

Notes from the Owner of Vita Beata

Island Packet 440

Hello Sailors and New Friends!

We searched for the perfect boat to fulfill our dream of blue water sailing and feel fortunate to have found "Vita Beata" (Happy Life!). Not only is she a beautiful boat, but she is an Island Packet – a brand known for quality, comfort, safety, and excellent performance in all conditions.

Here are some features that we love about her:

- The five-foot draft of the full-keel makes her well suited for all conditions and hazards you may encounter while sailing the San Juan Islands and beyond. If you are unfamiliar with a full-keel boat, let San Juan Sailing know.
- In true Island Packet tradition, the 440 is cutter rigged with the staysail set on a self-tacking boom. Both headsails are on furlers. This configuration makes the sails more manageable, especially given that all sail controls lead to the cockpit.
- The two primary winches are electric, self-tailing winches for easy Genoa sail trim.
- The mainsail is on an in-mast furler, making deploying and furling the mainsail a breeze.
- Vita Beata has 250-gallon water and 160-gallon fuel capacity.
- Vita Beata has two comfortable, private cabins with two spacious in-cabin heads.
- Plenty of dry and refrigerated storage for anything you may want to bring onboard.
- The salon is very comfortable for gathering in living room style or around the extendable cabin table.
- The salon couch can extend to a double bed.
- The hydronic heating of water and living space adds to your comfort at dock or at anchor.
- For your comfort and ease of use, we have added companionway doors that allow easy access in/out and easy closure of the cabin in the evenings, and the doors are lockable too.
- Last year, we upgraded our chart plotting system to state of the art Garmin GPSmaps.
- This year we upgraded our bow thrusters adding additional power. Be aware they are a bit noisy in use and pretty powerful. Use the joy stick with light touch and short burst.



When planning for your time on Vita Beata, we strongly recommend you pack in duffle bag-like luggage, like Patagonia Black Hole duffle. Storing regular roller bags on the boat will be challenging and will risk scratching the beautiful woodwork in the boat interior.

We love our boat and know that you will too!

Carla and Mike

Mike's cell 208-661-2547

Carla's cell 509-998-0559

PLEASE NOTE: SMOKING OF ANY KIND IS NOT ALLOWED ON VITA BEATA. THANK YOU FOR YOUR UNDERSTANDING.

VERY IMPORTANT FOR TRAVELS TO THE GULF ISLANDS: THERE ARE NO-GO ZONES TO PROTECT THE WHALES. CHECK THE ONBOARD MAPS, THE CHART PLOTTER OR ASK SAN JUAN SAILING AND AVOID THESE AREAS. WITH AIS, THE CANADIAN COAST GUARD KNOWS WHERE YOU ARE. FINES FOR ENTERING THE NO-GO ZONES ARE IN THE MILLIONS, YES, MILLIONS! AS THE DRIVERS OF THE BOAT, YOU WILL BE HELD LIABLE. PLEASE READ APPENDIX B FOR MORE INFORMATION.

Table of Contents

1. Specifications and Vessel Information 3

2. What is unique about Vita Beata 4

3. Emergency/Safety Equipment..... 7

4. Anchors and Windlass 8

5. Barbecue..... 11

6. Batteries, Charging and Inverter 12

7. Berths and Bedding 14

8. Bilge Pumps 15

9. Bow Thruster 15

10. Dinghy and Outboard 16

11. Dodger and Bimini..... 19

12. Electrical 20

13. Electronics/Instruments 22

14. Engine 25

15. Entertainment Systems 31

16. Fuel 31

17. Heads and Holding Tanks 32

18. Heaters (Cabin)..... 34

19. Lighting 35

20. Refrigerator and Freezer 35

21. Sails and Rigging 366

22. Showers and Sumps 377

23. Stove, Oven and Microwave 377

24. Water..... 399

Appendix A: Through-Hull Locations

Appendix B: Being Whale Wise ** Please read

1. Specifications and Vessel Information

Vessel Information:

Carbon Monoxide Warning Decal – Located in the salon at the top of the companionway stairs.

Discharge of Oil Prohibited Decal – Located in the engine compartment on the starboard wall.

MARPOL (Marine Pollution) Decal – Located in the galley on the inside of the cabinet door below the sink.

U.S. Customs Re-Entry Decal – Located on the aft side of the starboard helm binnacle.

Vessel Official Number - 121038 Same number as shown on the Coast Guard Certificate of Documentation found in Section 5 Documentation of the Charter Guest Reference Manual (white binder). Vita Beata's number is located inside the port cockpit locker, on the hull up high near the deck. Look for 3" high numbers.

AIS MMSI No. 338399689 – Programmed into the VHF radio or AIS transponder to transmit Vita Beata's position and vessel data (heading, speed, vessel name, MMSI number). Refer to Section 11 (Electronics/Instruments) for a detailed description of AIS and Vita Beata's capability.

Coast Guard Boarding Document – Refer to the Charter Guest Reference Manual (white binder), Section 5 Documentation. Explains what to expect if you are boarded by the Coast Guard and where to find the information/equipment they may ask to see as part of their safety inspection.

Specifications:

Make:	Island Packet	Fuel Tank:	160 gallons
Model:	440	Holding Tank:	55 gallons
Year:	2008	Water Tanks:	260 gallons, water heater 11 gallons
LOA:	45'9"	Engine:	Diesel, Yanmar, 4Jh4-TE, 74 hp, propeller: 3-blade 19 RH 11
Displacement:	32,000 lbs	Heating:	Webasto DBW 2010 diesel-fired 'hydronic' recirculating hot water
LWL:	38'1"		And fan forced air furnace with 4 outlet ducts
Beam:	14'4"		
Draft:	5'0"		

Sails

Mainsail:	Dacron in-mast furling
Genoa:	Dacron furling
Staysail:	Dacron furling

Cabins

Berths:	(2) queen, fore and aft
Salon:	Full-size berth in salon
Headroom:	6'5"
Heads:	2, fwd and aft cabins; aft shares with salon

Entertainment

Stereo: Fusion MS-RA70NSX

Galley

Refrigerator: Large, top loading

Freezer: Large, top loading

Microwave: Tappan

Stove: Force 10 propane, 3 burner
with oven and broiler**Electronics**

Sailing Instruments: Garmin

Compass: 5" Richie

Autopilot: Garmin

Depth Sounder: Garmin

GPS/Radar/AIS: Garmin

VHF Radio: Icom IC-M504 VHF with an
external Icom IC-M504 VHF**EMERGENCY CONTACTS:**

Vita Beata Maintenance Team: Epic Yacht Management – 360-366-8929

San Juan Sailing Office – 360-671-4300

2. What is unique about Vita Beata

There are a few things about Vita Beata that are not 'typical'. These are the things that may require special attention or where it may be best to deviate from customary operating procedures. We have listed some here because we believe they will help you plan your charter.

In-Mast Furler

The mainsail uses an in-mast furling system. There are **IMPORTANT** nuances with an in-mast furling system:

- 1) Unfurl the mainsail only **after** the genoa and/or staysail; the genoa and/or staysail is always first out, last in (this straightens the mast so that mainsail furling is easier and less likely to jam)
- 2) **Unfurl and furl the mainsail while on a STARBOARD TACK only.**
- 3) When furling the main, keep light tension on outhaul to ensure a tight roll. Do not furl main beyond sun cover, approximately 18 inches from the clew (near black dot on sail).
- 4) When furling the headsail or staysail, keep light tension on a sheet to ensure a tight roll.

Engine Exhaust

The engine exhaust is on the centerline of the boat transom. Please avoid towing the dinghy on centerline. With the engine running you will notice there are two streams of water coming out of the transom of the boat. This is normal. One is engine exhaust cooling, and the other is heat exchange cooling.

Handling Characteristics

Vita Beata handles well under sail and power, especially under high wind and rougher water conditions, because she is a heavy displacement, full keel, blue-water sailboat, and her handling characteristics reflect that. She tracks very well and will carry way even after shifting into neutral. Extra care should be taken while in reverse. (We suggest having the bow thruster turned on and ready.)

Bow Thruster

Bow thrusters are necessary to maneuver an Island Packet in tight situations due to the full keel. The engine **must** be running to use the bow thruster. It is very important to **ONLY** operate the bow thruster in short 1-3 second bursts, otherwise you will move the bow too fast and you will deplete the batteries and it will immediately stop working.

Turn the bow thruster on by pressing the two 'ON' buttons at the helm simultaneously. Once on, a light will activate. Push the toggle in the direction you want the bow to move. Turn off bow thruster by pressing the 'OFF' button. *Note: the bow thruster will turn off after a couple of minutes of non-use; be sure it is on before it is needed.*



Bow thruster 'ON' buttons at helm.

Battery Capacity

There are six batteries on board. Recharge batteries when the voltage dips to 12.2V on the DC charge meter at the nav station.

The batteries are recharged one of two ways: 1) start the engine, or 2) connect to shore power. Vita Beata is equipped with three solar panels that will feed the batteries all the time. It is important to still check the battery capacity and recharge with the engine or shore power when the voltage dips to 12.2V. We recommend turning the refrigerator and freezer off at night unless you are connected to shore power.

NOTE: *The only time you should turn on the Inverter is when plugging items into the 120V AC plugs. Electronic devices can be used at any time using the USB ports or 12V plug.*

Heads and Holding Tank

Be sure to switch the Pump Fuse Block power ON at the electrical panel in the nav station, along with the switches for the HEAD FWD and the HEAD AFT. The Vacu-Flush heads (similar to an airline toilet) are equipped with a step lever that opens the bowl to dispense waste. When you lift your foot off the lever, the bowl will close and will self-fill with a little bit of water. Lifting the lever prior to use will add water to the bowl and facilitate flushing feces. Gentlemen, we ask that you please SIT when using the head. **Absolutely no toilet paper or feminine products down the head; THIS IS A BLANKET POLICY FOR ALL SAN JUAN SAILING & YACHTING VESSELS.** Put used toilet paper, feminine products, etc. in small plastic baggies (provided by SJS) and then put them in the trash cans in each head.

The holding tank holds 55 gallons. **IMPORTANT: The tank indicator does not work.** Be sure to pump out every 2-3 days depending on the number of people on the boat. The Vacu-Flush toilet has a read light and green light indicator. If red light goes on and stays on it is an indication that the holding tank is full.

Salon, Galley, Stateroom, and Head Lighting

Turn the CABIN LIGHTS PORT, MID, and STBD switches on at the DC panel. The individual controller for the galley overhead lights is on the starboard side of the companionway. The controller for the salon overhead lights is above the trash receptor that is on the port side of the sink cabinet. The lighting fixtures in the salon and cabins can be turned on manually at each fixture. The lighting fixtures over the sinks in each head can be lighted by moving the light lens to the right.

The controller for the forward cabin is on the side of the port side cabinet in the cabin. The controller for the aft cabin is on the side of the port side cabinet in the aft cabin. Turn on the aft head light above the sink by sliding the light lens to the right. The light in the forward cabin head is under the cabinet.



Salon Table

The salon table folds up and out of the way when not in use. To open the table, pull the pin to release the table and fold the leg down on to the metal circle on the floor. To extend the table full width, unfold the top and use the two removable legs with suction cups that are stowed in the salon hanging locker on the port side next to the forward cabin door. Please be careful using the table in an extended manner as the suction legs can slip causing damage to the table.

Forward Cabin and Head doors

These two doors are secured open by latches located at the bottom backside of the door. They **MUST** be manually unlatched. You **CANNOT** close the door without first unlatching these doors manually. This is a bit of a pain, though **PLEASE** take care when using these doors so they don't get damaged.

Pump Fuse Block – AKA: Water Pump

This switch is located in the DC panel of the nav station and needs to be **ON** to use the freshwater system, including toilets, shower drains, and sink faucets.

Shower Drain Pump Operation

Be sure to turn **ON** the Pump Fuse Block at the DC panel at the nav station before using the shower. Each shower has a drain pump switch in the shower to engage the pump while using the shower. Allow the shower pan to partially fill before turning on the pump so that the pump is not running dry.

Storing Fenders and Dock Lines

The fenders and dock lines can be stowed in the port side of the anchor locker, just aft of the windlass or in the cockpit lazarette. (**NOTE:** stowing fenders on the starboard side of the anchor locker will interfere with the anchor chain. **Also note:** The starboard, aft lazarette contains the AUTO PILOT and other sensitive, easily damaged equipment and wiring. **STOW ITEMS CAREFULLY!**)

Galley Sink Faucets

There are three faucets in the galley sink, all are fresh water. The faucet on the right is filtered drinking water. The other two are fresh water. The hand pumped faucet is available in case you lose or are low on power.



