

# OPERATION MANUAL

## *Elaine J*

Welcome Aboard!

We are happy that you have chosen Ship Harbor Yacht Charters and the vessel Elaine J for your vacation. We hope you enjoy your cruising experience in the lovely islands of the Pacific Northwest.

The Elaine J is a 38 foot Wauquiez, designed by Ted Hood. Henri Wauquiez intended this design to be a dependable blue water cruiser, capable of taking her crew anywhere in the world, comfortably and safely. In my pre-purchase research, I was impressed by the respect and admiration these boats receive from the sailing community. As such, I felt compelled to re-name her after my mother, a woman I have come to respect and admire all the more, the older I get.

This manual will help you become more familiar with your boat. If you have any further questions, about the boat or your itinerary, please do not hesitate to ask the SHYC staff.

Remember our vessels are non-smoking boats. But please feel free to smoke out on deck.

Bon Voyage!

The Ship Harbor Yacht Charters Staff

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# BOAT OPERATION

## Engine Inspection

Remember your "WOBBBS" every morning. (Water, Coolant), Oil, Bilges (Inspect and Pump-out), Belts, and Sea Strainer. Check the level of COOLANT in the expansion tank. Check the level of your engine oil with the dipstick. Your dipstick is located on top of the engine, slightly favoring the starboard side. Look at the etch mark on the dipstick that indicates proper levels. **DO NOT OVERFILL!** Fill only if oil level is below the ½ mark. Check the general condition of the hoses and belts. The Elaine J has a "V" drive, so engine looks like it is mounted "backwards". The belts are located on the stern of the engine and you have to reach over and feel for proper tension etc.

Ensure the RAW WATER THRU-HULL is OPEN! (Lever in-line with valve). It is located on the front of the engine, port side, and is labeled. Check the sea strainer for debris. If necessary, close the thru-hull, open the strainer lid, clean out debris, and reassemble. **REOPEN the Thru-hull!**

## Start Up

Boat name has a 47 Hp Perkins diesel engine with a 3 bladed feathering prop. There is an ignition, throttle and transmission control in the cockpit. The vessel cruises at 1800 rpms to a speed of 6 knots. Running your engine much above that will burn a lot more diesel at the gain of very little boat speed.

The boat has a definite prop walk to port in reverse, with not too much noticeable effect in forward. When in reverse, be careful to keep a firm grip on the wheel. Use only low rpms in reverse.

To start engine, disconnect the shore power cord and set the "Engine Start" battery selector switch to the "On" position. It's the silver switch located by the companionway steps, on the starboard bulkhead, just forward of the engine room hatch. Place transmission in the neutral (port side lever straight up), and the throttle (starboard side lever) is at idle, **FULLY FORWARD**, the engine is in "backwards" so the cable is reversed. If the engine is cold, first preheat it by turning key to the "heat" position for about 10 seconds. Turn the key to the "Start" position and listen for the engine to start and run on its own, just like your car. Your oil and temperature alarm will sound. As soon as it catches, release the key and it will rotate to the "Run" position. Immediately, check the transom for water and exhaust as an indication that your thru-hull is open and water is keeping your engine cool. Do not hold the start button for more than 15 seconds at a time. If the engine does not catch the first time, wait about 15 seconds before trying again. After the engine starts, warm it up for about 5 minutes at about 1000 rpms. The shut-down button is located in the same panel as the ignition switch. Press and hold the button until you hear the engine die, only then turn the key to the off position.

**NEVER TURN OFF THE KEY WHILE ENGINE IS RUNNING**

As the engine warms up, observe your gauge readings. Oil pressure reads around 40-50 psi, and should make pressure immediately after engine start-up. Water temperature should gradually climb to 170-180 degrees.

