

Notes from the Owners of “KALLISTO”

Welcome aboard KALLISTO!

This 2010 Jeanneau Sun Odyssey 39i Performance has 3 staterooms, 2 heads and is roomy with ample storage for food and gear. She is a flyer, with a 7' 2" draft and 60' mast making her the deepest and nearly the tallest of the SJS fleet. Our choice of this particular boat comes from many years of experience in ocean racing on the high seas and lots of chartering. We wanted a boat that could accommodate 6 with ease and provide a lively sailing experience as well. We chose San Juan Sailing to handle KALLISTO because; of all the companies we have tried, SJS is clearly the best run. We hope that your experience will be equally as good.

Alex Goetz and Kate Wilson, Owners

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KALLISTO-Specific Alert

PLEASE NO SMOKING ABOARD *KALLISTO*!

BELAY THE DINGHY ON THE STARBOARD SIDE TO KEEP IT AWAY FROM THE CABIN HEATER EXHAUST ON THE TRANSOM. DO NOT RUN THE HEATER WHILE SAILING. In 2012 we had to replace the fan because seawater splashed into the intake.

KALLISTO HAS A NEARLY PLUMB BOW. PLEASE FOLLOW INSTRUCTIONS IN SECTION 2 CAREFULLY TO KEEP FROM DINGING THE BOW.

KALLISTO is a performance model Jeanneau 39i with high-tech sails and an adjustable rig. The backstay can be adjusted from either quarter by pulling on the "squeezer" mounted on the split backstay. The result of applying tension to the 15/16 rig is to tighten the head stay and flatten the jib as well as put bend into the mast which in turn flattens the main. The end result is to depower the rig, reduce the heel angle and weather helm. When you have lowered the sails PLEASE REDUCE THE TENSION IN THE BACKSTAY TO THE POINT WHERE THE TENSION LINES ARE SLACK. At this point the squeezer will be about 3 feet below the backstay split joint. The reason for this request is that the prop shaft was aligned while the rig was slack and the bending of the hull by tightening the backstay causes misalignment.

The forward head has a silver pushbutton below the sink. IT IS NOT THE SHOWER SUMP SWITCH, BUT RATHER THE MACERATOR SWITCH TO EMPTY THE HOLDING TANK OVERBOARD. PLEASE DO NOT SWITCH THE MACERATOR ON UNLESS THE THRU-HULL IS OPEN OTHERWISE THE FUSE WILL BLOW.

The heavy, Plexiglas main hatch insert is stowed on the engine vertical behind the door to the starboard aft cabin with the handle facing out.

The three knives in the galley belong in the center outboard locker in the galley. In the mahogany holder put the chef's knife on top and the paring knife at the bottom. There is a steel and a separate sharpening tool in the lower drawer. Please keep these high-quality knives sharp for the next guests.

After your charter, please leave all the seacocks open for the next guests.

KALLISTO Specs:

Year: 2010

LOA: 38' 11"

LWL: 35' 2"
Beam: 12' 9"
Draft: 7' 2"
Displacement: 15,760 lb.
Mast height above WL: 62' (with antenna)
Fuel: 34 gal.
Water: 94 gal.
Holding: 13 gal. fwd, 22 gal. aft

KALLISTO name origin:

The word "Kallisto" in Greek means "most beautiful." We hope that you agree she is. In Greek mythology Kallisto was a daughter of the Arkadian King Lykaon and a hunting companion of the Goddess Artemis. She was seduced by the God Zeus, and bore a son named Arkas. Zeus' jealous wife, Hera, transformed Kallisto into a bear. Later Arkas became a hunter, and in order to spare Kallisto from his arrow, Zeus transferred her to the stars to become the constellation Ursa Major. That theme is seen in our spinnaker.

The photo on the port forward bulkhead is self-explanatory. The painting on the starboard bulkhead is a reproduction of a larger watercolor painted by my grandfather (Alex) Hermann Krezzer in 1897 of surf breaking on a beach on one of the Ostfriesland (German) islands in the North Sea.

1. Anchors.

KALLISTO is equipped with two anchors, one forward and one in the port aft deep cockpit locker. The **primary bow anchor** is a 44 # Lewmar Claw (Bruce) with 300 feet of 5/16" hi-test chain. The chain is marked with yellow paint at 50-foot intervals and in red at the bitter end. At 50' there is one-12" yellow section, at 100' there are 2-yellow sections and so on up to 5-sections at 250'. If you see red, **STOP** paying out chain, you have only 10 feet left.

The **secondary stern anchor** is a 15 # Fortress with 50 feet of chain and 240 feet of nylon rode. It is in the port aft cockpit locker.

The **stern tie line** is a 600 foot reel of yellow polypropylene line for stern ties in the port lazarette locker. Please do not cut the line; it is all needed for places like Desolation Sound. To unwind the reel, put the boat hook, not the mop as SJS suggests, through the reel and place it athwartships aft inside the stanchions.

The scope to use in the islands is 4-to-1 for the highest water depth you'll encounter in the spot where you choose to drop anchor. Add 5 feet to the water depth when calculating the scope. Check your tide data...to know how much water you may gain and how much water you will lose as the tide floods in and ebbs out during your stay. Since most coves are 15'-30' deep, expect to pay out about 60'-120' of chain. After you have paid out the suitable amount of chain, 2 minutes of reverse (in idle speed reverse) sets the anchor and tests its holding power. (Note other boats and points of reference on land. Are you moving? If not after 2 minutes, you've set your anchor successfully.) If you wish to sleep even better or are expecting 30 knot winds, throttle up to about 1500 RPMs in reverse for another 30 seconds to prove to yourself that the anchor is set well! A NOTE OF CAUTION, AFTER REVERSING AT HIGH RPM'S, KALLISTO WILL LURCH FORWARD OVER THE ANCHOR AND COULD POSSIBLY FOUL THE CHAIN ON THE KEEL BULB (IT HAS HAPPENED ALREADY). The best course of action is to slowly reduce the rpm's in reverse until there is some slack in the chain and then return to neutral.

For storm conditions (sustained winds of 25+ knots), extend your scope to 7 or 10-to-1, provided you have room to leeward. Otherwise, set two bow anchors (using the secondary anchor, chain and rode) in a v-type pattern for extra holding power.