Filtered drinking water

3. Emergency/Safety Equipment

Bilge Pump Switches and Manual Handle: The automatic bilge switch is located on the wall near the floor at the salon settee closest to the nav station. **Please leave this switch set to AUTOMATIC at all times.** The bilge is located under the sole in the center of the salon. You may drain the bilge manually by switching the switch to manual; then **RETURN** the switch to automatic when done. Water will backflow into the bilge – this is normal. The emergency manual bilge pump handle is located in the starboard, aft lazarette. Insert the manual pump handle into the rubber gasket starboard near the helm to physically pump the bilge without electrical power.

Note: in the event of serious flooding, if water rises above the floorboards, you can use shower drain pumps as well.

Carbon Monoxide Detectors: There are two CO detectors, one under the nav station and the other on the side of the bed in the aft stateroom.

Cockpit Cushions: In case of Crew Overboard, quickly throw anything that floats overboard, including cockpit cushions.

Emergency Tiller: Long curved pipe stored in starboard lazarette.

Fire Extinguishers (3): The first is on the port wall next to companionway stairs, the second is in the forward cabin behind the cabin door, and the third is in the aft cabin on wall behind head door.

First Aid Kit: In starboard salon upper cabinet.

Flares and Folded Plastic Distress Flag: In green mesh bag in the starboard salon cabinet just forward the nav station.

Flashlights: One mounted by the companionway door and the second is mounted at the nav station.

Horn, handheld: In green mesh bag in the starboard salon cabinet just forward of the nav station.

Lifesling: On starboard stern pulpit. Please review the cartoons on the face of the case for procedures. The lanyard is secured to the boat so that tossing the floating harness allows it to tow behind the boat like a ski tow rope. Circling the person overboard will draw the recovery line near them.

PFDs – Inflatables: Located in the stateroom hanging lockers. NSO: please check for “green” visible at bottom of clear canister before each cruise. That verifies the auto-inflate function when immersed. We wear these at all times when working the deck and often in the cockpit, depending on conditions.

Propane: Tank is in the aft, starboard propane locker. Turn the knob on propane tank to open. The propane solenoid switch is on the outside of the sink cabinet in the galley. There is also an LP gas fuse switch on the DC System panel on the nav station. **BOTH SWITCHES MUST BE ON** to use the propane, and, for safety, switch BOTH switches off when not in use.

Radar Reflector (tube style): Starboard shroud above first spreader.

Tapered Plug, Universal Foam Orange StaPlug: In green mesh bag in starboard salon cabinet just forward of the nav station.

Tools and Spares: In the starboard settee cushion storage closet to the nav station.

VHF Radios: The VHF base unit is at the nav station and the corded handheld remote is to be plugged in at the helm. **Plug in the corded handheld VHF remote at the helm BEFORE turning the VHF switch to ON.** Otherwise, the corded handheld remote will not work. Detailed instructions on use of the VHF and corded handheld are with other manuals. **DO NOT LOSE THE INSTRUCTIONS.**

Windlass Clutch Release/Tighten tool (looks like a winch handle): Hanging in bow anchor locker.

4. Anchor and Windlass

Highlights

- Windlass controller has two-foot controls outside the anchor locker. **CAUTION: operating the windlass can be dangerous if you are not careful; be sure not to get body parts or clothing near an operating windlass.**
- Chain length markings: 200' of chain marked with 1 piece of yellow line at 25' intervals and 2 pieces of yellow line side by side at 100' and 200'. At 200 feet of chain, it will switch to a 100' of rope rode. The

CHAIN LENGTH MARKING

2' lengths of line woven into chain:

- 1 piece every 25'
- 2 pieces at 100' + 200'

placard shown on the right is glued to the inside of the anchor locker door as a reminder.

- Windlass breaker switch on the panel on lower starboard settee must be **ON** to raise or lower anchor.



- Windlass clutch release/tighten tool (a winch handle) is located inside the bow anchor locker. If the windlass slips when raising the anchor, the clutch may need to be tightened. In an emergency, if the anchor needs to be lowered quickly, the clutch can be loosened. Keep enough tension on the clutch so the chain pays out at a controlled rate – keep an eye on the chain pile and be prepared to tighten the clutch if a knot of chain is pulled up.
- The windlass gypsy is **not designed** to hold the boat while anchored, so please use the bridle with chain hook to hold the chain while anchored.
- **Do not pull boat forward on the windlass under any circumstances. Use snubber on chain.**
- Please avoid chipping the bow with the anchor by using caution and slowly raising/lowering the anchor when it is out of the water.
- Turn **ON** the Anchor light overnight. Breaker switch is labeled and located on the DC panel at the nav station.
- Secondary/Spare anchor is stowed in the starboard cockpit locker.
- There is a 600' spool of line for stern-tie shore-tying stored in the cockpit lazarette. Use the wooden mop handle for spooling line in and out.

Main Anchor – Delta 44# Plow mounted on the bow, with 200' 3/8" chain marked with 1 piece of yellow line at 25' intervals and 2 pieces of yellow line side by side at 100' and 200'. At 200' of chain, it will switch to 100' of rope rode.

Wash down – pumps salt water from bottom of sail locker, circuit breaker on electrical panel.

To Deploy Main Anchor:

- 1) We check tide tables to determine current water level and amount of drop while anchored.
- 2) Weather (ch 4, "Northern Inland Waters" or ch 7) helps select a safe anchorage.
- 3) Turn ON windlass circuit breaker on the panel on lower starboard settee.

- 4) To deploy the anchor, press port 'down' switch.
- 4) Normal for the islands is a 4 to 1 scope, bow to bottom (add 5 feet to depthsounder reading: 4' freeboard and 1' for transducer below waterline). In the San Juans, anchorages are often about 25' bow to bottom, so we often deploy about 100' chain—hence the marker at 100'.
- 5) To avoid hitting the hull when initially lowering the anchor, we do the following to prevent the anchor from swinging as it travels over the roller: Push the anchor forward keeping the shank *level* before gradually allowing the shank to rise as we ease it forward slowly into the hanging position (no swing!).
- 6) Lower the anchor to approximately the number of feet on the depth sounder so the anchor is on the bottom, either by easing the brake or depressing the down switch. To loosen, pull aft, then use a pulsing motion to moderate gravity descent.
- 7) A signal to the helmsman prompts reverse at idle speed while deploying rode to the desired scope. Set the snubber so protect the windlass when you set the anchor.
- 8) We then allow the anchor to set and to stop the boat while it continues in reverse, idle speed. We then line up objects on shore to determine if we are holding, staying in reverse at idle for about one minute.
- 9) Finally, check the snubber to take the load of the chain and to be sure the windlass is not carrying any load.
- 11) If stronger winds are forecast, we test with RPM at half the projected windspeed (1,000 rpm for winds to 20 knots; 1,500 rpm for 30 knots, etc), *after* setting snubber. (We check movement shoreside, not the significant prop current going by the chain.)
- 12) In storm conditions (or storm forecast), you can increase scope if there is adequate room to leeward.
- 13) A secondary anchor is available for additional holding power if a storm is anticipated, but best if set before the storm hits.
- 14) If anchored in a small cove, you may wish to deploy a line ashore. 600' floating polypropylene on a reel resides in the cockpit lazarette. Open transom doors; use the mop handle as an axle through the reel; set mop handle on helm seats. Deploy the line with the dinghy while the spool unwinds. If sufficient length, bring the line around a secure shore object and back to the boat to a transom cleat for ease of retrieval.

To retrieve the anchor:

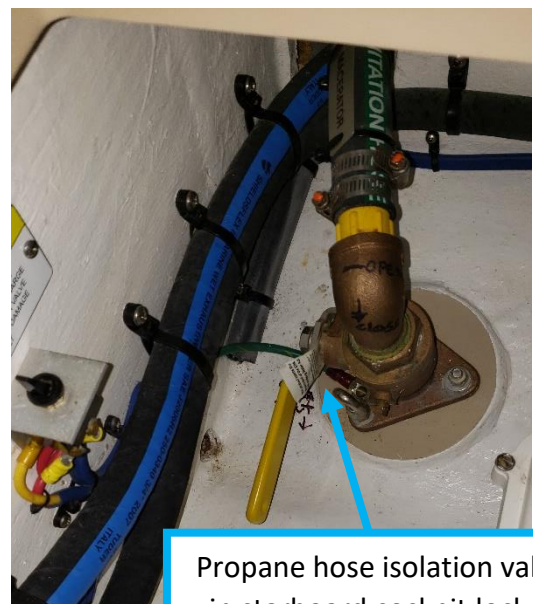
- 1) The "anchor washdown" circuit breaker is at the nav station.
- 2) Start the engine, and turn on the windlass breaker on the panel on lower starboard settee.

- 3) Depress starboard "up" switch, always assuring the chain is vertical during retrieval—this avoids either towing the boat or dragging the chain against the hull. Into a breeze, we engage forward gear as needed, but exercise care that we don't overstand and drag the chain against the hull.
- 4) As needed, we clean the chain with the saltwater pressure hose during retrieval (run hose outboard of your foot so that it doesn't get caught in windlass).
- 5) A mountain of chain under the windlass can jam it and in rare cases cause a wild gravity runout of rode. If that happens, stand clear for safety. We avoid that chain "mountain" by "lifting" the chain forward in the well as it is retrieved, using the wooden handle of the deck mop. We grab the chain with the mop handle and pull it forward as another crew feeds it by pressing the "up" switch, 2'-3' at a time. Important for the initial chain retrieved. Last 50' can stack under windlass ok. **Note: using the boat hook to lift the chain can easily bend it, making it unusable. Please use the wooden mop handle.**
- 6) As the length of rode remaining approaches the water depth, the sound of the windlass laboring alerts us to immediately stop. Sometimes a brief pause will cause the anchor to break free, given the 90-degree angle of pull. A brief tap on the button, if laboring, says to break out the anchor with the engine in idle forward, not with the windlass.
- 7) To nest the anchor without chipping the hull, the anchor may need to be swiveled. We use the windlass to bring the anchor shank up and over the bow roller in one continuous motion, then nest the anchor by hand.
- 8) After nesting, with a slight *slack in the chain*; we secure the anchor once again with the snubber on the windlass-mounted cleat. As noted, the chain is only "unsnubbed" when it is moving in or out.
- 9) Reminder: cover the windlass switches *before* closing the anchor locker lid.
- 10) Turn off the "anchor washdown" circuit breaker at the nav station to avoid burning out the pump! Windlass breaker normally remains "on". Good in case of emergency deployment.

5. Barbecue

Highlights

- Propane hose isolation (Shut-off) valve is located in the starboard propane tank locker, outside of cockpit.
- BBQ propane hose is plumbed through the solenoid valve, located in the galley. Use the isolation valve, mentioned above, to shut-off BBQ after each use.
- Please clean grill (using the brush attached with wire lanyard) when finished cooking.



Propane hose isolation valve
in starboard cockpit locker

Details

To operate:

- Turn on the BBQ propane hose isolation valve (yellow handle) located in the propane tank locker. Ensure the LP breaker on the DC panel and the solenoid in the galley are ON.
- Remove plastic grill scrubber brush before lighting and replace when cool after use.
- Grab a BBQ lighter from the galley and insert the end into the small hole in the BBQ below the grill until ½" from the burner. Light the BBQ lighter.
- Turn the regulator on the right side of the BBQ to the "Light" position.
- As a courtesy to the next charter guest, please clean the BBQ grill with the wire brush.
- Turn off the regulator after grilling.
- Turn off the solenoid valve switch in galley and LP breaker on DC panel.