*Note: If water temp. is high or oil pressure low, **shut the engine down** and look for the problem. Was there a lack of water exiting with exhaust? Are thru-hulls open and debris cleared from sea-strainer? If problem keeps occurring, call SHYC Service.*

## Shut Down

Before shutting down, let engine idle for about 5 minutes to cool. Ensure the gearshift is in the neutral position and the throttle is in idle. Turn off the engines by pushing the shut-down button on the control panel. After the engines stop, turn the key counter-clockwise to "Stop"

## Cruising

Slowly come up to cruising speed of 1800-2000 rpms where you will cruise at approx. 6 knots, using only 1 gallon of diesel/hour. Using excessive rpms will only give you a ½ knot of speed and will only damage the engine. Speed will vary depending on weight, load, and weather conditions

## Getting Underway

Disconnect the shore power cord (see AC Power below). Close portholes, windows, and hatches. Turn on VHF and electronics. Assign crewmembers to their tasks. Put one crew member in charge of the dinghy, if it is under tow (the "dingiest" member of course!). It needs to be kept on a tight leash when in the marina. Have another crewmember on the bow as a lookout. Once outside marina, have crew members bring in fenders and put lines away.

## Docking

During docking, give clear instructions to the crew on what you will expect of them i.e. with lines and fenders. Always come into the dock slowly allowing for any wind or tide. If you have a choice, dock on the port side because as you put the transmission in reverse, she will pull to port sucking you in closer to the dock.

Have the bow, stern, and spring lines ready. If you are short on crew, lead the lines amidships (where the boat is fattest) where your crew member can easily step off with one of the lines, secure it, and quickly grab the next one.

As you are approaching the dock, have your crew call out distances to the captain (i.e. 20 feet, 10 feet, 3 feet etc.). This will help with a successful landing.

If you find you are too far from the dock, **DO NOT have your crew jump!** Back out and do it again. Disaster will follow if someone falls in the water.

## Fueling Up

You will need to fill up upon completion of your charter. Your fuel tank holds 40 gallons. You should have a rough idea of the number of gallons you will need to add to your tank. (i.e. if you use 1 gal per hour and have run 18 hours = 18 gal.)

Open the fuel filler cap is located on the transom. It's a threaded cap that you can remove by hand. **The keeper chain is not attached!! Keep the cap in your hand until you can lay it down in a safe location.**

**MAKE SURE YOU HAVE DIESEL!** Make sure it is going into the right deck fill! DOUBLE-CHECK! Before pumping, have your oil/fuel sorb ready(found in a tote in an aft locker) to soak up any spilled fuel. Do not add water at the same time.

Put the **Diesel** nozzle into the deck fitting and pump slowly listening to the sound of the flow. Pumping too fast may not allow excess air to escape, which will lead to spillage out the vent. As the tank fills, the sound will rise in pitch or gurgle. Pay attention to the vent that it does not spill fuel into the water. The fuel tank vent is located in a small compartment, amidships on the starboard side of the cockpit. If you open the little hatch, you can hear the level rising in the tank. Lay a sheet of oil absorb in the compartment to catch any spillage. Top off carefully, catching any spillage with your sorb.

Check your gauges. Replace the deck fill caps and clean up any spatter and wash hands thoroughly.

## **BOAT ELECTRICAL**

The electrical system is divided into two distribution systems: 110 volt or AC and 12 volt or DC. The DC system is distributed from the electrical panel located above the nav station. The AC system is distributed through a smaller panel on the bulkhead, port side of the companionway steps. The start battery switch is located starboard of the companionway steps. Elaine J has two deep cycle house batteries that provide power for domestic needs. A third battery is for starting the engine only. It is isolated from the house batteries by the silver switch, starboard of the companionway steps. A smart charging system monitors all the batteries and charges them all while the engine is running. The voltage regulator located in the compartment at the top of the companionway steps.

When not connected to shore power your house batteries provide your electrical power. Therefore, the use of onboard electricity needs to be monitored very carefully. **Turn off electrical devices** when they are not being used (lights, instruments, etc.)

### **110 Volt or AC (Alternating Current)**

Shore Power supports all AC equipment and receptacles on board as well as the battery charger. Check your power rating/plug size of the dock receptacle (i.e. 30amp, 20 amp etc.) If necessary, add an adaptor located in the tool cabinet under the starboard, aft settee.

To connect to shore power, ensure the dockside breaker is open (off) and connect the power cord to the boat. The receptacle is located on the starboard stern. Connect the power cord to the dock receptacle, and close the breaker (power on). The idea is to avoid making either connection with power on the cord. That way there is no danger if the cord falls in the water. Secure the cord around the shore power electrical receptacle and off the bow (i.e. wrap around bowline a few times). The same is true when leaving. Turn the shoreline breaker off before working with either end connector.

