NOTES FROM THE OWNERS OF "VOYAGER"

Welcome aboard VOYAGER!

Voyager is an Island Packet 445 Cutter Rigged Sloop. Although built in 2005, Voyager was commissioned in June of 2007. Island Packets are recognized as one of the finest passage-making sailing vessels available. We hope you will enjoy and appreciate Voyager as much as we do.

Please respect our need to maintain VOYAGER as a totally smoke free vessel.

We have equipped Voyager to give you as much independence and comfort as possible. The cutter rig should give you a fine sailing experience in all winds. The motor, genset, inverter and batteries are more than adequate to power all of the onboard systems, plus hairdryers and other personal accessories.

As you settle in, we ask that you pay particular attention to the following:

1. ***Power Systems. Voyager has AC and DC power systems. Shore power, the engine, the generator (genset) and the inverter all supply power. Please become familiar with these systems and the switches that control them.***
2. ***Voyager has a full keel and displaces 34,000 pounds. At low speeds and in docking situations, she is not as agile as lighter displacement fin-keel sailboats. Plan accordingly and take advantage of the bow thruster.***
3. ***Mast furling of the mainsail may seem a little odd to operate the first time. We suggest you try it a couple of times to get familiar.***
4. ***Wifi and Cell phones. We have some advanced electronics at the navigation table to keep you (regrettably, perhaps) connected. Read the information on these features carefully.***

We've prepared these notes to bring you up to speed quickly and to make your vacation cruise as trouble-free and enjoyable as possible.

Happy Sailing!
Peter and Sally, Owners

Specifications

LOA.....	45'9"	13.95m	SailArea.....	1,074 ft^2	99.8 m^2
LWL.....	38T'	11.61m	Displacement(dry).....	32,000lbs	14,500 kg
Beam.....	14'4"	4.37 m	Ballast.....	12,800 lbs	5,820 kg
Draft.....	*5'0"*	1.52 m	Aux. Power (diesel).....	75 hp	56kw
Mast Above DWL.....	*62'0"*	18.90 m	Storage Capacity.....	425 ft^3	12.0 m^3
Water.....	260 gal	984 1	DispL/Length.....	259	
Fuel.....	160 gal	606 1	SA/Displacement.....	17.0	
Holding.....	55 gal	208 1	Ballast/Displ.....40%		
Max. Headroom, Saloon...	*7'3"*	2.2 m	Cabins/Berths.....	3/7	
Elsewhere.....	*6'6"*	2.0 m	STIX(Stabilitylndex).....	50	

EMERGENCY AND OTHER IMPORTANT GEAR

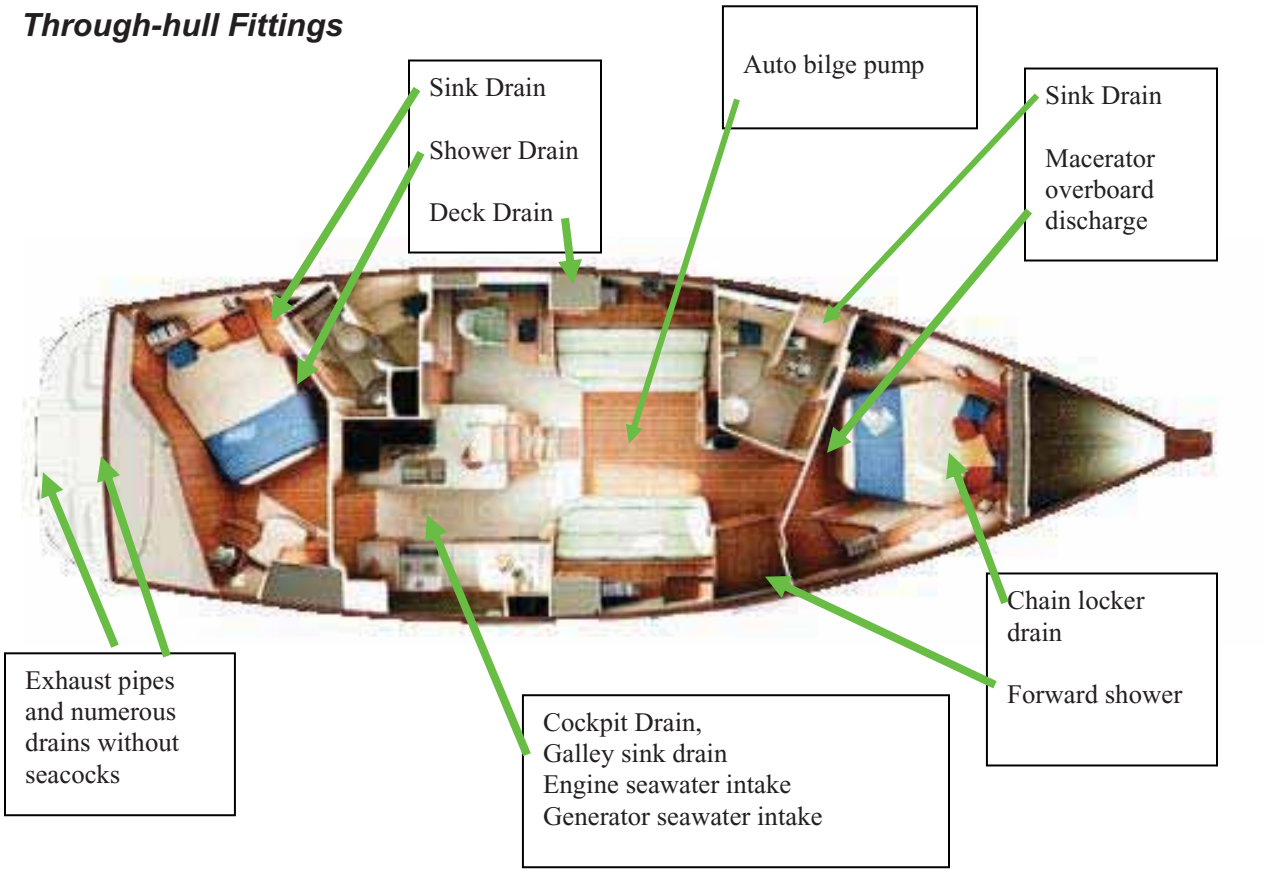
- **Life jackets are in the hanging locker forward of the starboard settee in the main salon and in the foul weather gear locker behind the nav station.**
- **Flares, binoculars, first aid, radar reflectors, etc. are in the cabinet just forward of the nav station over the port settee.**
- **Tools, plugs and engine spare parts are under the berth in the forward stateroom. Lift up on the end of the birth.**
- **Oil, rags and funnel are in the container on top of the genset in the engine compartment. Access it through the hatch to the right of the sinks in the galley.**
- **Lines and emergency tiller are in the lazarette.**
- **Books and manuals are in the bookshelf over the starboard settee.**
- **Flashlights are in the nav desk**
- **Deck fitting wrenches (for water, fuel, etc.) are in the nav desk**
- **Fire extinguishers are located in the hanging lockers of the fore and aft staterooms and next to the nav station.**
- **Emergency rudder. Use the autopilot if wheel steering fails. If AP fails, emergency tiller is in the lazarette.**

WHERE TO BE ESPECIALLY CAREFUL

There are a few things that you need to be sure you know how to operate or you may break something. We've done it and want to spare you the experience:

- **Check the through-hull fittings before you operate the shower drain pumps. These fittings need to be closed when sailing (and heeling) but open again before you turn on the pump or you will get water in your clothes lockers.**
- **Be very sure that the valves are aligned properly before discharging the holding tank overboard.**
- **Be sure not to moor the dinghy on the starboard quarter cleat if you are running the heater. The heater exhaust is there and it will melt the dinghy painter.**
- **Be sure the dinghy and its painter are clear before maneuvering Voyager, especially when backing down.**

Through-hull Fittings



All through-hull fittings should remain open, except for sink drains (heads and galley). These should be closed when in sailing in heavy wind with 15 degree or higher angles of heel.

