

Vessel Operations Manual

Imagine Version 1.2

WARNING: Failing to follow these operational procedures may put you and others in danger. Read all procedures prior to operating the vessel and review the procedures before operating the equipment on the vessel.

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Auxiliary Engine Operation

Battery switches

NOTE: The battery switches are ON when in the horizontal position (↔) and OFF when in vertical (↑).

Port side battery switches (located on forward end of port aft berth under step)

Switch	Function	Position
House (red)	House battery bank	Normally ON
Engine (red)	Port Starting battery	Normally ON
Left (black)	Ground connection	Always ON

Starboard side battery switches (located on forward end of starboard aft berth under step)

Switch	Function	Position
Right (red)	Cross connect	Normally OFF. ON will connect to port batteries, use only for starting engine if battery is depleted. Either engine can be started when cross connected. Turn off when engine is running.
Middle (red)	Starboard Starting battery	Normally ON
Left (black)	Ground connection	Always ON

Starting engine

WARNING: Always check oil level in each engine before starting. Refill oil if low.

- Momentarily press the power (lowest) button on engine panel by helm to turn power on
- Wait till buzzer sounds
- Press start button to start engine

NOTE: If engine does not start, wait 10 seconds and repeat as described above.

- When engine is running, check that cooling water exits out of the exhaust on the side of the vessel.

WARNING: If cooling water is not exiting the exhaust, turn engine off, investigate and correct the problem, then restart engine.

Stopping engine

- Press and hold "Stop" button till engine stops
- Press and hold power (lowest) button till buzzer stops

Refueling

The two Yanmar diesel engines each have a separate fuel tank with their own fuel fills located on the inside portion of the hull transoms. The caps are polished stainless steel and are labelled "**Diesel**".

- Loosen cap with the key located in the chart table and remove
- Refuel with **DIESEL FUEL** taking care not to cause overflow
- Re-insert fuel cap and tighten it with the key
- Repeat for other fuel tank

WARNING: Add fuel very slowly, the overflow air vent is prone to overflow fuel.

Pumps, water faucets, showers and heads

Bilge pumps

Electric bilge pump operation

- Press "BILGE PUMP" (port and/or starboard) switch the the left of main circuit breaker panel, the electric bilge pump will turn on and stay on, until turned off

WARNING: DO NOT RUN BILGE PUMP DRY for extended periods, THIS WILL DAMAGE THE PUMP.

- Turn "BILGE PUMP" switch OFF when bilge is empty (the pump will sound differently than when pumping water)

Engine compartment electric bilge pump operation

- Turn on "BILGE PUMP" (port and/or starboard) circuit breaker, the electric bilge pump will turn on and stay on, until turned off

WARNING: DO NOT RUN BILGE PUMP DRY for extended periods, THIS WILL DAMAGE THE PUMP.

- Turn "BILGE PUMP" switch OFF when bilge is empty (the pump may sound differently than when pumping water)

Manual bilge pump operation:

- Locate and remove bilge pump handle located on the inside wall of the port cockpit lockers.
- Open one of two white plastic covers in the middle of the vertical part of the cockpit seat.
- Insert handle into hole.
- Pump up and down with handle.
- Repeat for other hull

Fresh Water System

Faucets

There are hot/cold water faucets in each head, the galley, and at the port transom. To operate:

- Turn "WATER PUMP" circuit breaker ON
- Turn faucets on/off as at home

WARNING: Hot water can be VERY hot. Ensure that water is not too hot before using. Supervise your children.

Switching water tanks

Imagine is equipped with two 80 gallon water tanks which are full when you start your charter.

If you run out of water in one tank, turn the valve located behind the salon forward seat to the other tank. Run water until air has cleared the lines.

Filling water tanks

The water fill caps are located on the foredeck, one on each side. The caps can be loosened with the key located in the chart table.

How to make hot water

Simply run the starboard engine for a while. How long depends on the outside temperature and when the engine was last run. This will produce about 10 gallons of very hot water. Keep running the engine and it will keep warming the water.

NOTE: Running the engine will also charge the batteries.

WARNING: Hot water may be VERY hot, supervise your children.

Shower drain pump operation

- Make sure "CONFORT" circuit breaker is ON
- Press small black switch in head compartment by sink till water has drained from under floor grate.

Head Operation*

1. Lift lid
2. Flick small lever to the left
3. Pump a few strokes with big handle to fill water into bowl
4. Sit down and do the business
5. Toilet paper is in cabinet under the sink
6. Pump up and down with big handle with small lever still to the left 2-3 times or until contents are gone
7. Flick the small lever to the right
8. Pump with big handle til bowl is empty
9. If the pump gives resistance: Flick small lever back to left and then to the right again and pump again till empty
10. There is a brush behind the commode in case additional bowl cleaning is required

NOTE: Do not put anything into the head that you have not already eaten or the toilet paper provided.

