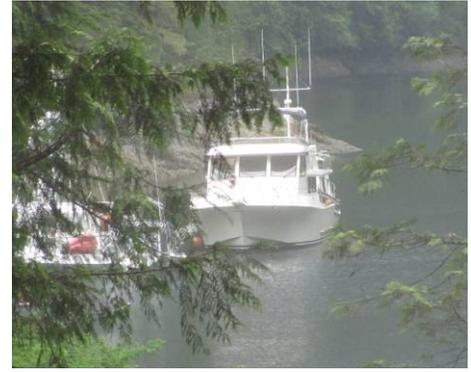


## Welcome Aboard “*Escape*”

(Notes from the Owners)



We hope you enjoy your cruise on the *Escape*. She is a custom 3-stateroom, 52' 2007/1989 Nordic Yacht 52 Raised Pilothouse Trawler. The interior was redesigned and completely rebuilt in 2007/2009 by the manufacturer, including all new electronics, equipment, joinery, heads, cabins, appliances and furnishings. She shows as a new boat. We hope that you enjoy cruising and relaxing aboard the *Escape* as much as we do. You will find she is very maneuverable and easy to pilot in tight areas and is set up for economical cruising while providing for higher speeds should the occasion arise.

The *Escape* also provides many comfortable areas in which to relax and/or socialize. We especially enjoy dining, playing games and looking at the great view from the dinette in the raised pilothouse. The fly bridge / boat deck is spacious and pleasant in nice weather. Sirius satellite radio, along with other stereo functions, is available on the fly bridge, in the pilot house and salon and in the cockpit for your enjoyment. There is also high definition TV with a DVD player in the salon.

We're immensely pleased with this fine vessel and look forward to sharing her with you, our guests. We hope you'll love her as much as we do and we thank you for taking special care of her. You will find numerous guidebooks on board that contain very useful information on the area and are enjoyable to read as well.

If you have any issues or suggestions that could enhance your experience with *Escape*, please inform San Juan Charters and they will pass it on to us.

Thanks for choosing our boat; we wish you a wonderful voyage and fond memories!

*Richard Ehlers & Kathy Harbert*

### “*Escape*” Specs:

Year: 2007/1989

LOA: 56'

Beam: 16'

Draft: 4'

Vertical clearance: 19'

Displacement: 47,000 lbs

Fuel: 2- 400 gal. tanks (800 gal. total)

Water: 2 - 100 gal. tanks (200 gal. total) plus watermaker

Holding: 40 gal.

# Escape Quick Start Notes

## Upon Boarding “Escape” and Before Use:

1. Turn shore power breaker “OFF” at electrical panel on the boat and on the dock.
2. Disconnect shore power and store cords and adapters on board (under the step at the forward end of the starboard side deck works well).
3. Power panel: Insure that batteries are charged and all needed breakers are “ON”. Turn on INVERTER breaker switch and push INVERTER button on inverter panel.
4. If you expect to use the fly bridge, remove fly bridge seat canvas covers and stow in compartment under starboard seats and install chart plotter repeater (located in stowage compartment forward of stairs to staterooms). Open deckplate next to helm and connect data and power leads. Repeater is not weatherproof. Install remote VHF radio unit (in same storage compartment).



## First Thing Each Day:

1. Turn off anchor light if illuminated.
2. Check oil and coolant in engines.
3. Check engine oil pads.
4. Check fuel tanks and water tank sight gauges in tank room, if you are unsure of levels. (access from lazarette). Open both top and bottom valves to check level and then secure – a flashlight is helpful.
5. Close and secure forward stateroom hatch before getting under way.

6. Place proper charts and navigation tools at the appropriate helm (chart books and tools are located in compartment under dinette seat immediately to port of pilothouse helm; rolled charts are stored between dinette and windscreen).

## **Electronics:**

**Lower Helm Chart Plotter must be turned on FIRST or the Upper Helm Chart Plotter will not function.**

### **Lower Helm:**

1. Turn “ON” CHARTPLOTTER breaker to power lower chart plotter.
2. Turn “ON” Chart Plotter by holding in the POWER/BRILL button.

### **Upper Helm:**

1. Ensure data and power leads in deck plate are connected, turn on monitor and bring remote control to upper helm, if desired.

## **Starting Engines (either pilot house or flybridge):**

1. Be sure engine controls are in Neutral.
2. Turn key half way ON—buzzing will sound—. Immediately turn key fully until engine starts, usually immediately. Check oil pressure. Repeat with other engine.
3. If engine doesn’t crank, verify controls are in neutral.
4. Buzzer should go off within a few seconds.
5. Check to see if exhaust and water is coming from both engines. Look for small bubbles on either side of swim platform.
6. Engines should be kept at lower RPM, close to idle speed until they warm up. This is frequently attained with a few minutes of warm up and idling slowly out of the harbor.
7. **With the electronic engine controls it is easy to rev up engines before gears have engaged. We suggest shifting from neutral to idle forward or reverse and then giving a count of 1-2-3 before revving engine. You will feel a modest ‘clunk’ as gears engage. This will eliminate unnecessary (and potentially expensive) transmission stress from engaging gears at higher RPMs. It will become second nature as you gain experience with these controls.**

**Leaving Dock:** Note — We prefer to dock and pull out from the pilothouse because of better visibility (you can see all 4 “corners” of the boat).

