Are you ready to start a sensational vacation?
If so, welcome aboard Sensation,
a 2002 Beneteau Oceanis 39'3"

She is a 2- stateroom 2002 Beneteau 39'3" sloop. We bought her, new to us, in 2009 in brand new condition. With only 188 hours on the engine she was barely broken in. Her beautiful interior shows that her previous owner cared for her very well. Sensation sails beautifully, we hope you'll enjoy sailing her through the islands as much as we do.

Our favorite things about Sensation:
* Her two staterooms, each with their own private head and shower, make her a very comfortable boat for two couples.
* The L-shaped galley is a cook's dream, with a front loading refrigerator, giving way to amply counter space and plenty of storage.
* Both sails can be set, furled and controlled from the cockpit. Both the main and the genoa are roller furling. This makes it easy to set sail and gives you an infinite range of reef points as the wind dictates. Because of these features we put the sails up every chance we get!!

Sensation puts a smile on my face very time the sails go up. We hope you'll enjoy Sensation as much as we do. Please respect our need to keep Sensation a **smoke free** and **pet free** vessel for everyone's enjoyment.

Here's to a Sensational cruise…..Happy Sailing!

Dan and Helen Green
360-734-0524
360-483-8897

PRE-DEPARTURE CHECKLIST.
The following systems/switches/valves should be checked prior to departure:

Welcome Aboard:
As you enter Sensation you will find storage for the clear compainway panels is conveniently located in the center bench seat of the main salon settee. The two panels fit in their own gray felt cloth pouch and are ready to go when you need to lock the boat.

1. Turn off the main 110 Volt AC shore power breaker and battery charger breaker located in front of the Navigation Station starboard side of the salon. Turn AC power off at electric box on dock and unplug cord. Unplug cord from stern of boat, stow the shore power cord in the port side lazarette. Leave all battery switches located in aft cabin in the **"on** " position.
2. Turn on desired instruments at the Navigation Station. **Bilge pump will always remain on.**
3. Lift the companionway steps, open access door in aft cabin starboard side, lift up and open access door in aft cabin stern side to access engine.

It is easiest to check the oil from the starboard opening. The correct level is in the **MIDDLE** of the high and low mark on the dipstick. Any filling, if necessary, is done through the red cap located starboard side in the front corner of the engine compartment. The oil and funnel are located right next to the fill port. **Do not overfill. A**dd no more than a cup at a time. Then check the level again. 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. Also check the coolant level in the plastic expansion tank that can be seen on the port side front corner of the engine. It should be close to the low reading when the engine is cold leaving room for expansion when the engine heats up.

Skippers Note: All of the above fluids are checked and filled, if necessary, prior to every charter. They will probably not need to be topped off.

Check the sea water strainer located in the back of the engine from the port stern side opening. Shine a flashlight (location mounted in kitchen) to see if there is grass in the strainer. If there is: open strainer to remove grass and retighten the cap. **It is very important not to over tighten the cap. Please only hand tighten. Sea Strainer is above water line.**

WARNING: Make certain the all latches are secured especially on the companionway steps after closing.

Engine keys are in the navigation table in the far right compartment. Check **Engine and Handling** for starting instructions.

Preparation

1) Check dinghy secure – a cleat tie with 4' to 5' long painter with a second tie on the stern rail. Painter knot should be 1' above the water.
2) All movable items in cabin secure.
3) Shore power disconnected and A/C switch turned off.
4) Turn the following breakers on at the D/C panel: **sailing instruments, video plotter, radar, auto pilot.**
5) Remove instrument covers and stow in burgundy pouch located in port stern lazarrete. Power up Chart Plotter. (Please power down chart plotter before turning breakers off at panel.)
6) Foredeck and cockpit clear.
7) Sails & lines ready.
8) Untie from dock stowing lines on hooks in starboard stern lazarrete. **Bow line can be stowed on hook in anchor locker for easy access.**
9) Once safely underway pick up fenders and stow in large port side lazarrete. (**Fenders can be clipped onto crab pot for easy retrieval.)**

You're ready to go! The following information will explain Sensation in more detail. Above all be safe and *HAVE FUN.*

