

OWNER'S NOTES FOR "SALUS"

Welcome aboard SALUS!

She's a 3-stateroom 2001 Jeanneau Sun Odyssey 40. We named after the Roman goddess of health, safety and welfare. We hope you'll appreciate the equipment and gear choices we made with Salus and that you'll enjoy sailing her and cruising the islands as much as we do. SALUS is very well balanced and sails beautifully. She keeps her speed in light air and is stable in heavy weather.

Our 6 favorite things about SALUS:

- 1. She has a big cockpit and is very roomy below decks too, with a large dinette and a comfortable opposing settee and Nav station for great "conversation pit" seating. And the L-shaped galley allows the "chef du jour" to face forward and join in the fun!***
- 2. Her three staterooms allow up to six people to have nice privacy and a quiet place to sleep uninterrupted. In addition, the dinette converts into a spacious and very comfortable double berth, if a fourth sleeping area is needed.***
- 3. With a roller furling main and genoa, and all lines leading aft to the cockpit, she's very easy to handle.***
- 4. Twin steering stations to port and starboard that offer wonderful options for navigating down on the lee rail or up windward with both areas protected by an Iverson Bimini along with a new Dodger over the cabin entrance. And there's also a "Sun/Rain Fly" that zips in between the Dodger and Bimini for added protection.***
- 5. She is beautifully appointed with warm natural teak wood throughout.***
- 6. We replaced the original propellor with a Max-Prop feathering propellor. It feathers automatically with forward momentum while sailing increasing sailing speed by an average of 15%.***

SALUS's primary nuances (which will be discussed in greater detail in our notes): 1. She walks very slightly to port in reverse (like most sailboats do), but much less than the traditional 3-bladed fixed prop. Just get a little sternway, put her in neutral, the prop feathers and the wheel and rudder take over and she backs to starboard nicely. 2. She's so well engineered that it's difficult to "bury the rail" in under 20 knots. The non-thrill seekers in the crew think that's good! But it can be done if you push her a bit. So have a camera ready when you're in a blow. Everyone loves THAT photo! In fact, we have just such a photo online with our San Juan Sailing website. We're immensely pleased with this well-built and beautiful vessel and look forward to sharing her with you, our guests. We hope you'll love SALUS as much as we do and we thank you for taking special care of her.

Happy Sailing!

Michael and Mollie Broom and Sandra and Gary Simon, Owners

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Salus Specifications:

Year: 2001

LOA: 40"

LWL: 33' 4"

Beam: 12' 11"

Draft: 6' 4"

Displacement: 16,094 pounds (dry)

Mast height above WL: 55' (with antenna)

Fuel: 36 gal.

Water: 115 gal. 1 forward and 1 aft tank to port

Holding Tanks: 10.6 gal. forward, 12.1 gal. aft

1. Anchors.

Salus is equipped with two anchors, one forward and one in the port cockpit locker.

The **primary bow anchor** is a 33 # Davis plow type (like a Bruce) with 312 feet of 5/16th inch chain. The chain is marked with yellow paint at 50-foot intervals. At the end of the chain, there's another 130 feet of nylon line.

The **secondary stern anchor** is a 12 # Fortress Anchor with 50 feet of chain and 250 feet of nylon rode. It is in the port cockpit locker.

The **stern-tie line** is a 600-foot reel of line for stern ties in the port cockpit locker. (Please do not cut the line; it is all needed for certain places like Desolation Sound.)

The **the typical scope to use for anchoring** in the islands is 4-to-1 for the highest water depth you'll encounter in the spot you choose to drop anchor. Check your tide data to know how much water you may lose and how much water you will gain 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 rode. After you have paid out the suitable amount of rode, 2 minutes of reverse (at 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, throttle up to about 1500 RPMs in reverse for another 30 seconds to prove to yourself that the anchor is set well! 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.

2. Electric Anchor Windlass.

Power to the Anchor Windlass is received from the engine start battery. **Always operate the windlass 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 located in the port aft stateroom. The switch is labeled "**Guindeau**" which means **Anchor Windlass** in French. **Up is "ON" and Down is "OFF."** The Up-Down "hand-held" controller for the windlass is located inside the chain locker at the bow. (please leave it plugged in there).

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. (Getting the anchor slightly into the water by hand will buffer the troublesome "pendulum" action that causes a partially-deployed anchor to swing and ding the bow -- before you get it into the water with a windlass controller that you're not familiar with.) Once the anchor is lowered into 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. To retrieve the anchor, start the engine. Once the engine is warmed up, slowly head the boat under power toward the anchor while using the windlass to take up the slack in the chain. (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 batteries And it might cause serious damage to the attachment base.)

