

OPERATIONS MANUAL



CARPE DIEM

Welcome aboard!

We are happy you have chosen “Carpe Diem” 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: **W**ater (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 the yellow dipsticks located inboard on both engines. 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 the dish towels! Check the general condition 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 for debris. 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.

Start-Up

Before starting the engines, do your inspection.

Ensure GEARSHIFTS are in ‘neutral’, or the engines cannot be started because of the “neutral lockout”. At the electrical panel, turn both keys ON. At the helm, wait for the Mercury engine display to load. Press the START/STOP buttons to the right of the wheel. Normally, plan to start the port engine first.

If the engine cranks slowly or fails to turn over, check the condition of the battery on the ELECTRICAL PANEL. If the battery is low, try the BATTERY PARALLEL SWITCH located to the right of the wheel to connect the other engine battery.

Press THROTTLE ONLY and move the THROTTLE to raise the engine speed to 1000 rpm on the TACHOMETER. Warm the engine for about 5 minutes before engaging transmission. Observe the readings of the gauges. The oil pressure will register about 60 PSI. The engine temperature should rise slowly.

Note -- If oil pressure is low, shut down engine, and inspect engine compartment and look for possible cause (for example, loss of oil.) Caution -- If an engine is overheating or there is lack of raw water expelled in the engine exhaust, stop the engine immediately. Recheck the raw water-cooling system to ensure the seacock is ‘open’ (handle in-line with valve). Next, check the raw water strainer for debris. Remove the strainer, clean, re-assemble, and reopen the raw water intake valve (seacock). Restart the engine and re-check water flow from the exhaust. If water is not flowing properly, the RAW WATER PUMP may need to be serviced. Seek help.

Trim Tabs

Carpe Diem is equipped with automatic trim tabs. There is a switch to the right of the wheel. To use tabs manually, turn AUTO switch to OFF. Tab angles can be viewed on the Raymarine DASHBOARD screen.

Getting Underway

DISCONNECT the shore power cord (see 110-Volt next page). Close the PORTHOLES, WINDOWS, and FORWARD HATCH. Turn on your VHF and electronics. ASSIGN crew members their various positions. Once outside the marina, idle the engines while crew brings in fenders and lines.



Cruising

Engage the GEARSHIFTS. Cruising speed is a maximum of about 2600 RPMS. If you run at 2600 RPMS you will cruise at 25 knots and use approximately 40 gallons of diesel per hour. Your speed will vary depending upon the weight and load and weather conditions. TRIM TABS can be put in the “bow down” position. Throttle back very slowly, I.E. 500RPM every 30sec, to prevent engine alarms. If alarm occurs, turn engines off, turn keys off, and restart engines to clear alarm.

Note -- Avoid higher engine speeds as it causes higher engine temperature, possible damage, and higher fuel consumption.

Docking

During docking, have your crew make ready the lines and fenders and give clear instructions on how you will be docking. Often times 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.

Rock TRIM TAB switches to the ‘bow up’ position (8 to 10 seconds) to make slow-speed backing and turning easier. While moving slowly to the dock or mooring location, center the WHEEL (e.g. rudder straight) and use only the THROTTLES to maneuver the boat.

The Zeus pod drive joystick takes the place of bow thrusters and can maneuver the boat well with a little practice. Spend some time in open water with no obstacles getting used to the joystick before attempting to use it in docking. Throttle levers must be in NEUTRAL to use joystick.

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. Ensure each GEARSHIFT is in the 'neutral' position. Turn off engines by pressing the START/STOP buttons. Once the engines are off, turn the keys off at the electrical panel.

Canvas

There is an extendable canvas awning that will shade the cockpit. To extend it, unzip the canvas covering and press the UP button on the lower left at the starboard salon door. Retract awning when under way.

Fueling

OPEN FILLER CAPS located on the transom with a DECK FITTING KEY which is kept in the starboard salon cupboard drawer.

MAKE SURE YOU HAVE THE RIGHT FUEL! DIESEL! DIESEL! DIESEL! MAKE SURE IT IS GOING INTO THE RIGHT DECK FILL! DOUBLE-CHECK!

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 engine hour indicator. Also periodically have someone turn on the key to watch the fuel gauge.

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 be prepared to catch spilled fuel. Spillage may result in a nasty fine from law enforcement.

The fuel tanks are connected and will fill sequentially from a single fuel inlet. Pay attention to the fuel gauges.

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.*

BOAT ELECTRICAL

110-Volt AC/DC Panel

The electrical system is divided into two distribution systems: 110-volt AC and 12-volt DC.