*) The bathroom on a boat

Waste Pump Out

The vessel is equipped with a holding tank for each head. The pump-out caps are located on the side deck on each side and is labelled "WASTE", the key to open the cap is located in the chart table.

Many marinas provide pump-out for a minimal fee.

If you are on the West river or Rhode river you can call the "Honey Dipper" to schedule a pump-out boat, they will come to the boat and do the pump-out. Their number is 410-940-3754. Sometimes they need a couple hours notice so call them as soon as you can.

Liberty Marina provides pump-outs at the fuel dock where you can also fill the water tanks.

Electrical System

220V System

The 220V system consists of 220V outlets in each cabin and two in the salon when connected to shore power.

The outlet at the chart table is active when the 2000W inverter is on. The inverter can be used while underway. Press the orange button so that it lights up to energize the outlet.

The 220V outlets, with the supplied adapters, can be used to charge phones, laptops, and run most electronics. **Please check your device to make sure: It should say "Input: 100V-240V" or something to that effect on the charger for the device.**

NOTE: The inverter uses electricity from the batteries which must subsequently be re-charged.

NOTE: The inverter supplies the fridge which uses a LOT of power so always run the port engine when fridge is on.

Shore power operation

- Plug black shore power cable into a **250/125 Volt 50 Amp** shore power outlet on the dock

NOTE: If red "REVERSE POLARITY" LED is illuminated, inquire with shore power provider (marina) and have situation corrected.

- Turn "220V AC OUTLETS" circuit breaker ON if desired
- Turn "BATTERY CHARGER" circuit breaker ON if desired

WARNING: DO NOT SWIM AROUND ANY BOAT THAT IS CONNECTED TO SHORE POWER.

Anchoring

Imagine carries two anchors: One on the bow anchor roller and one in the port forward hold. Generally one anchor is sufficient, but the additional anchor is available if you need to effect a Bahamian moor or need a different anchor for the bottom conditions.

Anchor Windlass Operation

NOTE: Port Engine must be running to operate windlass.

The electric windlass is located in the starboard hold amidships along with the anchor rode.

The windlass remote control is located inside the front starboard salon window.

The windlass is intended to raise the anchor and rode, not to move the boat forward by pulling on the anchor. Please have a helper motor the boat forward slowly while you raise the anchor and rode with the windlass.

NOTE: To break the anchor loose, it may be necessary to shorten the anchor line/chain so that it is more or less vertical and then "run over" the anchor with the boat. This can be the case if the anchor has buried itself very deeply.

The windlass circuit breaker is located in the port aft cabin near the battery switches. If the circuit breaker lever is down the circuit breaker has tripped. Press red button and push lever back up. It might be necessary to wait a minute to let the breaker cool down.

There is 100 ft of anchor chain and 100 ft of anchor line.

The bridle can be connected to the anchor chain to center the boat on the anchor and lessen the tendency to "sail" at anchor.

Chesapeake Bay Thunder Storms and Anchoring

The thunderstorms on the Bay occur with regularity and while the thunder and the lightning are impressive it is the sudden increase in wind speed that the sailor should be concerned with: Always be alert to darkening of the sky, change to colder temperatures and approaching thunder. When a thunderstorm hits, the visibility may also decrease drastically due to the rain. Many thunderstorms occur in the evening and at night while you are anchored.

WARNING: Make sure your anchor is set securely. Make sure you have enough rode out. Be aware of other boats that are close by.

WARNING: Never anchor close to boats on moorings, they swing differently than anchored boats and might make contact with you and your security deposit.

Galley

Refrigerator Operation

There are two cold-plate refrigerators, one top loading and one front loading. The top loading is roomy and very efficient in that cold air stays inside the refrigerator when the door is open, the front loading is just roomy.

Refrigerator operation while under way:

- Turn port engine on
- Turn circuit breaker labeled "INVERTER" ON (DOWN position). This circuit breaker is located in the locker under the circuit breaker panel. Look to the right inside locker.
- Turn inverter ON, switch is on the panel at the chart table
- Adjust thermostat above fridges to 0 C (32 F), re-adjust later if fridge temperature is not as desired.

NOTE: Due to the high current draw from the electric winch and the windlass the low voltage alarm on the inverter might sound while operating either the winch or windlass. If this happens, turn off the inverter until done using these.

Refrigerator operation while on shore power:

- Turn circuit breaker labeled "SHORE POWER" ON (UP position). This circuit breaker is located in the locker under the circuit breaker panel. Look to the right inside locker.
- Adjust thermostat above fridges to 5 C (37 F), re-adjust later if fridge temperature is not as desired.