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. Also, if the anchor was to get hung up on the bow roller and you continued to press the “up” button on the electric windlass, you will very likely damage the attachment base. PLEASE 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. You may need to push the chain 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 Onboard. *Once the anchor is on the bow roller, be sure to secure the anchor with the “keeper” line. Snap the line through a link in the chain nearest the anchor, then lead the line straight back and around the drum angling the line to the port bow cleat. 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 a line, immediately switch the windlass breaker “OFF” to prevent draining the engine start battery should the windlass system decide to short out.*

3. Barbecue.

A new Kumma propane BBQ is mounted on the port stern quarter of Salus. It features a removable warming rack, built-in thermometer, igniter, latching lid and stay-cool handle. It is plumbed to propane tanks in the hatch under the seat at the starboard steering station.

1. Make sure the valve on the propane tank is opened counter-clockwise/turned on.
2. There’s a red valve between the two tanks. That valve must be pointed down, in line with the propane line leading to the BBQ.
3. Turn ON the propane switch located in the galley, just below and to the right of the sink. You’ll see RED when the switch on.
4. After that, the BBQ’s regulator is your control. It is located on the right side of the BBQ. Turn the control to the “on” or “light” position, and with the LID UP, light the burner. This can be accomplished by pressing the red button that clicks and sends a spark to the BBQ. If that doesn’t work, you can use a lighter to get it started.
5. Monitor cooking as appropriate with the lid closed or open.
6. As a courtesy to the next guest, please use the wire brush attached to the BBQ to clean the grill grates after use. **Please Do Not Wire brush other parts/surfaces of the BBQ.**

4. Batteries and Charging.

For normal operations, leave the battery switch(es) “on” (in the horizontal position) all the time. A battery combiner isolates the start battery, assuring all batteries are charged,

while protecting the engine start battery from draw-down by “House” usage. The House bank has three 70 amp-hour deep-cycle batteries for house services. The “Moteur” (motor in French) is a single high-amperage-output battery specifically designed for starting diesel engines. The **VERTICAL position on the battery switches is “OFF”**, the **HORIZONTAL position is “ON”**.

Battery voltage can be checked on the electrical panel. The **starting battery is labeled “BOT. MOTEUR”** and the **house battery is “BOT. BORD.”** Please try not to discharge below 11.5 volts before recharging the batteries by (1) running the diesel engine or (2) plugging into shore power with the charger breaker “ON”.

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

5. Berths.

Salus is ideal for 6 people, but she’ll sleep up to 8 very comfortably - two in the forward cabin, two in each of the aft cabins, and two at the dinette area which converts to a double berth (see photos at the website: <http://www.sanjuansailing.com/charters/Salus/index.htm>). The forward berth is 6’4” long, 5’2” wide (at the head) and 2’1” wide (at the foot). The aft berths are each 6’6” long, 4’8” wide at the head and 3’8” wide at the foot. The converted dinette is 6’6” long and 4’ wide.

Converting the Dinette into a Double Berth. Grab the table on either end fore and aft. Wiggle it up and down on each side until the legs are loose from the table, but connected to the floor. Remove the table top. The legs are attached by friction to the receptacles on the floor so just wiggle them and they’ll come out. Get the two support boards that are stowed on the port shelf in the forward stateroom. Each of the boards are labeled as to how they should be installed in the notches forward and aft, starboard and port - with the writing up. Insert the boards into the notches under the forward-most and aft-most dinette cushion. Then carefully set the table down on top of the support boards. There is a small piece of wood on the port underside of the table that locks in to starboard of the port support board. Place the two extra cushions (found in the forward cabin) on top of the table. It is very comfortable for sleeping ... or if you all want to gather around and watch a video together. In the morning, you can return it to a Dinette by following the process in reverse.

6. Bilge Pumps.

Please check the bilge each day, morning and evening. It is accessed by lifting the floorboard along the center line of the cabin between the dinette and navigation tables. 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 three bilge pumps:

- 1. One electric on-demand bilge pump** is controlled at the top right of the electrical panel. **PLEASE LEAVE IT ON AT ALL TIMES!**
- 2. The secondary bilge pump** is a high-capacity pump hot-wired to the batteries. It is operated by a separate switch located at the lower left-hand corner of the instrument panel. **It is always left on “AUTO” and is also operated by a separate float switch in the bilge.** This secondary pump is used in reserve in the event that a large volume of water is entering the vessel. Pressing and holding down the top of the toggle switch at the panel will test whether the pump is operable. If this pump goes on at an time, you should investigate why. There may be a significant leak somewhere. It will shut off automatically when there is no more water in the bilge.
(photo coming)
- 3. The manual emergency bilge pump** is the third pump. The emergency bilge pump handle is stored in clips in the aft port cockpit locker. This handle is insert into the outlet located in the cockpit accessing a 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.

Salus has an inflatable “West Marine” 10-foot dinghy with one center wooden 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. This lifts the bow slightly out of the water and reduces drag. You go faster, and it reduces the chance of wrapping the painter around the propeller. Tie the painter off twice – once at a cleat with a standard cleat knot, then the bitter end of the line to the stern rail. We’ve recovered dinghies “lost at sea” by others who relied on a single cleat hitch.