Most drains are through-hull but without seacocks. Those with seacocks include

- Engine and galley drains underneath galley deck
- Macerator overboard discharge
- Shower and sink drains for the forward and aft heads

Lights

Master switches for lights are on the DC circuit breaker panel, to the right of the nav station under the companionway. Turn on the three "Cabin Lights" breakers. The recessed lighting in each space is on a rheostat which is the blank knob usually located near a locker or by the companion way. The silver light fixtures each have their own on/off switch and dimmer. Other lights are located throughout the cabins.

Deck and navigation lights are each controlled by the switches on the DC breaker panel. When the breaker is on, the light is on.

Flashlights are in the nav station desk and mounted behind the companionway ladder.

Anchors.

Our boat is equipped with two anchors, Both anchors are forward. The primary bow anchor is a 40 # Delta with 250 feet of 3/8" chain. The first 100 feet of chain is marked with yellow painted links in the chain at 25-foot intervals. All links in the last 20 feet are painted red. The bitter end of the main anchor is secured in the bottom of the chain locker

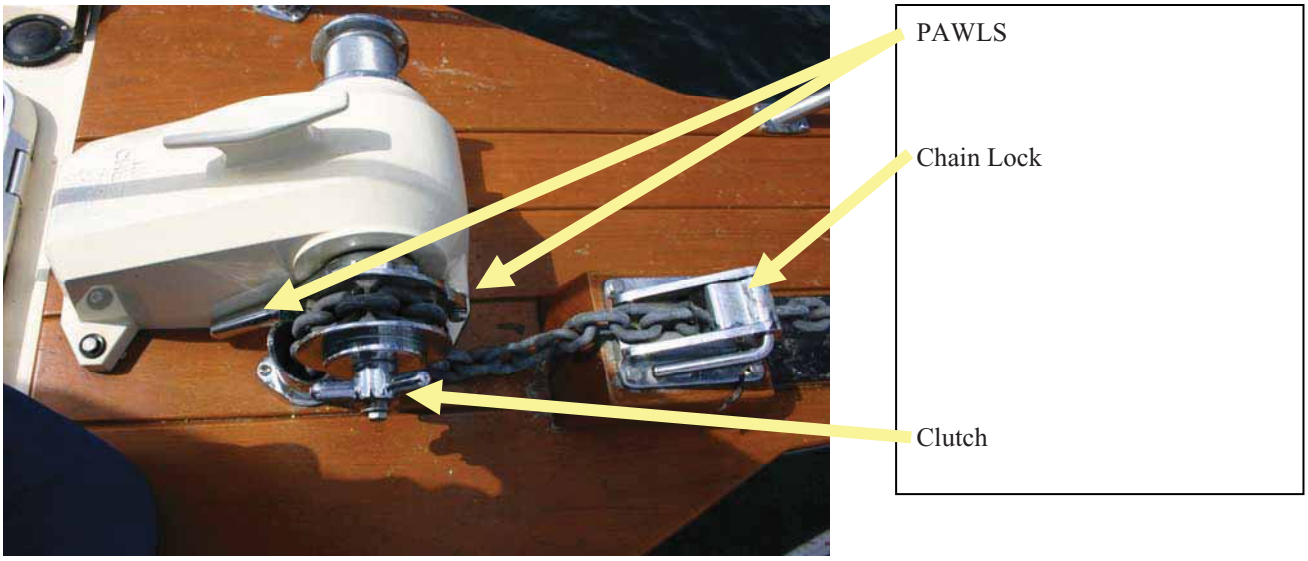
Electric Anchor windlass receives power from the engine start battery. Always operate the windless while the engine is running! Otherwise, the windlass will drain the start battery. The breaker (i.e., the "on" and "off" switch) for the windlass circuit is in the forward part of the black electronics bulkhead (where the radio and inverter are located) next to the nav station. This switch should be turned on when the windlass is in use and turned off otherwise.

There are two windlass controls. There are a set of foot switches mounted on the deck just behind the windlass. Lift the covers to use them. They are marked as to which direction they move the windlass. A second up-down toggle is on the port side of the steering pedestal. **We strongly suggest that windlass operations be conducted from the bow so that the anchor's position is monitored as it is raised or lowered.**

Voyager's main anchor is heavy and thus the windlass should be used to raise and lower.

Deploying the Anchor:

1. Turn on the windlass switch by the nav station.
2. Check the windlass. Make sure that the windlass clutch is locked so that the windlass controls the anchor chain. Also make sure that the pawls are positioned so that the windlass can deploy the anchor chain.
3. Unlock the chain lock which is between the anchor and the windlass. Deploy 6-8" of chain and slide the anchor forward enough so that it is still on the roller but will deploy under its own weight.
4. When the ship's motion is appropriate, lower the anchor using the windlass.
5. When successfully anchored **always set the chain lock so that the anchor load is taken up by the lock and not by the windlass. You will know the chain lock is set if you can slack the chain going from the windlass to the lock. Set the pawls on the windlass to prevent accidental deployment of rode.** We strongly recommend that the anchor snubber be used to take the load off of the chain lock. It is found is found in the chain locker on the port side.
6. Turn off the anchor windlass switch.



Retrieving the Anchor:

When retrieving the anchor, *never* use a windlass to pull the boat up to where the anchor is set. (The windlass is powerful enough to do that, but again it might rip itself from it's attachment point.). Instead, head the boat under power toward the anchor while using the windlass to take up the slack chain. Apply the following steps to retrieving and securing the anchor:

1. Turn on the windlass switch by the nav station.
2. Check the windlass. Make sure that the windlass clutch is locked so that the windlass controls the anchor chain. Also make sure that the pawls are positioned so that the windlass can retrieve the anchor chain.
3. Unlock the separate chain lock and remove the snubber
4. When the ship's motion is appropriate, activate the windlass to bring up the chain. Only use the windlass to take up slack chain. Use the engine to move the boat towards the anchor. We recommend that you have the chain locker hatch open so you can push the chain down into the chain bay. Otherwise the chain may slip off of the windlass.
5. Watch for the anchor itself. Carefully use the windlass to bring the anchor completely up over the roller, but not to the point where there is tension on the chain.
6. Lock the anchor in place with the chain lock. Be sure the chain lock is fully engaged. Then slack the chain between the windlass and the chain lock so that the chain lock and the roller are securing the anchor.
7. Set the pawls on the windlass so that the chain cannot run.
8. Turn off the anchor windlass switch.

The secondary anchor is a 12 # Danforth with 25 feet of chain and 200 feet of nylon line. It is in the second bay of the chain locker.

We recommend a scope of 4-to-1 or more. Vessel swing is frequently dictated by currents and tides rather than wind, which means that your heading may change 180 degrees during the time at anchor. Most coves are 15' to 30' deep, so expect to pay out about 60' to 120' of rode. After you have paid out the suitable amount of rode, 2 minutes of reverse (idle speed) sets the anchor and tests its holding power. If you wish to sleep even better, put the throttle at half-speed in reverse to prove to yourself that the anchor is well set!

NOTE: Voyager has a full keel and draws 5'7''…so figure on 6 feet to be on the safe side. We like to always see 10-12' on the depth sounder under the keel at all times. Both underway going in/out of a shallow bay and, importantly at low tide on anchor! (So be sure to consult your tidal information from San Juan Sailing to plan for the lowest tides you'll encounter while on anchor.). The depth sounder is set to read depth from the bottom of the keel. So if it says you only have 2 feet of depth, that means the bottom is about 2-3 feet under the keel.

Barbecue And Stove

The stainless steel propane BBQ is mounted midships on the fantail rail. The propane hose is found in the propane locker on the starboard quarter deck. The T-fitting on the propane tank enables propane flow to the BBQ and stove simultaneously. Please remember to turn off the valve at the tank if neither the stove nor the BBQ are going to be used for several hours. Please re-stow the hose in the propane tank locker after use and anytime that you are underway. Also, as a courtesy to the next guest, please use the wire brush attached to the BBQ to clean it after use.

For those of you used to the 3-burner "Mr. Bar-B-Q" grilling station on your patio with enough heat generation to smelt steel or roast an entire cow, the shipboard BBQ is not the same. The heat generation is lower and a brisk wind while at anchor will slow down cooking considerably. Plan you meals and grilling accordingly.