1. Check around boat for any possible hazards or situations that could arise.
2. Ensure bow thruster is active.
3. Untie and stow lines as appropriate, with captain at the helm and ready to depart.
4. Have deck hands with boat hook or fenders in hand, ready to assist if necessary.
5. When away from dock, stow fenders appropriately.

## **Underway:**

1. Again, helmsperson should be “On Watch” at all times while proceeding.
2. RPM under 1200 until engines warm, never to exceed 2300 RPM.
3. Always keep wake effects in mind.
4. Trim tabs can be used for leveling at higher speeds but are seldom needed.

## Approaching Dock:

1. Put fenders out on appropriate side (we like fenders on both sides ‘just in case’).
2. Attach bow line to cleat and put line through the hawsepipe and blouse around toward midships (so its easier to reach from dock).
3. Attach stern line to cleat through hawsepipe and lead back over rail, ready to tie to dock.
4. Attach midship lines to cleat and lead through hawsepipe and back over rail.
5. Trim Tabs in fully “Bow Up” position.
6. Ensure bow thruster is active.
7. Engines should be dead slow...often need to coast with one or both engines in neutral.
8. Mate ready to secure midship line first (in most circumstances).

## Upon Arrival at Dock in Marina:

1. Secure all lines...bow line, 2 midship spring lines and stern line. (Reminder) Trim Tabs brought to the up position if being used!
2. **Before** connecting shore power, check that BOTH main SHOREPOWER switches are “OFF”.... in the *power panel* and the *breaker on shore*.
3. **After** the adaptor (if needed) and yellow electrical cord are connected, turn *both* “ON”. Check AC amp meter and voltage meters to be sure you are connected and batteries are charging.

## Using a Mooring Buoy – note that the *Escape* is too long to use WA State Parks mooring buoys.

## Mooring at Anchor:

1. Anchor is lowered with foot pedals or helm control while boat is backed up slowly away from anchor –When desired chain length out (4:1 or 5:1 scope), windlass is stopped and attach keeper hooks (located in exterior storage hatch under port side deck step) to chain 1 - 2 ft forward of cleats on bowsprit and secure lines to the bowsprit cleats so line is taut.
2. Engines reversed at idle briefly until chain pulls up virtually straight. Note: The boat should *not be held in reverse* against a taut anchor chain!
3. Loosen chain just enough to put pressure on tie lines and a bit of slack on chain coming off windlass. The main pressure of the anchor should be secured on the keepers and cleats, rather than on the windlass.
4. See “Owners Notes” for more info on anchoring.

## Stopping Engines:

After operating at cruising speed, allow engines to idle a few minutes to cool down and then turn key to “OFF”. Normally, time spent docking or anchoring is enough cool down.



## **Overnight at Anchor or Buoy:**

1. Anchor light “On” at dusk - it is an LED and will not drain the battery.
2. Unnecessary DC and AC electrical items “Off” (i.e. extra lights, etc).
3. Turn off heat (in most situations).
4. Please bring flybridge chart plotter repeater below (leave power and data leads attached to monitor and disconnect at end of leads).

## **Upon Arising:**

1. Turn on heat if necessary.
2. Turn on water pressure switch if needed

## **Retrieving Anchor:**

1. Turn Washdown Pump “ON” if using salt water (be sure throughhull in lazarette near watermaker is open). We prefer to use fresh water if possible to avoid salt and smells in the anchor locker.
2. Connect hose with nozzle to appropriate outlet next to pulpit (forward is salt water and aft is fresh). We prefer to use fresh water to help keep odors from anchor locker.
3. Remove keeper.
4. Captain **powers** boat forward slowly, as directed by spotter on bow. **Never** pull boat forward with windlass (it can overstress the windlass).
5. Use foot pedal to retract chain, while rinsing with hose. Alternatively, person at bow can rinse and direct person at helm in controlling windlass.
6. Stop when anchor shaft is at about a 45 degree angle to avoid accidentally stressing the windlass by pulling against the bow pulpit (this can also overstress the windlass).
7. Push the anchor stock down by hand until parallel with pulpit and secure using keeper tied off to bowsprit cleat. The chain should not be taut at this point.
8. Turn off rinse down spigot, coil and stow hose.
9. Turn Rinse Down Pump “OFF”

## **Before leaving vessel: (after use or after arrival at dock)**

1. Power panel: Turn water pressure switch “OFF”.
2. Canvas covers on in all locations as appropriate.
3. Stow fly bridge chart plotter repeater and VHF radio remote below, if used.

