Imagine

Notes from the Owners

Welcome aboard! We're absolutely delighted to have you as our guests. We know you will enjoy this boat we love so much.

We have appreciated the livability and performance of Jeanneaus from prior boats and have enjoyed chartering in the San Juan and Gulf Islands for the last 20 years. Imagine joined the charter fleet as a brand-new boat just a few years ago, especially selected by San Juan Sailing for her great handling characteristics and beautiful design. Her twin helms and double rudder steering make her very responsive, and the modern square-top sail design maximizes the drive from the main, making a large jib unnecessary and improving the ease of sailing to windward. The electronics are state-of-the-art and very flexible, including radar which is integrated with the chart-plotter.

Having tried a number of different charter companies around the San Juans, when we discovered San Juan Sailing, we were blown away by their service and attention to detail. A very thorough orientation to cruising the area was combined with careful introduction to each boat we sailed over a number of years and led us to become owners with the company. It was no surprise that in 2009, Sail Magazine rated San Juan Sailing the best Charter Operator in the Pacific Northwest.

There are many reasons why the Jeanneau Sun Odyssey 349 was our choice for cruising in these lovely Northwest waters. We wanted a boat easily handled by two people, but spacious enough for up to six guests. From the bright and spacious salon, the roomy, standup shower separated from the head, the spacious cockpit with dual helms, and the roomy fore and aft cabins, to the storage and excellent galley, there is much to like about this boat! But looks are not her only virtue. She has excellent sailing characteristics in both heavy and light winds.

This boat is a lot of fun and we're excited to have you on board. We trust these owner's notes will get you on your way quickly and easily. Thank you for taking great care of our boat.

Have a wonderful trip, and fair winds and following seas!

Bill Hammond and Nancy Osborne
Dunham Edward Management LLC

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1. Vessel Information

Washington State Parks Annual Permit Decal
Located on the cabin exterior, port side aft.

U.S. Customs Re-Entry Decal
Located at the starboard helm behind the wheel.

Vessel Official Number – 1286912
Located in the bilge on the forward stringer. Lift the floorboard at the aft end of the dinette table. Look for 3” high characters. (The same number as shown on the Coast Guard Certificate of Documentation found in Section 5 Documentation of the Charter Guest Reference Manual.)

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.

2. Vessel Specifications

Year	2017
LOA	33’ 11”
LWL	30’ 10”
Beam	11’ 3”
Draft	6’ 3”
Displacement	11,773 lbs. (dry)
Mast height above WL	50’ 7”
Engine	Yanmar 21 HP
Fuel capacity	34 gallons
Water capacity	54 gallons
Holding tank	21 gallons
Number of cabins	2
Number of heads	1
MMSI number (AIS)	368138580

Top-load refrigerator	19” W x 14” D x 21” H
V-berth mattress	6’ 6” L x 5’ 6” W at head (24” at feet)
V-berth headroom	6’ 2”
Aft berth mattress	6’ 6” L x 5’ 6” W
Aft berth headroom	6’ 2”
Salon headroom	6’ 4”
Shower headroom	6’ 4”

3. Nuances

There are a few things about Imagine that are not necessarily typical for a boat in her class. These are the things that may require special attention during your charter, but that we hope you will find to enhance your charter experience overall. They are listed here to help you plan your charter.

Lithium House Battery

Imagine has a LiFePO4 house battery that can safely be discharged much more deeply than traditional Lead Acid batteries. See **8. Batteries and Charging**.

Dual Rudders

Imagine has dual rudders for better handling while heeling under sail. This needs to be accounted for while docking, as prop thrust is not deflected at all by the rudders. See **12. Docking and Boat Handling**.

Performance Mainsail

Imagine has a high performance full battened mainsail with a square top takes more attention to hoist between the Lazy Jacks. See **21. Sails and Rigging**.

No Jib Tracks

Imagine provides a system to easily adjust the jib sheeting angle from the cockpit using low friction rings and barber haulers, rather than traditional jib cars and tracks. See **22. Sailing Characteristics**.

Onboard Wi-Fi

Imagine has an onboard Wi-Fi router that connects to an LTE cellular network. The large antenna mounted in the cockpit provides better reception than a typical smartphone. See **28. Wi-Fi**.

4. Emergency/Safety Equipment

Bilge Pumps

There are two bilge pumps. The manual bilge pump is located on the starboard side of the cockpit wall, above the lazarette lid and just aft of the throttle. The handle is mounted under the locker lid below the bilge pump. The electric bilge pump has an automatic float switch but the switch on the electrical panel can be used to power the main pump manually. The electric pump is located under the salon sole just aft of the mast compression post. Note: if water rises above floorboards, the shower sump pump can also be used in an emergency.

Emergency Plugs

Each accessible thru hull opening located below the water line has an emergency plug taped to it. A diagram that shows these locations is included in this notebook

Emergency Tiller

The emergency tiller is a long, curved pipe located behind the shelf in the port storage locker. It fits on either rudderpost located beneath the aft cockpit stainless steel screw covers which can be removed using a winch handle or deck key.

Fire Extinguishers
There are 3 ABC rated fire extinguishers onboard. They are located in the starboard cockpit locker, in the salon on the forward side of the sink cabinet, and in the starboard aft stateroom.

First-Aid Kit
The First-Aid kit is located in the head cabinet, under the sink.

Flashlights
Several flashlights can be found in the nav station table.

Floatation Devices
There are a total of 4 inflatable PFDs, stored 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. There are also 3 foam PFDs stored in the port storage locker, on the shelf. A Life Sling is mounted on the starboard stern rail.

Safety Equipment
A mesh bag containing essential safety equipment is located in the compartment behind the port aft end of the settee. This bag contains flares (electric and pyrotechnic), a distress flag, a horn, and a universal tapered plug.

Spare Parts and Tools
Spare parts are located in the salon under the aft end of the port settee cushion. A toolkit and bag of additional tools are located in the same compartment.

User Manuals
User manuals for various equipment onboard can be found in a Jeanneau bag under the forward end of the port settee cushion.

Windlass Clutch Release
A winch handle is stored in the bow chain locker in case the anchor needs to be manually dropped in an emergency. It can be found in the winch handle pocket mounted on the aft bulkhead of the compartment.

5. Emergency Procedures

Crew Overboard
Throw a Type IV PFD or cockpit cushion to the person in the water first. Second, hit the MOB button on the chart plotter so you will know where they are. Then, use one of the procedures mentioned in the skippers' meeting to get back to the person. There is a Life Sling mounted on the starboard side of the stern rail.

Fire
There are 3 ABC rated fire extinguishers onboard. They are located in the starboard cockpit locker, in the salon on the forward side of the sink cabinet, and in the starboard aft stateroom. If you have a fire at the stove turn off the LP Gas breaker (solenoid switch) at the electrical panel.

Hitting a Log, or Running Aground

In case of a log hit or running aground, immediately check for leaks in the bilge and then check for cracks in the fore and aft sections of the bilge where the keel attaches to the hull. Also check all keel bolts. Once you are sure no water is entering the hull contact **San Juan Sailing at 360-647-4300** and proceed to the nearest marina or location as directed by San Juan Sailing staff.

Leaks

Make sure the bilge pumps are running. Then determine the source of the water, check the prop shaft first and then the through-hulls. There is a diagram showing the location of the through hulls in the notebook. Get the crew on deck and into life jackets. There are wood plugs wired to each of the through hulls.

There are two bilge pumps. The manual bilge pump is located on the starboard side of the cockpit wall, above the lazarette lid and just aft of the throttle. The handle is mounted under the locker lid below the bilge pump. The electric bilge pump has an automatic float switch but the switch on the electrical panel can be used to power the main pump manually. The electric pump is located under the salon sole just aft of the mast compression post.