INDEX:

Sensation's Specs:

Year: 2002
LOA: 39'3"
LWL: 35'1"
Beam: 13'1"
Draft: 6'2"
Displacement: 17,152lb
Mast height above WL: 55' with antenna
Fuel: 36 gal.
Water: 120 gal: 60galforward, 60gal aft
Holding: 40 gal: 20gal fwd, 20gal aft

1. Anchors.

Sensation is equipped with two anchors, both located in anchor locker. The primary bow anchor is a 44 # Lewmar with 125 feet of 3/8" high test chain and 200' of line. **Use snubbing hook to snub off anchor to starboard cleat. Make sure there is some slack in the chain between the snub hook and the windless so the windless does not have tension on it. The windless is not designed to hold the anchor in place.**
The secondary anchor is a 33 # Bruce with chain and line in rhode bag.

Note: Sensation has a fin/bulb keel and draws 6'3" of water so figure on 12' of water under her at all times to be safe.

2. Anchor Windlass.

To operate the windlass the engine must be warmed up and RUNNING. The windlass will not work if engine is not turned on. The breaker for the windlass circuit is located in the aft stateroom near the battery switches. If the breaker is tripped you will notice a thin piece of plastic protruding from the bottom of the breaker, simply push it back up. It is very hard to see since it is the same color as the breaker itself. The up-down controller for the windlass is located inside the chain locker (Please leave it plugged in).

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 a windlass controller that you're not familiar with.) 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.
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. 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 (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 you 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!
Snub off the anchor chain with snubbing hook to starboard cleat. Make sure there is slack in the chain between snub hook and windless. The windless is not designed to hold the anchor in place.

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.

Retrieving the Anchor. Engine must be warmed up and RUNNING to use the windless.
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, would be a large draw on the batteries, 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.

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.

3. Barbecue.

The propane BBQ is plumbed to the propane tank. Make sure the faucet-like valve on the tank is turned on and the LPG breaker on the control panel 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 OFF, light the burner. (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. As you may know BBQ strikers are notoriously fickle. If the striker fails use the hand held striker. We have had luck in inserting the striker flame into the hole on the right side of BBQ.

ALWAYS TURN LP GAS SWITCH OFF AT THE CONTROL PANEL WHEN THOUGH!) The solenoid gets very hot when left on.)

4. Batteries & Charging.

For normal operations, leave the battery switches "on" (in the vertical position) at all times. These switches are located in the aft state room above the engine. 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 starting battery is an AGM battery specifically designed for starting diesel engines. The house batteries are deep cycle AGM. Both batteries are maintenance free. The horizontal position on the battery switches is "off", the vertical position is "on". Always leave battery switches in the "on" position. The black switch is a ground and needs to be left in the "on" position. Battery voltage can be checked on the electrical panel "**Battery Test".** The HOUSE battery is labeled 1" and the START battery is 2". You should try not to discharge below 11.5 volts before re-charging the batteries by (1) running the diesel engine or (2) plugging into shore power with the Battery Charger Breaker "on" at the A/C panel.

NOTE: Refer to monitoring systems.

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.

5. Berths.

Sensation is ideal for 4 people, but she'll sleep a maximum of 6 - two in the forward stateroom; two in the aft stateroom; also two people on the dinette table that converts to a double berth by lowering the table. The forward bed is 6' long, 4' wide (at the head) and 2'6" wide (at the foot). The aft bed 6'2" long, 6'4" wide (at the head) and 6'4" wide (at the foot). The converted dinette is 6'4" long and 4' wide (with side cushions removed).

Converting the Dinette into a Double Bed

Pull up on each side of the table, and then remove the long legs (they're attached by friction only). Insert the short legs located in the seat bench then allow the table to come down and rest on the short legs. Place the extra cushions (found in the forward or aft stateroom, burgundy in color) on top of the table.

