

Owners Notes for "RAVEN"

Updated for 2024



Dear Fellow Sailors,

Welcome aboard RAVEN! We are thrilled that you've chosen to charter with San Juan Sailing and spend your vacation sailing in the Pacific Northwest...our all-time favorite cruising grounds!

We began chartering with San Juan Sailing almost twenty years ago and have enjoyed "borrowing" just about every boat in the fleet. Finally, we took the plunge and added our new Jeanneau Sun Odyssey 419 to the SJS fleet.

Raven has been outfitted with the options and features we find essential for fast and comfortable cruising in the Pacific Northwest. She has a modern feel with plenty of natural light and ventilation. Under sail, she is lively and fast, but also steady in a heavier breeze.

Raven has 3 large staterooms plus an option to convert the dinette into a surprisingly comfortable 4th berth. She has 2 heads, (one electric and one manual), with an easy-to-use maintenance system.

Safety features include a factory-installed bow-thruster, a Max Prop feathering prop, a 300ft all-chain main anchor rode, AIS transmit/receive, radar, and type-V inflatable life jackets for 6 adult guests. Interior add-ons include a Webasco cabin heater, a deluxe salon table, LED "mood" lighting, and an easy-access fridge.

For exploring, Raven has been outfitted with a 10'2" Achilles RIB with an aluminum bottom. Charter guests have the option of a convenient 2HP Honda outboard or a more spirited Tohatsu 9.8HP with a Kato engine hoist.

Recent Additions:

- Starlink Internet
- New Cabin Upholstery
- New high-density foam mattresses
- 200W solar power
- Complete canvas enclosure available by advance request for Spring and Fall sailing.

Listed below are some tips on how to get the most out of Raven and her equipment. Your safety is our highest priority, and we sincerely want you to have a wonderful sailing vacation. She is a non-smoking / non-vaping boat. Pets are welcome with a SJS Pet Release. We respectfully ask that you treat her as if she were your own.

If you have questions or feedback, we would love to hear from you!

Laura & Brian Bolin

BOAT SPECS – Jeanneau 419

Year:	2016
LOA:	41'10"
Beam:	13'1"
Draft:	7' 1"
Fuel:	53 gallons
Fresh Water Tank #1:	87 gallons
Fresh Water Tank #2:	53 gallons
Holding Tanks:	2 tanks, 21 gallons each
Engine:	45 HP Yanmar Diesel with folding Max Prop
Refrigerator:	48 gallons with freezer, and easy access top and front hatch doors.
Berth Mattresses:	V-berth: 6'11" x 6'7" 2 Aft Cabins: 6'7" x 5'2" Saloon: 6'4" x 3'2"

RAVEN'S SPECIAL NUANCES

The Jeanneau 419 is one of the most popular charter sailboats in the world and you'll find her systems easy to operate. However, there are a couple of things that require special attention.

Anchoring: Like most modern sailboat designs, Raven has a plumb bow and fiberglass bowsprit. Extra care is required when anchoring to avoid fiberglass dings.

- The boat must be stationary when deploying or retrieving the first 10 feet of chain. Any forward or aft motion creates a "pendulum" action that causes the anchor to strike the bow.
- The bowsprit is fiberglass. Do not use the windlass to "slam" the anchor into its "nest" – it creates dings and chips away at the bowsprit integrity.
- Please do not secure the anchor with excessive tension on the windlass. Ease the chain a few inches and secure the anchor to the boat with a piece of line.

More details can be found in section #3 below.

Max-Prop: Raven is outfitted with a feathering Max-Prop so when you put her in reverse, she responds faster than a boat with a fixed prop. Just take note of this when maneuvering in tight quarters. Also, the Max Prop allows her to sail up to a full knot faster in light wind. Shift into reverse when sailing to fold the prop and keep it from spinning while underway.

PHONE NUMBERS:

San Juan Sailing: 800-677-7245. Channel 80 during office hours.
Maintenance Pro: Parker at Armstrong Marine Services. 360-870-6320
Brian & Laura Bolin (Owners): 425-445-0298

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1. EMERGENCY EQUIPMENT & LOCATIONS

QUICK NOTES

- 4 Fire Extinguishers
- Fire blanket in the galley
- Emergency plugs are taped to all thru-hull fittings.
- Emergency Tiller in starboard cockpit locker
- Flares/Horns/Tools: Under aft navigation seat.
- Manual Bilge Pump Handle clipped inside port cockpit locker
- 6 Inflatable Life Jackets for adults. 4 add'l Type III vests available in the cockpit lockers

DETAILS

Fire Extinguishers – RAVEN has four (4) ABC-rated fire extinguishers. They are located:

- Underneath the bottom companionway step
- Forward Cabin, just behind the cabin door
- Aft starboard cabin locker, (closest to the galley)
- Above the electrical panel

Fire Blanket – Located in the galley cabinet.

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

Emergency Tiller – Located in the starboard cockpit locker. It fits on the rudder post which is accessed through the round cap between the helm seats.

Bilge Pumps - There are two bilge pumps: The electric bilge pump in the bilge operates automatically. ***The bilge pump circuit should ALWAYS be “automatic on” at the electrical panel.*** The manual bilge pump is in the cockpit on the port side, just in front of the port steering wheel. The handle is mounted inside the port cockpit locker.

Tools & User Manuals: Located behind the aft navigation seat cushion, below the electronic panel.

Spare Parts & Supplies: Underneath the forward main salon settee cushions and under the salon floor.

First Aid Kit: Located in the aft head cabinet, above the sink.

Emergency/Safety Equipment – Flares, air horns, and other essential safety equipment are in a mesh bag under the aft navigation table seat. 2 Type V PFDs are stored in each of the 3 cabin hanging lockers and 4 Type IIIs are stored in the cockpit lockers. A Type IV throwable should always sit in the cockpit. A Life Sling is mounted on the stern rail.

2. EMERGENCY PROCEDURES:

QUICK NOTES

Please review all emergency procedures with your crew before departure

DETAILS

Hitting a Rock, Log, or Running Aground – If you strike a rock, log or run aground, immediately look for water:

- In the bilge and engine compartment,
- At the keel bolts where the keel attaches to the hull, or
- Where hull contact took place.

Once you are sure no water is entering the hull, contact San Juan Sailing at 800-677-7245 and proceed to the nearest harbor. A professional diver must inspect the hull, keel, prop, and rudder before proceeding on your trip.

Leaks – Determine the source of water, either at the engine sail drive seal or at the point of contact. Note: you cannot get to the sail drive seal easily, but you should be able to see water flowing at the back of the engine. A diagram showing the location of the sail drive and through-hull fittings is included in this notebook. Wood plugs are taped to each through hull fitting, and a larger plastic plug is stored in the emergency/safety equipment bag located under the aft Nav. Station settee.

- Confirm the bilge pump is running. Use the manual bilge if needed. The shower sumps may also be used to pump out water.
- Get the crew on deck and into life jackets.
- Use the VHF to call for assistance. Use a PAN PAN call if the situation does not appear life-threatening. Use MAYDAY if loss of life or vessel appears imminent.
- In a MAYDAY situation, you may also push the red distress button on the VHF that will transmit the ship's name and location, but direct communication with assistance providers, (i.e., Coast Guard), is more effective.

Crew Overboard: We practice MOB drills often. Our friends know that the ugliest hat or dirtiest (unworn!) PFD is always at risk of being tossed over the side to initiate a drill. To summarize:

- Immediately throw a Type IV PFD to the crew member in the water.
- Hit MOB on the chart plotter to mark where the crew went overboard.
- Assign a crew member to “spot” the overboard person. Point to the person and continually communicate their position to everyone aboard.
- Safely motor or sail back to the crew and use the Life Sling system mounted on the stern pulpit to retrieve the lost crew member.
- A small emergency rope ladder is stored inside the transom at the waterline. *Please do not deploy it unless you have an emergency – it is difficult to reload.*
- In calm seas, the stern platform may be lowered to assist in retrieving lost crew members.
- Use MAYDAY if loss of life appears imminent.

3. Anchors & Windlass

QUICK NOTES

- Primary Anchor: 44# Delta (Bruce-type) with 300' of 5/16' chain
- 4-to-1 or 5-to-1 scope is typical in the Pacific NW.
- Check tide charts: 12+ foot tidal range.
- Windlass circuit breaker (yellow) is located on the battery panel in the aft starboard cabin.
- Boat must be stationary when paying out and retrieving the last 10 ft of anchor rode to avoid bow damage. The plumb bow is especially susceptible to [expensive bow dings](#).
- Do not allow the anchor to “slam” into the bowsprit and damage the fiberglass.
- The engine must be running to power the windlass.
- Deploy a snubber line while at anchor.
- Unless calm, do not use the windlass to pull the boat to the anchor.
- **When retrieving, the chain pools below the windlass. Use a mop handle to spread the chain around the anchor locker to prevent jamming.**

DETAILS

Anchors: Raven is equipped with two anchors and sufficient rode for Pacific NW conditions. The primary bow anchor is a 44# Delta with 300 ft. of 5/16” chain. The chain is marked in two ways:

- 1) With a **YELLOW** nylon line woven through the chain at 50 ft increments.
- 2) With colored paint marks indicating the following lengths:
 - **GREEN** – first 10 ft “anchor warning” – boat must be stationary.
 - **YELLOW** – every 50-foot increment. (50ft, 150ft, 250ft)
 - **WHITE** – every 100-foot increment. (100 ft, 200 ft)
 - **RED** – Last 20 feet = 300 ft.

The secondary anchor is a Danforth with 50 ft. of chain and 250 ft. of 5/8” nylon rode. It is stored in the port cockpit locker.

Pac NW Anchoring: Our tides, currents, and intimate coves can make anchoring a little tricky, but you’ll have no trouble if you follow the guidelines provided in the [San Juan Sailing Safety Video](#). To highlight:

- Scope in the islands is 4 to 1 or 5 to 1 for normal conditions. (Raven draws 7’ 1”)
- Raven has approx. 5 ft of bow freeboard to add to your depth calculation.
- We have a tidal range up to 12 ft so check tide tables to determine if you are anchoring in a rising tide, (which may require you to pay out an additional chain), or a falling tide, (which may cause you to ground during the night).
- **TIP: 25 ft depth + 5 ft bow freeboard + 5 ft additional rising tide = 35 ft x 5x scope = 175ft minimum chain.**



- Use the snubber line located in the anchor locker to take the load off the windlass drum and to avoid chain noise in the forward cabin. A spare snubber is located in the stbd cockpit locker.
- The anchor light, for overnight stays, can be turned on at the electrical panel.
- For storm conditions (sustained winds 25k+ increase the scope to 5 or 6-to-1 or more, then consider deploying the secondary Danforth in a V-type pattern.

Windlass Breaker & Operations: The breaker is located in the aft starboard cabin on the battery panel, between the battery switches. The windlass is powered by a separate battery and **the engine must be running to operate the windlass**. Basically, the system voltage input needs to be higher than the output.



