

WHITEHAWK

Owner's Notes

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PLEASE TAKE TIME TO READ THIS MANUAL AND USE IT AS A REFERENCE SOURCE BEFORE AND DURING YOUR CRUISE. THIS MANUAL USED IN CONJUNCTION WITH THE FACTORY ISSUED (ITEM SPECIFIC) MANUALS ON-BOARD PROVIDE A GOOD SET OF INSTRUCTIONS. Studying this manual now will make your checkout a breeze and speed you on your way with well-founded confidence based on boat specific knowledge.

Please don't be afraid to ask any question of the San Juan Sailing staff during your orientation or at any time. The folks at San Juan are thorough, friendly and caring, so they appreciate customers who care enough to ask. No question is too insignificant.

We have enjoyed getting *WHITEHAWK* ready for your cruise. We hope you will enjoy your time aboard her as much as we always do. As you cruise, if you discover anything we could do to enhance your experience with *WHITEHAWK*, please share that with the good folks at San Juan Sailing and/or us at rikrobert@aol.com.

Robert & Linda Klingler, Owners

1. Owner's Commentary

Welcome Aboard *WHITEHAWK*!

You will find *WHITEHAWK* distinguished from other coastal cruisers by having real living space as well as great performance. The exceptional roominess and comfort aboard this 2007 Hunter 44 DS model coupled with her high end sailing characteristics will ensure your time aboard will be both restful and exhilarating. During 2012, this Hunter model won best-in-class in the famed Heineken Regatta in the Caribbean, so if wind conditions are good, you can expect an exhilarating ride! We purchased this 2-stateroom Hunter 44' Deck Salon from her original owner in 2013. She was berthed on Seattle's Lake Union and was in like-new condition with less than one hundred hours on the engine.

WHITEHAWK is also ideally set up for coastal cruising by having an in-mast furling main sail, a roller furling jib and an electric winch for line management. With this equipment you will find yourself sailing more and motoring less because sail handling requires less effort. An additional mast mounted whisker pole affords good downwind sailing even in light air.

Other equipment aboard includes state-of-the-art electronics, a 5.4 hp Lewmar bow thruster, a Raymarine Evolution-200 autopilot, a five person hard bottom Walker Bay dinghy, a Webasto diesel/hydronic heating system, cockpit cushions, an Iverson Bimini, and a Magma party size grill. An inverter, microwave, electric flush fresh water heads, freezer, toaster, coffee grinder, entertainment center and several A/C outlets round out this 10 person cockpit equipped vessel to ensure you will cruise the San Juan Islands fully equipped to enjoy this unique paradise in full comfort!

WHITEHAWK sails beautifully and is very well balanced. The Glenn Henderson-designed hull sports a unique "bow hollow" at the stem – affording a smooth entry and creating a longer waterline for increased lift and speed. The hull aft has a stern "reflect" for a flatter exit, resulting in enhanced stability and markedly reduced wake characteristics. *WHITEHAWK* keeps her speed in light air and is very stable in heavy weather.

A sizable swim platform enables easy dinghy access, and a fold-down swim ladder can be extended two feet below the water surface making re-boarding after a swim easy. An extendable hot and cold shower hose is within easy reach of the platform.

We're immensely pleased with this well-built and beautiful vessel and look forward to sharing her with you as our guests. We hope you'll enjoy *WHITEHAWK* as much as we do, and we thank you for taking special care of her. In our efforts to keep *WHITEHAWK* in pristine condition, we request that no pets be brought aboard and that there be NO smoking aboard. Thank you!

Wishing You Fair Winds and a most enjoyable Sailing Adventure,

Robert & Linda Klingler, Owners

2. Disclaimer

These notes have been prepared to give the charter captain a helpful information resource for the sailing vessel *WHITEHAWK*. While the goal is to summarize information from multiple sources into a single manual, this document does not claim nor pretend to be the ultimate authority on the equipment and systems on board. Please consult the manuals provided by the manufacturers located in the dark blue bags underneath the nav station seat for detailed information provided by the equipment manufacturers.

The charter guest captain while operating this vessel accepts full responsibility for the safety of the crew, the passengers, the vessel, the dinghy and all provided equipment pertaining thereto. *WHITEHAWK* is chartered with the expectation that the captain and his/her crew are qualified to operate a vessel of the size, type and complexity of *WHITEHAWK* and have become thoroughly familiar with *WHITEHAWK* prior to leaving the dock. Good judgment and following all applicable laws during operation of *WHITEHAWK* is fundamental to a safe and successful experience on board this vessel and in the maritime environment.

No warranties (expressed or implied) are extended by this document nor by the owners of *WHITEHAWK*.

3. 3 Favorite Things About Whitehawk:

- 1. The Cockpit.** So much of the camaraderie of the day's sailing adventure occurs here, and there is spacious room for it to take place! This cockpit has comfortable seating for 10 or more people allowing crew and guests to be together underway. With cushioned seats all around there is ample opportunity for a fully "stretched-out" nap at a whim. It's a wonderful place to take morning coffee, and later to enjoy an outdoor meal using the fold down table and party size Magma grill within easy reach on the aft port rail. Two stern rail teak seats compete for the "best seats in the house", and the full overhead bimini top enables maximum "outdoor" time even in less than ideal weather.
- 2. Interior Spaciousness, Light and Visibility.** With large wrap-around windows in the salon and galley area, this deck salon style boat is awash with interior light and has excellent outdoor visibility. Unique to this year and model, is the ability to sit inside the salon on the top step of the companionway and yet see forward and aft with over 220 degrees of visibility. Two portals on either side of the aft cabin enable cross ventilation and quick safety checks of shoreline proximity without the disruption of going topsides while at anchor --VERY HANDY! The fore and aft staterooms are sizable -- each with its own head, shower, and temperature control. Two couples enjoy complete privacy at either end of the boat. The aft cabin's cozy hideaway nook repleat with bookshelves offers a quiet private place for reading. If more than four persons are aboard, no problem! Opposite the dinette table, a full length settee doubles as an additional sea berth or a ready "quick nap" area, and the eight person dinette table converts to a very comfortable extra long queen bed. Just loosen the table stanchion knobs below and push down on the table to add a very large additional bed. Headroom throughout the Salon is 6'-8". The large L-shaped galley has plenty of storage -- even a pantry, a microwave, a front entry refrigerator and a stand alone freezer that keeps ice-cream. From here the gourmet cook ventures forth well equipped and with elbow room to add special flair to the adventure!
- 3. Electric Quiet Flush -Fresh Water Heads.** No more pumping or fiddling around in confusion at important times! Each head has it's own macerator in addition to the main macerator used for tank discharge. The risk of a plugged head (for which each user is responsible, by the way) is greatly reduced. Wall switching fills the bowl, empties the bowl, or does both at once --all with fresh water and electricity for easy operation and reduced odor. Thanks to Hunter for putting simplicity and convenience "at the head".

Note: Nothing above withstanding, as per San Juan Sailing's guidelines, all paper products should be disposed of in the trash. Nothing goes into the commode that has not been eaten.

4. 10 Must-Knows About WHITEHAWK

1. IF STEERING IS LOCKED, THE AUTOPILOT IS ENGAGED PRESS AUTOPILOT "STANDBY" BUTTON TO RELEASE.

2. LOCATION OF BOAT AC SHOREPOWER BREAKERS

No AC power when plugged into shore power? Try resetting the two AC breakers found near the ceiling area just inside the aft cabin door.

3. DOMESTIC WATER SHUTOFF VALVES

A manifold for shutting off various parts of the domestic water system is located under the galley sink. Remove the shelf for easy access and a clear view of the labels. A valve key hangs ready to use.

4. ENGINE SHUT DOWN

DO NOT SHUT DOWN THE ENGINE USING THE KEY. RATHER, PUSH AND HOLD DOWN THE BLACK FUEL CUTOFF BUTTON located above the key. This will kill the engine. TURN THE KEY TO THE "OFF" POSITION ONLY AFTER THE ENGINE IS SHUT OFF. Failure to follow this sequence can damage the diodes inside the alternator.

5. NECESSITY OF POWER CONSERVATION

WHITEHAWK is equipped with a heavy duty (100 amp) alternator and smart regulator to maximize charging efficiency. Still, batteries will run low after a couple of days even with significant engine usage and good power conservation habits. You won't achieve a full charge again under engine power alone. If your batteries get down to 12 volts at rest on the battery monitor at the nav station, do spend a night on shore power to prevent permanent damage to the batteries. 8-12 hours charging ashore will nicely top off your batteries again. (See Electrical Section)

6. ANCHOR LOCKER DANGER

Lowering the anchor locker lid while holding the lid with your fingers inside the cutout hole for the gypsy can cause severe finger injury! Only use the finger latch located at the far right to raise and lower the locker lid.

7. ENGINE -CLOSED RAW WATER INTAKE DANGER

THE ENGINE UPTAKE THROUGH-HULL VALVE MUST BE OPEN WHEN STARTING THE ENGINE. PLEASE CHECK THIS. A closed seacock will cause the plastic muffler to melt rendering the engine useless. That's a big repair expense for you. If you **MUST** close the raw water intake to service the engine, or to clean the raw water strainer, hang the engine keys over the seacock handle while it is in the off position as a safety measure.

8. HOLDING TANK MACERATOR BURN OUT DANGER

TWO (2) VALVES MUST BE OPENED before holding tank discharge can occur. Both are found by lifting the bilge panel at the foot of the companionway steps. **ONE, is a through-hull valve** located in the bottom of the bilge. **TWO, is the large RED handled PVC pipe valve located in the bilge just below the cabin sole. It is in open position when the red handle is turned parallel to the pipe).** Failure to open both valves when attempting to discharge the holding tank will result in a burn-out of the macerator pump.

NOTE: It is best to shut off the engine when discharging the holding tank so you can HEAR the macerator pump pick up speed when discharge is complete—when no more liquid is being pumped. This may take more than FIVE minutes of holding the macerator switch in the “on” position (located on the DC panel) to complete pumping. Do not be in a hurry. The sound change is definite.

9. LOCATION OF FORWARD HEAD LIGHT SWITCH

Lest you are caught at an untoward time, know that **it is under the vanity mirror just inside the door.**

10. NO TRASH IN ANY LOCKERS OR LAZARETTES

Due to the shape of the hull and construction of the boat, liquid and odor from leaking trash sacks stowed even temporarily inside the cockpit or swim platform lazarettes can run under the cabin soles. This liquid follows the hull contour underneath the sole to inaccessible places as it gravitates toward the lowest part of the bilge. This can create highly unpleasant odors inside the boat which are very difficult to remove or remedy. Please prevent this by stowing all trash sacks in the dinghy until disposal is possible.

5. Quick Start Procedure:

Once familiarizing yourself with WHITEHAWK by on-board inspection, review of the 10 MUST KNOWS above and reading the Owner's Notes, follow these steps **to quickly get underway:**

Prior To Starting the Engine:

1. Open the shades for best visibility and close all hatches and portholes in staterooms and heads.
2. Disconnect shore power stowing cord in a locker or lazarette.
3. Run engine blower for about 3 minutes. It is convenient to do this during the oil level check (#4) procedure below. The blower is turned on by the breaker switch on the DC panel.
4. Check Engine Oil Level & Alternator Belt Check -two insertions of the dipstick is required to get a proper oil level reading. Alternator belt deflection should be 1/2". When finished, shut off the engine blower.
5. Lift the sole panel at the base of the companionway steps and check that the "Engine Uptake" through-hull valve is open (in the vertical position) and that the glass strainer for the engine uptake is clear of eelgrass or other debris. If it is not, shut off uptake valve and clean out the glass bowl and strainer. See page 63.
6. At DC Power panel: Switch on the breakers for Instruments, VHF radio, GPS, and Autopilot. If not already in place, install the remote marine radio mike at the helm (sometimes stored in nav station). Green breakers ON; Yellow breakers ON as needed; Red breakers LEFT UNCHANGED.
7. State a plan for departure and docking. Discuss and assign crew to line and fender handling positions, assign one crew member to manage a "roving" fender and one to manage the dinghy. Pre-plan dinghy route and painter handling around dock and boat(s). (Hint: If the dinghy is tied fairly snug to the aft rail on the port side when backing out of home port it should stay out of the way as the stern swings to port in the fairway.) Encourage crew to practice line throwing from aboard to loop around dock cleats. Very useful for later docking.
8. Finally, having confirmed that the engine uptake valve is open below, insert ignition key. Check the fuel gauge. You are now ready to start the engine.

Starting the Engine:

1. Put throttle control lever in neutral (detente) position. This is marked with an "N" on the binnacle behind the throttle handle.
2. Turn key to left and hold for about 15 seconds to warm the engine glow plugs.
3. Turn key to right to start. Engine will normally 'catch' and begin running after just a second or two of starter engagement.
4. If the engine does not start after 30 seconds wait for a 2-minute "rest" period before another attempt. Check fuel gauge level.
5. Once running, warm engine up at 800 or 900 RPM a minimum of 2-3 minutes to stabilize.
6. Make sure water is coming out with the exhaust at the port side of the cockpit. Since it is too far under the hull to see from the cockpit, listen for a intermittent spitting/gurgling sound. If this is not heard, shut down the engine using the black shut off button and recheck that the engine raw water intake is open and that the strainer is clean.

