OPERATIONS MANUAL

MISS SEALANEOUS EXPENSE II



Welcome aboard!

We are happy you have chosen “Miss Sealaneous Expense II” for your vacation. We are sure you will enjoy cruising the lovely islands of the Pacific Northwest.

We hope this manual will help you become familiar with the boat. If you have questions about the boat or about places to visit, please do not hesitate to ask the AYC staff.

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BOAT OPERATION

Engine Inspection

Remember your **"WOBBS"** every morning: Water (Coolant), **O**il, **B**ilges (Inspect and Pump-out), **B**elts and **S**ea Strainer.

Check the level of COOLANT in the expansion tanks. Check the level of OIL in each engine by checking your dipsticks located on the inner side of each engine. On the main engines, Port is red top; Starboard is green top. Look at the etch marks on each dipstick that indicate the proper oil level. **DO NOT OVERFILL OIL!** Only fill if oil levels are below the ½ way mark. Please use a paper towel or oil rag, not dish towels! Check out the general conditions of the BELTS, HOSES, and FUEL LINES.

Ensure the valve on each RAW WATER THRU-HULL is in the **'open'** position (lever in-line with valve). Observe the glass of each RAW WATER STRAINER located just on the front inner side of each main engine for debris. Valves are located just ahead of both engines under a small hatch in the deck. If necessary, close the seacock, open the strainer cover, clean the strainer, and reassemble. Remember to reopen the seacock. Check your generator fluids as well. Tools to open the Sea strainer are in left hand drawer of engine room work bench.

1. PORT GENERATOR, remove front panel to check oil dipstick. Sea strainer outboard side just below generator, through hull located forward / port side of generator under small deck access hatch the expansion tanks of generator for coolant that should be visible
2. STARBOARD GENERATOR, remove front panel to check oil dipstick and sea strainer in board just below, Coolant tank again just between bulkhead and aft side of generator for coolant check.
3. Oil and coolant for both main engines and generators is located on outboard main engine stringer.

To properly sequence this yacht for normal operations you should start one of the generators before starting main engines or disconnecting from the shore power as this vessel has no inverter system.

It is possible to run both generators at the same time if you need more amperage. We recommend one at a time alternating even and odd days for port and starboard.

The original connection is for 240 volts that is typically far more than needed to run all systems on board. There is a 50 AMP adaptor for normal use with all marinas. This vessel will not accept anything less than 50-amp shore power service.

GENERATOR START UP SEQUENCE

Recommend alternating generators port odd day, starboard even day of calendar.

1. The main AC selection and start panel is located on the starboard wall of the stairs leading below the accommodation level. There are two push panels that should be open by firmly pushing, and they will spring open.
2. Select your generator: source 1 is port generator; source 2 is the starboard generator.
3. Press and hold the start / stop toggle; a light will start blinking until fuel and preheat is completed; generator will then start. Let the generator run for at least 5 minutes to warm before shifting from shore to generator/ship power.
4. Once generator is warmed for at least 5 minutes, you will disconnect shoreline double pole breaker down position depending on which generator is the source.
   To shift to ships' power, slide the safety over the shoreline source and flip up the generator source.
5. All source rotator switches should be sourced to the generator in use.
6. Confirm power by viewing the data displays; note data display will read shore or generator so don't forget to switch the small toggle switch as you use the system.
7. There are numerous panels for AC /DC power distribution to the vessel hotel services, and all commonly used breakers should already be on. AC power can be checked by just looking at the microwave oven lights. If it is on, you are good to go.
8. The shore power cord can now be disconnected, and using the shore power cords retractor system the cord can be stowed, and end cap cover screwed on to prevent moisture intrusion. Be cautious with the 50 AMP adaptor at the end of the cord. It must be disconnected and stowed in the crew's freezer area.




000
AC AMPERES
LINE 1
LINE 2
GEN
SHORE
59.9
005
208
215 V OR MORE
215 V OR LESS
SHORELINE VOLTAGE SELECTOR


SHORELINE VOLTAGE SELECTOR
SOURCE NO. 1
SHORELINE NO. 1
GENERATOR NO. 1
TRANSFORMER NO. 1
SOURCE NO. 2
GENERATOR NO. 2
TRANSFORMER NO. 2
SHORELINE NO. 2
AC DISTRIBUTION PANEL NO. 1
SOURCE SELECTOR
SOURCE 1
OFF
SOURCE 2
000
AC AMPERES
LINE 1
LINE 2
AC POWER MONITOR
AC DISTRIBUTION PANEL NO. 2
SOURCE SELECTOR
000
SOURCE 1
OFF
SOURCE 2

Main Engines start procedures

Start-Up Suggest ear protection that is normally outside the engine room on a hook as once running; it is noisy. Close the engine room door when main engines are running.

ENGINE / A.C. GENERATOR BATTERY PANEL (STBD)



ENGINE START / STOP BLACK BOX ON EACH ENGINE



CATERPILLAR DISPLAYS AT MAIN HELM



You can change the view of your engine performance by using the two arrows to scroll through the available data, this is the default page

The Engines Must Start from the Engine Room Station

Most switches will be on at the start of your voyage and should be left on unless directed by AYC staff turn off.

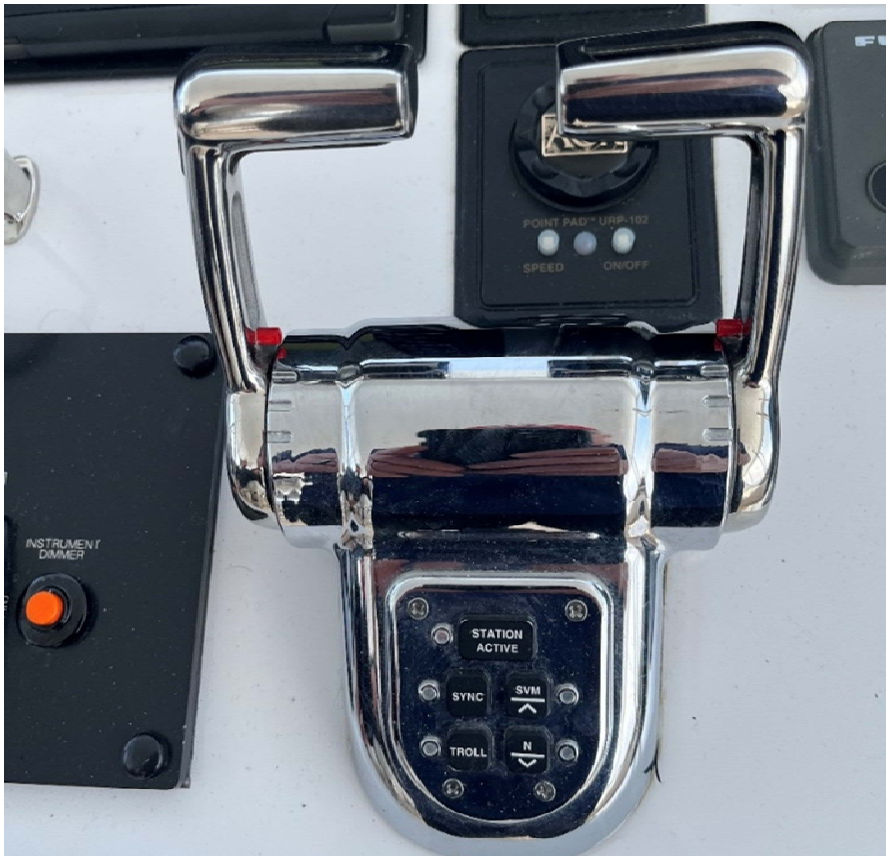
1. If Temperatures are below 50 degrees, turn on engine block heaters at least 1 hour before starting the engines. Breakers are in front of starboard engine on the AC panel and aft port panel for the Port engine. These do take significant power if left on so please use only if engine room is below 50 Degrees.
2. Turn on rotating battery switch located on forward engine room bulkhead marked as 24 VDC Battery panels Two panels marked starboard and Port. While this location turns on, the AC generator battery switches as well.
3. There are two ignition keys at each panel. Turn those to on like a car that will power up the black ignition box on the front inner side of each engine.
4. At the black ignition box turn the key and release after the engine starts. If the engine does not fire up, there is a red push button in a safety cover that must be recycled, push in and then pull out then try the ignition key at the black box again.
5. To STOP engines, push the big red protected button in at each black box, or you can stop engines at the engine controls at the flybridge helm. Do remember to turn the ignition keys off at each engine black box.
6. If engines do not start, Call AYC.