On the boat, ensure the shore power circuit breaker is on. It's the breaker marked "Main AC ON" and is located on the "AC Load Center" panel, port side of the companionway steps. Turn on appropriate breakers marked "outlets", "water heater", and/or "battery charger". Watch your voltmeter for load. If the load exceeds the available voltage, it will pop the breaker. If this occurs, wait to turn on one of your systems (i.e. water heater) until the use of power decreases.

## Inverter

The inverter provides AC power to the 110 receptacle plugs when the boat is **disconnected from shore power**. The inverter does not supply power to the water heater, it is available with shore power only. The inverter is located under the nav station and is powered by the two house batteries, one located under the nav station and, the other located under the starboard side, forward settee. The amount of DC power is **limited** to the capacity of these batteries so **use it very sparingly!!!** This means use of the toaster, hair dryer, microwave, coffee maker etc. must be limited!

When **connected to shore power**, the inverter acts as a battery charger for the 12-volt house batteries. There is a red LED located at the lower right of the instrument panel. It flashes fast (i.e. two times per second) when the system is on shore power, and slow (i.e. once per second) while drawing on the house batteries. It may take several minutes for the inverter to settle out when first connecting to shore power. However, the LED should start flashing fast within 5 minutes or so. Should you detect the inverter failing to charge the house batteries, check the circuit breaker on the AC panel (marked "Main AC On" and the "Battery Charger" breaker located on the same panel.

## House 12-volt System

Two battery banks support your 12 volt system: The single engine start battery located just aft of the engine and, the 2 House batteries located under the nav station and under the starboard settee.

To start the engine you must move the starter battery switch to "on", the alternator then charges **both battery banks**, the starter battery, and the house batteries. If you forget to turn the starter battery switch "off" when you shut the engine down, the starter battery is still seen as part of the circuit and "becomes" a house battery, and will be drawn down with the real house batteries.

**When anchored or moored, turn the start battery off by moving the silver companionway switch to "off".**

Your 12 volt panel shows all the systems supported by your batteries. Primarily you will be turning on these breakers for lights, water pressure, electronics, etc. Bilge pumps will always be left on. Some breakers such as propane and, engine room blower should be turned off after every use.

When disconnected from shore power, the 12-volt systems will drain the house batteries, especially when at anchor. **Monitor your batteries very carefully.** The DC voltmeter on the DC panel can be switched between your battery banks to measure battery voltage. Typically the bank should read from about 13.0 to 14.5 volts when being charged. While at rest, your voltage will drop as indicated in the figures below.

All your batteries are charged while underway by the alternator. The engine and house batteries are charged by the battery charger/inverter while connected to shore power.

Voltage	Battery State of Charge
12.65 volts	100%
12.47 volts	75 %
12.25 volts	50 %
11.95 volts	25 %
11.70 volts	0 %

# SANITATION SYSTEM

## Marine Toilet (Jabsco)

It is imperative that every member of the crew be informed on the proper use of a marine head. The valves, openings, and pumps are small and will clog easily. If the head gets clogged, **it is your responsibility!** Always **pump the head for small children** so you can be certain of what is being flushed. *Note: Never put in paper towels, napkins, sanitary products, household T.P., or food into marine heads. **Use only marine T.P. provided by SHYC.***

To use toilet, move selector switch to the "wet bowl" position. Pump the handle 3-5 times to wet the bowl. After using head, pump to remove waste from bowl (approx. 20 times). Then return selector back to "dry bowl" position and pump for a few times until bowl is dry.

Your toilet raw water intake thru hull is located under the forward head sink if you should need to shut off the water to the toilet.

Should the toilet squeak or be a bit sticky to pump, lubricate with a couple of squirts of dish soap or salad oil. Put in bowl and pump 2-3 times to get it to pump and leave overnight. Again, leave in the "dry bowl" position.

## Holding Tanks

Your sanitation holding tanks holds 35 gallons. Be aware of the rate of waste production (about 1 gallon/flush). If you overfill your tank, you will break a hose, clog a vent, or burst the tank **which is an indescribable catastrophe!** And a very **expensive fix for you.** Empty the tank at least every other day to avoid any problems.