Turning on the Cockpit Electronics:

While engine is warming up:

1. Uncover and stow all 5 cockpit instrument sun covers (two are above the companionway).
2. Turn on the MFD Furuno NavNet TZTouch2 display at the helm by pressing the single button at the lower right of the display. Acknowledge start-up message, set brightness. Check for chart visibility, cursor position, and latitude longitude GPS readings. Remember the **e-guide** feature of the MFD –an onboard owner's manual always readily accessible from the home page.
3. Check gauges above the companionway for active operation.
4. Turn on VHF radio at helm.
5. Turn on the bowthruster by pressing the button at the joystick and confirm bowthruster operation. If no power is present, open the cabinet below the v-berth and turn the red knob (the bow thruster battery disconnect) to the forward or "on" position.

Leaving the Dock:

1. Center the rudder and check that the fenders are in the best position to prevent hull contact as the boat will leave the dock.
2. Direct the crew in untying and stowing the mooring lines making sure one end of each line is tied to the boat to prevent their loss underway. Care must also be taken so that the lines do not fall in the water and foul the prop.
3. One or more crew now can walk the boat partially out of the slip stepping on at the last minute as the engine is engaged in idle reverse.
4. Back and turn the boat being aware of nearby boats as well as the dinghy and the dock. Direct the roving fender. Once sufficiently back and angled into the fairway COMPLETELY REVERSE THE WHEEL TO STARBOARD and give a quick burst of FORWARD engine power swinging the boat parallel in the fairway.
5. Slowly proceed forward looking well ahead for approaching masts and/or other vessels. Remember, "Slow is Pro".

Once Underway:

1. Retrieve and stow the fenders in the lazarette and/or the swim platform lockers.
2. Helmsman and on deck crew should to be "on watch" at all times looking for logs or debris in water. They are seen floating with surprising regularity. Avoid patches of eelgrass when possible and slow the engine way down when passing through them cannot be avoided. Eelgrass can plug the engine raw water intake quickly.
3. **Know where you are:** Regularly confirm your position on both the paper charts and the MFD, and **monitor water depth constantly** in every area.
4. Monitor the engine gauges: Look for engine temperature normal readings between 160-195, typically around 185; Oil pressure reading should be between 30-90 psi, varying with temperature and engine speed. Engine rpms should not exceed 3000 rpm at any time.

NOTES:

6. Anchoring:

Equipment:

WHITEHAWK is equipped with two anchors:

Primary Anchor:

A 44 lb. Delta plow anchor with 240' of 5/16" high tensile chain attached is located forward on the bow roller. The anchor chain is marked with a length of yellow paint every 50'. The yellow mark at the 100' point (mark 2) is 10' in length whereas the other 50' intervals are 5' in length. The last 20' of chain is painted red to warn of the approaching bitter end. At the bitter end of the chain there is a short length of triple braid nylon rode attaching the chain to the boat. This allows the skipper to cut the anchor and chain free should extreme emergency conditions so warrant. The anchor and chain are expensive investments totaling over \$1,200. Cut them loose only in an dire emergency. If possible, before doing so, attach two or more fenders to the bitter end for possible future recovery. We hope you never encounter a situation that requires you to take this action.

The anchor is raised and lowered with an electric windlass. See "Windlass" section below for operation details.

Snubber Line:

Tied to a cleat in the anchor locker is a short, black, nylon line with a clevis at the end. The clevis hooks onto the chain to secure the anchor taunt in the stowed position within the bow anchor roller guide during travel. Also after anchoring the clevis is attached to the chain to transfer the anchor/chain/boat load from the more fragile windlass and its attachment base to the sturdy cleat.

Secondary Anchor:

The secondary anchor is a Fortress FX-37 with 30' of 5/16" chain and 150' of nylon rode. It is located in the cockpit lazarette. The chain is in a 5 gal. plastic bucket for easy transport to the dinghy, the bow, or other location for deployment.

Windlass:

Located in the anchor locker, and operated by nearby on-deck "on" and "off" foot switches, the windlass raises and lowers the primary anchor using power from the house batteries. The DC breaker labeled "Windlass" must be

switched "on" and the engine running during operation to avoid rapidly depleting the house batteries.

An overload protection breaker for the windlass is located on the battery panel below the nav station and may need resetting if no power is reaching the deck switches.



Emergency Manual Windlass Use: All Lewmar windlasses have a standard manual free fall function. To free fall the anchor, loosen the top nut on the gypsy half a turn using a winch handle. This releases the gypsy allowing it to free wheel. You can control the speed or stop the descent by re-tightening the top nut. Also the nut can be loosened to assist raising the anchor manually hand over hand over the bow roller if the windlass loses power. Raising the anchor in this manner is not pleasant but very doable.

Scope:

In the Northwest a scope of 4:1 is used rather than 7:1 common elsewhere. However, tides must be considered in addition to depth. 10-ft. tides and occasional "minus" tides below chart datum are not uncommon. Hence, at 30 feet of depth, you might drop 120' of chain + 5' for the height of the boat + any rise in tide you expect overnight.

Preparing to Anchor:

1. Check the tide tables aboard and the graphs provided by San Juan Sailing in order to determine your current level of tide, and how much and in which direction it will vary overnight from its current depth. You may need to add to your rode calculations to keep from going aground during the night.
2. Turn on the "Windlass" breaker at the DC power panel at the nav station.
3. Note where other boats are. If the cove is windless, you may want to ask where they've placed their anchor, so you don't cross rodes.

4. Determine where you want your boat to be after anchoring.
5. Proceed upwind from that spot a couple boat lengths to make up for the drift back and stop.

Lowering and Setting the Anchor:

- 1.** Mate goes forward, raises the anchor locker lid, and releases the snubber/safety line from the chain. He then pulls the anchor chain an inch or so inboard to unhook it from the center guide partition and carefully lowers it slightly about halfway out of the anchor guide until the slack is gone from the chain. The anchor and chain should now be held taut by the windlass but still partially within the guide –not dangling.
- 2.** When the skipper indicates the “drop point” he communicates to the mate how much chain to lower. The mate uses the “down” foot switch on the deck to drop the anchor while noting by the chain markings the amount released. When the scope the captain desired is attained (again, usually 4:1) the mate signals the captain to set the anchor as the snubber line is reattached to the chain.

Important: In case of winds above 20 knots, consider both increasing your scope to 5 or 6 to 1, and deploying the second anchor in a V type pattern. You will likely need to drop the second anchor with the dinghy, so set it before the wind increases. It's too late if there is chop.

Note: The anchor chain is marked at 100 ft with a 10 foot yellow mark, and then with 5' white marks every 50' thereafter. The last 10 ft of chain is marked red. These marks are helpful in determining the amount of chain released.

- 3.** As chain is being lowered, the skipper maintains very slight way in reverse to keep the chain from tangling on itself below the water while, at the same time, the mate prevents any tangle of the chain as it comes from the locker.
- 4.** While watching the shoreline, the skipper slowly backs the boat away from the anchor site until he sees that the boat's movement is arrested by the anchor setting. The anchor is tested by running reverse up to 1,000rpm for winds to 20 knots, 1,500 for 30 knots, etc. If holding at that rpm, you have reasonable assurance of holding.
- 5.** Once the anchor is set, the mate double checks that there is some slack in the chain between the guide and the gypsy. The snubber line should be taut and taking the strain of holding the boat –not the chain on the windlass!
- 6.** Skipper now holds down the engine kill button to shut down the engine.

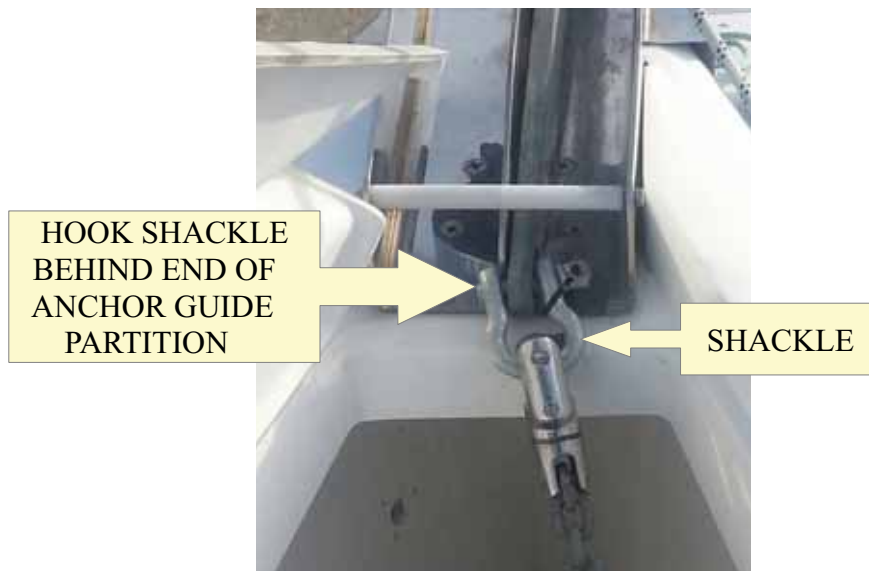
ONLY THEN is the key turned to the "off" position to prevent blowing out the alternator diodes.

7. Switch off the chartplotter and electronics in the cockpit by switching off the breakers on the DC Panel marked "Instruments" and "GPS/Autopilot". Also, turn off "Windlass" power at the DC panel. Replace all sunscreen covers.

Retrieving the Anchor:

1. Turn on the windlass breaker, start the engine and proceed in the direction of the set anchor to develop slack in the chain.
2. The mate unhooks the snubber line from the chain and lays it out of the way. He presses the "up" foot switch to gather up the slack in the chain.
3. The mate continues to direct the skipper toward the anchor to produce more chain slack, gathers in chain, and directs the fall of the incoming chain into the locker to prevent tangle. Excess mud on the chain is also removed as it comes to the surface by swirling the chain around and/or dipping it as it is retrieved. Skipper be patient. Do not hurry the mate.

Important: The windlass is never used to pull the boat forward to where the anchor is set. The windlass is not designed for this use. It would produce a large draw on the batteries, and could cause serious damage to the windlass attachment base.



4. Once the boat is directly over the anchor, the mate continues to retrieve the anchor upwards until it rounds up on the bow roller and enters the guide. Watch that the snap shackle does not jamb in the guide! Once the snap shackle is over half way in the guide, stop. The anchor is now manually pulled the last distance into the metal anchor guide and the snap shackle hooked on the metal divide in the center.

5. Finally, pull the chain to remove as much slack as possible and attach the clevis hook from the snubber line onto the chain to keep it taut. The snubber line then keeps the anchor in the guide and it's weight off the windlass.
6. Switch the windlass breaker "off"

WARNING: YOUR FINGERS CAN BE SEVERLY PINCHED BY THE ANCHOR LOCKER DOOR! USE ONLY THE COLLAPSIBLE CHROME FINGER LIFT RING TO RAISE OR LOWER THE ANCHOR LOCKER DOOR. IT IS LOCATED ON THE EXTERIOR RIGHT SIDE OF THE DOOR. DO NOT LOWER THE DOOR WITH FINGERS THROUGH OR WITHIN THE CIRCULAR CUT-OUT FOR THE GYPSY HEAD.

7. Autopilot:

WHITEHAWK is equipped with a state of the art Raymarine Evolution 200 autopilot. The controller/display is located and easily accessible on the starboard side of the binnacle. It has a digital compass and turn rate sensor module that provides excellent performance in heading and waypoint tracking. Press the "Auto" button on the lower right of the controller at the binnacle to hold a course and the Standby button on the lower left to release the autopilot. (See further details of autopilot operation by reading the factory manual located in the small "Raymarine" box below the nav station seat.

Caution: An autopilot is a wonderful tool for relieving the helmsman from the tedium of having to make frequent rudder inputs to hold a course or heading. However, it is important to remain alert at all times never leaving the helm unattended. Logs have a way of popping up when least expected and other pleasure and commercial traffic share the waters. We urge you to use the autopilot as a tool to take the drudgery out of steering the vessel but keep your eyes up and scanning outside the ship. Maintain a watch at all times while underway!

NOTE: WHEEL LOCKED? Do not forget there is an autopilot. It is easy to be startled by suddenly finding the wheel will not turn. Someone may have unwittingly pressed the "Auto" button at the helm. No need for alarm, just press the "Standby" button to release the wheel.

8. Bow Thruster:

WHITEHAWK is equipped with a powerful 12 V Lewmar 185TT 4.0KW 5.4Hp Bow Thruster. It should not be operated close to swimmers, as a powerful suction of water is generated when in use. An **emergency motor shut-off** switch is accessed directly below the v-berth (starboard door). Power to the thruster is from the main house battery bank through this battery switch. It is normally left in the

in the "on" position (turned forward).

To turn on the thruster system for use, hold down the lower center button at the joystick controller located on the binnacle console until it lights up. The system will now be ready to use. Simply push the joystick in the direction you desire the bow to go.

The system will automatically shut down if not in use for approximately 20 minutes. Also, if the thruster is operated constantly for 3 minutes it will power down and the controller panel will deactivate.

Using short bursts of thrust and being patient while the bow moves in the desired direction will conserve precious battery power for use elsewhere.