6. Batteries, Charging and Inverter

Highlights

- Please keep batteries above 12.2V at all times. 12.8V is fully charged (with all loads turned OFF – including the fridge and when not charging).
- When charging, battery voltage will read above 13V.
- Check the house bank voltage at night before going to bed, and if it is close to 12.4 volts, recharge the batteries. Refrigeration can be kept on overnight, but if the battery voltage is below 12.4 volts, turn the Ice Box breakers off on the DC panel for the night. Then you can charge the batteries first thing in the morning and turn the Ice Box breakers back on. It will hold the cold for the night.
- Ensure batteries are charging when connected to shore power – see details below in Charging section.
- When underway the engine is automatically charging all batteries. **Do not turn on AC Battery Charger.**
- At anchor, batteries can be charged with engine in neutral at 1,500 RPM. To put engine in neutral for charging, press the rubber button at the base of the throttle and push the throttle forward to 1,500 RPM.
- While OFF shore power, the AC powered outlets PORT and STBD (see switches on AC panel) can only be powered using the inverter. To turn on the inverter, switch the inverter on in two places: 1) the inverter switch on the Phoenix Control Panel on the bulkhead forward of nav station below the heater thermostat, and 2) the white inverter bar on the AC panel section (be sliding the protective cover over the Shore Main switches). While using the inverter powered plugs when engine is not running, be sure to monitor the battery levels and recharge when batteries get to 12.4V. *Caution is needed when inverting and using 120V power. Only use low-draw (wattage) items*

like phone chargers or computers. High-wattage items like the microwave oven, hair dryers, and electric heaters will kill the batteries.

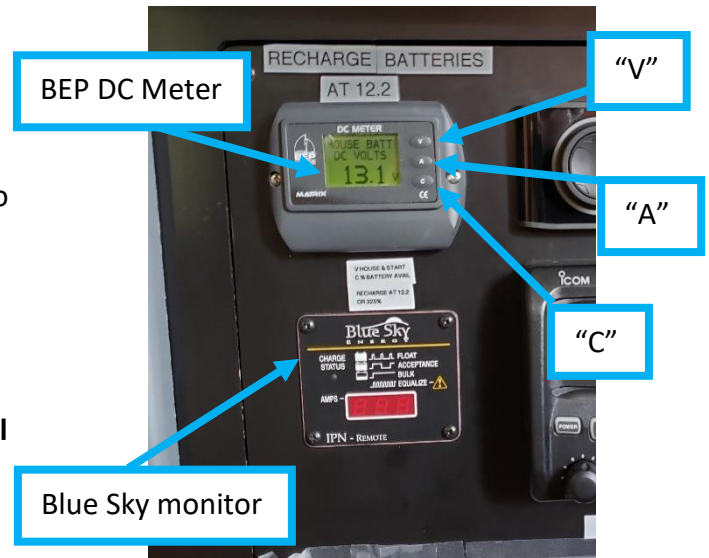
- When the engine is running, the batteries will be automatically charging. When on shore power, you charge the batteries by switching the battery charging switch on the 120 VOLTS AC panel (left-hand side) to "ON." Do not turn on the inverter. We highly recommend charging the batteries whenever on shore power.
- Vita Beata is equipped with 3 solar panels that automatically charge the batteries – no action is required by Charter Guests. The panels, combined with motoring and/or plugging into shore power will normally keep the batteries topped up.

Details

BATTERIES:

All batteries are charged automatically when connected to shore power with **BLUE DOT** breakers ON or while the engine is running.

SAFETY REMINDER: Never turn off the batteries or the ignition key when the engine is running. This will seriously damage the electrical system. If you have small children aboard, switches can look like something fun to play with. Please make sure no one switches off the batteries or engine key when the engine is running.



INVERTING/CHARGING

There are four battery voltage readouts on Vita Beata. One analog meter marked "Line Voltage" on both the 12 VOLT DC SYSTEM panel and the 120 VOLT AC SYSTEM. There are two LCD readouts to the right of the Raymarine monitor screen at the nav station. The battery voltage is displayed on the Blue Sky monitor and BEP DC METER.

BEP DC METER: Toggle the "V" button for house battery and start battery volts – there is NO aux battery; Toggle the "A" button for charge/discharge rate; Toggle the "C" for capacity remaining.

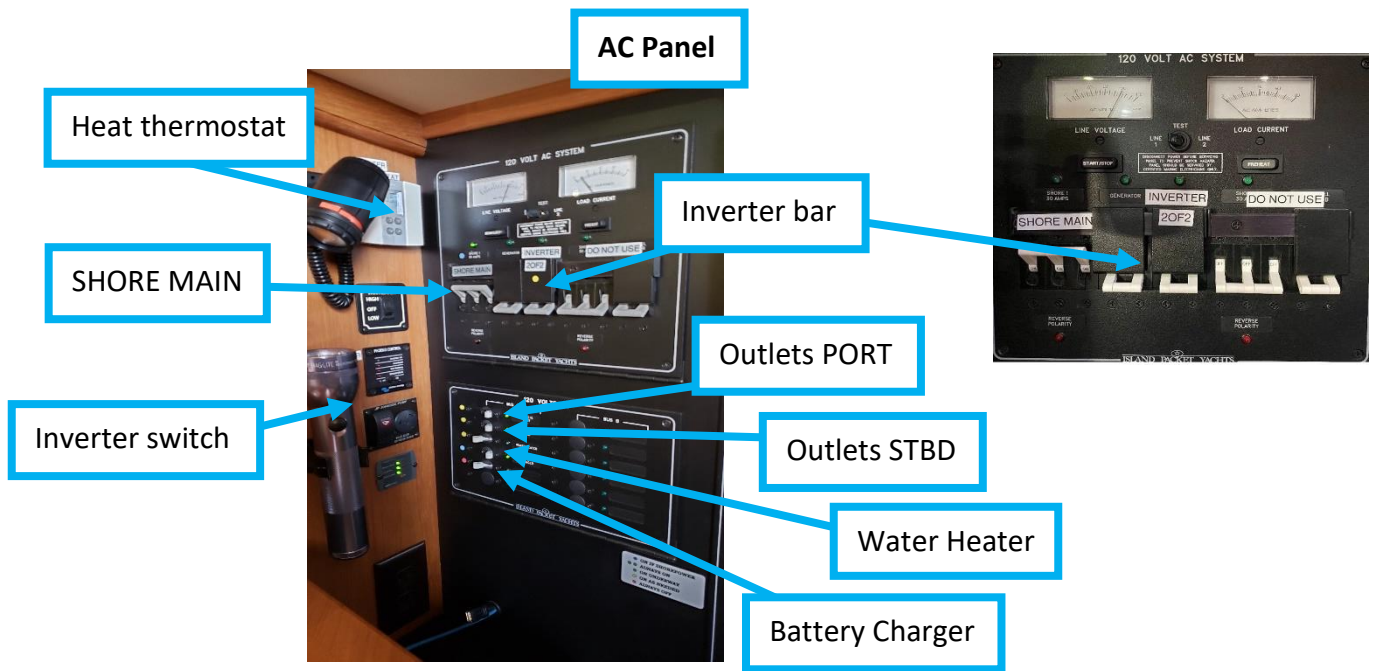
Inverter

- If 120V power is needed for low wattage devices when shore power is not available, the Inverter can be turned ON.
- The inverter powers the 120V outlets PORT and STBD (see switches on AC panel).
- The inverter must be turned on in **two places**: **1)** the inverter switch on the Phoenix Control Panel on the bulkhead forward of nav station below the heater thermostat, and **2)** the white inverter bar on the AC panel section (by sliding the protective cover over the Shore Main switches).
- On the AC panel, flip ON the PORT and STBD breakers.

- When back on shore power, be sure to turn off the inverter switch on the side panel. The inverter switch must be OFF and the protective cover moved to the right in order to switch Shore Main on.

Charging – Shore Power

- Vita Beata is equipped with 50-ft and 25-ft shore power cords stored in the starboard lazarette. The shore power cord attaches in the cockpit, starboard and aft of the helm.
- **Before connecting or disconnecting shore power, turn off Shore Main. Before disconnecting shore power please turn off the AC outlets and battery charger switches on the AC panel.**
- To connect to shore power, first connect the power cable to the boat THEN to the shore power junction box. (When disconnecting, do this in reverse.)
- Once connected, be sure to turn on SHORE MAIN on the AC System panel (a green light above the bar will be illuminated).
- When on shore power, the batteries will be charged by switching the battery charging switch on the 120V AC panel (left-hand side) to “ON”. **Do not turn on the inverter.**



7. Berths and Bedding

Vita Beata has two cabins with queen-size beds, hanging lockers and storage areas. There are ample sources of lighting in each berth, with a master switch near the door and individual controls for reading lights. All hatches come equipped with sliding pull-out covers and sliding pull-out screens.

The forward cabin is oriented with your head at the bow and feet pointed toward the stern (no more pivoting around to get out of a V-berth). The starboard cabin has its own door to the aft head for additional privacy and convenience.

Before

After

July 2024

The settee in the main salon converts into a full-size bed:

- a) Remove the cushions from the starboard settee.
- b) Remove the pin and pull the extension out.
- c) Replace the pin to hold the extension in place.
- d) Replace the cushions to create the bed.



8. Bilge Pumps

Highlights

- Emergency Bilge Pump (manually operated): located in the starboard, aft lazarette.
- Electric Bilge Pump: Has an automatic float switch. The pump is located under the sole in the center of the salon. Check the strainer on the pump inlet for any clogging debris and remove if needed.
- Please visually inspect the bilge each day, which is accessed by lifting the floorboard in front of the main salon table. The refrigerator drains into the bilge, so most accumulated water is from melting ice and condensation. The intake tube is at the lowest point in the bilge.

Bilge circuit breaker



Note: in emergencies, the shower sump pumps can be turned on if water rises into the heads.

9. Bow Thruster

Highlights

- Activate the controller at the helm by pressing the two "ON" buttons simultaneously.
- **Use minimally, in short 1-3 second bursts.** Continual use will overheat the thruster. It will shut down and not restart until cool – 10-15 minutes.
- Most of the vessel maneuvering should be done using the engine and rudder. The thruster is meant to be used for small corrections during your final approach into the slip or emergency situations to keep from hitting another vessel or dock.
- Dedicated thruster battery charge DC to DC battery, be sure the house battery is above 12.4v, see recharging the house batteries Section 6..

Details

The engine must be running to use the bow thruster. Turn the bow thruster on by pressing the two "ON" buttons at the helm simultaneously. Once on, a light will activate. Push the toggle in the direction you want the bow to move. Turn off the bow thruster by pressing the "OFF" button. **The bow thruster will turn off after a short period of non-use; be sure it is on before it is needed.**

Note: Overuse of the thruster will deplete its battery, which is **only recharged on shore power**. Most of the vessel maneuvering should be done using the engine and rudder. The thruster is meant to be used for small corrections during your final approach into the slip or emergency situations to keep from hitting another vessel or dock.

There is no circuit breaker for the bow thruster. There are in-line fuses on the electric bow thruster motor and in the port aft stateroom (for the bow thruster battery charger). Spare fuses are attached, but they are seldom if ever needed.

Caution: the bow thruster is very powerful, designed to push into a 30 knot sidewind. It will rotate the boat on its keel and can swing the stern sharply into the dock by thrusting the bow away from the dock. Please position a crew with fender between stern and dock when departing and arriving until you get a feel for it.

10. Dinghy and Outboard

Highlights

- 10' inflatable dinghy with 2.3hp Honda outboard.
- **In harbor tie dinghy to a dock cleat at the front of the boat so that it is out of traffic lane. At anchor ALWAYS keep dinghy tight to the port stern cleat so as not to let dinghy near exhaust ports.**
- Tow the dinghy 15' off stern using the starboard cleat. Use a proper cleat hitch and for peace of mind tie off the painter's bitter end to base of the stern pulpit. In very rough conditions, towing the dinghy from the low side makes it unlikely the dinghy will flip in the wind and waves.
- Please DO NOT tow with outboard attached to dinghy or leave on the dinghy overnight. Stow the outboard on transom rail after every use and be sure to lock the two screw together when not in use.
- Inflatable tube air pump – located in the dinghy's forward compartment.
- Inflatable tube patch kit – located with the general spares
- The 2.3hp Honda outboard is air cooled 4-stroke and takes straight gas.
- The spare 1-1/4 gal red gas can is filled 2/3 full (for expansion in hot weather) by our staff. We will top it off when you return the boat, no charge. We stow it in the dinghy, tied to the transom. For safety, please *never* store gasoline in a compartment on board Vita Beata.