Battery Switches

The systems are controlled from the AC ELECTRICAL PANEL located across from the galley. The DC AUXILIARY PANEL is located below the AC panel, and the BATTERY SWITCHES are found on the left of the DC panel. When not connected to shore power, batteries are providing all power. Therefore, monitor the use of onboard electricity carefully with your volt meter located above the battery switches, and turn off electrical devices that are not needed.



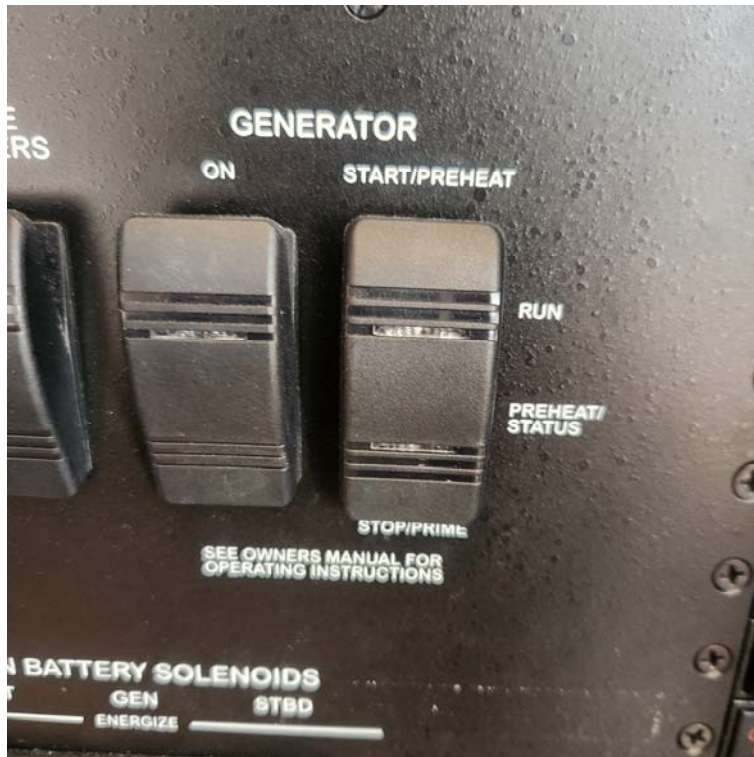
Shore Power

SHORE POWER supports all AC equipment and receptacles on board, as well as the battery chargers. To connect to shore power, extend the 50-amp POWER CORD from the transom of the boat and then into the dock receptacle. There is a remote control to extend and retract the power cord. If necessary, add a CORD ADAPTER located in the transom locker. Turn the dock power on. Cords coming off the bow can be wrapped loosely around the bow line.

At the ELECTRICAL PANEL, flip the SHORE CIRCUIT BREAKER on. Check for reverse polarity. Then turn on appropriate breakers for battery charger, refrigeration, water heater, and air conditioning. Watch your volt meter for load. If the load exceeds voltage, you will pop your breaker. If this occurs, wait to turn on one of your systems (i.e., water heater) until your use of volts drop.



If you are at a dock with only 30amp shore power, use the Y-adapter in the transom locker to connect. If your outlets fail to work, check your GFIs to make sure that they have not been tripped.



Generator

To start your GENERATOR, first check that your generator's fluids are topped off and the raw water intake is open. The generator controls are located at the electrical panel. First pre-heat the generator for about 20 seconds. Then while still pre-heating turn the switch to start. Hold the switch in that position while the generator catches. (about 5-10 seconds). Make sure water and exhaust is exiting at the stern.

After generator is running, turn your AC distribution switch to generator (or ship). Then turn on AC systems as you would on shore power one system at a time.

To turn the generator off, first take off the load by turning off AC breakers. Then turn off main AC distribution switch. Lastly shut down the generator by switching generator switch to "off" until it dies.

House Battery (12-Volt) System

The battery banks support 12v power. The batteries themselves are located on the starboard side in the forward engine room.

The BATTERY SWITCHES are located at the electrical panel. Normally, leave the ENGINE/ GENERATOR and HOUSE SWITCHES in the 'ON' position. *Note -- Do not change the position of the switches while the engines are running or the alternator diodes will be damaged. Change positions with the engines off.*

Your 12-volt panel shows all the systems supported by your batteries. Primarily you will be turning on the breakers for your lights, water pressure, electronics, television, etc. Bilge pumps should always be left on.

There is another 12-volt DC panel forward in the engine room. Normally you should not need to do anything here, but if you are not getting power and the main panel breakers are on, check downstairs.