9. Cabins & Berths:

WHITEHAWK is ideal for 4 people, but can sleep 7 comfortably --two in the forward cabin, two in aft cabin, two on the dinette table conversion, and one on the settee forward of the nav station. The v-berth is 6'8" long, 6'0" wide (at the head) and 2'1" wide (at the foot). The aft bed is 6'6" long, 5'0" wide (at the head), 5'2" (in the middle, and 4'0" wide (at the foot). The converted dinette is a whopping 7'9" long with side cushions removed or 6'11" with cushions left in place, 5'4" wide at the head, and 4'2" wide at the foot. The port settee is 6'5" long and 2'2" wide (with side cushions removed). The headroom inside *WHITEHAWK* is exceptionally good; at the centerline in the main salon it measures 6'8".

Converting the Dinette into a Queen Bed.

- 1.** Loosen the black knobs on the table stanchions below the table.
- 2.** Push down on the table to lower it far enough to rest on the edges of the dinette seats (under the cushions) and re-tighten the knobs in the lowered position.
- 3.** Retrieve and unfold the blue cushion (stored on top of the aft cabin settee cushion) placing it atop the table. Viola, a very comfortable extra long queen bed!

Each sleeping area has secondary safety egress and good ventilation. The hatch over the V-berth uniquely provides a good view of the night sky and has a sliding shade and screen. The aft cabin has portals on either side for cross ventilation and easy checking of the shoreline without going topsides.

10. Cockpit:

WHITEHAWK'S cockpit is fully covered and provides seating for 10. Two stern rail seats, a fold down table, party size grill and fully cushioned seats provide a great living space and a wonderful place to stretch out.

Arch Light:

Switch is located on the overhead light.

BBQ:

See Galley and Grill Section –page 38.

Cockpit Cushions:

These cushions are constructed with an open cell foam. They will not float. Please take care to keep them aboard the boat and unsoiled.

Entertainment: Exterior Speakers/Tuner/Receiver :

You will find the tuner controls above the companionway by raising the plastic cover door –volume control, tuning, and on/off. Shut off the tuner by pushing the upper left button and the tuner dial simultaneously.

Flag:

The U.S. flag is flown on a wooden flagstaff fitting into the aft rail mount on starboard side of the cockpit. A Canadian courtesy pennant and a San Juan Sailing Logo pennant are stowed inside the nav station. Hoist them with the small halyards available at the mast. Please be sure flags and pennants are completely dry before stowing them again. Fly the Canadian courtesy pennant while cruising in Canadian waters.

Swim Platform Shower:

The hose and shower head are located inside a small cover door on the starboard side of pass-through to the swim platform along with the hot/cold controls.

Helm:

Please always cover the electronic instruments when not in use. The port quarter locker atop the coiled water hoses is a handy place to stow the covers when not in use.

Dodger & Bimini:

Please be gentle with the dodger! 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 any rag or sponge. Salt does dissolve in water, but not as fast as you might think. The salt crystals can remain undissolved for several seconds. Rubbing with even a soft cloth is like rubbing the glass with sand paper! Rather, to clean, please use generous amounts of fresh water from a pan from the galley and "flood" the glass to dissolve the salt crystals away.

Better yet, wait until you're at a dock where you can hose off the salt crystals. Also, please be careful not to scratch the plexiglass with rings or long fingernails. If the dodger glass is really clear, you can thank previous guests for their diligence. And we thank you too!

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

On hot days, you can roll up the center window panel and secure it with the snap straps. *Never fold the plexiglass; always roll it.*

Lazarettes and Quarter lockers:

Numerous items and pieces of equipment are located here. Refer to the inventory list and/or snoop. As a kindness to the following charter guests, kindly re-stow the items to their respective locations after use. Fenders are normally stowed in the swim platform lockers, but take care to keep them away from the wrapped heater exhaust pipe inside the starboard locker.

11. Dinghy & Outboard:

DINGHY

WHITEHAWK is equipped with a 10'2" Walker Bay Hypalon hard bottom dinghy rated to carry 5 persons. The dinghy is powered either manually with two adjustable oars or with the Honda 2.3 four cycle outboard normally carried on the starboard transom rail. Two oars and two dinghy seats are provided. Always wear your life vest when using the dinghy.

Towing:

The dinghy tows with the least drag if brought close to the boat--about a foot off the stern. This guarantees that you won't accidentally wrap the painter around the propeller when you back up! Also, it tows best when tied to the starboard stern pulpit stanchion base as illustrated below:



If tied to the port or starboard cleat the dinghy tends to "hunt". Moving it inboard to the starboard stanchion eliminates the "hunting" and keeps it away from the engine exhaust on the lower port side. Also, if the dinghy is tied such that the bow is slightly out of the water it will help reduce drag. Always tie the painter off twice to prevent accidental loss.

Beaching/Dinghy Care:

As owners, we would very much appreciate your special care when beaching the dinghy. Beaches in the San Juans are seldom gentle, sandy beaches; most often

they are rocky and covered by barnacles equipped with extra sharp rubber cutters. Here's what works best: When approaching the shore, weight the dinghy aft by leaning or moving the crew toward the back. Coming in, launch one person off the bow then offload everyone over the bow. Now crew lifts the dinghy above barnacle height and deposits it gently on the beach. Secure the painter under a rock or to a log – a rising tide can leave you high, dry and dinghy-less!

Whitehawk's dinghy comes equipped with two seats and two adjustable oars. To prevent loss of either keep them secured. Secure the oars inside the dinghy using the lower holding straps. This is especially important when underway or sailing.

Check to make sure the dinghy is fully inflated before leaving the dock. Located in the cockpit lazarette on the small shelf to the right is a foot operated pump if air is required at any time. Note that the oarlocks will not properly hold the oars if the dinghy is too low on air. They will pop out possibly with the loss of springs, pins or other hardware.

Use the Dinghy for Trash Management:

When not in use, and while underway, the dinghy is the best place to haul sacked trash. Never stow filled trash sacks or garbage in the swim lazarettes or the cockpit lazarette as the smell will come through to the salon. Liquid from any leaking sacks can easily run under the aft cabin bed and cabin soles through inaccessible spaces while traveling toward the bilge. Cleaning and deodorizing the boat from such mismanagement creates a horrendous problem. Please be aware, the costs to remedy this are significant and must be borne by the charter guest. They are avoidable. The dinghy is a handy hauler of trash sacks and can be easily hosed out if such a trash leak occurs. Trash is easily gathered and removed from the dinghy when at a dock or marina.

OUTBOARD

Fuel:

The four-cycle motor uses straight 87 octane gasoline for fuel –**Do not add oil.** The fill cap is located at the top of the engine. San Juan Sailing will be sure you have a full gas can tied in the dinghy. Do not store this can aboard WHITEHAWK. Placing it inside the salon, swim platform lazarette or cockpit lazarette even briefly guarantees lingering smelly fumes inside and it is very DANGEROUS! A spark from the cabin heater or stove could cause an explosion.

Starting the Outboard:

- 1.** Push the fuel valve lever (starboard aft corner of the outboard) aft to open.
- 2.** Pull out the choke switch (starboard forward corner of the outboard).

3. Open the air vent on the top of the fuel cap by turning counter-clockwise.
4. Make sure the red 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 start cord until it starts (usually not necessary more than 5 times).

Operating the Outboard:

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.
3. Shut the outboard off by pulling the red lanyard until the clip pops off.

To avoid prop damage, shut the outboard off and raise it out of the water before you reach the shore. Tip the outboard forward and out of the water until it clicks and stays in place. To put the outboard shaft back in the water, release the stainless steel lever on the starboard side of the shaft.

After Using Outboard:

1. Push the fuel valve lever forward to close (starboard aft corner of the outboard).
2. Close the air vent on top of the fuel cap (top of outboard) by turning it clockwise.

Stowing the Outboard:

The outboard is normally stowed on the outboard mounting block on the starboard stern pulpit rail with two hand tightened braces. The outboard is very light and can easily be transferred from the stern rail mount to the dinghy transom (and vice versa). Please do not cruise with the outboard on the dinghy as a large wake or gust of wind can overturn the dinghy. We also recommend taking the outboard off the dinghy at night. Do make use of the blue amsteel safety clip and line to secure the outboard to the rail or dinghy transom.

Troubleshooting the Outboard:

If the outboard engine won't start, review steps 1-6 above under "Starting the Outboard," to make sure you've done all 6 steps. There is a spare spark plug and spark plug wrench in the engine spares box below the nav station seat in case you need them. Replacing the spark plug can solve 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 stops, it's usually because the vent on the fuel cap is closed. If the engine is running fine but the propeller isn't moving, check the shear pin. It is likely broken –just take the cotter pin out to remove the propeller and replace the broken shear pin (spare pins are located forward of the shaft under the motor housing).

12. Docking/Mooring:

Dock Lines, Mooring Lines & Fenders:

Whitehawk has six black fenders and one blue step fender. When not deployed, they are normally stowed either in the cockpit lazarette or the swim platform lockers. Six dock lines are normally stowed in position hanging from the lifeline near their respective cleats.

In preparation for docking, put fenders on the appropriate side and adjust the lines so the fenders are barely above the water line. Typically, you will use 4 fenders for docking. When placing any fender near the stern, check to see that placement is not over the exhaust port on the port side, or the heater exhaust port on the starboard side. Make sure your dock lines are where you will be needing them and secured at one end before throwing them.

Extra fenders can be used for rafting to other boats or for extra protection if the docking situation puts another boat in close proximity to you.

Except for passing a line ashore, a boathook is of minimal use when docking. *WHITEHAWK* weighs 12 tons --a boathook is not strong enough to stop the boat's momentum and may buckle causing a fall. Do not attempt to hook and pull in to a dock or to fend off with a boathook.

Important: Never cruise with fenders down (with the exception of the fender step); it is hard on fenders and lifelines, and you risk losing them.

Before Leaving Vessel at a Marina:

1. At the DC and AC Power panels: turn off all green dot breakers and any yellow dot not needed.
2. Close all blinds for theft deterrence and further UV / heat load management at your discretion.
3. Lock the companionway door.

Tying up to a Mooring Buoy:

1. Approach the buoy going directly upwind if possible.
2. Mate has ready a mooring line both ends of which are fastened to one bow cleat on one side of the boat (which, does not matter).
3. The skipper now steers the mate into a position where he can reach the ring of the buoy with a boat hook.
4. The mate pulls up the mooring ring with the boat hook taking it in hand. He then lays down or hands off the boat hook.
5. Now the mate puts the loop through the ring and fastens the loop securely around the free bow cleat on the opposite side making it stationary. Sufficient slack is allowed so that the ring can return to the buoy.
6. Free either cleat of line and pull the line through the buoy ring to release.

Stern Tie Line:

The stern tie line is a 600 foot reel of line for stern ties. It is stowed in the swim platform locker. (Please do not cut the line; it is all needed for certain places in Desolation Sound.) Using the smaller diameter boathook or brush handle found in the lazarette, insert one end in the reel and position the reel across the stern pass-through to the swim platform. It can easily be unreeled from this position as the HANDLE is held by the seat brackets near their attachment point to the hull.



After the line is recovered on the spool it is usually very wet so it is best to leave

the spool hanging in the walk-through for a couple hours to dry before it is stowed.

Daily (Overnight) Checklist at Anchor or on Buoy:

- 1.** Turn "on" anchor light at DC panel during hours of darkness. (Not required in designated anchorage or if tied to buoy.)
- 2.** Turn off all unnecessary electrical items.
- 3.** Put on instrument covers at helm and over companionway. Remove ignition key.
- 4.** Secure wheel in center position by tightening center hub.
- 5.** Gather cockpit cushions and place under dodger to keep them dry.

If you experienced a lot of salt spray during the day, pour a gallon of fresh water on the dodger windows, but, again, PLEASE DON'T WIPE THEM AS THEY EASILY SCRATCH.

13. Electrical Systems/Power:

You have an electrical "fuel tank" aboard. It's called a battery bank. 13.5 volts is full; **Please note, 12.0 volts is empty.** Besides a separate start battery, *WHITEHAWK* has four large D cell house batteries in her battery bank each one providing 180 amp hours. While aboard *WHITEHAWK* you can read the charge level of the bank Monitor located on the the VHF radio. Besides of the battery bank, it drawn from the bank or alternator –very helpful awareness. Please glance provides often and Should the battery bank running the engine at partially, but not bank. As mentioned after a couple of days even with significant engine usage and good power conservation habits. You won't achieve a full charge again under engine power alone. If your batteries are down to 12 volts at rest, do spend a night on shore power to prevent permanent damage to the batteries. 8-12 hours charging ashore will nicely top off your batteries again.



on the Clipper Battery nav station wall just left of showing the state of charge shows the amperage being charged into the bank by the in enhancing consevation at the data this instrument adjust usage accordingly. charge fall to 12 volts, 1500 rpm for 30 minutes will altogether replenish the earlier, batteries will run low

Xantrex Panel:



Besides monitoring the battery bank charge level with the Clipper instrument, other electrical information and functions are available at the Xantrex panel to the right of the VHF radio. Converting 12 volt battery power to a limited amount of 110 volt AC power for outlets and appliances aboard can be done by pressing the "Invert" button. Only the receptical outlets, AC battery charger, the microwave, and the

water pump for the diesel heater run off inverted power --the water heater will not. Remember, the AC outlet breaker switches on the far right 110v AC panel must be "on" for the plugs to be live. (Do NOT use the inverter while connected to shore power.)