Details

Towing the Dinghy

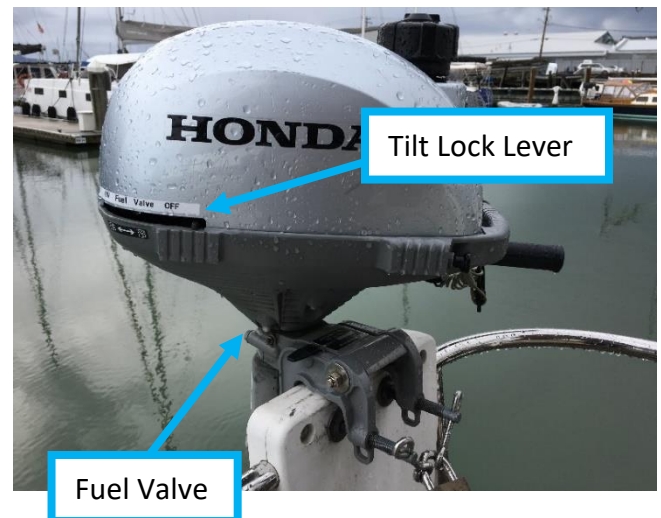
Always remove the outboard motor dinghy before towing. We leave the **red** spare gas can for the outboard engine in the dinghy, tied off to the transom. Towing works best when the dinghy is brought close to the boat with 15' of painter line between the stern and the towing bridle of the dinghy. Tie the dinghy to the starboard side cleat when towing, tie the painter off at stern starboard cleat with a standard cleat knot, then attach the bitter end to the stern rail using a rolling hitch or similar secure knot.

Preparing the Outboard

1. Unlock the outboard (combination is listed on your charter packet) and reattach the lock nearby on the stern rail.
2. Carefully loosen the mounting screws on the outboard bracket keeping one hand on the outboard handle at all times or tie the motor off to a dock line attached to Vita Beata. We have actually witnessed a crew member allowing an outboard to flip off the rail and quickly sink into 30 feet of water!
3. Transferring the outboard to the dinghy is best accomplished by having one crew member in the dinghy to receive the outboard from another crew member on deck, rather than a single crew member trying to get off the boat and onto the dinghy with outboard in hand. Although the outboard is relatively light, it should be handled carefully.

Starting the Outboard

1. Open the fuel valve by pushing the fuel valve lever (starboard aft corner of the outboard) aft to the ON position.
2. Pull the choke all the way out (forward corner of the outboard).
3. Open the air vent on the top of the fuel cap (top of outboard) by turning the indicator halfway between ON and OFF. We have discovered that turning the indicator all the way to ON will sometimes cause the valve to close.
4. Make sure the black U-shaped kill clip (attached to the red or gray lanyard) is clipped into the red shut-off knob (port forward corner of the outboard).
5. Turn the throttle handle to the start position. There is a friction thumb screw that can be tightened to hold the throttle in the start position.
6. **NOTE:** The motor has a centrifugal clutch (no gear shift) – the propeller will spin when the RPM is above idle. Please make sure the dinghy is securely tied to Vita Beata as the dinghy will surge forward when the

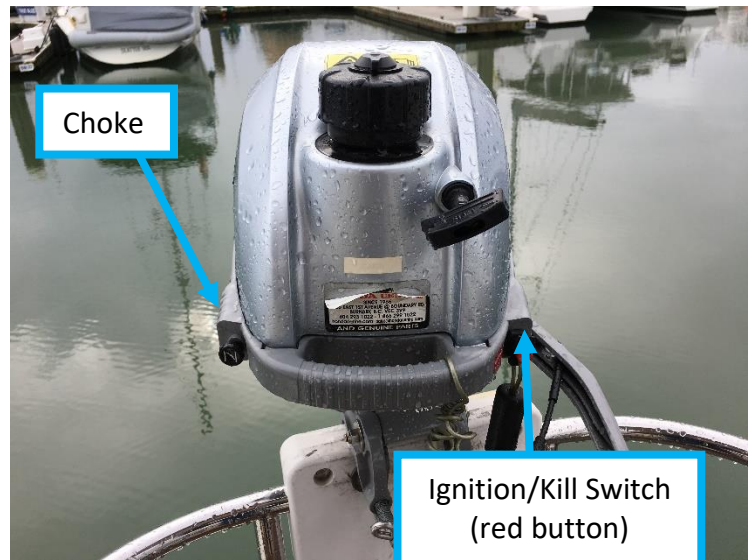


motor first starts up at the starting RPM then will stop when you turn the throttle back to idle RPM after warmed up (about 10 seconds).

7. Pull the starter cord quickly then repeat a few times if needed until the motor starts. (You shouldn't have to pull it more than 5 times.)
8. Slowly push the choke back in shortly after the engine starts (after about 5 or 10 seconds). If the motor starts to run rough then ease the choke back out for another 5 seconds and then try pushing back in. Turn the throttle back to idle.
- 9.

While Outboard Is Running

1. Keep the red lanyard kill clip connected to your belt or PFD while operating.
2. The motor has a centrifugal clutch (no gear shift) – the propeller will spin when the RPM is above idle - just throttle up to go forward and throttle down to stop. If you want to go in reverse just swivel the outboard around 180 degrees and throttle up.
3. Note that you will only have steerage when the propeller is driving the boat (throttle above idle RPM).



Arriving at the Beach

1. Before you hit the beach and while still in a few feet of water, stop the motor by pushing in the red shut-off knob (where the kill clip is clipped in) or just pull the red lanyard until the clip pops off. Close the fuel valve and vent lever (the motor will leak fuel when tilted if these are not closed. Also, the carburetor will be flooded making it hard to restart the motor).
2. Tilt the motor out of the water by pulling the motor head forward until it stops – you should here a “click” as the tilt support locks in place. Note that the motor is held in the lowered position by friction from a large rubber clip that grips the shaft. Very little force is needed to pull the motor shaft out of the clip.
3. To tilt the outboard back in the water, first pull on the motor head slightly to take the strain off the tilt lock then release the tilt lock by lifting up the black handled lever below the motor head on the starboard side of the shaft.
4. Please do not drag the dinghy up the beach over sharp rocks and barnacles.
5. Secure the painter to ensure the dinghy doesn't float away on a rising tide.

When The Outboard Is Not in Use

1. Put the outboard back on the outboard mount on Vita Beata's stern rail and tighten both bracket screws.
2. Put the combination lock back on the bracket screws.
3. Close the fuel valve and fuel cap vent.
4. Put the blue Honda cover back on the motor head.

Outboard Troubleshooting

- If the motor won't start, review steps 1-8 above to make sure you've correctly done all 8 steps.
- If the motor is running fine and suddenly quits then it is often because the fuel cap vent is closed.
- If the motor is running fine but the propeller won't spin with the RPM above idle then the shear pin is probably broken. Put the motor back on the stern rail bracket, take the cotter pin out to remove the propeller and replace the broken shear pin. A spare pin is located the forward underside the motor head.

Inflating the Dinghy

If the dinghy needs inflation, inflate with the foot pump. The dinghy has three (3) baffles, each with an inflation valve located on the inside of the boat, plus an inflatable keel. The keel's inflation valve is in an opening in the bow floorboard. Use the **black** adapter to inflate the main baffles. Use the **grey** adapter to inflate the keel.

The foot pump is held closed with a locking clasp. Release the clasp, insert the appropriate inflation nozzle onto the valve and give a ¼ turn to lock it in place. Inflate the baffle or keel with the foot pump until it is firm. When done, carefully detach the inflation hose. If the valve is still open, press it once to close it.

If you need to make a repair, the repair kit and instructions can be found with the spares.

11. Dodger and Bimini

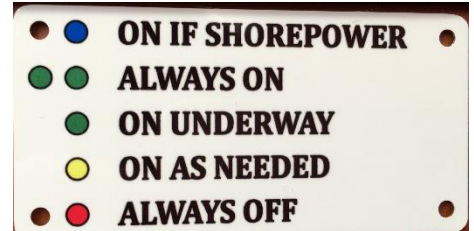
Highlights

- **TIP:** if we get early morning dew fogging our dodger glass, or salt crystals from spray, we rinse off with a pan of **fresh water** from the galley (salt crystals may need a second splash). There is a soft squeegee to use for dew removal. *We avoid wiping.* **Do NOT apply aerosol sunscreen upwind or close to the dodger.** Sunscreen will destroy the glass. Be careful no to rub against the dodger glass, it scratches and permanently smudges easily.
- If you wish to use the rain "insert" between the bimini and the dodger (gives full coverage over the cockpit), zip the insert in *before* attaching to the bimini. Start the zipper in the center and work out to each side.

12. Electrical

Highlights

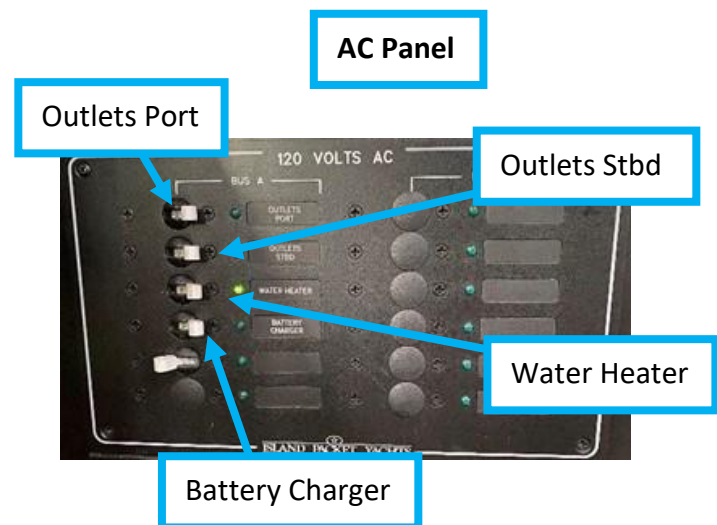
- The AC and DC panel breakers use the color dot convention shown on right:
- Main AC breaker/switch is located on the DC panel in nav station.
- Primary shore power breaker is on the left side of the nav station electrical panel adjacent to the inverter switch (SHORE MAIN).
- Main DC breaker is on the electrical panel under 12 VOLT DC SYSTEM.
- The AC outlets, water heater, and battery charger switches on the electrical panel are under 120 VOLTS AC on the left side of the panel.

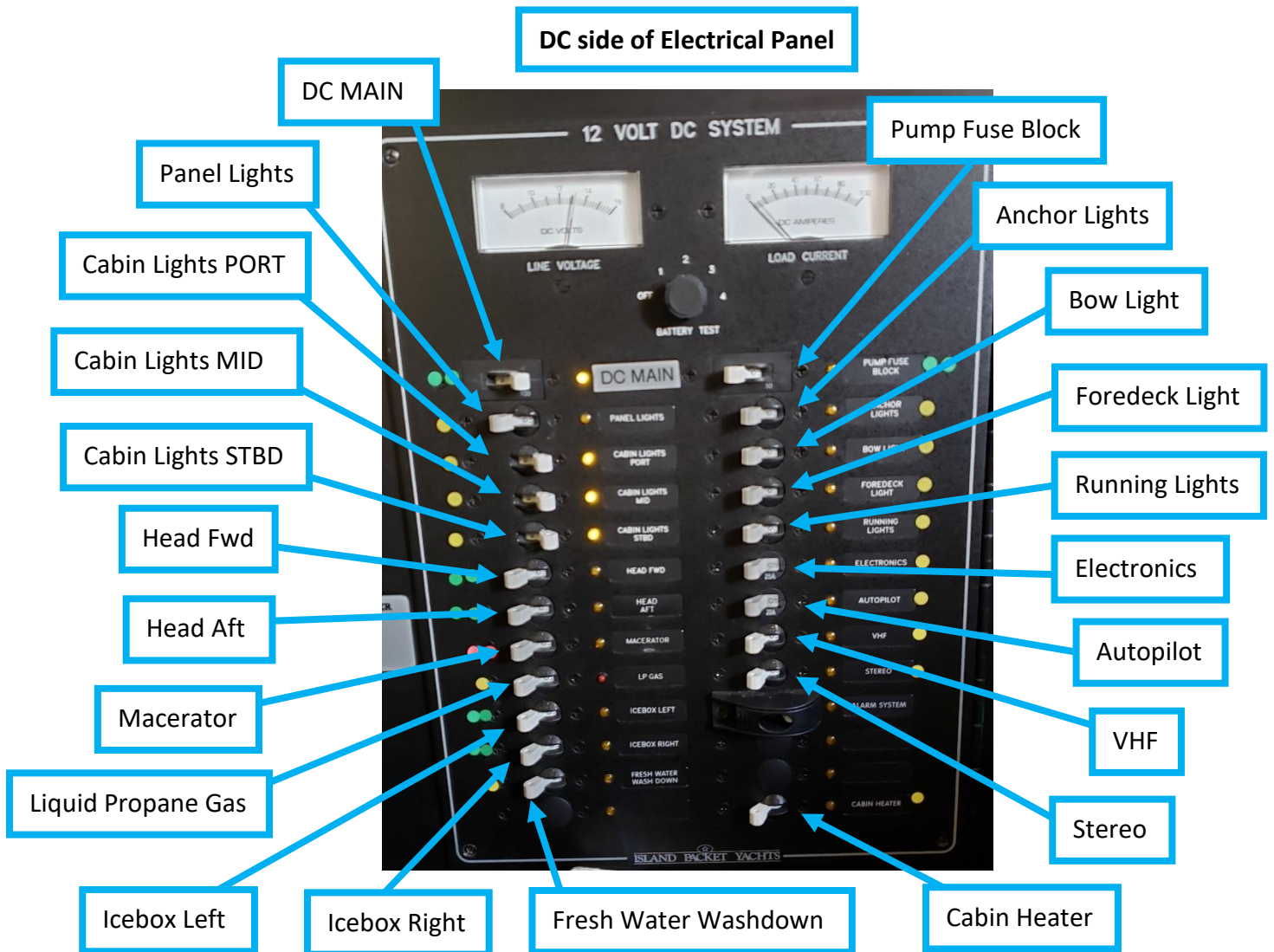


Switches and Controls on the Electrical Panel

The electrical panel is in the main salon on the starboard side at the nav station. Here are some things to note:

- **Shore Power:** All the AC controls are along the left side of the panel. There is no “master switch” to turn on AC power; when you connect and disconnect shore power, AC is simply ON or OFF. Use SHORE MAIN to turn it on. When the AC is ON, a green LED light is illuminated above the white color bar at the left-hand corner of the panel. Please ensure that the switches for the AC items (water heater, battery charger, AC plugs) are turned OFF before connecting or disconnecting shore power.
- **Water Heater:** Keep the water heater off unless you are under shore power.
- **Battery Charger:** Turn ON the battery charger switch only when you are connected to shore power. It must be “ON” to charge the batteries while on shore power. Turn the battery charger to “OFF” when underway, as the engine is automatically charging the batteries.
- **AC Outlets:** Turn on the Outlets Port and Outlets Starboard switches to turn ON the 120V AC electrical outlets that are located throughout the boat, including the microwave. USB and 12V plugs are on all the time without needing to switch anything on.
- **Bilge Pump:** Always leave the bilge pump setting in “Auto.” Test the pump daily by switching to manual and listening for the pump to run, then return it to the “Auto” setting.





- **Water Pump:** The water pump switch is located on the DC panel labeled “Pump Fuse Block” and is necessary for all freshwater functions. If you don’t hear the pump start when you turn it on, it means that the system is at working pressure – you should hear the pump start again after you use some fresh water. **OPERATING TIP:** When underway and if no one is below decks, we turn the water pump OFF.
- **Forward and Aft Heads:** On the DC panel, switch on the “Head Fwd” and “Head Aft” breakers in order for the toilets to work.
- **Cabin Lights:** There are three DC power switches that must be turned on for cabin lighting: Cabin Lights Port, Cabin Lights Mid, and Cabin Lights Stbd. These power the LED lights located throughout the boat.
- **Refrigeration Units:** Leave the Ice Box Right and Ice Box Left switches “ON” whenever on the boat, unless the house battery charge level drops to near 12.4V and you are unable to run the engine or connect to shore power. In that situation, turn the switches off. Your provisions will stay cold overnight.

- **Navigation Instruments:** Turn on Electronics, Autopilot, and VHF switches to activate the electronics, instrumentation, and multi-function display in the cockpit. This switch also provides power for the radar, depth sounder, knotmeter, and autopilot.
- **Anchor, Running, Bow and Foredeck Lights:** When anchored or mooring, turn on the Anchor Light at dusk (located at the top of the mast). When motoring at night, turn on the mast-mounted Bow Light, it is the steaming light. Turn on the deck Flood Light if you must go forward on deck at night. If sailing at night, turn on the Running Lights.

13. Electronics/Instruments

Important: To power up electronics, FIRST be sure that the white VHF wire remote microphone is plugged into the helm. Then at the DC panel, turn on the VHF, Autopilot, and Electronics switches.

CHART PLOTTER:

A.I.S. (Automatic Identification System):

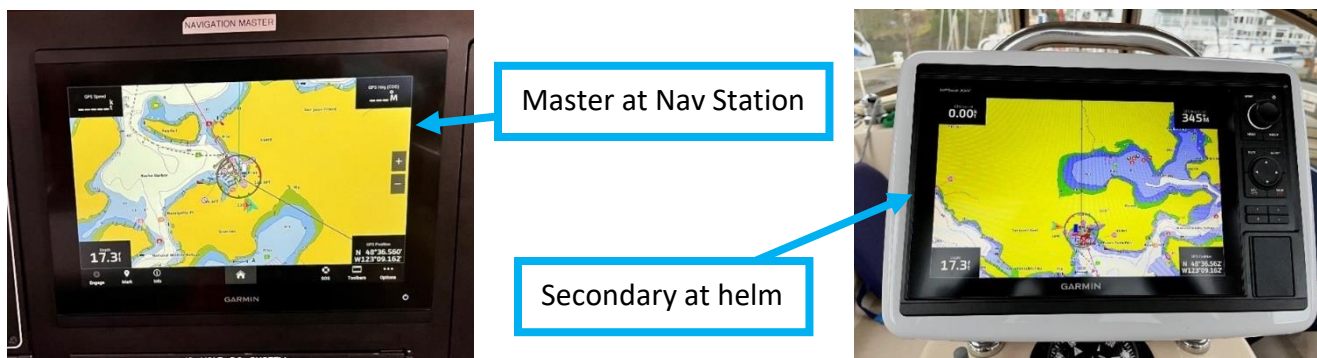
- Vita Beata transmits her position and data via an AIS signal as well as receives AIS signals from other vessels equipped with AIS transmitters (Commercial vessels are required to have AIS, recreational vessels are optional).
- The AIS functions through a dedicated transceiver unit. The Electronics switch on the DC panel must be turned on for the AIS to function.
- AIS information supplements marine radar, which continues to be the primary method of collision avoidance for water transport.
- AIS requires each vessel to have a 9-digit MMSI (Maritime Mobile Service Identity) number to transmit position and data. **Vita Beata's MMSI number is 338399689.**
- AIS vessels appear on the chart plotter screen as triangles when AIS Overlay is turned on (see below for how to). The triangle points in the direction that the vessel is moving and if you touch the Master screen or move the cursor on the screen over the triangle on the Secondary, the system will give you additional information (such as name, size, speed, bearing, etc.) about the vessel. The system also transmits this same type of information about Vita Beata to other vessels with AIS. The AIS is an added safety feature which allows large commercial vessels to easily see you and your direction and speed. They may try to contact you on VHF Channel 16 to verify your course intent. In addition, AIS for coordinating search and rescue and also allows SJS&Y to provide faster assistance in case of unplanned

maintenance issues as well as alert SJS&Y of Vita Beata's return approach. Vessels with AIS can be viewed in real-time through mobile device apps and websites like www.marinetraffic.com that will reveal Vita Beata's course, speed, track, and other information.

Garmin Navigation

In 2023, we upgraded our navigation system to state of the art dual Garmin chart plotters. Our Garmin chart plotter has dial and button screen at the binnacle and touch screen at the Nav station (the Master plotter). Garmin will turn on when the electronics switch is on at the DC panel. After power is applied, the system will return to the last format or settings selected.

While the Garmin chart plotter is all you need in navigation, we still encourage everyone to download and get familiar with Navionics. Navionics is just one more look at passages, currents, tides, and hazards. Plus, you can plot your routes in Navionics prior to arrival. The screen at the Nav station is the master and the screen at the binnacle is the Secondary. Turn on the Garmin system by switching the toggle for electronics on the 12V DC panel. Please do not change any system settings on Garmin beyond the typical functions like chart orientation, radar overlay, AIS overlay and range. Note: fuel economy on Garmin is not linked to the fuel gauge, instead look at the fuel gauge in the floorboard hatch next to the Nav station. Garmin is very comprehensive, though pretty intuitive, so the best way to understand it is to explore a bit before leaving Bellingham. You can find helpful operating information at [GPSMAP Owner's Manual Owner's Manual - GPSMAP Owner's Manual \(garmin.com\)](http://GPSMAP Owner's Manual Owner's Manual - GPSMAP Owner's Manual (garmin.com)). Or, be sure to ask your Checkout Skipper any questions when they do the onboard checkout.



Briefly, chart overlays can be found by pressing the Home screen. Nav. Chart is what you will want to use for boating. You can split the screen should you want to see the chart plotter and radar on one screen. We find the four corner gauges along with the chart plotter on the screen to be adequate. Here are some of the most used features:

- Change chart orientation on the Master by pressing Options, Chart Settings. We suggest Map Orientation to be Heads Up, so it reflects the direction you are traveling and, Vessel Orientation to be Heading with is Course Over Ground (COG) indicated by the blue line. On the Secondary go to Menu, Layers, My Vessel.
- The four corner gauges can be changes on Options, Edit Overlay

- Add Radar overlay from Home Button, AIS for other vessels is set Home, Settings, Other Vessels. We suggest you leave this on so you know where other vessels with AIS are at all times. Add vessel detail by pressing Details on same screen.
- Zooming in and out, Master is touch screen, use two fingers like you would on your phone. On the Secondary screen, use the dial.
- Move view orientation on Secondary using the arrows up, down, right, left.
- Remove tracks on Master by pressing Info, Tracks, Clear Active Tracks, Okay. On Secondary, show tracks by pressing Menu, Tracks, User data, select color.
- Add Waypoint on Master by pressing Info, Waypoints, New Waypoints. You may also delete waypoints in the Waypoints screen. You may find plotting waypoints much easier on Navionics.
- Change screen brightness on Home, Settings, System, Sounds and Display, Backlight

We encourage everyone to download and get familiar with Navionics. Navionics is much more user friendly than the Garmin chart plotter on Vita Beata. Having both systems provide a very good look on navigation charting.

AUTOPILOT:

Autopilot must be turned on at the Nav station by switching the toggle on the 12V DC panel. The autopilot gauge is on the front of the binnacle behind the steering wheel. Standby is manual steering, Engage is autopilot control. Engage autopilot to course and adjust direction without disengaging the autopilot by using the -1, -10 +1, +10 to move the boat by 1 or 10 degrees.

Autopilot at helm



Depth, GPS/Speed, Wind

NAVIGATION GAUGES over the companionway:

There are three gauges above the companionway. Left is Compass Course Over Ground and Speed Over Ground in knots. The center is Depth in feet and Water Speed. The right gauge is the wind direction, showing true wind, apparent wind, and then wind angle to the boat. The left and middle gauge views can be changed using the switches in the lower panel.

VHF RADIO COMMUNICATION:

Note: Everyone on board, including children, should know how to use the VHF radio. Always have the VHF on and transmitting when underway.

The VHF marine radio is located above the nav station in the main cabin. Turn on the unit with the toggle switch in the DC panel **after** you have plugged in the white handheld (found in the Nav station) at the binnacle on the portside. Channel 16 is the default setting allowing you to monitor the US Coast Guard (USCG). Leave

the radio tuned to Channel 16 in case an emergency broadcast, a request for assistance is issued by the USCG, or, to call for help in the case of an onboard emergency.

To use the VHF handheld, the first thing you want to do is adjust the squelch. Press the squelch until it squawks then back it down until the squawking goes away. Second, do a radio check before leaving Bellingham Harbor. Turn channel to 80 (SJS monitors this channel) by pressing channel 16 then moving the dial to 80, then hold the side button and say, San Juan Sailing, San Juan Sailing, San Juan Sailing, this is Vita Beata doing a radio check. Take your finger off the side button to wait for confirmation and you are finished. Use the same technique for any VHF calling needs. Increase the volume by pressing the volume button and turning the dial until you reach the volume you desire.

Never use Channel 16 for radio check or a non-emergency situation. In case of an emergency, hail 16 and say: Mayday, Mayday, Mayday, this is Vita Beata, Vita Beata, Vita Beata and state your emergency, location and boat description. (Remember to take your finger off the call button.) The USCG will respond immediately. If they do not respond in 10 seconds, repeat. This is the level 1 emergency tactic used for things like: man overboard, medical emergency, emergency boating situation. For level 2 emergencies, such as: something serious on board or near you is happening or eminent, you are on a collision course with another boat and need to reach the boats helm urgently. In this case, on channel 16, you broadcast Pon, Pon, Pon, this is Vita Beata, Vita Beata, Vita Beata and state your situation. And lastly, level 3 is in case of a lookout or general alert situation. In this case, you broadcast, Securite, Securite, Securite, this is Vita Beata, Vita Beata, Vita Beata and state your situation.