Steering Failure

If the steering system fails, first attempt to control the rudders using the autopilot as this does not require the chain connection from the wheels to below decks. If this does not work, there is an emergency tiller under the mattress in the starboard aft stateroom. It fits on either rudderpost located beneath the aft cockpit stainless steel screw covers which can be removed using a winch handle or deck key.

Emergency Tiller

6. Anchors and Windlass

Anchors

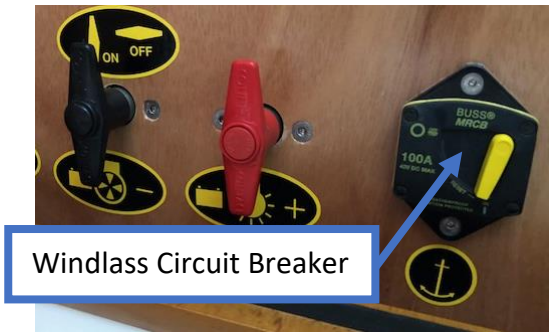
Imagine is equipped with two anchors, one forward (44 lb. Bruce with 200’ of chain) and a 15 lb. Fortress in the port storage locker along with 50’ of chain and 200’ of rode. The primary anchor chain and rode is marked every 25’ with yellow line woven through the chain, with double sections at both 100’ and 200’. The chain is also marked with a 10’ section of yellow paint at 100’, followed by a 5’ section of white paint at 150’, and a 10’ section of red paint at 200’ where the chain is connected to 100’ of rode.

The scope normally used in the islands is 4 to 1. Most of the anchorages are well protected and popular, so you will likely have someone anchored nearby. Most coves are 20’- 40’ deep; so, expect to pay out about 100’-175’ of chain. After you have paid out the suitable amount of chain, 1-2 minutes of idle in reverse sets the anchor.

Here is an easy formula for how much chain you need; add the water depth on sounder, plus any tide increase expected during the night, plus 4' (to account for the distance from sounder to roller on bow) and take that total and multiply by 4 (typical example would be 25' of water + 6' of tide increase + 4' = 35' x 4 = 140').

Windlass

The anchor windlass requires power from a circuit breaker located in the port storage locker on the front of the base of the locker (see photo on right). If this breaker trips there will be a small yellow lever on the bottom which needs to be swung back into place to reset the breaker.



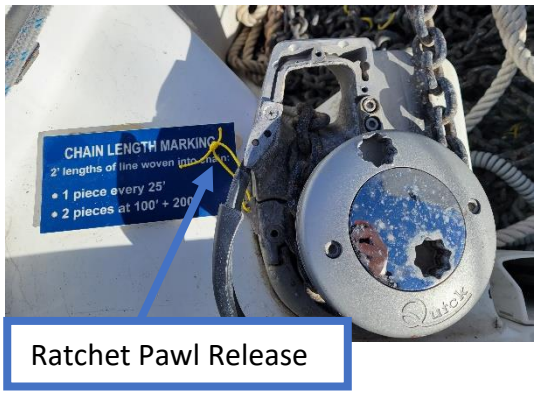
The up-down controller for the windlass is located inside the bow chain locker. *The windlass will only operate while the engine is on to avoid draining the engine starting battery*.

The windlass clutch release tool (a winch handle) is located in the bow chain locker, in the winch handle pocket mounted on the aft bulkhead. 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.

Lowering the anchor

1. Be sure the windlass breaker is on.
2. Untie the line holding the anchor in place (this line doubles as the snubber).
3. There is a ratchet pawl on the left side of the windlass (yellow string, see detail picture) which needs to be slid forward while lowering the anchor. It may be necessary to momentarily raise the anchor to release this tab, then start lowering once it is released. Please lower the anchor by hand for the first 5-6 ft. so it does not swing into the bow.
4. Lower the anchor until the needed chain/rode is paid out.

5. Secure the chain with the snubber using the port forward cleat and run out enough chain to take the load off the windlass. *Do not leave the load on the drum*.
6. Set the anchor by reversing at 800 RPM for 1-2 minutes, not going above 1000 RPM.
7. Leave the windlass circuit breaker on and, if needed, turn on the anchor light.



Ratchet Pawl Release

Raising the anchor

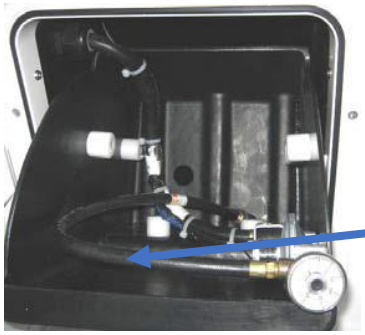
1. Start the engine.
2. Be sure the windlass breaker is on and, if needed, turn off the anchor light.
3. When retrieving the anchor into a breeze, never use the windlass to pull the boat; instead, slowly power toward the anchor while using the windlass to take up the slack. Also, if the anchor is really stuck in the mud, you will hear the windlass slow under the load. Immediately stop the windlass and drive the boat forward to free the anchor.
4. The incoming chain will pile up quickly against the aft end of the chain locker, so the operator needs to reach in and pull the chain forward every 3-5 feet of chain. Failing to do so can quickly cause a jam. If a jam does occur, run the windlass back out for a second to clear.
5. *Once the anchor is out of the water, please bring onto the boat by hand.* Please do not pull the anchor up onto the rollers using the power of the windlass, doing so will likely chip the fiberglass as the anchor swings into the bow.
6. Secure the anchor with the snubber.

Stern Ties

There are times when adding a stern tie to shore will be handy, especially in Desolation Sound. Imagine has 600’ of line on a spool stored in the port storage locker for this purpose. We suggest using a mooring line strung across the open transom to mount the spool so the line can easily be deployed and recovered. The recovered line is usually very wet so we leave the spool sitting on end in the cockpit for a couple hours to dry before we put it away.

7. Barbecue

The stainless-steel Magma propane barbecue is mounted on the port stern rail. There is a line inside the propane locker with a connector for the regulator on the BBQ. Since the BBQ runs from the main tank, the solenoid switch in the galley behind the oven needs to be ON to run the BBQ. To connect the line to the regulator, rotate the connector so the hose is pointing nearly straight up then gently push it in while slowly rotating back and forth until it lines up and connects.



Propane hose for barbecue in port cockpit locker

Please remember to turn off the regulator valve at the BBQ, place the hose back into the locker, and turn off the BBQ hose isolation valve (yellow "T" handle – off is perpendicular to the hose).

Also, as a courtesy to the next guest, please use the wire brush wired onto the BBQ to clean it after use.

8. Batteries and Charging

Battery Voltage Indicator Lights

Imagine has a LiFePO4 house battery bank (156 amp-hours) which is located under the aft port storage locker floor and a starter battery (75 amp-hours) located adjacent to it.

Battery voltages can be checked at the nav station (see photo on right) by pressing the 3-way toggle to the right or left as labeled. There is also a BMV-712 battery monitor mounted next to the stereo on the nav station that reports the state of charge of the house battery.

House Battery

The battery banks are isolated from each other, so there is no need to change the battery switch. For this reason, Imagine does not have a battery combiner switch.

Please do not run the voltage of either bank below 12.0V, as doing so damages the batteries. If the house bank gets below 10% charge or below 12 volts, please run the engine for a couple hours to charge the batteries. An engine speed of at least 1000 RPM is needed for full charging rate.

Please be aware the CO detector (located under the nav station) will chirp if the batteries get too low. This is not the loud alarm sound, just a complaint that its batteries are low. If this happens it is time to start the engine and charge for a while.