The battery charger is part of the inverter system and is switched on at the "Xantrex" panel above the nav station. The charge level of the batteries is indicated on this panel as well.

Batteries will be charged even if the battery switches are in the off (vertical) position on the panel below the nav station. This lower panel can normally be left alone during vessel operation.

Battery capacity is measured in amp hours (similar to gallons in your fuel tank) and amp hours are drained as electricity is consumed. Carefully monitor the gauges to make sure you don't draw down the batteries to below 12.0 volts. You will note that the green lights begin to turn to yellow as the power is drained from the batteries and voltage drops to a danger point. Below 12.0 the batteries can be damaged. Note: watching DVDs drains batteries VERY fast.

CONSERVATION GUIDELINES

Hint: Check your "electrical fuel level" before lights out nightly. If necessary, turn the fridge and freezer off to conserve energy overnight.

Remember: Key voltages are one volt apart:

- 13.5v (or higher) charging
- 12.5 v full
- 12.0 v empty

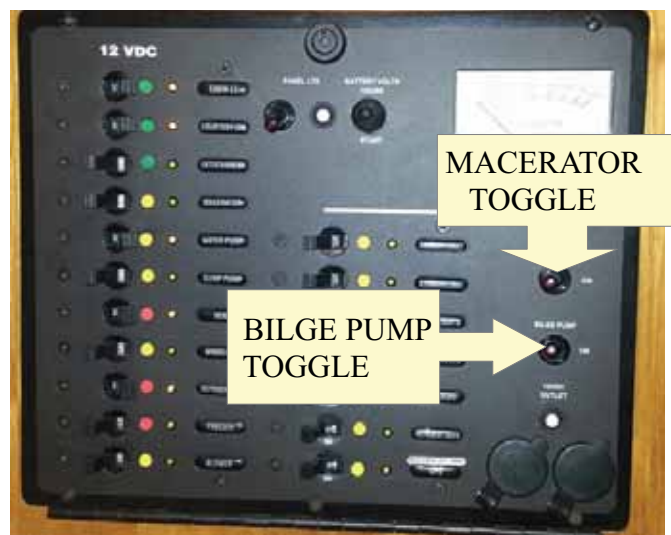
The 12VDC Panel:

Both the DC and AC panels have breakers marked with colored dots to indicate the typical / normal usage of the breaker. Green: NORMALLY CHANGED OFTEN; Yellow: TURN ON OR OFF only as needed; Red: NORMALLY LEFT UNCHANGED.

The Bilge Pump and Macerator Toggle Switches:

The bilge pump switch at the right of the panel is set to automatically come on when water rises in the bilge. However, it can be run manually by holding the toggle switch seen on the right side.

The macerator switch (also on the right side), must be be toggled and held to pump out the holding tank. Do this only after opening the holding tank discharge through-hull **AND** the red handled main holding tank valve. These valves are located under the in the bilge at the foot of the companionway (end of the counter). For Holding Tank Discharge Procedure **PLEASE SEE: page 45-46!**



Other DC breakers:

- 1. Chart Plotter/GPS/Autopilot.** A circuit breaker labeled "Instrument Lights," as well as one labeled "GPS and Autopilot" are located at the bottom of the 12VDC electrical panel. These must both be switched "on" for the chart plotter and GPS, autopilot and other instruments to function.
- 2. Cabin Lights.** Turn on the circuit at the 12VDC electrical panel labeled "cabin lights" to activate the most interior lighting switches (except the aft cabin and the red night-vision-retaining floor illumination).
- 3. Courtesy Lights.** This breaker is the red night-vision-retaining illumination along the cabin soles throughout the boat. The on/off switches are below

the hand hold at the galley counter area.

- 4. Water Pressure.** This water pump breaker must be “on” in order to pressurize the hot and cold water systems. An automatic pressure switch shuts the pump off until the pressure drops to a preset level (for example, a pressure drop caused by opening a faucet). The pump will then run until the system is repressurized. The pump has a built-in check valve to prevent backflow through the pump. So, 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.

IMPORTANT: When motoring or sailing when no one is below decks, turn off the water pump breaker. If left on, no one would hear it continuously running should a tank run dry. The motor will burn out.

Water tank selection valves are located on the aft wall of the main bilge compartment. Access these valves by lifting the floor board between the nav station and the dinette settee –the one nearest the dinette settee.

- 5. Running & Steaming Lights.** Please be advised that night passage-making is not permitted under terms of your charter agreement with San Juan Sailing. Only use these lights in cases of reduced visibility (like fog or when there’s heavy overcast).
- 6. Anchor Light.** The breaker controlling this light should be on all night in an anchorage. (The light is an LED --it won’t significantly deplete the batteries.)
- 7. Sump Pump.** This breaker need only be turned on when using the showers. The sump switches in the head will then be operational. **Hint:** A vacuum can develop in the shower drain if the sump is turned on while the shower drain stopper is closed. In order to open the drain in such case, a table knife may be gently inserted under the drain stopper to release the vacuum so the drain can open and sump pump operation be resumed to fully drain the shower pan.

When you leave the boat at the end of your trip the only two DC breakers to leave on are the ones for Refrigerator and Freezer.

The 120 V. -60 HERTZ Panel:

AC power is distributed through this panel when it is available from either shore power or from the inverter. The main AC breakers for shorepower are located on the ceiling level just inside the aft cabin door. To reset, push “Line 1” switch to the left.

When not on shore power, the AC outlets will only function when the "Invert" button on the panel labeled "Xantrex" is pressed to "on." It is unnecessary to use the inverter while connected to shore power.) In either case, the AC Outlet breaker panel switches (#1 and/or #2) must be "on" for the receptical plugs to be live.

Note: The water heater circuit will only be functional when on shore power. Also, it is best to wait two hours after plugging into shorepower before turning on the waterheater breaker or it may trip.

A/C power limits can be exceeded by using too many "high draw" appliances at once. If a circuit is overloaded and a breaker tripped, unplug one or more of the appliances in use, reset the breaker, and try just one of the appliances at a time, OR plug one appliance into another location. If none of the AC breakers will stay on, try turning off the water heater and/or refrigerator breakers temporarily to reset the breaker. In a while, turn them back on and all circuits should then remain active.

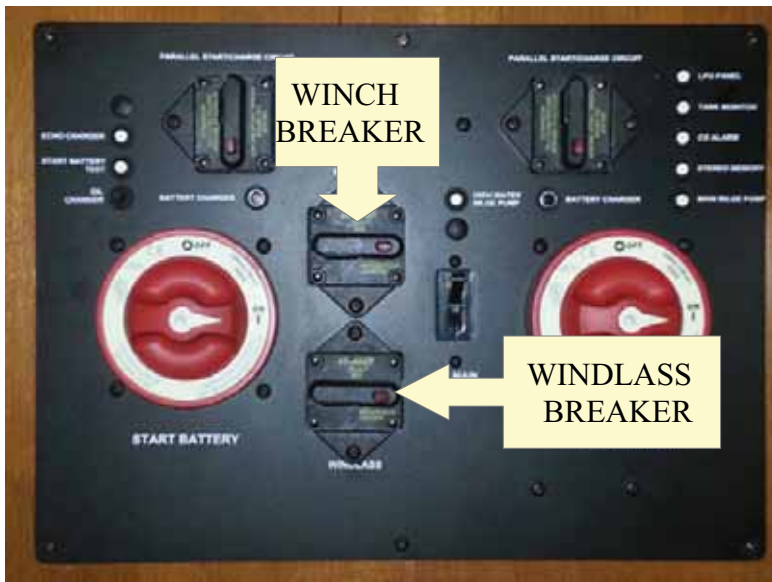
When you leave the boat at the end of your trip make sure you are plugged in to shore power and the AC panel reads 110 volts on the meter.



AC Panel Cabin Heat Breaker:

Note: the breaker labeled "CABIN HEAT" should remain on. It provides power to the furnace water pump. The circulation of water through the heating system is dependent on this switch remaining in the "on" position during the heating season. **DO NOT attempt to shut off the diesel-fired heater furnace using this breaker.** It could result in a damaged heating system. Rather, to shut down the heating system use the "Heat System" switch with the green light on the wall just forward of the nav station.

Battery Switch Panel:



This panel is located on the starboard side under the nav station and contains safety breakers for the DC system and dial switches used to isolate the start and/or house batteries from being drawn down when DC power is required by the system. Note both the windlass and electric winch breakers are located here should they need to be reset.

Both battery bank components will be charged automatically even if the battery switches are in the off (vertical) position. This entire panel can normally be left untouched during vessel operation.

14. Electronics:

WHITEHAWK is equipped with up-to-date navigational instruments including a new Furuno NavNet TZTouch2 MFD with built-in enhanced resolution Fishfinder, built-in GPS antenna, and a Furuno DRS4D-NXT solid state Doppler Radar. The MFD works much like a cell phone with panning, select, pinch zoom, and finger touch navigation. The charts are the latest. The charter guest is highly encouraged to visit beforehand the Furuno introduction videos on youtube.com for the NavNet TZTouch2 https://www.youtube.com/watch?v=nz_iHxi46-A and the DRS Doppler Radar instrument <https://www.youtube.com/watch?v=gYzSWssJ0VQ>. Also, a comprehensive e-guide (users manual) is easily accessed from within the MFD itself from the bottom of home screen. A Raymarine Evo 200 autopilot, wind instruments, depth and knotmeter round out the array of the displays and sensors. The instruments, of course, are networked together. The technical aspects and in depth operating instructions for *WHITEHAWK'S* instruments are well beyond the scope of this manual, but references are close by from the factory issued technical manuals and instructions located under the nav station seat. Manuals for the Raymarine Autopilot, knotmeter, depth display and the other Raymarine instruments are kept inside a white box labeled "Raymarine." Also, inside two dark blue canvas bags under the nav station seat there are numerous other factory manuals covering nearly all of the other boat equipment. Also, in the blue bags is a large black Hunter factory notebook illustrating the boat systems on board.

Autopilot: See section on page 15

Bow Thruster: See section on page 15

Cell Phone Charging Access:

WHITEHAWK is equipped with seven 12-volt cigarette lighter type outlets that may be used for recharging cell phones. The outlet locations are: 1 in forward cabin, 1 in forward head, 2 at nav station DC panel, 1 in galley, 1 in aft cabin, and 1 in aft head. These are not connected to a specific breaker, but work anytime the DC Main breaker is on. Also, since when the inverter is on you can also charge phones using a normal 110-volt charger. Cell phone coverage is good in Friday Harbor and Roche Harbor. It is spotty elsewhere.

Depth Sounder:

Depth information can be read from two locations. One is from the starboard side Raymarine instrument above the companionway and the other is from the MFD display. The information is obtained from a through-hull transducer located below the forward cabin sole.

Note: Digital depth sounder displays give you accurate readings in generally shallow water. They 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 underwater debris. These false reading often report very shallow water and can be heart stoppers unless you know you are in deep water from the charts. Again, it is most important that you know where you are. Also, if the reading on the display is blinking on and off, it means the unit is not getting a return signal (i.e. you are in very deep water). We strongly recommend leaving 10-12 feet of water under the boat at all times (a noted exception is Bellingham's harbor which at low tide can be as little as 8 feet deep). At any rate, use the depth sounder only as an aid to navigation in shallow water and remember that the real key to avoiding rocks is not the depth sounder – it is knowing where you are on the chart at all times.

IMPORTANT: ROCKS ARE THE SINGLE BIGGEST NAVIGATIONAL AND SAFETY HAZARD IN THE ISLANDS – BUT THEY ARE ALL MARKED ON THE CHARTS.

The depth sounder functioning at its best may not provide even 15 seconds warning as the boat heads for a rock collision.

Knotmeter:

Located above the companionway on the port side is the knotmeter/speed indicator. Speed is indicated in knots, or nautical miles per hour, and is obtained from a small spinning impeller on a through-hull transducer under the fore-cabin sole. The impeller wheel is turned by the flow of water passing along the hull and renders speed of the boat relative to the water. Differing somewhat is "speed over ground", or SOG, which is obtained by the GPS. These speed readings can both be read at both the knotmeter and/or from the chart plotter

Note: If the digital knotmeter above the companionway 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. (It's not recommend that you try to remove the impeller to clear it, unless you are VERY experienced in such things. An open hole in the hull is a scary situation, and if not plugged quickly, it can jeopardize the boat and the safety of your crew.) If the knot meter is temporarily "out of service", the GPS input to the chart plotter (SOG) provides an alternate and quite accurate speed indication.

Turn on the instruments by starting the engine then toggling "on" the two breakers at the DC electrical panel labeled "Instrument Lights" and "GPS and Autopilot".

The chart plotter is usually used without the radar function to minimize battery drain.

San Juan Sailing Maptech waterproof chart book and the roll charts (with the most active "killer rocks" marked in red) are your PRIMARY navigation aids. Keep them in the cockpit while underway. You can utilize the chart plotter for added safety to see if you are where you think you are on the chart book or paper charts.

Remember: ROCKS AND HAZARDS DISAPPEAR ON THE CHART PLOTTER WHEN YOU ZOOM OUT. Make a habit of being zoomed "in" so the rocks are visible. Get the "big" picture by using the charts. Both used together in this manner can help assure safe passage.