## *Escape* – Owner’s Notes

- 1. Anchors.** “*Escape*” is equipped with two anchors, one forward and one in the aft cockpit lazarette. The **primary bow anchor** is a 60lb CQR with 280 feet of 5/16” chain. The chain is marked with white and green line as follows: at 50 feet, there is a 12” white line section; at 100 feet, there is a 12” green line; at 150 feet, there are 12” green line followed by a 12” white line; and 200 feet there are 2 - 12” green lines separated by 1 foot; at 250 feet there are 2 - 12” green lines with a white line. There is a 10’ section marked with red paint 20 feet before the bitter end. Please stop when you see the red paint. The **secondary anchor** is a Fortress aluminum anchor with 18 feet of heavy duty chain and 280’ of rode, located in the cockpit lazarette. There is also a 300’ floating line, used as a **stern tie line**. (Please do not cut the line; it is all needed for certain places in Desolation Sound.)*The anchor scope to use in the islands is 4-to-1. Most coves are 15’-30’ deep, so expect to pay out about 60’-120’ of rode. After you have paid out the suitable amount of rode, complete a couple of in and out of reverse (idle speed) sets the anchor and tests its holding power. For storm conditions, extend scope to 7 or 9-to-1 (180’ in 20’ of water, maximum chain is 250’), provided you have room to leeward. Otherwise, set two bow anchors (using the secondary anchor, chain and rode) in a v-type pattern for extra holding power.*
- 2. Anchor windlass.** The *Escape* has a Lofrans Falkon (new for 2012) windlass, providing both a chain gypsy and a drum for line operation. Power is received from a separate battery. Always operate the windlass while the engine or generator is running! Otherwise, the windlass will drain the battery. There are UP/DOWN foot pedals located on the bow near the anchor to lower and retract the anchor. One person rinsing chain and signaling anchor chain angle at the bow, with the skipper powering forward and taking in slack chain using controls at the helm seems to work best. There are also windlass foot control buttons at the bow. Note that you will not be able to rinse chain and anchor or monitor for difficult situations when using the helm windlass controls without a spotter. **NOTE:** Windlass is on same circuit breaker as the trim tabs.



- A. **Deploying the Anchor:** With both engines running, come to a complete stop before releasing the anchor from the bow. Drop the anchor slowly off the bow roller and into the water. Determine the depth and let out enough chain to allow the anchor to hit the bottom. Inform the helmsman to reverse the engine(s) slowly and pay out the chain until you reach the desired scope (Usually 4 to 1). Make sure to take into account the tide and how much the water is going to rise or fall, along with the distance from the bowsprit to the water (about 6'). Attach keeper hooks (located in exterior storage under step at forward end of port side deck) to chain forward of cleats on bowsprit and secure lines to the bowsprit cleats so line is taut. Using a combination of reverse and neutral, gently tug on the anchor until it is set. Let out and inch or two of chain to relieve pressure on windlass. Check potential swing area when wind and/or tide change. *Perform an anchor watch for about a half an hour. Provided you are not losing your position, you should sleep well.*
- B. **Retrieving the Anchor:** *Turn Washdown Pump "ON" at the power panel if using salt water (make sure throughhull in lazarette near watermaker is open). Connect hose with nozzle, located in port side deck step locker, to appropriate outlet next to pulpit (forward is salt water and aft is fresh - fresh water is preferred to minimize anchor locker odors). When retrieving the anchor, never use the windlass to pull the boat forward to where the anchor is set. (The windlass is not designed for this and can be overstressed). Instead, under power, head the boat toward the anchor while using the windlass to take up the slack in the chain.*

When raising the anchor, please remove debris and hose off the chain using the washdown hose – fresh water is best. This will prevent mud and bad smells from entering the chain storage compartment. Stop when anchor shaft is at about a 45 degree angle to avoid accidentally overstressing the windlass by pulling against the bow pulpit. Remember to turn OFF the washdown pump breaker in the power panel.

- C. **Securing the Anchor:** Once the anchor is on the bow roller, Push the anchor stock down by hand secure using keepers tied off to bowsprit cleats. (The chain on the windlass should not be the only thing keeping the anchor from unexpectedly returning to the sea bottom!). The chain should not be taut at this point If necessary, the chain locker is accessed from the forward stateroom and is located behind a hinged panel at the bow.
3. **Barbecue.** The propane BBQ has its own tank mounted on the adjacent rail. There are also small canisters located in the propane locker under the fly bridge helm chair, if needed. When the lid is closed, the BBQ tends to be hot and cook quickly, so tend meat often. As a courtesy to the next guest, please use the wire brush attached to the BBQ to clean it after use.
  4. **Batteries & Charging.** For normal operations, leave all battery switches on. Each engine has its own separate starting battery. A battery combiner isolates the start battery, assuring all batteries are charged, while protecting the engine start batteries from drawdown by house usage. The batteries consist of a bank of 4 8D AGM house batteries, 2 8D engine start batteries and a generator start battery. Battery voltage can be checked in the electrical panel. **You should try not to discharge below 11.5 volts before recharging the batteries by one of the following methods:**
    - a. plugging into shore power
    - b. using the generator (refer to section 14 for generator use)
  5. **Berths.** “*Escape*” is ideal for 6 people, but she’ll sleep a maximum of 9 - two in the forward cabin; two in the port cabin, two in the starboard cabin; two on the dinette table (converts to a double berth). In a pinch someone could also sleep on the couch.  
  
**Converting the Dinette into a Double Bed:** Pull up on each side of the table; remove legs (there is friction and can be stubborn). Set the table on the support lip on dinette seats. Arrange dinette cushions on top of the table.
  6. **Bilge pumps.** Please check the bilge each day, morning and evening. It is accessed looking in the lazarette, tank room, engine room and under the floorboard in the master stateroom. There are both automatic float switches and switches that you can operate manually on the electrical panel.
  7. **Dinghy/Davit.** The “*Escape*” has an inflatable, hard bottom “Avon” 11’2” dinghy, with helm station, navigation lights and an electric bilge pump. The 20 HP Honda 4 stroke engine has electric start and power tilt. It is best not to run the bilge pump while dry.