There is a white "snubber" line with a chain hook located in the anchor locker. When you have set the anchor, attach the chain hook and let out 3' or more of line and belay it to the starboard cleat. Put the snubber line over the chain roller. Then pay out chain until the snubber is taking over the load. The snubber acts as a spring and reduces the jerking that can occur under windy conditions.

2. Anchor Windlass.

Power is received from the engine start battery. The windlass will **only** operate while the engine is running! The breaker (*i.e.*, the "on" and "off" switch) for the windlass circuit is located in the starboard aft stateroom in the bottom middle of the battery switch panel. Up is "on." The up-down controller for the windlass is located inside the chain locker (leave plugged in please). When raising the anchor, you may hear the battery alarm in the electrical panel go off. This will stop when you push in the red button on the throttle and increase the engine rpm's.

Deploying the Anchor.

With an electric windlass, it is important to deploy the anchor into the water by hand. Pay out enough slack in the chain so that you can hand-deploy the anchor into the water about one foot below the water surface. (By having the anchor slightly in the water, the water will buffer that troublesome “pendulum” action that causes a partially-deployed anchor to swing and ding the bow before you get it all the way into the water with the windlass controller.) Once the anchor is in the water, use the electric windlass to lower the anchor to the bottom of the bay and deploy the desired amount of scope.

Retrieving the Anchor.

When retrieving the anchor, never use a windlass to pull the boat forward to where the anchor is set. (The windlass is not designed for it, it would be a large draw on the battery, and might cause serious damage to the attachment base.) Instead, head the boat under power toward the anchor while using the windlass to take up the slack in the chain. If you hear the “low voltage” alarm on the switch panel, put the gear shift in neutral, press in the red button and increase the rpm’s until the alarm stops.

Also, when retrieving the anchor, only retrieve it up to where you can see the anchor about one foot below the water (again to buffer any possible “pendulum” action if the anchor were just out of the water). Then, by hand, retrieve the anchor from just below the water onto the bow roller. This prevents possible pendulum action, plus, if the anchor gets hung up on the bow roller and you continue to press the “up” button on the electric windlass, you will probably damage the attachment base. DO NOT use the windlass power to take up the last few inches of slack. Just take the extra chain and snug it up and hand-set the chain back onto the gypsy.

Take your time, the anchor chain dropping off of the gypsy sometimes bunches up under the windlass and you might need to push it down several times (with your foot or a mop handle) to the bottom of the chain locker to prevent the chain from jamming in the windlass.

Securing the Anchor.

Once the anchor is on the bow roller, be sure to secure the anchor with the “snubber” line. Engage the chain hook across a link in the chain nearest the anchor in the locker, then pull the line straight back and belay it on the cleat in the chain locker. Secure tightly with a standard cleat knot. (The chain on the gypsy on the windlass should not be the only thing keeping the anchor from

unexpectedly returning to the sea bottom!) After securing the anchor with the line, immediately switch the windlass breaker “off” to prevent draining the engine start battery should the windlass system decide to short out.

3. Barbecue.

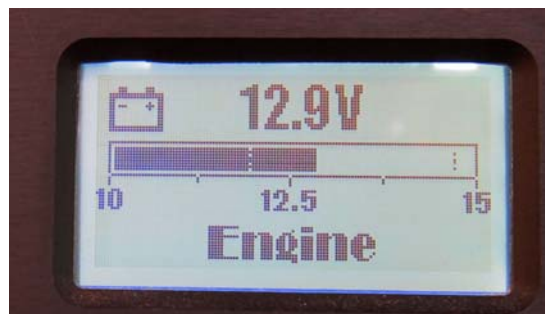
The propane BBQ is plumbed to the propane tank through a valve with a yellow handle. It is only accessible by removing the inboard tank. It is only necessary to turn the valve off if the valve on the BBQ is malfunctioning. The solenoid valve switched in the galley controls the BBQ as well. Make sure the faucet-like valve on the tank is turned on. After that, the BBQ’s regulator is the control. Turn the control to the “on” or “light” position, and with the LID OPEN, light the burner through the opening at the bottom of the grill using the galley stove lighter. With the lid on, the BBQ tends to be hot and cook quickly, so tend your meat often. *As a courtesy to the next guest, please use the wire brush attached to the BBQ to clean it after use.*

4. Batteries & Charging.

For normal operations, leave the battery switches “on” (in the horizontal position) all the time. A battery combiner isolates the start battery, assuring that all batteries are charged, while protecting the engine start battery from draw-down by house usage. The domestic bank has 400 amp-hours of deep-cycle AGM batteries available for house services. A 125 Amp alternator and “smart regulator” assure that there will be enough power to run the fridge, lights and TV under normal use with less than 2 hours of cruising under engine. Of course, at the dock, shore power handles the charging. The engine starter is a single high-amperage-output battery specifically designed for starting diesel engines. Battery voltage, water and fuel tanks can also be monitored on the switch panel. Press the aft button in the round, 4-part switch below the display.



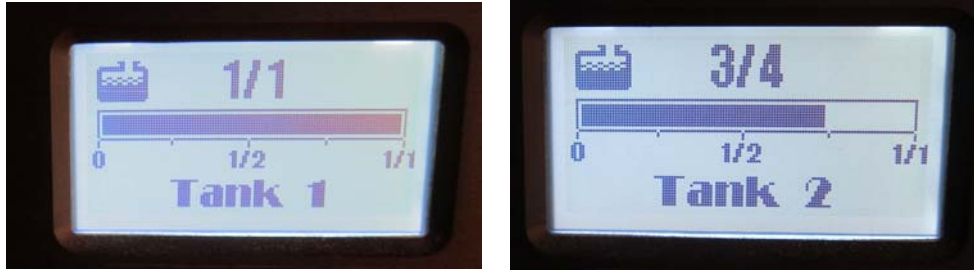
Press the left switch to get the display of the engine battery voltage.



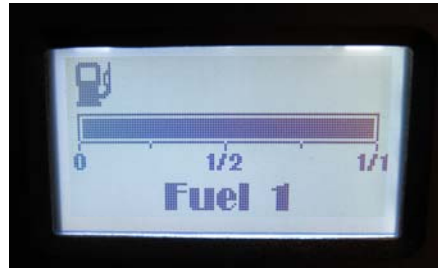
Please do not discharge the house bank below 11.5 volts before re-charging the batteries by (1) running the engine or (2) plugging into shore power with the charger breaker “on.” If the batteries are run down to below 11.5 volts, battery life is considerably shortened and they are quite expensive to replace.

