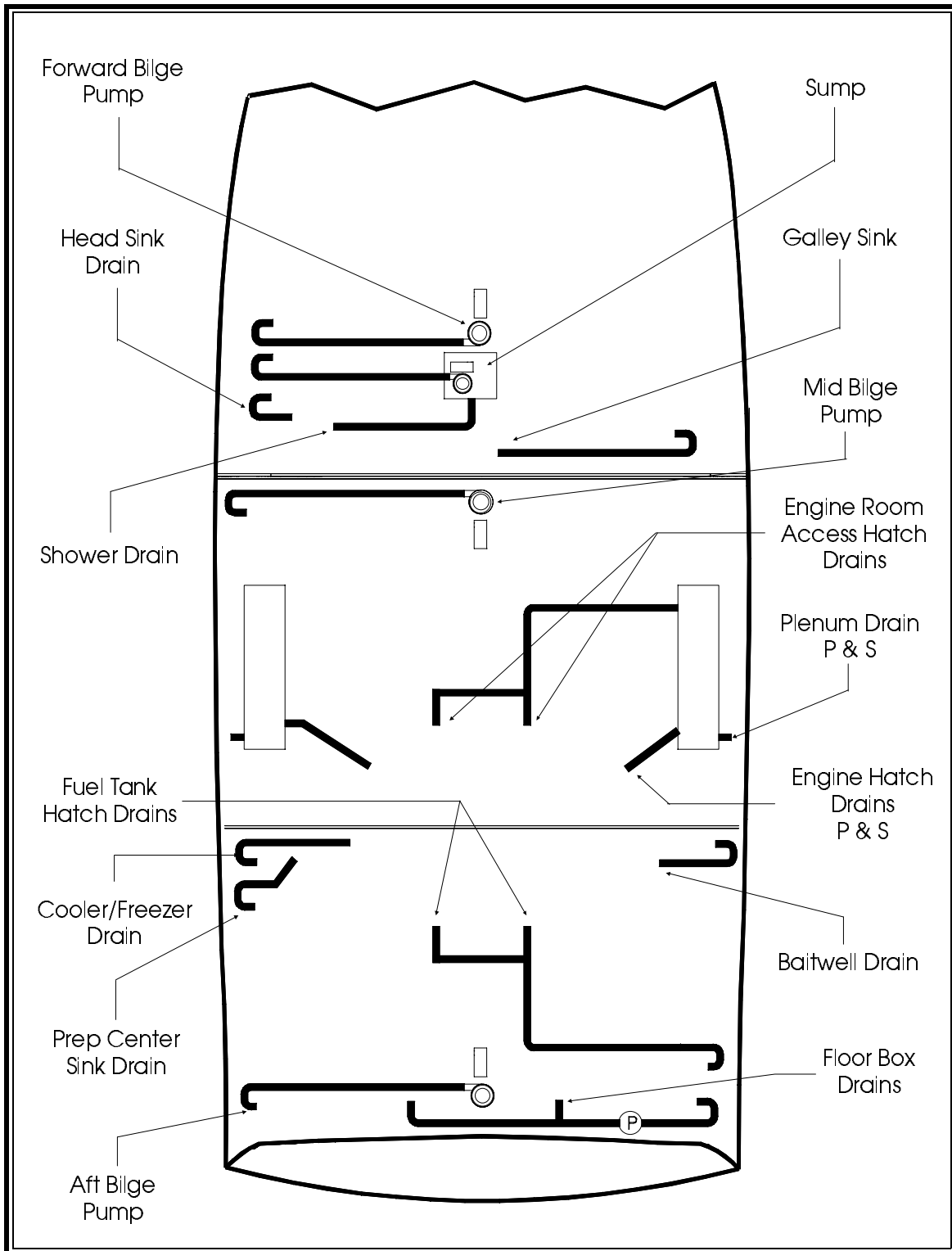


Figure 6-10 : Drainage System Schematic

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Chapter 7

STORING AND WINTERIZING YOUR BOAT

If you live in a climate where you will not be able to use the boat for several months a year, there are a number of things that must be done to prevent damage to your boat from the cold and from lack of usage. These items assume that your boat will be hauled out of the water during this storage time. To lift the boat, follow the instructions in Section 5.2.

7 . 0 . 1 . *Supporting the Boat During Storage*

The best way to support your boat when it is out of the water is on a cradle, made specifically for this purpose (see Figure 7-1). The cradle must be well supported and placed on a level surface. It must be placed in the proper fore and aft position in order to properly support the hull. When the cradle is in the correct location, the bunks will match the bottom of the hull. Custom made cradles are available from the factory, through any **PURSUIT** Fishing Boats dealership. The cradles come with padding on the bunks to protect the bottom of the boat.

7 . 0 . 2 . *Storage*

If the boat is to be stored indoors, be sure that the building has enough ventilation. It is important that the boat be well ventilated during storage.

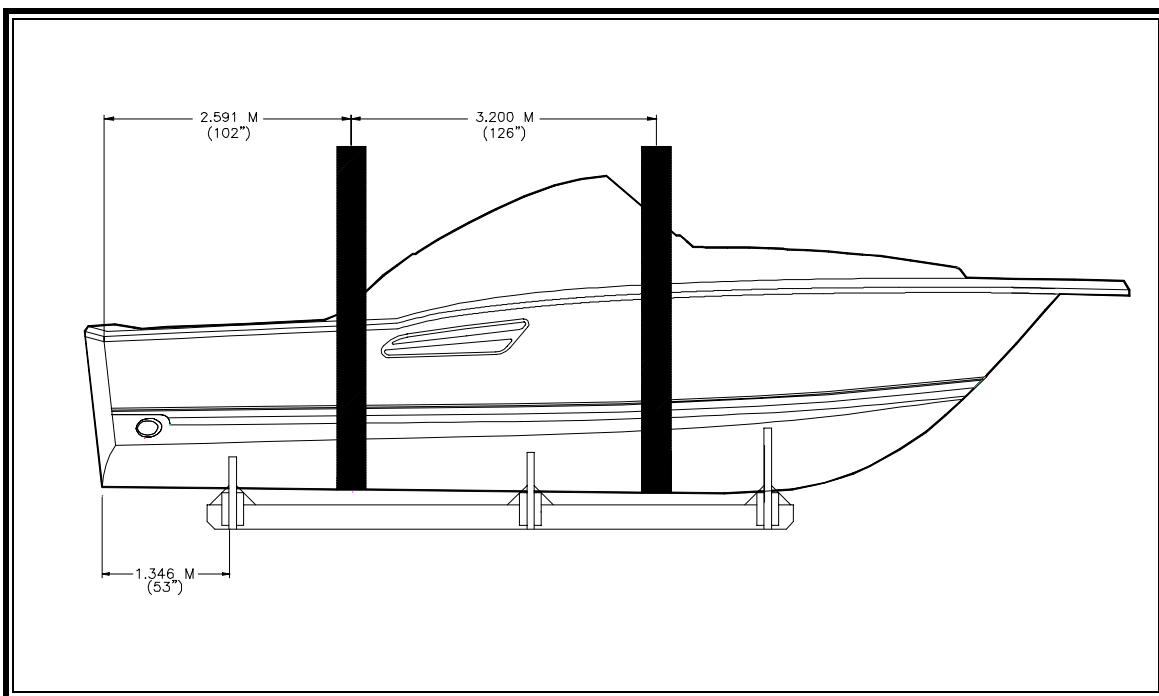


Figure 7-1: Cradle Diagram

If the boat is to be stored outdoors, a proper cover is necessary to protect the boat from the elements. Construct a frame over the top of the boat to support a canvas or plastic cover. The frame should be built so as to be slightly wider than the outside of the boat. The cover should be fastened securely, as a loose flapping cover for an extended period of time will damage the gelcoat surface.

7.1. FUEL SYSTEM

The fuel tanks should be filled to near capacity before storage in order to minimize fuel deterioration. The addition of an appropriate fuel conditioner will also prolong the fuel life. Fuel remaining in the fuel systems of the engines and generator should be treated per the engine or generator manufacturer's recommendations.

7 . 2 . FRESH WATER SYSTEM

To prepare your boat's fresh water system for winterizing, the system must be drained. The procedure for draining is:

1. Make sure the water heater breaker on the A.C. main panel is in the off position.



HOT WATER WILL CAUSE BURNS. DO NOT FOLLOW THESE PROCEDURES WITH HOT WATER IN THE SYSTEM.

Do not operate the water heater without water in the fresh water system.

2. Open all fresh water faucets in the boat, galley, head, and cockpit.
3. Remove the hoses from the bottom of the water tank, input and output sides of the water pump, and let the tank and hoses drain into the bilge.
4. Run the fresh water pump for a few seconds to remove the water from the bottom of the pump.
5. Drain the water from the water heater by opening the valve on the bottom of the water heater and letting the water drain into the bilge. Close the valve when the water tank is empty.

The system must then be flushed with potable water anti-freeze. To flush the system:

1. Close all faucets in the fresh water system, galley, head, and cockpit.
2. Pour five gallons of potable water systems anti-freeze into the water tank.

3. Turn on the fresh water pump breaker on the D.C. main panel.
4. Open all faucets in the system, hot and cold, one at a time, until the pink anti-freeze begins to come out, and then close.
5. Turn off the fresh water pump breaker.

To protect the shower sump from freezing:

1. Pour two quarts of potable water anti-freeze into the shower drain.
2. Run the shower sump until the anti-freeze is gone.
3. Turn off the pump switch.

7 . 3 . ELECTRICAL SYSTEM

7 . 3 . 1 . 12 V D.C. System

The only major component of your D.C. system that needs preparation for winter storage are the batteries. To prepare them for storage:

1. Make sure the batteries are fully charged.
2. Turn the D.C. main switches to the OFF position.
3. Disconnect the batteries.
4. Clean the battery terminals and case. Apply a coat of petroleum jelly to the terminals.

You should check the information provided with any installed electronics to see if they may be damaged by the lowest temperatures that your boat may experience. If so, remove and store in a clean, dry area that will protect them from damaging temperatures. Please refer to the owner's manual supplied by the battery manufacturer for any additional winterizing instructions.

7 . 3 . 2 . 110 V A.C. System

The installed A.C. electrical system in your **PURSUIT** 3400 Express Fisherman does not require any winterizing procedure, with the exception of the generator. For generator winterization, see Section 7.6.1.

7 . 4 . EXTERIOR EQUIPMENT AND FIBERGLASS

The entire exterior of your boat should be completely washed and dried before storage for the winter. The fiberglass surfaces, bottom paint, zincs, etc. should wait for the spring for maintenance and/or replacement.

Underwater gear can be coated with a light coat of petroleum jelly or boat wax to prevent corrosion. The cutlass bearing in each strut should be coated with a rubber lubricant to prevent seizing. Do not use petroleum products on the rubber bearing.

All exterior hardware should be protected by a heavy coat of boat wax or petroleum jelly.

7 . 5 . INTERIOR EQUIPMENT

The interior should be carefully cleaned before storage. All carpeting should be vacuumed, all upholstery cleaned, and the interiors of all cabinets should be emptied and wiped clean. Any bilge areas should also be wiped clean.

Whether stored inside or outside, open all interior drawers, lockers, and cabinets to allow them to properly ventilate and stay fresh. If possible, remove all upholstery, carpeting, and cushions and store them elsewhere.

7 . 5 . 1 . Air Conditioning

Your **PURSUIT** 3400 Express Fisherman may have an optional, self-contained air conditioning unit, located under the forward dinette seat (see Figure 7-2). Please refer to Chapter 2, *Interior Equipment*, for specific locations. The raw water pump

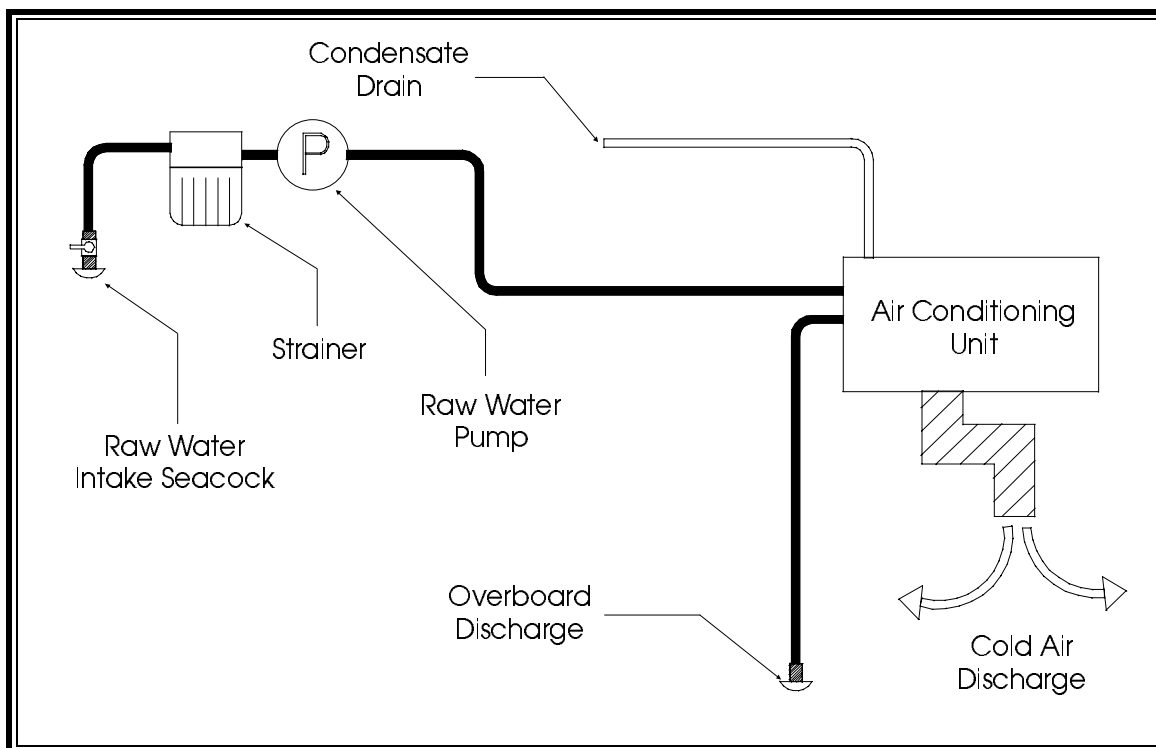


Figure 7-2: Air Conditioning Schematic

and intake strainer are located under the cockpit center floor hatch.

To winterize air conditioning unit:

1. After hauling the boat, open the seacock, remove the top from the strainer, and disconnect the intake hose from the pump. Remove all water from the hoses, seacock and strainer.
2. Disconnect the outlet hose from the pump and drain all water from the air conditioning units. If you are not sure if all water has drained from the system, use compressed air blown in from the air conditioning water outlet, on the starboard hull side, to be sure.



Be very careful with compressed air. Too much pressure or volume can damage the raw water system.