The holding tank is located in the forward stateroom, port side. You can do a visual check with a flashlight or the "watermelon test" by thumping it. There is a tank watch warning light located in the forward head, but do not rely on this as they are subject to being inaccurate.

The holding tank is emptied in one of two ways:

#1 At the pump-out station, remove the deck waste cap located on the starboard side, near the anchor windlass. Insert the pump-out nozzle into the waste opening. Double-check that you have the right deck opening! Turn on the pump on the dock and open the valve on the handle of the hose. When pumping is finished, close lever on handle and turn off pump. Remove from deck fill.

If there is a fresh water hose on the dock, rinse the tank by adding water for 1-2 minutes. Then re-pump to leave the tank rinsed and clean for the benefit of the next charterer. This also eliminates any head odors.

#2 The tank's contents can also be discharged at sea by using the macerator pump. To operate the macerator, open thru-hull located in the V-berth, depress macerator switch (found in the forward head, on the tank level-watch panel), and pump until pitch becomes higher indicating an empty tank. This should take about 2 minutes. Discharge can be seen on the port side of the boat. *Note: Overboard discharge is only allowed in Canadian waters.*

*It is illegal to discharge overboard within U.S. waters.*

## **Y-Valve**

The Y valve directs the flow of waste from the head, into the holding tank, or directly overboard. The Y Valve is located under the sink in the forward head. To flush directly overboard, move the handle in line with the overboard hose. Usually, because of Coast Guard regulations the Y- Valve will be locked in the holding tank position. The key is in the nav station.

## **WATER SYSTEM**

### **Fresh Water Tank/ Pump/ Hot Water Heater**

Two fresh water tank(s) holds 120 gallons and is located under the settee cushions on both sides of the cabin. Observe the water level by watching the gauges on the breaker panel above the navigation table. Waste water from the sinks and showers drains overboard through various thru-hulls usually located under the sinks. To fill the tank, remove the deck water fill cap located port and starboard. While filling the tank, avoiding flushing debris into the tank. **The potable water overflow is piped to the forward head sink. MAKE SURE the thru-hull for the sink is open to allow overflow to drain overboard.** **Do not fill water and diesel at the same time!**

The water pressure pump is located under the sink in the galley. Activate the pump by turning on the breaker at the DC panel. If, when in use, the pump continues to run, you are either out of water or have an air lock which can be corrected by opening a faucet. There is a pressure gauge under the galley sink, it should read 40-50 psi when the system is at full pressure. If you run out of water, shut off pump and **turn off hot water heater** on AC panel. **You can cause serious damage** to the heating element.

The hot water heater has a 6 gallon capacity. It is powered by a breaker on the auxiliary AC panel (port side of the companionway steps) and, a second set of breakers located in the engine room. There is a white switch box with three auxiliary breakers on the starboard side of engine room, just inside the hatch. The first two red buttons must be pushed in. Normally, you shouldn't have to bother with these two switches but, if the hot water heater isn't working, these would be something to check. The heater draws a lot of power so it only functions while the boat is connected to shore power. If you are in an area without shore power, you'll have to run the engine to get hot water, (see below). Do not use the water heater if the water level is low. The water heater is located under the mattress in aft stateroom.

To get hot water when no shore power is available:

- Open the two ball valves on the top of the engine, look for the black supply/return lines.
- If the engine is cold, it must be idled up enough to open the engine thermostat, approximately 1500 rpm\180 degrees. Once the engine is hot, you can idle her back. If you have been motoring a while, you should be good to go.
- Under the mattress in the aft stateroom, there are supply/return lines for a cabin heater (look for the labels). If the handles on those valves are up, hot water is circulating forward as well as through the hot water heater. It is more efficient to block those valves in (handles down), and circulate through the hot water heater only.
- If you need more cabin heat, move those valve handles up. A blower motor is controlled by a two way rocker switch located on the aft, starboard settee.