The only time 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.)

Note: You should have little need of the radar except for the highly unlikely event you are suddenly enveloped by fog. Fog is dangerous but rare in this area. It normally appears in the mornings in August and September and usually burns off by 10 or 11am. It is best to put on another pot of coffee

and wait until it clears. Departing from a safe location into the fog even with radar is contrary to prudent seamanship. It is safe to proceed CAREFULLY when fog becomes "reduced visibility"; that is, when you can see ¼ mile (about 4 football fields) in all directions. Radar can then be used to "see" beyond the haze as you travel. 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! To quickly take evasive action, you need to see these fast-moving vessels sooner-rather-than-later.

VHF Radio, Remote Access Mic:

WHITEHAWK is equipped with marine band VHF radios. The breaker marked "VHF" on the DC electrical panel must be on. The main radio is mounted at the nav station and a RAM mic is available for the cockpit binnacle if desired. If you plan on using the RAM mic at the helm it has to be plugged in before the radio is turned on, **THE RADIO CAN BE DAMAGED IF YOU PLUG IN THE RAM MIC WITH THE RADIO ON.** The RAM mic is normally stored in the nav table in the salon when not in use.

Note: Continuous monitoring of channel 16 (the hailing and distress channel) is a legal requirement when operating a vessel the size of *WHITEHAWK*. You may save a vessel or a life. You may hail vessels on channel 16, after establishing contact. Ask the skipper of the other boat to switch to working channels 78, 79 or 80 to continue communicating. 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 Charter Guest Reference Notebook on-board.

15. Emergencies

Fire:

Please note: Fire extinguishers onboard are located as follows:

1. **In the galley on the port side of the gangway steps.**
2. **In the aft cabin on the port side of the vanity stand.**
3. **In the cockpit lazarette.**

All are ABC fire extinguishers which are effective against electrical, grease, wood, and fuel fires. If you have a fire at the stove **turn off the gas solenoid switch to the right of the stove just under the sink counter top.**

Hitting a Rock, Log, or Running Aground:

Immediately check for leaks inside the boat. Especially check for cracks in the fore and aft sections of the bilge where the keel attaches to the hull. Check all keel bolts. Once you are sure no water is entering the hull, contact **San Juan Sailing at 800-677-7245 or at 360-671-4300** and proceed to the nearest harbor and have a professional diver check the hull, keel, prop, and rudder before proceeding on your vacation.

Water Coming In/Leaks:

1. **Determine the source of the incoming water.** This could be from damage to the hull, a faulty through hull or hose, or a problem involving the prop shaft. A diagram showing the location of the through hulls can be found in APPENDIX C at the end of these notes.
2. **Plug the hole.** There are red cone foam plugs found at each through hull location (Three cones are located beneath the floor bilge cover at the foot of the gangway stairs. Two more in the bilge just outside the fore cabin head). If the leak can be located, jamb a red foam plug into the leak site to stem the flow of water.
3. **The prop shaft seal could be the leak source.** Check easily by setting aside the vanity/engine cover in the aft cabin. If the prop shaft seal is broken where it exits the hull you should be able to see water flowing at the back of the engine. You may be able to slow the leak by tying a rag around the shaft and jamming it back against the seal. Be sure the two electric bilge pumps in the bilge are running –assure their breakers are on at the DC power panel. They should turn on and run automatically.
4. **Get the crew on deck and into life jackets.** Call for help on the VHF Radio (Channel 16) as needed. (use a PAN PAN call if the situation does not appear life threatening; a MAYDAY MAYDAY call if it is).
5. **An additional manual bilge pump is located in the cockpit.** The handle is inside the cockpit lazarette clipped to forward wall. Insert it in the pump handle receiver located in the cockpit on the port side wall of the pass-through to the swim platform. It is not far above the floor. Once inserted, pump up and down to assist water removal inside the main bilge.

All water intakes for the pumps are located in the bilge under the salon sole at the nav station area. The two electric pumps have automatic float switches but a switch on the electrical panel can also be used to activate the smaller pump manually. This switch must be held in the on position to activate the pump manually.

Domestic Water Shut-Off Point –Distribution Manifold:

Located beneath the galley sink is the water distribution manifold for both the hot and cold water. Domestic water leaks can be stopped here by turning the valves with the key attached nearby. The valves are well labeled for each section of the domestic water supply.



DOMESTIC WATER
AREA SHUT-OFF
VALVES

Steering Failure:

Make sure the auto pilot is on "Standby". If the steering system fails there is an emergency tiller in the port cockpit lazarette clipped to the forward wall. It fits on the top of the rudder post which is accessed by unscrewing the white plastic cap in the cockpit floor aft of the helm. You will want to reduce sail or power when using the emergency tiller.

Emergency Equipment:

Flares, a canister manual horn, etc. are located in the nav station or the starboard quarter locker. A second anchor and chain are in the lazarette.

Man Overboard:

1. **Quickly throw a flotation device to the person in the water** --Life Jacket, the Life Sling from the stern rail, a flotation cushion, or fender.
2. **Direct one person to keep their eyes fixed on the person overboard at all times.**
3. **Press the MOB button on the chart plotter** to set a marker of current boat position on the chart plotter.

4. **If sufficient crew are available besides the helm person, rapidly dispatch the dinghy** for fast closure of distance to person in the water to "roll-in" the person from over the side of the dinghy.

If the dinghy cannot be dispatched, there are several procedures one can use to get the big boat back to the man overboard. San Juan Sailing will discuss these in the skipper's meeting. These include the use of the Lifesling located on the port side stern rail. One recent method published by *Sail* magazine recently is called

THE QUICKSTOP MOB PROCEDURE (*Sail* magazine -April 2015):

1. Tack immediately without touching the jib sheets.
2. Let the jib back so you are hove-to.
3. Shout "Man Overboard!" Delegate a crewmember to keep eyes on the MOB and press the MOB button on the Chartplotter or any available GPS.
4. Deploy the Lifesling immediately before you sail past the MOB.
5. Ease the jib if need be to maintain 2-3 knots.
6. Gybe over so you end up half a boat length downwind of the MOB and circle the MOB until they can grab the Lifesling.
7. Furl in the jib (ideally while off the wind).
8. Head up and furl in the main. DO NOT START THE ENGINE. A turning prop can KILL. Shift into and leave the boat in reverse to stop the prop from spinning.
9. Pull in the Lifesling and MOB until they are as close as possible to the boat for boarding.

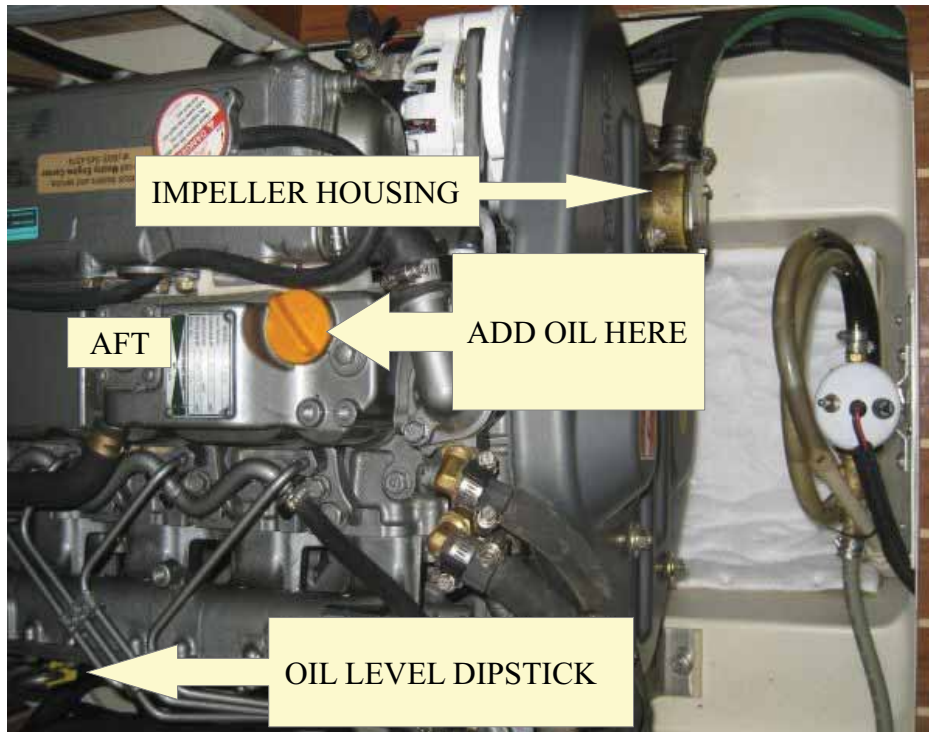
Important: Once at the boat, the simplest way to get the MOB out of the water is by assisting him up the deployed swim ladder (if conditions permit). Rolling the MOB from the water into the dinghy for transfer to the swim platform is next easiest.

16. Engine:

Whitehawk's Engine: **Yanmar Diesel --Model 4JH4E**

Oil Level:

1. Check engine oil level daily:
2. The oil dipstick is located in the middle on the starboard side of the engine about half way back on the engine (See photo on the following page)
3. If oil needs to be added, a full quart container can be found under the cabin sole just inside the aft cabin. **Please take care to not overfill.**



Coolant Level:

Engine coolant should be above "cold" level in the reservoir on the bulkhead of the engine compartment. There is spare coolant and distilled water in gallon containers under the cabin sole just inside the aft cabin.

Note: The coolant is a 50/50 blend of red marine antifreeze and distilled water in case you must purchase antifreeze locally.

Seawater Engine Uptake and Strainer:

THE ENGINE UPTAKE THROUGH-HULL VALVE MUST BE OPEN BEFORE STARTING THE ENGINE. CHECK THIS OFTEN. The valve is located at the bottom of the companionway steps just under the sole. A closed seacock will cause the plastic muffler to melt rendering the engine useless. That's a big repair expense for you. If you **MUST** close the raw water intake to service the engine, or clean the raw water strainer, hang the engine keys over the seacock handle as a safety measure.

Fueling:

You are putting in diesel, right? **Green hose only!** Total tank capacity is 51 gallons.

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 1/2 full, you should refuel at your next opportunity. NEVER let the fuel level fall below 1/4 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.)

Startup:

1. Turn ignition key to the left for 10 seconds to activate the glow plugs.
2. Then turn key to the right to start.
3. To prevent stalling, don't plan to leave the dock until the engines have idled for at least 3 minutes to warm up. Temp gauge should indicate an initial rise in temp.
4. Idle out of the harbor / dock area.
5. Keep engine speeds below 1000 RPM until temp is above 125 and below 1300 RPM until engine temp reaches 150 degrees.

Shutdown:

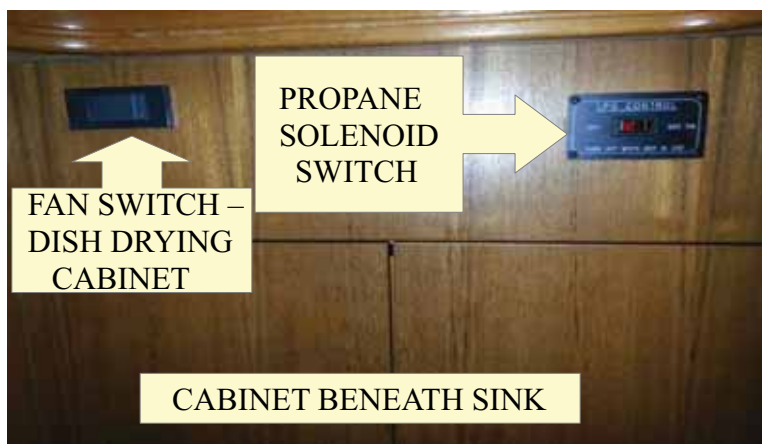
Key Point: Please **do not turn off the key** while the engine is **RUNNING**. This can damage the alternator! Instead, follow these steps:

1. Make sure the engine is at idle and the gearshift in neutral.
2. **Push the "Stop" button** above the key until the engine dies.
3. Lastly, turn off the key.

17. Galley & Outdoor Grill:

WHITEHAWK'S gourmet galley is something special. A pantry, a fan powered dish drying cabinet, a freezer that keeps ice-cream, a front opening refrigerator, Corian countertops, a microwave, an electric coffee grinder, a well stocked spice rack, a toaster, and stainless steel gimboled 3 burner stove all set it apart. Place settings for eight are included and a good selection of high quality pots, pans and utensils.

Turning On the Propane:



Two propane tanks are located inside a sealed and vented white propane box located inside the cockpit lazarette. Remove the lid by undoing the four lid latches to access and turn on the propane.

Completely open the valve of the connected propane tank. Please note two small yellow handled valves located lower

down between the tanks. One allows gas to flow to the galley while the other allows gas to flow to the BBQ/grill. The galley valve is kept in the "on" position while the grill valve is turned to "on" only when using the grill.

IMPORTANT: Any use of propane appliances (grill included) requires that the gas solenoid be switched on. Standing facing the galley sink, find the switch located just below the edge of the counter top. It lights up red when in the "on" position. For safety's sake, always shut this switch off when finished using the gas.