Battery Parallel Switch

This vessel is equipped with an automatic engine start battery Parallel switch. If you are restarting the engines from the Flybridge helm, there is a manual override switch on the port engine start / stop panel that can be used if the automatic system does not work.



HELM CONTROLS



1. Ensure GEARSHIFT is neutral, take station possession by pressing STATION ACTIVE BUTTON.
2. Test that you have control by shifting one engine ahead at a time for a spit second then neutral and the same in reverse.
3. Make sure all dock lines are still secured, and there are no passengers boarding while doing so. There is a brief delay with the electronic engine controls so just a quick and slight movement to first detent will tell you that station is active.

Hatteras Monitoring System

The system's monitor display is located to port side of helm wheel and will monitor the ships' safety and convenience operations including engine room camera.



This monitoring system has over 25 alarms to monitor this vessel attachments at end of manual. The one that will get you most often is the stern door open and or not locked. If engines are in gear for more than 10 minutes, the alarm will sound at the helm, and a message will display Aft Door open.

The back of this manual has all alarms and corresponding issues.

Getting Underway

The Flybridge helm position is the best and only location to operate the vessel. There is an additional docking station in the cockpit but do not recommend it unless you have experience of operating a docking station.



Close the PORTHOLES, WINDOWS, and FORWARD HATCH.

1. Turn on your VHF and electronics. The electronics package will be discussed at length in a further section, but powering all electronics prior to leaving the dock is very important.
2. The auto pilot is your rudder angle indicator so always center the rudder before maneuvering in close quarters and make sure the auto pilot is in standby mode
3. The bow / stern hydraulic bow thruster is also important to be on. Turn on the thruster at the flybridge joystick green button. Turn on the red YACHT CONTROLLER BUTTON located port of wheel black panel. Turn on the remote handheld yacht controller and confirm you have a thruster control at handheld or joystick controller.

ASSIGN crew members in various positions. Once outside the marina, idle the engines while crew brings in fenders and lines.



Cruising

All maneuvering should always take place at the FLY BRIDGE helm.

Engage the GEARSHIFTS. Ensure the throttles are in the 'idle' position before engaging the gearshifts to avoid transmission damage.

Cruising speed is a maximum of about 1450-RPM's burning 52 GPH at 13 KT. If you run at 1280 RPMS, you will cruise at 11.5 knots and use 42 gallons of diesel per hour. The most efficient RPM is 1050, You will cruise at 10 Knots and use 20 Gallons per hour. Your speed will vary depending upon the weight and load and weather conditions. I leave it to your imagination, but this vessel has more power than you need for anything but emergency operations, but it will cost you as at 1550 RPM you burn about 160 Gallons per hour and at WOT 190 GPH.

Note -- Avoid higher engine speeds as it causes higher engine temperature, possible damage, and higher fuel consumption. DO NOT EXCEED 1450 R.P.M.

Docking

During docking, use the FLYBRIDGE HELM for greater visibility to the stern. Have your crew ready the lines and fenders and give clear instructions on how you will be docking. Your crew will need to step off from the swim step with the stern line. Another crew member will need to be at the bow or mid-ships to hand over the next lines.

1. Lock the stabilizers if turned on before moving to dock the boat
2. While moving slowly to the dock or mooring location, center the WHEEL (e.g. rudders straight) and use only the GEARSHIFTS, THRUSTERS and THROTTLES to maneuver the boat.

Shut Down

Before shutting down, allow the engines 'idle' for about 5 minutes to cool them gradually and uniformly. The time engaged in preparing to dock the boat is usually sufficient.

1. Turn off engines by pushing the stop buttons at the flybridge or the big red stop buttons in the engine room black box.
2. Remember to turn off the ignition keys in the engine room at each black box. If the Caterpillar engine displays are lit, the ignition key is still on.
3. Please turn off the engine block heaters and the engine room blowers

Canvas Enclosure

Please note that not all the enclosure panels CAN open. Under no circumstances should any panel be removed from its upper attachment point and stored separately. Panels that open will have a zipper on each side and at the bottom with attachment points to fold the canvas back up to the hard ceiling. THESE PANELS CONTAIN SENSITIVE AND EASILY SCRATCH OR BROKEN POLYCARBON GLASS. DO NOT BEND THE PANELS AS THEY WILL CRACK, ESPECIALLY IN COLDER CLIMATE. CLEAN ONLY WITH CLEAN NO SCRATCH FIBER CLOTHS AND CLEANERS PROVIDED.

Fueling

OPEN FILLER CAP(S) 3 located Port side with a DECK FITTING KEY which is kept in bottom drawer port side forward of galley by side door. There are 3 tanks, Bow, Mid and Day tanks.

Fuel tank capacity and levels are at the flybridge analog gauges and are labeled A. B. and day tank. Total fuel capacity is 2200 gallons.

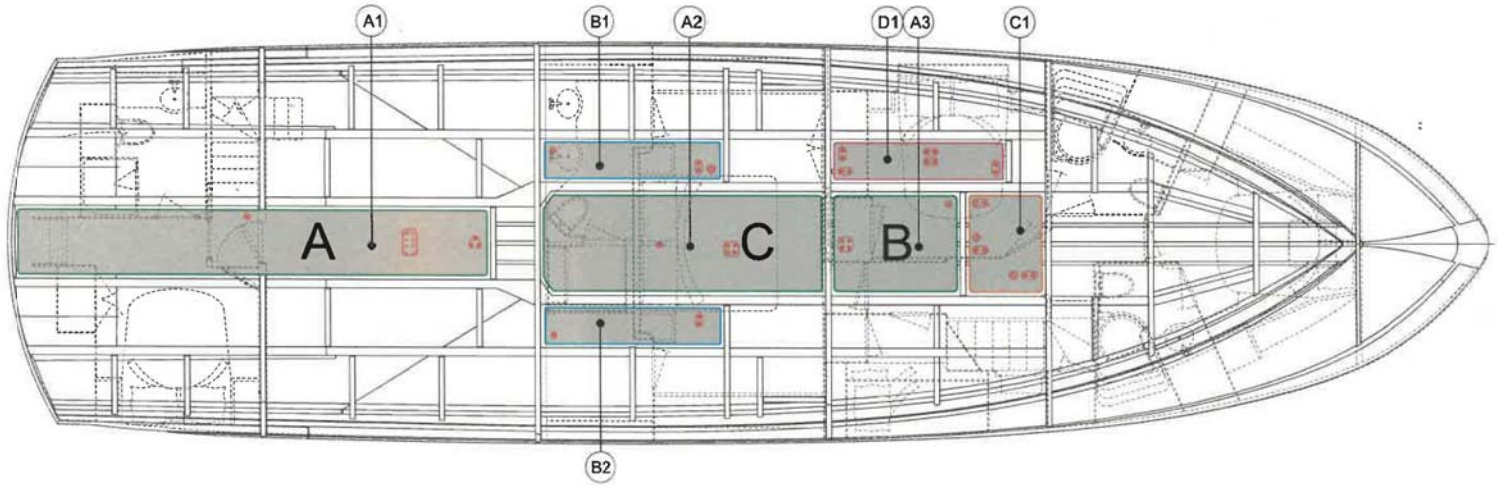
THE MAIN DAY TANK, (A) OF 750 GALLONS IS THE PRIMARY SOURCE FOR ALL ENGINES AND MUST BE FUELED AS NEEDED BY TRANSFER OF FUEL FROM THE BOW OR THE MID TANKS WHEN BELOW ¼ FULL. THE DAY TANK (A) FILL IS THE FURTHEST FILL AFT ON THE PORT SIDE. ALL TANK CAPS ARE MARKED WITH THE APPROPRIATE DESCRIPTION SO CHECK AND DOUBLE CHECK.