## Shower

Before taking a shower, make sure the water pressure and breaker is on. The shower pump switch is located in the head, high and to port, looking to aft. Take short "boat" showers by turning off the water between soaping and rinsing. Shower water from the shower sump is discharged overboard via the head sink thru-hull. Carefully hang the shower curtain in place and wipe down the shower stall and floor when finished to keep shower tidy, and protect the woodwork as much as possible. Leave the curtain open and hanging as long as possible so it dries, and open the head hatch for fresh air circulation while showering. Pick up any accumulation of hair in the drains as it clogs the hoses. Ensure that the faucets are tightly turned off after each shower to save water.

## GALLEY

### Propane

The boat is equipped with a pressurized propane system for cooking. The propane tank is located forward, in the anchor chain locker. Open the tank valve then turn on the propane solenoid switch in the galley portside of the companionway steps. When lighting the first time, allow a few seconds for the gas to travel from the tank to the stove. Light the stove top by pushing, turning and holding the knob for the desired burner, and simultaneously, push the igniter button. Hold for a few seconds while the thermocouple warms up. Pick the burner you from among the knobs on the left, the igniter is the knob on the right

To ensure safety, turn off the propane solenoid switch, the propane at the bottle, and the DC breaker when finished.

### Refrigerator

The refrigerator operates on 12 volt. Carefully monitor the use of the refrigerator when the engine is not charging the 12-volt system as when you are at anchor. SHYC will supplement you with a block of ice. **Keep the fridge off at night!** Use a cooler when possible for all your drinks to keep the refrigerator door closed as much as possible.

## HEAT

The Webasco diesel forced-air heater is located in the portside aft locker. It provides heat much like your household furnace. Throw the toggle switch located in the aft locker and set the temperature at the thermostat near the nav station to the desired temperature. Check the exhaust port on the port stern to make certain that there are no obstructions, such as a fender or a dock line. Let the furnace run at least 15 minutes before turning it off. Turn the furnace off back at the thermostat.

Electric heaters are also available when connected to shore power. Make sure the appropriate AC breaker is on.

Cabin heat is also available through a "red Dot" heat system when the engine is running. There is a rocker switch located on the starboard, aft settee that starts the

blower. It circulates hot air from a heat exchanger as long as the engine is running. See the section on hot water above, for more details

## **ELECTRONICS**

There is a Standard VHF radio located in the Nav Station. Make sure the breaker is on at the DC Panel. Always monitor Channel 16 while underway.

There is an Autopilot, depth sounder, Garmin GPS and Raytheon radar located near the companionway entrance. To activate, ensure that the appropriate DC breakers are on. They are located on the DC breaker panel above the nav station. The sounder is reliable in waters less than 200 feet and at slower speeds. If your reading is blinking, it might be a false reading due to excessive depths or strong currents! Watch your depth carefully in cruising unknown waters that might have rocks or obstacles.

There is a TV located amidships, starboard side and a blue-ray player and radio in the cabinet just aft of there. The radio breaker is on the DC panel and the TV breaker is on the AC panel, port side of the companionway steps.

## **ANCHORING**

Your primary working anchor, a 35 pound Bruce, is attached to 250 foot of 5/16" chain rode.

Turn the anchor windlass on at the AC panel AND the rocker switch on the starboard side settee. Proceed to raise and lower the anchor as needed by using the foot switches near the windlass. Be sure to always have your engines running.

See page 11 in the White Binder for further anchoring instructions.

Turn the breaker and switch off when finished.

## **SAILS AND RIGGING**

There is a 130% Jib on a roller-furler. The furling line runs on the starboard side to the cockpit.

To unfurl the headsail:

- Un-cleat the furling line
- Wrap the sheet around the appropriate winch
- Pull the sheet aft while applying some tension to the furling line
- Cleat when it is fully out or when to point of appropriate reef

To furl the jib, apply slight tension on the jib sheet while pulling in the furling line until there are 2-3 wraps of the sheet around sail. Jib sheets are led back to the cockpit to two winches, and the furling line is cleated off, exerting slight tension against the sheets. This prevents the wind from unfurling the jib. Adjust fairleads forward in heavy air, aft in light wind.

The Mainsail winch is located on the mast. The main halyard is blue. There is an extra (red) halyard because she was originally cutter rigged.

The vang is a traditional block and tackle setup.

The main winches are Lewmar three speed winches. Crank one way for fast, the other for slow, push the button and crank for real slow. It is doubtful you would ever need the lowest speed.