6. Bilge pumps.

Please check the bilge each day, morning and evening. It is accessed by lifting the floorboard in front of the bench seat under the table. Please note that the refrigerator drain has its own sump pump located and labeled above the stove. **To Operate:** turn sump pump breaker on at D/C panel. Press pump out switch above stove

There are two bilge pumps:

(1) One electric on-demand bilge pump is controlled at the electrical panel labeled "auto man". The other is labeled "Bilge Pump" and is controlled with a float in the bilge. (If it goes off, you should investigate why. There may be a slow leak.)It will shut off automatically when there is no more water in the bilge.

(2) The manual emergency bilge pump is the second bilge pump. **The emergency bilge pump handle is located in the port stern lazarette under the burgundy pouch, green line attached to the handle for easier location.** Insert handle into the pump located port side close to the cockpit floor. Monitor bilge water daily and alternate your choice of pumps to ensure that all are functioning properly.

7. Dinghy.

Sensation has an inflatable Zoom 310 5 Zodiac 10.17' 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. (Painter knot will be about 1' off the water.) This lifts the bow slightly out of the water and reduces drag. It also lessens 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 to the stern rail. SJS has 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 the shore, weight the dinghy aft by leaning or moving the crew toward the back of the dinghy. Then offload everyone over the bow. Lift the dinghy above barnacle height using the hand lines on either side, and set it down gently on the beach. Also remember to secure the painter under a rock or to a large driftwood log – we have very large tidal fluctuations (so your dinghy won't float away).

8. Dodger

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

Please don't take the dodger off. (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 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!

9. Electrical Panel.

There are two electrical panels. **One 110 volt A/C shore power & one 12 volt D/C power panel.** The A/C shore power panel is located facing forward of the navigation station and the 12 volt D/C power panel which you see in the navigation station is used the most. Almost all electrical is 12 volt on the boat. When you are connected to shore power and the battery charger is on you are still using 12 volt power on most things. **The exceptions are:** the microwave, wall heater, water heater and the outlets, these will only work when connected to shore power and the **shore power breaker is "on". Then turn each desired breaker switch to the "on " position on the A/C Paned.**

Battery Charger. The Battery Charger breaker switch must be turned "on" for shore power to charge the batteries. A green light will come on almost immediately signaling that you're charging and A/C power is available). The **A/C Outlets breaker** switch must be "on" for the plug- ins to be live.

Salon/Cabin Lights. Once you have turned "on" the breaker switch at the electrical panel labeled "**salon lights**", "**cabin lights**" an on/off switch for all recessed salon/galley lighting is controlled by three "ROCKER" switches located above D/C panel. All other cabin, head, and navigation station lighting locations have individual on/off switches on the fixtures. There is a "ROCKER" switch located in each cabin for an overhead light.

Note: reading light switch for the forward cabin is located port side under the shelf.

Water Pressure. Turn breaker switch on at the breaker panel labeled "**Freshwater."** The pump that pressurizes the system is located under the port settee. 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 freshwater breaker switch. 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 underneath the aft port settee seat cushion in the main salon. Use **bow** water tank first, when empty switch to the **aft** tank.

Note: the **aft** water tank is connected to a water monitoring system (explained in this section under Monitoring Systems.)

Shore Power A/C Circuit Breaker. This box is located in front of the navigation station starboard side. It rarely trips, but if it does, just turn it back on.

Navagation 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 batteries.)

10. Electronics.

The radar/chart plotter/GPS, depth sounder, wind instrument, and autopilot are all Raymarine products. Instruction manuals are located under the nav table seat and quick start manuals are located under the nav table.

Cellular Telephones. Sensation is equipped with two 12-volt cigarette lighter type outlet that may be used for recharging your cellular telephone. To activate the outlet on the electrical panel face turn the "**salon light**" breaker switch to the "**on**" position.
The other plug in is in the kitchen left of the microwave. It is always on.
The I pod connecter is activated when the "**stereo**" switch is in the "**on**" position

Depthsounder. Is activated by turning the "**sailing instruments**" breaker switch to the "**on**" position. **Sensation draws 6'3" and the depth is measured from the WATERLINE.**
The digital depthsounder 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 depthsounder only as an aid to navigation in shallow water.

IMPORTANT: The key to avoiding rocks is NOT the depthsounder – but knowing where you are at all times. (Rocks are the greatest navigational and safety hazard in the islands – but they are all clearly marked on the charts.)