The “*Escape*” is equipped with a Marquipt 1500lb. electro-hydraulic davit system. To lower the dinghy, turn on the salon outlets on the 12volt electrical panel, get the davit controller from the storage compartment on the forward wall of the companionway to the accommodation deck,

and extract the black electrical cord from stowage at the aft end of davit. Plug power cord into outlet at base of davit and plug controller into fitting near the cord storage compartment. You will need to be plugged into shore power, have the generator running or have the inverter turned on to use the davit. We suggest not using the inverter to power the davit because of the large power draw on the house batteries; instead start the generator.

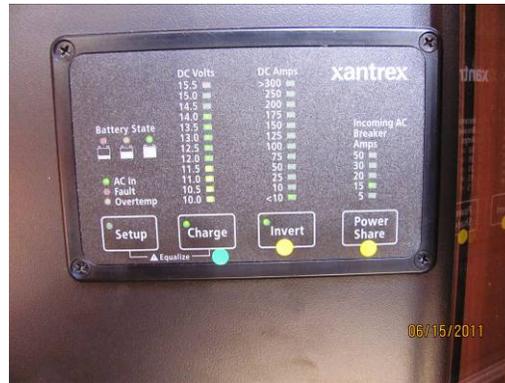


**Don't forget to insert the drain plug in the transom.**

*Please take special care when beaching the dinghy (refer to the dinghy beaching procedure in your charter guest book). Most of the beaches you will land at are strewn with barnacle-covered, bottom-slicing rocks. When approaching the shore, weight the dinghy aft by leaning or moving the crew toward the back of the dinghy. Offload everyone over the bow. For dock tying, there is a small line on the dinghy. If doing a beach landing, there is a long line (painter) in the bow locker. Also remember to secure the painter under a rock or tie to a large driftwood log – we have very large tidal fluctuations (so your dinghy won't float away).*

***IMPORTANT:*** Please REMEMBER to top off both the dinghy fuel cans and the two diesel tanks at the end of your charter (at the fueling dock) to avoid extra charges by SJY for doing so.

8. **Electrical Panel.** *Escape* is equipped with a Xantrex Inverter Charger. This control panel monitors DC current, inverter input, battery state and power share.



**CHARGE LED.** When the CHARGE LED light is solid green, the charger is on and charging. When the LED is off, the charger is off. When external AC power is detected, this unit automatically begins to charge the batteries.

**INVERT LED.** When the INVERT LED is ON (solid green), the inverter is operating (making AC power from DC battery power). When the LED is not lit, the inverter is OFF. When the INVERT LED is blinking green, the inverter is in STANDBY, waiting for the external AC power to be removed or it is in idle mode, standing by until an AC appliance is turned on and more power is needed.

**POWER SHARE.** Power Share limits the amount of external AC current used by the charger and power loads. If total AC load is larger than the available AC power, the external AC breaker in the power box may trip. Reduce the POWER SHARE setting to reduce AC power consumption. Before you plug into an external AC source, note the breaker size. Then press the POWER SHARE until the appropriate Incoming AC Breaker is on the corresponding AMP light. For example, if the external breaker is 30 AMP, press the POWER SHARE until the 30 AMP Incoming AC Breaker LED is on. When using the generator to charge the batteries, start with the Incoming AC Breaker light on 30 AMP. If the generator is really bogged down, reduce it to 20 AMP. See section #13 for instructions on operating the generator.

**AC (120V) Power.** The AC outlets will function either while connected to shore power, while running the generator, or with the inverter as described above. The outlets are covered with GFI breakers which are located in the galley outlet and the outlet in the guest head. Be sure to check these if your outlets are not working properly.

**Hot Water Breaker.** When NOT connected to shore power or running the generator, have the Hot Water Breaker turned OFF (or the batteries will get drained.) Running the engines will heat hot water automatically. CAUTION – WATER IS HOT.

**Autopilot.** The breaker for the autopilot and most of the other instruments are always ON.

**Water Pressure.** This pump pressurizes an accumulator tank. This accumulator tank builds up water pressure so that the water pump does not need to run every time water is turned on. It shuts down when the tank is at “working pressure”. If you don’t hear the pump start up when you turn the switch in the electrical panel ON, it means that the system is at working pressure – you may hear the pump start again after you use a couple of gallons of fresh water. When no one is aboard, turn off the water pressure breaker. If the tank would run dry, the pump will continue to run until it burns out. An added note, when on the flybridge, you cannot hear it running.

**Anchor Light (LED).** Okay to run all night in an anchorage (won’t deplete batteries).

9. **Electronics:** Radar, Chart Plotter, Depth Sounder –IMPORTANT – Paper charts and requisite navigation tools should be your **primary** navigation aids. Chartbooks and tools (dividers, parallel rules, hand bearing compass) are located in compartment under dinette immediately to port to pilothouse helm. Rolled charts are stored between dinette and windscreen).