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 shore, weight the dinghy aft by leaning or moving the crew toward the stern. Then offload one after another over the bow. Lift the dinghy above barnacle height using the hand lines 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 often have very large tidal fluctuations in the islands.

8. Dodger, Bimini, Rain Fly and Cockpit Table.

Our Dodger not only protects the crew from the weather when in the cockpit, it also has several stainless steel grab handles for safety. The center plexiglass panel can be opened on

hot days to let a refreshing breeze into the cockpit. **Please DO NOT take off the Dodger.** It can be difficult to put back on.

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 in 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 plexiglass. So **please inform your crew to spray sunscreen downwind of the dodger glass. And please don't lean against the dodger plexiglass 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).

The Bimini at the stern is supported by a permanent framework covering the aft portion of the cockpit and steering stations. We recommend that you leave the Bimini up. If you decide to take it off, do so carefully. Roll it up carefully so as not to bend the two plexiglass windows. Stow in a safe place where the plexiglass will be protected and not get bent or scratched.

The Cockpit Table is wonderful in that the outboard sections can be folded inward to make room in the cockpit for moving about. These sections can also be unfolded outward so people can sit in the cockpit seats and eat a meal, read charts while traveling or to meet any number of other needs. Before you open the table sections outward, please make sure to pull out the table-section support bars that are located just under the table at the center on the Port and Starboard side. This will prevent the table hinges from being damaged or spoiling a great time.

9. Electrical Panel at the Navigation Station.



Most switches at the panel board at the Navigation Station to port in the main salon are self-explanatory, but some circuits are unique.

A/C (120V) Power.

- The A/C Outlets will function while **CONNECTED** to Shore Power.
- The A/C Outlets will also function when **NOT CONNECTED** to Shore Power as long as the Inverter Button (on the Magnum Energy panel located right of the DC panel) is pressed “ON” (converting the 12-volt house battery to A/C).
- A/C Outlets will only work when the A/C **PLUGS** breaker on the AC panel is in the “ON” position.

Battery Charger. The Battery Charger/Inverter 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 orange lights (labeled **SHORE POWER** and **INVERTER**) on the AC panel come on (indicating that you’re charging and A/C power is available). Wait for the orange lights before using A/C power. Also, the A/C **PLUGS** breaker switch must be “ON” for the plugs to be live.

Inverter. When not on shore power, A/C power may be enabled by pushing the “Inverter” button on the Magnum Energy panel located to the right of the DC panel. A green light will come on next to the “INV” label. Then flip on the “AC **PLUGS**” breaker on the AC panel.

TURN OFF the Inverter when not in use and always turn off the inverter BEFORE connecting to Shore Power.

Chart Plotter. The circuit breaker for “INSTRUMENT 1” is located on the electrical panel. This switch powers the chart plotter at the helm.

Autopilot. The autopilot and most of the other instruments, with the exception of the chart plotter, are powered by an on/off breaker labeled “PILOTE” in the port side stateroom on the engine compartment side wall. Both the “**Pilote**” and the “**Instruments 1**” switch need to be on for all instruments to work properly.

Cabin Lights. Once you have turned on the circuit at the electrical panel labeled “Cabin Lights 1”, an on/off switch for all recessed salon/galley lighting is controlled by two rocker switches. One is located on the overhead just above the companionway entrance (above the starboard aft cabin door). The other is located above the port settee (slightly forward) on the overhead. All other cabin, head, and navigation station lighting locations have individual on/off switches on the fixtures (and will operate after turning on the breaker for “Cabin Lights 2”).

Water Pressure/Systems. There are two fresh water tanks on board. One is in the forward cabin under the berth. The other is located underneath the aft port berth.* The water pump pressurizes a small accumulator tank located beneath the navigation table 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, hopefully 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 located behind the port settee back cushion just forward of the navigation table.



To best manage your water, we recommend drawing down one tank at a time. You can do this by running out of one water tank at a time. The picture above shows the **top valve rotated with horizontal lines pulling water from Tank 1. The other two valves are turned off in the “vertical” position.** Once you run out of Tank 1, you can switch over to

Tank 2 using the middle valve and know you have roughly half of your water capacity left. We recommend leaving the bottom valve turned off as noted above because it pulls from both tanks.

You can also check your water usage using the water meter located in the galley on the starboard side above the shelf. These gauges are track the water level in the forward “Tank 1” and the aft “Tank 2.” To check, just press the button (as show in the photo below). In the case shown, all four lights are on showing the tank is full. As water is used, you’ll be able to track as it goes from Full (far right) to Empty (red far left). You’ll find an identical gauge below the instrument panel on the port navigation station. However, the gauge on the starboard side is more reliable/accurate.



Shore Power A/C Circuit Breaker. This breaker box is located in the port 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. Must be on all night in an anchorage. (It won’t deplete batteries.)