CAUTION: The outboard, if you have one, mounts on the rail (while underway) next to the BBQ. Never use the BBQ with the outboard on the rail mount. Put it on the dinghy or up on deck forward of the cockpit. The outboard contains highly flammable gasoline and could explode from the heat of the BBQ!

Stove. The stove is fully gimbaled for use at sea or when anchored. Gas to the stove is controlled via a relay. To activate gas to the stove from the propane tank, take the following steps:

1. Turn on the valve at the propane tank which is located under the hatch in the stern on the starboard side. There is a spare tank in case the connected one runs out.

2. On the main DC breaker panel, turn on the LP Gas switch (red light).

3. On the cabinet just below the freezer door is a Propane Control switch. Turn this on.

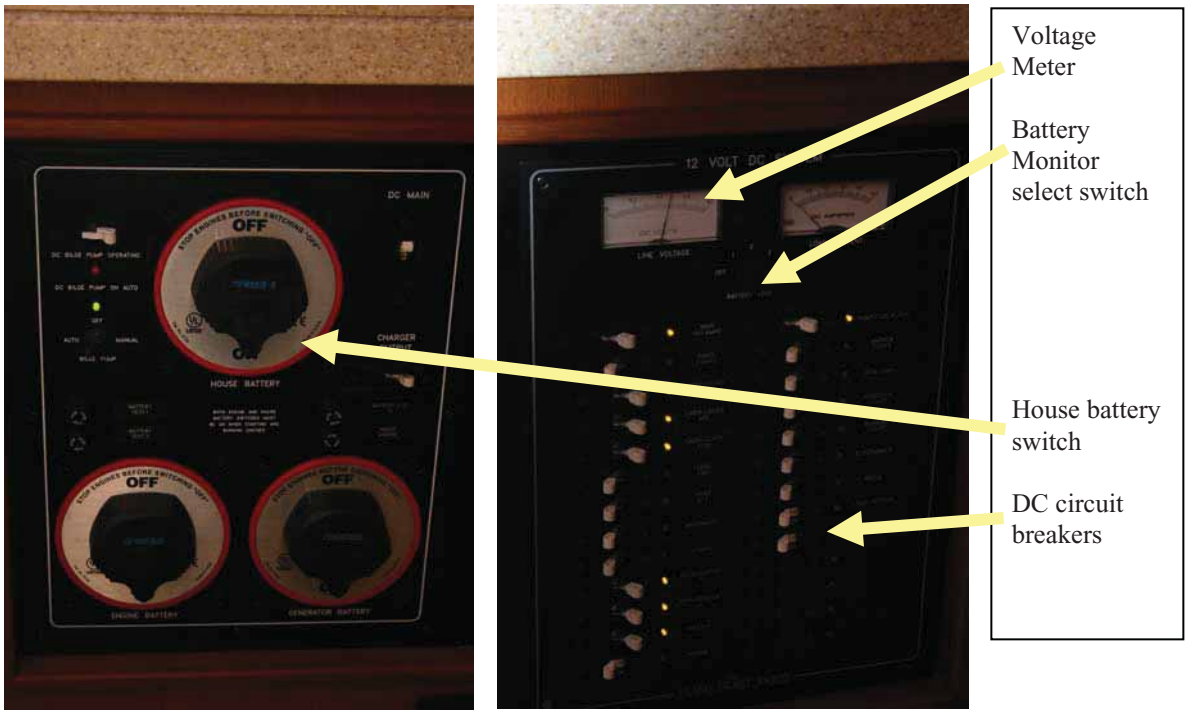
4. Light the stove or oven as required. It may take a moment for the gas to get to the stove. If the stove does not light within 15 seconds, turn off the burner and check the connections and switches. If you smell gas, let it dissipate before trying again.

5. The propane control switch operates a solenoid which draws DC power when active. Turn off the switch when you are done with the stove. We recommend you shut off the gas at the tank every evening before retiring.

Power Management

Voyager has both AC and DC power. Most equipment runs from DC power provided by batteries. Some equipment, including the microwave, DVD player and the AC outlets, require AC power which can be supplied from shore power, the genset, or the batteries. There are circuit breakers to route and manage various configurations. Please familiarize yourself with these before you get underway.

Battery Power. Voyager has three battery circuits. One battery powers the starter for the engine and also the windlass. A second battery powers the starter for the generator. The third bank of "house" batteries supply power to the ship and to the inverter for limited AC current. All batteries are an advanced "gel" design and are under the aft part of the port settee.



The main battery on/off switches are to the right of the nav station under the companionway. We recommend that all battery switches remain in the ON position unless there is a requirement to isolate a battery circuit or there is an electrical fire.

To the right of the main battery switches is the primary DC circuit breaker panel and battery monitoring station. The rotary switch under the voltmeter lets you select the battery bank and see the voltage available. Switch positions are:

- Position 1, house batteries
- Position 2, engine start battery
- Position 3, generator start battery
- Position 4, not used.

House battery status can also be monitored with the digital meter on the inverter. This meter gives you a continuous picture of power drain and battery voltage and is probably your best and easiest way to monitor the house battery system.

Any time that a battery voltage falls below 11 volts, it should be recharged via shore power, the genset, or the engine. House batteries should be at 12 volts before retiring for the night, especially if the heater system is being run. To recharge via the engine, simply start the engine and let it run for an hour. To recharge batteries from shore power or the GenSet, activate either of these systems and check that the Inverter charger switch is on (it should be at all times, but it is worth checking. See below).

The circuit breakers also serve as main switches for DC systems on the boat. That is, when the switch is on, the system is on. This includes navigation lights, electronics, the heating system, reefers, vacuflush heads and general lighting. Systems that should remain on during your entire cruise are:

- Refrigerator 1, Refrigerator 2 and Freezer
- Vacuflush heads (Head Fwd and Head Aft)
- Pump Fuse Block
- Cabin lighting
- Bilge pumps
- Fresh water pump

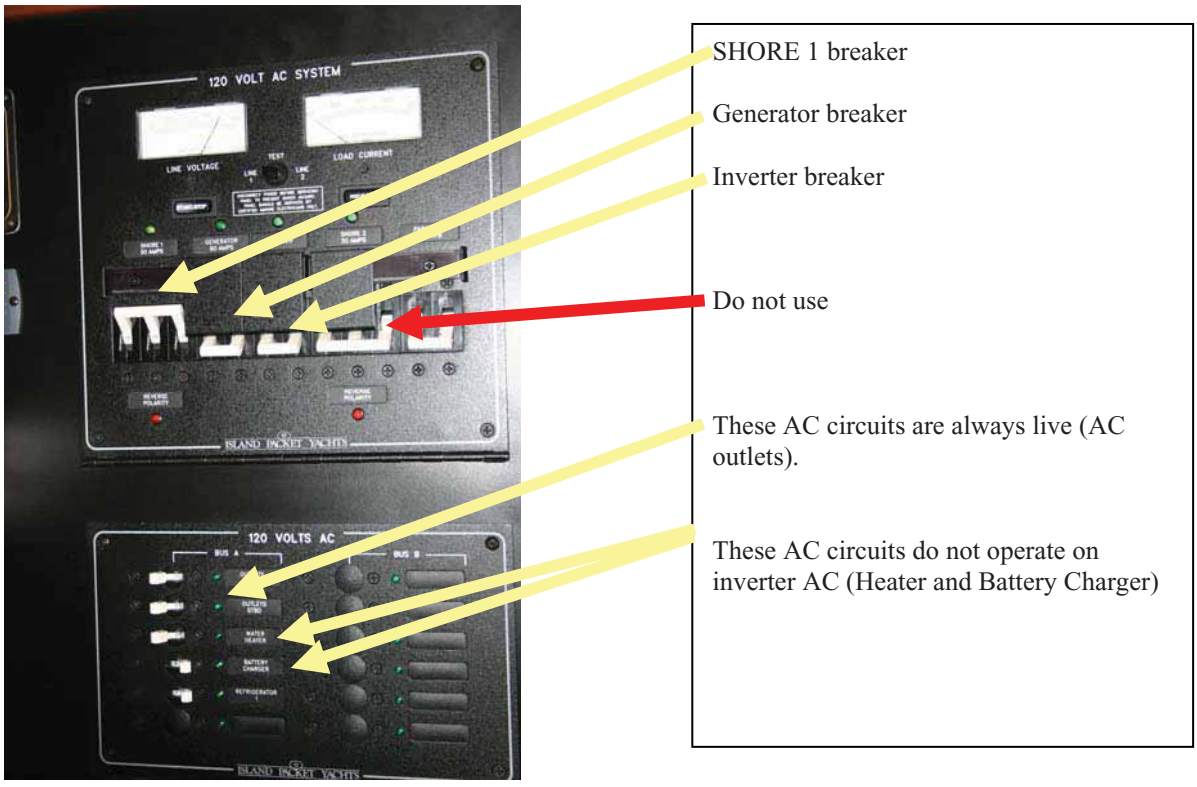
All other switches should be turned off when not in use to prevent unnecessary battery drain.