CAUTION: Never turn a battery switch to “off” while the engine is running!
This will blow the diodes on the alternator, and your batteries will no longer charge.

Pressing the top button in the circle selects the water tank 1. Press it a second time to view the status of water tank 2.



Pressing the right-hand button brings up the status of the fuel tank.



5. Berths.

KALLISTO is ideal for 6 people, but she'll sleep a maximum of 9 - two in the forward cabin, two in each of the aft cabins, two people next to the dinette table (converts to a double berth), and one on the settee opposite the dinette (with a conversion piece and cushion that insert into slot under the chart table for a full-length berth). The conversion piece is stowed in the center locker under the settee. At check-in, ask for the appropriate additional cushions. The forward bunk is 6'7" long, 6' wide (at the head) and 2'6" wide (at the foot). The aft bunks are each 6'8" long, 4'10" wide (at the head) and 4' wide (at the foot). The converted dinette is 6'6" long and 4' wide (with side cushions removed). The port settee is 6'4" long and 2'4" wide (with side cushions removed).

Converting the Dinette into a Double Bed: drop the table leaves, raise the folded support board in front of the cushion (under your knees if you are sitting), lock it in place. The support board is hinged and folded tightly with industrial strength Velcro. Don't worry about pulling hard to open the leaves. Unlike on many boats, nothing needs to be done with the table.

6. Bilge pumps.

Please check the bilge each day, morning and evening. It is accessed by lifting the floorboard next to the chart table. Please note that the refrigerator drains into the bilge, so most of the water that accumulates in the bilge is from melting ice and condensation.

There are two bilge pumps:

- (1) One **electric on-demand** bilge pump is controlled at the electrical panel with a switch that reads “Auto” or “On.” Always leave the switch in the Auto position unless you want to pump the last bit of moisture out of the bilge. In the Auto position the pump will turn on if there is enough water to activate the float switch. (If it turns on, you should investigate why. There may be a slow leak.)
- (2) The **manual emergency** bilge pump is the second bilge pump. The emergency bilge pump handle is built into the pump (with the pickup tube in the lowest point in the bilge). Monitor bilge water daily and alternate your choice of pumps to ensure that all are functioning properly.

7. Dinghy.

KALLISTO has an inflatable, Aquapro-Yachtsman 10’2” aluminum RIB dinghy, one seat, oars and an outboard engine. (See “Outboard” section.)

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. BELAY THE DINGHY ON STARBOARD TO KEEP IT AWAY FROM THE CABIN HEATER EXHAUST. This lifts the bow slightly out of the water and reduces drag so you go faster, and lessens the chance of wrapping the painter around the propeller. Cleat off on starboard to stay clear of the very hot, cabin heater exhaust. Tie the painter off twice – once at a cleat with a standard cleat knot, then the bitter end to the stern rail. SJS has recovered dinghies “lost at sea” by others who relied on a single cleat hitch.

If you desire the ultimate in sailing performance, you can hoist the dinghy by the bow using the spinnaker halyard and place it bottom-up on the foredeck. Use the painter to strap it down.

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 the crew toward the back of the dinghy. Then offload everyone over the bow. Please keep the outboard propeller from striking the bottom. It is only made of plastic. Lift the dinghy above barnacle height using the handles on either side, and set it down gently on the beach. Also remember to secure the painter under a rock or to a large driftwood log so your dinghy won't float away – we have very large tidal fluctuations.

8. Dodger

Our dodger not only protects the crew from the weather when in the cockpit, but it has several stainless steel grab handles for safety.

The center Plexiglas panel can be opened on hot days to get a refreshing breeze. Please don't take the dodger off. It was installed professionally.

The dodger's plastic "glass" is vulnerable to scratching from salt crystals, especially after sailing into a challenging breeze. When salt spray on the glass dries in the wind, tiny salt deposits are left behind and tend to obscure your vision. Please avoid directly touching the glass with a damp rag or sponge. Salt does dissolve in water, but not as fast as you might think. The salt crystals remain un-dissolved 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 and "flood" the glass to 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!)

CAUTION: *We have found that most spray sunscreens react chemically with the Plexiglas. So please inform your crew to spray sunscreen downwind of the dodger glass. And please don't lean against the dodger with sunscreen on your back and shoulders. Once that chemical reaction takes place, the glass is ruined and must be replaced (at a cost of around \$400). Best not to lean on the dodger at all, regardless of how you are clothed.*

9. Electrical Panel.

Most switches at the panel board are self-explanatory.

A/C (120V) Power. The European panel says 230V, but *KALLISTO* is set up for the American 120V standard. The A/C outlets will only function while connected to shore power. A/C outlets will only work when the A/C Outlets breaker is in the “on” position.

Battery Charger. The Battery Charger breaker switch must be turned “on” for shore power to charge the batteries. There is a 90-second delay from the time you flip the breaker “on” to when the red light on the electrical panel comes on (indicating that you’re charging and A/C power is available). Wait for the red light before using A/C power. And, the A/C Outlets breaker switch must be “on” for the plugs to be live.

Chart Plotter. The circuit breaker for “Nav. Instruments” is located on the electrical panel. The C90W chart plotter and radar at the helm are not on this circuit but rather separately fused. When the Nav. Instruments switch is off, the C70 displays (knot meter, depth, etc.) are not feeding signals to the chart plotter and it will beep until you turn it off at the helm.

Autopilot. The autopilot is also controlled by the Nav. Instruments switch and the on-off switch at the helm.

Cabin Lights. The system switch is on the panel and each light is switched individually.

Water Pressure. This pump pressurizes a small accumulator tank located on starboard behind the aft-most salon seat back and it shuts down when the tank is at “working pressure.” If you don’t hear the pump start up when you turn it on at the panel board, it means that the system is at working pressure – you should hear the pump start again after you use some fresh water. (When no one is below decks, especially while motoring or even when sailing, turn off the water pressure breaker. Should you run a tank dry, the pump would continue to run until it burns out...and you’d never hear it running while everyone is in the cockpit.) Water tank selection valves are just forward of the water pump. The tan knobs rotate ¼ turn. The upper knob is for Tank 1, the aft tank. The middle knob is for Tank 2, the forward tank, not necessarily logical but who is asking? These designations relate to the tank fill status seen on the electrical panel. Use the forward tank first to help equalize the trim since 400 lb of chain and anchor are in the bow.