House Battery Bank & Switch

The HOUSE BATTERY BANK provides power for all DC systems, except the engines and automatic bilge pumps. When disconnected from shore power, all 12-volt devices drain the house battery. Use devices as needed.

When a battery bank is being charged, the voltage will read from about 13.1 volts to 14.4 volts depending upon state-of-charge of the battery bank. When the battery bank is at rest, (that is, not being charged), the voltmeter can give a rough indication of the state-of-charge of the battery bank.

All batteries are charged by the engine ALTERNATORS while underway. The engine/house batteries are charged by the BATTERY CHARGER when connected to shore power. Ensure the Battery Charger circuit breaker at the electrical panel are ON. The GENERATOR will also charge the batteries.

Voltage (Wet Cell Battery)	Battery State
12.65 volts	100%
12.47 volts	75%
12.25 volts	50%
11.95 volts	25%
11.70 volts	0%

Battery Parallel Switch

Each ENGINE BATTERY is connected to its corresponding engine. However, should one engine battery be insufficiently charged to start its engine, the other engine battery may be momentarily connected to provide a boost. Press the BATTERY PARALLEL SWITCH located to the right of the steering wheel. Turn off after the engines start up.

SANITATION SYSTEM

Marine Toilet

It is important that every member of the crew be informed on 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 being flushed.

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.

The toilets are Vacuflush and can be used by lifting the handle with your foot to fill the bowl with water. When you are done, push down on the handle with your foot and remove your foot sharply. The vacuum pump will cycle in the engine room and should stop within a minute.



Holding Tank

The sanitation HOLDING TANK holds approximately 60 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 indescribable catastrophe and an EXPENSIVE FIX to you. Empty the tank EVERY OTHER DAY to avoid this problem.

The HOLDING TANK is located in the engine room. Some may be subject to a visual check with a flashlight or the “watermelon” test by thumping it. There is a holding tank gauge at the electrical panel but do not rely upon this as they often get clogged. The breakers for the toilets must be on for the holding tank gauge to work.

The holding tank is emptied in one of two ways:

#1 At the Marine Pump-Out Station, remove the WASTE CAP located at the port transom. 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 lever on handle and turn off pump. Remove from deck fitting.

If there is a fresh water hose on the dock, rinse the tank by adding 2 minutes of water into tank. Then repump to leave the tank rinsed for the next charter. This also eliminates head odors.

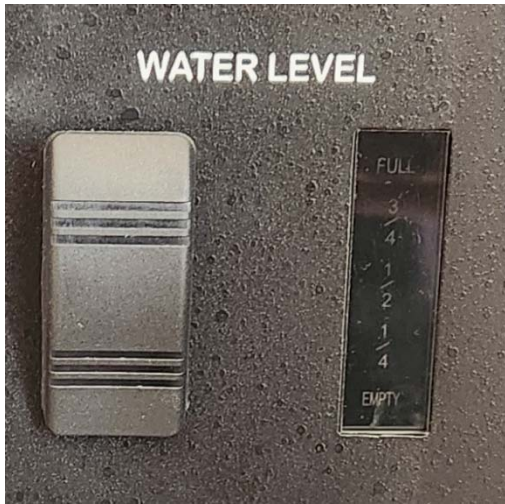
#2 The tank's contents can be discharged with the MACERATOR only in Canadian waters.

To operate the macerator, open the thru hull to port of the port engine behind the two head pumps. Turn on the discharge pump breaker at the electrical panel. Listen to the macerator's sound. When the pitch becomes higher, the tank is empty. Discharge may be observed on the port side. It should only take a few minutes to empty the tank. **NOTE: Discharge pump will NOT activate if thru-hull is closed.**



WATER SYSTEM

Fresh Water Tank(s)



The FRESH WATER TANK holds 110 gallons. Observe the water level by pressing the switch at the electrical panel. Waste water from the sinks and showers drains overboard through various thru-hulls usually located under the sinks.

To refill the tank, remove the WATER CAP located at the port bow. Avoid flushing debris from the deck into the tank opening. DO NOT fill water and diesel at the same time!

Fresh Water Pump

The WATER PRESSURE PUMP is located in the compartment at the base of the stairs. Activate pump at the DC panel by turning on the breaker. If the water pump continues to run, you are either out of water or might have an air lock and need to bleed the system by opening up a faucet. If you run out of water SHUT OFF YOUR HOT WATER HEATER on the AC panel. Serious damage can occur!

Hot Water Tank

The HOT WATER HEATER has an 11 gallon capacity tank and is available when connected to shore power or via a heat exchanger underway. To use on shore power, flip on the water heater circuit breaker on the AC electrical panel. Do not use the water heater if the water tank level is very low. The water heater is located in the compartment at the base of the stairs.