AC Power. Voyager has AC outlets throughout the ship. In addition, the microwave and DVD are powered by AC current. AC power is available from three sources. Shore power, Genset, and the Inverter. Note: the inverter power is limited, so if you running hair dryers or other power hungry AC equipment, have the Genset going or be plugged into shore power. Remember that 1 amp of AC power is the equivalent of 8-10 amps of DC power.

The AC power panel is to the left of the nav station on the bulkhead. The panel has two parts. One is a set of circuit breakers for AC powered equipment and the AC plugs on the ship. The other is the set of master circuit breakers for selecting the AC power source. The three left hand

breakers (SHORE 1, Generator and Inverter) are the ones you will use. The sliding covers prevent you from having more than one source active at a time. Configurations for AC power are as follows:

- Shore Power. Plug in the shore power 30 amp cable to the **PORT** shorepower receptacle (the one next to the orange warning label) behind the cockpit above the mainsheet traveler. Ensure that the Inverter and Generator circuit breakers are OFF (down position). Turn ON the SHORE 1 power breaker. All of the AC circuits will be live.
- GenSet. Turn off the Generator AC circuit breaker. Start the Genset (see below). Ensure that the Inverter and Shorepower circuit breakers are off. Turn on the Generator AC circuit breaker. All AC circuits will be live. Turn off this breaker before turning off the GenSet.
- Inverter. Turn off the Generator and Shore 1 breakers and turn on the Inverter breaker. Check the AC load and make sure that it is not more than 10 amps. If the batteries drain below about 11 volts, the inverter will turn off AC power. Switch to the GenSet for AC power and recharge the batteries.



Inverter. The inverter panel is to the right of the AC panel. The inverter also controls the recharging of the batteries from AC shore or genset power. The display on the inverter gives a very accurate indication of the charge status of the house batteries, as indicated by the voltage.

Fully charged house batteries will show about 13.8 volts. If the voltage shows 11 volts or less, recharge immediately with the engine or AC sources.

The inverter should always have the three switches on its front panel turned on.

Battery status (volts and amps)

Master ON switch

AC Power inverter ON switch

Battery charger from AC ON switch

The inverter is not designed to create AC to run hair dryers and other heavy load items. If you anticipate using such equipment (perhaps after morning showers, plus making a pot of coffee and running the microwave), start the Genset to take the load.

GenSet. If shore power is not available, for instance, when at anchor, then the genset should be used for periods of heavy power load. For example, in the morning, when hot showers, hairdryers, coffee makers and the microwave will be needed, powering up the genset to provide necessary amps for these devices is a good idea, plus it recharges the batteries. Remember that starting the engine only recharges batteries and does not provide adequate AC current for heavy loads.

The generator is fully automatic. The start switch is just to the left of the companionway ladder. To start the generator, click the switch to the START position and the green light will come on. The generator will automatically go through its starting sequence and activate in a few seconds. One it is started, turn the master Generator circuit breaker on and check that the voltage output is 110. To turn off the generator, first turn the breaker off and let the genset run for 15-30 seconds. Then turn off the start switch. The generator will automatically shut down.

If the Genset fails to start after 30 seconds, turn the switch to the STOP position. Open the engine door hatch to the right of the sink in the galley. The Genset is the big grey box. There is a small control panel with one red and two yellow buttons. A red light next to the right hand (yellow and labeled AUTO) button should be illuminated. If it is not, press the AUTO button until the red light comes on. Then try the Start switch again.

Bilge Pumps.

Please check the bilge each day, morning and evening. There are two bilge pumps.

The electric bilge pump is located in the bottom of the bilge. This pump has an automatic float switch wired directly to the house batteries. When there is enough bilge water to "float" the switch, the pump engages and the water will be pumped out. Hopefully you will never hear the bilge pump start automatically. If you do, please investigate immediately. Check the thru-hulls to make sure none are leaking and take appropriate action (shutting off the seacock valve and, perhaps, tighten the hose clamps and reopen the seacock valve). Report it to San Juan Sailing either by phone or VHF if a significant problem, or upon your return if a minor problem. The pump can be operated manually by turning the bilge pump switch on the battery panel to manual. Always return the switch to Auto when you are done

Bilge pump Manual/Automatic switch.

The emergency bilge pump is located in the engine room and is operated from the galley. Open the white cover on the bulkhead to the left of the sink and insert the handle mounted on the bulkhead. Pump up and down and observe the water level.

Any time that the automatic pump runs for more than a minute or so, inspect all through-hull fittings and close them if required until the source of the water is determined.

Dinghy and Davits.

Voyager has an inflatable 10'6" dinghy. Towing works best when the dinghy is brought close to the boat— only have about 4 or 5 feet of painter line from the stern cleat to the bow of the dinghy. This lifts the bow, reduces drag, and lessens the chance of wrapping the painter around the propeller. Tie the painter off twice—once at a cleat then the bitter end to the stern rail. We've recovered dinghies "lost at sea" by others who relied on a single cleat hitch.

Whenever possible, secure the dinghy to the port side, especially if you plan to run the ship's heater. The heater exhaust exits on the starboard side right near the transom and is very hot. It will melt or burn through any line that is in front of it.

The dinghy should be stored in the davit when not in use. Attach each of the davit lines to one of the bridles and raise the Dinghy carefully. Be sure to secure the dinghy tightly to the davit and aft pulpit so that it does not move while underway. Also be careful to not drop the dinghy onto the swim platform. Rather, ease it out into the water as it is lowered from the davits.

Please take special care when beaching the dinghy (refer to the dinghy beaching procedure in your charter guest book). Most of the beaches you will land at are strewn with barnacle covered, bottom slicing rocks. When approaching the shore, weight the dinghy aft by leaning or moving toward the back of the dinghy. Then offload everyone over the bow. Lift the dinghy above barnacle height using the hand lines on either side, and deposit it gently on the beach. Also remember to secure the painter under a rock or to a log—especially in the case of a rising tide.

Dodger and Bimini

The dodger's plastic "glass" is vulnerable to scratching from salt crystals, especially after sailing into a challenging breeze. The salt spray on the glass dries in the wind, leaving behind tiny salt deposits that obscure your vision. Please avoid directly touching the glass with a rag or sponge. Salt does dissolve in water, but not as fast as you might think. The salt crystals remain undissolved for several seconds. It's like rubbing the glass with sand paper! To clean, please use generous amounts of fresh water from a pan from the galley or a sopping wet sponge to "flood" the glass and dissolve the salt crystals away. (Better yet, wait until you're at a dock where you can hose off the salt crystals. If the dodger glass is really clear, you can thank previous guests for their diligence. And we thank you too!

The Bimini should be up when you charter Voyager. You can take the bimini down if weather or your personal sailing preferences dictate. To take down the bimini, follow these steps:

1. Unzip and remove the bimini top. Start with the "glass" windshield that connects the bimini to the dodger. ***Please be very careful with this section. Do not let it fold or crease since it will damage the glass. Roll it up and stow it in the lazarette or a closet where it is safe.***
2. Remove the horizontal brace bars on either side which brace the hoops. Stow the end in the holder as shown below. Be sure to put the knob screws back into the frame on either side so that you do not lose them.
3. Rotate the hoops aft and secure them together with a bungee, as shown in the picture below. You will have to swing the boom to the side to allow the hoops to rotate aft.