**Lower Helm Chart Plotter must be turned on FIRST or the Upper Helm Chart Plotter will not function.**

**a. Lower Helm:**

8. Turn “ON” CHARTPLOTTER breaker to power lower chart plotter.
5. Turn “ON” Chart Plotter by holding in the POWER/BRILL button.

**b. Upper Helm:**

9. Be sure FLYBRIDGE ELECTRONICS breaker is turned on (AC panel).
10. Take monitor (located in cupboard at state room stairway), Foruno remote control and remote VHF microphone to flybridge.
11. Ensure data and power leads (under deck plate at helm) are connected, turn on monitor and bring remote control to upper helm, if desired.

Turn off chart plotter when not in use by holding the power button for three seconds and disconnect flybridge monitor, returning it to the storage locker when done (it is NOT weather proof). This conserves battery power.

**Backup** – there is a Garmin handheld Chartplotter in the navigation cupboard immediately to port of the helm. This may be used as a backup to the Foruno system or for dinghy navigation.

**IMPORTANT:** *The key to avoiding rocks is NOT the depth sounder – but knowing where you are at all times. (Rocks are the greatest navigational and safety hazard in the islands – but they are all clearly marked on the charts.) SJS does not recommend using the depth sounder’s alarm during night. It’s likely to sound at inappropriate times such as late at night while fish are passing beneath the transducer. (Instead, consult the onboard tide data to determine whether you’re anchored in a safe location, considering how shallow your depth will become when the tide ebbs out of your anchorage in the middle of the night.) We recommend that in addition to using your PRIMARY navigation aids – namely, the Maptech waterproof chart book or the roll charts (with the most active “killer rocks” marked in red) – up at the helm while underway, you also utilize the chart plotter for added safety. It helps you to see if you are where you think you are on the chart book or paper charts. If someone asks, “Where are we?” Within 3 seconds, you need to be able to point to the chart and show them the vessel’s precise position. If you can’t, you’re in danger of hitting a rock.*

*The only time when the chart plotter becomes your primary navigation tool is when you’re in a “tight spot” like going through a narrow pass or approaching the entrance to a secluded cove. (With the chart plotter, you can “zoom in” to make something that’s the size of a dime on a paper chart into the size of a paperback novel or larger on the screen. You can see more detail and, importantly, any hazards in the area. Your boat’s position on the chart plotter is accurate to within 3 meters – about 10 feet). You should have little need of the radar except for the highly unlikely event that you are suddenly enveloped by fog, which is rare in this area. The fog that we’ve encountered in the islands usually forms in the wee hours of the morning and burns off by mid-day. So if it’s a little soupy after breakfast, we put on an extra pot of coffee until it lifts. Never depart from a safe location into the fog! To do so, even with radar, would be contrary to prudent seamanship. FYI – Fog becomes “reduced visibility” when you can see ¼ mile (about 4 football fields) in all directions. It is safe to proceed CAREFULLY in reduced visibility using your radar to “see” beyond the haze, but be sure to look up from the screen about every 10 seconds and use your eyes to scan the horizon forward, behind, and side to side. A motor yacht, tanker or freighter traveling at 20 knots takes only 39 seconds to travel ¼ mile! You need to see these fast-moving vessels sooner-rather-than later so you can prepare, if indicated, to quickly take evasive action to avoid an impending collision. The digital depth sounder will not give accurate readings beyond 400’. In deeper water, the sensitivity on the unit increases as the transducer tries to get some reading back. Consequently, you will receive many false readings caused by currents, changes in water temperature, fish, and seaweed. Use the depth sounder only as an aid to navigation in shallow water.*



**Autopilot.** When vessel is on course, push the “Pilot” button to engage autopilot. Note that there is no standby mode; the autopilot is either off or driving the boat. To make small course changes tap the red or green button. Each tap will change course by 1 degree. To dodge an obstacle, hold the red or green button down. When released, the autopilot will resume a course parallel to your original course. To set a new course push the red or green button until you turn to your new course (release

somewhat before reaching the new course to allow the boat to stop swinging) and push the “Pilot” button to lock in the new course. Simply push the “Off” button to resume manual control.

**To engage secondary flybridge autopilot head, touch the PILOT button when on course and then hold down both green and red buttons to transfer control to the flybridge. Thereafter, operate as above.** If you then go below, hold down red and green buttons in pilot house to transfer control back to main unit.



**Radios:** There are three VHF radios. In the pilot house the radio is on the overhead panel. The flybridge remote microphone is stored with the chart plotter monitor in the compartment forward of the stairs to the accommodation level. It plugs in under the helm. There is also a portable radio located on the countertop just inside the salon door. NOTE: This is a DSC radio connected to the GPS. In case of a MAYDAY event, lift red emergency flap and push button. The radio will broadcast latitude, longitude and MMSI number to the Coast Guard. This will enable them to look up boat characteristics and get to you quickly. You should also call MAYDAY on channel 16 so any nearby boat can assist.