Lighting the Stove:

- 1.** Make sure all the stove control knobs are in the "off" position.
- 2.** Turn on the propane solenoid switch on the cabinet face just below the sink (It is labeled LPG Control). If all is well, a red light will appear.
- 3.** Push a stove control knob in and turn to the left to "Ign" and push the red button on the left of the stove to spark the ignition. The burner should light immediately or within 30 seconds if the tank has just been turned on. When lit, continue to hold the knob in for 5-7 seconds (warming a thermal couple) and then release slowly. The flame will now remain on. You may then operate from high to low like a normal stove by turning the knob counter-clockwise.
- 4.** When finished with the stove, shut off the burner knobs and lastly, shut off the solenoid switch. You can leave the propane tank turned on, but always make sure the solenoid (LPG Control) switch is off when finished with the stove.

Lighting the Oven:

- 1.** Make sure the oven control knob is in the "off" position.
- 2.** Turn on the propane solenoid switch on the cabinet face just below the sink (It is labeled LPG Control). If all is well, a red light will appear.
- 3.** Turn the oven dial to "pilot on".
- 4.** Push in the red oven safety knob.
- 5.** Light the burner in the broiler area, with a lighter or match. Be patient as the gas travels to the oven burner.

6. Hold the safety button pushed in for about 10-15 seconds and slowly release the button. If the flame goes out, repeat the lighting process.
7. After the pilot is lit, turn the thermostat to the desired temperature. It will take 30 to 60 seconds to heat the control valve to release gas to the burner to ignite it.
8. Always turn the oven thermostat to the "Off" position when the oven is not in use, and remember to turn the solenoid off when finished with oven and stove.

Using the Outdoor BBQ/Grill:

IMPORTANT: Prior to using the grill, which is located on the aft port rail, the dinghy must be moved to the starboard side of the boat to prevent any hot or burning material from falling into the dinghy.

Operating the Grill:

The party size circular Magma Bar-B-Q grill is fueled by the main propane tanks. **The small yellow valve between the propane tanks inside the propane locker must be turned to the "on" position AND the solenoid switch below the galley sink activated for the grill to operate.** Depress and use the small black control knob immediately below the grill itself in conjunction with a hand held lighter to complete the grill lighting process. Do this with the LID OPEN! You are now operating the second most dangerous piece of equipment on-board other than the boom.

When finished, shut off the valve at the grill and ALSO the yellow valve in the propane locker to prevent accidental depletion of your gas supply. **Take care that the propane locker lid is aligned by fastening all four latches so that the locker seal does not leak.**

Cleaning the Grill:

As a courtesy to the next guest, please use the wire brush attached to the BBQ to clean it after use. A good method of cleanup is to run the grill burner on high with the lid closed for 10-15 minutes. This will char remaining greasy residue so it can be loosened with the attached wire brush when things have cooled down. The grease drip cover and the circular grates can be removed for cleaning, but beware --grill parts can easily go overboard at this time.

Cooking In General:

Steam Caution: Please point the tea kettle away from any of the woodwork near the stove to protect the finish. Also, when lots of steam is created in the cooking process (such as when using the crab cooker), please open a portal and/or hatch to prevent moisture buildup inside the boat. You will be more comfortable.

Caution Cooking Underway: Do not attempt cooking in high wave conditions or in strong, gusty winds. Food will definitely go flying! For milder conditions underway, you can gimbal the stove by pushing the rod under the oven door to the right so it is not inserted into the hole in the metal plate which is secured to the cabinet. While on gimbals be aware, however, that the stove's center of gravity can shift rapidly by opening the oven door. Cooking pots can tip fast. It is best to secure the stove with the rod when opening the oven.

Microwave:

1. When not on shore power, the microwave runs off the inverter. Make sure it is "on" at the Xantrax Panel, and also that the "Microwave" breaker is turned "on" at the AC Panel.
2. At the microwave, push "Time" to enter minutes and/or seconds, and then push "start".
3. To set clock, push "clock", then "clear", then enter the time, and push "clock" again.

Counter Tops:

Please, kindly do not cut, chop or place hot pans on the Corian surfaces or the table top. Either can be damaged quite easily by too much heat or by knife cuts.

You will find two cutting boards and two silicone pot holders which can assist in protecting these surfaces.

Ceiling Lights and Bulbs:

You will find that most of the fluorescent ceiling lights have been rewired to use only one LED bulb to conserve power. Additional bulbs will not work. Most find this lighting level is more than sufficient.

Dish Drying Cabinet:

The dish drying cabinet makes a great place to store plates and dishes as well as

dry them. After rinsing the dishes, place them in the cabinet and turn on the inside fan using the switch on the cabinet under the sink. It is located just to left of the propane solenoid switch. Silverware can drain on a towel and be wiped dry and placed in its tray above the cabinet. To conserve power don't forget to turn off the fan when not needed.

Refrigerator:

The refrigerator's breaker must be turned "on" at the DC electrical panel. The temperature thermostat control dial is located inside the refrigerator, on the left behind the light. It works well at a quarter turn, keeping the temperature around 38 degrees (more than a quarter turn will freeze lettuce at the rear of refrigerator). If power conservation is not an issue, the refrigerator can be on at all times. You may want to turn the refrigerator thermostat down one mark (there are no numbers) or even shut it off entirely at night if the batteries are becoming discharged over a period of days off shore power. This will help conserve house battery power significantly. Return it to normal settings in the morning.

To drain the water from the refrigerator when defrosting, for cleaning, or in case of water build-up, remove the narrow tray at the back wall of the refrigerator, dump, wash and replace.

Freezer:

The freezer, located to the left of the oven, is entirely independent of the refrigerator. The control knob is on the right behind the light and keeps ice cream frozen on the 4th mark. The freezer also has a DC power breaker that must be in the "on" position and can be turned off overnight to conserve power.

Small Appliances:

Take care not to overload the outlets. For instance, since the toaster uses a significant amount of AC power (from either shorepower or inverter), using another AC appliance at the same time may cause the breaker to trip. Unplug one of the appliances and reset the breakers at the AC panel labeled "Outlet #1" or "Outlet #2". Again, when using shore power the breakers near the ceiling in the aft cabin will be the ones most likely to trip and need resetting.

Waterheater:

Please note that the waterheater breaker may trip to "off" when first plugging in to shorepower. You may have to wait up to two hours for it to hold in the "on" position. This is normal.

18. Heating System:

WHITEHAWK is equipped with a highly efficient hydronic heating system using a WEBASTO DBW-2010 diesel-fired furnace. The furnace unit is located and is accessible inside the stern swim platform lockers. Varied temperature levels can be attained inside the boat by using three zone thermostats located --one in each cabin and one in the salon. Water is circulated by an AC powered water pump to small radiators with fans and air vents to provide heat to the various locations. The heater is sized to heat the entire boat to toasty warm temperature within minutes and to maintain a comfortable temperature while the system is on.

Before Startup:

IMPORTANT: Prior to starting the heater assure that at least 4' of space can be maintained at all points around and in front of the furnace exhaust vent located on the starboard side of the boat at the stern. Any object such as a fender, the dinghy, a dock or a piling closer then this distance could catch fire or be damaged by the hot exhaust blast.

Make sure the heat vents are open where heat is desired.

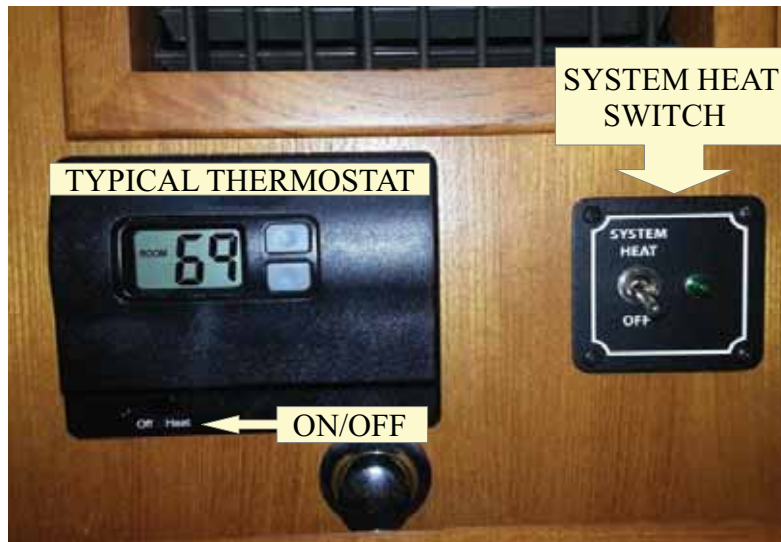
Vent Locations:

1. AFT CABIN -EITHER SIDE OF THE FOOT OF THE BED.
2. AFT HEAD -SIDE OF THE VANITY
3. GALLEY -UNDER THE SINK CABINET
4. SALON – AT THE END OF THE SINK AREA SETTEE & UNDER THE DINETTE TABLE
5. FORWARD CABIN -BELOW THE SETTEE & INSIDE THE SHOWER

Start Up:

With the furnace exhaust vent clear, turn on the inverter at the Xantrax Panel and make sure the AC breaker labeled "Cabin Heat" is in the "on" position. This will make AC power available to the heat system water pump. Next, set one or more of the 3 zone thermostats to "Heat" using the small switch at the bottom and set the desired temperature level for that zone using the gray buttons.

Finally, activate the system itself by toggling on the "System Heat" switch located on the wall just forward of the nav station. You will hear the furnace start up in the stern area. Allow a few minutes for the furnace to heat the circulating water in the system. When the circulating water in the system is hot, you will notice the fan blowers start up. These will continue to cycle on and off to maintain thermostat temperature settings all the while the "System Heat" switch is on.



The aft head heating setup varies slightly from the other areas. There is no thermostat but only a manually switched fan. Simply turn heat off or on as desired using at the switch located on the side of the vanity.

Important: Remember to turn this blower off when not in use as otherwise it will continue to run and consume battery power.

While System Heat is On:

Please make sure the various zone hot air blower vents remain unblocked and in the open position. It is easy for them to be blocked some object, or accidentally kicked shut. In the case of the aft cabin bed area, it is easy for a blanket or sheet to fall in front of the vents. Blocked vents can burn out a blower motor.

Shutdown:

When the furnace has ended a heat cycle, simply toggle off the "System Heat" switch to shut down the whole system.

Turn off the aft head heat fan motor if it is running.

The AC "Cabin Heat" breaker for the heater water pump as well as the thermostat settings can be left "as is" --ready to be called upon next time the "System Heat" switch is activated.

SPECIAL CAUTION: NEVER TURN OFF THE MAIN DC POWER SWITCH ON BATTERY SWITCH PANEL UNDER THE NAV STATION WHILE THE HEAT SYSTEM IS ON. DOING SO WILL DESTROY THE HEATER BY INTERRUPTING ITS REQUIRED COOL DOWN PROCESS.

19. Holding Tank & Heads:

Holding Tank Capacity:

WHITEHAWK has a 45-gallon holding tank which needs to be emptied about every two days to avoid leaking sewage or, worse yet, an exploded holding tank...a real "vacation ruining" event! (San Juan Sailing staff will discuss holding tanks, use of No-Flex-Digester, and overboard discharge and pump outs upon your arrival.)

Holding Tank Maintenance & Monitoring:

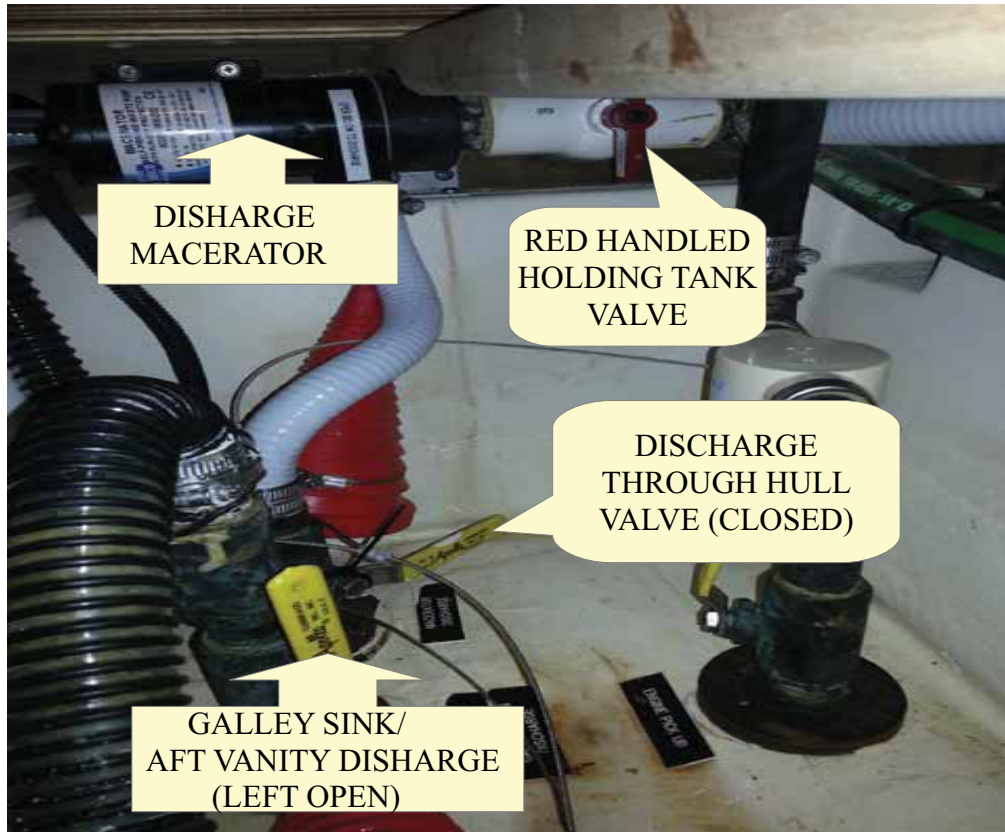
Important: First one up in the morning puts 1 tsp No-Flex in the toilet (and thus into holding tank). You'll find it in a white plastic cylinder in the head. This enzyme promotes holding tank digestion and reduces odors. Failure to do this could foul the tank gauge.