When you are done, the stowed hoops will look like this:

Swim deck

The swim deck aft of the transom has a couple of important features. There is a swim ladder in the middle of the deck that can be lowered into the water to facilitate entry and exit. BE SURE THE LADDER IS STOWED BEFORE GETTING UNDERWAY.

There is a cold water shower nozzle on the port side for a quick rinse.

Electronics.

Voyager has a full suite of electronics for navigation and communications. Power for all electronics is controlled at the main DC panel, next to the battery panel. There are a set of quick reference cards on a key ring for getting familiar with the basics. These are in the bookshelf on the starboard side. Take a minute to review these before getting underway.

Depthsounder: The digital depthsounder will not give accurate readings beyond 200'. It is designed for use in shallow waters. In deeper water, the sensitivity on the unit increases as the transducer tries to get some reading back. Consequently, you will receive many false readings caused by currents, changes in water temperature, fish, and seaweed. Use the depthsounder only as an aid to navigation in shallow water. However, the key to avoiding rocks is not the depthsounder—but knowing where you are at all times. (Rocks are the greatest navigational and safety hazard in the islands—but they are all clearly marked on the charts.) We do not recommend using the alarm. It is likely to sound at inappropriate times such as late at night while fish are passing beneath the transducer. Depthsounder is corrected to read depth below the keel. So 2 feet means 2 feet between the keel and the bottom.

Chart Plotter: Voyager has the RayMarine E-80 series Chart Plotter, including a gyro compass and GPS. There is a Navionics "Gold" flashcard database to provide chart information to the system. This card plugs in at the display. If it is not there, check in the navigation table as it may have been stored there to keep it from "walking." Turn off the plotter and insert into the slot on the display.

The chart plotters may be used without the radar to minimize battery drain. GPS input to the Chart plotter comes from a Raystar 120 WAAS receiver mounted on the port stern rail. To start Chart plotter, turn on the electrical panel switch labeled "Chart Plotter". Then, press and hold the power button at the lower right corner of the unit until it beeps and turns on the display. The unit will start up in its last pre-shutdown mode (radar only, chart only, or split screen). Use the display key located at the upper right corner of the unit to change modes. To shut down the unit, press and hold the power key for 3 seconds.

The chart plotter has a lot of features ("bells and whistles") which you can spend your entire cruise learning to master, thereby missing a lot of scenery.. In the bookshelf on the starboard side of the main salon are quick reference cards for most common plotter features. We suggest you get familiar with basic functions before getting underway. We recommend that in addition to the Maptech waterproof chart book (with the most active "killer rocks" marked in red) in the cockpit, please utilize the chart plotter for added safety.

Autopilot. The autopilot is controlled from the panel just to the right of the helm. Like the chart plotter, the autopilot has many bells and whistles and can guide based on magnetic course, apparent wind, or waypoint-to-waypoint. Our strong recommendation is that you use the autopilot to set a magnetic course and not worry about other modes unless you are familiar with the RayMarine system. To set a course, do the following:

1. Turn on the autopilot circuit breaker and then turn on the autopilot at the display.
2. Steer the course you want.
3. Push the AUTO button. The autopilot should follow your current course. To alter course, put the AP in standby, turn to the new course and press the auto button again. For slight course changes, press the +/- buttons which will alter course by 1 degree or 10 degrees, respectively.

Radar. The Radar is integrated into the Chart Plotter.. 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 usually burns off by mid-day. If it's still soupy after breakfast, we put on an extra pot of coffee until it lifts. (Never depart from a "safe" location into the fog!).

Knotmeter: If the digital knotmeter shows a reading of "0.00" while underway, the impeller is most likely clogged with a piece of eelgrass. Sometimes it will float off overnight. You can also try removing it by traveling in reverse. The impeller is located beneath the most forward salon seat cushion. (We don't recommend that you try to remove the impeller to clear it, unless you are VERY experienced in such things. An open hole in the hull is a scary situation, and if not plugged quickly, it can jeopardize the boat.) If the knotmeter is temporarily "out of service", the GPS input to the chart plotter provides an alternate and quite accurate speed indication.

VHF radio: The remote access microphone (RAM), when plugged into the port side of the pedestal, controls all radio functions of the unit mounted above the nav station from the steering station. We find this very convenient while entering and leaving moorings. You should monitor channel 16 (the hailing and distress channel) during your cruise. After establishing contact on channel 16, switch to working channels 68, 69, or 79. Scan the weather channels for the one with the best reception before sailing in the morning and prior to anchoring for the evening. This is generally a light wind region but weather changes can be sudden. Listen for the "inland waters of western Washington" or "Camano Island to Point Roberts". Both cover the San Juan Islands. You will also hear "Strait of Juan de Fuca" (south of the San Juans), "Georgia Strait" (north), and "Rosario Strait" (runs through the eastern part of the San Juans). San Juan Sailing monitors channel 79 during office hours (closed Sundays). By phone you can reach the San Juan Sailing office at (800) 677-7245 or SJS's owner, Roger Van Dyken, at (360) 224-4300 (cell) or (360) 354-5770 (home).

The VHF radio has a detector for emergency DCS transmissions which emits a loud alarm when it detects one. Typically, our guests hear about one alarm a week. You should be able to silence the alarm by hitting the CLR button on the radio or turning the radio off and back on

Entertainment. Voyager has both a DVD and a CD/radio player. A couple of notes about these devices. The CD player is wired to the same circuit as the VHF radio, so make sure the radio breaker is on. The on-deck speakers are the R (rear) speakers on the Fade control and the cabin speakers are the F speakers. If you want to listen to music in the cabin but do not want to disturb other boats in the harbor, push in on the left knob on the CD player (it is on the bulkhead next to the nav table) until FAD appears. Then turn the knob to F15. This turns off the deck speakers. Turning to R15 turns off the cabin speakers. Push the knob again until volume reappears.

The DVD player is a Sony while the screen is Magnavox. So there are two remotes velcroed to the DVD player. Use the Magnavox to control the volume and the Sony to control the DVD player.

The Nav Desk Laptop Station.

Note to spouses. Voyager is equipped with a computer monitor and some electronics to provide laptop, cellular and WiFi connectivity. If part of the goal of your charter vacation is to separate your spouse from his/her email or other on-line work, you may want to tear this page out of the notes now.

Laptops, Wifi and Cell Amplifier. For those of you who need to stay "connected" while on Voyager, the Nav station is also set up for extended cell/ communication. Specifically:

1. To facilitate laptops, on the bulkhead beside the navigation table you will find a power strip. In addition, the flat screen over the navigation table can be used with your laptop.
2. A wireless mouse and a small keyboard are provided. These are connected to a USB port replicator which can then be connected to your laptop. To turn on the mouse, flip it over and you will see an on/off switch. Remember to turn it off or the batteries will drain.
3. A cell "inductance pad is provided. This is described below.

Note. Voyager is not a clandestine intelligence ship. Those two vertical poles on the dinghy davits are the antennae for the cell and WiFi amplifiers.

A cell phone amplifier system is installed and accessible via an induction pad. The induction pad is the black rectangle velcroed to the radio panel below the VHF radio with the thin black cable attached to it. Take the pad and either put it underneath your laptop cellular modem or put your cell phone on the pad. By placing either your cell phone or your laptop cellular data card on top of the induction pad, you should observe substantially improved reception at remote distances from cell towers.