MAKE SURE YOU HAVE THE RIGHT FUEL! DIESEL! DIESEL! DIESEL! MAKE SURE IT IS GOING INTO THE RIGHT DECK FILL! DOUBLE-CHECK! THIS VESSEL CAN TAKE A HIGH-SPEED VOLUME HOSE WITH CARE AND CLOSE MONITORING.

Before pumping, have an oil/fuel sorbs handy to soak up spilled fuel. You should have a rough idea of the number of gallons you will need by the gauges at the helm, so it is REQUIRED to have someone watch the fuel gauge AND STANDING BY AT THE VENTS WITH SORB MATERIAL TO CATCH ANY VENTED FUEL

Place the DIESEL nozzle into the tank opening, pump slowly and evenly, and note the sound of the fuel flow. Pumping too fast may not allow enough time for air to escape, which may result in spouting from the tank opening. As the tank fills, the sound will rise in pitch or gurgle. Pay attention to the TANK OVERFLOW VENT on the outside of the hull near the tank opening. The sound may indicate that the tank is nearly full. Top off carefully and prepare to catch spilled fuel. Spillage may result in a nasty fine from law enforcement.

Replace each tank cap. Turn on blower before starting engines. *Caution -- Clean up splatter and spillage immediately for environmental and health reasons. Wash hands with soap and water thoroughly.*



LOCATION	TANK (NOTE 2)	GALLONS/LITERS (NOTE 1)	
A1	AFT KEEL FUEL TANK (A)	740 GALLONS	2801.21 LITERS
A2	MID KEEL FUEL TANK (C)	1020 GALLONS	3861.12 LITERS
A3	FWD KEEL FUEL TANK (B)	460 GALLONS	1741.29 LITERS
**	TOTAL FUEL TANK CAPACITY (NOTES 1 AND 2)	2220 GALLONS	8403.62 LITERS
B1	MID PORT WATER TANK	150 GALLONS	567.81 LITERS
B2	MID STBD WATER TANK	150 GALLONS	567.81 LITERS
**	TOTAL WATER TANK CAPACITY (NOTES 1 AND 2)	300 GALLONS	1135.62 LITERS
C1	KEEL HOLDING TANK	330 GALLONS	1249.19 LITERS
**	TOTAL HOLDING TANK CAPACITY(NOTES 1 & 2)	330 GALLONS	1249.19 LITERS
D1	PORT GRAY WATER HOLDING TANK	185 GALLONS	700.30 LITERS
**	TOTAL HOLDING TANK CAPACITY(NOTES 1 & 2)	185 GALLONS	700.30 LITERS

NOTES:

1. TANK CAPACITIES ARE COMPUTED AT THE TIME OF TANK DESIGN. THE USABLE GALLONAGE MAY BE CONSIDERED TO BE APPROXIMATELY 90% OF THE STATED CAPACITY, BUT WILL VARY WITH TRIM CONDITIONS, RUNNING ANGLES, AND OTHER OPERATIONS VARIABLES.

2. REFERENCE DRAWINGS:
   - FIG. 3.3A FUEL SYSTEM
   - FIG. 3.6A FRESH WATER SYSTEM
   - FIG. 3.7B TOILET AND HOLDING TANK SYSTEM
   - FIG. 3.15 OIL CHANGE SYSTEM

MODEL:	FILE:	DRAWN BY:	FIGURE NO:
72 MY	HA20121B	MAC	2.1B

Hatteras

TANK ARRANGEMENT

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BOAT ELECTRICAL

110-Volt AC/DC Panel

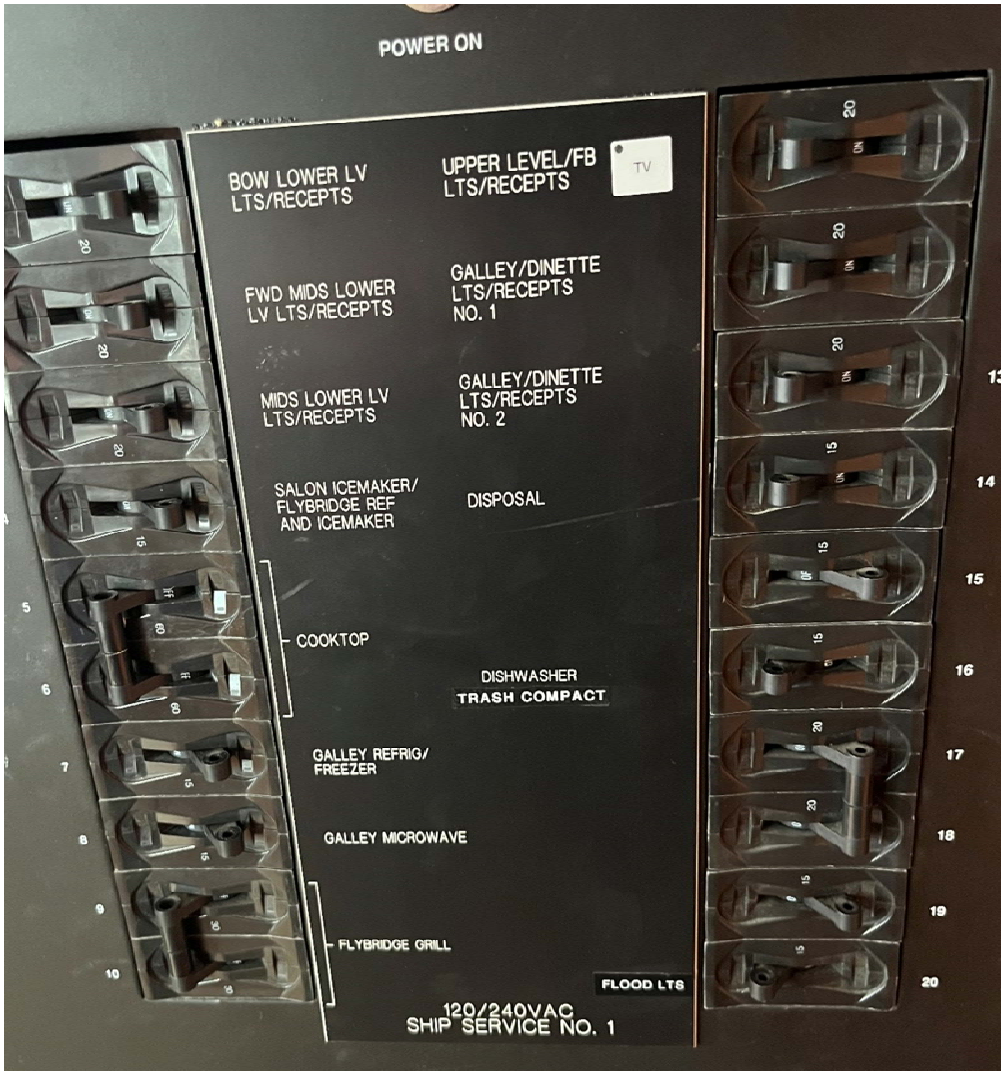
The electrical system is divided into two distribution systems: 110-volt AC and 24-volt DC.