Shower

Take only very short “boat” showers (turning off water between soaping up and rinsing). To keep shower tidy wipe down the shower stall and floor. Check for accumulation of hair in the shower and sink drains. An additional FRESH WATER SHOWER is located in the cockpit on the starboard side. Ensure that the faucets and nozzle are completely off after use.

A pressured RAW WATER WASHDOWN is available from a hose spigot in the starboard bow locker.

GALLEY

Stove/oven

The stove is electric. Turn on the STOVE breaker on the AC panel. The microwave is also a convection oven and can be used as an oven as well as a microwave. Shore power or generator power must be on to use the stove and microwave.



Refrigerator / Ice Maker

The REFRIGERATOR is dual voltage (12-volt and 110-volt power). It will automatically use 110-volt power when the shore power is connected; otherwise, it will operate on 12-volt power. Monitor the use of the refrigerator when the engines are not charging the 12-volt battery system. The local power switch is located below the front door. It can be turned down to the lowest position when anchored or moored or turned off when turning in for the night.

There is an ice maker in the cockpit and a freezer in the salon. At anchor, you may wish to turn these off to conserve power.

HEATING & AIR CONDITIONING SYSTEMS

Built-in Cabin Heat (AC)

There are several zones with air conditioning. Turn on the AC PUMP RELAY breaker first. Then turn on the zones you wish to heat or cool. Set your desired temperature at the control panels in their zones. You must run the generator or use shore power for the air conditioning.

Skylight

There is a switch to the left of the steering wheel that will open and close the pneumatic skylight. Release the latch holding it closed and press the switch to open. Press the switch the other direction to close it. If the skylight does not respond, check the pressure gauge above the helm seat on the starboard side. It should read near 60psi and the compressor may turn on periodically to keep the pressure up.

ELECTRONICS

All electronic manuals are located in the black bag in the starboard side forward on the galley level.

VHF Radio

The VHF radio is located to the left of the steering wheel. Turn on by pressing the button at the top of the handset. Always monitor channel 16 while underway.

Depth Sounder

Both of the Raymarine displays as well as the Mercury engine display will show your current depth. On the Raymarine, set the scale, shallow alarm, and deep alarm as desired. The sounder should provide reliable readings in shallow waters. If in doubt, switch it off, then turn it back on to reset sounder. If your reading is blinking, it is a FALSE reading. False readings can occur in depths of more than 200 feet or in areas of strong currents or tides.

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

Radar

To operate the Raymarine radar, go to the home screen of the plotter and select Radar. Select TRANSMIT to view radar. To turn off, press the gears at the top right of the screen and deselect TRANSMIT.

***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.*

AIS

Carpe Diem does not have AIS.

ENTERTAINMENT

AM/FM Stereo Radio

The Rockford Fosgate audio unit is located at the electrical panel. There is a remote panel at the helm as well. It has multiple different input options. There are speakers downstairs, in the salon, in the cockpit and on the transom. The volume control at the cockpit door controls the volume to the external speakers. To connect to Bluetooth, connect to the unit on your phone, then select Bluetooth on the control panel.



TV/VCR

A TV/DVD player is in the upstairs and downstairs salons as well as in both berths. There are Roku and Amazon Fire Sticks which connect to the boat's Starlink network. The upstairs and downstairs salon TVs are smart TVs and can also connect to Starlink.

Starlink

Carpe Diem is equipped with Starlink. The network name is **Carpe Diem** and the password is **CarpeDiem!** The data plan is not unlimited and watching too much TV will max out the data plan in a hurry.

ANCHORING

The primary WORKING ANCHOR is a plow and is attached to 300ft chain with 10ft of rode passed through the deck from the ANCHOR LOCKER. The locker can be accessed through the hatches at the bow. Release the anchor snubber prior to use.