Finally, if you have your own navigation software such as Fugawi ENC which accepts NMEA 0183 data, there is another USB cable in the shelf below the VHF radio marked "Navigation." This cable provides NMEA GPS data from the RayMarine shipboard electronics so that you can track your progress on your laptop. This cable is a Sealevel model 2105 RS-232 to USB converter device and may require installation of a driver on your computer. You can download this driver at the following URL:

http://www.sealevel.com/drivers.asp?part_num=2105&submitButtonName=FIND#part_number

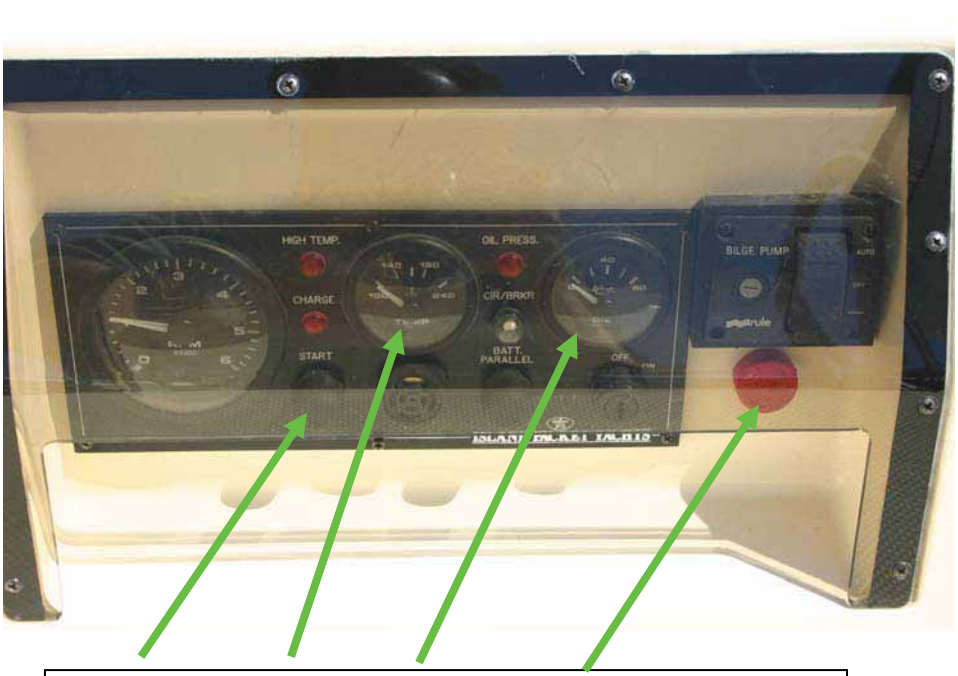
If you are going to hook your laptop navigation software to Voyager's RayMarine E80 system, we suggest you check with the software vendor ahead of time to get detailed instructions on how to set this up, including configuring COM ports, etc.

Remember that your laptop and the screen use AC power from the inverter and can drain the batteries. Be sure to turn them off when not in use, especially overnight when at anchor.

Engine and Maneuvering Ship

Voyager is powered by a Yanmar 75HP Diesel engine. Primary access to the engine for purposes of inspection is from the after stateroom through the hatchway located below the vanity mirror. The front of the engine is accessible through the hatchway in the galley forward of the sink.

Every day, we would like you to check the oil level. The dipstick is easily accessed on the starboard side of the engine and is best accessed from the aft stateroom. There is a wide gap on the dipstick between the full line and the fill line. **Do not overfill.** Use the onboard spare oil to add no more than a cup at a time. Then check the level again. Overfilling is a bad thing to do to a diesel. The excess oil will escape somehow, perhaps by blowing the head gasket . Also, if the dipstick indicates no oil the first time you check it, reinsert and try again - the correct level will show when the air lock bubble is broken. Expect the oil to be blacker than that of a gasoline powered automobile engine…this is normal for a diesel after only a few hours of operation.



Start button Water Temp Oil Pres. Engine stop button

The engine start sequence is as follows:

1. Ensure that the transmission is in neutral. Voyager uses a combination lever for throttle and gear which is located on the starboard side of the steering pedestal. Ensure that the lever is straight up.
2. Insert the key in the ignition. An ignition alarm will sound. Press the start button until the engine starts, but not more than 15 seconds.
3. Check the oil pressure. If it does not rise within about 10 seconds, shut down the engine and investigate.
4. Ensure that water is coming out of the exhaust pipe on the transom.
5. To advance the throttle without engaging the propeller, push the button in on the throttle lever and advance the throttle. To re-engage the transmission, bring the throttle lever to neutral. The button will click out and the transmission can be engaged either forward or aft.

For purposes of charging batteries, the engine RPM can be left at idle or brought to 1200 RPM, whatever is comfortable in terms of sound and vibration.

When cruising, we recommend that the engine RPM not exceed 2900. This will give approximately 7 knots of hull speed.

The engine shutdown sequence is as follows:

1. DO NOT TURN OFF THE IGNITION KEY UNTIL THE ENGINE IS STOPPED.
2. Bring the throttle to idle and ensure that the transmission is in neutral.
3. Push the engine cut-off button on the engine panel in the cockpit. Hold it until the engine has completely stopped and the ignition alarm sounds.
4. Remove the key. Turning the key prior to engine shutdown will have no effect.

Ship Maneuver. Voyager has both propeller and bow thruster available for maneuvering the ship in close quarters. We STRONGLY encourage you to make use of the bow thruster when necessary; its use does not represent poor ship handling skills but prudent judgment instead. Voyager has a full keel and is heavy. At slow speeds and in reverse it is not as agile as lighter, fin keep boats. Plan accordingly. Before getting underway, check the following:

1. Look over the stern for things that could foul the propeller. If the dinghy is not in the davits, bring it alongside and secure the painter to a mid-ship cleat. The dinghy painter is a floating line, but don't trust it.
2. Turn on the bow thruster circuit breaker at the DC panel next to the nav station.
3. Start the engine and let it warm up for 5-10 minutes.

4. The bow thruster control is the joystick on the top of the steering pedestal on the port side. Push both ON buttons simultaneously to activate it. NOTE: THE BOWTHRUSTER AUTOMATICALLY TURNS OFF AFTER 3 MINUTES IF NOT USED. To reactivate, press the ON buttons simultaneously.
5. Before untying lines, put the transmission momentarily in forward and reverse to ensure that it is working.

Some other notes on ship maneuvering and cruising:

- Voyager kicks to port when going astern. Plan on using a fair amount of starboard rudder to keep it going straight.
- The bow thruster should not be used for more than about 15 seconds at a time. It is also noisy. It is supposed to sound that way.
- Rudder position is indicated on the autopilot display and with a string on the wheel.
- Recommended maximum cruising RPM is 2800-2900. That will push the ship close to hull speed. RPM should never exceed 3400.
- Voyager carries 160 gallons of fuel and burns only a couple gallons per hour, so you are not likely to run out of fuel.
- If the buzzer sounds while the engine is running, immediately check the oil pressure and temperature gauges. If you lost oil pressure, shut down the engine, check the oil level, and contact San Juan Sailing.
- The alarm buzzer is more likely to indicate engine overheating (and a different light will light up – the one with the thermometer symbol). Check for water gurgling out the exhaust before you shut down the engine. If you have the normal amount of water exiting through the exhaust, check the coolant level after the engine cools down. If there is no water gurgling out of the exhaust or you see steam instead of water, the seawater strainer is likely plugged with eelgrass. The best solution to this problem is <u>prevention</u>—keep an eye peeled for eelgrass masses, especially along those "soapy" tide and eddy lines in the water.
- When eelgrass gets sucked into the engine cooling water intake, it jams at the raw water strainer. To clear the strainer, access the strainers via the floor hatch in front of the companionway stairs for access. The raw water strainer is above the waterline, so there is no need to shut the seacock valve on the raw water intake. Remove the top of the strainer by turning it counterclockwise. (It will be tight, so a little elbow grease will be required.) Extract the plastic filter element. Remove the eelgrass (and throw it in the garbage can), and reinsert the plastic filter element into the strainer. Replace the lid and tighten by turning it clockwise until the lid is seated on the rubber gasket. (Be careful not to mis-thread the plastic top. Hint: Turn counter-clockwise first until you feel the top threads drop down into place in the bottom threads…then tighten clockwise.) If upon restarting the engine overheats again, check the seal between the strainer and its lid. If the strainer is drawing air, it won't draw water. (If still overheating, contact San Juan Sailing.)

Tankage

Fuel Tank. The 160-gallon diesel fuel tank is located under the main salon at the foot of the companionway ladder. The engine consumes less than two gallons of fuel per hour. The amount of fuel in the tank can be determined by lifting the bilge hatch at the foot of the companionway ladder and reading the gauge. For the typical week or two of charter, fuel will not be a problem. However, if the fuel gets below ¼ tank, refueling is recommended.