Battery Switches

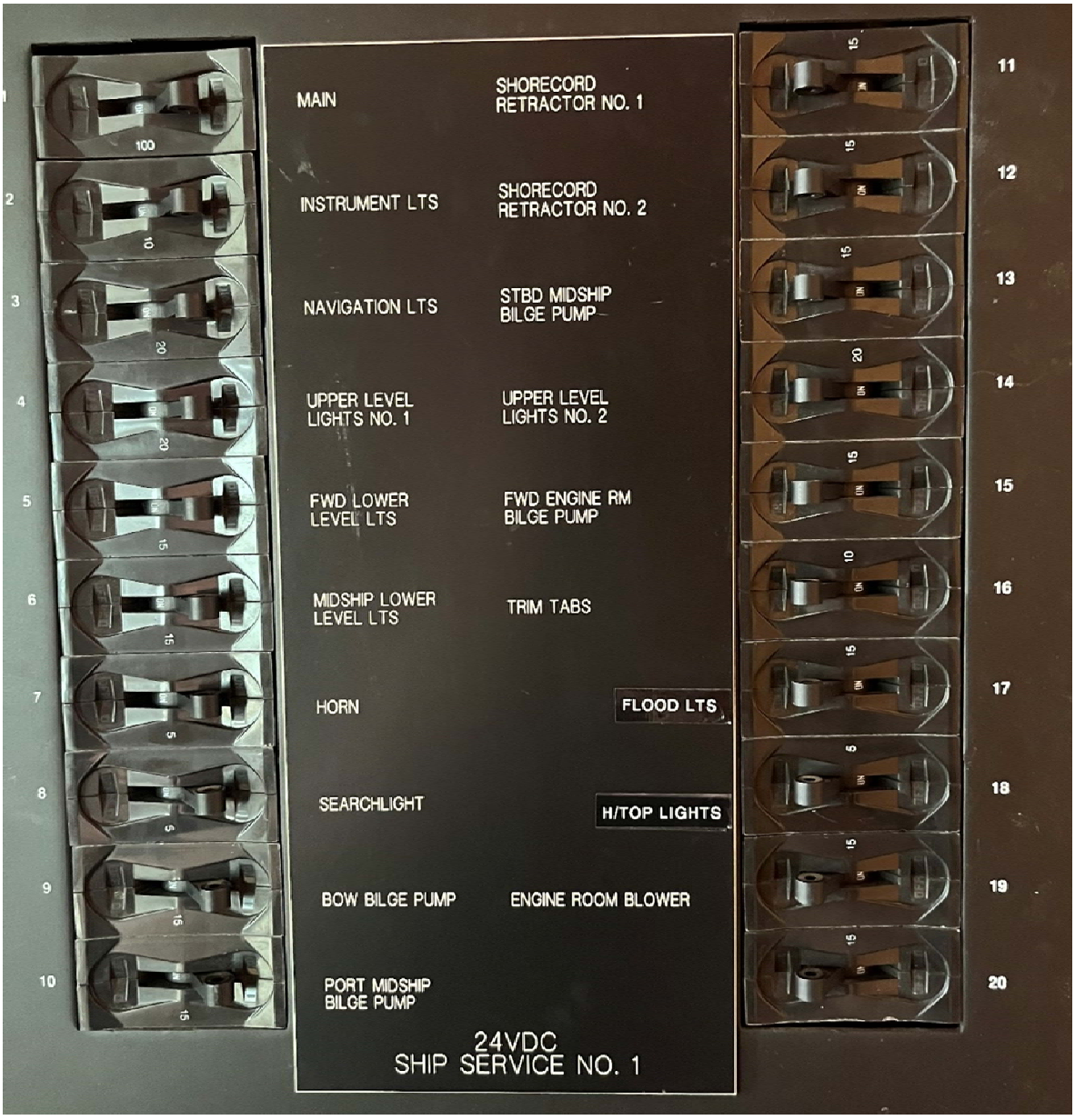
The ships' AC power is controlled from the primary AC ELECTRICAL PANEL located at the stairs to the accommodation level. This is where you select the source for all AC power on the vessel.

There are 8 additional AC / DC panels on board

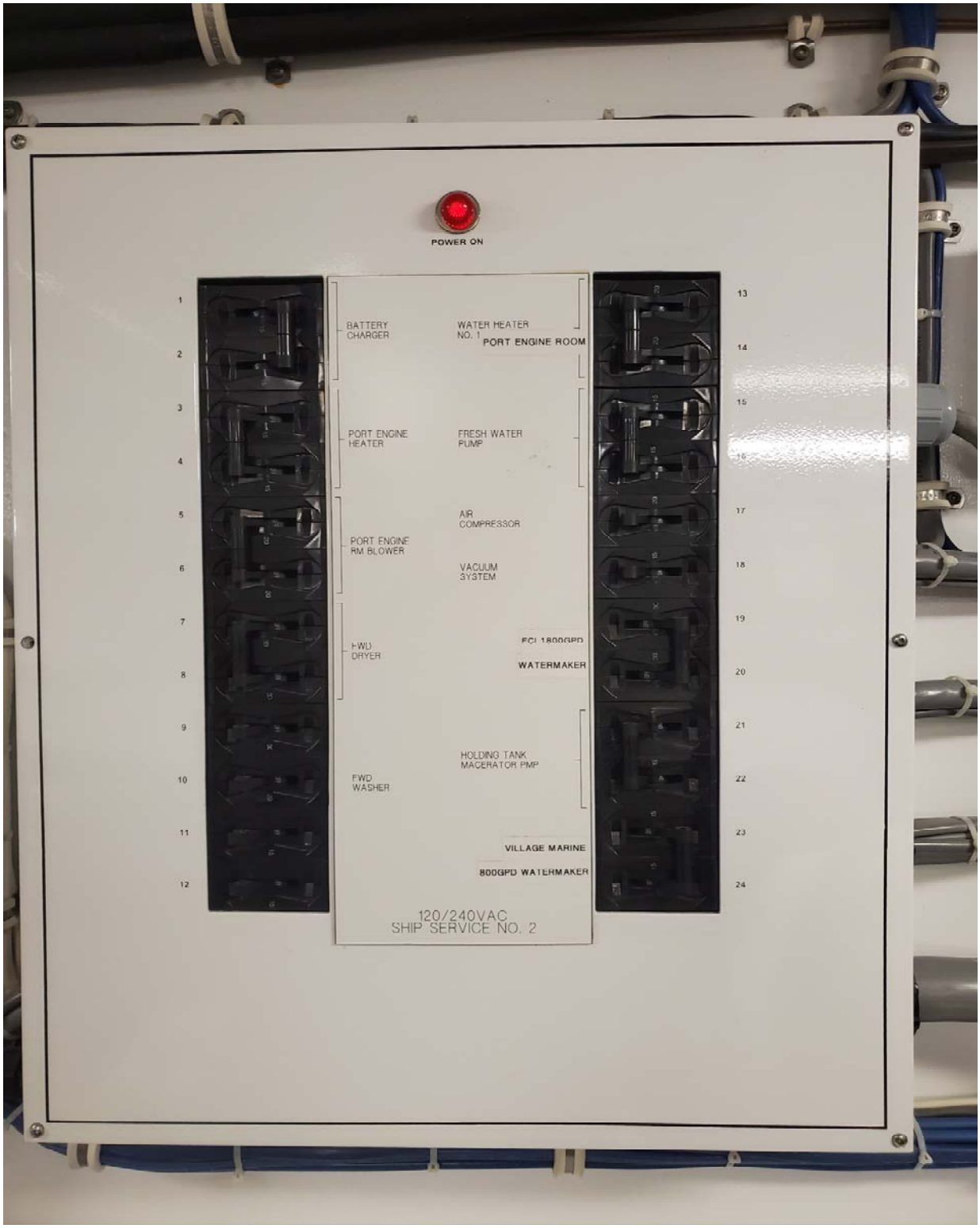
1. PANEL #1 120-V AC IS LOCATED JUST BETWEEN THE GALLEY AND THE SALON ON PORT SIDE WOOD FACED CABINETS. THIS IS MOSTLY FOR LIGHTING AND GALLEY ACCESSORIES.



2. PANEL #1 24-V DC IS LOCATED AT THE SAME LOCATION AT THE LOWER LEVEL. THIS CONTROLS MANY IMPORTANT ITEMS FOR ENGINEERING INCLUDING BILGE PUMPS, BLOWERS FOR ENGINE ROOM ETC...



3. PANEL #2 120-V IS LOCATED IN THE ENGINE ROOM ON FORWARD BULKHEAD, JUST ABOVE THE ENGINE AND GENERATOR BATTERY CONTROLS. SHIPS BATTERY CHARGER WATER HEATER AND WATER PUMP RUN IN PART FROM THIS PANEL.