Shore Power A/C Circuit Breaker. This box is located in the port, aft cockpit locker. It rarely trips, but if it does, just turn it back on.

Running & Steaming Lights. Please be advised that night passage making is not permitted under terms of your charter agreement with San Juan Sailing. Only use in cases of reduced visibility (like fog or on the rare days in the Pacific Northwest when there's heavy overcast).

Anchor Light. Should be on all night in an anchorage. (It won't deplete the batteries.)

10. Electronics.

The radar/chart plotter/GPS, depth sounder, wind instrument, and autopilot are all RayMarine products. The 222 page reference manual is stowed under the nav. table seat. The display at the nav station is useful for showing depth and wind speed at anchor should you need to get out of your warm bunk at night for a check before having to go on deck.

Cellular Telephones. *KALLISTO* is equipped with a 12-volt cigarette lighter type outlet that may be used for recharging your cellular telephone. In addition, there is a 150W inverter located in the chart table and suitable for light duty uses. This inverter can be used to power any normal charger. PLEASE do not try to use a hair dryer with this inverter! There is no guarantee as to the quality of the AC power.

The TV/DVD player is powered from the 12V socket directly. The cable is wound around the back of the TV and the remote is located in the chart table

Depth Sounder. Controlled by the Nav. Instrument and the cockpit displays.

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, you will receive many false readings caused by currents, changes in water temperature, fish, and seaweed. Use the depth sounder only as an aid to navigation in shallow water.

IMPORTANT: *The key to avoiding rocks is NOT the depth sounder – 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 depth sounder's alarm during night. Besides a fairly high battery drain, it's likely to sound at inappropriate times such as late at night while fish are passing beneath the transducer. (Instead, consult the onboard tide data to determine whether you're anchored in a safe location,

considering how shallow your depth will become when the tide ebbs out of your anchorage in the middle of the night.)

Radar & Chart Plotter. *KALLISTO* is equipped with a RayMarine radar and a color C90W chart plotter at the helm. (The chart plotter may be used without the radar to minimize battery drain.) GPS input to the chart plotter is internal to the plotter. To start the radar/chart plotter, turn on the electrical panel switch labeled “Nav. Instruments.” Then, press and hold the power button at the lower left corner of the unit until it beeps and turns on the display. It takes about 10 seconds to come up. You then use the power switch to toggle between Standby and Transmit for the radar (if you need it). If you plan to save electricity and use the chart plotter only, toggle to Standby. The unit will start up in its last pre-shutdown mode (Radar only, Chart only, or Radar Overlay screen). Use the “Page” key located at the upper right corner of the unit to change modes (using the soft keys at the bottom to select Chart or Radar). To shut down the unit, press and hold the power key (red button, lower left) for 3 seconds. If you haven’t turned off the chart plotter and switch the “Nav. Instruments” off, the plotter will beep until switched off.

We recommend that in addition to using your PRIMARY navigation aids – namely, the Maptech waterproof chart book or the roll charts (with the most active “killer rocks” marked in red) – up in the cockpit while underway, you also utilize the chart plotter for added safety. It helps you to see if you are where you think you are on the chart book or paper charts. If someone asks, “Where are we?” within 3 seconds you need to be able to point to the chart and show him or her vessel’s precise position. If you can’t, you’re in danger of hitting a rock.

The only time when the chart plotter becomes your primary navigation tool is when you’re in a “tight spot” like going through a narrow pass or approaching the entrance to a small cove. (With the chart plotter, you can “zoom in” to make something that’s the size of a dime on a paper chart into the size of a paperback novel or larger on the screen. You can see more detail and, importantly, any hazards in the area. Your boat’s position on the chart plotter is accurate to within 3 meters – about 10 feet.) IN CLOSE QUARTERS, ZOOM INTO THE ¼ MILE SETTING IN ORDER TO BE ABLE TO SEE ACCURATE DEPTHS AND ROCK LOCATIONS.

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, you might put on an extra pot of coffee until it lifts. Never depart from a safe location into the fog! To do so, even with radar, would be contrary to prudent seamanship. FYI – fog

becomes “reduced visibility” when you can see ¼ mile (about 4 football fields) in all directions. It is safe to proceed CAREFULLY in reduced visibility using your radar to “see” beyond the haze, but be sure to look up from the screen about every 10 seconds and use your eyes to scan the horizon forward, behind, and side to side. A motor yacht, tanker or freighter traveling at 20 knots takes only 39 seconds to travel ¼ mile! You need to see these fast-moving vessels sooner-rather-than-later so you can prepare, if indicated, to quickly take evasive action to avoid an impending collision.

Knotmeter. Powered on with the other electronic instruments. Speed is indicated in knots or nautical miles per hour. For comparison, 7 knots is approx. 8 statute mph. The knot meter reads about 1.2 knots too high at the beginning of the season. As scum builds up, the transducer produces steadily lower readings. By September, the reading is more or less correct.

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 for a short distance in reverse. The impeller is located beneath the access port in the forward head shower pan. (It’s not recommended 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 and the safety of your crew.) If the knotmeter is temporarily “out of service,” the GPS input to the chart plotter provides an alternate and quite accurate speed indication called SOG (speed over ground).

VHF Radio. The remote access microphone (RAM) is hard-wired to the cockpit table pedestal and controls all radio functions of the unit which is mounted above the chart table. The VHF at the nav station is turned on (after the Nav. Instruments switch on the electrical panel is “on”) by holding down the “PWR” switch on the left front side for 3 seconds. There is also a “PWR” switch on the RAM to turn on the system at the helm. We find this very convenient while entering and leaving moorings. To set the volume, click the VOL button and use the arrow buttons to change the volume.

To listen to the weather reports (should be done in the morning before you head out and ½ hour before your final destination), push the “WX” button on the radio. 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.”

This covers the San Juan Islands and the Canadian Gulf 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).

You should monitor channel 16 (the hailing and distress channel) during your cruise. You may save a vessel or a life. You may hail vessels on channel 16, but after establishing contact on channel 16, ask the skipper of the other boat to switch to working channels 78, 79 or 80. San Juan Sailing monitors channel 80 during office hours (closed Sundays). If you need a review of VHF radio protocol, you’ll find information located in the onboard Charter Guest Reference Notebook. (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 on cell or 360-354-5770 at home.)