Windlass Breaker Switch, shown in the vertical "on" position

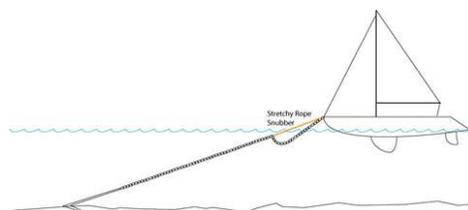
Windlass Controller: The handheld windlass controller sits in a cradle in the forward anchor locker. **KEY!** When not in use, place the controller in its cradle so the anchor locker doesn't fall and sever the cord. *The chain is very heavy to retrieve by hand!*

Deploying the Anchor: We've learned that Raven's plumb bow invites bow dings, so we ask that you take a little **extra care** when deploying and retrieving the anchor.

- Bring the boat to a complete **STOP** before deploying the anchor.
- Once stopped, the anchor should be lowered by hand into the water.
- With the windlass, pay out about approx. 1:1 length until the anchor hits the bottom. Then place the engine in *reverse-idle speed* and pay out the remaining rode. This allows the boat to move slowly backward to ensure the chain doesn't pile on top of itself. Continue in reverse idle speed until you feel the anchor catch.
- To firmly set the anchor, continue in reverse for 1-2 minutes, using reference points on land to ensure you are not moving. 1,000 RMP for winds to 20kts and 1,500 RMP for winds up to 30 knots.

Setting the Snubber: After the anchor is set, deploy the **snubber**:

1. Cleat the bitter end of the snubber to a bow cleat. Lay the hook through the center of the bow pulpit.
2. Place the hook around a link, (it is not meant to fit into/thru a chain link)
3. Release some chain, easing the hook over the anchor roller. Pay out enough chain to place tension on the snubber line and remove the load from the windlass drum.



Retrieving the Anchor: On Raven, the chain dropping into the anchor locker piles up beneath the windlass so it's **necessary** to redistribute the chain away from the windlass with the boat hook. It's helpful to send a second crew member forward to help, but it's possible to manage with just one.

- Remove the snubber and tie it aside so it doesn't go overboard or tangle in the windlass.
- When retrieving the chain, it's helpful to alternate between running the windlass and pausing for a few seconds. This eases the strain on the windlass and gives you a break to spread the chain around the anchor locker.
- Unless it's calm, the windlass should not be used to pull the boat forward.
- **The 10ft. GREEN mark indicates that the boat should come to a complete STOP. When the anchor has no "pendulum action" slowly take in the last 10 feet.**
- **Retrieve the last few feet SLOWLY! Do not allow the windlass to "slam" the anchor into its fiberglass bowsprit.**
- If the anchor comes up upside down use the broom handle or boat hook to flip it over.
- Once the anchor is aboard **do not place excess tension on the windlass.** Easy out the chain by a couple of inches then secure the anchor to the boat with a small piece of line. Do not allow the chain to be "bone tight" on the windlass while at a slip or underway.
- Replace the snubber in the anchor locker and the windlass controller in the bracket.

If the anchor is firmly set you may hear the windlass slow under the load. If this happens:

- Stop the windlass and allow the boat to move forward to "break" the set.

Stern Ties: Some of the most rewarding anchorages in the Pac NW will require you to deploy a stern tie to shore. 600' of polypropylene line is stored in the starboard cockpit locker. Use the mop handle to mount the spool on the stern transom pass-through. After retrieving the line allow the spool to sit out for a couple of hours for the line to dry.

4. Barbecue

QUICK NOTES

- Propane tanks and valve to the BBQ are in the aft starboard cockpit locker
- Solenoid switch is located beneath the galley sink
- Grill is manually lit. Lighter supplied in the galley
- Store brush inside grill while underway

DETAILS

The propane tank valves can be turned on in the aft starboard cockpit locker. In addition, there is a dedicated valve that leads to the BBQ. The solenoid switch is located near the sink in the galley. All three must be turned on.

This is a manual-light grill, so you'll need a lighter. Insert the lighter into the ignition hole then turn on the gas by pushing IN the knob and turning it to "high".



Safety Issue #1: Do not let the gas run before inserting the lighter.

Safety Issue #2: Always turn the solenoid off and close the dedicated BBQ valve. Leaking propane is a major hazard on any boat

5. Batteries & Charging

QUICK NOTES

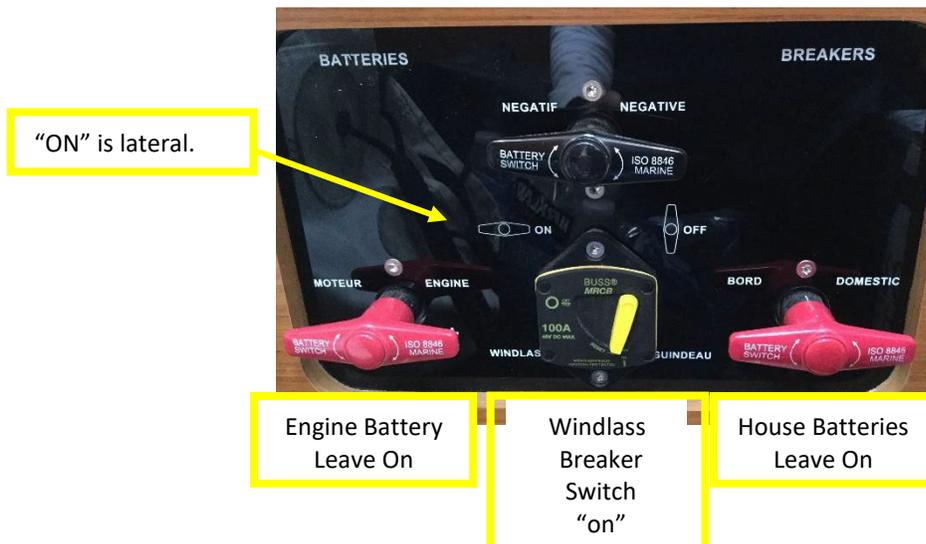
- Leave battery breakers “ON” at all times.
- Start battery is isolated from House batteries
- Voltage should not fall below 12.2v before charging
- Batteries charge via the engine alternator while under power or by 30AMP AC shore power
- Solar power provides 200W of “trickle charge” to the batteries.

DETAILS

Raven has three sets of batteries:

- 1 x 110A AGM Engine Start Battery – Breaker in the aft starboard cabin. Battery located in the aft starboard cabin under the berth.
- 2 x 50A AGM Windlass and Bow Thruster batteries - Windlass breaker in the after starboard cabin. Bow thruster batteries located under the forward V-berth.
- 4 x 110A AGM House Bank - Breaker located in the aft starboard cabin. Batteries located in both the aft starboard and port cabins under berth.

Leave Battery breakers in the “ON” position. A tip from personal experience...if you have kids sleeping in the back berth, check that the battery breakers aren’t accidentally switched off. The windlass breaker can be switched on and off at your discretion.



Battery Charging – Raven’s batteries charge via the engine alternator while under diesel power or by 30 AMP AC shore power. Raven also has 200w solar for “trickle” charging.

Battery Monitor - Use the BlueSea M2 monitor on the electrical panel. It replaces the original battery monitor.



Please do not allow batteries to fall below 12.2v. Anything lower than 12.2 may damage the batteries. At 12.2v we recommend charging with shore power overnight to bring the batteries to their full capacity. Engine power isn't likely to fully charge the batteries during short hops between islands. Raven's house batteries have 210 usable amp hours. The largest battery users are navigation equipment and autohelm, (while under sail), and the refrigerator. Also, cell phones and personal electronics use a *sneaky* number of amps over time. For instance, a typical 2 amp charger will use 48 amp hours over a 24 hour period.

Normally, turning off the nav. equipment when not underway leaves sufficient power for everything else. If we are near the 12.2 mark and no shore power is available, we'll turn the fridge off overnight

6. Berths

QUICK NOTES

- Sleeps 6 comfortably in three private cabins
- Main salon table may be lowered to create a 4th berth
- Ask SJS for the main salon cushion if it is not aboard

DETAILS

Raven sleeps 6 people comfortably in three cabins. All are spacious with berths equivalent to queen-sized mattresses. The main salon table may be lowered to create a fourth, comfortable bunk. Lowering and raising the table is easily accomplished by two people. (See photos)

- Under the table are two "L" supports. Lift these to 90 degrees until you feel them catch.
- Inside the beverage cabinet are two white pull handles. One person holds the table while the second person pulls the releases. After they "pop", both people can lower the table until it meets the "L" supports. You may need to gently wiggle it into place. (See photos below)



To raise the table, just reverse this process. Again, gentle wiggling may be necessary to raise the table. Once the table is locked in place, lower the “L” supports by squeezing the interior spring. They can be shin-busters if you forget!

7. Bimini, Dodger, Salt & Sunscreen

QUICK NOTES

- Touching salty “glass” with hands, rags or sponges causes permanent scratches.
- To clean, use a pan or bucket to flood the glass with **fresh** water
- Avoid “spray-on” sunscreen or leaning on the glass with sun-screened skin.
- The connector is easily removed for sunny days, but the bimini and dodger should not be detached.

DETAILS

Dodger Glass: *A polite plea from the Owners:* The dodger’s plastic “glass” is highly vulnerable to scratching from salt crystals. Please avoid directly touching the glass with your hands, rags or sponges. It’s like rubbing the glass with sandpaper. To clean, use a generous amount of fresh water from a pan in the galley to “flood” the glass to dissolve the salt crystals. Alternatively, use a hose at dock. *Thank you!!!*

Sunscreen & The Dodger: Pack plenty of sunscreen **lotion** because UV in the Pacific NW is surprisingly strong, even on grey-ish days. However, *we highly discourage the use of “spray-on” sunscreen* because most spray sunscreens react chemically with plexiglass. Please ask your crew to use lotion. Also, please do not lean against the dodger with sunscreen on your back and shoulders. Once that chemical reaction takes place the glass is ruined and must be replaced by the guest at a cost of approx. \$700.

Canvas: Raven has an extra-large center panel that may be detached at your convenience. Do not remove the dodger and bimini. They are tightly fitted and very difficult to reattach.

8. Bow Thruster & Max-Prop

QUICK NOTES

- Bow thruster control located at the starboard helm. Turn on by pressing the red and green buttons simultaneously.
- Maxprop causes Raven to respond faster in reverse than a boat with a fixed prop
- Raven has little prop walk
- When sailing without power, place the prop in the reverse position.

DETAILS



Bow-Thruster - Controls are located at the starboard helm. To activate, press the red and green buttons simultaneously. You'll hear one short beep that will tell you the bow thruster is "awake". The bow thruster will turn off automatically after 20 minutes of non-use. You will hear 3 quick beeps.

The bow thruster should be used in short 2 second bursts or you risk a circuit trip or overheating. It is useful to complete a turn or finish docking, but it's not capable of being the primary means of steering the boat. 95% of your docking still uses conventional steering techniques.

Also, the bow thruster causes the boat to rotate on her keel. In other words, if the bow moves one way, the stern moves in the opposite direction. For instance, if you plan to use the bow thruster to get the bow off the dock, hang fenders as far aft as possible because the stern will turn into the dock.

Maxprop – Raven's Max-Prop has two great advantages. First, after you shift Raven into reverse, **she responds faster** than a boat with a fixed prop. Also, the Max-Prop allows her to sail up to a knot faster in light wind. When sailing, **shift the engine into reverse** to ensure the prop folds properly and doesn't rotate while underway.