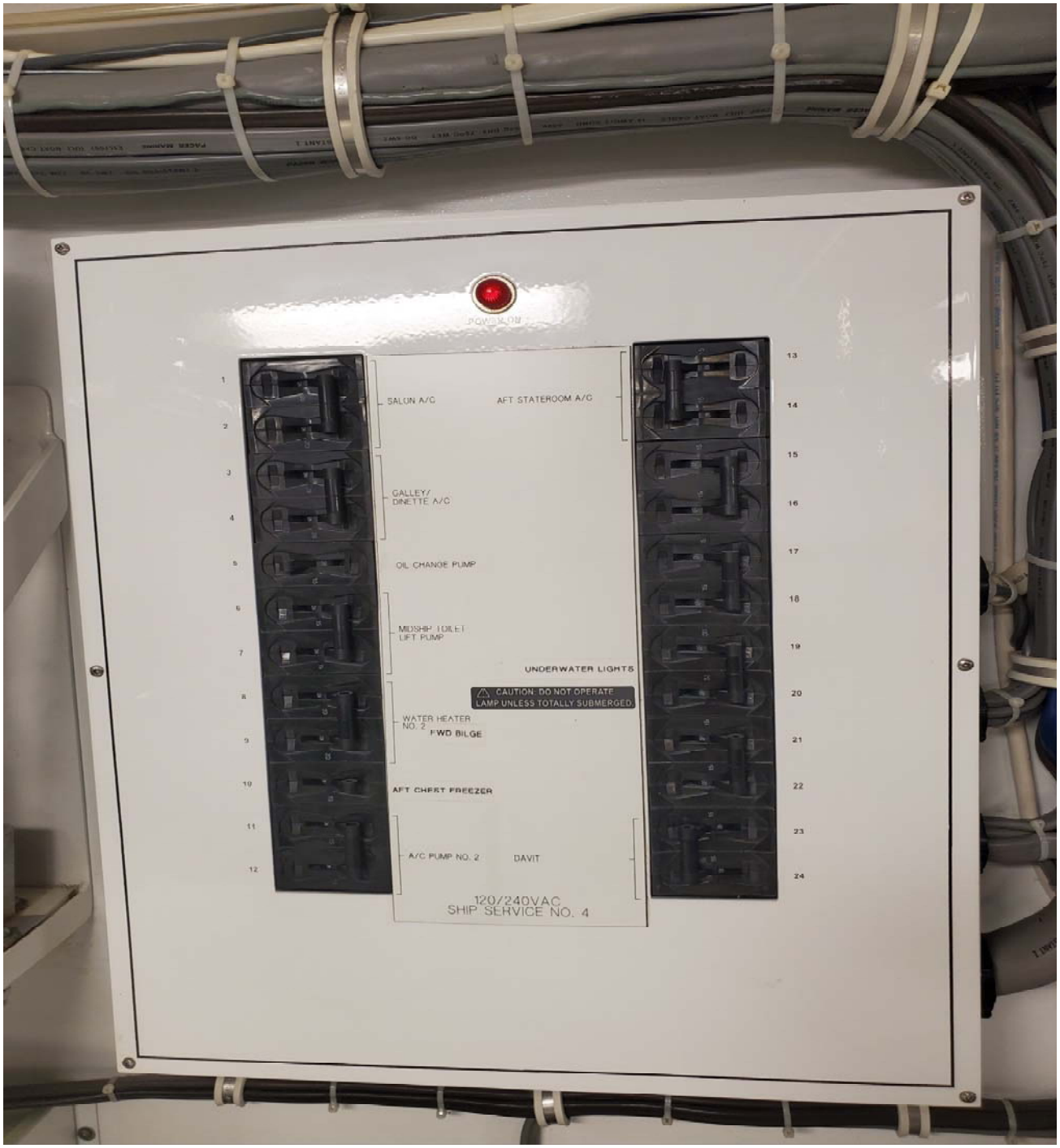
4. Panel #2 - 24V - DC IS IN THE SAME LOCATION AND CONTROLS MANY VITAL SYSTEMS SUCH AS BILGE PUMPS, HYDRAULIC CONTROLS GRAY WATER AND SEWAGE TREATMENT DISCHARGE SYSTEMS.



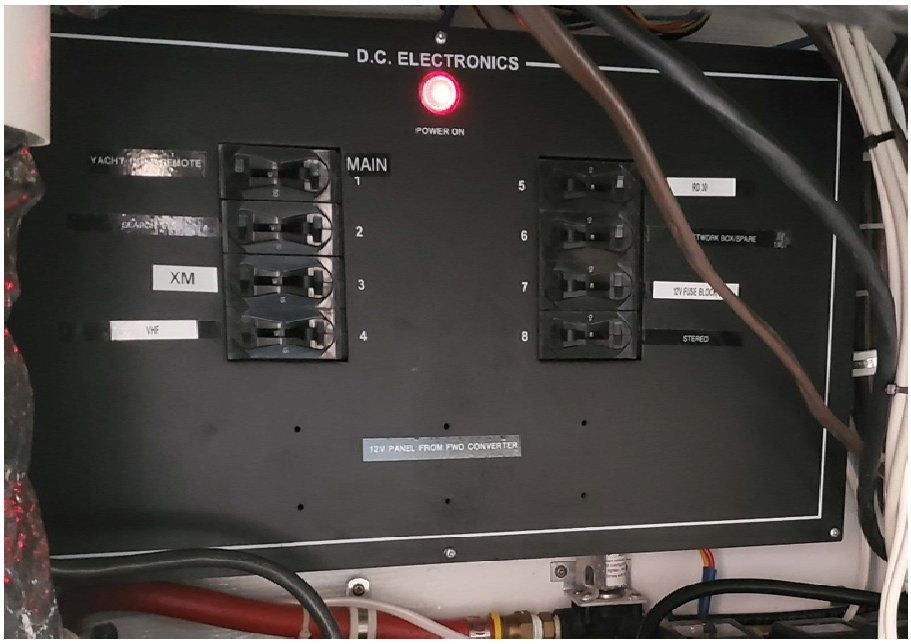
5. Panel # 3 - 120V- AC IS IN THE ENGINE ROOM AFT OF THE PORT ENGINE ON THE STARBOARD BULKHEAD



6. PANEL #4 120/240V IS AFT STARBOARD ENGINE ROOM BULKHEAD



7. PANEL #7 12/24 DC IS LOCATED UNDER THE HELM ON THE FLYBRIDGE BULKHEAD AFT. THIS PANEL CONTROLS MOST NAVIGATION AND HELM ACCESSORIES.



8. 12/24V DC PANEL IS LOCATED UNDER THE HELM ACCESS TO THE STARBOARD OF PANEL POWERS FURTHER NAVIGATION



SANITATION SYSTEM

Marine Toilet

It is important that every member of the crew be informed of the proper use of the MARINE TOILET. The valves, openings, and pumps are small and may clog easily. If the toilet clogs, it is YOUR RESPONSIBILITY!
Always pump the head for children, so you can make sure nothing foreign is flushed.

These are Tecna style toilets that macerate as they move product to the 330-gallon holding tank. There is a push button on the side of each toilet lid, on the left side if facing the unit. There is a high fill light (CURRENTLY NOT OPERATING) in each head near the countertop with a red light that will display if the holding tank is near capacity, please always be very aware of your holding tanks status and discharge black water at least every 3 days with a full crew.

When using a toilet on a boat you must follow some strict rules so as not to cause damage to the waste system, which can be very costly for repairing and ruin your trip. There is a small plunger if needed under the bathroom sinks. The reason for this is that the pipes on the boat are only 3 inches around as opposed to your home pipes that are 6-8 inches around. 😳

#1- DO NOT PUT ANYTHING IN THE TOILET OTHER THAN YOUR BODILY WASTE AND THE TOILET PAPER PROVIDED. INCLUDING WIPES THAT SAY THEY ARE FLUSHABLE!
#2- Put ALL other Kleenex, trash, wipes, diapers and feminine hygiene products in trash cans provided.
#3- The button to flush the toilet is located on the back left side of the toilet. Hold it in until you hear the water begin to run down.
#4- Lastly, wash your hands, it will make for a much more pleasant trip for everyone!