As of approximately June 1, 2012, Kallisto will have an AIS system installed. This Class B unit sends out the ship’s position information derived from the chart plotter GPS along with ship’s name and description every few minutes. Every commercial vessel is required to have AIS and broadcasts location, heading and speed every minute. This information appears on the chart plotter screen and can be a very useful complement to radar in bad weather.

With AIS, the red emergency button on the upper right corner of the cabin VHF unit will be active and if used will transmit location information from the chart plotter automatically meaning that the plotter has to be on!

11. Emergency / Safety Equipment.

First Aid Kit: A complete first aid kit is located under the nav table seat. Separate Band-Aids and antibiotic ointment are also located medicine cabinet in the aft head for minor scrapes or cuts. Please note any usage of these items so they may be replaced for the next guest.

Flares. Visual day/night distress signals are located in an orange case under the settee forward of the nav table.

Fire Extinguishers. There are four fire extinguishers. One is located in the galley above the flashlight next to the companionway, one in the salon by the base of the compression post (mast), and one each in the aft cabins’ hanging locker.

Emergency Tiller. It sort of looks like a metal pipe, with an “elbow” bend in it. It’s located in the starboard lazarette locker. The rudder post attachment point is at the aft end of the cockpit. To remove the cover, insert a winch handle in the star-shaped fitting

and unscrew. Please leave the plastic bag sheath on the tiller. Made of steel, it rusts easily and stains the locker.

12. Engine & Handling.

At the start and end of the cruise, please record the engine hours number in the Guest Log. This value comes up on the small LCD screen under the RPM gauge when the key is turned on. You will have to get down on your knees to see it.

Reverse. *KALLISTO* “walks to port” very slightly. This is easily overcome with the wheel and rudder when you have a little sternway. It helps to “goose” the throttle to gain steering control in reverse. Be sure to hang on tightly to the wheel in reverse. If not, water pressure on the aft edge of the rudder will slam the rudder over to one side or the other. And that’s very hard on the steering mechanism.) Goosing helps in forward gear as well when a quick turn needs to be made.

Forward. *KALLISTO* has a large and deep rudder. So she’s very quick on her feet and turns in a narrow radius. Very small rudder adjustments will easily change course.

Feathering the Prop. After switching the engine off for sailing, the prop will feather automatically but still might turn the shaft slowly. To stop the turning, briefly put the gearshift in reverse and then return it to neutral.

Docking. *KALLISTO* carries momentum well, so your final approach and turn in toward your slip can usually be done with the shifter in neutral...you’ll certainly need no more than “idle speed forward” (unless there are high winds).

Never turn off the engine until the vessel is securely tied at the dock. Remember, you’ll need to use your engine – in reverse – to stop the boat. It’s very difficult and often impossible for people holding lines to stop the forward momentum of an eight ton vessel.

When coming into our docks in high winds or if you’d just like a little assistance upon arrival, simply hail “San Juan Sailing” on VHF channel 80. We’ll be glad to offer some “coaching” and/or catch your lines. In fact, most marinas in the islands will help you if you hail them and ask for assistance. Asking for docking assistance, especially in windy conditions or with an inexperienced crew, is a sign of prudent seamanship.

Starting.

1. Check the oil level. The dipstick is accessed by opening the small hatch inside of the starboard aft cabin. The dipstick is on the starboard side of the engine. There is a wide gap on the dipstick between the full line and the fill line. **Do not overfill.** Use the onboard spare oil (starboard lazarette) to add no more than a cup at a time. Then,

after waiting about 2 minutes for the oil to trickle down to the pan, 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.

2. Check the coolant level...anywhere between the two lines (high and low) on the overflow reservoir is “good.”
3. While you have access to the front of the engine, check for belt tightness and leaking fluids.
4. Look over the stern for kelp, logs or branches that could foul the propeller.
5. Make sure the gearshift is in neutral (12 o'clock looking from the port side) with the red clutch pin pushed in. Then, keeping the red pin pushed in, advance the throttle lever to about the 10 o'clock position. Often, when the engine is warm, it can be started in the idle position. Leave the red button out.
6. Insert the key and turn it clockwise, to the first click.
7. Turn the key further clockwise to start the engine. Expect the engine to start in 5 seconds or less. If the engine doesn't start after 10 seconds of cranking, turn the key counter clockwise to the off position. Wait 15 seconds and try again.
8. After the engine starts, release the key, check for water gurgling out the exhaust, then gradually ease the throttle back to idle near 1000 RPM.
9. While the engine warms, check your fuel level. *KALLISTO* has a fuel gauge on the display on the electrical panel down below. To activate the gauge, press the circular control to the fuel icon.
10. Please allow 5-10 minutes of warm up before placing a load on the engine. It is very hard on a diesel to be placed under load when cold.

Proceeding in Forward / Reverse.

Bring the throttle back to the neutral position. and the red clutch pin will pop out. Now you may engage forward gear by pushing ahead on the throttle or reverse gear by pulling back on the throttle. To keep the transmission “healthy,” please remember to pause 2 seconds (say “one and two and”) in the 12 o'clock neutral position when shifting from forward to reverse and vice versa.

Operation.

40HP Yanmar 3 GM series engines are very reliable. Cruising speed is **7.0 knots** at **2800 RPM**. Fuel consumption is approximately 0.8 gallons/hour at 2800 RPM. However, if using the heater allow for an additional 0.3 gal/hr.

Please do not exceed 3000 RPM because it's hard on the diesel and fuel consumption goes WAY UP (at very little increase in actual speed). Running at 5-6 knots at 2000-2500 RPM is the economy cruise speed using less than $\frac{3}{4}$ gallon per hour.)

To avoid the possibility of sucking air or sludge when the fuel level approaches 1/4 of a tank, refuel when the fuel drops below 1/2 full and before it reaches 1/4 full.

Engine Overheat.** If the buzzer sounds while the engine is running, about 999 times out of a thousand it's no more serious than eelgrass plugging up your raw water strainer. The best upfront solution to this problem is prevention—keep an eye peeled for eelgrass mats, especially along those “soapy” looking tide and eddy lines in the water. And don't run over it. When eelgrass gets sucked into the engine cooling water intake, it jams at the raw water strainer. **Stop the engine.

To clear the eelgrass from the raw water strainer (above the water line in the engine compartment in KALLISTO), open the small, aft-facing hatch in the port aft cabin and simply twist off the clear screw top and extract the eelgrass and toss it in the galley garbage can. Replace the lid and tighten by turning it clockwise until the lid is seated firmly on the rubber gasket. Then restart the engine.