10. Electronics.

The radar/chart plotter/GPS, depth sounder, wind instrument, and autopilot are all RayMarine products.

Cellular Telephones. *Salus* is equipped with a 12-volt cigarette lighter type outlet that may be used for recharging your cellular telephone. The outlet is just below the electrical panel face and connected to the Cabin Lights 1 breaker (it must be “on” to use cigarette lighter plug).

Depth Sounder. Power on by flipping “ON” the breaker labeled “PILOTE” on the port side of the salon at the navigation station.

The digital depths 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 and Chart Plotter. *Salus* is equipped with a RayMarine Radar and a color C70 chart plotter in the cabin at the Nav station and also at the starboard helm. (The chart plotter may be used without the radar to minimize battery drain.) GPS input to the Chart plotter comes from a Raystar 120 WAAS receiver antenna mounted on the stern rail.

To start the Radar/Chart plotter, turn on the electrical panel switch labeled “INSTRUMENT 1.” Also flip “on” the breaker labeled “PILOTE” which sends power to the GPS antenna. Then, press and hold the power button at the lower left corner of the unit at the Nav station until it beeps and turns on the display. Then turn on the power button on the unit at the Starboard helm. 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.

We recommend that in addition to using your PRIMARY navigation aids in the cockpit while underway (namely, the Maptech waterproof chart book or the roll charts with the most active “killer rocks” marked in red), that you also utilize the chartplotter for added safety!

This helps you 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 them the vessel's precise position. If you can't, you're in danger of hitting a rock.

The only time when the chartplotter 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 secluded cove. With the chartplotter, 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 chartplotter is accurate to within 3 meters – about 10 feet.

You should have little need of the radar except for the highly unlikely event that you are suddenly enveloped by fog, which is rare in this area. The fog that we've encountered in the islands usually forms in the wee hours of the morning and burns off by mid-day. So if it's a little soupy after breakfast, we put on an extra pot of coffee until it lifts.

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. Power on by flipping “on” the breaker labeled “PILOTE” at the Nav station on the Port side of the salon. Speed is indicated in knots or nautical miles per hour. (For comparison, 7 knots is approx. 8 statute mph.)

*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 most forward salon sole board. (It's not 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 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), when plugged into the outlet on the pedestal at the Starboard steering station, controls all radio functions of the unit mounted at the Nav station from the Starboard steering station. The VHF at the Nav station is turned on (after the VHF breaker on the electrical panel is “ON”) by holding down the volume knob (upper right corner) 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 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.”

Both cover the San Juan Islands and the Canadian Gulf Islands. You will also hear “Strait of Juan de Fuca” (south of the San Juan Islands), “Georgia Strait” (north), and “Rosario Strait” (runs through the eastern part of the San Juan Islands).

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.)

In case of a distress where you can no longer stand by the radio to pass your mayday, use the red distress button on the radio. First flip up the cover, then press the button. GPS input is automatically coded into your signal.

11. Emergency / Safety Equipment.

First Aid Kit: A complete first aid kit is located in the aft head. Band-Aids and antibiotic ointment are located in each of the medicine cabinets 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 below the Instrument panel.

Fire Extinguishers. There are four fire extinguishers. One is located in the compartment just to port of the Nav station seat. There is also one in the hanging locker of each stateroom.

Emergency Tiller. It's a 2" diameter metal pipe, with an "elbow" bend in it. It's located in the port cockpit locker in the aft outside corner behind a plastic storage bin. The rudder post attachment point is under the helmsman seat. (To remove the cover, insert a winch handle in the star-shaped fitting and unscrew).

12. Engine Operation and Handling *Salus*.

Reverse. *Salus* "walks to port" very slightly. It's easily overcome with the wheel and rudder when you have a little sternway. (*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.*)