Caution *– **Never** put paper towels, tampons, Kleenex, sanitary napkins, household toilet paper, or food into the marine toilet. Use only the special dissolving marine toilet tissue provided by AYC.*
IF YOU DID NOT CONSUME IT OR IT IS NOT MARINE DISSOLVING PAPER, DON'T FLUSH IT, BAG IT!

Holding Tank

The sanitation HOLDING TANK holds approximately 330 gallons. Be aware of the rate of waste production. (about 1 gallon per flush) With an overfilled tank, it is possible to break a hose, clog a vent, or burst the tank. The result will be an indescribable catastrophe and an EXPENSIVE FIX to you. Empty the tank EVERY OTHER DAY to avoid this problem.

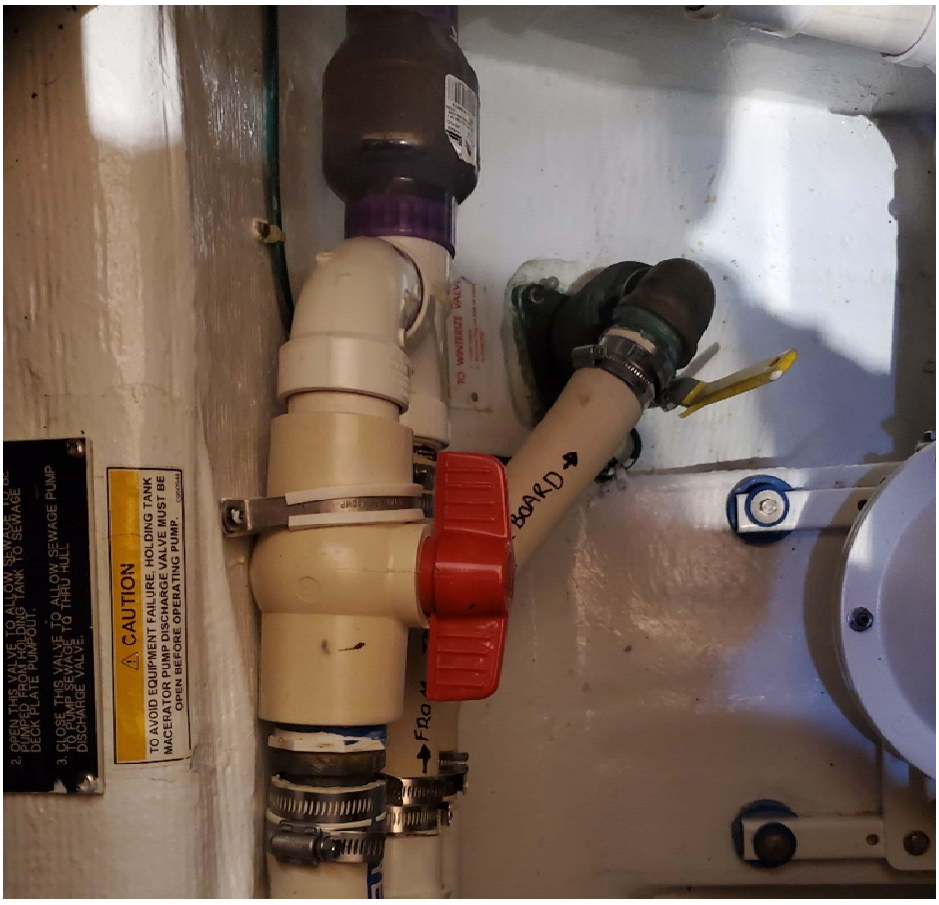
The holding tank is emptied in one of two ways:

#1 At the Marine Pump-Out Station, remove the WASTE CAP located on the starboard side forward on deck.

You must make sure the valve in the closet of the bunk room floor is open or in line with the piping to deck discharge before pumping. Insert the pump-out nozzle into the waste opening. Double-check your deck fitting! Turn on pump and open valve located on handle. When pumping is finished, close the lever on the handle and turn off the pump. Remove from deck fitting.

If there is a freshwater hose on the dock, rinse the tank by adding 5 minutes of water into the tank. Then repump to leave the tank rinsed for the next charter. This also eliminates head odors.





#2 The tank's contents can be discharged with the MACERATOR only in Canadian waters.

1. Move the sea valve into vertical position hull in bunk room cabin closet floor panel is open with handle in line, straight up with the thru hull fitting
2. Turn on the electrical switch at this location
3. In the engine room 24-V DC panel #2 confirm switch #8 for black and gray water pump is on.

Then go to the gray water / black water control panel directly in front of the starboard engine on bulkhead in the engine room.

4. Press the green start buttons and the middle buttons will show a red light while pumping both gray and blackwater.
5. When the lights go out, reverse the process and turn off the breakers in the same sequence.
6. You can press the emergency stop if accidentally discharged in US waters.
7. You can leave the valves open while on charter, but you cannot pump in USA



GRAY WATER TANK:

The Gray water tank holds approximately 185 gallons. Be aware of the gray water production that comes from showers, sinks etc. This is different than the Black water system. An overfilled Gray water tank will back up the showers and sinks on the vessel. EMPTY THIS TANK EVERY DAY TO AVOID THIS PROBLEM

- In the engine room on the 2 panels at the forward bulkhead turn on the breakers for gray water pump and the gray water control
- Follow the same steps as outlined in 5-7 above but for the gray water.

WATER SYSTEM

Fresh Water Tank(s)

The FRESH WATER TANK holds 300 gallons. Observe the water level by looking under the galley sink. There is a small analog gauge that shows the water tank % of use. The black button next to the gauge powers it on.
To refill the tank, remove the WATER CAP located on Port side fwd. Avoid flushing debris from the deck into the tank opening. DO NOT fill water and diesel at the same time!

Water Maker system

There are 2 water makers onboard and detailed instructions will be given in a separate document.

DC Panel #2 Fresh Water Pump 110V pumps One active at a time, one a backup.

The WATER PRESSURE PUMP system is in the engine room. Activate pump at the AC panel #2 by turning on the breaker. If the water pump continues to run or stops running, you are either out of water or might have an air lock and need to bleed the system by opening a faucet. If you run out of water, SHUT OFF YOUR HOT WATER HEATER on the AC panel. Serious damage can occur! You can reset the pump by turning off and on the freshwater breaker at the panel.

Hot Water Tank

The ship has 2 water heaters. To use, flip the water heater circuit breaker on the AC electrical panel #2. Do not use the water heater if the water tank level is very low.

Shower

Before taking a SHOWER, make sure water pressure and shower sump breakers are on. To keep the shower tidy, wipe down the shower stall and floor with the squeegees provided. Check for accumulation of hair in the shower and sink drains

GALLEY

Stove/ oven / microwave/ dishwasher/ garbage compactor

1. Burner Electric cook top and convection oven and microwave are just like at home. They are powered by all galley appliances from AC panel #1 located in hallway between salon and galley. All breakers should be on when you arrive on board
2. Galley and Salon Bar
3. All the baking sheets, cooling racks, and other metal bake ware are stored in the oven. *PLEASE REMOVE BEFORE USING OVEN! The cupboard above the stove is where the glass mixing/ serving bowls are a plastic 4 cup measuring mixing bowl with lid.
4. Glass casserole dishes, platters, cutting boards, plastic mixing bowls water pitchers, plastic storage containers and the hand mixer are in the cupboard of the island. The drawers in the island have utensils, plates, bowls, pots and pans including a flat bottomed frying pan. A griddle and an electric frying pan are in the bottom of the left end of the couch. The cupboards above the sink have coffee mugs and plastic glasses. The glass glassware is in the right side of the buffet area by the dining table in the salon and there are a few highball glasses in the bar area along with a Vitamix blender, a regular blender, and an electric wine chiller.
5. Measuring cups, measuring spoons, and other kitchen tools and beaters for the hand mixer are in the two drawers on the Port side of the dinette. The Starboard side of the dinette has junk drawer items in them, just in case you need something.
6. There are round and rectangular placemats for the dining table in the left side drawer in the table under the big picture on the starboard side in the salon.
7. Spices are up in the cupboard to the right of the stove.
8. There is a garbage disposal which has a switch above and to the left of the sink. DO NOT PUT ANY OIL OR GREASE DOWN IT.
9. There are electrical outlets above the coffee maker (instructions for coffee maker are on the inside of the spice cupboard door) and on the right end of the cabinet for the toaster and hot water pot or for charging phones and computers.
10. The trash compactor has 3 buttons on it. 1 is Off, 2 is On, and 3 is Start.
11. When using it, push the On button first, then press Start, making sure the compactor is fully shut before starting. Then turn it off.
12. The kitchen sink cupboard has all the cleaning supplies we use . There is dish detergent and dishwasher soap, scrub bushes and dish washing gloves in the bins. There are also extra drying pads and an extra dish drainer. The disposal wrench is in the bottom of the plastic bin with the whisk broom in it. There are 2 fire extinguishers on the right side under the sink.
13. *The dishwasher instructions are on the inside of the right cupboard door.
14. Note: when adding dishwasher pods, place to one side of the dishwasher so that it doesn't interfere with the water spraying mechanism.
15. The Sub-Zero refrigerator/freezer has a control panel inside the refrigerator door. If using the ice maker, be aware that it will make ice continuously and can become overfilled. If this happens, push the ice maker off the button inside the door until needed more, then press the button back on. You may need to remove the cover and shake the ice bin to get the ice moving again.
16. The slide out cupboard next to the oven has hot pads, hand towels, dish cloths, baggies, plastic wrap, tinfoil, and waxed paper sheets.