If upon restarting the engine overheats again, check the seal around the rubber gasket between the strainer and the lid. If the strainer is drawing air, it won't draw water. If needed, open and then retighten the lid on the strainer...and check to make sure the rubber gasket is in place in the lid (and not lying in the bilge).

If the above fails to solve the problem, call San Juan Sailing for assistance.

There may be other reasons you hear the buzzer. If you lost oil pressure, the oil icon warning light will light up, so check which light is showing red. If it's the oil light, shut down the engine, check the oil level, and contact San Juan Sailing. The alarm buzzer is more likely to indicate engine overheating, and the temperature icon light will light up. Before you shut down the engine, check for water gurgling out the exhaust. If you have a “wet exhaust,” check the coolant level in the overflow reservoir bottle and if none is seen, add enough to reach the top level line on the bottle. (ONLY AFTER THE ENGINE COOLS DOWN, you might remove the cap on the engine block and add coolant.) And check the bilge for a light green liquid. If found in the bilge, call San Juan Sailing. If the coolant reservoir bottle is full, check to see if the engine threw a belt. Without a belt on the raw water pump, the coolant won't circulate and cool the engine. (Replacement belts are located in the engine spares kit.) One other possibility is that the impeller in the raw water pump has failed. While impellers are replaced each spring, it's still possible that a hard object may be drawn in and break off an impeller blade. (A replacement impeller is found with the engine spares.) Call San Juan Sailing if you suspect you have an impeller problem.

Engine Shutdown. Remember--do not shut the ignition key while the engine is running! (This can damage the diodes on the alternator, and the batteries will no longer charge. If you accidentally do this, turn the key back to the “on” position as soon as

possible.) Instead, first bring the engine to idle and the gearshift to neutral. Allow the engine 5 minutes to cool down. Then push the fuel cutoff button located next to the key. After the engine stops, turn the key to the “off” position (turn it counter-clockwise) and remove it.

13. Fuel Tank.

KALLISTO has a 34-gallon fuel tank. At 2800 RPM (7 knots) the engine consumes approximately 0.8 gallon of diesel per hour. If you use the diesel heater, add 0.2 gal/hr.

Please be very careful when fueling. The filler fitting is located on the starboard aft quarter. 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. Check the side vent and, with dish washing soap, wipe up any excess fuel to avoid yellowing the hull and 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.

Put your ear down to the fill hole and listen to the diesel flow. When the pitch changes and gets higher and higher, the tank is likely full and you’re now filling the hose between the tank and the fill hole. Avoid a fuel spill – STOP! Check the fuel gauge below on the electrical panel. If the gauge is not on “F,” continue filling. When you think you’re finished fueling, check the fuel gauge one last time to make sure it’s reading “F.” That way, San Juan Sailing will not charge you a \$50 fueling charge (plus the cost of fuel).

Note: Unlike automobile fuel gauges, fuel gauges on boats are notoriously inaccurate, especially on the low end. Therefore, whenever the fuel level drops below ½ full, you should refuel at your next opportunity. NEVER let the fuel level fall below ¼ full or you’re in danger of running out of fuel. (Towing and the cost of a mechanic to bleed the air from the fuel lines is an expensive proposition for a charter guest.)

14. Head & Holding Tanks. *KALLISTO* has two heads. The aft head has a 22-gallon holding tank above the waterline, and it will need to be emptied once every day to avoid leaking sewage or, worse yet, an exploded holding tank...a real “vacation ruining” event! The 22 gal tank is semitransparent and located behind the panel next to the head. (San

Juan Sailing staff will discuss holding tanks, overboard discharge and pump outs upon your arrival.) The smaller forward head has a 12 gallon holding tank below the water line.

If the toilet pump starts to resist your flushing effort, don't force it! Exploding or leaking sewage is most unpleasant. Search out the problem and correct it. The head on KALLISTO has no Y valve. Pumping the toilet puts everything into the holding tank located in the cabinet outboard of the toilet in the aft head. It is a greenish-blue tank. It is a gravity discharge system and to empty it, or simply pass waste through it directly overboard, open the red-handled large seacock located below the small hatch found on the pedestal behind the head. The handle turns with difficulty. All tank contents will drain overboard in just a few seconds...you'll hear a noticeable "whoosh" as it discharges. Then close the large seacock handle, and all toilet contents go to and remain in the holding tank once again.

The forward head has a different tank arrangement. The head contents empty into a 12 gal tank under the forward seat in the salon. Since it is below the waterline, it must be pumped out at a facility or, in Canadian waters, by opening the seacock behind the center, starboard salon cushion and running the macerator. The switch for the macerator is in the forward head below the sink. THIS IS NOT THE SHOWER PUMP SWITCH. The shower sump is emptied by a pump with a float switch. The head sink also empties into the shower sump, so expect to hear this pump switch on after each use.

If you pump out the holding tanks at a shore facility, please fill it with about 5 gallons of fresh water through the deck fitting to rinse, and then pump it out again. Thank you!

Offshore sailors have a rule: "Never put anything down a marine toilet that hasn't been eaten first." And that, of course, includes feminine items. In fact, offshore sailors do not even put soiled toilet tissue down a marine head. They simply deposit soiled toilet tissue (and feminine items) in a receptacle such as a waste basket with a liner bag or a ziplock baggie, but not down the toilet. We and San Juan Sailing highly recommend you follow this rule. And since we've been recommending this, we've had almost no incidents of plugged heads!

15. Headroom.

The headroom on *KALLISTO* (taken centerline in the main salon) is 6'3".

16. Heater .

The diesel-fired Webasto Hydronic cabin heater will make the interior “toasty” within 15-20 minutes. The heater control is located outboard, ahead of the white panel holding the VHF radio. Switch on the toggle switch and use the panel button to set the temperature. The thermostat regulates the heating in the salon, but affects all of the cabins. The cabins have an on/off switch that controls the fans at each heat exchanger. In the galley the on-off switch is just below the propane stich. The switch in the port aft cabin controls the heat in the head. Note: it takes about 5 minutes for the heater to “cycle up” and get hot. In the process the unit emits a sound reminiscent of a jet afterburner. Not to worry, it doesn’t last long. The heat is dry, comfortable, and on those rainy days or cool evenings, makes a huge difference in cruising comfort!