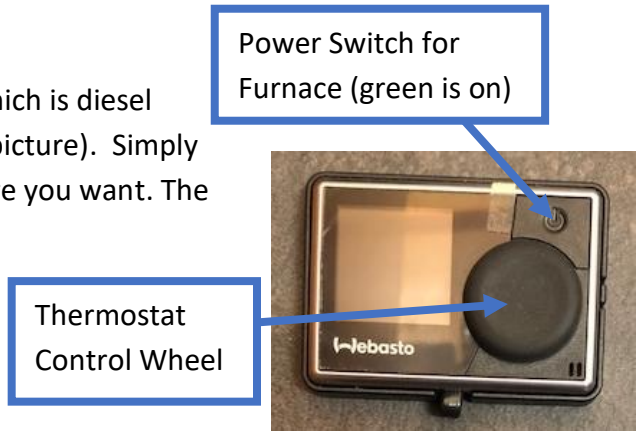
As Imagine is not equipped with a hardwired inverter, the 120V outlets will only be operational when connected to shore power. There is a plug-in inverter located under the aft end of the port settee that can be connected to the 12V socket at the nav station. The available power when using the inverter is limited by the fuse on the DC side to roughly 100W of AC power.

9. Berths

Our boat sleeps 5-6; 2 in the private V-berth forward, 2 in the aft cabin and 1-2 in the main salon. The port salon bunk is short and works for children or someone less than 5’6”.

10. Cabin Heat

Imagine is equipped with a Webasto forced air furnace which is diesel fueled. The thermostat is located at the nav station (see picture). Simply press the power button to turn on and set the temperature you want. The power switch is white when off, and turns green when on.



The control wheel can be rotated and pressed in the center; rotate to access options like heat intensity and temperature setpoint, then press the center of the wheel to select and make a change. Please do not pull or pinch the control wheel; if you accidentally pull it off, it is very difficult to put back on.

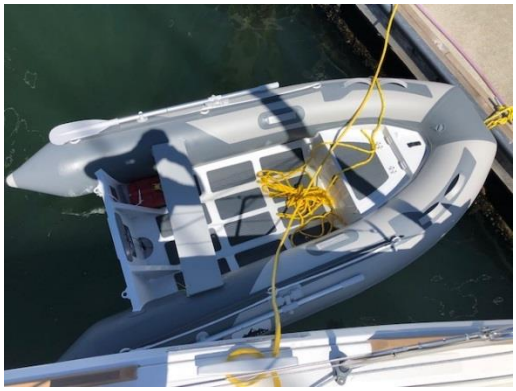
See the detailed Webasto manual for full details on operational controls. *There is a 2–3-minute delay from when you turn the thermostat on to when you will hear the fan running.*

When the furnace is running you may notice a clicking noise, this is the electric fuel pump pulling from the main diesel tank. Also, we do not recommend running the furnace all night (although it is doable) as its draw on the batteries is sizable. It is also fairly noisy, especially from outside the boat, so your neighbors will appreciate it being off most of the night. The heat is dry, comfortable, and on those occasional rainy days or cool evenings, makes a huge difference in cruising comfort!

11. Cockpit Table

The Lagun cockpit table is completely removable and is stored in the port garage storage locker in 2 pieces. The leg/arm frame slides into the aluminum fitting on the port cockpit seat, and then the table top slides into the arm. Extend the table leg and adjust the height of the table in the fitting to level the surface of the table. The black tightening handles are actually ratchets, activated by pushing on the button in the center and rotating. The cup holder is held up by pins on each side, and can be flipped down to extend the length of the table. Please note that this is not strong enough to bear significant weight or be leaned upon. There are slides below the table that hold up the leaves.

12. Dinghy and Outboard



Imagine has a 10’-2” Kachemak Rigid Inflatable dinghy. Towing works best when the dinghy is brought close to the boat — about 4 or 5 feet off the stern. This guarantees you won't accidentally wrap the painter around Imagine’s propeller when you back up! We tie the painter off twice – a cleat tie close and the bitter end we tie onto the stern rail. Others have lost the dinghy when their cleat tie slipped loose.

As owners, we would very much appreciate your special care when beaching the dinghy. Beaches in the San Juans are seldom gentle, sandy beaches; they are usually rocky and covered by barnacles equipped with extra sharp rubber cutters. Here’s what we have found works best: launch a person off the dinghy bow as you approach shore; then offload everyone over the bow. Lift the dinghy above barnacle height and deposit it gently on the beach. We also secure the painter under a rock or to a log – a rising tide can leave you high, dry, and dinghy-less!

The dinghy has a four-stroke outboard, so do not add oil to the gasoline mixture – it uses straight gasoline. San Juan Sailing will be sure you have a full gas can, which is normally in the dinghy. Also please do not cruise with the outboard on the dinghy as a large wake or gust of wind can overturn the dinghy. The outboard is light, so it's easy to transfer from the stern rail mount to the dinghy transom (and vice versa) by hand. *Please be sure to tighten both hand screws when mounting the outboard on the dinghy*.

If the dinghy is feeling low on air, there is a foot pump stored in the port garage storage locker. This pump is for *air only*. Please do not use it to bail the dinghy. There is a grey bailing pump with a red handle in the starboard cockpit locker for pumping water out of the dinghy.

Starting the Outboard

1. Push the fuel valve lever (starboard aft corner of the outboard) aft to open.
2. Pull out the choke switch (starboard forward corner of the outboard).
3. Open the air vent on the top of the fuel cap by turning counter-clockwise.
4. Make sure the black U-shaped kill clip (with the red lanyard) is clipped into the red shut-off knob (port forward corner of the outboard).
5. Turn the handle throttle ¼ turn counter-clockwise.
6. Pull the cord until it starts (you shouldn't have to pull it more than 5 times).
7. Wait about 10 seconds, then push in the choke switch (the motor does not like to go until the choke is off).
8. There is no transmission; just throttle up to go forward and throttle down to stop. If you want to go in reverse, swivel the outboard around 180 degrees.

To Shut Off

1. Shut the outboard off 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.
2. To avoid prop damage, shut the outboard off and raise it out of the water before you reach the shore. Pull the outboard forward and out of the water until it clicks and stays in place.
3. To put the outboard down, release the stainless-steel lever on the starboard side of the shaft.
4. Put the outboard back on the outboard mount on the starboard stern rail and tighten both braces.
5. Push the fuel valve lever forward to close and close the air vent on top of the fuel cap.

Outboard Troubleshooting

If the outboard won't start, review steps 1-6 above to make sure you've done all 6 steps. There is a spare spark plug and spark plug wrench in with the safety equipment in case you need them. If the outboard is running and you're heading toward shore, and the engine suddenly quits, it's usually that someone has forgotten to vent the fuel cap.

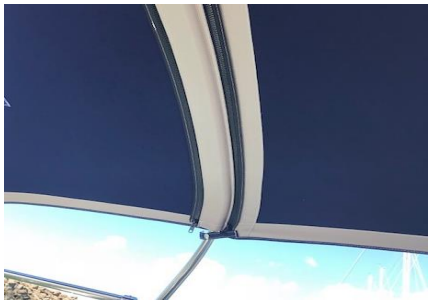
If the engine is running fine but the propeller isn't moving, the shear pin is probably broken – carefully take the cotter pin out to remove the propeller and replace the broken shear pin (a spare pin is located forward of the shaft under the handle grip).