Keeping a close eye on the holding tank level at the gauge prevents problems. It is imperative to empty it before the gauge shows full. Remember, water tank and holding tank levels are checked at the monitor located on the wall adjacent to the nav station. For the holding tank reading, turn on the tank monitor using the left hand knob and set the tank selection switch to #7 using the right hand knob.

Holding Tank Discharge Offshore:

In U.S. waters, the holding tank may be legally pumped overboard in deep water more than 3 miles from land. Discharge of waste overboard is permitted in Canada except in harbors and near land. To discharge the holding tank (refer to the photo illustration below):

1. Open the discharge through hull valve located in the bilge access at the foot of the companionway stairs.
2. Now open the red handled holding tank valve to the right of the discharge macerator. Open is red handle horizontal.
3. Turn on the macerator breaker on left side of the DC panel and hold on the macerator toggle on the right side of the panel opposite until the tank gauge reads empty.
4. Close both the holding tank valve and the through hull valve when finished.



Note: Since the through-hull discharge valve is below the water line, be underway at a modest speed while discharging the tank. Also, if you are boarded by the U.S. Coast Guard, and they ask to see the Y-valve, explain to them that this boat has no Y-valve. The heads pump directly to the holding tank and there is no way to flush the heads directly overboard.

Holding Tank Shore Pump-Out:

The deck fitting for shore pump is amidships on the port side. Follow the instructions at the Pumpout Station or ask your Checkout Skipper for an explanation before you leave. San Juan Sailing will provide you with a map showing the location of pumpout stations in the islands. When you have finished pumping out the holding tank at a shore facility, please run about 5 gallons of fresh water into the tank through the deck fitting to rinse the tank, and then pump it out again. Thank you!

Location of Forward Head Light Switch:

It is just inside the head door underneath the vanity mirror cabinet.

Electric Quiet Flush Heads:

WHITEHAWK has Quiet Flush electric heads –the nicest marine heads ever --all electric; no pumping required. To operate these an upper and lower toggle switch is located adjacent to each head. The lower switch fills or empties the bowl depending on its position. The upper switch brings in water and flushes simultaneously. Odor is minimized by the system's use of fresh water rather than sea water. Very nice.

Further, with each head flush, a dedicated macerator is called into action to pre-grind the flushed solids before they enter the holding tank. These macerators are in addition to the main holding tank discharge macerator used when discharging overboard. Although this system and these heads are of superior design, all precautions regarding use of heads given by San Juan Sailing should be heeded to prevent trouble. Especially this one: "Nothing goes down the toilet that hasn't been digested. Toilet paper and feminine articles go into the waste basket, plastic bag, ziplok, whatever...but not down the toilet."

Flushing only digested waste keeps everyone happy. It's worth it!

To Flush the Head:



The top switch of the switch labeled JABSCO both fills and flushes the bowl of the head simultaneously. The bottom switch toggles between "bowl fill" and "flush". Press the left side of the lower switch to run enough water into the bowl to cover all solids. Next, press the right side to flush. Repeat left-right until the solids disappear. In consideration of others, wipe the bowl clean with paper and dispose of the soiled paper into a bag.

20. Sailing, Sails & Rigging:

WHITEHAWK is a delight to sail. Her sail plan (a medium-sized furling jib and furling main) was selected with consideration for single or short-handed sailing. Once she has way, WHITEHAWK is easily steered with small rudder changes. Her perfect breeze is 10-20 knots with heel at 5-20 degrees. Full sail can be carried in winds up to 17 knots. If you reach the edge of your comfort envelope sooner, don't hesitate to shorten your sails.

Headsail (Jib):

The 110% genoa/jib has roller furling for your convenience. Whether fully or partially deployed, you'll have good sail shape.

- 1.** Handling: 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. You should never 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 easily.
- 2.** Reefing: Simply ease the jib sheets (while keeping control of them), then pull in the jib reefing line until only the amount of sail you desire is deployed cleating it off the reefing line and securing the sheets when finished.

Mainsail:

The "main" has an in-mast furling system. It is essential to have in mind that the system is constructed of a sail roller mechanism that looks like a vertically mounted winch installed above the deck near the base of the mast (it is easily seen from the cockpit on the aft side of the mast). A long loop of line runs to the cockpit on the port side to turn this roller. One leg of the loop is labeled "Furl-In". It winds up the sail inside the mast if it has been deployed. Its counterpart loop leg is labeled "Furl-Out". Since both are part of the same looped line, both must be released for the loop to operate the sail roller.

Movement of this loop is opposed by another line on the starboard side called the "Outhaul". It is attached to the clew of the main and runs to and from the mast along the boom as the main moves in and out. Since the loop and the Outhaul are connected to the main, all three lines (two loop legs and the Outhaul) must be considered if the main is to be brought in or deployed.

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 making it more "plumb". 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 first. Now you may throttle down and place the engine in neutral, sailing on the head sail alone. (After a few minutes of "cool down", kill the engine.) Now you are 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 in both the main and head sails while you're sailing. If wind is increasing, bring in some sail. When you think it may be time to reduce sail, remember the adage: "It's likely already too late."

Deploying the Main:

WHITEHAWK'S mainsail does not cooperate well when the boom is pulled down too tight. Give the boom vang a little "play" by opening the line clutch marked "Boom Vang" and pull out about a foot of line before closing the clutch again. Now loosen the Main Sheet by pulling out about 3 feet of line as well securing the clutch.

To deploy the main, release the clutches of Furl-In and Furl-Out (the two loop legs) on the port side, then wrap the end of the Outhaul around the winch on the starboard side. Release the Outhaul clutch and operate the starboard winch to pull in the Outhaul. This brings out the main. Once the main is deployed, the clutches can once again be closed.

Hints:

1. Slight wind pressure on the main can significantly help the main to deploy.
2. 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 (usually the hang-up is a stuck Furl-In or Furl-Out line.) The line clutches provide one-way stops, so you don't need to open them when winching in.

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 sail while sailing and from the safety of the cockpit!

Simply wrap the "Main Furl-In" line on a winch. Next, wrap the opposing "Outhaul" line with a minimum of two wraps around another winch. Since the sail is under load you will need to maintain control of the Outhaul line as it is slackened off to bring in the sail (It is best not to lock the Outhaul line on its winch since it needs to be free to pay out slowly). When you are ready, open the Outhaul line clutch while maintaining slight tension and winch in the Main Furl-In line, while slowly paying out the opposing Outhaul line. When you have shortened the mainsail to a position appropriate for the current wind conditions, close the line clutch on the Outhaul. You've successfully reefed the main!

Note: Remember, "Reef often and reef early." You can always "shake them out" if you decide you've been too conservative.

After you've reefed 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 Completely:

When you're ready to bring in the sails, start by furling in the main first. (Think of furling the main as reefing "all the way".) After 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). Winch in the Boom Vang slightly (the Boom Vang can exert tremendous pressure on the boom). This pulls the boom down slightly to help the mainsail enter the mast without wrinkles –a possible hindrance to a future deployment.)

To bring in the main, wrap the end of "Furl-In" around the port winch securing it to the winch. Release both the Furl-In and Furl-Out clutches so the loop will operate. Now release the Outhaul clutch on the starboard side to free the sail for travel. The port side winch now can operate to pull in the "Furl-In" line which winds up the sail. Maintain adequate tension on Outhaul while drawing in the sail to ensure a tight wrap inside the mast. (with a minimum of two wraps around the winch, not locking the line as it needs to pay out slowly). Completely furl the main until only about 1 foot of sail (at the clew) remains outside of the mast. When the main is once again inside the mast, close all three clutches.

Important: Be sure to keep plenty of tension on the Outhaul when reefing/furling the main 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're becalmed), tension on the Outhaul line is the ONLY

force that will get you a nice tight wrap. 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 "idle speed" 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.

Whisker Pole:

WHITEHAWK is equipped with a single Seldon Whisker Pole stowed in vertical position on the forward side of the mast. A single whisker pole is typically set on the windward side of the boat when sailing downwind. We have found that we can use the pole when the apparent wind is within 10° to 50° of dead astern – or even sail by the lee if not using the main.

If this is new equipment to you, try out the whisker pole for the first time on a light-air day.

Please Note: Whisker pole guys are located under the nav station seat and are labeled.

Deploying the Whisker Pole:

Unfurling the headsail with the pole in place is easy as long as you remember to move the jib car aft.

- 1.** Set the jib lead block as far aft as possible on the side that you will be setting the pole.
- 2.** Take the pole out of the chock and swing it forward and outboard over the lifeline on the side that you want to set the pole on. Hook it onto the jib sheet on that side.
- 3.** Cleat the aft guy to a deck cleat behind the shrouds, taking care to keep the aft guy inside and clear of the jib sheet. You want just enough slack in the line so that when the pole is lowered to horizontal in step 6 below, the pole can't go more than about 6" forward of the forward side stays. The first time you use the pole, you will have to guess at the amount of slack to leave in the line and possibly adjust it as you lower the pole in step 6 below. After the pole is set, you can mark the line with a piece of tape then in the future just cleat it at the mark.
- 4.** Cleat the fore guy to your forward deck cleat, again taking care to keep it inside and clear of the jib sheet. Here, you want just enough slack so that

when the pole is horizontal and extended, it will be near the forward side stay but cannot swing aft and hit it. Again, you will probably have to do some adjusting the first time you use the pole, but if you mark the line with tape when it is set correctly you can quickly cleat it off in the future.

- 5.** Uncleat both jib sheets, making sure that the bitter ends are secured. The lines need to be free to run as the pole position changes.
- 6.** Use the topping lift and the up/down line to move the pole into a horizontal position at the approximate height desired, adjusting the guys as needed.
- 7.** Use the control line on the pole to extend the pole, adjusting the fore guy as needed. NOTE: Only extend or shorten the pole with the jib furled (or dropped), in accordance with instructions from the pole manufacturer.
- 8.** When the pole is fully extended, the fore and aft guys should hold it 3" to 6" ahead of the forward sidestay. Make certain that it is not rubbing on the stay.
- 9.** Unfurl (or hoist and sheet in) the jib, sheeting in so that the clew is just at the pole jaws. As winds increase, you can leave part of the jib furled and not extend the pole all the way.
- 10.**
Make any adjustment you need to the height of the inboard end of the pole so that it is perpendicular to the mast. Then adjust the aft guy and sheeting as necessary. You may have to ease the aft guy some so that the pole can swing further forward for the optimum sail position.

The whole purpose of the aft guy is to prevent the pole from swinging forward as you are setting or stowing the sail. If the pole is allowed to go forward to the fore stay, it takes a great deal more effort to unfurl the sail and it is hard to get a tight wrap when furling the sail. The aft guy is not needed while sailing with the pole, although it can be left in place so that it's not necessary to remember to hook it up before stowing the pole.

Jibing:

- 1.** Stow the pole (To stow the pole, reverse the steps used to deploy).:
- 2.** Deploy on opposite side.

Stowing the Pole:

To stow the pole, reverse the steps used to deploy:

21. Troubleshooting:

Steering is locked: The autopilot is engaged. Press autopilot "standby" button to release.

Engine Overheat:

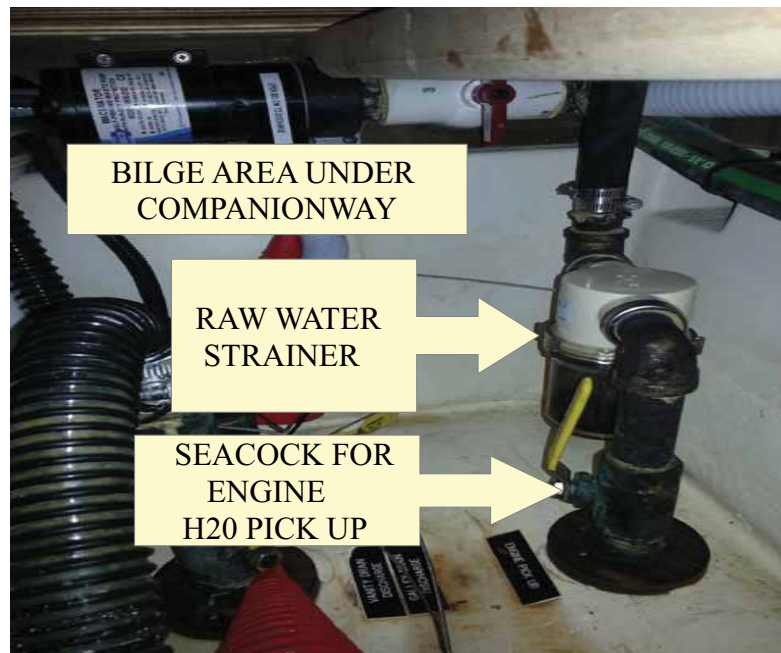
If the temperature gauge reads high or the buzzer sounds while the engine is running, or the engine just smells hot follow these steps:

With the engine still running, quickly check 3 things: check the oil pressure gauge, the engine temperature gauge and if water is flowing out with the exhaust gases on the port side. Then, shut down the engine.