When it’s cool, we recommend warming the boat before turning in for the night, with the last person to go to bed turning the diesel heater off before retiring. (Otherwise, the boat will get too hot and the electric pump and fan in the diesel heater will drain the house batteries. The comforters will keep you warm in bed.) Then, the first one up in the morning can simply turn the cabin heater back on.

DO NOT RUN THE HEATER WHILE SAILING!

17. Keel Depth.

KALLISTO has a deep fin keel and draws 7’2” ...so figure on **9 feet** to be on the safe side.

San Juan Sailing strongly recommends that you always maintain a minimum of 10’-12’ under the keel at all times, both underway and at low tide on anchor.

18. Outboard.

KALLISTO is equipped with a 4-stroke Honda 2 horsepower outboard. This brand and size has proven to be a practical and VERY reliable dinghy outboard.

DO NOT add any oil to the gasoline mixture – it uses just straight gasoline. The fill cap is located at the top of the engine.

As a courtesy we have an additional red spare gasoline container tied into your dinghy.

***WARNING** – Gasoline fumes are explosive and a very dangerous fire hazard if stored on a boat. Keep the spare gasoline container in the dinghy and tied to the transom so it stays upright. NEVER store the spare gasoline container in a locker, lazarette, or any other storage area on your vessel.*

The outboard is light so it's easy to transfer from the stern rail outboard mount to the dinghy transom (and vice versa). PLEASE do not cruise with the outboard on the dinghy. It will no longer work after saltwater gets into or even near the intake of the carburetor. If this happens, you will have to condition your rowing muscles until you get back to Bellingham. We also recommend taking the outboard off the dinghy at night. We have actually had dinghies deflate in the cool of the night and had wind waves or powerboat wakes flip the dinghy over. It's a disturbing sight first thing in the morning to see your outboard propeller sticking straight up, with the motor under the water. At that point it's nothing more than a very ineffective \$900 anchor. And we do not want to have to sell you a non-working outboard after it has been submerged!

To Start.

1. Push the fuel valve lever (starboard aft corner of the outboard) aft to open the fuel valve.
2. Pull out the choke switch (starboard forward corner of the outboard).
3. Open the air vent on the top of the fuel cap (top of outboard) by turning counter-clockwise about 3 full turns.
4. Turn the handle throttle $\frac{1}{4}$ turn counter-clockwise. Although there is a "start" setting on the throttle, give it a little more gas for a certain start.
5. Pull the rip cord until it starts. (You shouldn't have to pull it more than 5 times.)

While Running.

1. Push the choke back in shortly after the engine starts (after about 10 seconds).
2. There is no transmission--just throttle up to go forward and throttle down to stop. If you want to go in reverse--just swivel the outboard around 180 degrees.

To Shut Off.

1. Shut the outboard off by pushing in the red shut-off knob.
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.

To put the outboard shaft back in the water, release the stainless steel lever on the starboard side of the shaft.

When Not in Use.

1. Push the fuel valve lever forward to close (starboard aft corner of the outboard).
2. Close the air vent on top of the fuel cap (top of outboard) by turning it clockwise.
3. Put the outboard back on the outboard mount on the stern rail and tighten both braces.
4. Secure the outboard further by tying the safety lanyard to the stern rail.

Troubleshooting.

If the engine won't start, review steps 1-5 above to make sure you've done all 5 steps. There is a spare spark plug and spark plug wrench in the tool box in case the engine won't start or is running rough. (A new spark plug solves myriad outboard problems. If you use the spare spark plug, notify your check-in skipper upon your return so a new one can be placed aboard for future guests.) 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 – just 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) and put the propeller and new pin back into place.

19. Refrigerator/Freezer.

The well-insulated refrigerator must be turned “on” at the electrical panel. The temperature control dial (thermostat) is located inside the refrigerator (duck your head down and look forward to see it - a flashlight helps). Simply leaving this dial set so that the arrow points straight down (to the letter A) produces excellent results. There is a small freezer compartment in the refrigerator. The items you'd like to have coldest (not your lettuce) can be put in the basket that slides underneath the freezer.

The water from the refrigerator drains into the bilge and the bilge pump may come on to pump it out, or more likely, it will stay in the bilge section under the galley and need to be sponged out.

20. Sails.

Headsail. The 125% genoa/jib has roller furling for your convenience. Whether fully or partially deployed, you'll have good sail shape. Slight hand-over-hand tension on

opposing lines – furling line and sheets – 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.

Reefing the Headsail – Simply ease the jib sheets (keeping control of them) while pulling in the jib reefing line until only the amount of sail you desire is deployed. You should not have to use the winch to furl the jib if you are strong enough. If you cannot furl by hand, forcing it with the winch could exacerbate the problem. Instead, investigate to see why it will not furl in naturally.

Mainsail. The mainsail is battened, conventional rig with a lazy bag and two pre-rigged reefing lines. When attaching the halyard to the mainsail (we keep the main halyard shackled to the deck fitting abeam of the mast on the starboard side near the toe rail to keep the noise down), be sure not to foul the halyard on the lazy bag lines.

To deploy the main:

1. Steer head-to-wind and maintain.
2. Unzip the lazy bag.
3. Attach the halyard to the head of the sail.
4. Release mainsail reefing lines, mainsheet, and boom vang when preparing to hoist the main.
5. Pull down on the halyard at the mast, while someone in the cockpit takes up the slack. If shorthanded, you can pull the halyard from the cockpit – but it takes a fair amount of elbow grease.
6. Then, winch the halyard up the last few inches to eliminate wrinkles in the luff.
7. Fall off and you’re sailing! Now you’re ready to deploy the head sail.
8. *With time, you will notice that the luff will begin to wrinkle. This is caused by stretch in the rope halyard and not slippage in the halyard lock. Slack the sheet and use the winch to tighten the luff while the halyard lock is engaged*

When letting the mainsail down, it will flake nicely for the first 1/3 to 1/2 of the sail, but then will require a few tugs on the leech or luff to help flake the rest of the mainsail neatly into the lazy bag.

Reefing the Mainsail: “Reef early and reef often.” This will keep your crew comfortable and you from rounding up. Reefing the main is easy and can be done from the cockpit. Here's how.

1. De-power the main (by heading up or heaving to).
2. Be sure the topping lift has not been loosened, and will hold up the boom.