13. Docking and Boat Handling

Imagine is light on her feet (turns in a short radius) and, like most sailboats, carries momentum well. We find it is helpful for the person handling the lines to take a line from the mid-ship cleat, as this allows them to pull the boat to the dock without 'losing' the stern. The other important issue in many boats is prop-walk – Imagine has essentially none due to the dual rudders' locations away from the prop wash. This also means that you cannot bounce prop thrust off the rudders to steer the boat. *Therefore, make sure you have her under way, either forward or in reverse, before trying to turn her, and be aware that for this reason she turns very sharply as the spade rudders throw the stern sideways very quickly once in motion!*

Most marinas in the islands will help you if you ask for assistance. Asking for docking assistance, especially in windy conditions or with an inexperience crew is a sign of prudent seamanship.

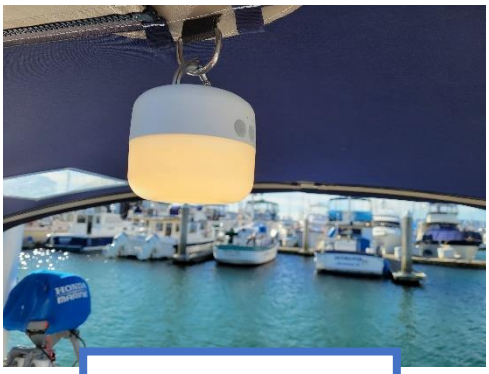
14. Dodger & Bimini



As with all dodgers, please be gentle. If the glass becomes spotted with salt, please get a pot of fresh water from the galley sink and "flood" the salt crystals off the plastic. Our dodger has some very handy rails on the back and sides that make staying upright and onboard easier. The connector canvas between the dodger and Bimini can be removed by unzipping it then unsnapping the four corners. If you do remove it, please fold and store it carefully in the port garage storage locker.

Illumination

For cockpit illumination after sunset, there is a portable light stored in the nav table that can be hung from a D-ring on the Bimini. With a little persistence, it can also be clipped to a pair of zippers on the dodger if that better meets your needs. When not in use, it should be left charging inside the nav table.



Mounted on Bimini

Mounted on dodger

15. Electrical Panels

The electrical panels on Imagine are straightforward and clearly marked. The photo below gives an overview of the whole panel.

DC Panel

Most of the breakers on the 12 VDC panel are self-self-explanatory. The AC and DC panel breakers use the color dot convention legend in the upper right corner of the photo on the right. (Note: the legend was relocated after this picture was taken, as shown above)

DC Panel

The Navigation breaker sends power to the following:

- Stereo
- Chart plotter
- Radar
- VHF radio
- Depth sounder
- Knot meter
- Wind instrument
- Autopilot

AC Power

Imagine draws AC power via a 30-amp shore power connection. The water heater and the battery charger both require either shore power or the engine running to work.

There is also a breaker for the shore power located in the end of the shore power cord with a bluish light indicator.

Onboard AC outlets are located in both staterooms, underneath the nav table, and in the galley. Be aware that Imagine is not equipped with a hardwired inverter so the 120V AC outlets will only be operational when connected to shore power.

Battery Charger Breaker – Leave on!

Water Heater ON/OFF Breaker – Leave off when not in use.

AC Outlets Breaker

Aft Stateroom

USB Charging

There are dual USB charging ports in each stateroom as well as four ports under the nav table. Each charging port is QC3.0-capable and can provide 15W of power.

There is a breaker on the DC panel labeled "USB" that controls power to all 4 sockets. Each individual socket can also be powered off by touching the power icon next to the ports. This is mostly useful for turning off the blue glow when not using them for charging.

Several wires are routed from the USB sockets into the nav table. These are for recharging the iPad, cockpit light, and vacuum that are stored there. When raising the nav table for stowage, these can become unplugged; if any of the items fail to charge, it is likely because this has happened.

Light Switches

The salon light switch looks like a cabinet latch and is located on the inward side of the galley sink counter (see picture to right).

The overhead light in the head has a touch-sensitive switch built in. Two quick, light taps will turn it on, and subsequent taps will toggle through bright, dim, and off states. (Sometimes it may take a couple extra taps to cooperate.)

16. Electronics and Instruments

Imagine has a Raymarine Axiom 9 multifunction display next to the port helm and Raymarine i70 and p70 displays next to the starboard helm. These displays provide access to data from all of the instruments at either helm. The displays and their connect instruments are all powered by the Navigation breaker on the 12 VDC panel.

This section will walk through the basics of using these displays. Full manuals for the displays, radar, and other instruments are in port salon settee locker in a black Jeanneau bag if needed.

Axiom 9 MFD

Raymarine Axiom 9 MFD

The Axiom 9 functions as a chart plotter, with the ability to overlay received AIS information and radar information. It also provides data displays for the other instruments as well as the ability to control the autopilot.

If the MFD was left on when the Navigation breaker was shut off, it will automatically turn on again when the breaker is flipped. Otherwise, it can be turned on by swiping across the power icon in the bottom-right of the display.

When powered on, the MFD will always display the welcome page and a warning at the top of the screen that must be accepted. From the welcome page, touching the various tiles will access those functions.

We recommend your primary navigation tool should be the Maptech waterproof chart book or paper charts (with the most active “killer rocks” marked in red). The best way to stay off the rocks is by knowing where you are at all times. The primary role of the chart plotter is to verify that you are where you think you are. When in a tight place, it will also allow you to zoom in for a more detailed view than the physical charts provide.

MFD - Chart App

When the chart app is opened, there should be an obvious boat-shaped symbol indicating Imagine’s current position to within several feet. If this symbol is not visible, the chart can be automatically centered by touching the boat-in-a-crosshairs button at the top of the screen. The zoom level of the chart can be adjusted using either the plus and minus buttons at the bottom or a two-fingered pinching gesture. We generally like to configure overlays on the right side of the screen for depth and Speed over Ground.

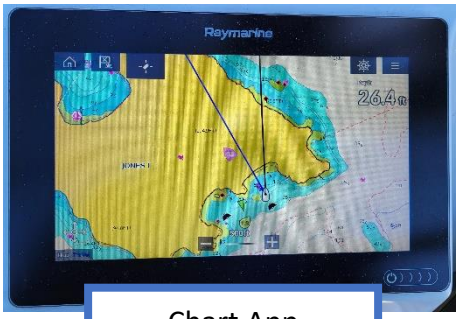
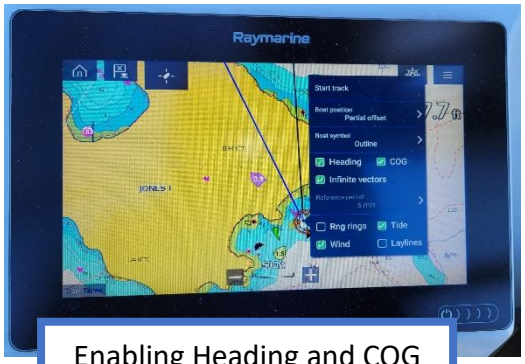


Chart App



Enabling Heading and COG

There should be a black line extending from the bow of the position symbol to indicate heading and a blue line indicating course over ground. If these lines are not visible for some reason, press and hold the position symbol until a menu appears as shown. (It’s easy to miss the touch target if there’s a lot of AIS targets nearby.) Make sure the “Heading” and “COG” boxes are checked to display those lines.

To control the autopilot from the Chart app, we recommend swiping from the left side of the display to bring up the side-panel. (If the panel is displaying something other than the "Pilot" panel, use the 3-dot symbol in the top left corner to change it.