3. Run the pump for a few seconds to be sure there is no water left in it. Re-connect the hoses to the pump and re-assemble the strainer.



When reconnecting raw water hoses, be certain to tighten clamps well. Leaking fitting on raw water hoses can sink the boat.

4. The system can be filled with an anti-freeze mixture. Refer to the air conditioning manufacturer's owner's manual for the recommended procedure.

7 . 5 . 2 . Head System

The first thing that must be done is to pump out the holding tank. Before doing so, drain the water from the fresh water system and run the toilet, without incoming water, to drain the hose running from the toilet to the holding tank.

Take your boat to a facility with the required pump-out facilities and follow the procedure outlined in Section 6.7.

If desired, flush 1-2 gallons of potable anti-freeze into the system.



When reconnecting raw water hoses, be certain to tighten clamps well. Leaking fittings on raw water hoses can sink the boat.

Note: Schematics of all head systems are located in Chapter 6, *Routine Maintenance*.

7 . 6 . ENGINE ROOM AND BILGE AREAS

All the bilge areas, forward under the floor, engine room, and aft under the cockpit, should be wiped clean. The hoses leading from the bilge pumps forward, in the engine room and under the cockpit floor, should be disconnected from the pumps and drained. Any bilge water should then be removed with a sponge and wiped dry.



When reconnecting raw water hoses, be certain to tighten clamps well. Leaking fittings on raw water hoses can sink the boat.

7.6.1. Engines, Transmissions and Generator

The engines, transmissions, and generator should be prepared for storage according to the manufacturer's recommendations. Please refer to the owner's manuals for these items for specific instructions.

7.6.2. Exhaust Systems

The exhaust systems for the engines and generator must have the water drained from their mufflers.



Figure 7-3: Main Engine Muffler

The main engine mufflers should be drained by removing the plug from the bottom of the muffler (see Figure 7-3), allowing the water to drain out, and replacing the plug.

Follow a similar procedure for the generator muffler.



BE CERTAIN THAT THE DRAIN PLUGS ARE INSTALLED TIGHTLY. FAILURE TO DO SO WILL ALLOW ENGINE EXHAUST GASES CONTAINING CARBON MONOXIDE AND WATER INTO THE BILGE AREA.

7.6.3. Raw Water Systems

The engine cooling water systems must be drained by opening the seacock, opening the strainer, and disconnecting the hoses, if necessary, to remove all water. Reconnect all hoses and reassemble the strainer when complete.

The raw water washdown system must also be drained. To do so:

1. Open the seacock and the washdown faucet, in the cockpit, under the starboard covering board.
2. Disconnect the hoses from the intake and outlet sides of the pump and let the water drain out. Use compressed air, if necessary, to remove all the water.



Be very careful with compressed air. Too much pressure or volume can damage the raw water system.

3. Run the pump for a few seconds to remove all water from the pump body.
4. Lubricate the pump impeller per instructions in the pump owner's manual.
5. Reconnect all hoses and tighten the clamps securely.



When reconnecting raw water hoses be certain to tighten clamps well. Leaking fittings on raw water hoses can sink the boat.

7.6.4. Steering System

The steering system is located in the bilge, underneath the center cockpit hatch (see Figure 7-4).

To prepare it for storage:

1. Use clean water and detergent to wash off the steering arms and linkage. Dry with a clean cloth.
2. Apply a light coat of petroleum jelly to the piston rod.
3. Lubricate the pivot points and upper rudder bearings with a lightweight oil.

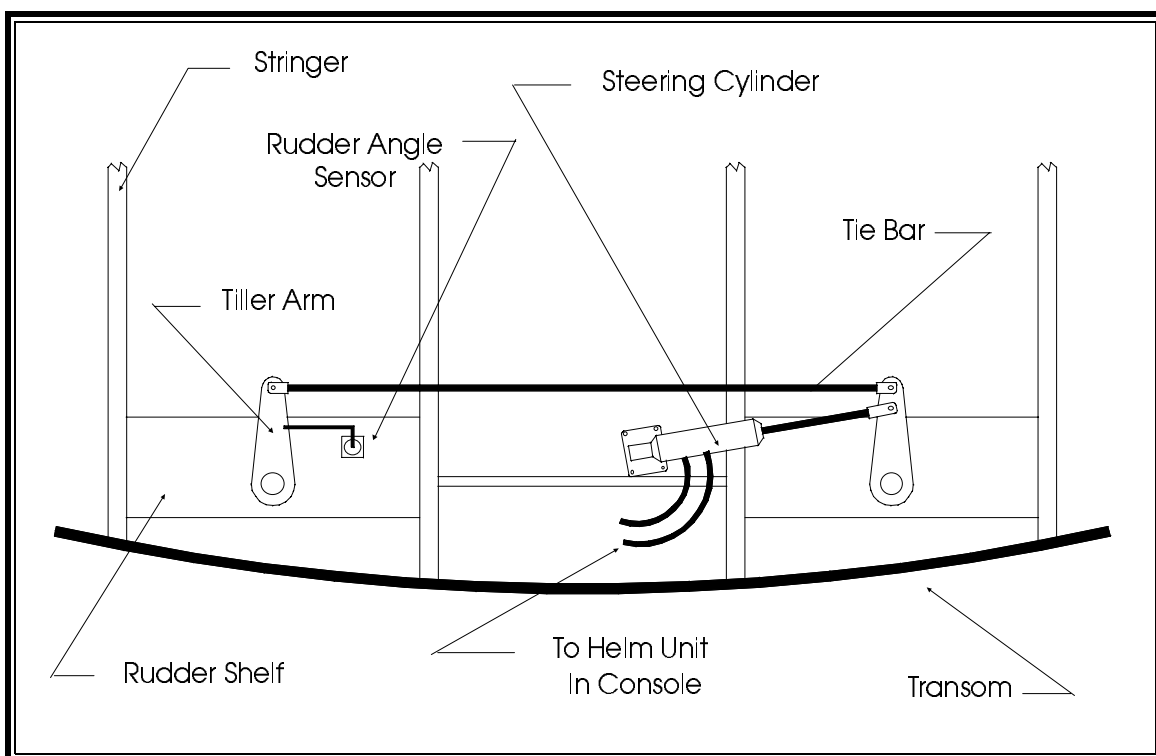


Figure 7-4: Steering System

4. Inspect the packing glands for wear. If worn, replace with new packing.
5. Coat all components with a light coat of petroleum jelly or other suitable corrosion inhibiting material such as CRC-666[®] or WD-40[®].

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Appendix A

SPECIFICATIONS

A . 1 . GENERAL

Twin Inboard

Cummins 6BTA5.9 - M3 . . . 370 HP approx	235 kw
Cummins 6BTA5.9 - M2 . . . 330 HP approx	265 kw
Crusader 454 XLI (fuel injected) - Gas	

L.O.A.

w/o Standard Pulpit	33'9"	10.29 meters
w/Standard Pulpit	36'4"	11.07 meters
Beam	12'9"	3.89 meters
Hull Draft (estimated)	2'8"	.66 meters
Approximate Dry Weight	14,000 lbs	6,350 kg
Standard Fuel Capacity	350 U.S. gal	1,325 liters
Height Above Waterline		
Top of Windshield	9'0"	2.74 meters
Top of Hardtop (estimated)	9'10"	3.00 meters
Sleeping Capacity	4	
Water Capacity	60 U.S. gal	227.1 liters
Holding Tank Capacity	30 U.S. gal	113.6 liters
Deadrise at the Transom	18°	

A . 2 . BOAT SPECIFIC

Boat Serial No: SSUP4036G798

Engine Option:

Port Engine Serial No:

Starboard Engine Serial No:

Head System:

Other Installed Options:

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Appendix B

GLOSSARY

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

athwartships: when an object lies on a line or in a plane at right angles to the centerline of a boat

beam: the breadth of a boat usually measured at its widest part

beamy: boats of greater than normal beam

bilge: the lower interior areas of the hull of a boat

bilge pump: pumps water that collects in the bilge, overboard

boarding ladder: set of steps temporarily fitted over the side of a boat to assist persons coming aboard

boathook: short shaft of wood or metal with a fitting at one end shaped to aid in extending one's effective reach from the side to a boat

bow: the front end of a boat

bow line: a line that leads forward from the bow of the boat

bow rail: waist high rails of solid tubing to aid in preventing people from falling overboard

bridge: the area from which a boat is steered and its speed controlled

bridge deck: deck forward and usually above the cockpit deck

bulkhead: vertical partition separating compartments of a boat

cabin: superstructure above the main deck level

capsize: when a boat turns over

chain locker: a locker, usually located in the bow of a boat, used for stowing the anchor line or chain

Chapman's: *Chapman-Piloting, Seamanship, and Small Boat Handling, 60th Edition*, by Elbert S. Maloney, Hearst Marine Books, NY, ISBN 0-688-10425-8

chock: a deck fitting, usually of metal, with inward curving arms through which lines such as mooring or anchor lines are passed so as to lead them in the proper direction both on board and off the boat

closed cooling system: a separate supply of fresh water is used to circulate 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 in the deck of a boat outside of the cabin and deckhouse

companionway: openings in the deck of a boat to provide access below

compartment: the interior area of a boat divided off by bulkheads

cradle: the framework which supports a boat as she is hauled out

cutlass bearing: rubber bearing in the strut that supports the propeller shaft

deck: the floorlike platform of the boat

draft: the depth of water a boat needs to float

dry rot: a fungus attack on wooden areas

drydock: a dock that can be kept dry during boat construction or repair

engine bed: a sturdy structural member running fore-and-aft on which the engine is mounted

even keel: when a boat floats properly as designed

fender: a soft object of rubber or plastic used between boats and piles, pier sides, seawalls, etc. to protect the topsides from scarring and to cushion any shock of the boat striking a fixed object

flying bridge: an added set of controls above the level of the normal control station

fore: the part of the boat in which the bow is located

foundering: when a boat fills with water and sinks

freeboard: the height of a boat's topsides from the waterline to the deck

fuel pump: feeds fuel under pressure

galley: the kitchen of a boat

grab rail: hand-hold fittings mounted on cabin tops or sides for personal safety when moving around the boat, both on deck and below

ground tackle: a general term including anchors, lines, and other gear used in anchoring

grounds: a boat touches the bottom

gunwale: the upper edge of a boat's side

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

harbor: an anchorage which provides reasonably good protection for a boat, with shelter from wind and sea

hatch: a door or cover for access down into a compartment of a boat

head: refers to both the toilet and toilet area

headroom: the vertical distance between the deck and the cabin or canopy top (or other overhead structure)

heat exchanger: used to transfer the heat that is picked up by the closed cooling system to the raw cooling water

helm: the operating area of a boat

hull: the frame or body of the boat

inboard: a boat with the engine mounted within the hull

keel: a plate or timber plate running lengthwise along the center of the bottom of a boat

knot: unit of speed, 1 knot = 1 nautical mile per hour

lay-up: to decommission a boat for the winter (usually in northern climates)

lazarette: a compartment in the stern of a boat used for general storage

length on the waterline (l.w.l.): a length measurement of a boat along the waterline

length overall (l.o.a.): a length measurement of a boat from the fore part of the stem to the after part of the stern

life preserver: provides additional buoyancy to keep a person afloat when he/she is in the water

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 from where it can be pumped out

line: rope

lists: a boat that inclines to port or starboard while afloat

locker: a closet, chest or box aboard a 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: secured with cables, lines, or anchors

nautical mile: distance measurement equal to a unit about 6/5th's of a statute (land) mile

oil pump: supplies lubricating oil where needed within the engine

outboard: a boat with the engine mounted on the transom and is detachable

overhead: the ceiling of a cabin or compartment

pier: a structure which projects out from the shoreline

piles or piling: a long column driven into the bottom to which a boat can be tied

plenum: a chamber for directing air flow, as in *engine intake air plenum*

pitching: the fore and aft rocking motion of a boat as the bow rises and falls

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 shaft: shaft which runs from the back of the engine gear box, aft, through the stuffing box, shaft log, struts(s), and onto which the propeller is attached

raw water cooled: water for cooling is drawn in through a hull fitting, circulated in the engine, and then discharged overboard

reduction gear: often combined with the reverse gear so that the propeller, turning at a slower rate than the engine, will have increased efficiency

reverse gear: change the direction of rotation of the propeller to give a thrust in the opposite direction for stopping the boat or giving it sternway

roll: a boat's sidewise rotational motion in rough water

rope locker: see "chain locker"

rubrail: railing (often rubber or hard plastic) that runs along the boat's sheer to protect the hull when coming alongside docks, piers, or other boats

rudder: a moveable flat surface that is attached vertically at or near the stern for steering

scrupper: an opening in the side or transom of the boat through which water on deck or in the cockpit is drained overboard

seacock: safety valves installed just inside the thru-hull fittings and ahead of the piping or hose running from the fittings

shaft log: pipe through which the propeller shaft passes

sheer: the uppermost edge of the hull

slings: a strap which will hold the boat securely while being lifted, lowered, or carried

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

stem: the line at which the port and stern topsides meet at the bow

stern line: a line that leads aft from the stern of the boat

stern: the rear end of a boat

stringer: longitudinal members fastened inside the hull for additional structural strength

strut bearing: see "cutlass bearing"

strut: an external support under the hull for the propeller shaft

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 cockpit

thru-hull: a fitting used to pass fluids (usually water) through the hull surface, either above or below the waterline

topsidess: the side skin of a boat between the waterline or chine and deck

transom: flat planking across the stern

travel lift: machinery used at boat yards to hoist boats out of and back into the water

trim: this relates to the way a boat floats in the water

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 it's motion

wash: the flow of water that results from the action of her propeller or propellers

water pump: circulates cooling water

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

yacht basin: a protected facility primarily for recreational small craft

yaw: when a boat runs off her course to either side

Appendix C

Wiring Diagrams

On the following pages are the 12 V D.C. and 240/120 V A.C. wiring diagrams.



ADDITIONAL WIRING OR REPAIR OF EXISTING WIRING SHOULD ONLY BE PERFORMED BY A QUALIFIED MARINE ELECTRICIAN. IMPROPER WIRING CAN CAUSE ELECTROCUTION AND FIRES IN BOAT WIRING.

Your manual should include 31 sheets of electrical schematics, labeled *sheet 1 of 31* through *sheet 31 of 31*.