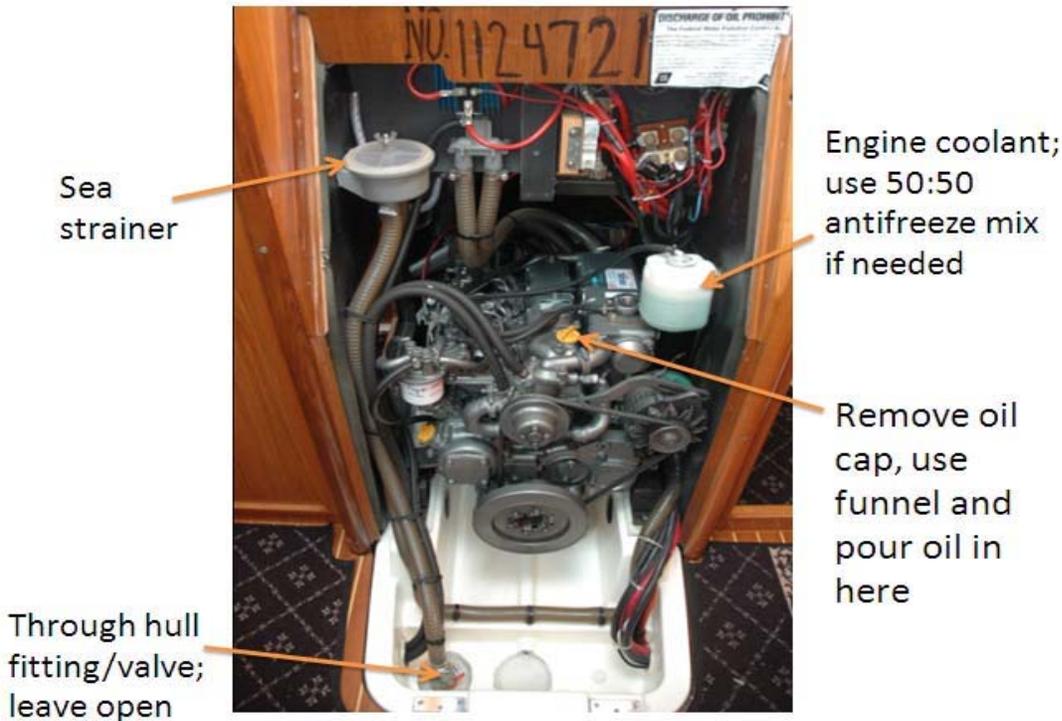
Forward. *Salus* has a large and deep rudder. So she's very quick on her feet and turns in a narrow radius. Very small rudder adjustments will easily change course.

Docking. *Salus* 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).

Leave the engine **ON** 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 a vessel as heavy as a cruising sailboat.

When coming into the Bellingham 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 the Engine. To begin the inspection at the beginning of each day, grab the top of the companionway steps and pull them back into the cabin to provide access to the engine compartment. Lines on either side will hold the stairway open to reveal the following picture.



1. **Check the oil level.** The dipstick is accessed from the aft starboard cabin. As you enter from the galley, immediately down to your right, you'll see a wooden access panel to the engine compartment. Push the button and remove the panel. You'll see the yellow-handled dipstick on the starboard side of the engine. There is roughly a 3/4 inch wide gap on the dipstick between the full line and the fill line. Use a paper towel or rag to check it. **Do not overfill.** Use the onboard spare oil located along with a funnel in the locker under the galley seat immediately across from the Nav station. Remove the yellow oil cap shown in the picture and 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 engine. 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. Make sure the dipstick is firmly put back in place when finished.

2. **Check the coolant level in the white opaque expansion tank** on the front, upper right side of the engine compartment. **Engine coolant is a mixture of 50% antifreeze and 50% water.** Anywhere between the two lines (high and low) on the overflow reservoir is “good.” If it gets down to the “low” line, refill it using the engine coolant located in the locker under the seat just forward of the galley and across from the Nav station.
3. While you have access to the front of the engine, check for belt tightness and leaking fluids.
4. Ensure the valve on each RAW WATER THROUGH-HULL is in the ‘Open’ position (lever in-line with valve). The through-hull should be left open at all times.
5. On the front of the engine, check the RAW WATER STRAINER for debris. If you need to clean it out, open the strainer cover, clean the strainer, and reassemble. **MAKE SURE THE HOLE IN THE STRAINER IS FORWARD** and goes over the intake line – this is the forward line coming up from the through-hull. Be careful to seat the O ring properly and tighten the lid. Make sure it is water tight and not leaking.
6. Look over the stern for kelp, logs or branches that could foul the propeller.
7. Make sure the gearshift is in neutral (straight up at 12 o'clock looking from the 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.
8. Insert the key and turn it clockwise, to the first click.
9. 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 key counter clockwise to the off position. Wait 15 seconds and try again.
10. 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.
11. While the engine warms, check your fuel level. *Salus* has an on-demand fuel gauge. To activate the gauge, push down on the toggle switch.
12. 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 (12 o'clock position) and the red clutch pin will pop out. Now you may engage forward gear by pushing ahead on the throttle or engage the 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 visa versa.

Operation.

56HP Yanmar Model 4JH3E engines are very reliable. Cruising speed is **6.5 knots at 2800 RPM.** Fuel consumption is approximately 1 gallon/hour at 2800 RPM.

Please do not exceed 3000 RPM because it's hard on the diesel engine and fuel consumption goes WAY UP (at very little increase in actual speed). We find the engine will have least vibration at 2800 RPM ... and at some points below 2800 RPM. (You can go 5-6 knots at 2000-2500 RPM – economy cruising speed at less than 3/4 gallons 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 engine-overheat 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.*

To clear the eelgrass from the raw water strainer (above the water line in the engine compartment in Salus), simply twist off the clear screwtop 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, turn off the engine, check the seal between the strainer, the rubber gasket, 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.) Also 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 in the lazarette under the aft dinette cushion across from the Nav station.) One other possibility is that the impeller in the raw water pump has failed. While they are replaced

each spring with a new one, 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 OFF 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 key.