If the oil pressure gauge read high, check the oil level. Call San Juan Sailing for advice.

If temperature gauge read high and/or no water was flowing out with the exhaust gases on the port side of the boat the engine belt may be broken, the water strainer plugged with eelgrass or other debris, or the impeller may be broken and needs replacing.

Clearing the Water Intake Strainer:



1. Under the galley sole, shut off the seacock labeled "Engine Pick Up."

- 2.** Hang the engine keys on the handle to remind you to open it when done cleaning the strainer.
- 3.** Open and shut the seacock quickly to make sure water can pass freely through the intake pipe. Don't worry, the small amount of incoming water will flow to the bilge and be pumped out automatically.
- 4.** Unscrew the clear cannister and remove any eelgrass or debris from around the screen. Remove the screen strainer from inside while **SAVING THE GASKET FOR REUSE.**
- 5.** If the strainer screen is clogged, clean and rinse it in the galley sink.
- 6.** If seacock and strainer are clear, the problem is likely the pump impeller or a broken belt. Is the belt O.K.?

Reassemble the strainer and parts and **REOPEN THE SEACOCK.** Now you can reclaim the engine keys!

Removing/Replacing the Engine Water Pump Impeller:



Engine Compartment

- 1.** Find the spare impeller in the box labeled "Engine Spares" usually stowed under the nav station seat.
- 2.** Under the galley sole close the "Engine Pick Up" seacock. As a safety measure, hang the engine keys atop the seacock after shutting it off as a

reminder to reopen it before starting the engine.

- 3.** Locate the impeller housing just below the alternator.
- 4.** Remove the cover plate after placing a trash bag under the area to capture the small amount of seawater that will expel from the pump housing when the cover is removed. You will see the impeller, shaped like an asterisk. It will likely have one or more broken or damaged arms. (If no arms are broken, the problem isn't the impeller – consult a mechanic or call San Juan Sailing for advice.
- 5.** If an arm is broken, slide impeller out. If it doesn't come out easily, locate and use the gear puller in the Engine Spares box to remove the impeller. For assistance, call San Juan Sailing or consult with a mechanic.
- 6.** Clean out pump chamber, trying to get any pieces of broken impeller out of the water system.
- 7.** Lubricate the new impeller with hand soap or dish washing detergent.
- 8.** Align the spline shaft with the matching pattern on the impeller. Note that the impeller spins in a clockwise direction when viewed from the access cover side, therefore bend the blades of the impeller with this rotation direction in mind.
- 9.** Replace the cover with a new gasket and tighten the screws firmly.
- 10.**
Open seacock with the strainer canister loosened to allow water to fill the canister and cover the screen inside.
- 11.**
Shut the seacock, tighten the canister, and **open the seacock again.**
Check that there are no leaks either at the impeller or the cannister.
There must be must no leaks. Reclaim the engine keys.
- 12.**
Start the engine and check for any leaks.

Replacing the Alternator/Engine Belt:

- 1.** Remove the cover from the front of the engine and confirm the belt is loose or broken.
- 2.** Retighten belt to 1/2" free play if it is undamaged. See step 4 below.

- 3.** If the damaged or broken, find the spare belt in the box labeled "Engine Spares" usually stowed under the nav station seat.
- 4.** Remove the old belt and loosen the belt tensioner above the alternator arm to provide slack. Install belt. Retighten the tensioner arm to allow 1/2" of belt deflection.
- 5.** Reinstall engine front cover.

Outboard: See page 31.

Domestic Water Leaks: See page 59

Emergencies: page 32-34

22. Water System:

WHITEHAWK has three water tanks with a total capacity of 140 gallons – a starboard, a port, and a bow tank. The bow tank is the largest of the three. Tank selection valves are located on a water tank manifold hung on the aft part of the main bilge under the salon sole between the nav station and dinette table. They are well labeled.



Changing Water Tank Source:

When you use water and then hear the pump run without stopping, it is time to switch from an empty tank to a full tank.

- 1.** Shut off the water pump breaker at the DC panel to stop the running pump.
- 2.** Lift the sole panel, locate the manifold and red wrench key for valve operation.
- 3.** Change the vertically positioned valve arrow by positioning it horizontally.
- 4.** Turn on a full tank by positioning its valve arrow in a vertical position. A quarter turn on the valve suffices. **Remember:** Do not leave both valves open –use only one tank at a time.
- 5.** Turn the water pump breaker on again.

Now the water pump will run until the new full tank is pressurized and stop.

Caution: It's okay to leave the water pump breaker on while someone is below decks, but please turn the water pump breaker "off" when motoring or sailing. Should one of the tanks run dry while underway, the pump will run continuously and burn out. It cannot be heard from the cockpit above the sounds of motoring or sailing.

Tank Level Monitoring:

WHITEHAWK has a tank level indicator panel located to the right of the nav table. Turn the left rotary knob to "on," then select the tank desired using right knob and the panel's boat layout diagram. W1, W2, and W4 are the water tanks, and W7 is the holding tank. The gage will then show the current level of the selected tank.

Hot Water:

WHITEHAWK'S water heater is located under the settee on the port side and adjacent to the salon/forward cabin bulkhead. It is heated in only two ways –by engine heat when the engine is running or when the boat is plugged into shore power. The water heater does not function using the inverter. It is not wired for that because it requires too much power. Neither is it practical to run the engine for a short period in the morning to obtain hot water. It requires too long a time. Fortunately, however, the tank is well insulated and retains hot water overnight (at very least it is warm!).

Starting out with all the tanks full, use the bow tank first because it is somewhat larger than the two individual lateral tanks and combined with the weight forward of the all chain rode it makes sense that depleting some of the water weight forward will bring the boat into better balance.

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 the tanks too often. When necessary to fill, you will find a white water hose in the cockpit port quarter locker. The deck key for the filler caps is on a float inside the nav station table.

Swim Platform Shower:

Hot and cold controls are located under a small door on the starboard wall of the pass-through from the helm to the swim platform. The hose is weighted to ease its return below so the door can be closed. Gently pull it up and down in short strokes while generally working it in the downward direction until it is fully lowered.

Domestic Water Shut-Off –Distribution Manifold:

Located beneath the galley sink is the water distribution manifold for both the hot and cold water. Domestic water leaks can be stopped here by turning the valves with the key attached nearby. The valves are well labeled for each section of the domestic water supply.



DOMESTIC WATER
DISTRIBUTION
SECTION SHUT OFFS

Showers in the Heads:



SUMP PUMP
SWITCH

To use the showers:

1. At the DC panel, turn on the breaker labeled "Sump Pump" to make power available at the labeled switches in each head. The sump pump will then drain the shower in either place when the switch is used.

IMPORTANT: The aft head shower drain is shut and opened alternately by

pressing on it. Make sure the drain is in the open position before turning on the sump pump. If the drain is shut and the pump is turned on a vacuum is created in the line such that the drain will NOT open when pressed. In such case, a table knife can be used to gently and slightly pry the drain up to release the vacuum. Please be gentle to prevent damage to the rubber gasket. Thank you. Once the vacuum is gone, the drain can then be opened normally by a press and release.

- 2.** In the aft head you can shower completely before turning on the switch (located near the head controls) draining all the water out at once, or you can leave the switch on during the whole showering process.

The forward head shower, however, has a shallow pan and has an open drain. It is best, therefore, to run its sump pump all the while the water is running in the shower at that location.

- 3.** Make sure (in either case) that the pump is shut off when the drain water is gone.

23. Appendix A -Specifications:

LOA 44'0"

Model Year 2007

Construction GRP

Underwater profile Fin

Sleeping berths 3

Engine 1 x diesel 54hp, Yanmar 4JH-4E (2007)

Designer Glen Henderson

Builder Hunter Marine

Lying Bellingham, WA

Last Survey 08/23/2013

Capacities

Fuel capacity 1 x 50.0 USG

Water capacity 1 x 140.0 USG

Holding tank capacity 1 x 45.0 USG

Mechanical

Engine 1 x diesel 54hp

Yanmar 4JH-4E (2007)

Oil filter: Yanmar 129150-35153

Fuel filter: Yanmar 129470-55703 or Racor R20P or R20S (2 micron)

Impeller: Johnson 09-1027-B1

Belt: Yanmar 25132-004300

Engine Cooled Fresh Water

Steering wheel

Drive shaft

Prop(s) Bronze 3 Blade

Fuel consumption (approx) 1.5 gal/hr.

Cruising speed (approx) 6.5 knots

Max speed (approx) 7.5 knots

Dimensions

LOA 44'0"

LWL 39'2"

Beam 14'6"

Draft 7'0"

Clearance 60'8"

Displacement 22,936.0lbs

Headroom 6'8"

Rig

Sloop rigged Selden Aluminium spars (2007), with Stainless Steel standing rigging (2007)

Selden Mast Mounted Whisker Pole

Sails

Reefing mainsail Doyle - Inmast (2007)

Headsail Doyle - Furling (2007)

Halyard winches 2

Sheet winches 2

Furlex 300 S Roller Furling Jib. Selden mainsail In-Mast Furling System.
2 Lewmar 48 ST winches. 1 Lewmar 40 ST sheet winch. 1 electric Lewmar 40 ST
Halyard winch. 1 Furlex winch for in-mast furling.

Electrical Systems

12 volt, 3 4D house batteries; one deep cycle start battery all charged by: engine, shore power
Balmar 100 amp Alternator with external Balmar Smart Regulator
Xantrex Freedom 25 -2500W Inverter.

Construction

GRP (Fiberglass) Construction with Fin underwater profile, gelcoat finish

Nav Equipment

Compass

Speed

Log

Wind

Radar

VHF radio

GPS Chart plotter: 10.4" Furuno Navnet VX2 Radar/Chartplotter/Fishfinder

Stereo: Bose

Clock, Tide clock, Barometer

Navigation lights

DVD -19" Flatscreen

Fish Finder -Furuno

Wind/Speed/Depth: 3 Raymarine ST60+ instruments

Autopilot: Raymarine Evolution EV-200 with p70 controller

Bow Thruster: Lewmar 185TT Electric 4.0kw 5.4hp 12v

Deck Gear

Dodger

Bimini

5 Fenders

Swim Platform

Swim Ladder

Magma Grill

Instrument Covers

**Simpson Lawrence Electric windlass with foot switches is recessed to deck level
in the chain locker for a cleaner fore deck appearance.**

2 Anchors: 44# Delta Plow and Fortress FX-37

230' All Chain Rode

Accommodations

Sleeps 7 in two cabins and a salon berth; two heads

Heating System: Webasto DBW-2010 Hydronic

24. Appendix B -Spare Parts Onboard:

Fuel Filters	Engine Spares Box -Under nav station seat
Engine Belt	Engine Spares Box -Under nav station seat
Impeller & Gaskets	Engine Spares Box -Under nav station seat
Impeller Puller	Engine Spares Box -Under nav station seat
Zip Ties	Engine Spares Box -Under nav station seat
Engine Oil 1 -Delo 400 10W40 -1 quart	Under sole just inside aft cabin door
Coolant -marine type -1 gallon	Under sole just inside aft cabin door
Distilled water for batteries -1 gal	Under sole just inside aft cabin door
Light bulbs 2 of each type	General Spares Box -Under nav station seat.
Hose Clamps -Variety	General Spares Box -Under nav station seat.
Cotter Rings	General Spares Box -Under nav station seat.
Nuts, bolts, screws	General Spares Box -Under nav station seat.
Lifeline Pins -Clevis Pins	General Spares Box -Under nav station seat.
Whipping Twine for end of sheets	General Spares Box -Under nav station seat.
Stainless Steel Seizing Wire	General Spares Box -Under nav station seat.
Sail Mending items	General Spares Box -Under nav station seat.
Hydronic Heat Filters & Nozzle	Hydronic Heat Spares Box -Under nav station seat
Outboard Motor Spark Plug	Engine Spares Box -Under nav station seat
Spare Alternator	Under Aft Cabin Berth -(port side)
Spare Starter	Under Aft Cabin Berth -(port side)
Transmission Fluid use Delo 400 10W40 -1 quart	Under sole just inside aft cabin door
Raw Water Pump	Under Aft Cabin Berth -(port side)
Domestic Water Pump	Under Aft Cabin Berth -(port side)
Electric Bilge Pump	Under Aft Cabin Berth -(port side)
Bilge Float Switch	Under Aft Cabin Berth -(port side)
Fuses for Alternator	General Spares Box -Under nav station seat.
Nav light bulbs	General Spares Box -Under nav station seat.
4 extra main fuel filters	Under Aft Cabin Berth -(port side)
2 secondary fuel filters	Under Aft Cabin Berth -(port side)
Spare Head Solenoid Valve	Under Aft Cabin Berth -(port side)

25. Appendix C -Through-Hulls Schematic :