Prop Walk – Raven has little prop walk to count on while docking.

9. Cannabis:

Per <https://travel.gc.ca/travelling/health-safety/drugs>: It is illegal to take cannabis – including products containing cannabis, such as edible cannabis, cannabis extracts and cannabis topicals, and all products containing CBD – across the Canadian border, whether you are entering or leaving the country.

Also, if you're on a boat in US federally patrolled waters, (the San Juan Islands and Puget Sound), you could be convicted of a crime if you have cannabis products in your possession. The U.S. Coast Guard enforces federal law, which overrides state laws. Also, federal law does not recognize an exception for medical marijuana use.

10. Dinghy & Outboard Engines

QUICK NOTES

- Dinghy: Two ties to the boat always.
- Take caution when landing on beaches. **Move weight aft to protect the bow of the dinghy.**
- Tow dinghy on aft **starboard** side away from engine exhaust while underway.
- When using the cabin heater, cleat dinghy on the **port** side away from the cabin heat exhaust
- Both engines are 4-stroke. *Do not add oil to gas.*
- **Close air vent and fuel lever when not in use.**
- Store outboards on the stern pulpit mounts while underway.
- Do NOT remove the lifting bridle from the 9HP Tahatsu.

DETAILS

Dinghy, Tying & Towing: Raven is equipped with a 10'6" aluminum bottom Achilles dinghy. It's an old sailing adage, but it's important to tie the dinghy to the boat twice. We've seen perfectly good dinghies go on walkabout when a single tie didn't do the job. Plus, the Coast Guard gets *really* concerned when they find a dinghy, (or kayak or canoe), drifting without an occupant.

Under normal towing conditions attach the dinghy to the aft **starboard** cleat away from the hot engine exhaust. It rides well about 8 feet from the stern. When docking or anchoring, shorten the tie to about 3 feet to avoid fouling the prop.

For longer passages or heavy seas, (such as upwind treks across the Straights of Georgia), we often hoist the dinghy onto the foredeck using the spinnaker halyard. It can be lashed to the foredeck's D-rings with orange straps located in the cockpit lockers.

Dinghy & the Cabin Heater: If you use the cabin heater at night tie the dinghy to the **port** side to avoid the hot exhaust from the heater. Remember to move it back to the starboard side while underway.

Beaching: Many Pacific NW beaches have bottom-slicing barnacles, but following San Juan Sailing's safety briefing video will help protect the dinghy and engine.

- When approaching shore, shift crew weight aft to the stern
- Turn off the outboard and tilt it to protect the propeller from rock dings.
- With oars planted in the ground, one person at a time may move forward and go ashore.
- With everyone ashore, use the handles to lift the dinghy above the barnacles to soft beach.
- Secure the painter around a rock or large driftwood log so the dinghy won't float away during the Pac NW's large tidal changes. The extra-long painter might seem a little excessive at dock but it is essential when securing a dinghy ashore.

Outboard Engines: Both the 2HP Honda and 9.8HP Tahatsu are four-stroke engines, so **do not add oil to the gasoline**. San Juan Sailing will ensure you have enough gas for the 2HP but guests are responsible for fueling the 9.8HP tank. (As a courtesy to the next guest, please return it full). It's okay to store the 2HP gas can in the dinghy, but the 9.8HP gas should be stored in the center aft locker. It is the only locker where gas fumes will not get into the boat.

Kato Lift & Hoist Straps – **Do not remove the harness from the 9HP Tahatsu.** It is fitted for the larger engine and is difficult to replace.

2HP Honda Outboard - Starting & Stopping:

Before starting – confirm 4 things:

- 1) Fuel in the tank
- 2) Air vent open on fuel tank (knob on top of the fuel cap)
- 3) Fuel lever “open” in the forward position. (Stbd aft corner of the outboard)
- 4) Kill clip is attached. (U-shaped clip with the red lanyard clipped behind the red shut-off knob.)



Then:

- Pull out the choke valve. (Push it back in slowly a few seconds after the engine is running).
- Turn the handle throttle ¼ turn counterclockwise to the “start” position.
- Pull the rip cord until it starts. You shouldn’t have to pull it more than 5 times. Once started, slower push in the choke valve.
- The 2HP does not have forward/reverse so be aware that it starts in a forward gear. To go in reverse, spin the engine 180 degrees.
- 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.



Tilting the 2HP: Stop the engine before landing, then pull the engine forward out of the water using the rear carrying handle (1). There is only one “up” position. When departing, tilt the engine a little further up and unlock the tilt with the little stainless steel lever (2) on the starboard side of the shaft.

Tahatsu 9.8 HP – **Do not remove the lifting harness.**

For the 9.8HP, all procedures are essentially the same as the 2HP engine, with the following additions:

- Attach the fuel tank hose. Open the air vent on the fuel tank and prime the hose by pumping the bulb until firm.
- Place the engine in neutral. This engine has neutral/forward/reverse.
- Run the engine at idle when shifting from between neutral/forward/reverse.

Tilting the 9.8 HP – This engine has two tilt positions. The first can be used while the engine is still running, but the engine must be off when using the second and highest tilt position. To lower, pull the black lever on the starboard side of the shaft. NOTE: The engine must be in the highest position to unlock.

Both Engines: When Not in Use: - To keep the engines running smoothing for your trip, please follow these guidelines:

- Close the fuel valve lever on 2HP
- **Close the fuel tank air valve. Water is sneaky and will find its way into your gas, which is the #1 reason outboards won't run.**
- Store the engines on the stern rail motor mounts while underway and overnight. Wake or gusts can unexpectedly flood the engines.

11. Dodger, Bimini, Salt & Sunscreen

QUICK NOTES

- Touching salty “glass” with hands, rags or sponges causes permanent scratches. To clean, use a pan or bucket to flood the glass with **fresh** water.
- Avoid “spray-on” sunscreen or leaning on the glass with sun-screened skin.
- The connector is easily removed for sunny days, but the bimini and dodger should not be detached

DETAILS

Dodger Glass: *A polite plea from the Owners*: The dodger’s plastic “glass” is highly vulnerable to scratching from salt crystals. Please avoid directly touching the glass with your hands, rags or sponges. It’s like rubbing the glass with sandpaper. To clean, use a generous amount of fresh water from a pan in the galley to “flood” the glass to dissolve the salt crystals. Alternatively, use a hose at dock. *Thank you!!!*

Sunscreen & The Dodger: Pack plenty of sunscreen lotion because UV in the Pacific NW is surprisingly strong, even on grey-ish days. However, we highly discourage the use of “spray-on” sunscreen because most spray sunscreens react chemically with plexiglass. Please ask your crew to use lotion. Also, please do not lean against the dodger with sunscreen on your back and shoulders. Once that chemical reaction takes place the glass is ruined and must be replaced by the guest at a cost of approx. \$800.

Canvas: Raven has an extra-large center panel that may be detached at your convenience. Do not remove the dodger and bimini. They are tightly fitted and very difficult to reattach.

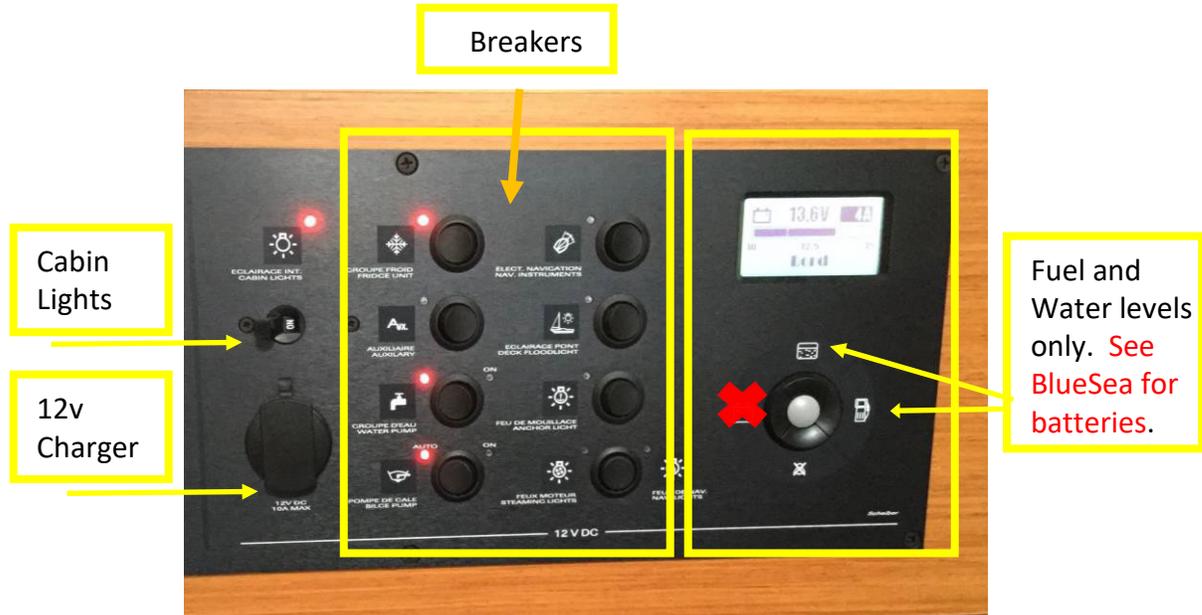
12. Electrical Panel

QUICK START

- Bring 12v (“cigarette”) USB chargers for additional charging options
- Use the new BlueSea panel to monitor batteries. The original Jeanneau gauge is not accurate.
- Batteries should be recharged at 12.2v. Below 12.2 can damage batteries.
- 30 AMP shore power. Cord in port cockpit locker. Plug located in port aft line locker.
- 50 AMP adapter located in port cockpit locker
- No AC “main switch” when connecting to shore.

DETAILS

DC “Battery” Power: Batteries should be monitored using the BlueSea panel. Fuel and water tank levels are monitored using the original Jeanneau panel on the forward side of the electrical panel.



DC Circuit Breakers: **The bilge pump should be “Auto/On” at all times.** Otherwise, we leave all circuit breakers in the “off” position unless the specific equipment is being used.