We do not recommend using the depthsounder'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.)

GPS, Radar & Chart Plotter. Sensation is equipped with a RayMarine GPS, Radar and a color E80 chart plotter at the helm and a RC520 at the navigation station. (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 port stern . To start the Radar/Chart plotter, turn switch "on" at the electrical panel and power up the unit with the red "on" button.

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 them the 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 secluded 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.)

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 wait until the fog 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. 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. 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).

Monitoring Systems. Sensation is equipped with a Blue Sea tank and battery monitoring system. The panel is located at the D/C panel below the heater thermostat.
Two sensors monitor both forward and aft waste tanks. The read out for each tank is in a percentage filled.
One sensor monitors the **AFT** water tank. The read out is also in percentage.

Note: A bit of caution: We are working very closely with BlueSea and continue to trouble shoot this system. We have experienced false readings on the tank monitors. At times a tank will show a false FULL when EMPTY. For the most part this happens only when the tanks are empty. Once the sensor detects something it tends to be accurate. Please use some common sense and keep track of pump outs, discharges and water fills. Do not depend solely on the tank monitors and when in doubt please pump out.

Battery monitor: Sensation has two deep cycle **AGM** batteries (maintenance free). These batteries should **NOT** be depleted more then halfway before recharging. Therefore the alarm is set to sound at 230 amp hours. At this point it is time to **recharge the batteries** either by motoring or hooking up to shore power. Please **DO NOT** discharge batteries below 230 amp hours. **THIS MONITOR WORKS VERY ACCURATELY.**

VHF Radio. The remote access microphone (RAM), when plugged into the outlet on the pedestal, controls all radio functions of the unit mounted above the navigation station from the steering station. To turn the VHF on; first, turn the "**VHF**" breaker switch to the **"on"** position at the electrical pane. Then hold down the PWR/Volume button on top of the unit 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 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.)
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 under the navigation table seat. Please note any usage of these items so they may be replaced for the next guest.

Flares. Visual day/night distress signals are located under the navigation table seat in orange plastic container.

Fire Extinguishers. There are four fire extinguishers. One is located in the galley left of the microwave, one in the forward cabin outside the starboard hanging locker, one in the aft cabin at the base of the berth and one in the port side lazarette.

Emergency Tiller. It looks like a metal pipe, with an "elbow" bend in it. It's located in the port side lazarette. 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 & Handling.

Starting.

1. Check the battery switches. All must be in the vertical "on" position.
2. Look over the stern for things that could foul the propeller.
3. Make sure the gearshift is in neutral (12 o'clock looking from the starboard side.) Push the red button in, keeping the red pin pushed in, advance the throttle lever to about the 1 or 2 o'clock position. This keeps the transmission in neutral while allowing additional RPMs during start-up.
4.. Insert the key and turn it clockwise to the on position.
5. Push down on and hold down for 10 seconds the pre heat button, to the left of the key, to activate the glow plugs. After 10 seconds while still holding the pre heat button press the start button. If engine does not start turn key off wait 15 seconds and repeat steps. **If the engine still does not start check the following: Make sure the PULL kill handle (located to the right of the start key) is pushed in. There is another Pull kill handle in the aft stateroom please check to see it is not pulled out.**

Check for water gurgling out the exhaust, and then gradually ease the throttle back to idle. You may need to keep the RPM's up to reduce the "Diesel Shake".

6. While the engine warms, check your fuel level. Also check and record your engine hours.
Fuel gauges sometime stick but hour meters seldom lie. Please allow 5 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.

Forward. Sensation 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.

Reverse. Sensation "walks to port" very slightly. One trick to overcome the port walk is to goose it a little and then put it in neutral so the prop is not paddling you to port. 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.)

Proceeding in Forward / Reverse
Bring the throttle back to the 12 o'clock position and the red pin will automatically pop out. Now by pushing the handle forward you will move forward and by pulling the handle back you will move in reverse. Please pause in neutral between shifting.

Engine Shutdown.
Remember**--do not turn the ignition key OFF 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 pull the handle to the right side of the start button out, an alarm will sound, after the engine stops then turn the key to the "off" position (turn it counter-clockwise) and remove key.