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Water System

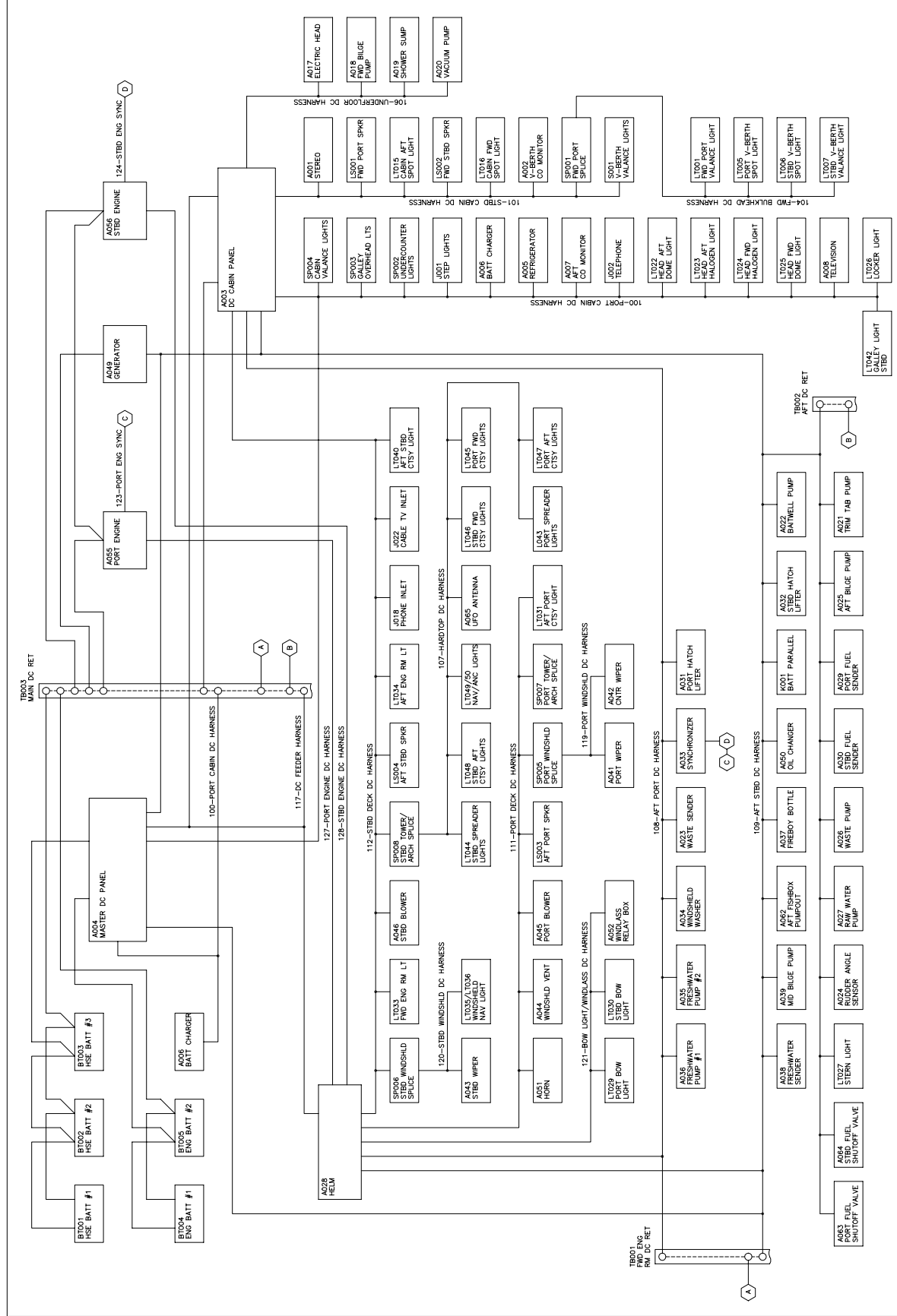
freshwater pumps	5, 12
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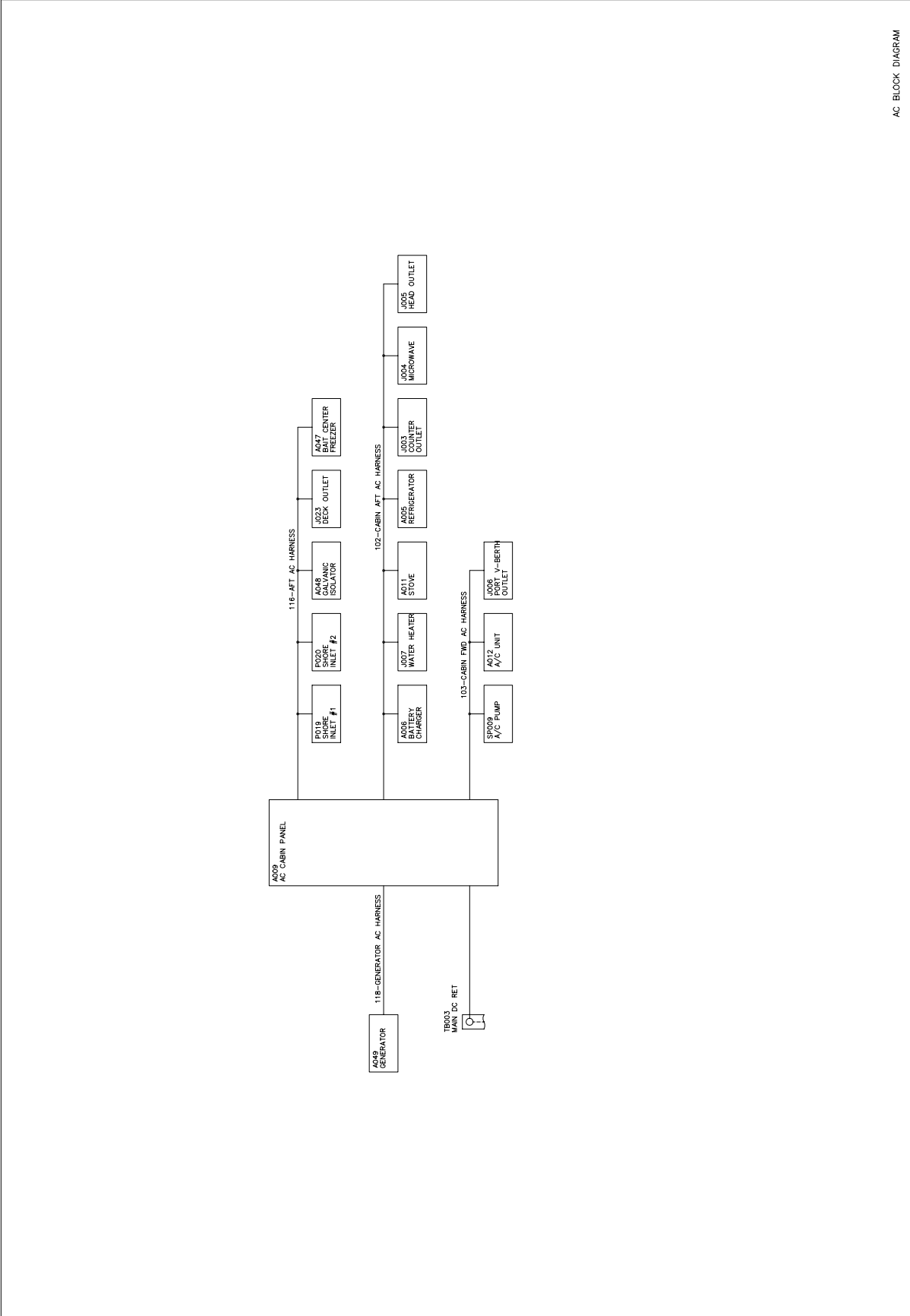
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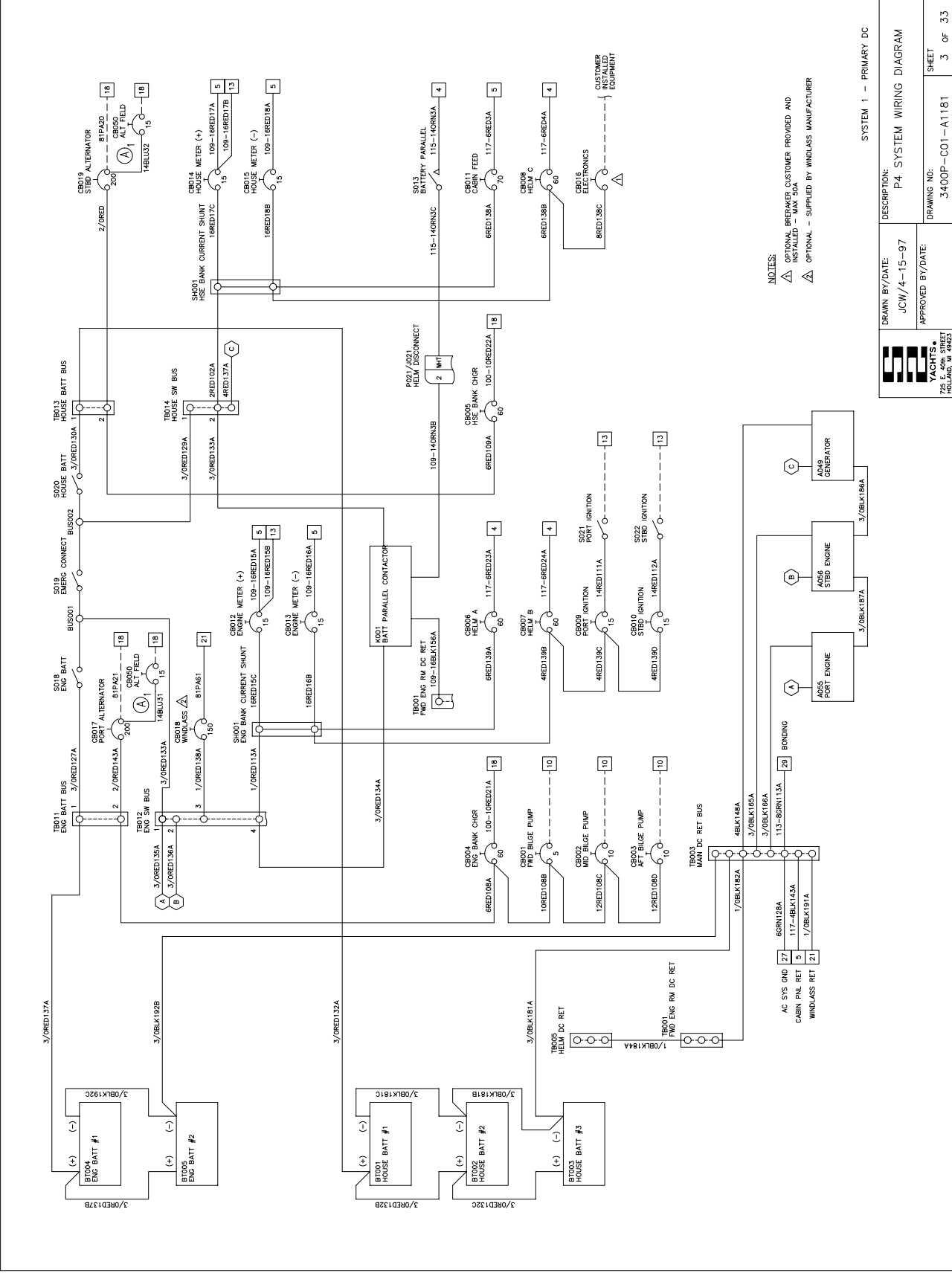
Windshield

vent	4, 14
wipers	4, 14
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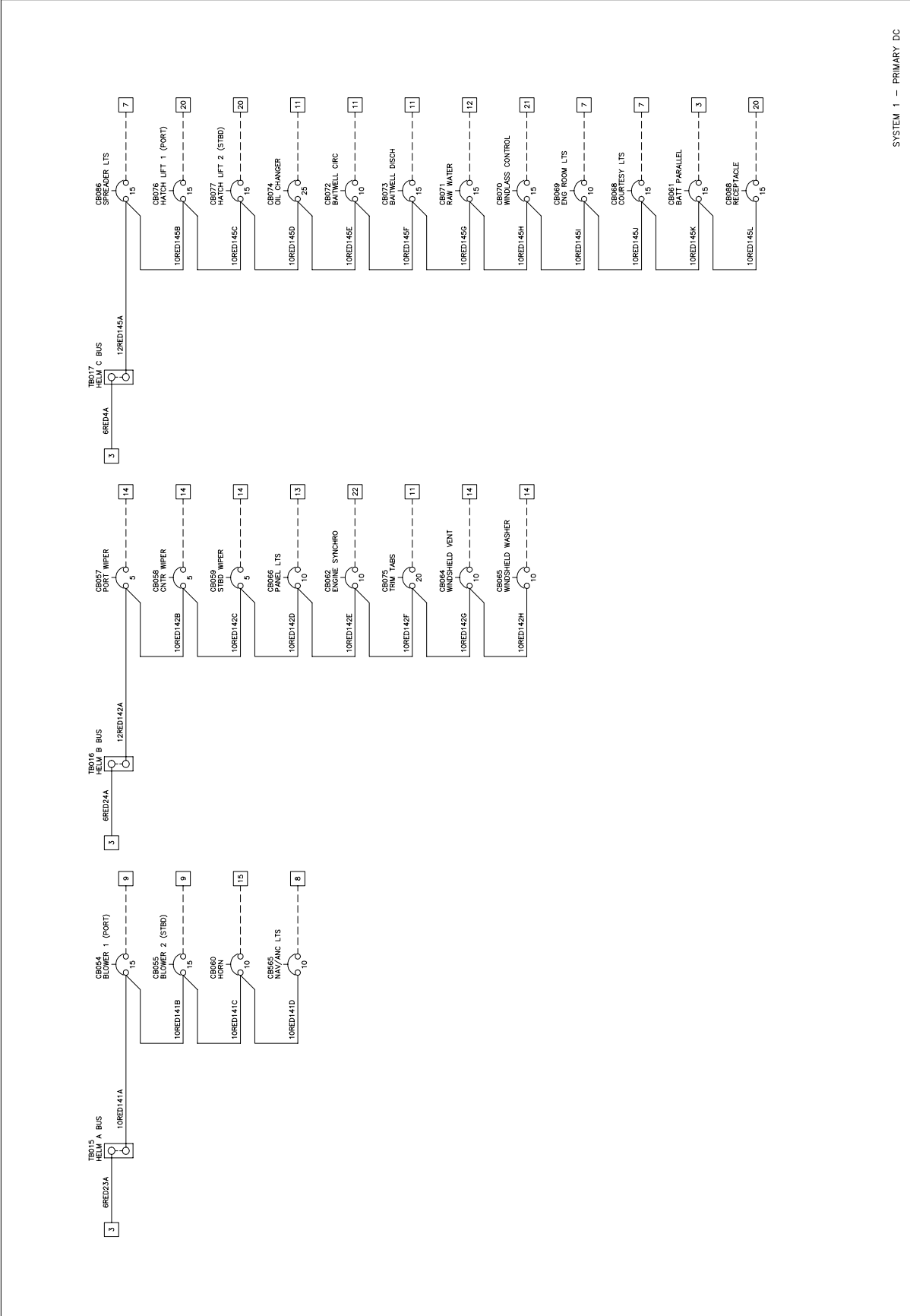