- Refrigerator – generally draws 4 amps while running. We’ll turn it off at night if batteries are low.
- Auxiliary – not wired.
- Water Pump – We turn on the water pressure only when needed and turn off the pumps while underway. If there is insufficient water in the tank you can’t hear the pump working and you could burn out the water pump.
- Bilge Pump – Always leave **AUTO/ON**
- Nav Equipment – Controls autohelm, chart plotter, depth sounder, radar, etc. Turnoff when not needed as it is a battery drain.
- Deck Floodlight – use as needed
- Anchor Light – use as needed
- Steaming Light – use as needed



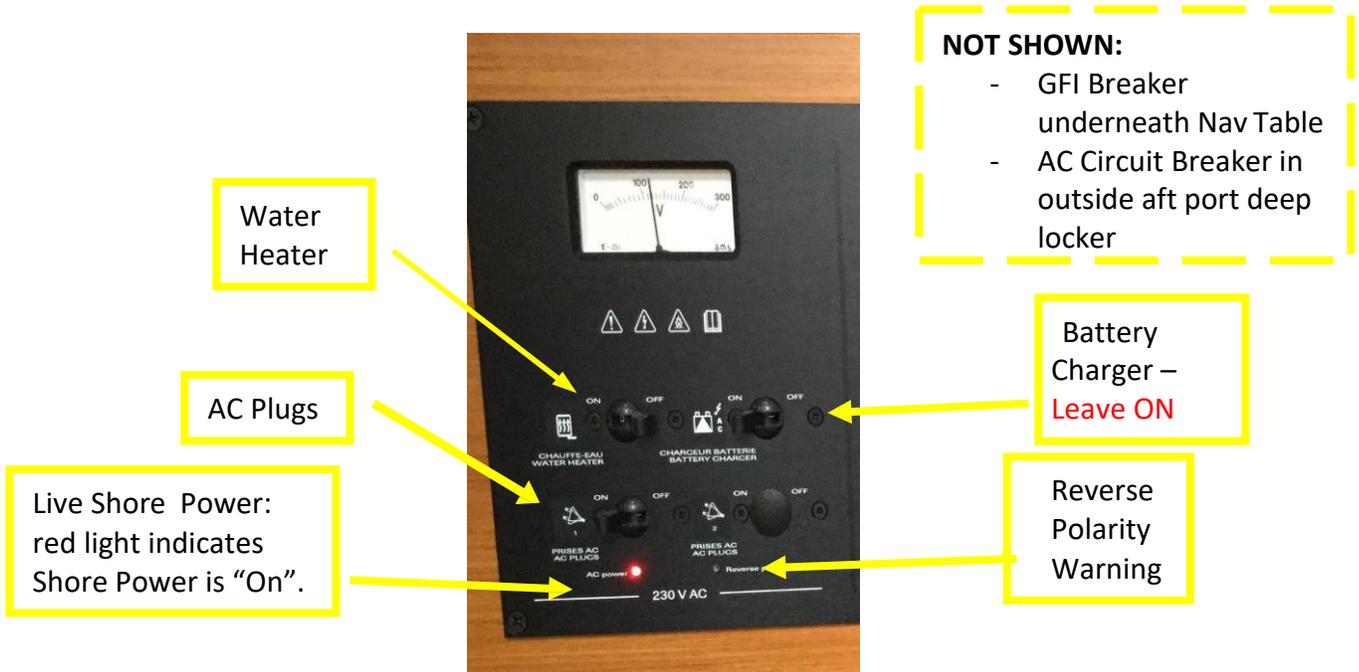
12V Outlets - For cell phones and other small personal electronics, Raven has five 12v outlets that operate off the House Battery. One is located on the electrical panel, one on the port side of the cockpit table, (beneath the chart plotter), and one in each of the 3 cabins.

Portable Inverter – A small 12v inverter with AC and USB plugs is located in the cabinet above the chart table. It’s small but capable of charging a cell phone or PC.

AC “Shore Power” - Raven is rigged to accommodate 30amp shore power. If you are assigned a 50amp slip, a 50 amp adapter is located in the port cockpit locker.

The AC electrical panel is located on the aft side of the electrical panel. The 3 circuit breakers are:

- Water Heater
- AC Plugs
- Battery Charger – Always leave **ON**



Connecting to Shore Power: The power cord is stored in the port cockpit locker. The boat-side inlet is located inside the aft port line locker.

- 1) Ensure the shore power breaker switch is in the "off" position so that there is no live current.
- 2) Attach the cord to the boat-side first, then attach to shore-side power.
- 3) Switch the shore-side power breaker on.

Raven does not have a have an AC main switch located on the electrical panel, but proper shore connection is indicated by the red live AC Power Light. If the AC panel does not indicate shore power, check: 1) the AC circuit breaker located in the aft port "deep" locker, and 2) the AC circuit breaker ashore. Check the reverse polarity light and immediately disconnect shore power if the reverse polarity light is fully illuminated.

AC Outlets - There are five AC outlets that operate under shore power: one under the chart table, one beside the cabin heater thermostat, and one in each of the three cabins. If you aren't getting outlet power when properly connected to shore power, check the **GFI breaker switch** located beneath the chart table.

13. Electronics/Instruments

QUICK NOTES

- SJS recommends that the Maptech chart kits with known “killer rocks” marked in red be used at all times in the cockpit while underway.
- The Nav. Instruments circuit breaker is located on the DC panel above the chart table
- Return handheld VHF to charging cradle each night
- Raven transmits and receives AIS signals

DETAIL

Raven B&G Chart Plotter

ON / OFF.

- Ensure the Navigation breaker is on at the DC panel.
- Firmly press the ON button for a couple of seconds. After a few more seconds the B&G symbol will illuminate indicating that the system is starting up. (Be patient. It might take a minute or two.)
- A warning page will appear. Hit ACCEPT in the bottom right corner.
- The default homepage is the navigation chart with the instrument panel on the right. See Photo below.
Verify that the red Course Over Ground vector line is visible.



On/Off

COURSE OVER GROUND

The Course Over Ground vector line is an ESSENTIAL navigation tool in the Pacific Northwest. Our strong currents affect the actual course of the boat (versus your heading), and the COG vector will show if the boat is “slipping” into rocks or other dangerous hazards. On Raven, this vector is **RED**.

If the red COG vector is not displayed, take the following steps:

- **Swipe down** from the top to display System Controls, (photo).



- Tap on Settings >> Chart >> Extension Line >> Check Boxes: Course Over Ground & Heading (See photo below)
- Tap SAVE.
- Exit using “X” in the top right corner.

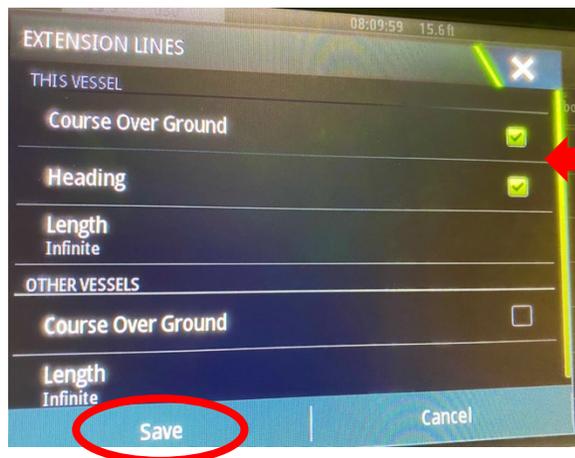
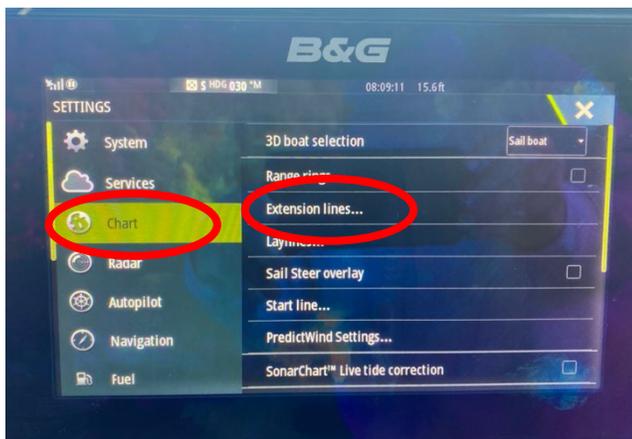
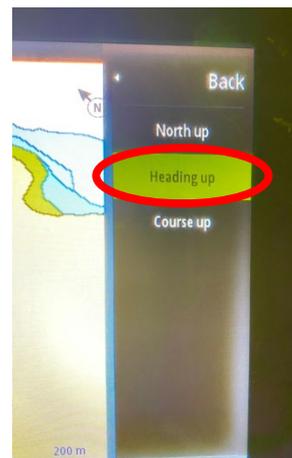
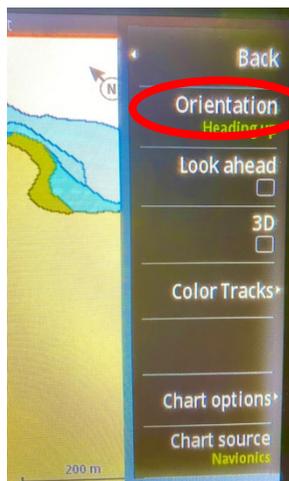


CHART ORIENTATION. The B&G will orient the chart Heading Up, Course Up or North Up. (We prefer Heading Up with the COG red line visible.) To set your chart orientation:

- Tap on “Three Bars” at the top right-hand corner.
- Tap on Orientation
- To select desired orientation: Tap on Three Bars in the upper right-hand corner.
- Tap on **MORE OPTIONS** >> ORIENTATION >> Select orientation.



ZOOMING IN AND OUT

- Option 1: Use the rotary knob in the upper right corner to zoom the screen.
- Option 2: The B&G has touch screen. Like your phone, you can use your thumb and forefinger to zoom the screen.



CLEAR CURSOR - RETURN SCREEN TO BOAT'S CURRENT LOCATION

- Option 1: If the grey Clear Cursor tab shows in the bottom right corner of the screen, tap the Clear Cursor tab.
- Option 2: Tap the three bars at the top right corner of the screen. Tap Clear Cursor



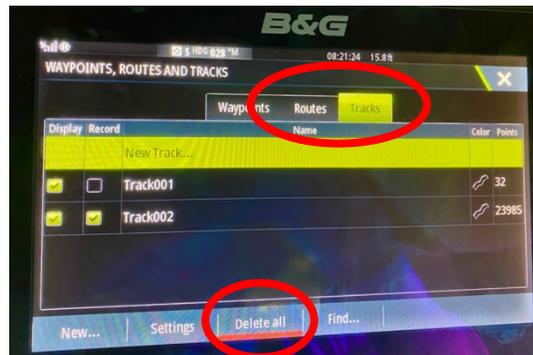
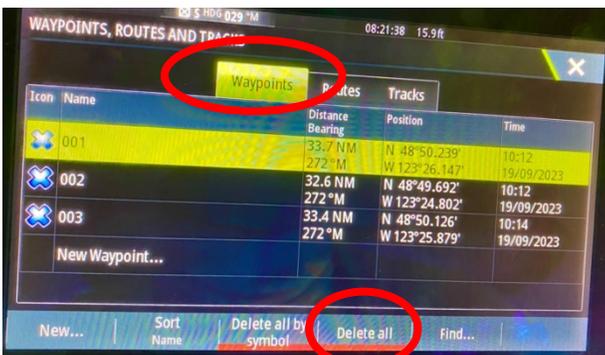
AIS, (Automatic Identification System) – To assist in collision avoidance, Raven is equipped with AIS that identifies most large commercial vessels and many pleasure craft. Vessels transmitting AIS appear as black triangles on the chart plotter. Tap on the triangle once to see the vessel name. Tap twice to see details such as size, speed, and direction. However, not all vessels transmit AIS so it doesn't replace the need to constantly scan the horizon and keep track of vessels around you.

CLEAR PREEXISTING WAYPOINTS & ROUTES: If previous guests have set waypoints and routes, you will want to delete these for your journey.

- Access the system "Homepage" by tapping on the 9 dots in the upper left-hand corner.
- Tap on Waypoints



- Select Waypoints Tab, then Delete All
- Repeat for Routes and Tracks



TIDES: To view tides at your location:

- Access the system Homepage by tapping on the 9 dots in the upper left-hand corner.
- Tap on Tides
- Use the rotary knob to move the cursor forward to view upcoming tides.