To use the VHF to contact a harbor master when you are approaching a harbor, look in the Wagonner book, San Juan Islands book, or the Gulf Islands book (if you are in the Gulf Island) for the harbor channel. The books are found in the upper portside cabinet just forward of the aft head in the salon. Use the same technique to hail the harbor master for such things as learning your slip number or letting them know you are leaving the slip.

NOTE: There is also a portable handheld VHF radio and charging cradle in the Nav table. If you plan to go ashore, charge the portable handheld in advance and take the radio when going ashore to communicate with crewmates on the boat or to call for assistance. Be sure your onboard crew knows the channel you will be using. This radio is also helpful when anchoring for the helm to communicate to the person at the anchor locker. Remember to switch both VHF units to a non-emergency channel, like **Channels 68, 69, or 72** for non-emergency communication.

14. Engine

Highlights

- Maximum RPM is 2800.

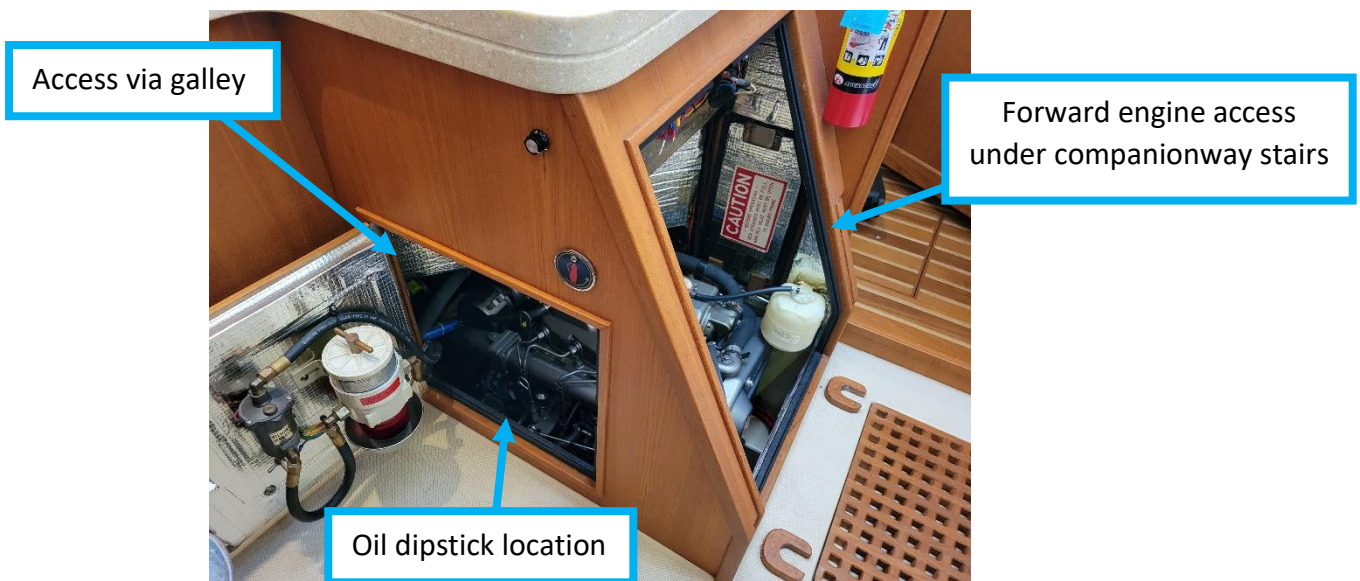
- Cruising RPM is 2000-2500. Comfortably cruise at 6-7 knots at about 2200 RPM depending on current. Idle is around 900 RPM. It's OK, and in fact preferred, to vary engine speed as you cruise. Please try not to exceed the cruising RPM range.
- The fuel tank holds 160 gallons of diesel, providing a considerable range.
- Access to the engine for checking the oil is through a small door in the galley.
- To put engine in neutral to charge the batteries, press the rubber button at the base of the throttle lever and push throttle forward to 1,500 RPM.

Details

Inspecting the Engine

We recommend performing the following inspections each morning before getting underway:

- To remove the companionway stairs, undo each locking pin at the top, and then gently slide the stairs forward to move them and access the front panel. *Look around and below* the engine for any signs of oil or other fluid leaks.



- *Check oil level* – If the oil level appears to be low, call **EPIC YACHT SERVICE (360-726-2899)** for guidance. (Oil levels are checked at each turnaround.)
- *Check the fuel level* – The gauge is under the sole in the salon. It should be showing FULL at the beginning of your charter.
- *Inspect the raw water strainer for debris* – Located in the sole forward of the fuel. In case of an engine overheat alarm, use a flashlight to check for eelgrass clogging the strainer. If clogged, contact EPIC YACHT SERVICE for guidance.
- *Check belt tightness* by deflecting the belt inward with your fingers; it should not depress more than an inch or so.

For longer charters (> 7 days), check the oil level once a week. The dipstick is on the starboard side of the engine and can be accessed from the panel in the galley. There are two (2) oil filler caps, one on top of the engine and one on the left side near the dipstick. Do not overfill, add no more than a cup at a time and re-check the oil level.

The fuel filter is on the left (starboard) side at the front of engine. On the right as you look at engine is the water pump and the blue water lines that pump water from the tanks to the sinks and showers.

Starting the Engine

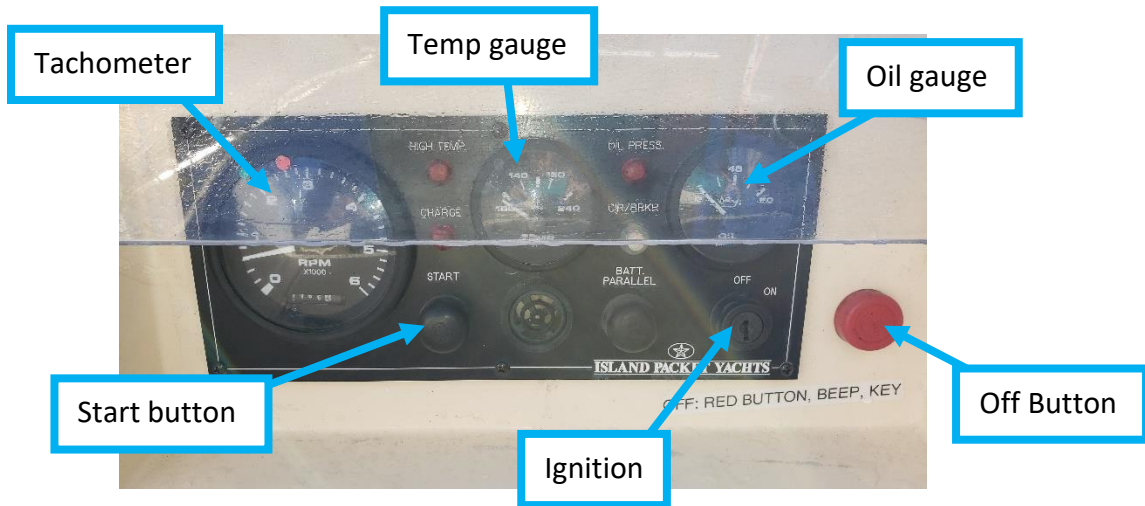
A key is needed for starting the engine.

1. Ensure that the throttle/gearshift is in neutral.

OPERATING TIP: In colder weather or when you want to run the engine at a higher idle speed (e.g., to charge batteries), depress the **red** button at the base of the throttle and push the throttle slightly forward. This disengages the transmission and allows the engine to run at a higher idle RPM. We recommend targeting 1000-1200 RPM for warm-up.



2. Insert and turn the key clockwise.
3. The 2 **red** lights for oil and water pressure will illuminate. A buzzer alarm will sound until the engine is running.
4. Push the black "START" button to the left of the key – hold the button until the engine starts (should only take 2-3 seconds). Do not crank for more than six seconds.
5. Listen/look for water/exhaust discharging from two through-hulls at the swim platform. If water is NOT coming from the exhaust IMMEDIATELY shut the engine down and contact Epic Yacht Services, or SJS.



OPERATING TIPS:

- **Warm-up:** allow 5-10 minutes of warm up before placing a load on the engine. It stresses a diesel engine to be placed under load when cold. Conversely, allowing a diesel engine to idle too long will cause carbon build-up. We recommend targeting 1000-1200 RPM for warm-up.
- **Battery Charging:** disengage transmission and run engine to 1500 RPMs to charge battery. We recommend 1 hour in the morning and 1 hour in the evening to satisfy battery needs.
- **Disengage engine transmission:** push the center button in the throttle as you move the throttle handle forward to increase RPMs. Returning to neutral engages the engine.
- **Engaging the transmission:** when shifting form forward to reverse and vice-versa, pause ~2 seconds in the 12 o'clock neutral position before shifting gears. Shifting smoothly, not erratically, is best for Vita Beata.

Note: we recommend keeping the engine speed under 2500 PRM for most operating conditions.

Shutting Down the Engine

1. Ensure the throttle lever is in the neutral position and allow the engine to idle for a few minutes in neutral to cool down.
2. Press the **red** "OFF" button to the right of the ignition switch, which will stop the engine.
3. The 2 red lights for oil and water pressure will again illuminate after the engine has stopped. A buzzer alarm will sound until the key is turned off.
4. Turn the key counterclockwise, remove, and replace back in the nav station table.

SAFETY REMINDER – Never stop the engine by turning off the battery switch or ignition key. Doing so will seriously damage the diodes on the alternator and the batteries will no longer charge. ALWAYS USE THE RED OFF BUTTON TO KILL THE ENGINE.

Engine Overheating

If the engine overheat buzzer sounds while the engine is running, shift to neutral and look for water coming out of the exhaust at the transom (there should be two streams of water). Call EPIC YACHT MANAGEMENT if there are not two streams of water coming out.

Loss of Oil Pressure or Coolant

If the engine loses oil pressure, the warning buzzer will sound and the oil icon warning light on the tachometer will light up, so check which light is showing red. If it's the oil light, shut down the engine, check the oil level, and contact EPIC YACHT MANAGEMENT.

Bottom line – you are on vacation! If the engine is giving you problems, call EPIC YACHT MANAGEMENT and San Juan Sailing. They have repair teams in the Islands to assist you.

Boat Handling with the Engine

Vita Beata has a full-foil keel, so while she is not as responsive as a fin keel sailboat, she is still able to turn in a narrow radius. The bow thruster should not be used as a substitute for good boat handling skills, but can be used as a great aid in low-speed maneuvering.

San Juan Sailing offers free handling instruction before you leave for your charter if you'd like to practice with *Vita Beata* or just bone up on your boat handling skills. Spending 30-60 minutes practicing getting in and out of the Bellingham marina can be a great experience.

Forward

Because the propeller is just aft of the keel and close to the rudder, the wash from the prop acts on the rudder almost immediately, so not much of a delay should be anticipated when maneuvering in tight spaces. A short burst of throttle will direct water at the rudder, which if already turned, will result in a short, sharp turn with little forward movement – a strategy that can be handy when turning in confined spaces.

Reverse

Prop walk is to PORT in reverse. With the shifter in reverse, Vita Beata will not turn as quickly as a fin keel sailboat. When driving in reverse make short power bursts followed by placing the shifter into neutral. This will negate most of the prop walk. Grip the wheel firmly when in reverse; water pressure on the aft edge of the rudder can push the rudder over to one side, which is hard on the steering mechanism (and your arms).

Docking

- **WE HAVE LOTS OF FENDERS; USE THEM!**
- Vita Beata will not stop quickly when you put the engine in neutral. Like all heavy boats, she will carry way even with the engine in neutral.
- Unless there are high winds, we typically motor in the marina in Idle-Forward, which will produce a boat speed of about 2 knots. About four slips from our target dock, we shift to neutral and glide in. Unless wind is blowing firmly on the bow, docking at 1 knot is about right. Use the engine to stop the boat at the dock, and don't shut down the engine until the vessel is secured at the dock.
- Vita Beata is very beamy (14'). It helps to have someone assist the helm from the bow or the widest point of the beam – otherwise it is difficult for the helmsman to determine whether the boat is too close or too far from the dock.
- Use the Bow Thruster to assist the helm in turning into or out of slips – in calm conditions with no cross current, Vita Beata can be pivoted with the thruster to align with a slip.
- The full foil-keel makes Vita Beata sensitive to cross currents – be aware of currents, particularly if they are running in a direction different from the wind.
- Use a spring line from the STERN cleat as the primary control after stepping ashore – with this line secure, Vita Beata can be aligned in the slip going forward against the line if there is room or using the bow thruster and/or bow and stern lines.
- We always have someone on deck with the roving fender available “just in case.” You can stow the fenders in the lazarette or on the stern rail. Some extra dock lines are located in the starboard cockpit locker.