Also, all the winches are non-self-tailing, (old school). It's easy enough to tail with one hand and crank with the other, or have another crew member tail the sheet for you. If the sheet tries to over-run itself, ease off on the tail, and it will usually self-correct.

Jib sheets, and traveler are all lead back to the cockpit. You'll have to go to the mast to reef. There is no spinnaker on board. Please use the topping lift located at the mast to raise the boom to its usual position after sailing.

Troubleshooting:

*Main resists being raised:* Check all lines. All reefing lines should be loose as well as the boom vang. Make sure a slide is not cocked in track on the mainmast. If so, lower the sail and try again.

*Furling line gets stuck:* Check the tension applied to the sheets. Try letting the sail out and repeating the process. Be sure you are headed into the wind. You also might have an override inside the furling drum.

*Unable to point with reef:* Maybe the reef line is not snugged in sufficiently. Be sure lines are snug before raising main halyard.

*Other Problems:* That's what being a sailor is all about! But isn't it nice when you kill that noisy engine and enjoy the sounds of the water.

## BARBEQUE

The Barbeque and mounting bracket are stored in a tote in the starboard aft locker. Mount it on the aft starboard rail.

Attach the propane bottle to the regulator and carefully light the unit. This Barbeque cooks fairly hot and fast so keep a good eye on your food. Store the barbeque back in **its tote/locker** when it has cooled. Please wipe it down with a rag or paper towel before storing. *Note: Propane bottles are not stocked by SHYC so you will need to purchase a bottle if one is not found on board during your check-out. Ensure that outboard gas or any other flammables are not near barbeque.*

## DINGHY AND OUTBOARD MOTOR

Your 4 man dingy is equipped with a 4 hp mercury four stroke engine. It has a capacity of 1100 pounds or about 4 people.

After the dinghy is in the water and readied to go (PFDs etc.), open the vent in the fuel tank and choke the engine once while starting. Make sure outboard is in neutral.

Please use extreme care in beaching your dinghy. Make sure the engine gets tilted up a safe distance from shore so the prop does not hit the bottom or shear the pin. Do not drag the boat on the beach. Please lift it up with your crew. Make sure it is secured as the tide comes in fast in these here parts.

When returning to the boat, leave your shore shoes in the cockpit and slip on your deck shoes or slippers to keep the boat neat and tidy.

## OTHER NOTES

Safety should be paramount to your daily cruising. A man overboard drill (person?) should be discussed and practiced with an unlucky PFD as the victim. (please rinse and dry afterward before stowing). Remember that your lifejackets are stowed in a locker in the aft cabin. A few should always be readily available. Flares and other safety equipment are located in the aft cabin locker as well.

Always have a sharp lookout posted for logs, deadheads, or other flotsam and jetsam. A log hitting your prop can ruin your vacation. As you are traveling, the debris does seem to gather along current lines. It is sometimes best to go around these areas and miss the "mine fields".

The Elaine J is equipped with two automatic bilge pumps, one under the engine and another in the galley bilge. Their switches are located in the engine room, just inside the hatch, on the bulkhead, left and right. And a breaker on the DC panel. The switches should normally be left in the "Auto" position can be switched for a minute or so to "manual" to pump the bilge. There is a bilge alarm hooked to a float switch in the galley bilge. It sounds a high pitched, constant tone from the control panel on deck. If you should hear it or, you continually hear the bilge pump running, **check your bilge!** You may have a serious problem!

An auxiliary hand-operated bilge pump is located aft of the wheel in the cockpit. The handle is a rod located in the small, deck level locker, starboard side, amidships. The pump is operated by inserting the handle in the pump slot and pumping back and forth. This is used in an emergency situation.

The engine spares are located under the mattress in the V-berth, port side. They include extra oil filters, impellers, head pump, etc. Extra oil and coolant is located in the starboard side aft locker.

Crabbing is fun but requires the correct license and season. Please be sure not to crab off the stern as the crab line can easily get tangled in your prop as you swing with wind or current. You certainly don't want to be the person who has to dive over and cut the line out of the propeller. It is best to use the dinghy to set your crab pot/ring away from the boat. A partially open can of cat food works well as any other bait and is less messy. Please clean up any seaweed or crab shells afterwards to keep the boat neat and tidy.