RADAR: In poor visibility conditions it is helpful to activate radar.

- Access the system Homepage by tapping on the 9 dots in the upper left-hand corner.
- Tap on Radar
- To activate, tap on **Three Bars** in the upper right corner >> TRANSMIT

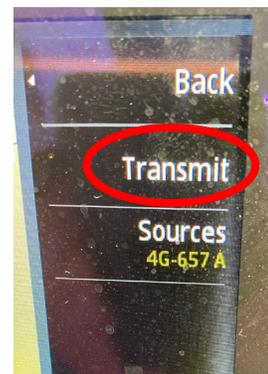
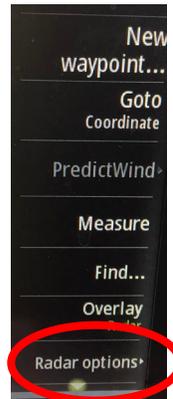
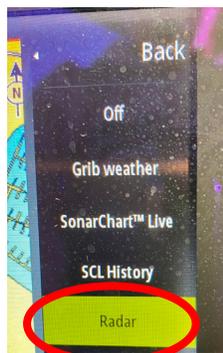
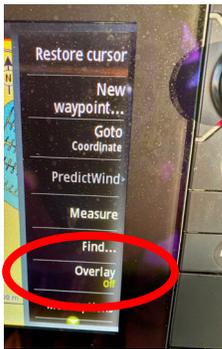


- Active Radar looks like this: Tap on STANDBY to turn off.



RADAR OVERLAY on CHART

- **Begin in the CHART view.** Turn Overlay option on as follows:
- On the Chart page, hit Three Bars on the upper right hand corner
- Tap on OVERLAY



- Tap on RADAR. This takes you back to the first side panel.
- If radar is not yet activated – tap on RADAR OPTIONS >> TRANSMIT This will show radar overlaid on the chart.
- To turn off, hit RADAR OPTIONS >> STANDBY >> POWER OFF

*****KEY – When not using radar, ensure it is turned off. It is a major battery draw while sailing*****

SPLIT SCREEN – Occasionally it is useful to view two different screens at once. Raven has three pre-set split screens:

- Chart + Instruments
 - Chart + Radar
 - Chart + Chart
- Access the system Homepage by tapping on the **9 dots** in the upper left-hand corner.
 - Tap on one of the split screens listed in the right-hand column.
 - Chart + Chart is especially useful to maintain one “zoomed in” chart and one “zoomed out” chart. To change the scale, tap on the side you wish to change before zooming in and out.



DISPLAY BRIGHTNESS - Trouble Shooting if the screen is too “dark”.

In the rare event that you power-up the B&G chart plotter, and after a few seconds it appears to “go black”, it may have activated it’s dimmer. The unit is on, but the screen is too dim to see in bright daylight.

To return to Bright mode:

- 1) If you are in bright sunlight, you may need to use a bath towel to cover the unit to see the dimmed screen. Think about how an old-fashioned photographer would cover himself with a black cloth.
- 2) Touch the top of the screen with a finger and “swipe down” to show the systems control.



- 3) Tap on the BRIGHTNESS control and slide the green box up to increase. Then tap the “X” in the upper right hand corner twice to exit.



B&G Triton Instruments - Located at each helm. Use the toggle on the bottom right to view:

- Boat Speed & Depth
- Apparent & True Wind Angles. Wind Speed
- Autopilot direction

Depth Sounder. The B&G Triton unit's measurement is set in feet, (unless a previous charter guest has reset the unit.) Always verify the base measurement of your depth sounder.



Knotmeter - Speed is indicated in knots. If the knot meter reads 0.0 while underway the little paddlewheel is likely clogged with a piece of kelp. Sometimes it will float off overnight, but you can also try removing it by traveling in reverse for a short distance.

Autohelm: The autohelm is straightforward. Set AUTO to engage, and STANDBY to deactivate.

14. Engine and Operating Under Power

QUICK NOTES

- Raven has a Power "ON/OFF" button rather than an engine key.
- Do not press the Power "ON/OFF" button while the engine is underway. It's like turning off a traditional engine key, which can blow the alternator.
- Always PAUSE for a few seconds (**One-Two-Three!**) when shifting between forward and reverse.
- Monitor engine temperature throughout the day and regularly check for water flowing through the exhaust. The Islands can be quite "grassy"
- Run engine between 2400 and 2600 RPM
- Ideal temp is 78 to 80 degrees Celsius. Higher likely indicates gunk in the raw water strainer.

DETAILS

Morning Routine: Open the companionway hatch and give the diesel a quick visual inspection to look for oil or water in the engine bilge (diaper) or belt powder. The belts are located behind a black protective cover but you can feel behind the cover for belt looseness. Fluid levels are checked weekly by Maintenance Pros, so there is no need to check fluid levels unless you are out for more than 1 week. Access to oil and coolant are noted below in this section.

In the Islands, it is important to check your raw water strainer each morning. It is located in the port aft cabin, (lift the shelf). Use a flashlight to view into the strainer. If there are a few strands, this is not cause for concern. If the strainer appears excessively clogged remove the gunk.

- The strainer has been installed above the waterline so you do not need to close the raw water intake through-hull seacock.
- To clean, unscrew the top of the strainer and remove the grass or gunk.
- Replace the lid being careful to reinsert the the O-ring correctly.
- Tighten to seal, but do not overtighten. It only needs to be lightly sealed, not Godzilla sealed. See photo below.

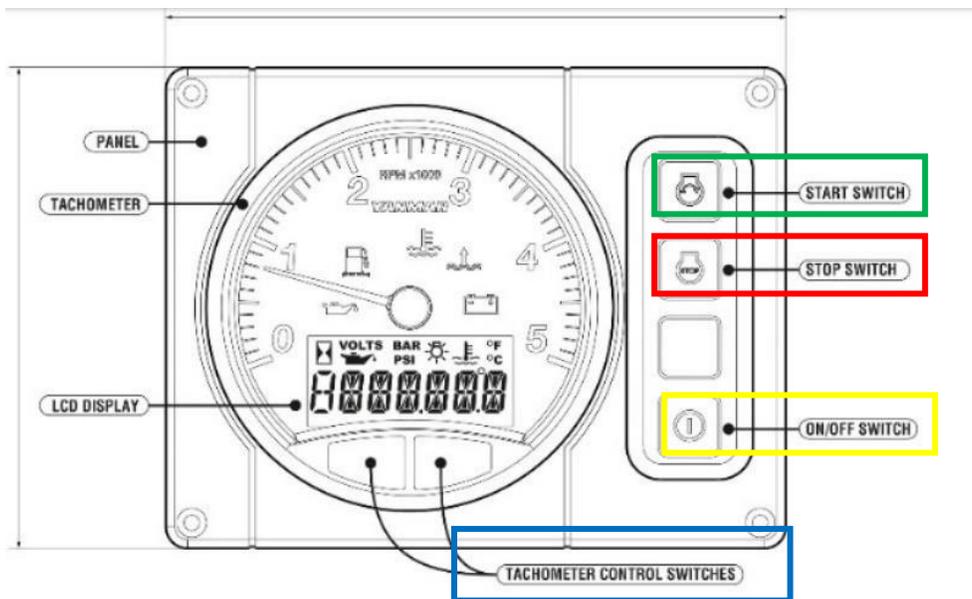


Raw Water Strainer- View from Port Aft Cabin Hatch

There is no need to “warm up” the engine much before casting-off in the morning. Too much idling can gunk up the engine. Using a slow speed while leaving a marina or hoisting the anchor gives the engine sufficient time to warm up. However, if the wind is dying while under sail, a little engine warm up is needed.

Starting the Engine:

- Place the gearshift into neutral (vertical)
- Press the ON/OFF switch located at the bottom of the engine controls, (see below in yellow).
- After a few seconds, press the top START switch (shown in green below).
- Check for water flowing out of the exhaust, located on a port aft side of the boat. NOTE: Check for water flow through several “cycles”. The first spit of water is left over from the previous operation.



Stopping the Engine: Do not hit the ON/OFF power switch while the engine is running. It's like turning off a traditional engine key while the engine is running which can blow the alternator.

- Place the engine in idle and the gearshift in neutral.
- Push the middle STOP switch, (shown in red above) to stop fuel flow.
- When the engine has stopped, press the bottom power switch (shown in yellow above)
- Place the MaxProp into reverse to help fold the prop and stop rotation.

Monitoring Temperature, Hours, & Engine Alarms- The black toggle buttons beneath the LED display allows you to monitor engine temperature, hours and other alarm indicators. (Shown in blue above). When started, it shows engine hours. One toggle to the right will show engine temperature, (best at 78 to 80 Celsius). If a problem is detected, an indicator light on the LED screen will illuminate and an alarm will sound. (See excerpt from Yanmar User Guide below).

Indicators and Alarms (Optional)

When a sensor detects a problem during operation, the indicator on the instrument panel will light and an alarm will sound. Indicators are located on the instrument panel and the alarms are located on the back of the panel. Under normal operating conditions, the indicators are off.

Battery Low Charge Indicator



When the alternator output is too low, the indicator will light. When charging begins, the indicator will turn off.

Coolant High Temperature Indicator and Alarm



When coolant temperature reaches the maximum allowable temperature (95°C [203°F] or higher), the indicator will light and the alarm will sound. Continuing operation at temperatures exceeding the maximum limit will result in damage and seizure. Check the load and troubleshoot the cooling system.

Engine Oil Low Pressure Indicator and Alarm



When the engine oil pressure falls below normal, the oil pressure sensor will send a signal to the indicator, causing it to light and the alarm to sound. Stop operation to avoid damage to the engine. Check the oil level and troubleshoot the lubrication system.

Water in Sail Drive Seal Indicator and Alarm



When water is detected between the seals of the sail drive, the indicator will light and the alarm will sound.

Water in Fuel Filter Indicator and Alarm



When the water level in the fuel filter/water separator becomes too high, the indicator will light and the alarm will sound. Drain the water from the fuel filter/water separator. *See Draining Fuel Filter/Water Separator on page 91.*

Engine Operation & Fueling:

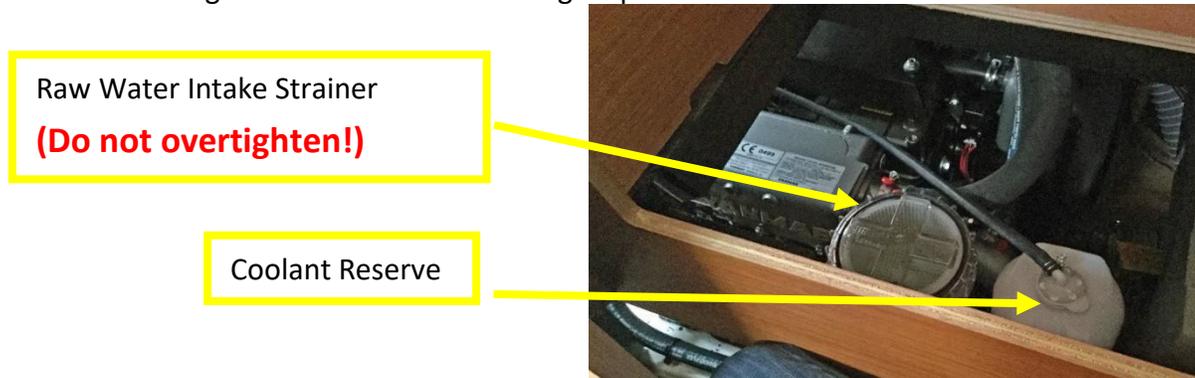
The 45 HP Yanmar engine moves Raven easily at 7 knots, (wind and current notwithstanding). The engine operates best at 2400 to 2600 RPM and in this range she consumes about 1.2 gal per hour. We've found that pushing the engine beyond 2800 RPM does little good for boat speed and disproportionately increases fuel consumption.