Docking. Always make sure the dingy is pulled up tight at the stern to avoid catching the painter in the prop when you put the boat in reverse.
Sensation carries five fenders in the port side lazarette. *We recommend that you deploy at least three of these fenders on the dock side of the boat and keep one in the hands of a crew person so they may place it anywhere it is needed to fend off the dock or another boat.*

Sensation 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 a vessel as heavy as a cruising sailboat.

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. Don't be embarrassed we have all been there. Relax, go slow and ask for help. Even the most experienced have bad days.

Operation.
40 HP Mitsubishi/Westerbeke engines are very reliable. Cruising speed is about 6 knots at 2800 RPM. Fuel consumption is approximately 1 gallon/hour at 2600 to 2800 RPM. Please do not exceed 3200 RPM for an extended period of time because it's hard on the diesel and fuel consumption goes WAY UP (at very little increase in actual speed). We find the engine will have least vibration at between 2600 and 2800 RPM. To avoid the possibility of sucking air or sludge when the fuel level approaches 1/4 of a tank it is time to find a fuel dock.

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. To clear the eelgrass from the raw water strainer (it is above the water line in the engine compartment in, Sensation, simply twist off the clear screw top and extract the eelgrass and toss it in the galley garbage can. Replace the lid and tighten hand tight by turning it clockwise until the lid is seated firmly on the rubber gasket. Restart the engine.

If upon restarting the engine overheats again, 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.) 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 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 located: in yellow tool box under forward port settee cushion in main salon.) Call San Juan Sailing if you suspect you have an impeller problem.

13. Fuel Tank.

Sensation has a 36-gallon fuel tank. The engine consumes approx. 1 gallon of diesel per hour @ 2600 RPM. The filler cap is located on the aft starboard side. The vent is right above the fuel cap.

Please be very careful when fueling. Never allow maximum flow from the filler hose. If you do, the fill tube will surge and diesel will spill from the vents onto the side and onto the deck. It takes only a few drops of diesel fuel in the water to create a sheen and subject you to a Coast Guard fine. Fill slowly and carefully. 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, 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. Heads & Holding Tanks.

Sensation has two 20-gallon holding tanks, and they will need to be emptied at every two to three days to be safe, depending on the amount of people onboard and the frequency of use. (Refer to Monitoring Systems)
(San Juan Sailing staff will discuss holding tanks, overboard discharge and pump outs upon your arrival.)
Both heads are manual units. 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.

General toilet function is as follows:

1. Pumping with valve in "flush" position will bring seawater into the toilet if desired.
2. Use toilet.
3. Pump 3 strokes in the "dry" position to remove excess water.
4. Pump about 10 to 15 strokes in the "flush" position to move waste out of toilet.
5. Switch valve to the "dry" position.
6. Pump about 10 to 15 strokes to move water and waste fully into holding tank. Leave valve in the "dry" position.

Both heads have a Y valve and waste may be sent to the holding tank or overboard. Leave the "TOILET OVERBOARD" through hull open to avoid pressure build up. The **Y Valve position** will then determine whether the waste is sent to the tank or overboard. Please note Coast Guard regulations are very strict on the discharge of waste in U.S. coastal waters, in Canadian waters it is legal to pump directly overboard or discharge your holding tank as long as you are in deep waters i.e. not shallow waters, coves, or marinas. With the Y valve set to holding tank, pumping the toilet puts everything into the holding tank located in the cabinet behind the toilet.
For both y-valves, pull the handle towards you for overboard; push it away from you (towards hull) for tank. The handle of the Y valve is the part that DOES NOT have the EYE LOOP. Each Y-Valve handle is labeled. The handle in the forward head (located in port side cabinet under mirror) is on top and the handle for the aft head (located under sink) is on the bottom.

To empty tanks overboard: Sensation has a gravity discharge. Open "Tank Overboard" through hull. It only takes a few moments and you will hear it when it goes empty.

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 Ziploc 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 Sensation is 6'3" centerline in the main salon.