Autopilot Controls

MFD - Radar App

You should have little need of the radar except for the highly unlikely event that you are suddenly enveloped by fog, which is rare in this area. The fog that we've encountered in the islands usually forms in the wee hours of the morning and burns off by mid-day. So, if it's a little soupy after breakfast, we put on an extra pot of coffee until it lifts. Please remember that SJS contracts do not permit night or restricted visibility sailing. However, you can practice by watching the radar screen and see what's actually happening around you to develop a familiarity with what it looks like. It's good to have a sense for how things work in case the fog rolls in while you are underway.

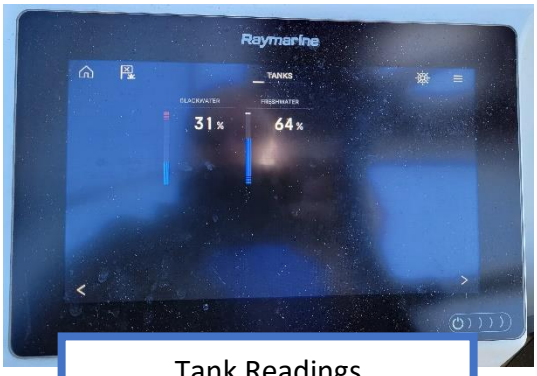
Radar Controls

In the Radar app, the system will generally be in Standby as it uses a fair amount of power when active. Pressing the Transmit button will make it go active and start displaying data.

The data from the radar can also be overlaid on the Chart app; if you have the radar on, you may notice this happening. One word of caution about the radar/chart overlay – it uses the digital compass to align the radar readings with the chart, and this can cause the radar readings to appear rotated on the chart. You can generally use an obvious feature of the coastline to figure out how much skew there is in the display.

MFD - Dashboard App

The dashboard app has pages to display all of the information available on the i70 display at the starboard helm. Additionally, it has a page called Tanks that displays the current levels of both the freshwater and blackwater tanks. Note that these readings are not truly precise due to the shape of the tanks, but are still useful for planning when you will need to find a place to pump out.



Tank Readings

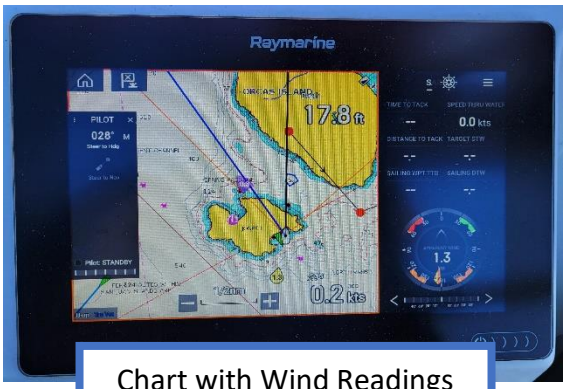
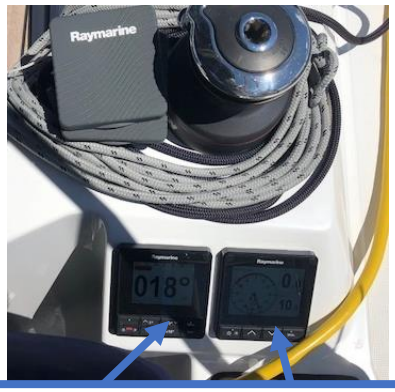


Chart with Wind Readings

MFD - Chart/Dashboard App

The Chart/Dashboard combo app is the last of the apps on the Axiom 9 that we commonly use. This lets us have both the chart and the wind instrument up at the same time while under sail. The trick is to adjust the split so that the chart gets about 70% of the screen space. (This should already be done for you, but can be adjusted from the menu accessed with the 3-bar icon in the top-right corner.)



p70	i70
Autopilot	Instruments

Raymarine i70 Instrument Display

The i70 display next to the starboard helm is primarily used for depth, speed, and wind measurements. The up and down arrow buttons can be used to scroll through different data pages. Additional pages can be added using the menu button, if needed. One page of data that is not currently shown on the Axiom 9 MFD is the state of charge of the house battery bank.

Depth Sounder

The digital depth sounder will not give accurate readings beyond 400'. In deeper water, the sensitivity on the unit increases as the transducer tries to get some reading back. Consequently, when you are in deep water false readings caused by currents, changes in water temperature, fish, etc. are common. These false reading often report very shallow water, so knowing you are in deep water will help prevent heart attacks. Also, if the word DEPTH is blinking on and off it means the unit is not getting a return signal (i.e. you are in very deep water). The depth showing on the sounder is being measured from the transducer (about 12" under true water level) so the water under the boat is really a bit deeper than the reading, but we strongly recommend leaving 10-12 feet of water under the boat.

We suggest using the depth sounder mainly as an aid to navigation in shallow water. However, the key to avoiding rocks is not the depth sounder – but knowing where you are on the chart at all times. *Rocks are the single biggest navigational and safety hazard in the islands – but they are all marked on the charts.* We do not recommend using the depth alarm. Experience in the islands tells us that it goes off at the wrong time – usually the middle of the night as a seal or fish passes underneath.

Knot Meter

If the digital knot meter shows a reading of "0.00" while underway, the impeller is most likely clogged. Sometimes it will clear itself; wakes from big powerboats are good for this. You can also try clearing it by traveling in reverse. The instrument transponders are under the forward end of the salon just forward of the mast. You can remove the impeller to clear it but only if you are experienced in such things. If

needed, the SOG (speed over ground) reading (available on the MFD, i70 and p70 displays) will work as a standby knot meter.

Raymarine p70 Autopilot Display

The p70 display next to the starboard helm displays course information and provides control of the autopilot. To engage the Autopilot in bearing mode, press the Auto button on the p70 display. The autopilot will hold that bearing until disengaged. To disengage press the Standby button. When the autopilot is engaged, the bearing can be adjusted by pressing the “-10”, “-1”, “+1”, and “+10” buttons. Please remember to stay situationally aware while using the autopilot, as it cannot see logs, rocks, or other boats.

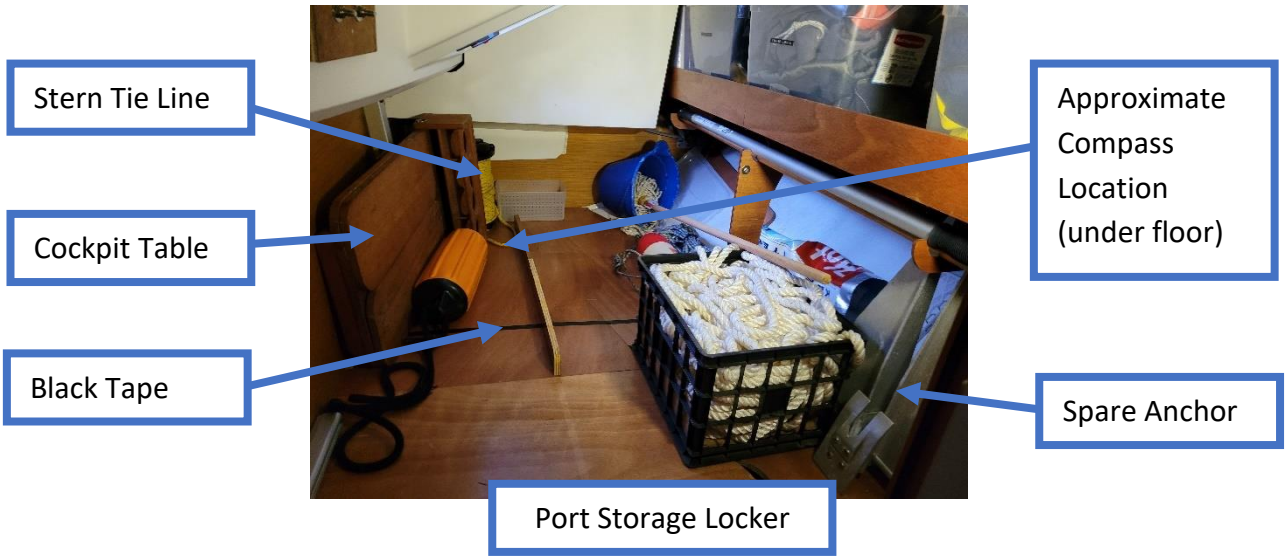
The autopilot also supports Wind Vane mode, where it will keep the apparent wind at a specific angle to the boat. This mode can be entered through the “Menu” system or by pressing the top-left button “*” if the screen says “Vane” in the bottom-left corner. When the autopilot is active in Wind Vane mode, it is also possible to have the autopilot tack while sailing by going into the “Menu” and selecting “Auto Tack Port” or “Auto Tack Starboard”. Simultaneously pressing either the “-10” and “-1” or the “+10” and “+1” buttons will also trigger an auto-tack. Note that the Gybe Inhibit system will prevent auto-tacking while travelling downwind.