13. Fuel Tank.

Salus has a 36-gallon fuel tank. The engine consumes about 1 gallon of diesel per hour.

Please be very careful when fueling. The Diesel Fill is located on the aft outboard starboard rail/deck by the navigation station. You'll notice that this fill cap is painted red for Diesel. 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. 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. 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.

Salus has an 11-gallon holding tank in the head in the forward stateroom, and an 12-gallon holding tank in the head across from the galley. They should be emptied once every day to avoid a leaking sewage or, worse yet, an exploded holding tank...a real “vacation ruining” event! (San Juan Sailing staff will discuss holding tanks, overboard discharge and pump-outs upon your arrival.)

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.

Directing The Toilet Flushing:

*The toilets on Salus both have Y-valves that will direct flushing waste to the holding tank or overboard. (Note that it is illegal to dump waste overboard in US inland waters. It is allowed in certain areas in Canadian waters.) The Y-valve is accessed from inside the cabinet above the toilet in each head and is clearly marked "Overboard" or "To Holding Tank". **Make sure the Y-valve is switched to "To Holding Tank" prior to your departure.***

Emptying the Holding Tanks:

*The holding tanks can be emptied in two ways: 1. By pumping out at a shore or barge facility or 2. In appropriate waters, discharge overboard. The overboard discharge is done by gravity (no macerator pump). **IMPORTANT:** There is a tank valve and through hull seacock that both need to be open to complete the discharge. In the aft head the tank valve (yellow handle) and seacock are both located inside the cabinet under the head sink. In the forward head the tank valve is accessed via the 8" round tan hatch just below the tank access door and the seacock is located inside the cabinet under the head sink. All tank contents will drain overboard in just a few seconds...you'll hear a noticeable "whoosh" as it discharges. Close the tank valve and seacock when complete.*

If you pump out the holding tank 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!*

Note that the Head/Holding Tank Pumpout ports on deck are black for waste.

15. Headroom.

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

16. Heater.

The diesel-fired Webasto cabin heater will make the interior "toasty" within 10-15 minutes. The heater control is located in the Navigation Station under the DC panel and is labeled "Webasto". Prior to turning on the heater, check to make sure there are no fenders or lines positioned over the exhaust pipe outlet. The outlet is located on the starboard side of the stern, midway up from the waterline. The rocker switch to the right of the rotary dial chooses

heat or ventilation (fan only). With the rocker in the heat position (push the “flame” icon on the rocker switch), rotating the dial to the clockwise to the right starts the unit and raises the temperature setting. Turning it switch up to about 12 O’Clock in generally a comfortable setting. Note: It takes about 5 minutes for the heater to “cycle up” and get hot. Turning the dial all the way to the left turns off the unit, however the fan will continue to run for about 5 minutes while the unit is cooling down and cycling off. 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 instructed to turn the diesel Webasto heater off before retiring. (Otherwise, the boat will get too hot and the electric fan in the diesel heater will drain the house batteries.) The down comforters will keep you warm in bed. Then, the first one up in the morning can simply turn the cabin heater back on and warm things up. ;-)

17. Inverter.

When not on shore power, A/C power may be enabled by pushing the “Inverter” button on the Magnum Energy panel located to the right of the DC panel. A green light will come on next to the “INV” label. Then flip on the “AC PLUGS” breaker on the AC panel.

TURN OFF the Inverter when not in use and always turn off the inverter BEFORE connecting to Shore Power.

18. Keel Depth.

Salus has a deep fin keel and draws 6’4’’... **so figure on AT LEAST 8 feet deep** 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 ... for *Salus* that means a minimum of 17 to 21 feet of water at low tide.*

19. Outboard.

Salus 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 the Outboard.

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. Make sure the black U-shaped kill clip (with the red lanyard) is clipped into the red shut-off knob (port forward corner of the outboard).
5. Turn the handle throttle $\frac{1}{4}$ turn counter-clockwise.
6. 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 (where the kill clip is clipped in). Or just pull the red lanyard until the clip pops off.
2. To avoid prop damage, shut the outboard off and raise it out of the water before you reach the shore. Pull the outboard forward and out of the water until it clicks at 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. Put the outboard back on the outboard mount on the stern rail and tighten both braces.
2. Push the fuel valve lever forward to close (starboard aft corner of the outboard).
3. Close the air vent on top of the fuel cap (top of outboard) by turning it clockwise.
4. Secure the outboard further by tying the safety lanyard with to the stern rail.

Troubleshooting.

If the outboard engine won't start, review "Start the Outboard" steps" 1-6 above to make sure you've done all of the 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 can solve a myriad

of 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, 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.