The water temperature typically runs between 78 - 80 degrees Celsius. Temperature can be monitored by "togglng" through engine indicators as instructed above. If the temperature rises above 82 degrees you may have weed or grass in the raw water intake. At 95 degrees the alarm will sound.

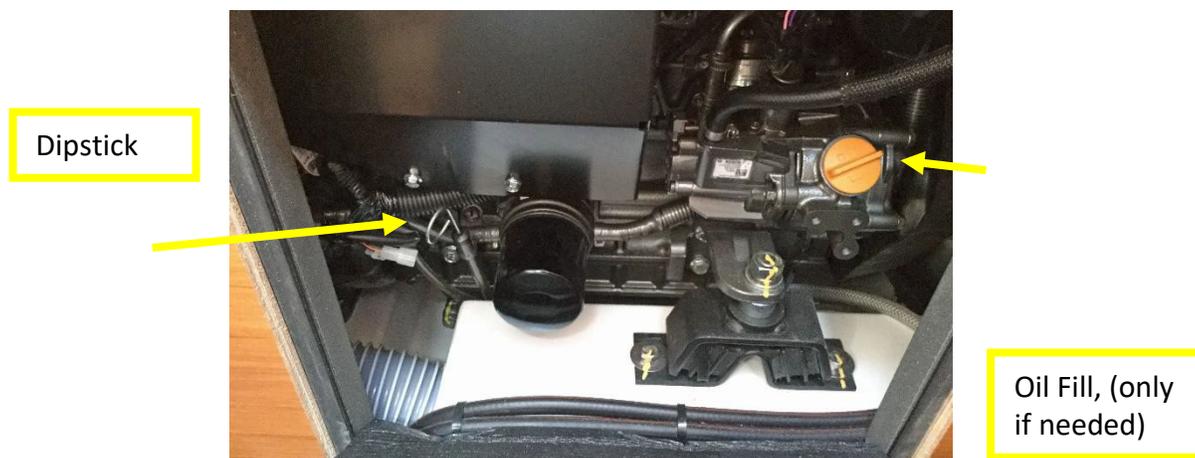
The fuel tank has a 53 gallon capacity. It can be checked at the Nav Station (see image in #10 above). Please do not allow the fuel tank to fall below ¼ tank since float gauges are notoriously inaccurate. A good rule of thumb is to fuel before the engine hits 30 hours of use.

The deck fitting for the diesel tank is on the port side in the stern line locker. The actual tank sits under the port aft cabin bunk and the fuel shut-off valve is located on top of the tank.

Troubleshooting: - Location of essential engine parts:



View from Port Aft Cabin Hatch



View from Starboard Aft Cabin Hatch

Troubleshooting (cont.)

If the engine is totally unresponsive to the Power and Start button, check to see if the battery circuit breaker is on, (aft starboard cabin).

If alarm sounds while the engine is running:

- If the Coolant High Temperature alert sounds AND there is reduced or no water flowing through the engine exhaust, you probably have grass or gunk in the raw water intake. See photo above.

The strainer has been installed above the waterline so you do not need to close the raw water intake through-hull seacock.

To clean, unscrew the top of the strainer and remove the grass or gunk. Replace the lid being careful to reinsert the the O-ring correctly. Tighten to seal, but do not overtighten. When replacing the plastic cap, do not over-tighten. It only needs to be lightly sealed, not Godzilla sealed.

If the engine overheats again upon restarting, check to be sure the O-ring is in place. If still overheating, call San Juan Sailing for assistance.

- If the Coolant High Temperature sounds but there IS a normal amount of water flowing through the engine exhaust, check the engine coolant level.
- For “Engine Oil Pressure” alerts, shut down the engine and check the oil level. Add oil if needed. If oil level otherwise appears normal, contact San Juan Sailing.
- For “Water in Sail Drive”, treat like a leak, head for the nearest harbor, and contact San Juan Sailing.
- For “Water in Fuel Filter”, shut down the engine and contact San Juan Sailing.

15. Entertainment

QUICK NOTES

- Stereo with USB input. Indoor and outdoor speakers.
- Turn outdoor speakers off when not in use

DETAILS

Stereo – RAVEN’s stereo has two sets of speakers in the cabin and cockpit. Please be courteous to neighboring boats when you adjust the volume of the cockpit speakers and turn them off when not in use. An iPhone or USB source may be plugged into the stereo using the plug to the left of the stereo unit.



16. Galley

QUICK NOTES

- Place settings and “glassware” for 8
- Pots, pans and utensils for cooking, baking and grilling.
- Extra grocery storage in salon cabinets and beneath galley floorboards
- Crab Trap stored in starboard cockpit locker. 16 qt. stock pot under starboard salon settee

DETAILS

RAVEN has a well-equipped galley with extra thought given to boat-friendly materials, (collapsible, multi-purpose, nesting, etc). There are place settings and “glassware” for eight plus equipment for stovetop and oven cooking. We’ve left a few cabinets empty for groceries and the boat has extra storage beneath the galley floorboards. The salon table has a cabinet that will store 4 bottles of adult beverages.

RAVEN is stocked with an assortment of basic spices, condiments, oils and supplies, (aluminum foil, wrap, etc). If you use the last of something, please replace it for the next guest. There is also a variety of cleaning supplies under the sink. A Britta water filter is available, so you do not need to bring single-use plastic bottles.

SJS will supply you with a French coffee press. **It cannot be placed directly on the stove top.** Please use the water kettle supplied in the galley to boil water to pour into the press.

A recycle tub can be found outside in the center-aft cockpit locker. Beyond being environmentally friendly, (thank you!), we find that depositing glass, cans, and paper in a separate location really reduces the amount of actual trash in the galley trash can. This will help minimize your trips ashore looking for dumpsters.

17. Heads and Holding Tanks

QUICK NOTES

- Two toilets: Main Cabin unit has a Domestic electric flush unit with freshwater rinse. The forward toilet manually pumps with sea water.
- Simple, gravity flow holding tanks.
- Nothing goes into the head that hasn’t been digested by your body.

DETAILS

Raven has a wonderfully simple sanitation systems and there is little that can go wrong if it gets a little attention. The main aft head has a Domestic electric flush toilet that uses fresh water. The forward head has a traditional hand pump toilet with saltwater rinse.

The tanks do not have gauges, but you can see the fill level by opening the large panels above each head. It helps to shine a flashlight from the side of the tank. A polite plea...don’t overfill the holding tank. Overflow is pretty gross to clean up.



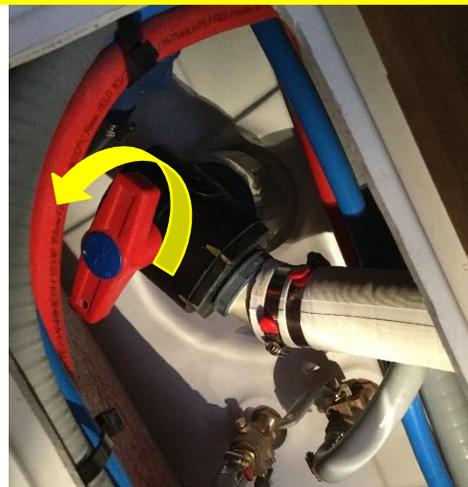
Plainly put, please do not put anything in the toilet that has not been eaten and digested by your body. Deposit toilet paper in a wastebasket, not down the head.

Where allowed the tanks may be dumped while underway by opening the drain valves. The forward head drain valve is located under the sink. The aft head drain valve is located under the shower seat. These are gravity drain tanks so while the boat is underway just turn the red handle counterclockwise 90 degrees. They will normally drain in less than a minute and you will hear a “whoosh” as they empty. Close the valves to prevent material from being accidentally sent overboard.

Forward Head Gravity Valve
Under the sink.



Aft Head Gravity Valve- under the shower seat.



You may also pump out the holding tanks while in harbor using a self-service portable waste pump, or by contacting Phecal Freak in Roche Harbor, or Pumpty Dumpty, in Friday Harbor. (*Yes, that's their real names – see Waggoner's Guide.*) The two waste deck plates are located just above where the tanks sit in the boat.

18.Heater

Quick Note: When using the cabin heater, be sure the dinghy is tied to the port side of the boat, away from the exhaust port.

Raven is equipped with a Webasco forced air furnace heater. The thermostat is located on the starboard side of the main salon, just ahead of the galley. To turn it on switch on on/off button on the lower left side. Adjust temperature with the grey buttons.



On / Off

19. Propane Tanks:

Raven has two propane tanks stored in the aft starboard cockpit locker. San Juan Sailing will ensure you have enough propane for your charter. If the stove or BBQ won't light, make sure the solenoid switch is on and the tank valve is open. Switch tanks if needed. **For safety** we always turn the solenoid off when propane is not in use. Propane leaking in a sailboat is a major safety hazard.

20. Refrigerator

QUICK NOTES

- 48 gallon unit with top and front access
- Small, very efficient freezer unit – don't let cans come in contact with it!
- Circuit Breaker located on the electrical panel

DETAILS

RAVEN is equipped with a large 48 gal. refrigerator with top and front doors. The circuit breaker is located on the electrical panel and the thermostat is inside of the refrigerator unit. We usually keep the thermostat set at "6 o'clock".

The unit can typically run 24 hrs a day without battery issues. If we plan to sail for a few days without much battery recharging time we may turn the fridge off at night.

There is a freezer unit that will keep meat frozen solid indefinitely. NOTE, (a lesson learned the hard way), anything that touches the outside of the metal freezer unit for an extended period will also freeze. Take care especially with cans that may burst when frozen.

Water that accumulates from melting ice drains into the bilge through a small plug in the bottom.

21. Sails & Rigging (updated 2023)

QUICK NOTES

- Main must be raised before unfurling the jib
- The boat must be dead upwind when launching the main to keep batons from hooking on the lazy-jack sheets
- "Flatter is Faster". Too much heel slows her down.
- When you first think about reefing, it's time to reef.

DETAILS

We are absolutely thrilled with Raven's sailing performance. She is spirited in light wind but is also comfortable in the heavy stuff. We can double-hand in all conditions.

Running Rigging - Halyards are labeled and lead to the doghouse roof. The jib is trimmed from behind the helm. The main is trimmed on the doghouse roof, (new).