The autopilot can also be controlled from the Chart Plotter by selecting the helm-shaped icon or from the Handheld controller.

Digital Compass

The digital compass used by the chart plotter and autopilot is located under the floor of the aft end of the port storage locker. Magnetic materials stowed within 3 feet of the sensor can interfere with its readings, resulting in odd bearing readings on the chart plotter and erratic autopilot behavior.

There is a line of black tape on the floor of the storage locker to roughly indicate the area that should be kept clear of magnetic objects. If the bearing on the chart plotter is more than about 15 degrees off, try moving objects forward and outboard in the storage locker.



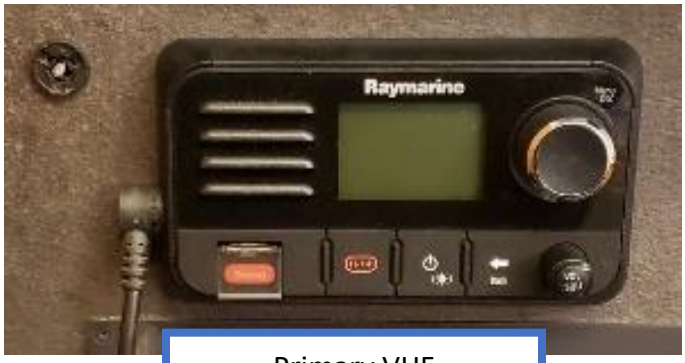
Handheld Controller

There is a Raymarine SmartController handheld onboard that is connected wirelessly to the instrument network. It can display readings from any of the instruments on its screen, as well as being able to control the operation of the autopilot. Press and hold the top left button to turn it off and on. When the instruments are powered off, the handheld will start beeping to indicate that it has lost its wireless connection. Pressing the power button will cancel the alert. Pressing and holding the power button a second time will power it off.

The SmartController can be plugged in to recharge in the sliding storage compartment in the settee backrest closest to the nav table. The charger is on the Navigation circuit and will turn on the handheld each time it is energized. Turning off the Navigation circuit later on will then result in beeping emanating from the settee backrest. We have generally found it easiest to recharge the handheld on the first day, and then simply store it in the nav table for most of the rest of the trip.

VHF Radio

Imagine's primary radio is located at the nav station. A separate handheld unit is available and we recommend it be kept in the cockpit for easy use while underway. It can also be used to communicate with crew who go ashore once anchored. The handheld radio needs to be charged every couple of days using



Primary VHF

the charging dock in the nav station table. The primary VHF must be powered on to send and receive AIS data as noted in the section below.

Primary VHF Radio

The primary VHF radio must be turned on and off manually by holding the power button on the unit. The handset has a HI/LO button to switch between high and low transmit power. The unit indicates the current power mode as either “25W” or “1W” in the top-left former for high or low power, respectively. We recommend using low transmit power when making non-emergency calls to nearby vessels or ports.

Volume and squelch are controlled with the small knob in the bottom-right of the unit. Press the knob to toggle between controlling volume and squelch as you rotate it.

To quickly get to priority Channel 16, press the “16/+” button on the front of the unit. Press again to monitor channel 09. Other working channels can be accessed using the rotary dial in the top-right of the unit. To monitor a working channel (e.g. 68, 69, 72, 74, or 78), select the working channel, then press Menu and select the “Watch Mode” setting. The “Dual watch” mode will monitor the working channel and Channel 16, while the “Triple watch” mode will monitor the working channel and Channels 16 and 09.

We listen to weather channels 1, 2, 3, 4 or 8 (whichever gives the best reception) before we sail in the morning and prior to anchoring for the evening. The islands are generally a light wind region but weather changes can be sudden. Listen for the reports identified as “Northern Inland Waters” for the San Juan Islands. San Juan Sailing monitors channel 80 during office hours.

A.I.S. (Automatic Identification System)

Imagine transmits her position and data via an AIS signal and receives AIS signals from other vessels equipped with AIS transmitters. (AIS is required for commercial vessels, but optional for recreational vessels.) The primary VHF must be powered on to send and receive AIS data.

Vessels with AIS transmitters will appear on the chart plotter as icons (triangles, pentagons, and sailboats) representing the type of vessel and pointing based on the reported bearing of the vessel. Touching one of the icons in the chart plotter will provide more information on the selected vessel.

AIS is an added safety feature which allows large commercial vessels to easily see you and your direction/speed. They may try to contact you via VHF channel 16 to verify your course intent. In addition, AIS allows San Juan Sailing/Yachting to provide faster assistance in case of unplanned maintenance issues as well as alert San Juan Sailing/Yachting of Imagine’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 vessel name, course, speed, track, and other information.

Stereo

We have installed a stereo/mp3 player on the electrical panel with speakers in the cabin and cockpit. It supports Bluetooth pairing as well. Please be aware of other boats when you are in harbor and adjust the faders so that the cockpit speakers are turned off when not in use.

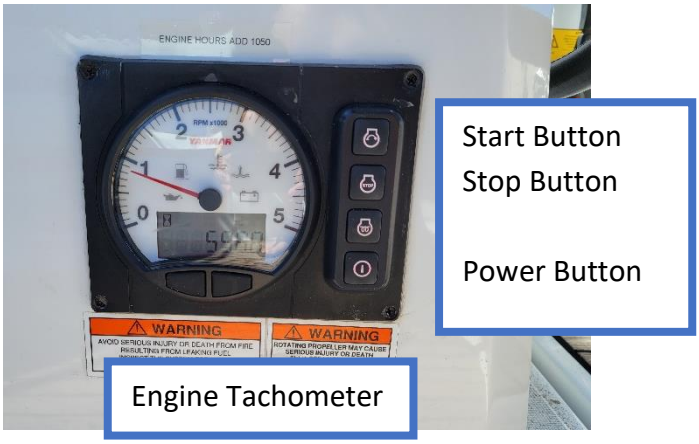
17. Engine and Operating Under Power

Operation

We have found the 20 HP Yanmar engine to be very reliable. Cruising should be done at engine RPMs of 2400 to 2700. The following table gives approximate cruising information:

RPM's	Boat Speed	Fuel Consumption	Range
2700	5.7 Knots	Approx. 0.75 gal/hr.	250 Naut. Mi.

The range listed assumes no reserve in the 34-gallon fuel tank. We find pushing the engine beyond 3000 RPM does little good, as boat speed does not increase much.



Starting

1. Please visually inspect the engine compartment daily, if there is no oil or liquid under the engine you are good to go. All boats in San Juan's fleet have the engines checked by a mechanic on every turnaround, so there should be no need to check the oil level unless you are out for more than one week.
2. Make sure the gearshift is in neutral (vertical).
3. Briefly press the "On" button on the engine panel. *It only takes a quick push – if you push it in and hold it too long, it will turn on and then right back off again.*
4. Once the panel has booted up, then push the "Start" button (upper right).