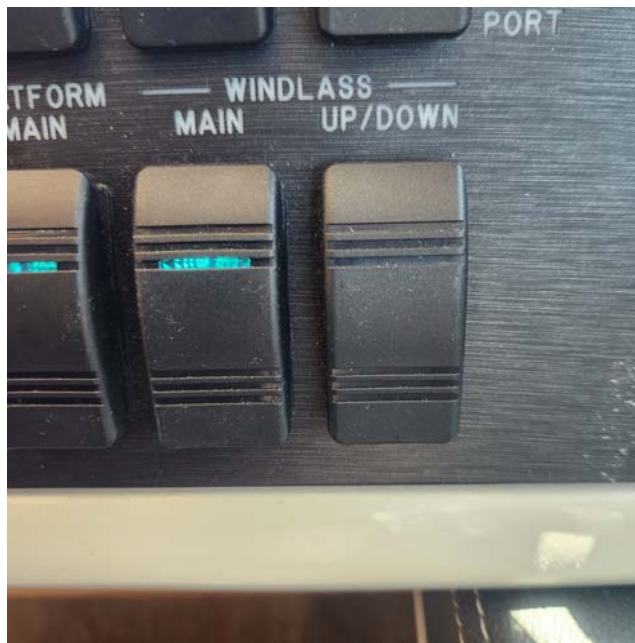
Windlass

The WINDLASS POWER SWITCH is located to the right of the wheel. At the bow, tap gently on the 'down' foot control to lower the anchor. If necessary, guide the anchor over the anchor roller to prevent binding on the pulpit.

Anchor Chain Color Coding

Let out sufficient ANCHOR RODE (chain) before setting the anchor. Colored markers are placed on the chain to indicate depth; the key to the colors is in the gray manual. 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.

Before raising the anchor, ALWAYS start the engines as it uses large amounts of power. Turn 'on' the WINDLASS SWITCH and as the boat moves toward the anchor, press the 'up' control to take up slack line. Give the windlass short rests as you are pulling it up. Place yourself in position to guide the anchor onto the roller. As the anchor rises, be careful not to allow it to swing against the hull. Wash down the anchor and chain as it goes into the locker.



Reconnect the keeper between the anchor and windlass. Close the plastic covers on the FOOT PEDAL CONTROLS. Turn 'off' the WINDLASS POWER SWITCH.

Mooring Cans

Carpe Diem is too large for mooring cans. Plan to anchor.

BARBECUE

There is an electric BBQ in the cockpit. Turn on the breaker at the AC panel. Shore power or generator must be on to use the BBQ.

DINGHY & OUTBOARD MOTOR

Your Walker Bay DINGHY with a 40hp Yamaha engine is stored on the swim step. It has a capacity of about 1300 pounds (motor, equipment, and 5 people).

To deploy the dinghy, use the dinghy platform remote found in the starboard salon drawer. There is also a control for it in the starboard transom locker, however the door cannot be opened fully with the dinghy in place. Hold the DOWN button until the platform is submerged and the dinghy floats free. **DO NOT FORGET TO GRAB THE BOW LINE BEFORE SUBMERGING THE PLATFORM! DO NOT FORGET TO PUT THE DINGHY PLUG IN!**

To raise the platform, position the dinghy on its cradle, then press the UP button.

When towing your dinghy, always keep it tight to the boat any time that you slow down or stop, assign one of your crew members as the “dinghy” person to be responsible for taking up slack. You don’t want to wrap a propeller.

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.

CRABBING & FISHING

Always check the fishing and crabbing requirements before you leave on your cruise. You will need a license. Many areas are CLOSED to crabbing and fishing on certain months.

CRAB AWAY FROM THE BOAT! Lines can get wrapped around props. Fish-flavored cat food with the pop-up ringed lids work the best for a nice neat way to bait the ring. Measure the crabs using the CRAB MEASURING GAUGE normally located in the drawer with the deck fitting key and dinghy remotes. Keep the male crabs of proper size (usually 6 ¼ inches across the carapace). Boil crabs about 12 minutes to cook.

After using, wash equipment thoroughly with fresh water (available from the cockpit shower faucet).

Note -- Please do not store wet rings and gear inside the boat.

OTHER: Safety & Bilge Pumps

SAFETY should be paramount in your daily cruising. A MAN OVERBOARD DRILL should be discussed and perhaps even practiced with a life jacket. Remember your lifejackets are stowed under the cockpit settee. A few should always be out and ready. Your flares and safety equipment are located in the counter compartment behind the helm seat.

Carpe Diem is equipped with AUTOMATIC BILGE PUMPS. The master switch is located on the electrical panel. Normally, the switch will be left in the AUTO position. You may occasionally hear the pump operate due to condensation accumulating in the bilge.

The ENGINE SPARES BOX is stowed in the engine room. This includes oil filter, raw water impeller, pump parts, injectors, and other small parts.

THRU-HULL LOCATIONS

In the engine room there are three thru-hulls. The macerator discharge is on the port side aft engine room. The Air conditioning water intake is in the forward center of the engine room. The generator water intake is in the center of the engine room.

SEA STRAINERS

There are four sea strainers in the engine room. The two engine strainers and the generator strainer are located aft between the two engines. The Air Conditioning strainer is between the two engines, forward of the engine room.