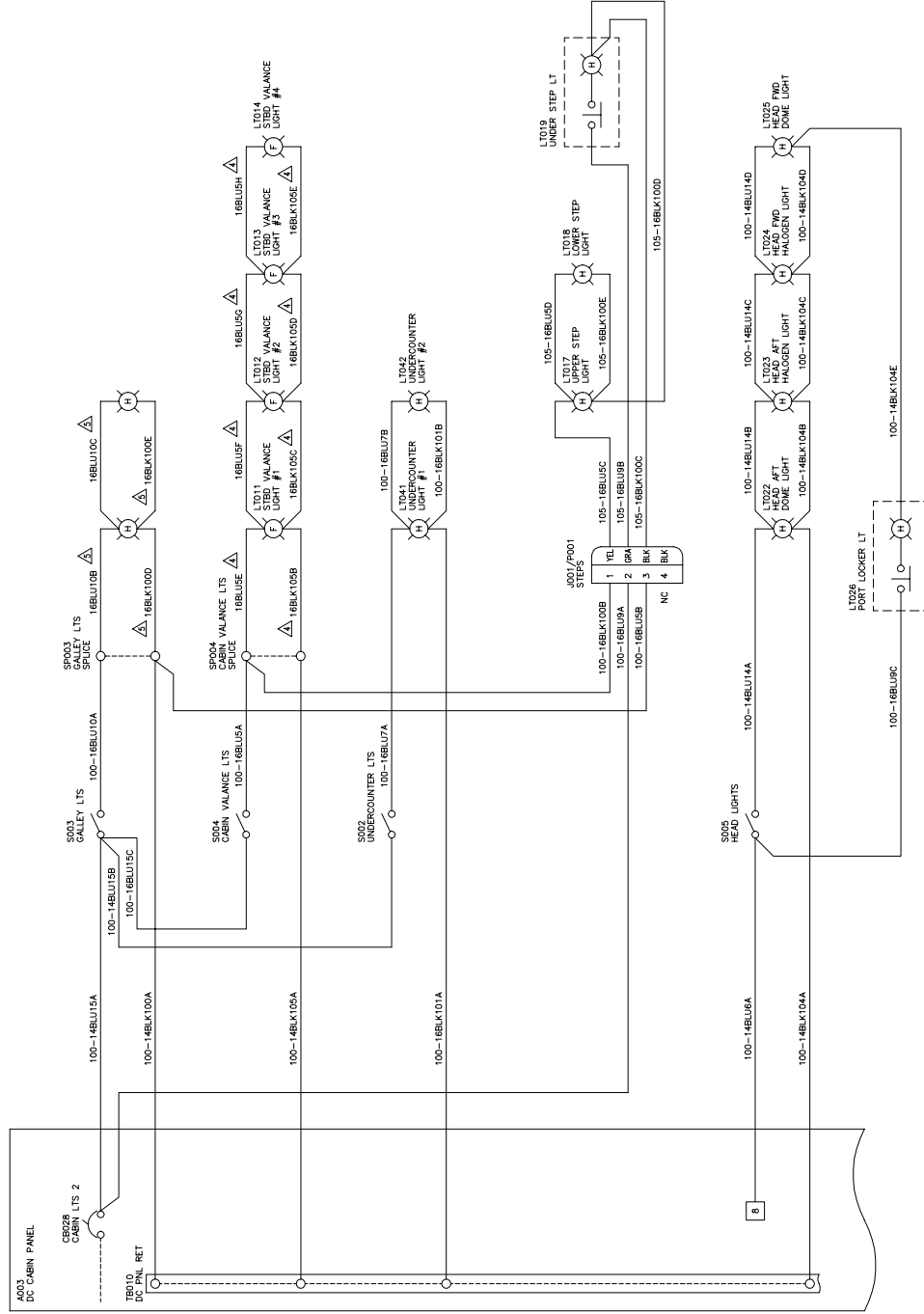
NOTES:
OPTIONAL BREAKER CUSTOMER PROVIDED AND INSTALLED - MAX 50A
OPTIONAL - SUPPLIED BY WINGLASS MANUFACTURER

SYSTEM 1 - PRIMARY DC

 YACHTS 720 E. 40th STREET MILWAUKEE, WI 53212	DRAWN BY/DATE: JCW/4-15-97	DESCRIPTION: P4 SYSTEM WIRING DIAGRAM
	APPROVED BY/DATE:	DRAWING NO: 3400P-C01-A1181
		SHEET 3 OF 33



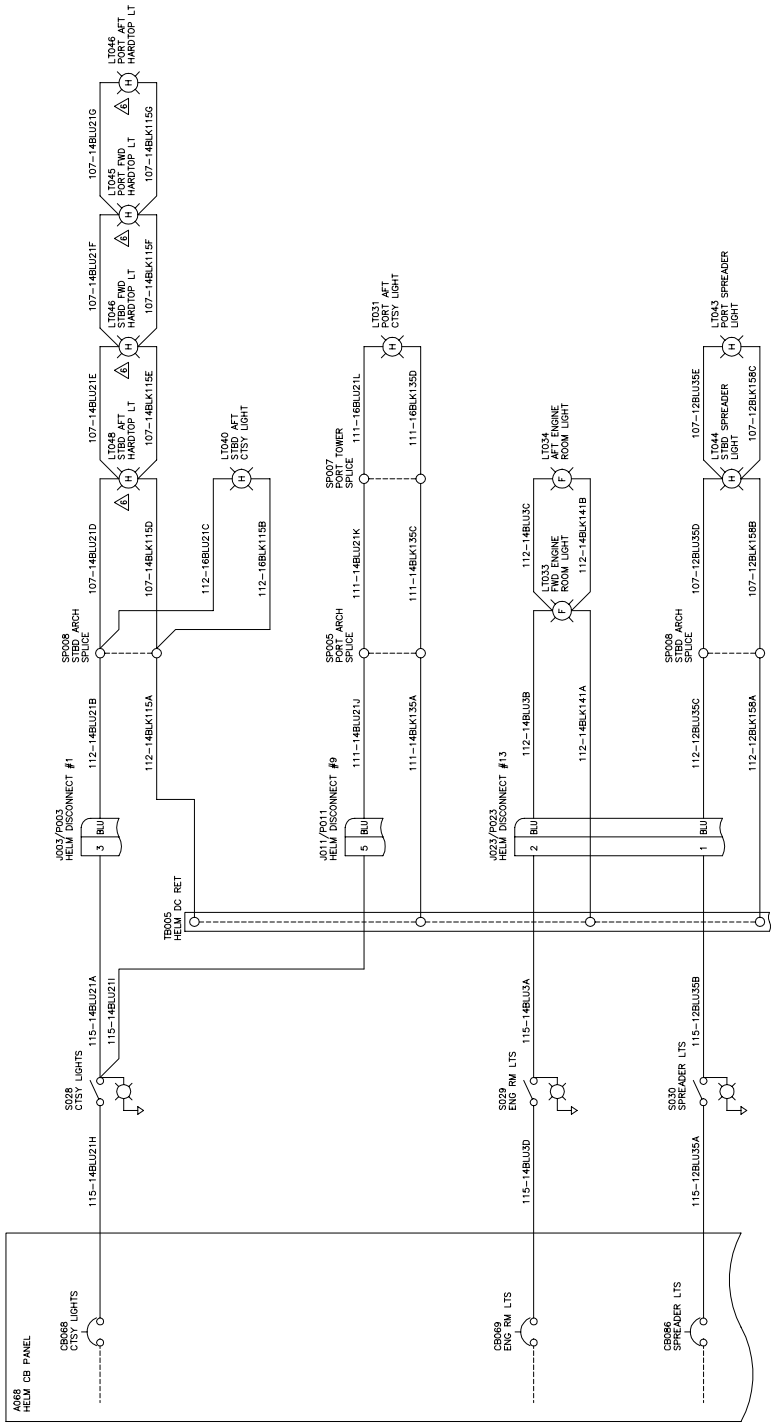
 ELECTRIC SYSTEMS 720 E. 40th St. HOLAND, MI 49423	DRAWN BY/DATE: JCW/4-15-97	DESCRIPTION: P4 SYSTEM WIRING DIAGRAM	SYSTEM 1 - PRIMARY DC	
	APPROVED BY/DATE:	DRAWING NO: 3400P-C01-A1181	SHEET 4	OF 33



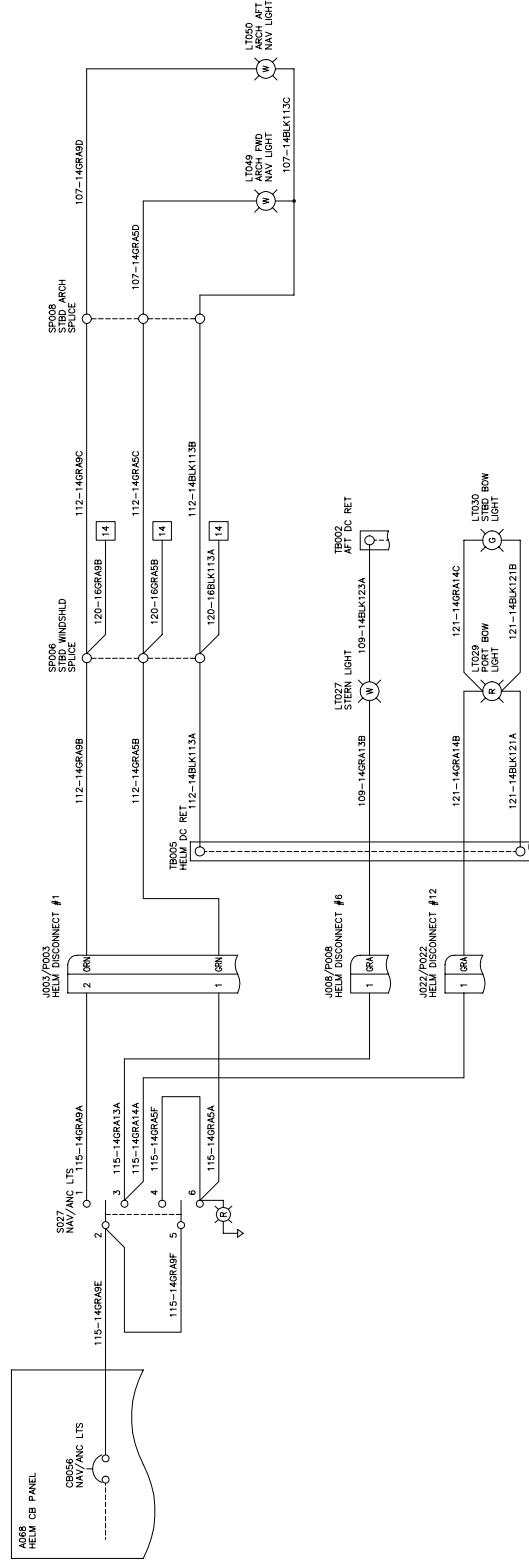
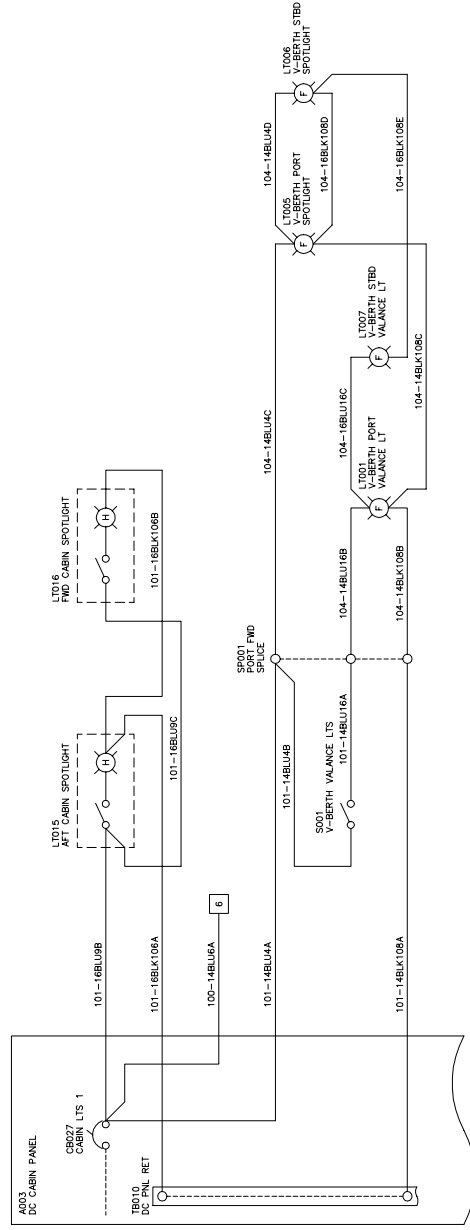
NOTES:

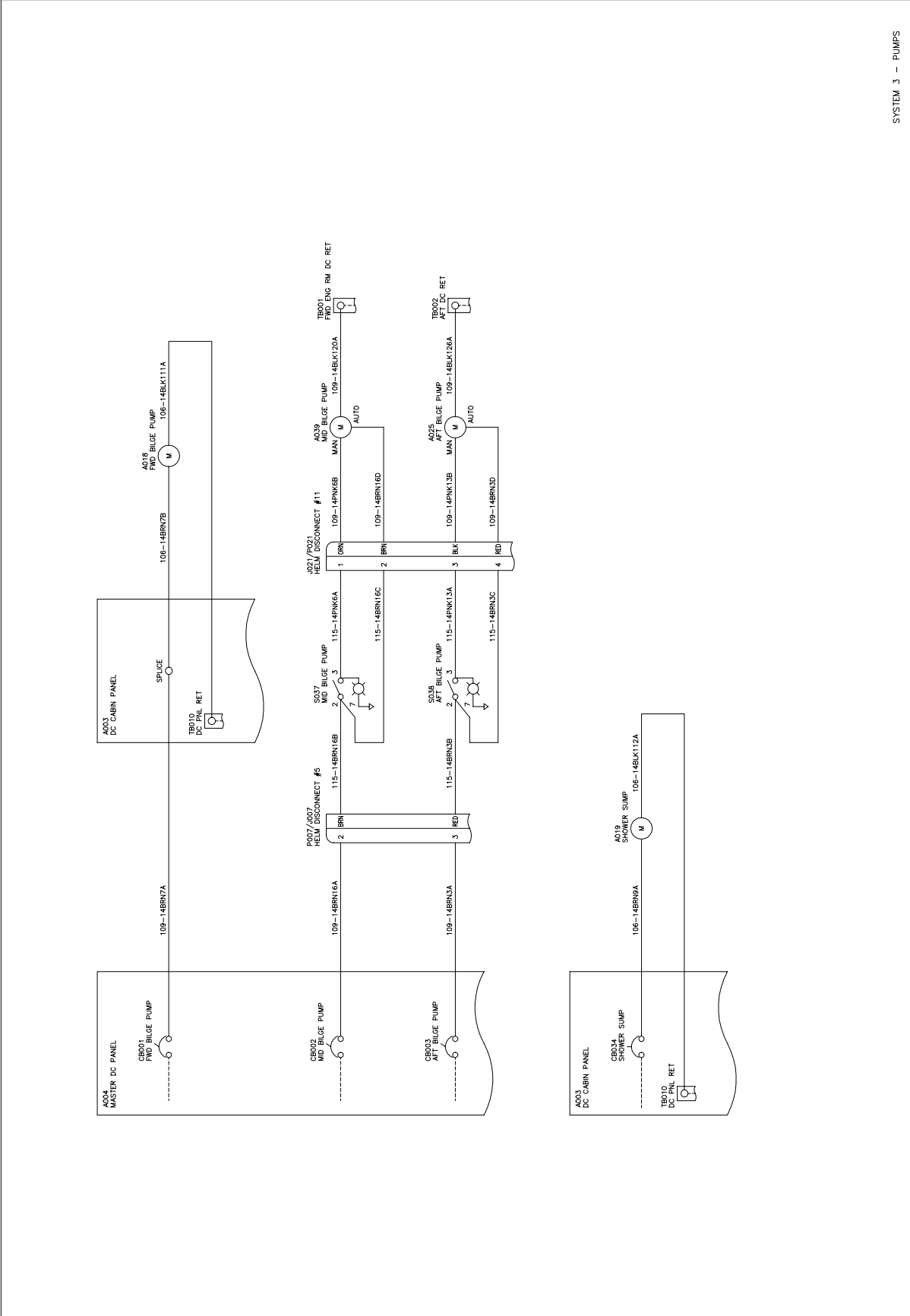
4 PART OF VALANCE ASSEMBLY

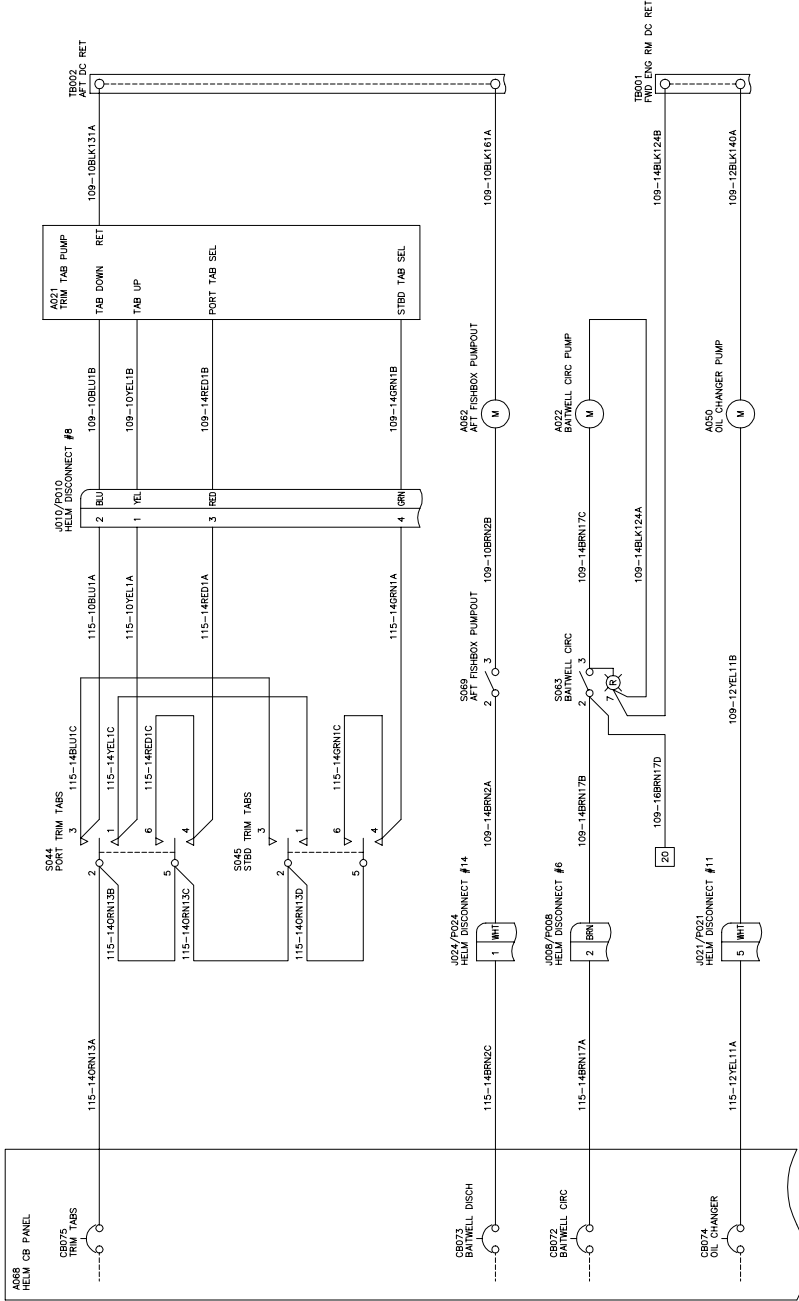
5 DUPLEX WIRE UNDER HEAD LINER

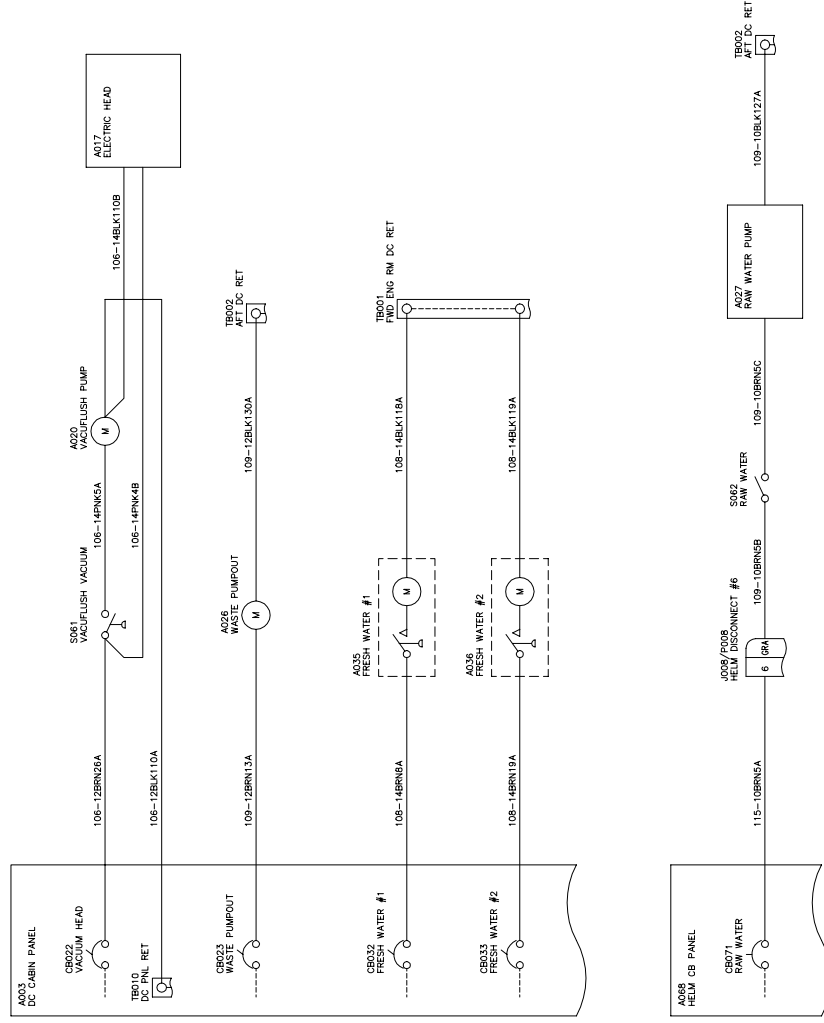


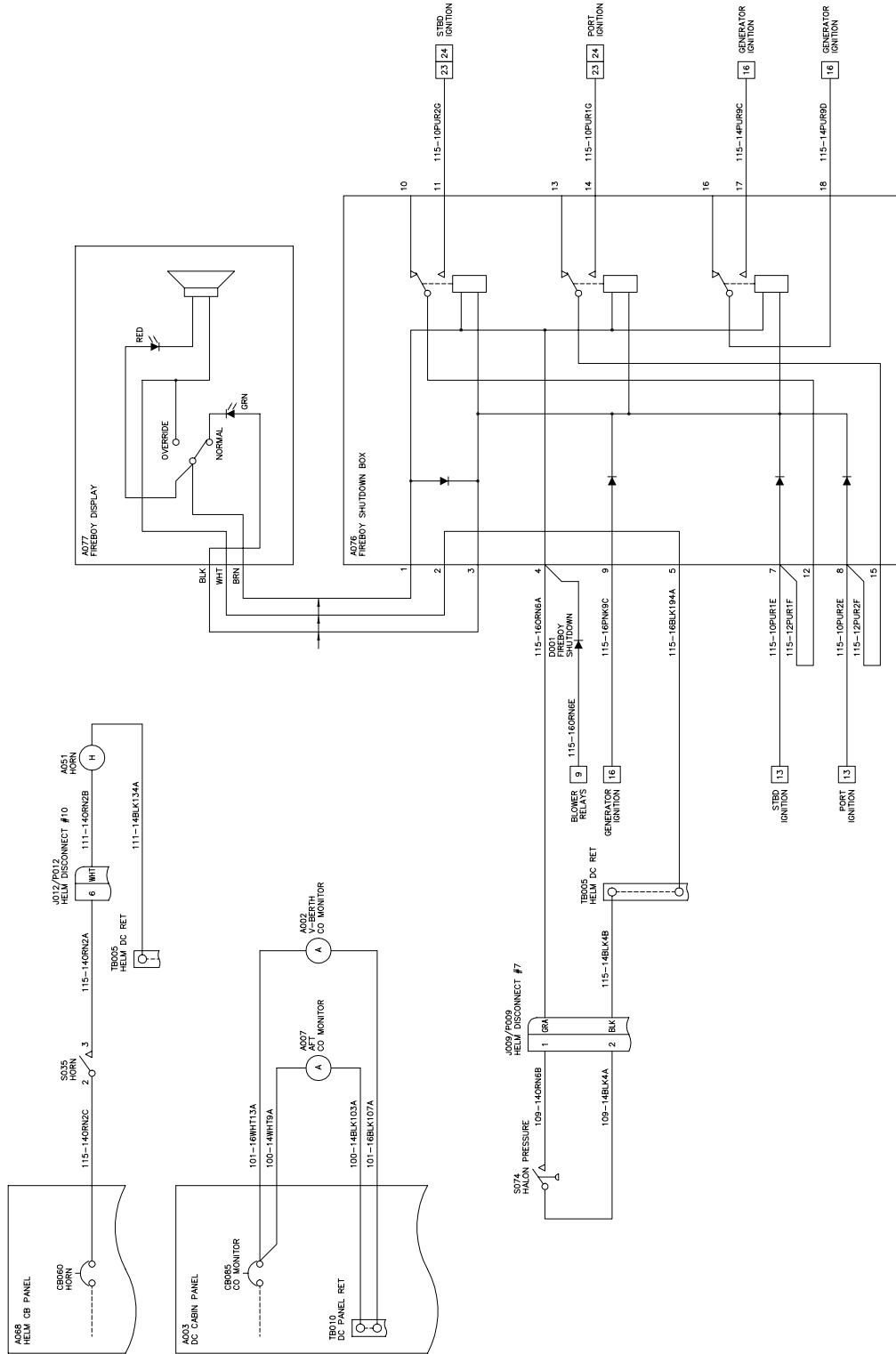
NOTES:
△ INSTALLED ONLY WITH HARDTOP OPTION

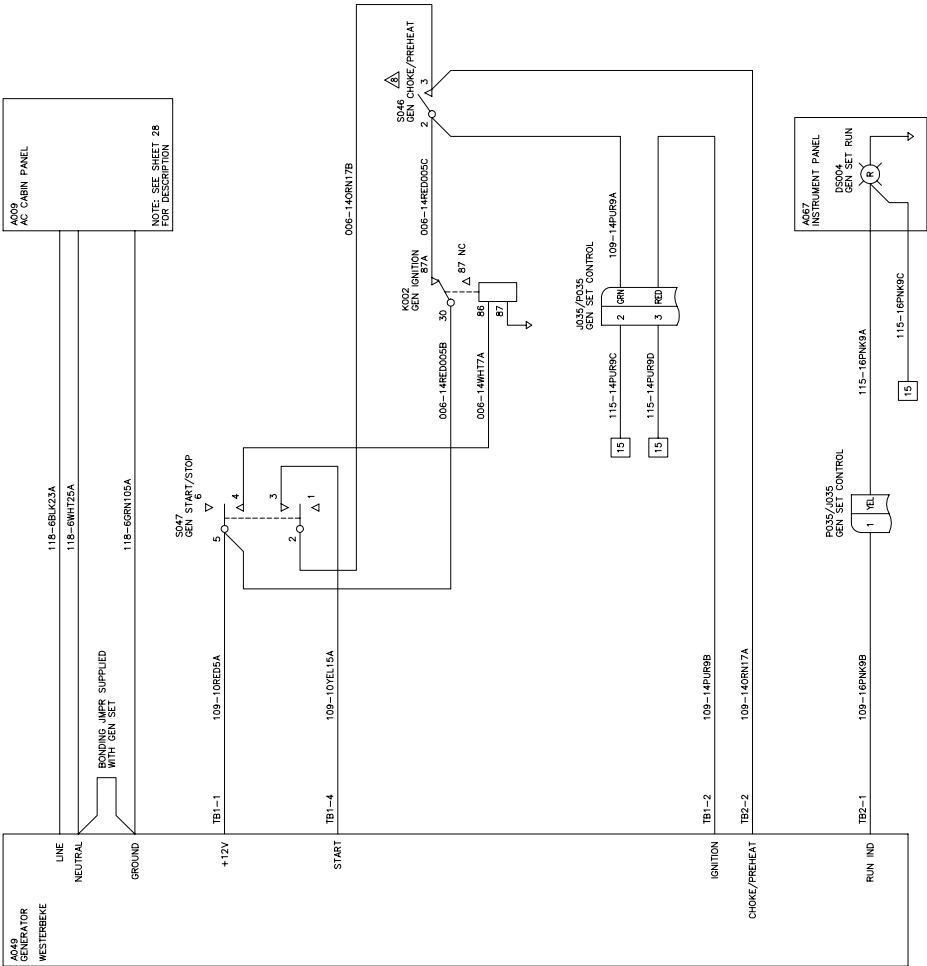




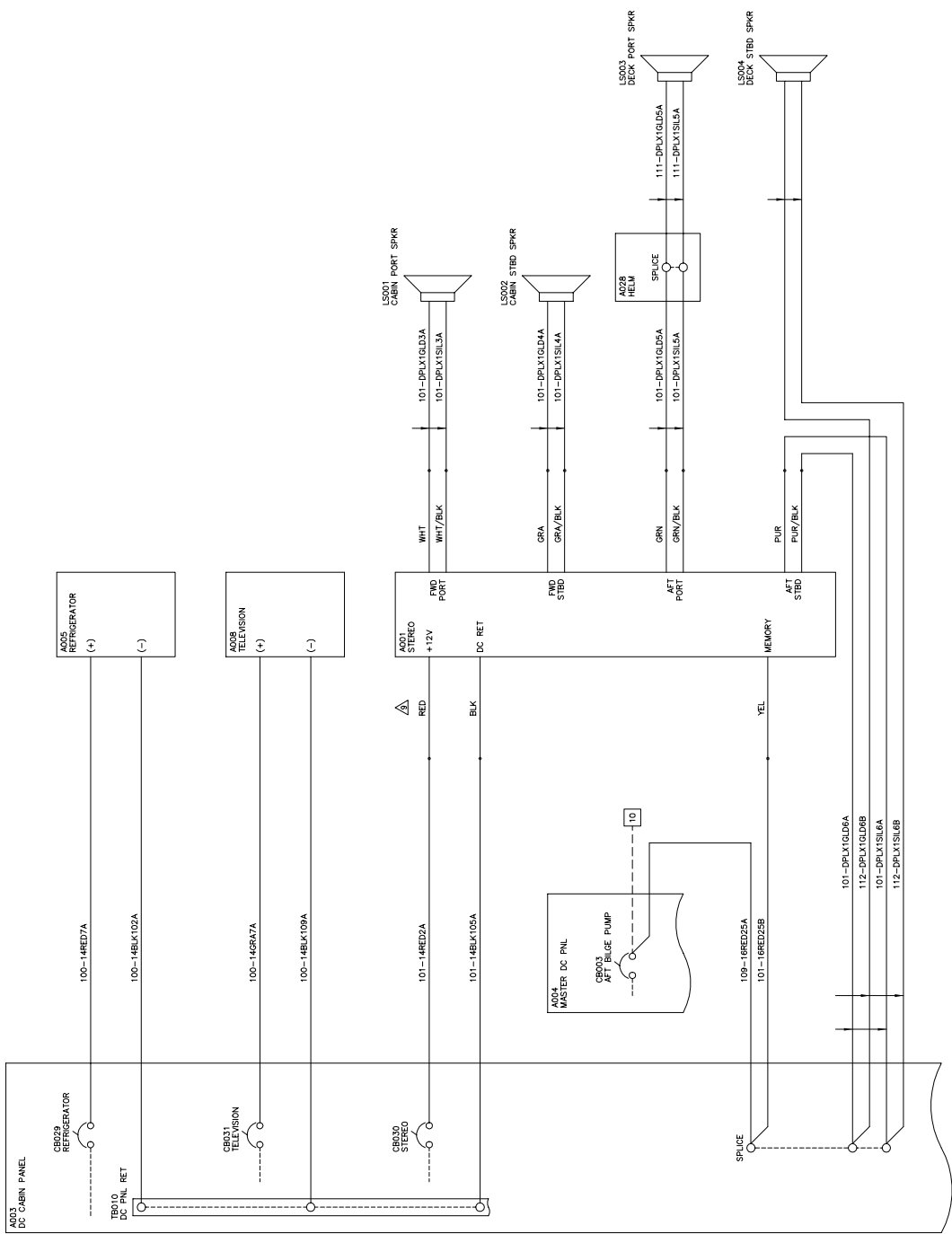