NOTE: Items near the cold plate and at the bottom of fridge will get much colder (might even freeze) than if placed up and away from cold plate.

NOTE: Keeping the fridge full and limiting the time the door is open will keep the fridge colder and will use less electricity from the battery.

NOTE: If the refrigerator water circulation pump becomes noisy, or fridge is not cold, clean out the strainer under the starboard mid side sole. At times debris or jellyfish clog the strainer.

Foot operated water pump

There is a foot operated fresh water spigot at the sink in the galley. This spigot is operational even if electrical power is lost.

To operate:

- Turn small lever on spigot counter clockwise
- Press and alternately release foot pedal at base of sink.
- When done, turn small lever on spigot clockwise and keep it there when using the electric pump assisted faucets.

Stove and oven operation

- Ensure that the propane tank handle is OPEN.
The propane locker is inside the starboard forward cockpit locker.
- Turn the "LP GAS" switch, located in locker under stove, ON
- Light burner(s) on stove with barbecue style lighter or a match while pushing the desired knob inward and turning at the same time.
- Keep the knob pushed in for about 10 seconds, then let go.
- The oven may be lit by pushing the far left knob inward and turning at the same time while inserting the lit lighter into the hole at the bottom right inside the oven. You will hear a slight "whoosh" when the oven burner lights. As above, keep the knob pushed in for about 10 seconds, then let go.

Propane Barbecue operation

- Remove one propane tank and the propane hose from the forward starboard cockpit locker
- Attach hose to regulator on barbecue
- Attach other end to propane tank, this end is threaded in opposite direction
- Turn on propane on tank
- Check/listen for leaks
- Open propane top
- Start gas flowing by pushing down on regulator knob and repeatedly push starter button till flame appears. If grill fails to light, wait a minute and try again.
- Turn regulator button to desired heat level
- Grill will be ready very shortly
- There is a grill brush in the propane locker to clean the cooking surface if the grill
- To turn grill off, turn regulator back from the start position and wiggle it till it pops up
- **TURN PROPANE OFF ON BOTTLE**

Switching propane gas tanks

There are two propane tanks on board; one at a time is connected to the stove. If the active tank becomes empty, use the following procedure to switch to the second tank:

WARNING: Extinguish all open flames and avoid creating any kinds of sparks on the boat while performing the propane tank switch.

- Turn all stove burners and oven OFF
- Turn the "LP GAS" switch OFF in locker under oven
- Locate and open the propane locker in the forward starboard cockpit locker
- Locate and remove the propane wrench from the Yanmar engine tool in locker
- Turn the propane off on the empty tank by turning the handle clockwise.
- UNSCREW the propane fitting from the empty tank, with the wrench, by TURNING CLOCKWISE (**NOTE: THIS IS OPPOSITE OF A REGULAR NUT OR BOLT**).
- Remove the empty propane tank and replace it with the full tank, place the empty tank back into the propane locker.
- SCREW IN the propane fitting by hand by TURNING COUNTER CLOCKWISE, finish by tightening the fitting with the wrench.
- Turn the propane on again by turning the handle clockwise. You will hear a slight

"whoosh".

- Check for leaks by listening carefully, smell for gas, or applying soapy water and checking for bubbles.

WARNING: If a propane gas leak is detected, immediately turn the gas off at the bottle in the propane locker in the starboard cockpit locker and check that the propane fitting is seated correctly and that it has been tightened with the wrench. If the leak persists, leave the propane off and do not use it until it can be repaired by a professional technician.

Sailing and Motoring

Reefing

When to reef

WARNING: This is a direct quote from the Lagoon owner's manual: "Never have 100% genoa out and 2 or 3 reefs in the main, this may cause the mast to break"

Always reef if you feel it is time to reef. If you feel the boat is going too fast, is over powered or the steering feels ineffective then it is time to reef.

NOTE: It may be prudent to reef before leaving a protected anchorage during high winds. The wind speed out on the water may be considerably higher than in the creek or marina you are leaving. It might be time to reef before hoisting the sails.

NOTE: When going downwind the apparent wind is less than the true wind, be aware of this when changing course from downwind to a reach or upwind. It might be time to reef before turning.

General Reefing procedure

The idea is to reef in a balanced way, reef the main a bit and the foresail a bit, as wind speed increases reef the main and the foresail some more.

The following table is the Lagoon reefing guide by wind speed:

Wind speed (Knots)	Genoa (%)	Main	Notes
0-15	100	100%	
16+	100	1 reef	
20+	1st reef (furl to first line on genoa)	1 reef	Locate possible sheltered location in case the weather deteriorates further
26+	2nd reef (furl to second line on genoa)	2 reefs	
35+	Furl genoa even more	3 reefs	Seek sheltered waters

	(20%)		
45+	20% or less	Down	Batten down the hatches

Chesapeake Bay Thunder Storms

The thunderstorms on the Bay occur with regularity and while the thunder and the lightning are impressive it is the sudden increase in wind speed that the sailor should be concerned with: Always be alert to darkening of the sky, a sudden change to colder temperatures and approaching thunder. When a thunderstorm hits the visibility may also decrease drastically due to the rain. If a thunderstorm is approaching, it is prudent to reef down before it hits. Make sure you know where you are and pre select a location to seek shelter.