16. Heater.

The diesel-fired Espar Hydronic cabin heater will make the interior "toasty" within 10-15 minutes. The heater control is a small black box located just below the electric panel at the navigation station. 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. Please allow heater to cool down and cycle off before turning the unit off. 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 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 alternative comforters will keep you warm in bed.) Then, the first one up in the morning can simply turn the cabin heater back on.

For **ON SHORE POWER ONLY** there is an electric heater located in the bench seat at the front of the dinette table. **To turn on:** switch heater breaker labeled heater on A/C panel (located in front of navigation station on starboard side) to on, then set heat by turning the white control dial on front of electrical panel.

17. Inverter

The A/C outlet located in the kitchen above the microwave is connected to the inverter. The green button on the unit panel turns it on. It can be used to power appliances drawing no more than 1000 continuous watts (such as a cell phone, computer…it will not run blow dryers or the microwave).

18. Keel Depth.

Sensation has a deep bulb keel and draws 6'3'…so figure on 12 feet to be on the safe side. San Juan sailing strongly recommends that you always maintain a minimum of 12' under the keel at all times, both underway and at low tide on anchor.

19. Outboard

Sensation 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, anchor locker or any other storage area on Sensation.
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. 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 engine won't start, review steps 1-6 above to make sure you've done all 6 steps. There is a spare spark plug and spark plug wrench in 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.

20. Refrigerator.
The well-insulated refrigerator/freezer must be turned on at the electrical panel. Set freezer control to 5(marked in blue.) The refrigerator loads from the front and the freezer from the top. To drain the water from the refrigerator or freezer for cleaning or in case of water build-up, turn the shower sump pump switch to the "on" position at the electrical panel, the pump is controlled by a button located above the

stove. We recommend running the refrigerator at all times to avoid it becoming smelly.

21. Sails.

Headsail. The 130% genoa/jib has roller furling for your convenience.
When deploying Genoa: Open cam cleat on port side releasing green line, pull black line on either port ot starboard to deploy sail. Close cam cleat.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 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.

Mainsail. The main has an in-mast furling system.
With an in-mast rig, in normal conditions, it's recommended that the head sail be deployed first (while underway). The mast bows slightly aft at the top. By deploying the head sail 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 that the wind is less than 20 knots, steer to a course of approx. 60 degrees to the wind (close reach). Deploy the head sail. Now you may throttle down and place the engine in neutral, sailing on the head sail alone. Shut down the engine. Now you're ready to deploy the main. If you're in high wind (20+ knots) conditions, you may prefer to deploy the mainsail head-to-wind instead. That's okay, but in this situation, deploy the main first. (Since you're in high winds, only partially deploy the main so it's in effect "reefed".) 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.

To deploy the main:
1. The "outhaul" red line is what pulls out the main. Open the downhall spinlock green line. Pull the outhaul by hand or careful use of 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. (Most rope clutches provide one-way stops, so you don't need to open it when winching in.)
2. For control, keep slight tension on the "downhaul" green line while winching in on 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:
You have infinite reef points with an in-mast furling main. You can deploy as little or as much sail area as you determine is appropriate for wind conditions you encounter. And you can reef an in-mast mail while sailing and from the safety of the cockpit!

Simply wrap the "downhaul" line on a winch. Open outhaul spinlock red line.Then grasp and control the "outhaul" line by maintaining adequate tension. When you're ready, open the outhaul rope clutch. Crank in the main furling line, while you slowly pay out the opposing outhaul line, until you've shortened the mainsail to a position appropriate for the current wind conditions. Close the rope clutch on the outhaul. Success!
After you've furled the main, you are ready to shorten the head sail. (If you shorten the head sail first, you'll increase "weather helm" and likely round up. So always reef the main first.)

Furling in the main:
When you're ready to bring in the sails, start by furling in the main. When the main is tightly wrapped inside the mast, you're ready to furl in the head sail.
1. While still sailing, steer the vessel into a close reach (about 60 degrees off the wind).
2. Wrap the "downhaul" line on a winch (again do not apply excessive force to the winch or damage may result).
4. Grasp and control the "outhaul" line by maintaining adequate tension, and open the outhaul rope clutch.
5. Crank in the main furling line, while you slowly pay out the opposing outhaul line, until the main is wrapped fully inside 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 get a nice tight wrap. 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. 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!
Sensation is easily steered with small rudder changes. Her perfect breeze is 15-20 knots with heel at 15-20 degrees.