Please be very careful when fueling. Never allow maximum flow from the filler hose. If you do, the fill tube will surge and diesel will spill from the vents onto the side and onto the deck. It takes only a few drops of diesel fuel in the water to create a sheen and subject you to a Coast Guard fine. Fill slowly and carefully. When the pipe begins to gurgle like its full, you are probably full. You may also be able to see the diesel when looking down into the fill tube. Check the side vent and, with soap, wipe up any excess fuel to avoid yellowing the stern and polluting the water. Also be very careful of drips when removing the hose. Diesel and shoe bottoms are a very slippery and dangerous combination. After wiping, please use soapy water to scrub down any drips so it does not stain the fiberglass.

Tank Gauges. As mentioned above, the fuel tank has its own gauge on top of the tank. Gauges for the water and holding tanks are electronic. The readout can be found next to the AC circuit breakers on the black panel to the left of the Nav station (in the upper left corner). Press the up and down arrow keys to alternate between the holding tank and the water tank.

CAUTION. Tank level indication does not change unless you cycle between tanks. This is particularly important if you are emptying the holding tank with the macerator. Cycle to the water tank and back to the holding tank about every 20 seconds.

Use this button to switch between the water tank and the holding tank

Level (this shows empty)

Water Tank. Voyager has a 260 gallon water capacity. This is generally sufficient for most charters of a week. We recommend that you not fill the tank until it is less than ½ full in order to keep the water as fresh as possible.

Head and Holding Tank. Please do not put anything in the toilet that you didn't eat first. The only exception is the toilet paper supplied by SJS. It is not Charmin, but it also does not plug the heads. Please do not use more expensive multi-ply toilet paper. DO NOT PUT KLEENEX OR OTHER ITEMS INTO THE HEAD. Period, (San Juan Sailing staff will discuss holding tanks and pumpouts on your arrival.)

Voyager uses the Vacuflush heads. Effluent from the head is sucked into the holding tank, similar to onboard a commercial aircraft. Several things you need to know:

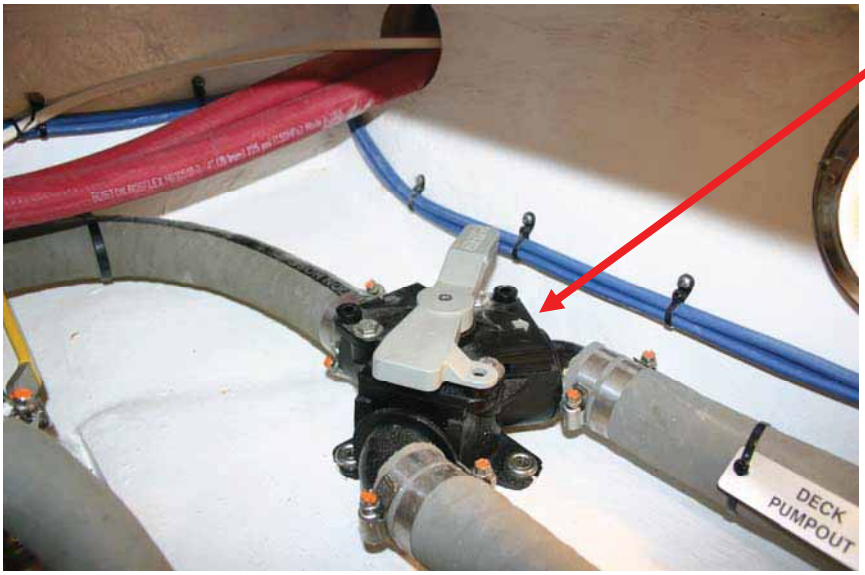
- The circuit breakers marked Head Fwd and Head Aft have to be on for the respective systems to operate.
- Before using the head, ensure there is adequate water in it. Lift up the foot lever until sufficient water has filled the bowl.
- Flush the bowl by pushing down on the lever (gently) and letting the bowl empty. By holding the lever down, additional water will wash out the bowl.
- Once you release the lever, the vacuum pump will reset the system. When it is ready for reuse, the green light will come on the VacuFlush panel mount below the sink in each head. Do not reuse until the light is green and the vacuum pump has turned off.

Occasionally, the vacuflush system in one of the heads will not reset. The panel light stays red and the vacuum pump will continue to run (more than a minute). Try cycling the on-off switch on the panel in the head. If this does not work, turn off the system in that head for a few hours and back on. The two heads are independent so the facilities will continue to work in the other head. Contact SJS for further advice.

Macerator. Voyager's holding tank has a 40 gallon capacity. Since only the heads empty into the tank, this will be sufficient for most charters. If the holding tank shows ¾ full or completely full, pump it out at the earliest opportunity. Allowing the holding tank to overflow can damage the heads and create a health hazard. If pumping facilities are not available, the holding tank may be pumped overboard using the macerator pump. CAUTION: Improper valve alignment or extended use of the macerator pump can cause damage to the pump system. Follow the directions below carefully for pumpouts and overboard discharge.

PUMPOUT.

Reference the following picture for correct valve position.



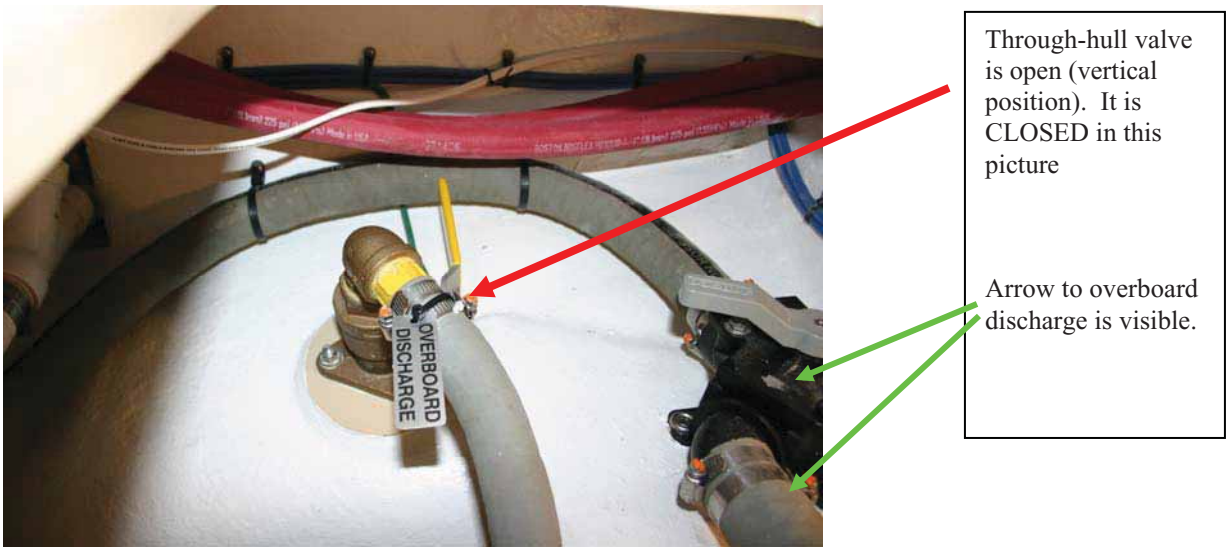
"Exposed" arrow points to deck pumpout

The pumpout valving for the holding tank is locate in the forward stateroom. Remove the deck hatch at the foot of the bed to expose the valve. The valve handle rotates so that it covers one arrow or the other going to either the Deck Pumpout or the Overboard hose. Make sure the arrow pointing to Deck Pumpout is not covered by the valve handle (this is not an intuitive design, so be careful). Pumpout using a shore station is then available.

OVERBOARD DISCHARGE.

Discharge in US waters is illegal unless you are greater than three miles from shore. Discharge in Canadian waters is generally allowed, however be aware of any restrictions based on your location. You are responsible for any penalties.