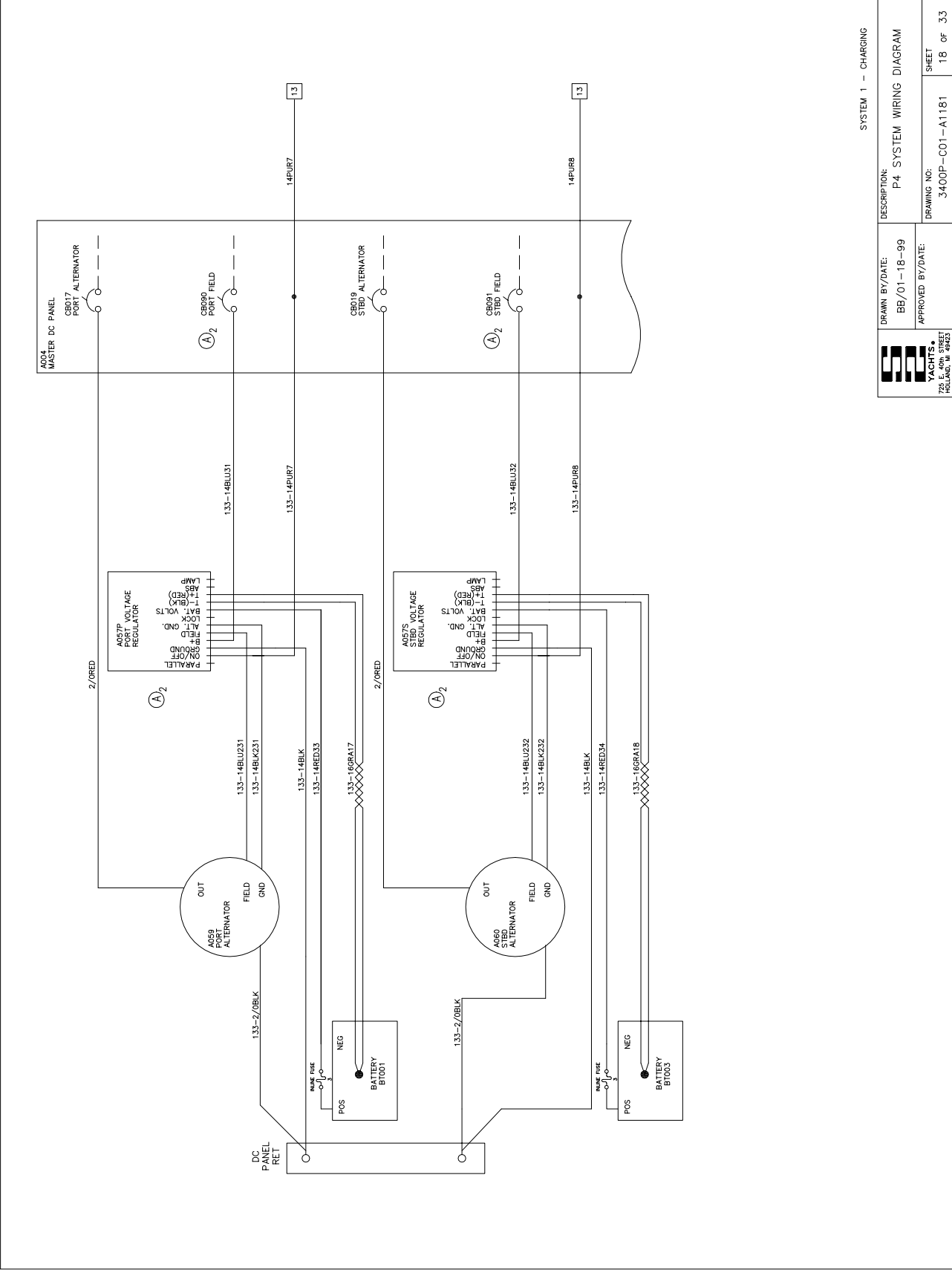


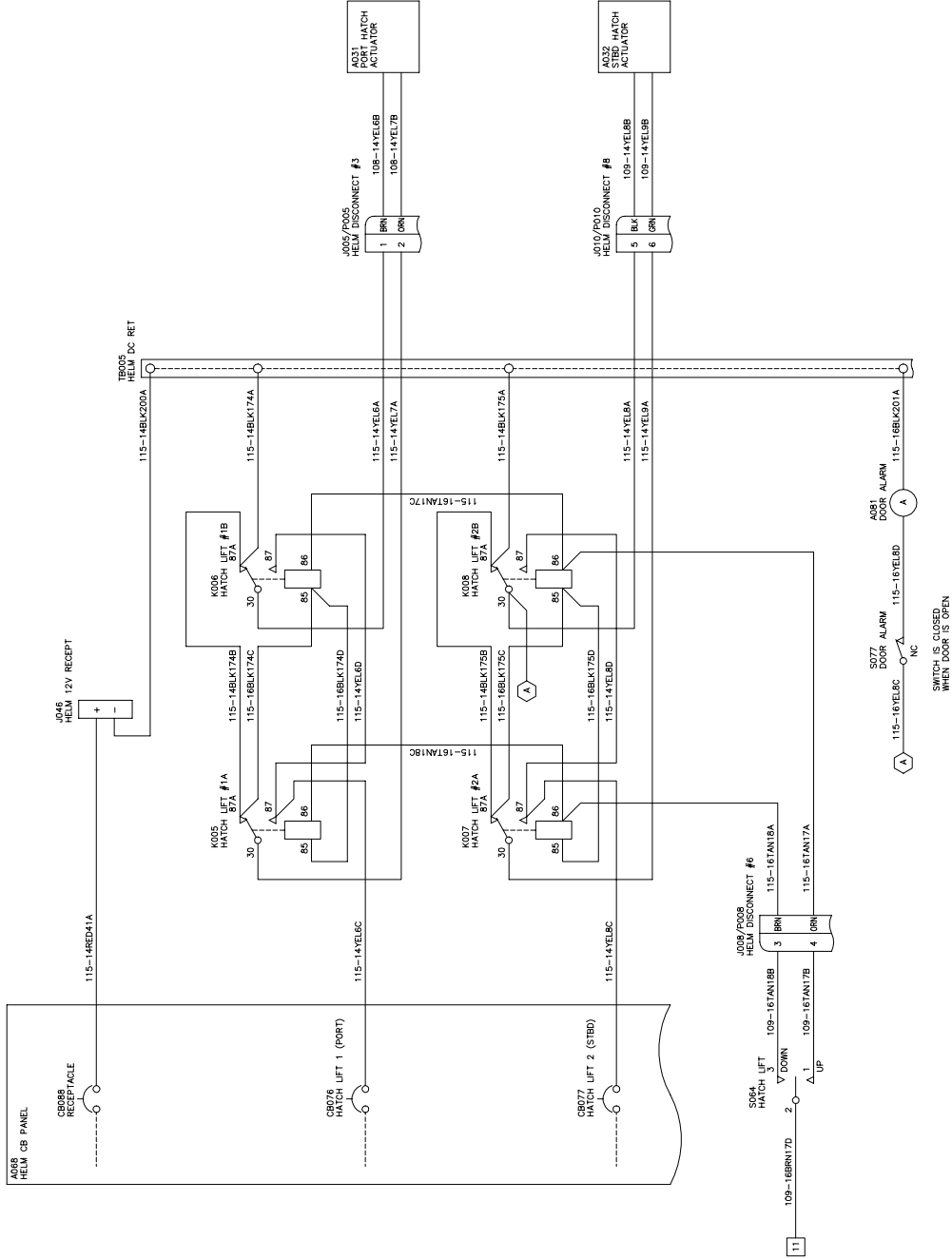


NOTES:
△ SWITCH IS USED FOR PREHEAT ON DIESEL MODELS
AND CHOKE ON GAS MODELS



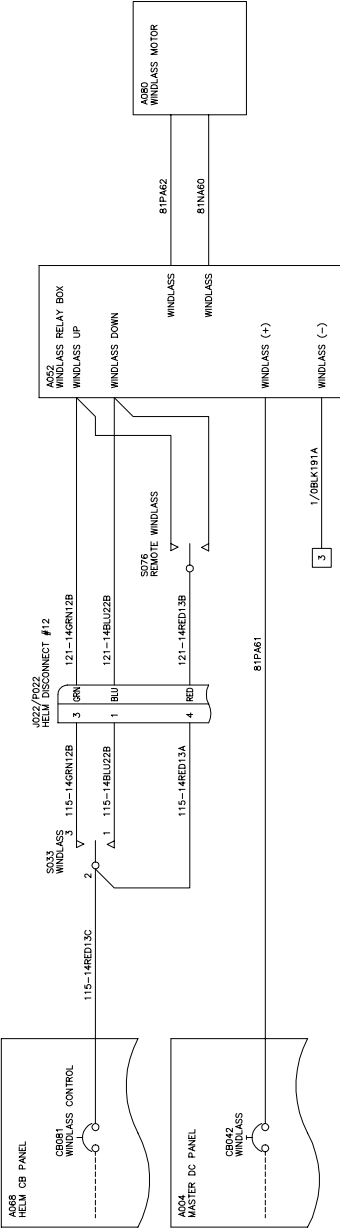
NOTES:
 ▲ HARNESS SUPPLIED WITH STEREO

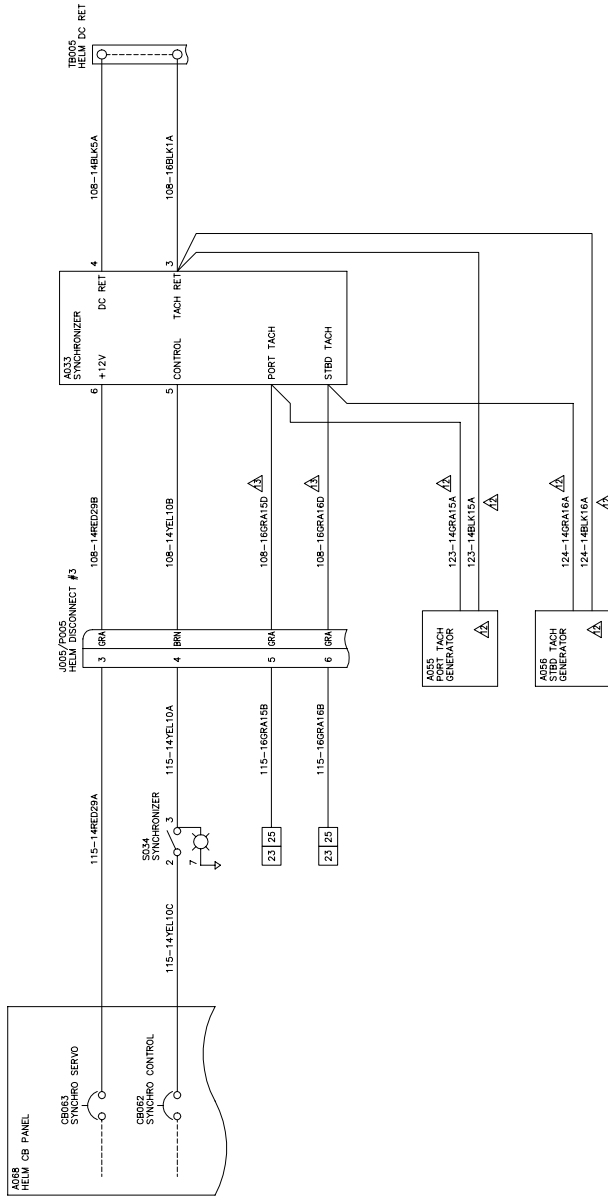




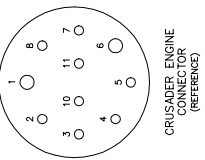