20. Refrigerator.

The well-insulated refrigerator (1'3" wide, 2'6" long, 1'8" deep) must be turned "on" at the electrical panel. The temperature thermostat control dial is located inside the refrigerator, along on the aft edge. Temperature is regulated from 1 through 7, with 7 being coldest (at which point it will probably freeze your lettuce). There is a small freezer compartment in the refrigerator (a dozen hot dogs max capacity). The freezer is 1'3" wide, 2'6" long, 1'8" deep.

We recommend running the refrigerator at all times to avoid it becoming smelly. You may want to turn the thermostat down to "3" (the medium setting) at night. This will help conserve house battery power. Then turn it back up to "5" or "6" during the day. Loading one or two blocks of ice into the bottom of the refrigerator helps keep it cold and reduces drain on the batteries. If you're anchored or sailing, monitor the house battery voltage. If voltage gets down to 11.5 volts, run the engine to charge up those batteries.

To drain the water from the refrigerator for cleaning or in case of water build-up, pull the small plug in the lower right-hand bottom of the refrigerator. Be aware that the water drains into the bilge and the bilge pump may come on to pump it out.

21. Sails.

Salus is a delight to sail. Her sail plan (a medium-sized furling genoa and roller-furling main sail) was selected with consideration for single or short-handed sailing. Once she has way, Salus is easily steered with small rudder changes. Her perfect breeze is 10-20 knots with heel at 5-20 degrees. Full sail can be carried in winds up to 17 knots. If you reach the edge of your comfort envelope sooner, don't hesitate to shorten your sails. Remember, "Reef often and reef early." You can always shake reefs out if you decide you've been too conservative.

Mainsail. Salus's main has an in-mast furling system.

With an in-mast rig, in normal conditions, it's recommended that the **headsail/genoa be deployed first** (while underway with the engine). The mast bows slightly aft at the top. By deploying the headsail first, the pressure of the wind in that sail tends to straighten up the mast. This makes it easier for the main to deploy from within a plumb mast. So provided the wind is less than 20 knots, steer to a course of approximately 60 degrees off the wind (close reach) with the **wind coming across the port side.**

Once you deploy head sail/genoa, you may throttle down, place the engine in neutral, and sail on the head sail/genoa alone.

Once deployed, fall off and begin sailing...just like you would on a vessel with a conventional main. Then partially deploy the head sail. Be conservative with the amount of sail you deploy in high winds. If you've been too conservative, you can easily deploy more sail area while sailing. Now you're ready to deploy the main.

Deploying the Mainsail:

1. The mainsail does not cooperate nicely when the boom is pulled down tight, so give it a little "play." To do so, open the rope clutch for the boom vang and pull out about a foot of line. Close the clutch for the boom vang and loosen the main sheet by pulling out about 3 feet of line. Then close the rope clutch for the main sheet.
2. The "outhaul" line is what pulls out the main. Pull the outhaul by hand or carefully using the winch. Be careful not to force the outhaul or you will do damage to the rigging and the sail. If it does not respond to moderate force, check for the hang-up. Note: Most rope clutches provide one-way stops, so you don't need to open them when winching in.)
3. For control, keep slight tension on the "main furler" line while winching in the outhaul until the main is partially or full deployed (depending on the wind and your preference). The wind pressure on the main will actually help the main to deploy.

Reefing the Mainsail:

1. While still sailing, steer the vessel into a close reach (wind coming about 60 degrees off the Port bow.) You can track it by the wind instruments at the steering stations.
2. Winch in the boom vang to pull the boom down. (This will help the mainsail enter the mast without wrinkles that may hinder a future deployment.)
3. Wrap the "main furler" line on a winch (again do not apply excessive force to the winch or damage may result).
4. Have a crew member grasp the outhaul line, open the outhaul line clutch, and maintain adequate tension on the line as the mainsail is furled.
5. Crank in the main furling line until you feel enough of the sail has been reefed.

Continue on sailing (-:

Furling the Mainsail:

When you're ready to bring in the sails, start by furling in the mainsail.

1. While still sailing, steer the vessel into a close reach (wind coming about 60 degrees off the Port bow.) You can track it by the wind instruments at the steering stations.
2. Winch in the boom vang to pull the boom down. (This will help the mainsail enter the mast without wrinkles that may hinder a future deployment.)
3. Wrap the "main furler" line on a winch (again do not apply excessive force to the winch or damage may result).

4. Have a crew member grasp the outhaul line, open the outhaul line clutch, and maintain adequate tension on the line as the mainsail is furled.
5. Crank in the main furling line until the **white main** is all wrapped smoothly inside the mast.
6. Stop after the white main is furled and leave the blue UV cover out of the mast. .

*IMPORTANT: Be sure to keep plenty of tension on the outhaul in order to get a nice tight wrap of the mainsail inside the mast. The wind will help you do this. Remember, if you furl the main without any wind pressure on it (if you're head-to-wind in high winds or if you simply becalmed), tension on the outhaul line is the **ONLY** force that will get you a nice tight wrap inside the mast. And a loosely furled main inside the mast could mean a tough next deployment or, in the worse case, a jammed main. THANKS!*

Now that you're just sailing on a close reach on the head sail only, it's time to start the engine and shift into forward in order to maintain your course of 60 degree off the wind. While holding course, furl in the head sail. And motor in to your anchorage or marina!