22. Shower, Hot Water & Shower Sump Pump.

Hot water is stored in the insulated six gallon 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" breaker switch on the A/C panel to the "on" position. It takes about 30min to heat the water electrically.

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

Before showering: turn the "**shower sump pump**" breaker switch to the "on" position at the electrical panel, the pump is controlled by a toggle switch located above the washbasin and to the left. As water fills the head use the toggle switch to drain the water. If some water remains just use a towel to wipe up.
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.

23. Spares.

Sensation is equipped with engine and general spares. They are located in the yellow tool box underneath forward port settee seat cushion in main salon.

A TOOL KIT IS LOCATED there is a **tool bag** and a **tool box** in the front console cabinet.

24. Storage.

There is ample storage aboard Sensation. Most is self explanatory. Remember there is storage under and behind most seat cushions.

25. Stove/Oven/Microwave.

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

1. Open the hand valve at the propane tank all the way open and very slightly snug.
2. Make sure all stove control knobs are in the "off" position!
3. Turn the LP Gas switch located on the electrical panel to "on". A red light will appear on the panel.
4. Push in the stove control knob and turn to the left to the "ignite flame" symbol, hold for a few seconds to allow the gas to flow to the burner or oven THEN push the igniter button. Hold the knob in for a few seconds then turn to desired flame. Unlike the BBQ this igniter works!
5. When finished with the stove, shut off the burner(s), and then **SHUT THE LP GAS SWICH OFF AT THE ELECTRICAL PANEL.** (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.)

To operate the oven: follow the instructions above. The approximate temperature of the oven is indicated on the thermometer located on the right hand side of the stove. Always check to see that the burner remains lit after opening and closing the oven door. If you do not intend to use the stove again in the next several hours, it's also a good idea to shut off the hand valve at the tank. Then you'll have both the solenoid valve and the hand valve protecting against a potential propane leak into the main cabin. (You'll sleep much better!) Please note that both propane valves – the hand valve and the solenoid valve – are located in the propane locker in the aft of the cockpit, which is vented and isolated from the rest of the boat. Any leaks there will move down, out, and away from the boat. Sensation carries two propane tanks. One tank normally lasts for 4 weeks or more, San Juan Sailing's staff fills the propane tanks every 2 weeks. If you have followed all the instructions above and the stove or BBQ will not light check the pressure in the active propane tank and switch to the alternate tank using a wrench from the tool kit.

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. There are two more fiddles located in the tray above the stove. 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 by lifting up on the oven door handle.
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.
To operate the microwave: the microwave may be operated anytime you are connected to shore power. Make sure the "**outlet**" breaker is in the "**on**" position at the A/C panel (located in front of navigation station.)

26. Water Pressure & Tanks.

The fresh water pump switch is located on the electrical panel.
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).pump running over the sound of motoring or sailing).

Water tanks: Sensation has two 60 gallon water tanks. One filler is located forward PORT SIDE and one aft PORT SIDE on the deck. Tank selection valves are underneath the aft port settee seat cushion in the main salon. The bow tank is the valve located closest to the bow and the stern is the valve located closest to the stern (Total fresh water capacity in both tanks is 120 gallons). Start planning to refill the empty tank once you have switched to the second tank. When the tanks are full, use the bow tank first. 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.

27. Coming Home.

1) Restart engine. (see starting engine)
2) Take sails down before arriving (If you have to sail into dock use only a reefed main)
3) Prepare dock lines and fenders. The fenders should be set to the correct length. Place fenders amidships. A 4th fender may be placed on the open side of boat as needed.
4) Tie up and turn engine off. (see shutting down engine)
5) Attach A/C Power shore cord to back of boat and at electric box on dock. **Turn breaker on at dock electric box.**
6) Turn **A/C breaker** and "**Battery Charger**" breaker to the **"on"** position at A/C electric panel.
7) Turn all D/C switches off except refrigerator switch.