*You should monitor channel 16 (the hailing and distress channel) during your cruise. After establishing contact on channel 16, switch to working channels 68, 69, or 80. Scan the weather channels for the one with the best reception before sailing in the morning and prior to anchoring for the evening. This is generally a light wind region but weather changes can be sudden. Listen for the “inland waters of western Washington” or “Camano Island to Point Roberts”. Both cover the San Juan Islands. You will also hear “Strait of Juan de Fuca” (south of the San Juans), “Georgia Strait” (north), and “Rosario Strait” (runs through the eastern part of the San Juans). San Juan Sailing monitors channel 80 during office hours (closed Sundays). By phone you can reach the San Juan Sailing office at (800) 677-7245 or SJS’s owner, Roger Van Dyken, at (360) 224-4300 (cell) or (360) 354-5770 (home).*

**TV/DVD.** There is a flat screen TV and DVD player in the salon. We unplug them when not in use to avoid battery drain. There are remotes that accompany these in the drawer immediately underneath.



**MUSIC** – Turn on VHF/Stereo breaker:

Pilot house (above helm) - Pioneer AM/FM/CD with iPod connection, Sirius satellite radio and built in Hertz speakers in salon and pilot house. Use fader control to adjust relative volume between pilot house and salon speakers. The stereo has both USB and AUX ports for your iPod or MP3 player. There is also a bracket to hold your device immediately to starboard of the stereo, along with a short USB cord in the basket below the stereo..



Fly bridge - Clarion AM/FM/CD with iPod connection, Sirius satellite radio and built in Pioneer speakers. Also powers speakers in aft cockpit. Use fader control to adjust relative volume between flybridge and cockpit speakers.

Remote controls are stored in top forward drawer opposite galley, with user manuals.

## 10. Emergency / Safety

**Flares:** Visual day/night distress signals are located in the aft bottom drawer in the cabinet under the TV in the salon, by the door to the cockpit.

**Horn:** Fixed horn button is located at pilot house. A portable air horn is kept in the chart cupboard under the forward seat of the dinette, next to the lower helm.

**Bell:** The bell is mounted in the cockpit to port of the door.

**Smoke/Fire Detectors:** There are linked smoke/fire detectors in the engine room, pilot house and accommodation level. If one is triggered all will sound an alarm. A carbon monoxide detector is located on the accommodation deck.

**Fire Extinguishers:** There are 3 fire extinguishers. One is located under the galley sink, one is in the foyer outside the master suite door, and one is mounted just inside the engine room hatch on the port side.

**Life Jackets:** Required PFDs are located under the portside seat of the dinette in the pilothouse. Two self inflating life vests are stowed in the forward lower drawer of the cabinet next to the cockpit door in the salon. There are a total of ten adult, two youth and one child PFDs on board.

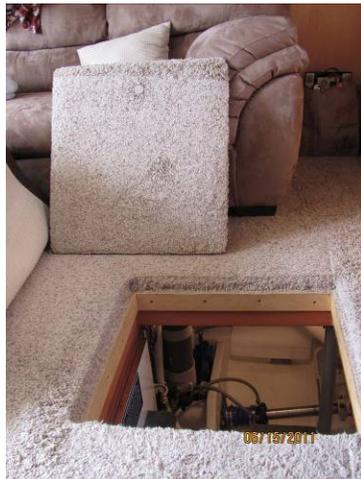
**Quick Emergency throws:** One flotation cushion on fly bridge, one life ring and one Lifesling in cockpit.

**Engines – Please log hours (meters are located behind electrical panel – accessed through door on your left as you descend the stateroom deck stairs).**

**Starting:**

a. Daily Fluid Check

- i. Check the oil level daily. The dipstick is accessed by opening the floor boards in the main salon. The dipsticks are on the centerline side of the engines. There is a wide gap on the dipstick between the full line and the fill line. **Do not overfill; it is likely to damage a diesel engine.** The excess oil will escape somehow, perhaps by blowing the head gasket. Use the onboard spare oil to add no more than a pint at a time and check the level again. The quart size paper cups are useful in pouring oil without spilling. If the dipstick indicates no oil the first time you check it, reinsert and try again - the correct level will show when the air lock bubble is broken. Expect the oil to be blacker than that of a gasoline powered automobile engine...this is normal for a diesel after a few hours of operation.



- ii. Check the coolant level - anywhere between the two lines on the overflow reservoir is “good”. The small plastic cups are useful in pouring the pre-mixed coolant into the reservoirs – overhead clearance is limited at the top of the reservoirs. Fill the cup about 2/3 full to pour without spilling.
- iii. Check transmission fluid level.

- iv. While you have access to the front of the engine, check for belt tightness or leaking fluids. Look over the stern for things that could foul the propeller.
- b. Make sure the transmissions are in neutral.
- c. Insert the key and turn it clockwise to start the engine. Expect the engine to start in 3 seconds or less. If the engine doesn't start after 5 seconds of cranking, turn the key back to the left and remove it. Wait 15 seconds and try again. When engine starts the oil pressure buzzer should turn off within 5-10 seconds.
- d. Repeat with other engine.
- e. After the engines start, check for water gurgling out the exhaust.
- f. Also check and record your engine hours. This can help you judge fuel remaining.
- g. Please allow 5-10 minutes of warm up before placing a load on the engines. The engines can idle out of the harbor while warming up but should be gradually brought up to cruising speed until temperature warms up to about 150 degrees. It is very hard on diesels to be placed under load when cold.