SAFETY REMINDER: It's difficult for people holding lines on the dock to stop the momentum of a heavy cruising sailboat. It's also a bad idea to use dock lines on a cleat to stop movement; this can result in a sudden swing of the boat and damage to cleats, boat, and/or dock. And please, no crew should jump to the dock. If you can't step off calmly, back-up and try again.

When coming into our docks in strong winds, or if you'd just like a little assistance on arrival, hail “San Juan Sailing” on **VHF Channel 80**. They'll be glad to offer some coaching and/or catch your lines. In fact, most marinas in the Islands will help you if you hail them and ask for assistance. Asking for docking assistance is a sign of smart seamanship.

SAFETY REMINDER –Whenever you are departing or arriving at the dock have a crew member designated as the “**roving fender**” teammate. If you are going to accidentally “touch” a boat or other object, lower the fender to the point of contact.

Using the Bow Thruster

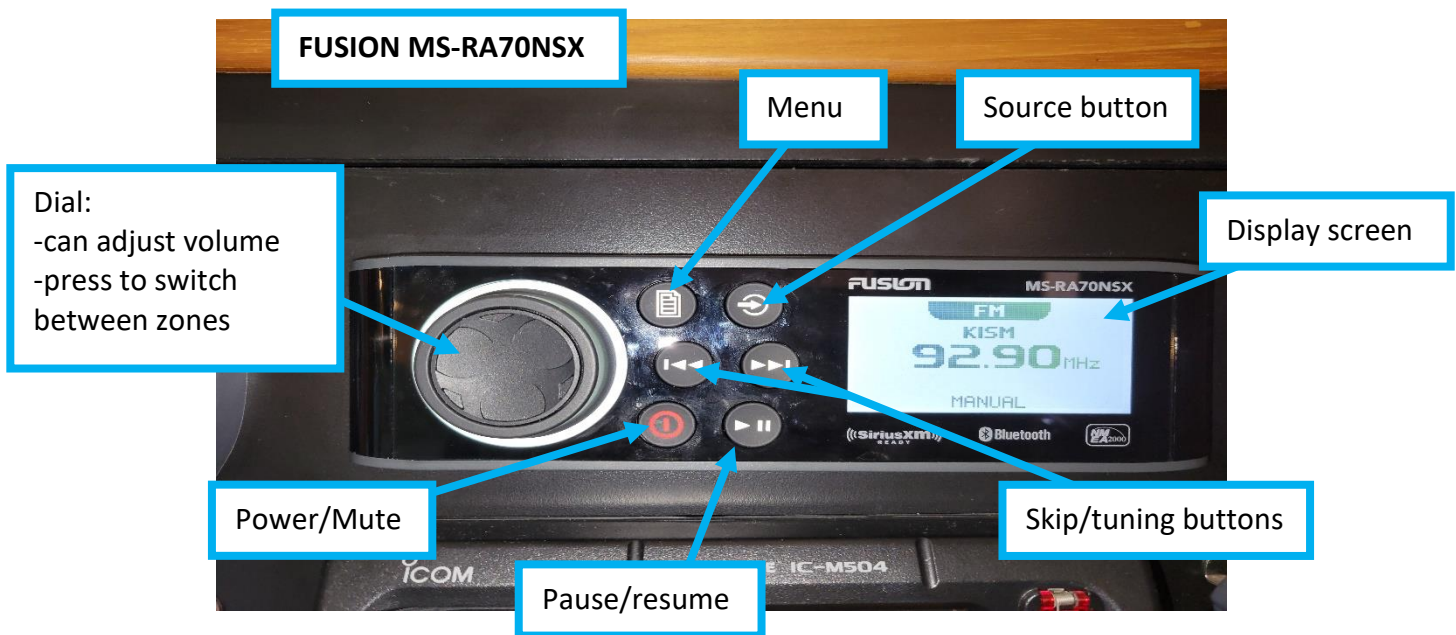
The bow thruster allows you to control bow alignment using short bursts when docking or departing (see Bow Thruster section in these notes for details).

15. Entertainment Systems

Vita Beata is equipped with a FUSION MS-RA70NSX marine entertainment system for audio. Speakers for the system are in the main cabin and in the cockpit. Highlights of the entertainment system include:

- **FUSION audio system:** AM/FM radio, wireless (Bluetooth) connections for audio players (e.g., iPod), and VHF monitoring. Speakers are in the main cabin and in the cockpit. The audio system can be controlled from the FUSION unit in the main cabin.

The FUSION unit is located next to the VHF radio near the Nav station. The system includes AM/FM radio, VHF audio (to monitor radio transmissions using the cabin and cockpit speakers) and wireless (Bluetooth) connections for audio sources such as iPods.



OPERATING TIP: You will need to download the FUSION-Link smartphone app to use the Bluetooth option. If using Bluetooth to connect an audio source, the FUSION unit will appear as **MS-RA710** in the list of available BT connections shown on your device.

More details and instructions can be found in the manuals or online.

16. Fuel

Highlights

- The diesel fuel tank holds 160 gallons (605 liters).
- The fuel gauge is located under the sole in the salon. The ignition must be on to read the fuel level.
- Refuel when gauge reads $\frac{1}{2}$ full.
- Fuel deck fill is on the port deck, near the stern.

When fueling:

Please fill very carefully because it is difficult to tell when the tank is full. You need to put your ear to the tank, not fill "too fast", and be prepared to stop immediately when the pitch rises.

The attendant will give you an absorbent pad to put over the nozzle to prevent spilling until the nozzle is in the fill receptor. Before removing the nozzle, hold the pad on the base of the nozzle to absorb any drops. Make sure you are ready, because reaching for the pads after the spill is too late.

17. Heads and Holding Tanks**Highlights**

- **Only what has been eaten goes in the toilet.**
- Holding tank for the black water is 55 gallons and is not accessible.
- Grey water from the three sinks and the showers is discharged straight overboard and does not drain into the holding tank.
- Both the black water holding (55 gal) and the potable water tank (160 gal) levels can be accessed by the Acu-Gage meter located on the cabinet above trash can). Touch one of the arrow keys to toggle between the two tank levels. There is a high and low level indicator light in the upper left corner of the meter panel. This panel draws very little power and may be left 'ON' all the time.



- Each head has a Vacuflush toilet (similar to an airline toilet) and equipped with a step lever that opens the bowl to dispense waste. When you lift your foot off the lever, the bowl will close and will self-fill with a little bit of water.
- Be sure to switch the "Pump Fuse Block" power ON at the electrical panel at the nav station, along with the switches for HEAD FWD and HEAD AFT.

- Put used toilet paper and feminine products in small plastic baggies and then put them in the trash cans in each head.
- **IMPORTANT: The holding tank indicator DOES NOT WORK.** The tank holds 55 gallons (about 25 flushes). Be sure to pump out every 2-3 days. If the red indicator light goes on and stays on, it is an indicator that the holding tank is full. Empty the tank ASAP.

Details

Please do not put anything in the toilet that has not been eaten. Experienced sailors deposit toilet paper in a wastebasket in Ziploc baggies, not down the toilet because paper tends to clog the hoses. San Juan Sailing provides baggies for each head on board.

San Juan Sailing staff will discuss holding tanks and pump outs on your arrival. Our one plea is this: please don't over fill the holding tank as leaking sewage is most unpleasant! Thank you.

Please note that in U.S. waters it is illegal to discharge holding tanks overboard. While in Canadian waters outside of bays and harbors overboard discharge is allowed. Be sure to check current laws before discharging as the penalties for illegal discharge are very high.

Toilets

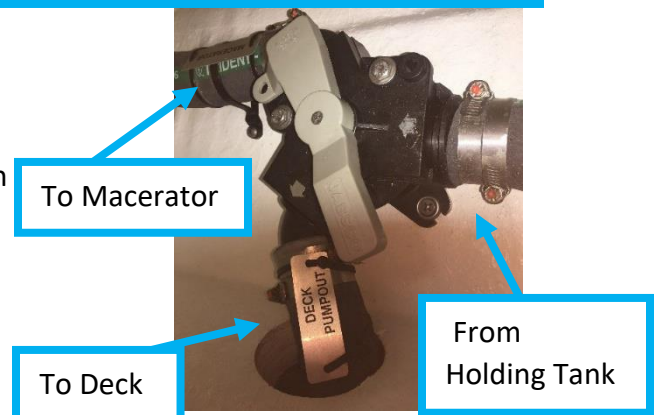
- Lift the handle with your foot to fill the bowl with a bit more water.
- After use, shut the lid, push down on the lever, then release. The bowl will quickly drain and then will fill with a little water after use. This is normal.
- Note: when at sea, please have all crew members sit when using the head. It's safer in a seaway and keeps the head much cleaner, under all conditions.

Emptying the Holding Tank

1. Pumping Out using a Shore Facility:
 - a. Check that the Macerator/Deck selection valves are directing flow to the Deck hose. The valves are located in the salon just aft of the head door below the floorboard. The Y-valve handle should cover the Macerator hose small white arrow. In the picture below the valve is set to pump out from the deck fitting (flow follows the arrows, not the handle).
 - b. The deck cap tool is stowed in the chart table. The waste cap is located on the port deck near the shrouds.
 - c. After pumping out the tank, please refill with about 5 gallons of fresh water through the deck fitting to rinse, and then pump out again. This will help keep the waste system smelling fresh. Thank you!

Holding Tank to Macerator/Deck Y-valve

2. Pumping Overboard using the Macerator (where legal)
 - a. A macerator pump is used to dump black water waste; the circuit is on the DC panel on the nav station. Please be aware of the dumping laws in the US and Canada.
 - b. Check that the Macerator/Deck selection valve (grey-handled Y valve) is directing flow to the



Macerator hose. The valve is located in the forward stateroom just aft of the head door below the floorboard. The valve handle should cover the Deck hose small white arrow. In the above picture the valve is set to pump out from the deck fitting (flow follows the arrows, not the handle).

- c. Open the macerator through-hull valve located in the salon just aft of the forward stateroom door below the floorboard and valve under the forward cabin floorboard.
- d. The Macerator pump circuit is activated by flipping on the Macerator breaker on the DC panel, then flip on a second switch located adjacent to the macerator through-hull valve under the floorboard.
- e. Listen to the pitch of the macerator pump (the pump is located near the Y-valve located in the forward stateroom just aft of the head door below the floorboard – remove the access cover so you hear the pump sound). **NOTE:** When the macerator is pumping blackwater you will see brown colored water trailing behind the center of the boat. When this stops, the tank is empty. When the tank is empty, the macerator pump should be turned off. Turn off the breaker on the DC panel.
- f. Close the macerator through-hull valves and return the Y-valve handle to the deck pump-out position.

Macerator Through-hull Valve and Pump Switch



18. Heaters (Cabin)

- Webasto hydronic with digital thermostat located above the inverter control at Nav station.
- Individual fan speed controls can be found in each heating zone.
- Turn on power to heating unit at DC panel (CABIN HEATER).
- Set temperature at thermostat.
- Fans need to run to heat zones – the heater needs to run for a few minutes before you will feel hot air coming out of the fans.
- Not efficient to run all night, noise wakes light sleepers.
- Also heats hot water tank after a 30-minute run.
- Be sure the dinghy is not tied to the Starboard cleat when you are running the heater.

19. Lighting

- Turn the cabin PORT, MID, and STBD switches on at the DC panel.
- The individual controller for the galley overhead lights is on the starboard side of the companionway.
- The controller for the salon overhead lights is above the trash receptor on the port side of the sink cabinet.
- The lighting fixtures in the salon can be manually turned on at each source.
- The controller for the forward cabin is on the side of the port-side cabinet. The controller for the aft cabin is on the side of the port side-cabinet.
- The main head light switches are on the cabinets below the sink. The secondary light in each head is below the upper cabinet in the forward head and on the stern facing wall in the aft head. These lights are turned on by sliding the light lens to the right.