Mainsail – Raven is rigged with a fully-battened traditional mainsail for best performance. It flakes into a “stack pack” and has two pre-rigged reefing lines. We’ve added additional mast steps to help crew stuff the main, and at 5’2” Laura can manage the stack pack.

To raise the Main (always before the jib):

- Unzip the sail bag while at dock or anchor before you depart, (easiest!). Use the traveler to position the boom on the starboard side to help you reach the zipper.
- When attaching the main halyard, make sure it leads inside of the lazy-jack lines.
- Un-clutch the mainsheet, vang, and 2 reefing lines, (if you are not reefing).
- When hoisting, keep the boat dead upwind so that the battens don’t hook on the lazy jack lines.
- Raise the sail, applying enough tension as conditions call for. Light air = looser. Heavy air = tighter. Don’t overtighten.
- Fall off the wind and trim!

UPDATE-Main Trim: Like most Jeanneaus, Raven was first rigged with a European-style main sheet that trimmed from behind the helm on either side of the boat. We have changed that. The main sheet is now located on the port side of the cabin roof. *Yes, it is an endless debate over which rig is better*, but we find that we don’t trip over each other as much, and that heavy-weather gybes are much safer.

Reefing the Main: Raven’s reef system is pretty simple, but it’s always best to reef just before you really need to. There are two preset reef points.

- Head the boat upwind to depower the main.
- Ease the boom vang and main sheet.
- Lower the main halyard so that the reefing point eye is about 24” above the boom. Clutch the main halyard.
- Pull in the reef line to tighten the sail, which will pull down the reef point eye closer to the boom.
- Adjust by balancing the amount of main halyard pulling the sail “up” with the amount of reef line pulling it “down.”

Genoa: Raven has a 108 roller-furled Genoa. It should be unfurled after the Main. To deploy:

- The furling line and clutch is located just ahead of the port helmsman’s position.
- Keep moderate tension while releasing the furling drum line when unfurling the sail. This helps prevent a rat nest on the drum.
- When furling the genoa in, keep a similar tension on the jib sheets while you pull in the furling line to prevent “candy striping”.

Sailing Characteristics: You’ll find that Raven can take full sails up to 15 knots of wind, (depending on your crew’s comfort level, wave pattern, etc).

Racers know that too much heel slows a boat down and the same applies to Raven. We’ll allow the front 1-2ft of the main to luff, and/or move the main traveler to leeward or “travel down” to depower the sail. Moving the jib cars aft will also help flatten the jib. Not only does this add speed, but it makes for a more comfortable sail. After 12-15 knots it’s so easy to reef that we don’t hesitate to pull in a little canvas and make things more comfortable.

Have Fun!!!

22. Showers and Sump Pumps

QUICK NOTES

- Fully-enclosed shower stall in the aft head
- Forward head's sink faucet converts to a shower head
- Outdoor shower head located near the swim platform
- Shower sumps pump are manually activated.
- Take caution using hot water. It is VERY hot!

DETAILS

Raven has three shower options. The larger, fully-enclosed shower is in the main aft head. The second shower is in the forward head where the sink faucet may be mounted inside the door. An outdoor shower fixture is located on the starboard transom just aft of the storage locker.

The shower sumps are manually activated with small black "push" buttons. They do not have automatic float switches. Note: shower sumps may also be used in emergency situations to remove water from the boat.

23. Starlink Internet (new 2024!)

QUICK NOTES

- Download Starlink app on your phone or internet
- WIFI Name: Raven
- WIFI Password: On label inside of Charter Guest Reference Manual (white binder)

DETAILS

Starlink Control: The Starlink unit is operated from the Starlink phone on your phone or table.

Start Up: Starlink needs the inverter to operate. Turn the switch on at the electric panel. *Note that it's next to the battery monitor so you can keep track of your power usage.* Once you have power it may take 15 min. to fully activate. During this time you may hear or see the dish move as it seeks the best position for a signal. You'll typically see "Raven WIFI" available but without connection during this process. The Starlink service package for Raven is advertised to provide service at 10 knots or less.

Power Use: Starlink draws 4-8 amps when operating, so it is critical to monitor the battery state of charge on the battery monitor. When not on shore power or under auxiliary engine power, it is critical to turn the unit off when not in use.

Starlink is not meant to be used non-stop while under sail or while at anchor – when the battery isn't being charged. Please do not allow batteries to fall below 12.2v. At 12.2v charge with shore power overnight to bring the batteries to their full capacity, or you run the engine at idle between 1500-2000 rpm.

Starlink Disclaimer: We have no control over network availability and therefore do not guarantee that it

will work in all locations and circumstances. Speed and availability will vary from fast, (streaming on multiple devices), to moderate, to not being able to stream on any device, (although we haven't experienced this).

24.State & Provincial Park Mooring Balls (new in 2024)

Washington State Parks and British Columbia Provincial Parks offer mooring balls in fantastic locations! They are available on a first-come basis.

Before 2024, we were able to offer season passes to WA State Parks, but we're no longer allowed to do that as a charter fleet. Please go ashore and pay \$15 US for your nightly stay in WA. BC rates will be posted on the mooring ball, and are typically \$12 to \$15 CAN.

25.Stove

QUICK NOTES

- 2 burner stove. The oven bakes and broils.
- Solenoid located beneath sink
- Pot restraints (fiddles) located in cabinet above stove



DETAILS

The stove's propane tanks and valves are located in the stern starboard tank locker. The solenoid switch is located just below the sink.

The ignitor button is on the right side of the cooking panel. Press the ignitor switch then push **IN** the stove knob and turn to high. When the flame lights, hold in the knob **IN for an additional 3-5 seconds**.

To light the oven, press the ignitor button then press and turn the oven knob to high. (It's on the left side and easy to confuse with the left-hand burner knob). The first setting is for upper broiler unit. The second setting is for the lower "bake" unit. It may be difficult to tell if the oven is lit. Look through the holes in the bottom of the oven's metal tray. We usually need to visually confirm that the flame is lit. **NOTE: the oven door must be slightly open for the broiler to operate. For safety, keep the solenoid "off" when not cooking.**

26.Swim Platform:

DETAILS

The swim platform must be in the "up" position before leaving dock or anchor.

To lower the platform, unclasp the pelican hook then un-cleat the swim platform control line located under the port helmsman seat. Use the control line to gently ease the platform down. Please do not allow the platform to slam down.

Raising the platform requires a little muscle. We've added blocks to assist. Once the platform is in place, make sure the blocks are flush to the hull before re-securing the pelican hook.

27. Water Tanks

QUICK NOTES

- Two fresh water tanks for a total of 140 gallons
- Monitor tanks at the electrical panel
- Fill or switch tanks before they are empty
- Valves to change tanks located behind starboard dinette cushion
- Open only one tank at a time

DETAILS

Tanks & Filling: Raven has two fresh water tanks.

- Tank #1 holds 87 gallons. The deck fitting to fill this tank is located on the port side, just forward of mid-ship.
- Tank #2 holds 53 gallons. The deck fitting to fill this tank is located inside the starboard line locker in the cockpit. (**The port line locker deck fitting fills the diesel – please don't confuse them!**)

Water Pressure – The water pump circuit breaker is located on the electrical panel. We switch this off when not in use. Pumps are a battery burn, but more importantly, it may continue to run and burn out the water pump if the tanks are empty. You can't hear the water pump while underway from the cockpit.

Monitoring Water Tanks: Tanks may be monitored at the electrical panel. Press the button to toggle through tanks #1 & #2. Float valves are notoriously inaccurate and will drop from ½ to empty quickly, so use your best judgement and fill tanks before they are completely empty. Allowing a tank to run empty risks damaging the water pump.

When a Tank Empties / How to Change Tanks – You'll know that a tank is completely empty when the water pump continues to run but no water is flowing through the faucet. To change the tanks, access the valves located behind the starboard salon settee, just ahead of the galley. Only one valve should be opened at a time. See image below for an example of "open" and "closed" valves.

Tank Monitor at electrical panel



Example: Tank 1 valve open and Tank 2 closed. Located behind starboard settee cushion.



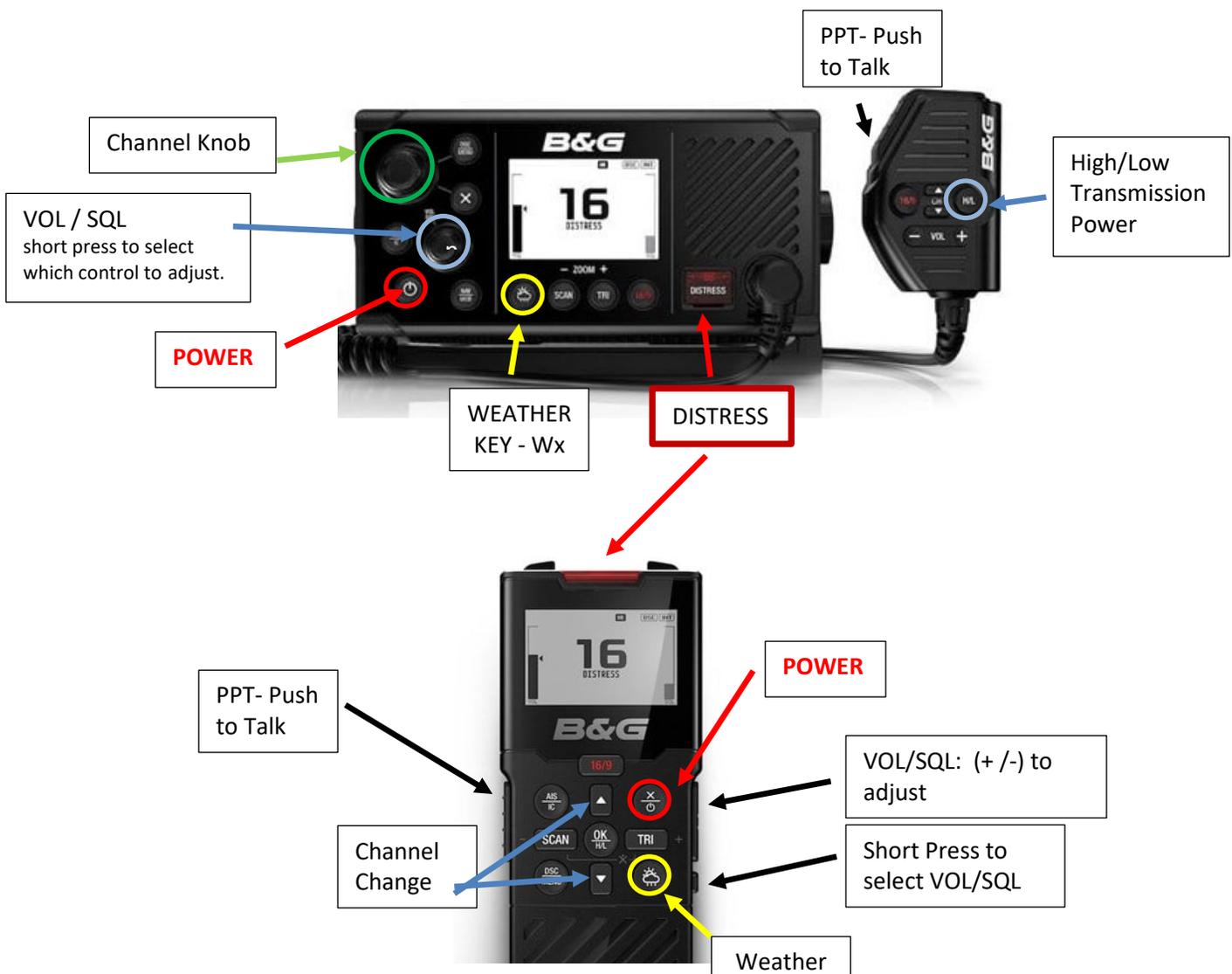
28.VHF – (New in 2023)

QUICK NOTES

- Main VHF unit located below electronic panel.
- Wireless handset located inside the cabinet above the nav table
- Return handset to charging cradle after each use.
- Monitor channel #16 while underway.
- Silencing a DSC Alarm – When the DSC button on a radio is pressed by another boat a shrill two-tone alarm sounds on all boats' VHF in the area. To silence this alarm, hit the “x” button.
- Weather forecast San Juan and the Gulf Islands are the “The Northern Inland Waters”.