**h. Operation.** 375 HP Caterpillar 3208 series diesel engines are very reliable. Please do not exceed 2300 RPM because it's hard on the diesel engines and fuel consumption goes WAY UP (at very little increase in actual speed). (8-10 knots at 1200-1500 RPM is economy cruise speed.), **With the electronic engine controls, it is easy to rev up engines before gears have engaged. We suggest shifting from neutral to idle forward or reverse and then giving a count of 1-2-3 before revving engine. You will feel a mild 'clunk' as gears engage. This will eliminate unnecessary (and potentially expensive) transmission stress from engaging gears at higher RPMs. It will become second nature as you gain experience with these controls.** *To avoid the possibility of sucking air or sludge when the fuel level approaches 1/4 of a tank, refuel when the fuel drops below 1/2 full and before it reaches 1/4 full. PLEASE CHECK THE SIGHT TUBES IN THE TANK ROOM, ACCESSED THROUGH THE LAZARETTE. OPEN VALVES AT TOP AND BOTTOM OF SIGHT TUBE ON EACH TANK, TAKE READING, AND CLOSE VALVES.*



**Single Engine Operation (NOT recommended when docking or maneuvering in tight situations).** The *Escape* is set up to safely run on a single engine to enhance fuel and maintenance economy. We find that running one engine at 1750 RPM will give an economical (3.5 – 4 GPH) cruising speed of about 8 - 8.5 KTS, while providing sufficient load on the operating engine. The autopilot will easily compensate for the asymmetrical thrust. We switch engines roughly every 4 hours, or daily if running less than 4 hours per day, to provide for less wear on the trailing transmission. Please check the hour meters and try to keep the total hours for each engine roughly equal by the end of your trip.

- i. **Engine Overheat.** *If the buzzer sounds while the engine is running, most of the time it's no more serious than eelgrass plugging up the raw water strainer. The best upfront solutions to this problem is prevention—keep an eye peeled for eelgrass mats, especially along those “soapy” looking tide and eddy lines in the water and don't run over it. When eelgrass gets sucked into the engine cooling water intake, it jams at the raw water strainer. To clear the eelgrass from the raw water strainer (just forward of each engine in “Escape”), close the valve on the through hull, turn the round caps off the tops of the strainer, remove the basket, remove the eelgrass and toss it in the galley garbage can. Replace the round cap; hand tighten until the lid is seated firmly. Open the through hull valve and check for any leakage. Check the oil level and belts on the engines. If a belt is broken or off, the coolant won't circulate to cool the engine. Check the coolant levels, but **only after engine has cooled**, and check the bilge for a light green liquid. If found in the bilge, call San Juan Yachting. There are replacement belts with the spare parts. If upon restarting the engine overheats again, check the seal between the strainer and the lid. If the strainer is drawing air, it won't draw water. If needed, open and then retighten the lid on the strainer. One other possibility is that the impeller in the raw water pump has failed. While they are replaced each spring with a new one, it's still possible that a hard object may be drawn in and break off an impeller blade (replacement impellers are found with the engine spares). Call San Juan Yachting if you suspect you have an impeller problem or can not solve the problem.*
- j. **Engine Shutdown.** First bring the engines to idle neutral. Allow the engine 5 minutes at slow speed to cool down (usually maneuvering in the marina or dropping anchor is sufficient).

**11. Fuel Tanks.** (2 tanks at 400 gallons each) *Please be very careful when fueling. 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 carefully. Fill slowly as diesel can create a lot of foam that can come bubbling out the fill hole or the air vent. Wipe up any excess fuel to avoid yellowing the hull or polluting the water. Also be very careful of drips when removing the hose. Diesel fuel and shoe bottoms are a very slippery and dangerous combination. After wiping, please use soapy water to scrub down any drips in order to not stain the fiberglass. 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.)*

12. **Generator.** The diesel generator is located in the port side of the lazarette. Please remember to check fluids when doing your main engine checks.

To use the generator:

The generator controls are located to starboard of the door from the salon to the cockpit. To turn on the generator hold the left switch ON while pushing the right switch to start. The generator should start within a few seconds. You can release the left switch



immediately if generator is warm or after about 15 seconds if cold. After 2 minutes move to the main electrical panel in the pilothouse and turn the double GENERATOR breaker switch on. Make sure the “charge” light comes on in the Heart Interface panel within about a minute. The “inverter” button should also be pushed and the indicator light on if you wish to use 120V power.

When finished with the generator simply turn off the “Generator” breaker on the main electrical panel and then, after 2 minutes, turn off the generator switch near the aft door.

### 13. Heads and Holding Tanks – PLEASE – NOTHING but waste and MARINE toilet paper!

“*Escape*” is equipped with 2 Vac U-Flush heads which lead directly into the holding tank that is located underneath the sole in the forward stateroom. They lead directly into the holding tank; there is not a “Y” valve. So, if boarded by the Coast Guard and they wish to inspect the position of the “Y” valve; there isn’t any. All waste goes directly to the holding tank.. When flushing, hold the pedal up for a couple of seconds to insure that there is plenty of water for the flush, the push down to evacuate bowl. Let pedal valve snap closed rapidly. Please then place more water in the bowl by raising up on the foot pedal briefly to ensure a vacuum seal Even though the Vac-U flush system is one of the best, the people who work in the sanitation field often suggest that used tissue be placed in a container next to the head rather than flushing into the holding tank. Just a suggestion. NEVER PUT ANYTHING OTHER THAN HUMAN WASTE AND MARINE TOILET PAPER IN THE HEAD PLEASE!