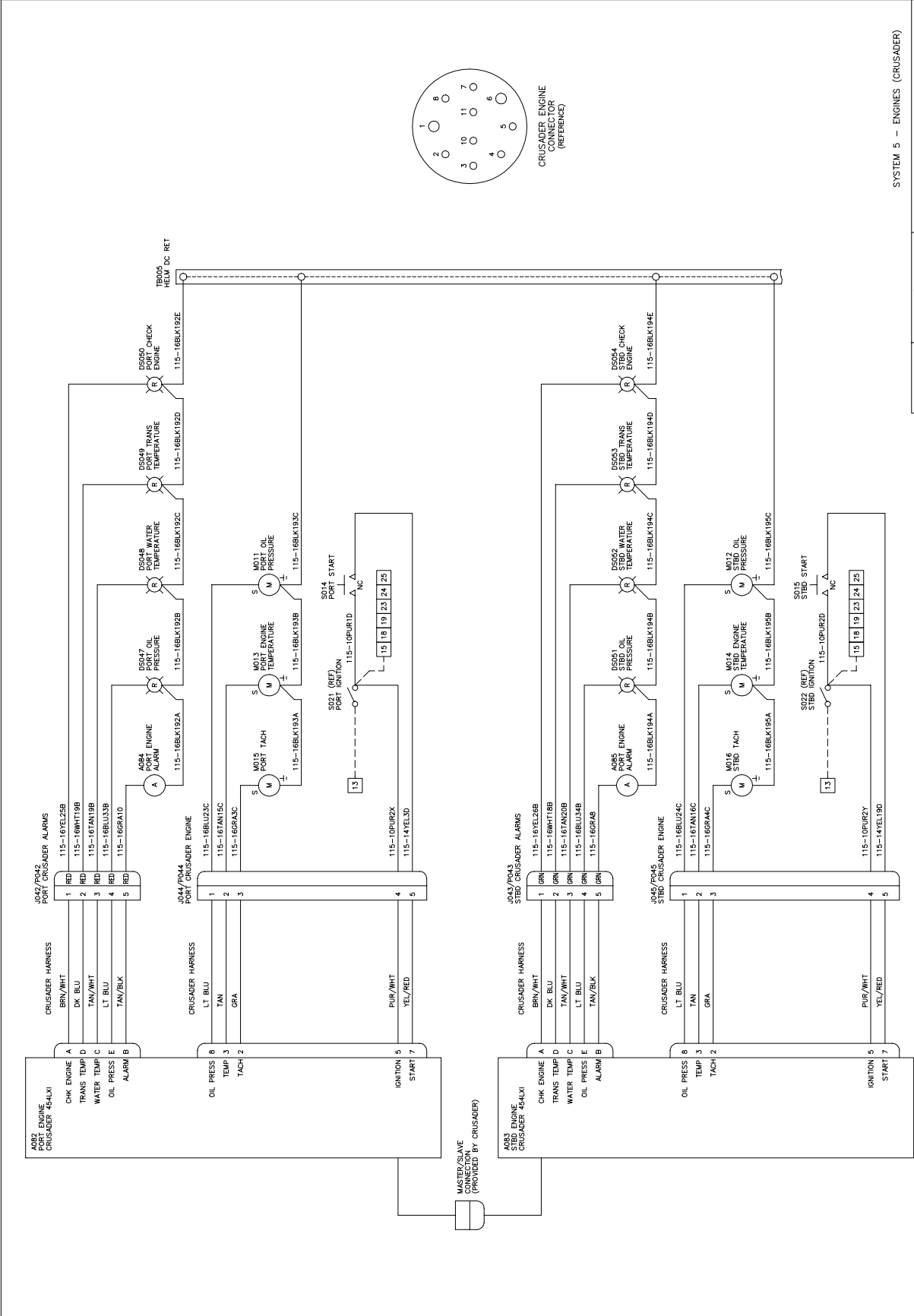
MISCELLANEOUS

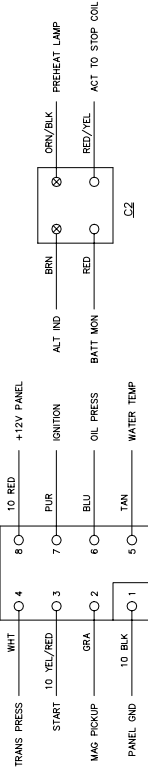
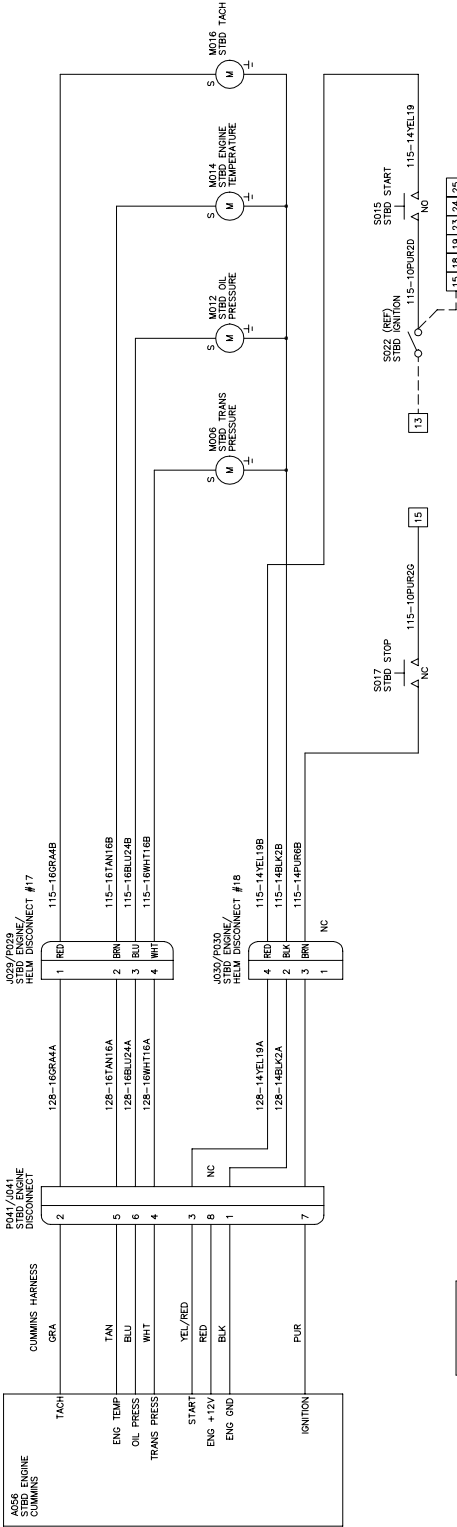
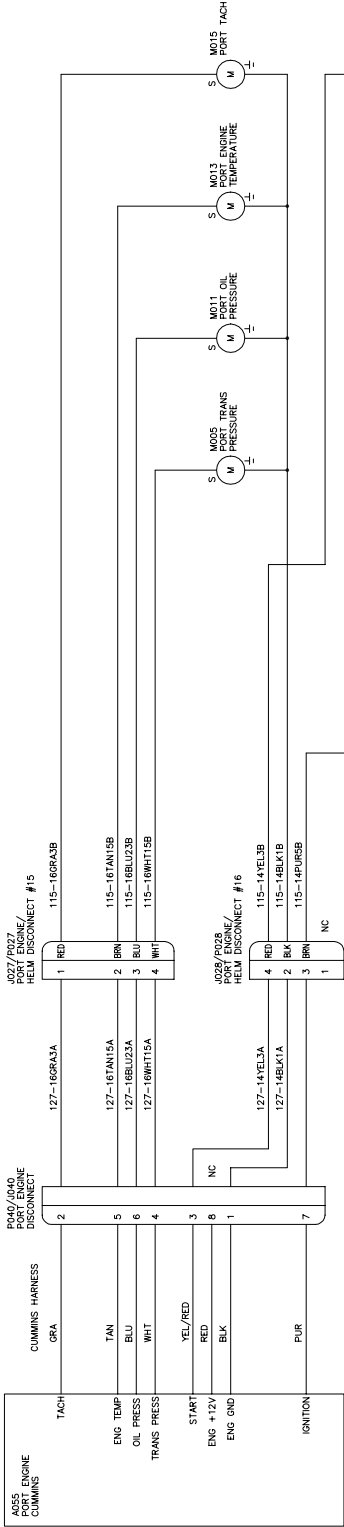
 ELECTRONIC MANUFACTURING 720 E. 4th St. Holland, MI 49423	DRAWN BY/DATE: JCW/5-2-97	DESCRIPTION: P4 SYSTEM WIRING DIAGRAM
	APPROVED BY/DATE:	DRAWING NO: 3400P-C01-A1181
		SHEET 20 of 33