20. Refrigerator and Freezer

- Ice box circuit breakers are located on the DC electrical panel.
- Check to be sure there is sufficient battery power to operate the refrigeration equipment all night.
- Power to the two refrigerator/freezer compartments is provided by the "ICEBOX LEFT" and "ICEBOX RIGHT" circuits on the DC panel in the nav station.
- To open the refrigerator/freezer lids, push down on the lid to release tension, and then turn the latch to the right.
- The gas struts will then raise the lids and hold them in an upright position.
- When closing, push down on the lid to release tension then rotate the latch to the left.
- To set the temperature in either refrigerator compartment, use the digital ITC-1000F temperature controllers in the galley.



OPERATING TIP: Running both units in the "refrigerator mode" with a setpoint of 40 degrees F will create a lower drain on the battery bank. This will decrease the need to run the engine to recharge the batteries while at anchor.

For operating instructions go to: [Inkbird-temperature-sensor.pdf \(waterheatertimer.org\)](#)

21. Sails and Rigging

- Cutter rigged with in-mast furling mainsail, furling Genoa headsail and furling self-tacking staysail.

Important with in-mast furling mainsail:

- Unfurl headsail (Genoa) first **on starboard tack**, before unfurling the mainsail. Having the headsail deployed first straightens the mast so that the mainsail unfurls and furls more smoothly.
- Furl the mainsail **on starboard tack**, before furling the Genoa
- Be sure to have slight tension on the outhaul when furling to ensure a tight wrap in the mast and on the headsail and staysail sheets.

General

- **IMPORTANT: Before you begin sailing, close the through-hull under the sink in the aft head. If you do not do this water will come into the boat while under sail.**
- The first step, **ON STARBOARD TACK** deploy sails is to unfurl the Genoa. Release the furling line on the starboard side of the cockpit and pull the portside Genoa sheet.
- Second step is to unfurl the main. Open the mainsail inhaul and outhaul clutches. While keeping light tension on the inhaul, start pulling the outhaul, ultimately wrapping it on the manual winch and using the winch handle to winch the clew of the sail into proper position on the boom. The clew should be in the vicinity of the white tape line at the end of the boom.
- Under most wind conditions, the next step is to unfurl and trim the staysail. Release the furling line clutch on the port side of the cockpit and pull the staysail sheet.
- Balancing Vita's sail plan under different wind and weather conditions is more art than science. As the wind picks up, you may find that the staysail is not benefiting you upwind and can be furled. If you feel overpowered, try reefing/furling the mainsail. Likewise, you may want to re/furl the Genoa. Overpowered is when it becomes difficult to balance the boat and a struggle to stay on the tack.
- Sailing with less than 8 knots of wind with this heavy boat is frustratingly slow. At wind speeds over 15 knots or heavy gusts conditions, you want to think about reducing the sail area. Start with furling the staysail, then reefing the main, then reefing the Genoa. Better to reef early!
- NOTE: When taking the Genoa, it is important to ease the sail at arm's length and then let the sail backwind before releasing it fully. If you don't do this, the big Genoa can get hung up and not pass through the other side of the boat. The backfilling is crucial in tacking in heaving winds.
- Hatches and port lights must be closed while underway.
- Clutches must be flipped up and rotated all the way forward to release the lines.
- The two primary winches are electric. They are operated by locking the line in the self-tailer and then pressing the button on the deck beside the winches. **CAUTION: Electric winches are extremely powerful – use with due care to protect fingers and rig!**
- There are two winch handles stowed in a bin in the companionway (please don't drop these because they are heavy and will damage the gelcoat).
- The engine transmission should be left in neutral while sailing; the propeller will freewheel and may produce an audible sound when sailing at speeds of 5 knots or greater.
- The headsails can be furled on any point of sail.

Heavy Weather Sailing

- We generally furl the staysail completely first above 15-18 knots, then reef the mainsail, and then the Genoa. If there is still too much sail, then completely furl in the Genoa and then unfurl the staysail to balance the boat.
- Shorten sail when the boat begins to feel overpowered (in general, if you think you might need to reef, you probably should).
- The moderate draft full-foil keel will provide better tracking and less leeway if the boat is more upright, so if there is excessive heel on the boat (more than 10-15 degrees), reducing sail will improve handling performance without sacrificing speed.
- Use the helm to judge the balance of the boat. You should not have to use excessive strength to handle the helm.

22. Showers and Sumps

- Turn on the Pump Fuse Block at the DC panel.
- While showers are available for convenience, it is always preferred given boat water and holding tank capacity to shower when at port in harbor facilities.
- The hot water tank holds 11 gallons.
- Shower drain pump circuit breakers are at the Nav station; drain switches in showers must be turned on in the showers and run in 1-2 minute intervals to successfully manage the water drainage.
- The water heater will get the water hot after about 20 minutes. There are three ways to heat the water: 1) on shore power with the Water Heater switch on; 2) with hydronic Cabin Heater on; and 3) running the engine for 20 minutes.
- If the shower drain pump is running continuously when the water in the head is not running, or if the drain pump does not run, the pump strainer may need to be cleaned. Call Epic Yacht Services or SJS.

Note: shower sumps can become emergency bilge pumps if water rises to that level.

23. Stove, Oven and Microwave

Highlights

- The stove/oven are propane-fired.
- The microwave oven is plugged into a 120V outlet in the galley.
- The propane solenoid switch is on the DC panel at the nav station and the LP switch is on the panel below the sink.
- There are two 2.5 gallon steel propane tanks in the cockpit propane locker, under the port helm seat. The locker is vented overboard for safety.
- The San Juan Sailing staff checks these tanks weekly to assure that you don't run out.
- For safety, we turn off the solenoid switch after stove use.
- The microwave should only be used when connected to shore power. It will drain the batteries very quickly.

- Caution: propane is heavier than air. If a leak is detected, extinguish all flames and open all hatches and doors.



Details

Lighting a Stove Burner:

- Make sure the propane tank hand valve is open and the solenoid valve switch is on.
- Make sure the gimbal lock at the bottom of the stove/oven is secured. That way, if someone leans on the stove or grabs the oven handle, it won't tip and spill pot/pans on the cooktop.
- Light a BBQ lighter and hold the flame near the burner edge.
- Push the corresponding burner temperature knob in and turn to the "Light" (flame symbol) position. Note that if the BBQ lighter won't light you don't need a flame...just the spark.
- After the burner lights, hold the knob in for a few seconds to heat the safety "thermocouple", then release.
- Turn the knob to the desired heat level.

Lighting the Oven Burner:

- Make sure the propane tank hand valve is open and the solenoid valve switch is on.
- Make sure the gimbal lock at the bottom of the stove/oven is secured. That way, if someone leans on the stove or grabs the oven handle, it won't tip and spill pot/pans on the cooktop.
- Open the oven door and using a flashlight locate the burner pilot at the bottom right side of the oven.
- Light a BBQ lighter and hold the flame near the pilot.
- Push the oven temperature knob in and turn to 300 degrees. Note that if the BBQ lighter won't light you don't need a flame...just the spark.

- After the burner lights, hold the knob in for a few seconds to heat the safety “thermocouple”, then release.
- Turn the knob to the desired heat level.

Microwave:

- Located on starboard side of galley, forward of the stove.
- Microwave should ONLY be used when on shore power, otherwise it will drain the batteries quickly.
- Make sure the OUTLETS switch on the electrical panel is ON.

24. Water

Highlights

- In line carbon water filter yields bottled-water quality in galley.
- One water tank totaling 160-gallons, located in the middle of salon under the cabin sole.
- Water pressure switch (“Pump Fuse Block”) is on the electrical panel.
- Tank level gauge is on the Acu-Gage meter located on the cabinet above trash can in galley.
- Deck fill is located on the starboard side. Be sure to use the hose in Vita Beata’s port locker and NOT the hose at the pump stations.
- Hot water is produced by two methods: 1. On shore power with Water Heater switch on; 2) with hydronic Cabin Heater on; and 3) running the engine for 20 minutes. The water should stay hot for approximately six hours. See details below.

Details

Water Pressure Switch:

Please turn off the water pressure switch when the system is not being used (note: the water pressure needs to be on for the toilets to flush). If the tank runs dry, the pump will run continuously and burn out. You will likely not hear the pump running over the sounds of motoring or sailing.

Hot Water Heater:

The hot water heater is located beneath the aft part of the starboard settee in the salon. The hot water tank holds 11 gallons.

- It takes about 30 minutes of running the engine under load to get the water hot. **CAUTION: Engine heated water may be scalding hot. Please BE CAREFUL!**
- The Webasto hydronic Cabin Heater can be turned to heat the hot water tank. It will take about 30 minutes.
- When on shore power, you can heat your water using electric coils by turning on the “WATER HEATER” switch on the AC panel.

NOTE: State parks do not have pressurized water to refill tanks, but all points of civilization do.

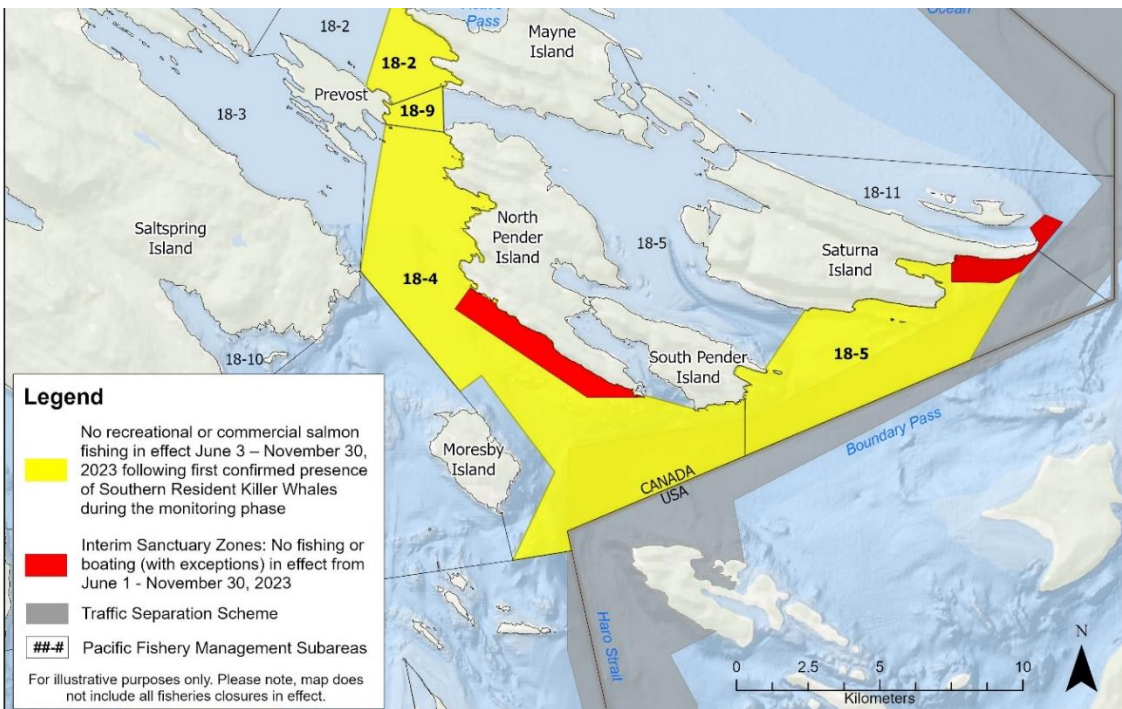
We hope this information helps. Have a great time!

APPENDIX B

Being Whale Wise

Our local Killer Whales are a wonderful part of the local family. But they are having a difficult time surviving due to declining salmon runs. These whales use echo location to find and catch their food. Therefore, noise pollution from boats and ships make it harder for them to thrive. In an effort to decrease human impact both the Canadian and US governments have implemented rules. We provided you a summary of these rules in the packet you receive when you arrived and there is more information in section 10 of the white reference book onboard Vita Beata. In general, stay at least 400 yds. away from the whales. Sometimes they come to you, if this happens shutdown the engine and turn off the instruments (assuming this is safe to do). They can hear the pings of the depth sounder – this is why we have you turn off the instruments.

In Canada they have gone a step further by creating some zones where boats are not allowed. This further improves the environment for the whales. The red areas in the diagram below show these zones.



And here is an example of what they look like on Vita Beata's chart plotter(s). The red lines have been added to help point out the dashed lines, which are what you will see on the plotter.

Note this is just to the west of Bedwell Harbour, so on your way in or out of there be sure to avoid this area.