5. After she starts, check for water flowing out the exhaust. If none, check the water strainer.
6. There is no need to "warm up" the engine as getting off the dock (or anchor) and leaving the harbor will do this. If you have been sailing and are switching to engine power, starting the engine before you furl will be plenty of warmup.

Engine Alarms

If the buzzer sounds while the engine is running first look at the engine panel to see if it is overheating or low oil pressure causing the alarm. If oil pressure alarm is on immediately shutdown the engine. If it is overheating, check to see if cooling water is flowing out the exhaust before shutting down. Overheating is the most likely cause for the buzzer. It is worth checking on the oil level, coolant level, and raw water strainer. If you see something obvious and can fix it great, if not please call San Juan Sailing.

Engine Shutdown

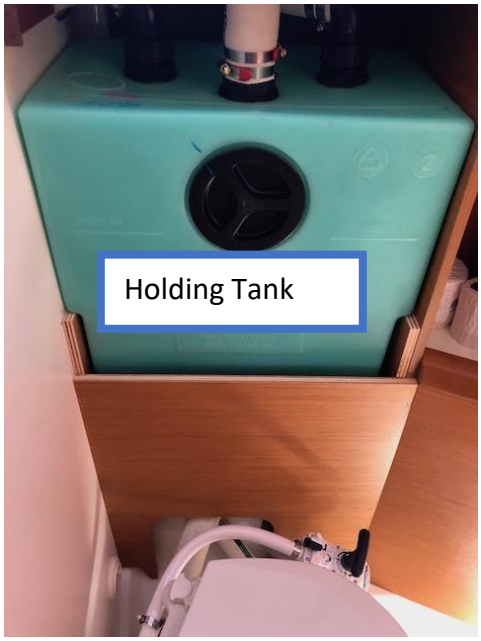
First make sure the engine is at idle and the gearshift in neutral. Then push the stop button on the engine panel for about 2-3 seconds (until the engine dies). When the engine stops, press the on/off button to power off the panel. *Please do not push the off key before the engine is stopped; doing so may damage the alternator diodes.*

18. Fuel

The fuel tank holds 34 gallons of diesel and is located under the aft berth. The fuel gauge is located on the main panel at the nav station (see picture in the Electrical Panels section). Push the toggle switch to the right of the gauge to activate the gauge reading. Fuel gauges on boats have a tendency to stick and show more fuel than may actually be there. So, it a good idea to note the engine hours (on the tachometer in the cockpit) when you leave or last filled and then fill up when you have run the engine for 30-35 hrs.

The deck fitting for the filling the fuel tank is on the starboard aft side. When filling the tank listen closely and stop as soon as you hear fuel coming up the fill pipe. It will foam out the vent if you go further. If fuel spills on the deck, please wash-up with soap as it yellows the fiberglass.

19. Head and Holding Tank



Please do not put anything in the toilet that has not been eaten. Experienced sailors deposit toilet paper in a wastebasket, not down the toilet because paper tends to clog the system. The 22-gallon holding tank is located behind the door outboard of the toilet and the thru-hull valve is behind the toilet. To access the tank, be sure to lift upward on the covering panel as pulling straight outward will break the clips.

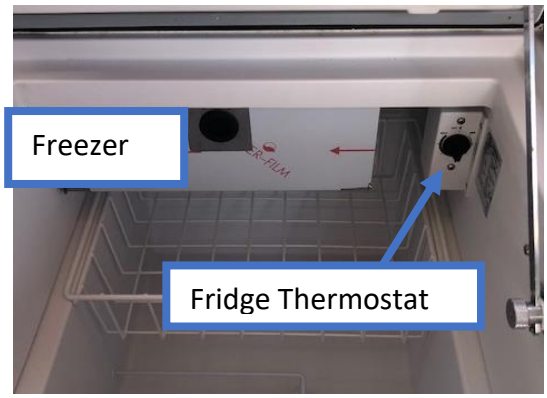
To control odors in the head, use the NoFlex treatment once daily in the toilet. The tub of white powder can be found under the sink in the head, with instructions printed on the side. If you can't find it during checkout, SJS staff can get you some. You'll be glad to have it!

There is a sensor mounted to the tank that sends data to the Chart Plotter. *The "Tanks" page of the Dashboard section on the MFD will show the percentage full.* Don't wait until it is totally full to pump out. The deck fitting for the pump out is almost directly above the holding tank on the port side of the deck by the shrouds. To operate the dumping of the tank in open waters, open the thru-hull immediately behind the toilet itself by removing the zip-tie. Please replace the zip-tie after returning to US waters or the Coast Guard could cite us for a violation.

20. Refrigerator/Freezer

There is a refrigerator and freezer inside the top load compartment forward of the stove and starboard of the sink. The freezer is small and located in the upper section and outboard. The on/off circuit breaker is on the nav station panel and the thermostat is in front load section near the top (see picture). We usually keep the thermostat set at 1.5-2. Any higher and things start to freeze in the refrigerator.

Also, we normally turn the unit off at night to save battery power. We find that our ice lasts several days in the freezer. The arm that holds the raised cover in place is released by pulling the knob forward. The freezer will keep things frozen but is not very good for freezing new items unless it is set pretty cold. *Therefore, be cautious with things like vegetables in the refrigerator as they will freeze if placed near the freezer when you try to freeze leftovers.*



21. Sails and Rigging

Mainsail

Imagine is rigged with a square top mainsail for better sailing performance. For ease of handling, we have a StackPack sail cover and Lazy Jack system. Hoisting the sail involves unzipping the cover, attaching the halyard, and following the steps below. The halyard is generally stowed attached through one of the Lazy Jack lines. No adjustment of the Lazy Jack system should be necessary during your cruise.

For tensioning the luff, we have a Cunningham downhaul routed to a clutch labeled “Tack”. With the square top on the mainsail, we found that it was difficult to get enough luff tension with just the halyard.

We have found that it is best to have the wind directly ahead when deploying, since the square top can easily catch on the Lazy Jack system as it is raised. Careful attention to the head of the sail as it goes up is far more critical than with a standard triangular head mainsail.

Here are the basic steps to hoist the main:

1. Open the boom vang, the Cunningham, and one of the mainsheet clutches – this last allows the boom some movement. Then pull a few feet of mainsheet thru the clutch and close the mainsheet clutch. This will keep the sail from running free as the wind gets into it.
2. Open the Reef 1 and Reef 2 clutches as well if the main was reefed when it was dropped.
3. Pull the halyard by hand until you run out of muscle and then put on the winch. At this point, careful attention to the square top of the sail and guiding it past possible catching sites is important. If you are planning on setting a reefed main use the reef point option you desire.
4. Set the halyard clutch and remove the halyard from the winch. It is normal for there to be a slight change in mainsheet tension as the clutch loads up.
5. Set boom vang and mainsheet as desired.

Headsail

Imagine has a 109% jib on a roller furler. It has good sail shape at the full out position. During periods of heavier winds, furl the headsail as desired. Boat heel will be greatly reduced when sailing under reefed main and partially furled headsail in winds over 20 knots**.**

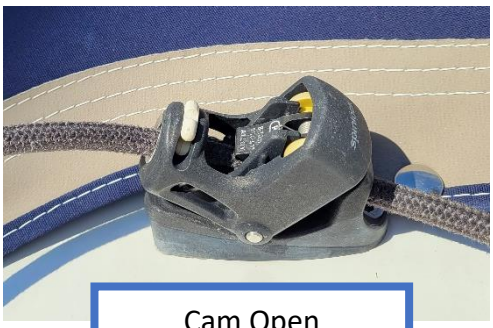
Please keep moderate tension on the roller furling line when deploying the headsail to prevent a rat's nest on the drum. Similar tension on the sheets should be used when furling, to prevent "candy striping" of the furled sail. We have found that tensioning the jib sheets after furling helps keep the low-friction rings off of cabin roof and prevents them from making tapping noises during the night.