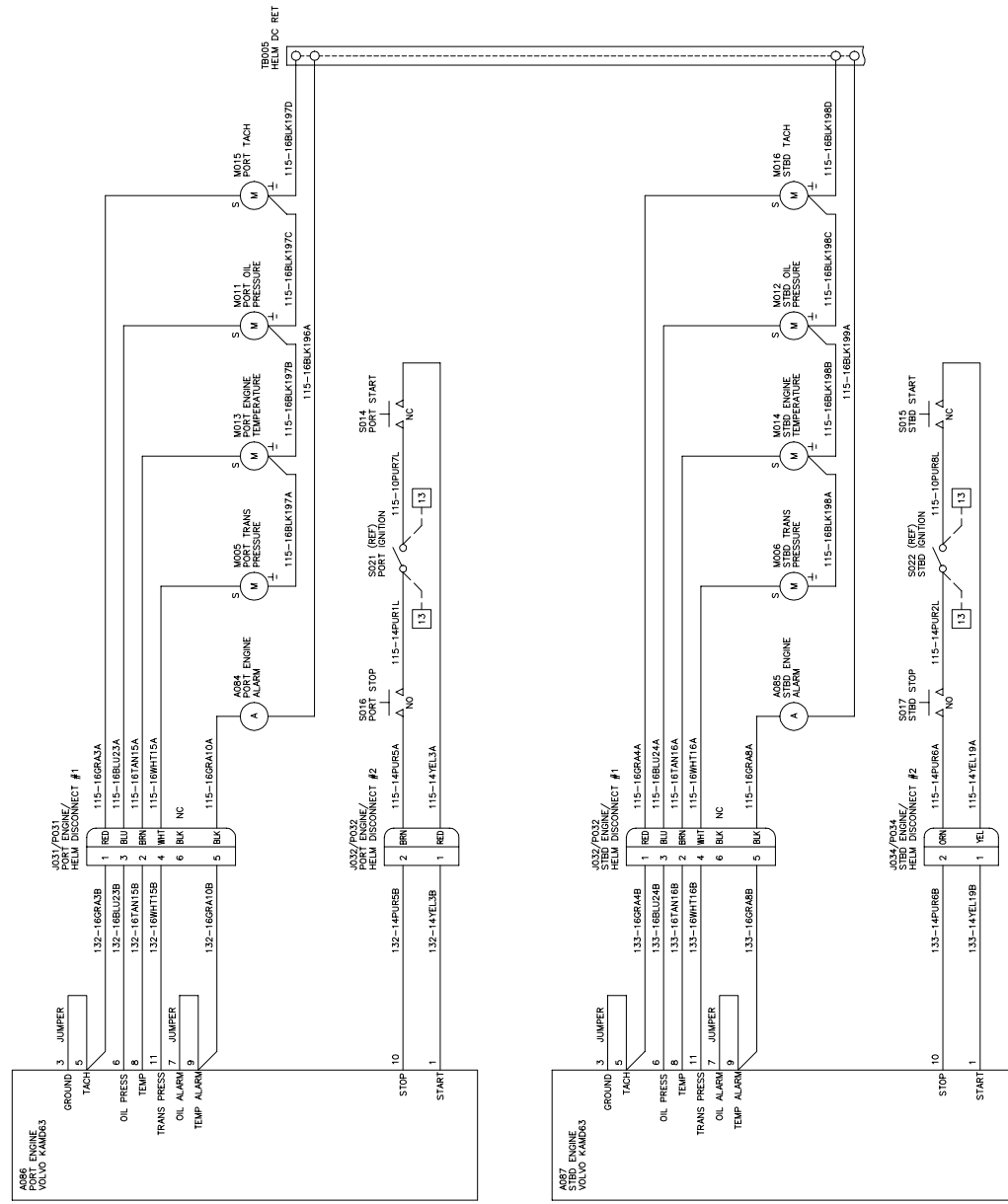


NOTES:
△ CUMMINS ENGINES ONLY
△ ALL OTHER ENGINES EXCEPT CUMMINS



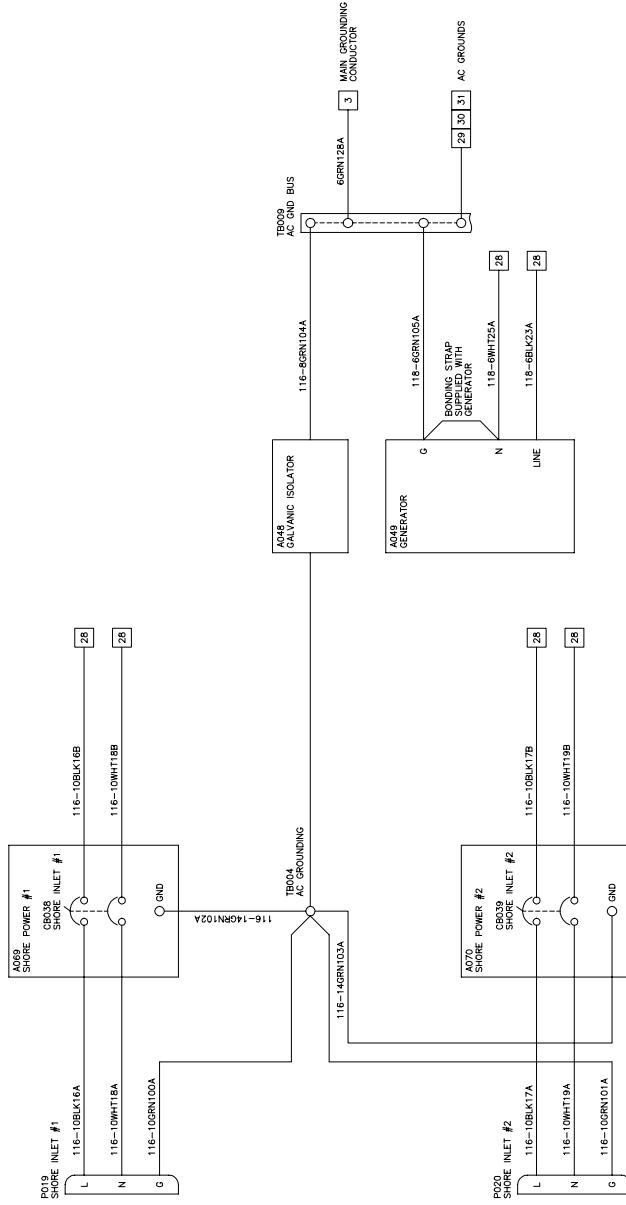


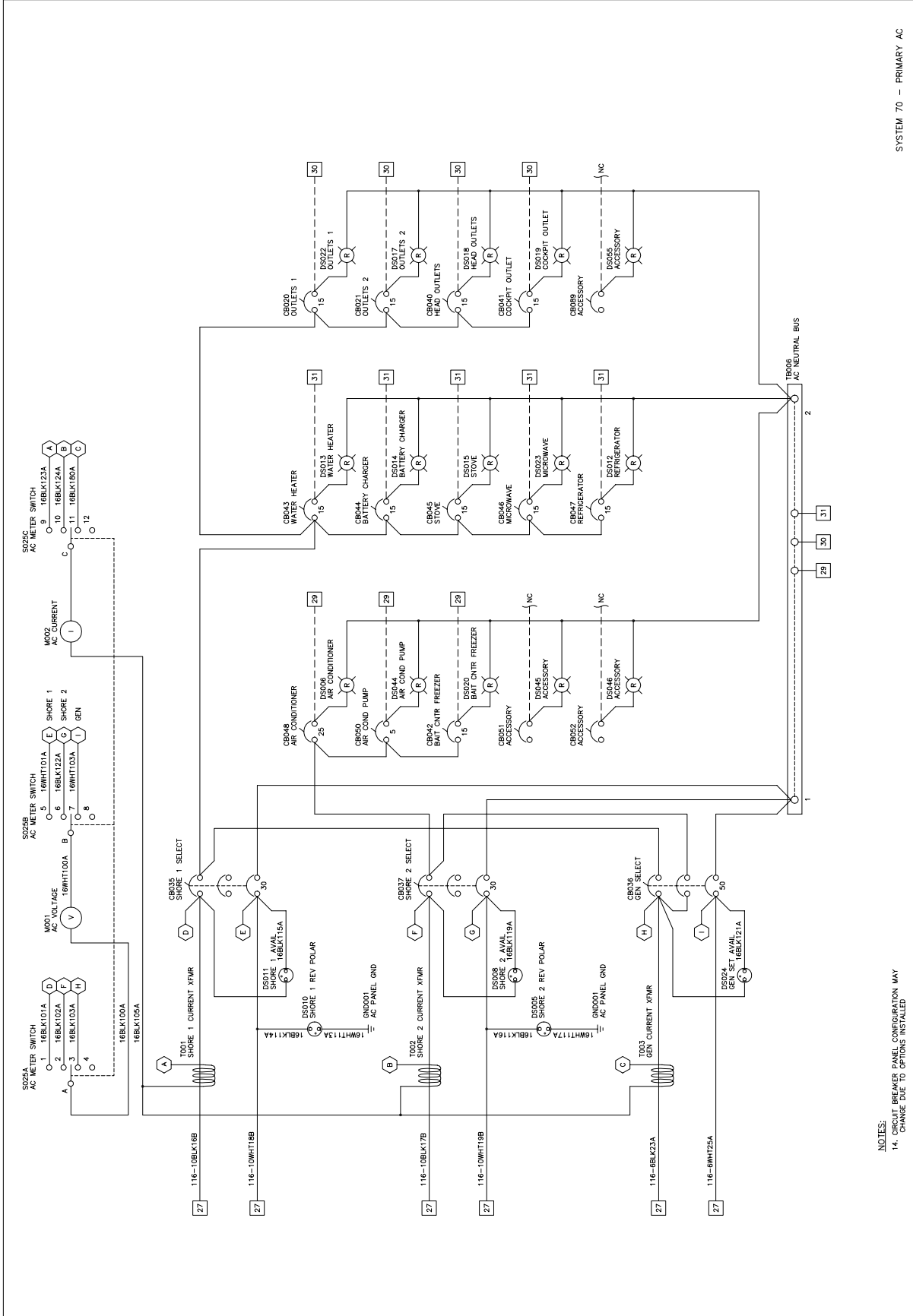
SYSTEM 5 - ENGINES (CUMMINS)



SHEET LEFT BLANK FOR FUTURE USE

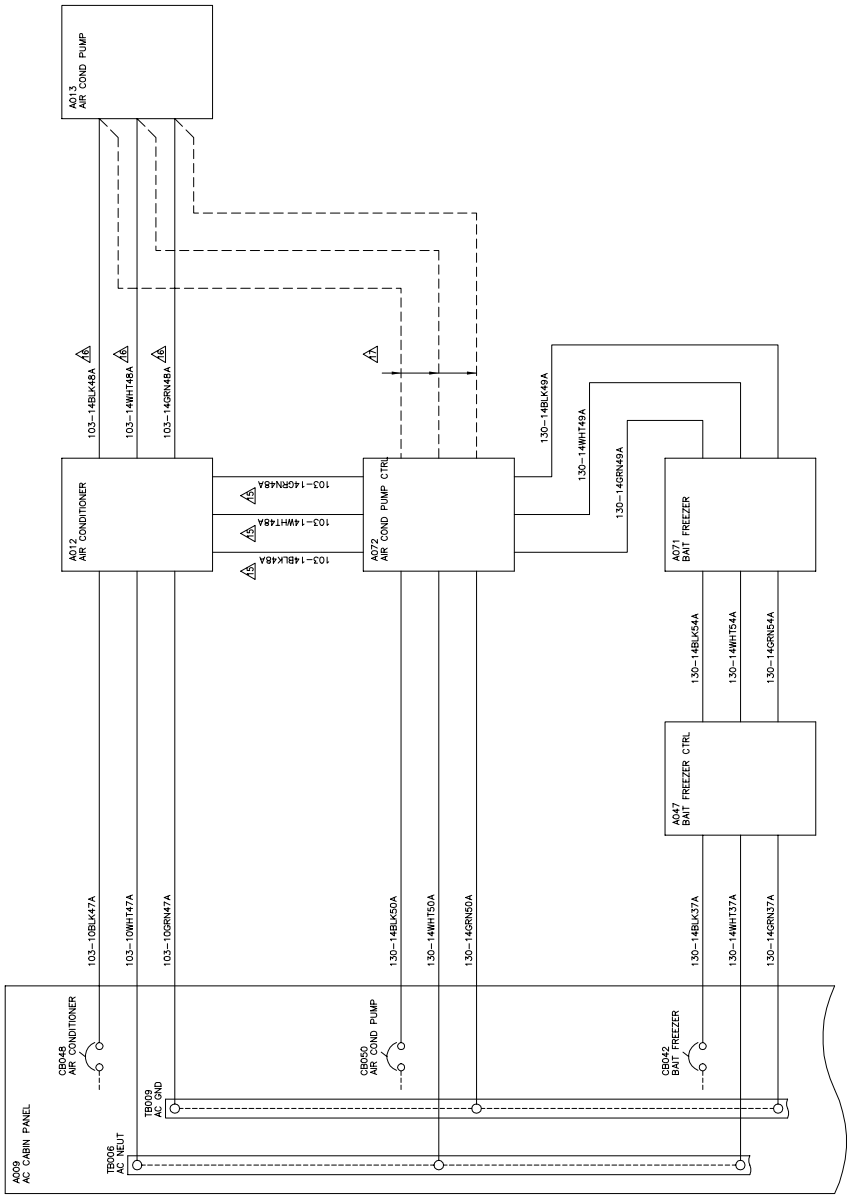
	DRAWN BY/DATE: JCW/5-5-97		DESCRIPTION: P4 SYSTEM WIRING DIAGRAM	
	APPROVED BY/DATE:		DRAWING NO: 3400P-C01-A1181	SHEET 26 OF 33



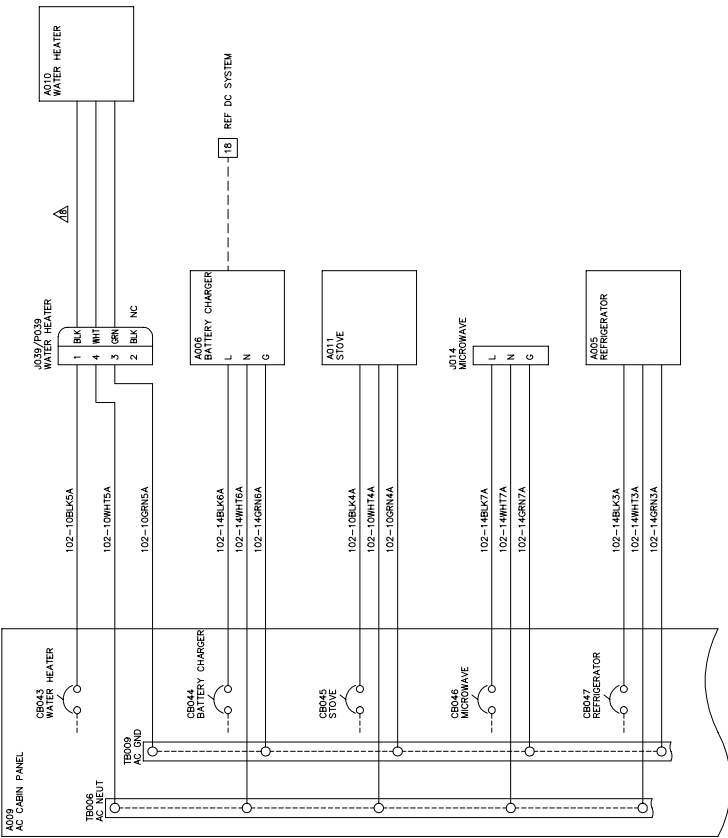


NOTES:
 14. CIRCUIT BREAKER PANEL CONFIGURATION MAY
 CHANGE DUE TO OPTIONS INSTALLED

 VACUTS 720 E. 4th St Holland, MI 49423	DRAWN BY/DATE: JCW/5-5-97	DESCRIPTION: P4 SYSTEM WIRING DIAGRAM
	APPROVED BY/DATE: 3400P-C01-A1181	SHEET 28 OF 33



NOTES:
A012 CONNECTED TO PUMP CONTROL ONLY IF
OPTIONAL BAT FREEZER IS INSTALLED
A013 CONNECT TO PUMP IF NO BAT FREEZER
IS INSTALLED
A014 PART OF PUMP ASSEMBLY

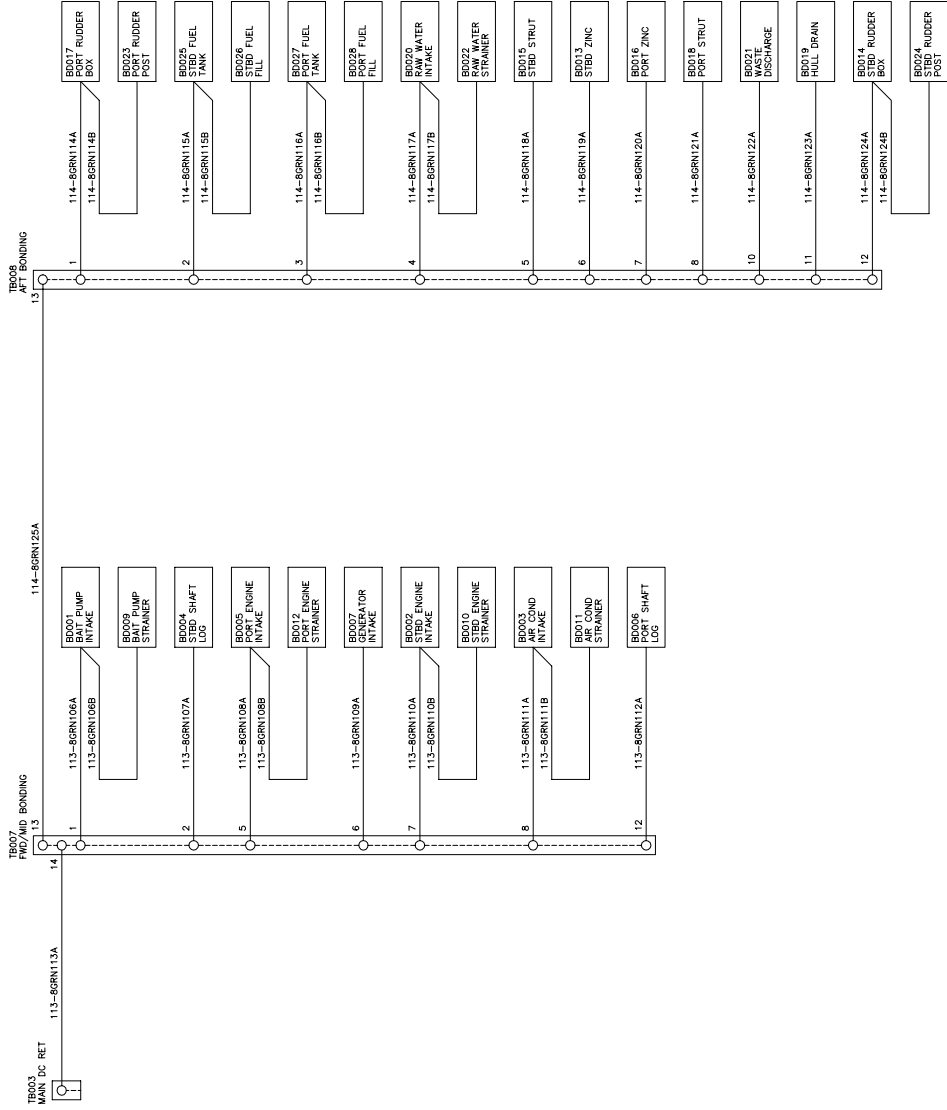


NOTES:

FACTORY SUPPLIED WIRE HARNESS

SYSTEM 74 - WATER HEATER/RANGE

	DRAWN BY/DATE: JCW/5-6-97	DESCRIPTION: P4 SYSTEM WIRING DIAGRAM
	APPROVED BY/DATE:	DRAWING NO: 3400P-C01-A1181
725 E. 40th STREET HOLAND, MI 49423		SHEET 31 OF 33



DO NOT CONNECT THE TRIM TABS TO THE BONDING SYSTEM

GROUNDING/BONDING

	DRAWN BY/DATE: JCW/5-6-97	DESCRIPTION: P4 SYSTEM WIRING DIAGRAM
	APPROVED BY/DATE:	DRAWING NO: 3400P-C01-A1181
YACHTS 725 E. 4th St. Holland, MI 49423		SHEET 32 of 33

REV	BY	DATE	HULL	NUM	SHT(S)	DESCRIPTION
A	BB	02/08/99	P4090	1	3	ADDED PORT AND STBD ALT FIELD BKRS
				2	18	ADDED PORT AND STBD ALT FIELD BKRS AND CHANGED/ADDED WIRING FOR VOLTAGE REGULATORS

REVISION RECORD

 J. & J. YACHTS, INC. 725 E. 4th STREET ANCHORAGE, ALASKA 99501	DRAWN BY/DATE: JCW/5-6-97	DESCRIPTION: P4 SYSTEM WIRING DIAGRAM
	APPROVED BY/DATE:	DRAWING NO: 3400P-C01-A1181
		SHEET 33 OF 33