17. The black ottoman in the salon has a 16 qt. Stockpot and crab crackers and picks inside it. There are extra paper towels in there as well.
18. The second seat in the salon couch has games in it. The third has beach towels and the fourth also has beach towels, a first aid kit and other supplies.

19. Under the Salon bar sink there are 2 aprons, bar towels, white vinegar, and a large box of baking soda. The cupboard to the right has a small garbage can and a jug of water.
20. There is an icemaker located under the bar. It is not turned on but may be used when needed.

21. The two bar “footstools” have blankets inside each one.

Refrigerator / Ice Maker

Ice makers on board, One in the main galley freezer, one under the flybridge bar and in the salon bar area.

HEATING & AIR CONDITIONING SYSTEMS

AC system is both cooling and heating for the separate zones throughout the vessel
Please confirm that all AC pumps on both panels are on before turning on the breakers for the multiple comfort zones.

Zone 1 on panel #3 is for all staterooms and hotel accommodation level areas forward to master

Zone 2 on panel #4 is for the salon and galley areas.

If the breakers are on at the designated service panels, the operation of the units is quite simple from microprocessor thermostat control in each stateroom inside the closet area. Flip opens the black face cover and press heat or cool and adjusts the temperature as needed.



Each room has a thermostat located in the closets

ELECTRONICS:

- **TWO FURUNO NAVNET SYSTEMS WITH VX2 MFD AND CHART PLOTTER**
- **FURUNO 72 MILE RADAR**
- **FURUNO 50/200khz depth fish finder**

- **TWO SIMRAD OP40 SYSTEMS WITH CHART PLOTTER, RADAR, DEPTH DETAIL, MULTIPLE CAMERA VIEWING**
- **TWO ICOM VHF RADIOS TRANSCEIVERS**
- 



Depth Sounder

There are 2 DEPTH SOUNDERS, The Furuno RD 30 at the port of the helm is one and the Simrad system has another depth display. The Furuno system is the better unit for deeper water, but both will operate well up to about 200 feet of depth depending on ships speed. False readings can occur in depths of more than 200 feet or in areas of string currents or tides.

*Remember to **ALWAYS** consult your charts for depth!*

Radar

Remember you are cautioned to not travel at night, in FOG or in serious wind conditions.

SIMRAD POWER AND CONTROLLER



FURUNO NAV NET POWER AND CONTROLLER



Note *-- GPS is considered a navigation aid. Do not rely on it. Compasses, charts, and dividers are the tools to plot position, course, and speed.*

ENTERTAINMENT

AM/FM Stereo Radio
The Entertainment system is networked via the STARLINK network.
PASSWORD IS
Nathanethen

TV/VCR
Networked and has blue tooth capability as well as AM/ FM/ Starlink

ANCHORING



The primary WORKING ANCHOR is a 50 KG CLAW and is attached to 300 ft of 3/8 chain and 100' of rode passed through the deck from the ANCHOR LOCKER. The locker can be accessed through the port forward deck hatch next to the winch. The Starboard locker contains a wash down hose and a anchor snubber to use.

Windlass

The Hydraulic WINDLASS only works if the main engines are operating. To operate, make sure the hydraulic thruster / stabilizer system is operating via the check service panel #2 in the engine room. The system must also be on at the thruster control panel at the helm. Remove the keeper and lock on the windlass drum then, at the bow, tap gently on the 'down' foot control to lower the anchor. It is marked by paint every 50 feet. If necessary, guide the anchor over the anchor roller to prevent binding on the pulpit.

Anchor Chain Color Coding

Let out sufficient ANCHOR CHAIN before setting the anchor. Colored markers are placed every 50 feet on the chain. If the anchorage is crowded, put down at least a 3 to 1 scope (60 feet for 20 feet of water), back the anchor in with a short burst from the engine. Then let out additional scope dependent upon conditions.

NOTE: THE ANCHOR CHAIN WILL OR MAY PILE UP UNDER THE DECK HAWSE PIPE. STOP EVERY 25 FEET AND CHECK THE ANCHOR LOCKER. PILED UP CHAIN WILL JAM AND POTENTIALLY RUIN THE WINDLASS.

To raise the anchor, please drive the boat to the anchor press the 'up' control to take up slack line. Give the windlass short rests as you pull it up. Place yourself in a position to guide the anchor onto the roller. As the anchor rises, be careful not to allow it to swing against the hull. Wash it down with the hose under the bow seats starboard side before it goes into anchor locker.

Reconnect the windlass drum lock and the keeper between the anchor and the windlass. Close the plastic covers on the FOOT PEDAL CONTROLS. There is a Spare anchor located in the engine room in emergency.

HIGHFIELD 420 SPORT

13.11 FEET LONG
6 PERSON CAPACITY
70 HP YAMAHA 4 STROKE OUTBOARD ENGINE



The new 2026 Highfield Sport 420 is an outstanding platform for all your needs. Only use ethanol free straight gasoline, no oil additives.

Launching is easy with the Steelhead electric/ hydraulic davit system. All your controls are wired remote.

Please confirm that all plugs are in the hull, life jackets, key and safety lanyard are in the dinghy before launch.

1. Detach tie downs
2. Attach lifting bridal
3. Have bow and stern lines ready to hand down to deck crew to guide the vessel away from the main ship's hull. Make sure nobody is directly below when launching or retrieving the dinghy
4. Detach once in the water and have fun.
5. Reverse this process to retrieve the dinghy.

Please be aware of ocean conditions and wakes while either operation is ongoing. You do not want the vessel in any rolling motion while launching or retrieving and never allow any person to ride in the dinghy while launching or retrieving.

Coast Guard regulations state that any child 14 and under must wear a life jacket in a dinghy. It is a good idea for EVERYONE to follow this rule.

The dinghy has flares / fire extinguisher and an anchor. Please raise the dinghy motor before getting close to SANDY beach. Do NOT drive or beach on the rocks.

OTHER: Safety & Bilge Pumps

Ships flares are in the safety locker at the flybridge helm compartment Starboard side near steps below.



The ENGINE SPARES are located under the mid VIP bunk and the master stateroom bunk. This includes oil filters, raw water impellers, pump parts, injectors, and other small parts.

LAUNDRY SERVICES

The Forward Laundry is located under the stairs leading to the Staterooms. Open the two large wooden cupboard doors completely and slide back until they stop. Open the small cupboard above the machines which contain laundry soap, fabric softener sheets, dryer balls, clothes pins etc…
*NOTICE: Do not use washer while underway, it can cause water to overflow.
Before using it, you must turn the power breakers on in the engine room which are located directly in front of you and across the room as you enter the engine room. Look for Forward Washer and Dryer switches on right panel # 7&8 (connected) and #10. Turn off after finishing your laundry.
To use the washer:

Load clothes into washer and add a detergent pod. Choose the cycle you would like to use, then push the power button on, close the door, push start, holding the bottom of the door shut firmly against the washer until you hear it click. This will then start your cycle.