22. Sailing Characteristics

Imagine is a delight to sail. Her sloop rig makes for easy sail handling, and gives a variety of options for various weather conditions. Her all-around perfect breeze is 10 to 12 knots. Full sails can easily be carried in winds to 15 knots. As the wind picks up it is best to reef the mainsail first.

Imagine has a continuous mainsheet routed to both the port and starboard helm winches. Both mainsheet clutches must be closed to prevent the boom from swinging free. We generally control the mainsheet from the windward winch on each tack, with the leeward winch used for the jib sheet.

Instead of using jib cars on tracks to control jib twist, Imagine has a friction ring and barber hauler setup on each of the jib sheets. The control line for each barber hauler runs along the outside of the cabin top to a clutch outside the dodger. Tensioning the barber hauler moves the sheeting effort outboard and down, similar to moving a jib car forward. Easing the control line moves the sheeting effort upward and inboard, similar to moving a jib car aft. The cam cleats on the control lines rock forward and back to release and lock the line; push down on the aft section to secure the control line.



Cam Open

Cam Closed

To allow the square top mainsail, Imagine was design with swept-back spreaders and no backstay. Because of this, sailing dead downwind will cause the mainsail to press hard against the shrouds, losing performance and causing wear on the sail. We recommend keeping your apparent wind angle below 140 degrees and doing a series of jibes if you wish to sail to a destination directly downwind.

23. Showers

There is no need to turn on a breaker for the shower sump; pushing the button on the wall next to the shower valve will cause it to run for several seconds. Experienced cruisers know the sailor's shower: get wet, turn it off, soap up, rinse off to save water. It is generally best to shower when the engine is running (or when on shore power) as it will refresh the hot water supply. *CAUTION: The engine can heat the water to scalding temperatures!*

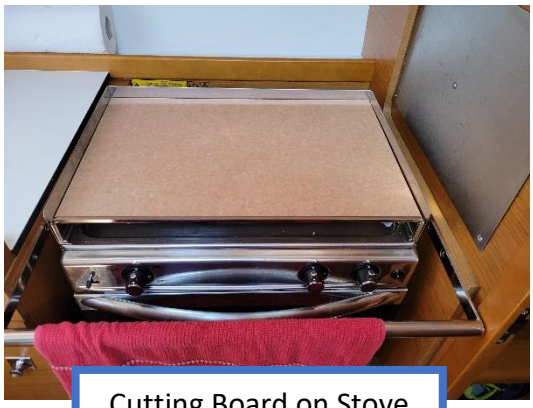
There is also a shower fixture back at the swim platform located on the port side of the transom above the swim step. This is useful for washing off shoes or feet after returning from the beach.

24. Steering Wheels

The steering wheels on Imagine are located in such a way to make passage from cockpit to swim platform easier when transiting to the back of the boat. When sailing we leave the cockpit table stored below decks to maximize space and ease of movement for the crew. Also, please cover the wheels with their respective covers when stopped at the dock. Doing so protects the wheel leather from the sun. Thanks.

25. Stove and Oven

The gimbaled propane stove has two burners and an oven. The stove can be latched in place when cooking at rest. There is also a cutting board that can be placed on top of the stove to provide more workspace when the burners are not needed. It can be stowed under the stove when not needed.



Cutting Board on Stove

Cutting Board Stowed

Stove Burner Controls

Always remember that propane is heavier than air and requires **caution.** For your safety, please follow these procedures:

1. Make sure all stove controls are in the "off" position. As with a BBQ, having the stove valves open when the solenoid is opened will cause the safety system to kick in. This will severely limit the flow to the stove. If this happens close all the valves, (including the one on top of the tank), then open the tank valve, then the solenoid, and then finally open the valves at the stove.
2. Turn on the LP Gas breaker located to the left above the stove.
3. Push in the stove knob and turn to high/ignite while holding the ignitor switch. You will hear the clicking of the igniter before you hear the gas ignite. The burners may take a while to light on the first use. When the flame lights, hold in the knob for about 3 seconds to allow the thermocouple to sense the flame.
4. When you are finished with the stove, immediately turn the solenoid switch and breaker off.

Oven Controls

To light the oven, you will need to push in and turn the "oven" control knob on the front of the stove while holding the ignitor switch. The same clicking sound of the igniter will be heard. You should then hear the burner ignite (and see through the hole). You will need to hold the knob in for 3-10 seconds to allow the thermocouple to sense the flame.

Propane Tank

Please note the propane tank is located in the propane locker, aft port side of the cockpit, which is vented and isolated from the rest of the boat. That way, any leaks will be vented away from the boat. San Juan Sailing's staff fills the propane tanks every 3 weeks. One tank normally lasts 6 weeks or more.

26. Tools & Spares

It is our goal and hope that you will not need to make repairs during your trip. That being said, we have also provided a good selection of tools and spares in case you need them. The tools are stored under the port settee cushions. The spares include engine filters and belts along with a replacement head parts. If you have problems that you are not comfortable handling, please call San Juan Sailing.

Portable Vacuum

For small cleaning projects, there is a portable vacuum stored in the nav table. It has a *very* small dust bin, but remarkably good suction. There is an extension wand that is stored with it. The dustbin can be emptied by twisting the chrome end and removing it from the body. The filter (2 pieces) can then be extracted and the dust bin emptied.

If the suction seems low, the filter probably needs to be washed and dried. Make sure it is completely dry before reassembling the vacuum. When stored in the nav table, there is a USB C cable for recharging.

In the Nav Table

Dust Bin Removed

27. Water

Water pressure

Imagine has a 54-gallon fresh water tank located under the V-berth. The filler cap is located on the deck port side, toward the bow. While you can use a winch handle to open and close the filler cap, we have found that it is too easy to damage the cap by over-tightening it this way. Instead, we recommend using the deck cap key located in the nav table

Deck Cap Key

The water pressure circuit breaker switch is located on the electrical panel at the nav station. Please switch this off when motoring or sailing. You could burn out the water pump if the tank runs dry (and you would not hear the pump running over the sounds of motoring or sailing). There is a pressure accumulator, so you will be able to get some water even with the pump turned off.

Water Heater

The water is heated automatically when the engine runs under load (it takes about 30 minutes). *CAUTION: The engine can heat the water to scalding temperatures!* The hot water is stored in a 6-gallon tank under the aft starboard salon settee. It can also be heated electrically when shore power is available. The switch is located on the 110 V panel.

28. Wi-Fi

Imagine has an onboard Wi-Fi router that connects to LTE networks. In addition to facilitating some onboard systems monitoring for our maintenance team, we have found it to come in handy for checking wind forecasts in moorages where our phones lose coverage inside the cabin. There is a sheet in the Charter Guest Reference Manual with the network's SSID and password.

We are not currently limiting data use on the network, but we would recommend enabling the "metered connection" settings on your devices to avoid extra background data usage. Our current provider includes roaming into Canada, with a limit of 500 MB of high-speed data per day, so you may experience limited or throttled connectivity closer to the border.

In Closing

We hope this information helps you have an amazing charter experience! Have a great time!

Bill Hammond & Nancy Osborne
whammondiv@gmail.com