DETAILS

The B&G V60 has a Class B AIS receiver and transmitter so RAVEN can be seen by most AIS-equipment vessels. This unit is capable of navigation and multiple other functions, but we recommend you use it for communication and weather. A User's Guide can be found with other boat documents beneath the nav station settee.



Commonly Used Channels in the Pacific Northwest

Channel	FCC Use	San Juan and Gulf Island Use
13	Bridge-to-Bridge Ships	Hail WA State Ferries
16	Int'l Distress / Safety & Calling	Maintain watch on this channel
22A	Coast Guard	Maritime Safety Broadcasts
66A	Port Operations	Most Major Ports: Friday Harbor, Bedwell Harbor, Public Wharf Victoria, Sidney, False Creek-Vancouver, Nanaimo.
68	Non-Commercial	Recreational Vessel to Recreational Vessel
69	Non-Commercial	" "
71	Non-Commercial	" "
72	Non-Commercial	" "
78 A	Non-Comm (used by these ports)	Roche Harbor, Rosario Resort, Deer Harbor,
80A	Public Correspondence	San Juan Sailing & Yachting Monitors

26. Water Heater

Raven has a 10 gallon hot water tank. While underway water is heated by heat recovery from the engine cooling circuit. While on shore power it is heated by the hot water heater. The AC circuit breaker is on the electrical panel. Caution: the water is heated to scalding temperatures.

29. Whale Wise! (added 2023)

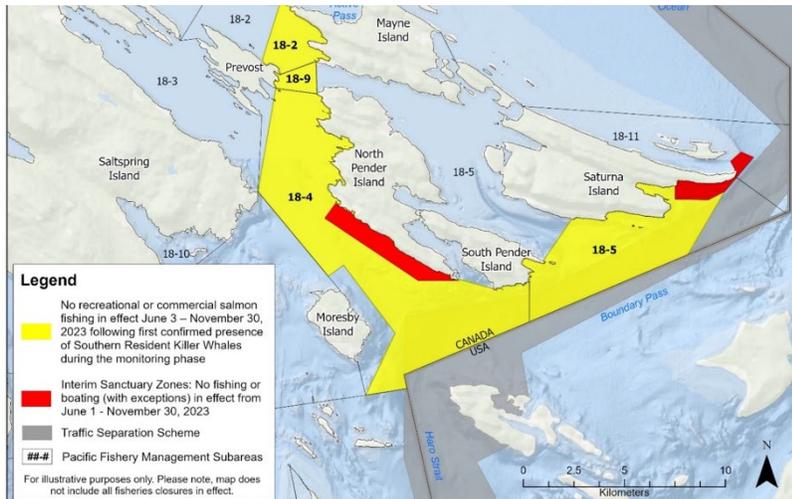
Sighting a whale, (and other marine wildlife), is a thrilling experience and one you'll never forget. But whales are having a difficult time surviving due to declining salmon runs. They use echolocation to find and catch their food, therefore noise pollution from boats and ships make it harder for them to thrive.

The US and Canada have implemented strict viewing guidelines and "no go" sanctuary zones. Per the Waggoner Guide: *"Transport Canada seems to have made it a practice to send registered letters after the fact, threatening fines of up to \$250,000, or a summary conviction with not more than a \$1,000,000 and/or imprisonment of not more than 18 months. This is serious business and boaters should maintain situational awareness at all times."*

San Juan Sailing provided you a summary of these rules in the packet you receive when you arrived and there is more information in section 10 of the white reference book onboard Raven. In general, stay at least 400 ft. away from the whales. Sometimes they come to you, if this happens shutdown the engine and turn off the instruments (assuming this is safe to do). They can hear the pings of the depth sounder – this is why we ask you turn off the instruments.

(continued below)

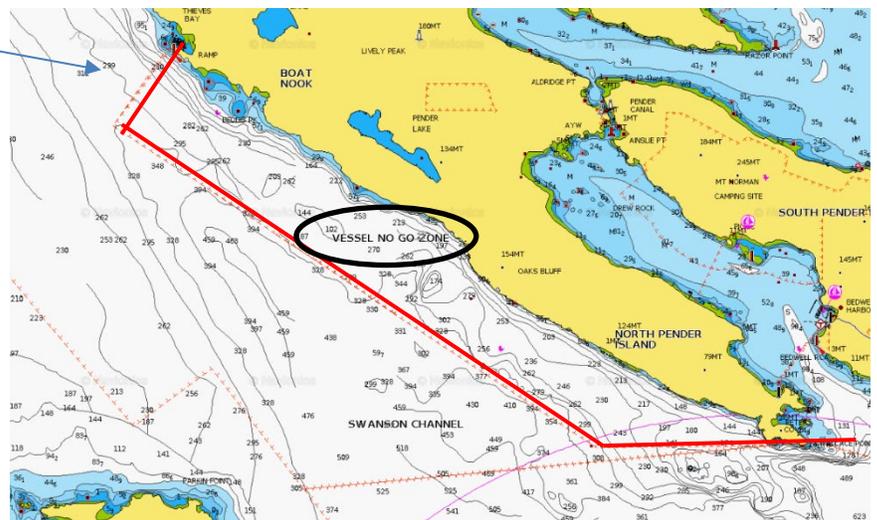
Canadian “No Go Zones” marked in red.



The No Go Zone is shown on Raven’s chartplotter with red dashed lines ++++++

To help you identify these lines, the chart here shows them in solid red.

Note this is just to the west of Bedwell Harbour, (a Canadian customs location). Be sure to avoid this area if Bedwell is on your itinerary.



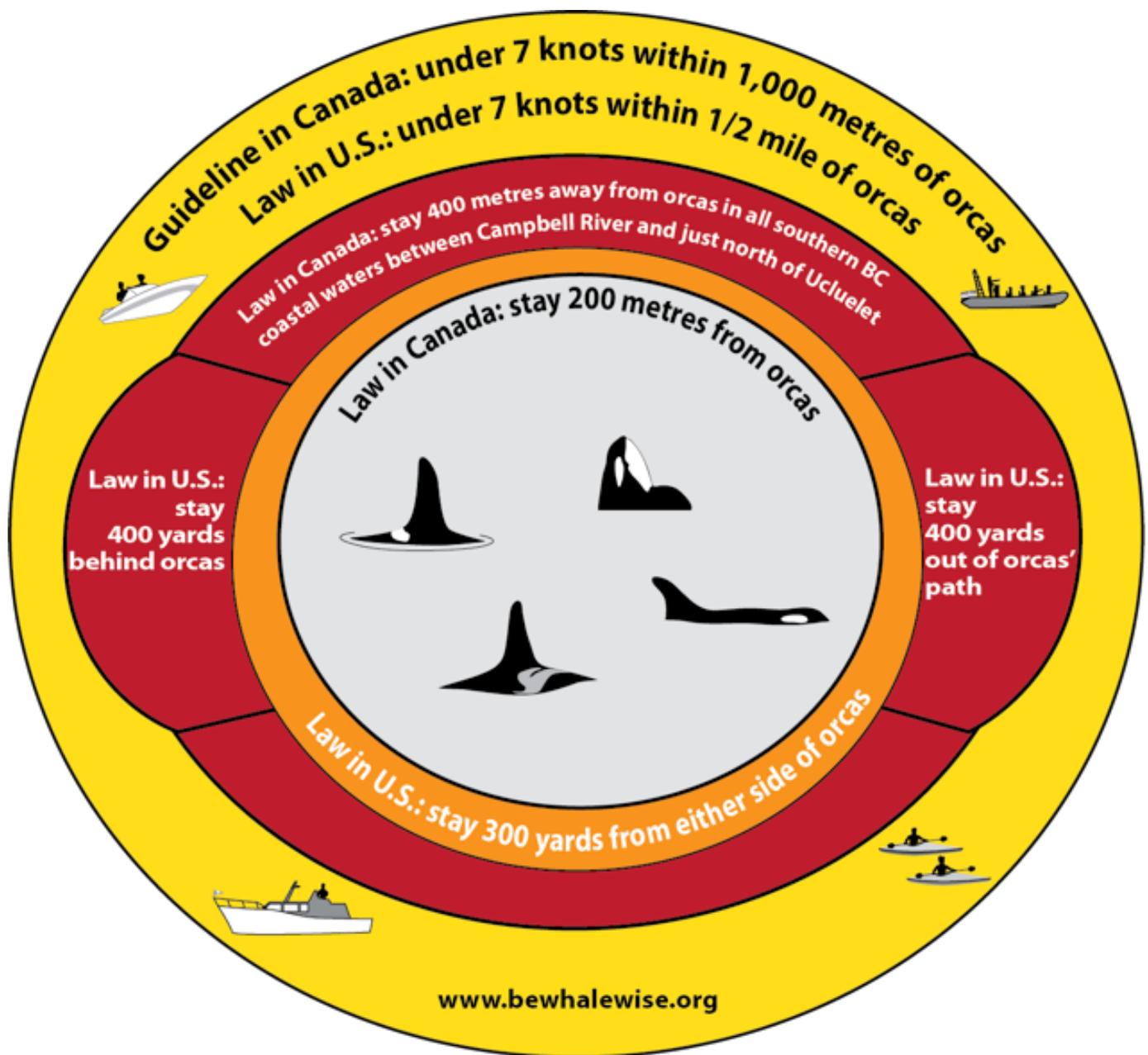
28. Planning Notes

If you are reading these notes before planning your trip, let us share that the San Juan Sailing itinerary offers great “tried and true” routes around the islands. We also suggest you reference the “Dreamspeaker Cruising Guides” for excellent insight into sailing the San Juans, Gulf Islands, Desolation Sound, and the Sunshine Coast. You can find them at: <http://www.dreamspeakerguides.com/> or at Amazon.com. These guides have led us to spectacular destinations that are often overlooked by major publications.

We sincerely hope you love cruising the Pacific Northwest as much as we do. Don’t hesitate to provide feedback on anything that you especially enjoyed, or something that could have made your trip better.

Safe Travels!
Brian and Laura Bolin





Keep 200 metres away from whales, dolphins or porpoises if they are resting or with their calf; and 100 metres/yards no approach zone for all other marine mammals in US & Canada.