To use the dryer:

Turn on power. Load clothes into the dryer, pick the cycle you would like to use by turning the knob clockwise and the temperature by pushing the button in for a lower setting or leave out for a hotter setting. Close the door and push start. The dryer should begin running your chosen cycle. When cycle is over, it will alert you by making a buzzing sound.

The crew laundry is located next to the crew bathroom and the crew quarters.
*NOTICE: Before using, you must turn the power breakers on in the engine room The Aft breaker switch is located on the left side of the doorway as you enter the engine room, #10&11 (connected) just above the light switches. Turn off after finishing your laundry.
To use the washer:
Lift washer lid and it should stay open with a button located on the right underside of the dryer. Add detergent (1 scoop for full load and 1/2 scoop for small load) and then your clothing (do not overfill). Close washer lid by pushing up on the button and holding the lid as you do so. Choose the cycle you would like to use by pushing knob in and turning clockwise. Also choose the temperature and soil level you would like. Pull the large button out to start. Once wash cycle is finished, leave lid open to allow washer to dry.

To use the crew quarters dryer:
Load clothing into dryer.
Select the desired cycle by turning the knob clockwise, then press the Start button to begin drying.
Turn off washer and dryer at the breaker box when finished.

SYSTEMS MONITOR

(See Fig. 3.11)

SYSTEM MONITOR (PLC)

GENERAL

The Systems Monitor is a normally closed monitoring and alarm system. It consists of display panel(s), an electronic processor, remote horn, outside horn and sensors. The processor is programmed by a personal computer to continuously monitor the various system sensors. When a sensor detects a fault condition, the display panel will display the appropriate message, sound the remote horn and in some cases, the outside horn.

DISPLAY PANEL

The display panel has an area to display an alpha-numeric message and programmed function keys.

The display panel keys are programmed as follows:

"SILENCE"	Used to silence the horns when activated. The message will remain until the problem is corrected.
"BLANK DISPLAY"	Used to turn "off" the display area illumination except when there is an activation.
"HATT MESSAGE"	Used to display the programmed Hatteras messages.
"S.D. RESET"	Used to reset the smoke detectors only, if needed.
"TEST O.S."	Used to test the sounding of the outside horn.
"TEST I.S."	Used to test the sounding of the remote horn (inside horn).
"LAST ALARM"	Used to display the last alarm that was activated.

The display panel is located at the main console. See Figs. 4.1A.1 and A2.

ELECTRONIC PROCESSOR

The electronic processor is a programmable logic controller (PLC) mounted in a box that contains its related circuitry, terminal strips, fuses, and relays for the connected sensors.

Should the system lose its programming, it can be reprogrammed on the yacht. For additional information, contact the Hatteras Service Department.

SYSTEM MONITOR ALARMS (FIG. 3.11)		
ALARM	**BEHAVIOR**	**ACKNOWLEDGED**
Engine Room Fire Extinguisher Discharge	• Inside and outside horns sound immediately. • Engine Room strobe and siren also sound immediately and automatically shut off after 60 seconds. • Engine(s) is shut down and prevented from restarting for 15 seconds. • Generator set is shut down and disabled for 15 seconds (may require a manual reset prior to restart). • Engine room blower(s) is shut down for 60 seconds.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Zone 1 Fire – Fwd. lower level (Bow, Port Fwd. Mid,, Midship, & Stbd.fwd.mid (if installed) Staterooms smoke detectors)	• Inside and outside horns sound immediately.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Zone 2 Fire – Engine Room (port & stbd. engine room fire sensor)	• Inside and outside horns sound immediately.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Zone 3 Fire – Upper Level (salon/galley) smoke detector	• Inside and outside horns sound immediately.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Zone 4 Fire – Aft Lower Level Smoke detector (if installed)	• Inside and outside horns sound immediately.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
CO_2 Detector (includes multiple zones)	• Inside and outside horns sound immediately.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Bow Bilge Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence"or "Acknowledge" button to disable the alarm.
Port Midship Bilge Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Stbd. Midship Bilge Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Forward Engine Room Bilge Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence "button to disable the alarm.
Port Lazarette Bilge Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence "button to disable the alarm.

Stbd.Lazarette Bilge Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence "button to disable the alarm.
Midship Bilge Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence " or "Acknowledge" button to disable the alarm.
Aft Shower Sump (If installed) Level High	• Inside horn sounds after 10 seconds • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence "button to disable the alarm.
Port Engine High Coolant Temp. (If installed).	If engine has been running for more than 5 seconds • Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Stbd. Engine High Coolant Temp. (If installed).	If engine has been running for more than 5 seconds • Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Pot Engine Low Coolant Level. (If installed).	If engine has been running for more than 5 seconds • Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Stbd .Engine Low Coolant Level. (If installed).	If engine has been running for more than 5 seconds • Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Pot Engine Low Oil Pressure. (If installed).	If engine has been running for more than 5 seconds • Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Stbd.Engine Low Oil Pressure. (If installed).	If engine has been running for more than 5 seconds • Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Port Engine High Exhaust Temp.	• Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Stbd.Engine High Exhaust Temp.	• Inside horn sounds after a 5 millisecond delay • Outside horn sounds after 30 seconds	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Aft Door Adjar	• If the engine(s) is running and either gear box is not in neutral. • Inside horn sounds after 25 seconds. • Outside horn sounds after 30seconds.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
AC Power Off	• Inside horn sounds immediately for 10 seconds.	Automatic acknowledge of audible alarm after 10 seconds. Fault message must be manually acknowledged.

SYSTEM MONITOR ALARMS (FIG. 3.11)		
ALARM	**BEHAVIOR**	**ACKNOWLEDGED**
Battery Charger Fault	• Inside horn sounds immediately for 10 seconds	Automatic acknowledge of audible alarm after 10 seconds. Fault message must be manually acknowledged.
Port Battery Low Voltage	• Inside horn sounds after 10 second delay	To acknowledge depress the "Silence" button to disable alarm or automatic acknowledge when fault clears.
Stbd.t Battery Low Voltage	• Inside horn sounds after 10 second delay	To acknowledge depress the "Silence" button to disable alarm or automatic acknowledge when fault clears.
Gray Water Holding Tank 75% Full	• Inside horn sounds after 15 Seconds for 5 seconds	Automatic acknowledge of audible alarm after 5 seconds. Fault message must be manually acknowledged by depressing the "Acknowledge" Area
Grey Water Holding Tank is 90% Full	• Inside horn sounds after 15 seconds. • Pump is activated, pump shuts off automatically after tank has been emptied or manually deactivated.	To acknowledge depress the "Acknowledge" Area to disable the alarm. Depress the "Acknowledge" Area to disable the automatic pump activation.
Grey Water Holding Tank 95% Full	• Inside horn sounds immediately. • Outside horn sounds immediately.	To acknowledge depress the "Acknowledge" Area to disable the alarm.
Holding Tank is 75% Full	• Inside horn sounds after 30 second delay for 10 seconds. • Holding tank lights (typically located inside head) are illuminated solid as long as condition exists.	Automatic acknowledge of audible alarm after 10 seconds. Fault message must be manual acknowledged.
Check Port Engine (Engine Diagnostics)	If engine is running, • Inside horn sounds immediately.	To acknowledge, depress the "Silence´ or "Acknowledge" button to disable the alarm.
Check Stbd. Engine (Engine Diagnostics)	If engine is running, • Inside horn sounds immediately.	To acknowledge, depress the "Silence´ or "Acknowledge" button to disable the alarm.
Check Genset 1 (Generator No.1 Diagnostics	If generator is running, • Inside horn sounds immediately.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Check Genset 2 (Generator No.1 Diagnostics	If generator is running, • Inside horn sounds immediately.	To acknowledge, depress the "Silence" or "Acknowledge" button to disable the alarm.
Port Engine(s) Run	• Inside horn sounds immediately.	Automatic acknowledge after 3 seconds.