Headsail/Genoa/Jib. The 130% 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. **FURL UNTIL UV COVER PROTECTS 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 be able to furl the jib by hand. **If you cannot furl by hand, forcing it with the winch will only exacerbate the problem.** Instead, investigate to see why it will not furl in naturally, resolve the issue and furl the sail by hand.

22. Shower, Hot Water and Shower Sump Pump.

Hot water is stored in the insulated tank. 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!**

Before showering activate the sump pump by switching the “Sump Pump” breaker to “On” at the electrical panel. The aft head pump is controlled by a toggle switch located in the head to the right of the sink. The forward head toggle switch is on the left side of the forward head sink. **IMPORTANT: Make sure the shower sump outlet seacock is OPEN before running the sump pump.** The seacock is accessed inside the cabinet below the vanity sink in each head. The seacocks have red handles and are just below the sink..

To manage water, the sailor's shower process is: get wet, turn off the water, soap up, rinse off. (If the shower basin overflows, you're using too much water.) Use the Sump Pump switch to drain the 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 on the stern. This is also a good way to rinse off salt after swimming or dirt after going ashore.

23. Spares.

Salus is equipped with engine parts and general spares. They are located in plastic containers LOCATED IN THE STARBOARD SIDE LAZARETTE UNDER THE FORWARD, OUTBOARD SEAT AT THE DINETTE. THERE IS ALSO A TOOL KIT UNDER THE SEAT JUST FORWARD OF THE DINETTE.

24. Stove/Oven/Microwave.

Please note that the propane tanks and propane valves 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 lasts for 4 weeks or more, San Juan Sailing's staff tops them off at least 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 left, so it is not inserted in the hole in the cabinet (aft). 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/carpet (or on 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.*

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 near the sink (front panel, to right) to "On."
4. You'll see **RED** on the switch when the solenoid is on.

Lighting a Burner on Top of the Stove:

1. With the solenoid switch on **RED**, light a butane lighter or wooden match.
2. Hold the flame at the outside edge of the burner.
3. Push the burner control knob in and turn it left to high. The burner should light immediately.
4. Hold the knob in for 2-3 seconds (warming the thermal couple) then release.
5. You may then operate the knob like a normal stove.
- 6.

Lighting the Oven.

1. With the solenoid switch on **RED**, open the oven door and light a butane lighter.
2. Push the tip of the lighter down through the open circle at the front of the oven, or through a smaller open circle a bit to the right.
3. Push the lighter down to meet the circular burner inside. You'll hear and see it when it is lit.

When finished with the stove/oven, shut off the burner(s), then shut off the solenoid switch to the right of the sink. (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.

At night, it's recommended that you do turn off the propane tank with its faucet-like hand valve (located in the lazarette under the seat at the starboard steering station). 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!

Operating the Microwave (in the starboard cupboard just above and forward of the stove)

1. The plug for the microwave is located on the shelf above it. Plug it into the outlet there.
2. Keep the cupboard door open when the microwave is in use.
3. When not in use, unplug the cord and close the cupboard door.
4. **While using the microwave, please keep an eye on the electrical panel and monitor the charge of the batteries. As mentioned earlier (on page 5), you should try not to discharge below 11.5 volts before recharging the batteries by (1) running the diesel engine or (2) plugging into shore power with the charger breaker "ON."**

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.

25. TV/DVD Player

The DVD player is located on the wall just aft and above the Navigation station in the salon. The player is mounted on a swiveled bracket that enables you to pull it out away from the wall and direct it toward the dinette table area.

26. Water Pressure & Tanks.

Water pressure. The fresh “water pressure” switch is located on the electrical panel. Push the breaker “on” to activate pump. The water tank level indicators are located above the galley counter. Push each button to activate the indicator lights. (They will only give an indication when the “water pressure” breaker switch is turned on at the panel board.) The 4 lights (3 green and 1 red) for each tank will go dark as the water in the tanks is used. *It’s okay to leave on while someone is below decks. But please turn “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. *Salus* has two water tanks. One holds 45 gallons and the other holds 40 gallons. Selection valves are located behind the port settee back cushion in the main salon. The bow tank is labeled “Reservoir Eau Avant.” The aft tank is labeled “Reservoir Eau Arriere.” You’ll notice the Water Tank Fill ports have a **Blue Insert** just outside and around the fill stations on the Port deck. One is located just aft of the cockpit winch. The other is located just forward of the mast.

When the tanks are full, use the bow tank first. With water tanks heavy with water, sailboats tend to be a little bow heavy (especially if ground tackle is all-chain). 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. 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 *Salus*! * * *