Overboard discharge requires care so as not to damage the macerator pump. If you find it necessary to discharge overboard, follow these directions carefully:



1. The valves should normally be configured for overboard discharge, with the through-hull fitting open and the Y-valve set to overboard. But check it anyhow to avoid breaking the pump.
2. Position the discharge valve so that the visible arrow is the one pointing to the overboard discharge hose.
3. If it is not already open, open the overboard through-hull fitting. The handle should be vertical. **Failure to do this will break the macerator pump when you turn it on.**
4. Go to the tank gauge panel at the nav station and confirm that the holding tank is full or nearly full.
5. On the DC circuit breaker panel, turn on the Macerator breaker and listen for the pump to start in the forward stateroom.
6. Monitor the gauge. When the gauge drops down to ¼ full, turn off the macerator pump.
7. Reset the discharge valve back to the deck pumpout position so that it is ready for normal operation. It is not necessary to close the through-hull fitting.

Failure to follow these steps can cause damage to the pump or the checkvalves in the system.

Heater

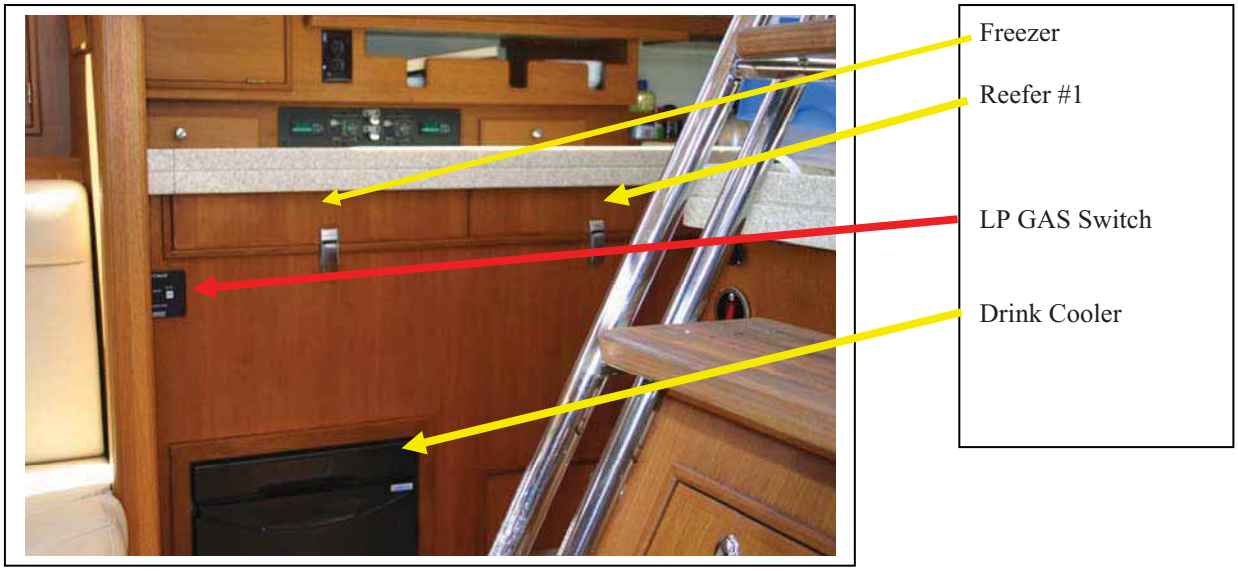
The diesel fired Webasto cabin heater is located in the starboard portion of the lazarette. It is accessible through the hatch to the lazarette in the aft stateroom. The heater heats hot water which is pumped to heat exchangers in the main salon, both staterooms and both heads. Operation of the heater is as follows:

1. Check that there are no lines (mooring, dinghy, crabpot) anywhere near the exhaust located on the starboard side near the transom.
2. Turn on the heater circuit breaker on the DC panel.
3. Set the desired temperature at the automatic thermostat located in the main salon forward of the starboard side settee. There is a day setting and a night setting (the half-moon icon). We suggest that the night setting be in the low sixties since the heater can be heard in the aft stateroom when the pump and the burner are both going.
4. There is a HIGH-LOW-OFF switch for the heaters in the heads. Generally, these should be left off to conserve battery power.
5. Turn off the heater by turning off the circuit breaker at the DC panel.
6. If the heater is going to be run overnight, ensure that the house batteries have at least 12.5 volts showing on the inverter voltage meter.

Refrigerator.

Voyager has two refrigerators and one freezer. Their locations are shown in the following picture. The refrigerator below the freezer is for wine and drinks. Circuit breakers for the systems are on the DC breaker panel by the nav station. We recommend that they be left on at all times.

The counter-mounted freezer and refrigerator have a control box above them that indicates current temperature. The freezer is set for 20 degrees F and the refrigerator for 37 degrees F. Please do not adjust. The drink cooler has a simple rotating knob to set the temperature. This unit can be adjusted as necessary.



Sails / Rigging.

Voyager is set up for minimum crew. The large sheet winches and the mainsheet winch are all electric and self-tailing. CAUTION: ELECTRIC WINCHES ARE VERY POWERFUL AND CAPABLE OF PARTING LINES AND RIPPING SAILS. Use with care and never to force the rigging. To operate the winch, press the large button next to it.

Mainsail – The mainsail has in-mast furling. If you are not familiar with this kind of furling, we suggest you try furling and unfurling a couple of times in lighter winds to get used to the line handling. Unfurling is done as follows:

1. Before deploying the main, loosen the boom vang line and the main sheet by opening the jammer clutch and pulling out about a foot of line on each, then close the jammer. (The sail does not like to come out when the boom is pulled down tight, so give it a little "play".)
2. Head into the wind or have it 10 degrees on the starboard side.
3. Release the outhaul jammer clutch and the furling line jammer clutch. Using the winch, pull on the outhaul to unfurl the main. Keep light tension on the furling line. Make sure the furling line stays on the spiral shaft in the mast.
4. When the main is unfurled, cleat the furling line and add tension to the outhaul to get the desired sail shape, Note that this is essentially a loose-footed rig so do not over tension the outhaul.
5. To furl the main, come into the wind, release the cam cleats for the furling line and outhaul. Winch the furling line while holding a little tension on the outhaul. Watch the progress of the furling to prevent wrinkles or sail jams. Do not force the furling. Wind coming from a few degrees starboard makes the furling process easier.

Headsails – The genoa/jib also has roller furling, with good sail shape from full out through three standard reef points marked by blue disks along the foot of the sail. As with the main, slight hand-over-hand tension on opposing lines – sheet and furling line – prevents problems such as a rat's nest on the drum (should the wind catch the sail and unwrap it violently) or a baggy furled sail.

The staysail is also roller furled and has a self tacking boom. We recommend that you set the Genoa first then use the staysail to either add power in moderate wind, or "protect" the Genoa in much stronger winds. If you are not familiar with staysails, Voyager will sail well just on the main and jib alone.

Water Systems

There is an 11 gallon hot water tank on Voyager. It is heated by the engine or when AC power is available from shore power or the Genset. It takes about 30 minutes to bring the tank to temperature. The tank is well insulated and will stay warm for 12 hours or more. If multiple showers are anticipated in a short time frame, fire up the engine or AC power to keep a supply of hot water available.

Hot Water. There is a 12 gallon hot water tank. Water is heater either of two ways: by running the engine or by AC power supplied via the genset or shore power. If you plan on using a lot of hot water at some point (everyone wants a shower before going ashore) then either keep the engine running or hook up to AC (shore power or genset) and turn on the Water Heater circuit breaker on the AC panel.

Showers. Showers are in the forward and aft heads. The shower head has a button valve to turn the water stream off and on. To use the shower, turn on the shower drain switch at the same time as you turn on the shower. Turn it off when all water has been pumped out at the end of your shower. Use the water on-off valve in the shower head to conserve hot water.

Be sure the through-hull fitting is open before operating the shower drain pump. Otherwise the water will blow through the anti-siphon valve and into the clothes lockers.

Water pressure: The fresh water pump switch is located on the electrical panel. The kitchen sink has a manual cold water pump faucet in the event the pressure system fails.

* * *

We equipped VOYAGER for both our own enjoyment and yours. We love her sailing ability, both in light air and in a blow, her very comfortable cockpit, her ample storage, roominess below, and just the overall good feelings we have while aboard. We hope you'll love her too!

Thank you in advance for taking special care of her! We earnestly solicit any suggestions for further improvements.

We're delighted to have you as our guests aboard VOYAGER!

Revised 02/03/2009