3. Let the tension off of both the boom vang and the main sheet.
4. Lower the mainsail so that the reefing point you desire is about 24 inches above the boom and cleat off the main halyard to keep tension on the mainsail halyard when reefing down the foot of the main.
5. Pull in on the reefing line (using the winch if necessary) to tighten the sail, which will draw down the reef point much closer to the boom and “shape” the sail.
6. If needed, raise the main halyard slightly (with the winch).

KALLISTO is a delight to sail. Her sail plan (a medium-sized furling genoa and battened main) was selected with consideration for single or short-handed sailing. Once she has way, KALLISTO is easily steered with small rudder changes. Her perfect breeze is 10-20 knots with heel at 5-30 degrees. Full sail can be carried in winds up to 18 knots apparent, or about a 25° heel. If you reach the edge of your comfort zone sooner, don't hesitate to shorten your sails. Remember, “Reef often and reef early.” You can always shake them out if you decide you've been too conservative.

KALLISTO has a 3-bladed, geared, folding “Fold-o-Flex” for sailing efficiency, gaining you an additional 0.25- 0.5 knots under sail. There is also a rope cutter on the prop shaft in case you encounter a crab pot line. It will also cut dinghy painters and stern anchor lines or whatever you throw at it. Enjoy!

21. Shower, Hot Water & Shower Sump Pump.

Hot water is stored in an insulated tank under the seat just forward of the galley. It takes about 30 minutes of running the engine under load to get the water hot. When on shore power, you can heat your water electrically by turning the “water heater” switch on the A/C panel to the “on” position. It takes about an hour to heat the water electrically.

CAUTION: The engine heats water to scalding temperatures! So please BE CAREFUL!

In the aft head, the sump pump is controlled by a push button switch located to the right of the washbasin. In the forward head the sump is emptied automatically with a float switch. The button below the sink is for the macerator.

Experienced cruisers know the sailor's shower: get wet, turn off the water, soap up, rinse off. (If the shower basin overflows, you're using too much water.)

On warm, sunny days, an alternative to the below decks shower is the swim platform shower (with hot and cold water) located next to the swim ladder. This is also a good way to rinse off salt after swimming or dirt after going ashore.

22. Spares.

KALLISTO is equipped with engine and general spares. They are located in plastic containers under the starboard aft berth.

23. Stove/Oven/Galley.

The gimbaled propane stove has two burners and an oven. Propane is a hazardous gas, and requires caution. For your safety, please follow these procedures:

1. Open the faucet-like hand valve at the propane tank all the way open.
2. Make sure all stove control knobs on the stove are in the “off” position.
3. Turn the electric solenoid switch located at the forward end of the galley to “on.” A red light will appear.
4. Light a match or butane lighter, push the stove control knob in and turn to the left to high. The burner should light immediately. Hold the knob in for 2-3 seconds (warming a thermo-couple) and release. You may then operate the knob like a normal stove.
5. When finished with the stove, shut off the burner(s), then shut off the solenoid switch. (What little propane remains in the line from the tank to the galley is insignificant, and even if this tiny amount of propane were to leak into the cabin, it would not cause a problem.) No need to shut off the propane tank during the day.
6. At night, it’s recommended that you turn off the propane tank with its faucet-like hand valve. That way, should the solenoid valve fail, there’s no chance that propane will leak into the vessel. (Since propane is a deadly gas, you’ll sleep much better!) Then, the first one up in the morning can go out to the tank and turn it back on to start the water boiling for the coffee!
7. The *KALLISTO* owners are very particular about sharp cutting edges on knives. In all our chartering experience we have rarely found a boat to have sharp knives in the galley. Therefore, we have made a special knife holder to keep the blades away from other cutlery. Please use the steel to sharpen the blades and if they get too dull there is a sharpening wheel assembly in the second drawer. Start in slot 1 and move to slot 2 for a final finish. Band-Aids are found in the first aid kit.
- 8 Please use the cutting boards and keep the Corian counter tops in tip-top shape.

Please note that the propane tank and both propane valves (the hand valve and the solenoid valve) are located in the propane locker in the starboard aft cockpit locker, which is vented and isolated from the rest of the boat. Any leaks there will move down, out, and away from the boat.

While the propane tanks normally last for 4 weeks or more, San Juan Sailing's staff tops them off every 2 weeks...so you'll have plenty for your cruise.

*If cooking underway, gimbal the stove by pushing the rod under the oven door to the right, so it is not inserted in the hole in the cabinet (forward). Then if the boat heels, hot liquids and foods will not readily slide off of the stove. Also, for added security, use the fiddles that hold the pots/pans on the burners. If you have something in the oven, please lock the oven door so the contents cannot slide out onto the galley sole (or someone's feet). A latching mechanism is located in the upper left of the oven door. **WARNING:** Never cook in high wave conditions or in strong, gusty winds. Food will definitely go flying!*

When cooking at a dock or in a quiet anchorage, lock the stove in position by pushing the rod under the stove to the left and into the hole in the cabinet (forward). That way, if someone leans on the stove or grabs the oven handle, it won't tip and spill pot/pans on the cook top.

24.Tools

There is a well-stocked tool box under the port aft cabin bunk.

25, Water Pressure and Tanks

Water pressure. The fresh "water pump" switch is located on the electrical panel. Push the breaker "on" to activate pump. The water tank level indicators are selected and displayed on the electrical switch panel display.

It's okay to leave the water pump on while someone is below decks. But please turn to "off" when motoring or sailing. You could burn out the domestic water pump should one of the tanks run dry as it tries in vain to pump water to build pressure (and you would not hear the pump running continuously over the sound of motoring or sailing).

Water tanks. *KALLISTO* has two water tanks. One holds 50 gallons and the other holds 44 gallons. Selection valves are behind the aft, starboard settee back cushion in the main salon. There is a manifold with 3 tan-colored knobs. The top one is for the aft tank (Tank 1), the middle one for the bow tank (Tank 2), the lower one is not used.

When the tanks are full, use the bow tank first. With water tanks full, sailboats tend to be a little bow heavy (especially since the ground tackle is all-chain weighing in at over 400 lb). Depleting some of the water weight forward first

brings the boat into balance. Use only one tank at a time – do not leave both valves open. When switching tanks, leave a faucet open until the water begins to flow in order to bleed air from the system. Otherwise, the pump continues to operate and could overheat without pumping any water.

State parks have no pressurized water to refill tanks, but all points of civilization do. If your crew does not let the water run continuously while they brush their teeth, shave or shower, you shouldn't need to refill too often.

Enjoy your vacation aboard *KALLISTO!* * * *