Electric Winch Operation

Imagine is equipped with an electric winch on the port inner side with two buttons next to the line organizer bag.

The electric winch is handy for raising the main.

WARNING: Be careful that no lines are hung up or battens tangled up in the lazy jack lines.

WARNING: Make sure the sail cover is unzipped all the way.

To operate winch

- Start port engine
- Remove winch handle if inserted
- Wrap line around self tailing winch like a manual winch
- Press right button for fast operation to pull line in
- Press left button for slow operation to pull line in
- Release clutch to let line out manually

Navigation Lights

Steaming light

Use this light combination when operating under engine power during darkness or reduced visibility.

- Turn "NAVIGATION LIGHTS" circuit breaker ON
- Turn "STEAMING LIGHT" circuit breaker ON

Sailing lights

Use this light when operating under sail during darkness or reduced visibility.

- Turn "NAVIGATION LIGHTS" circuit breaker ON (this activates red/green forward light)

Anchor light

- Turn "MOORING LIGHT" circuit breaker ON

Safety Gear and Documentation

The vessel is equipped with all US Coast Guard required safety equipment

Equipment	Location
Adult and junior Personal Flotation Devices (PFDs)	Port hold amidships and under forward salon seats
Throwable flotation device	One on port aft rail, 2 additional to be kept in cockpit
Flares	In chart table seat
Flare gun and safety kit with flag and mirror	In chart table seat
Fire extinguishers	One next to steps in salon on starboard side, one in each aft cabins
Horn	In chart table seat
Boat and dinghy registration	In chart table drawer
Oil Pollution Placard	One in each engine compartment
Garbage Placard	Located inside of galley sink locker
Marine Sanitation Device	One in each head/shower compartment

Chart Plotter

Start-up

The vessel is equipped with a tablet with built-in GPS running Navionics navigation software. To operate follow the instructions below:

- Plug tablet into USB "cigarette" lighter plug
- Turn tablet on (top left edge long ways)



- Start "USA HD" app on middle of home screen, similar to this
- Make sure the vessel position is shown on the chart

Please keep tablet out of rain, spray and take it inside at night.

Basic Navionics app operation

The Navionics app is very easy to operate:

- To move to boat location, tap on bottom left arrow.
- To zoom, use "+" or "-" buttons on top right or use two-finger pinch.
- Routes may be found under "Menu" -> Archive -> Routes

Dinghy operation

The inflatable dinghy is equipped with a **TWO STROKE** outboard motor which requires gasoline mixed with two-stroke oil in a 50-1 ratio.

There are two oars for use in case fuel runs out or of motor trouble.

- Always use the dead-man switch cable when operating the dinghy
- Don't flood the motor with fuel when it is warm, don't use the choke when starting a warm motor. Pretty much only use choke when starting motor for the first time on any given day
- Always bring and wear a PFD for each person (or pet) on board
- The dinghy is rated for four (4) average adults
- Bring dinghy lights when operating after dark, they are located in the basket next to the chart table on Imagine
- The dinghy inflation pump is located in the locker on the dinghy
- The dinghy may be towed or placed on the davits
- There is a red spare fuel jug under the starboard transom steps

Speedometer Paddle Wheel

The paddle wheel for measuring the speed through the water is located under the sole under the bed in the port forward cabin. It must be inserted and aligned correctly in order to work.

- Lift the mattress and board under it
- Hop into space under bed
- Lift the small board on the floor
- Unscrew the smaller cap on the plug
NOTE: Only a small amount of water should enter, but be prepared for a small fountain
- Insert the paddle wheel plug with the arrow on top pointing forward
- Confirm that the plug is fully inserted and that it will not rotate
- Carefully screw the cap back on
- Confirm that there are no leaks
- Replace small floor board
- Hop out and replace larger board and mattress

NOTE: It is a challenge to keep the paddle wheel unfouled.

Miscellaneous Information

Liberty Marina Information

Liberty Marina has a fuel dock with pump-outs and water. They also sell ice and a few snack items.

Phone Number: (410) 266-5633

VHF: Channel 16

Shower facilities Code: 0308

Other useful numbers

Annapolis Catamaran Charters: 410-941-9463

Annapolis Water Taxi: (410) 263-0033

Annapolis Harbormaster (for moorings): (410) 263-7973