Should a head pump unusually frequently, check to see that the bowl is holding water. If not, the vacuum generator will pump frequently and become annoying. Unpleasant smells may also be unleashed. First, try flushing toilet again and letting flap up sharply. If it still won’t hold water, flush toilet and, while holding flap open with foot pedal, run toilet brush around inside of hole to dislodge any small particles that could break the seal. This should solve the problem. It is normal for the pump to run briefly every 4-8 hours to replenish the vacuum. If all else fails, turn off the offending head at the electrical panel.

**There is one holding tank, with 40 gallon capacity. A good rule is to empty at least every 2 days. (San Juan Yachting staff will discuss holding tanks, overboard discharge and pump outs upon your arrival.) There is a tank monitor in the master head. We suggest that the skipper get in the habit of pushing the button every time s/he uses the head to monitor the level. Pump out access is marked “waste” and is located on the starboard side deck, just forward of the pilothouse door. There is macerator pump switch on the electrical panel. If you are in appropriate water for dispensing waste, activate macerator and monitor tank level in port head. When indicator shows less than 1/3 full, turn off the macerator switch. Do not run dry as the macerator pump can burn out easily. If you pump out the holding tank at a shore facility, please fill it with about 5 -10 gallons of fresh water through the deck fitting to rinse, and then pump it out again. Thank you!**

*\*\*Remote cruisers have a rule: “Never put anything down a marine toilet that hasn’t been eaten first.” And that, of course, includes feminine items.*

14. **Hot Water** Domestic hot water can be heated either electrically by using shore power or generator or by using waste heat from the main engines. To heat electrically simply ensure shore power is connected or the generator is running and turn on the water heater breaker on the AC electrical panel. Water will be heated automatically when running the engines (We most often shower while running or shortly thereafter). **Please don’t try to create hot water with the inverter by flipping the “Water Heater” breaker “ON” without another AC power source. It will rapidly drain the house batteries and not enough water will be heated to make a difference**
15. **Cabin Heat** Verify the furnace switch is turned “ON” (on electrical panel). Turn ON switch on thermostat located on your left as you descend stairs to accommodation level and set temperature. Adjust fan speed in each compartment as desired. We suggest turning off fans in unoccupied compartments to save battery power. The furnace can heat the cabin to a very comfortable temperature within minutes. The heat is dry, comfortable, and on rainy days or cool evenings, it makes a huge difference in cruising comfort! *When it’s cool, we recommend warming the boat before turning in for the night, with the last person to go to bed instructed to turn the diesel heater off at the thermostat before retiring. (Otherwise, the boat will get too hot and the electric fans in the diesel heater will put a drain the house batteries.) Then, the first one up in the morning can simply turn the heater on.*
16. **Ice Maker** To stop its ice production, lift the arm. Power is supplied by the inverter through the AC panel. It is quite efficient and can produce ice within approximately a half hour. It uses fresh water from the vessel’s tanks.
17. **Refrigerator/Freezer** Level 2 or 3 is a good average for battery operation. If you prefer it to be colder when plugged in to shore power, you may increase the number. If you encounter heavy seas, there are restraint straps for the doors mounted inside the cabinet doors above the refrigerator. Be cautious when opening refrigerator after rocking and rolling. *We recommend running the refrigerator at all times to avoid it becoming smelly. You may want to turn the thermostat down a bit at night. This will help conserve house battery power. Then turn it up during the day if necessary*

- 18. Shower / Sump Pump.** For hot water see section 15. **Verify the shower / head sinks sump pump breaker on the electrical panel is on prior to showering.** The sump pump for the showers has a float switch that turn on when needed. To conserve water, experienced cruisers know the sailor's shower: get wet, turn off the water, soap up, rinse off. CAUTION: The engine heats water to scalding temperatures! Please **BE CAREFUL!**
- 19. Spares.** “Escape” has spare propellers mounted on the aft wall of the lazarette, engine belts, oil filters, fuel filters, and impellers are in labeled bins in the engine room. The spare oil and coolants are also located in the engine room. The rest of the spares are in the bottom drawer of the cabinet under the TV. You will also find a black tool box in the engine room.
- 20. Stove / Oven / Microwave.** The stove is a Princess three burner propane stove & oven. To operate turn on valve on tank, ensure the Galley 12 V switches are ON in the DC panel, switch the safety button to ON to allow the gas to come to the stove. This switch is located just forward of the sink, above the countertop. After you have done this, push in and turn the burner knob to “ignite”, and hold the burner knob “IN”. As you are doing this, quickly push the red igniter button to get a spark. After a click or two, it should light. Note: The first lighting after the boat has not been used for awhile can take a little extra time for the gas to reach the burner. Be patient and keep clicking! To light the oven, turn to “Light” and “push and hold” Safety knob. If igniter does not work, manually use flame flicker or a match and place in bottom oven area near igniter to start the pilot light. When pilot stays lit, turn up heat and watch flame move down burner. The propane tanks (active + spares) which supply the stove/oven are located under the helm seat on the fly bridge. Use of the microwave works best when plugged into shore power or running generator. *Please note that the propane tank and both propane valves (the hand valve and the solenoid valve) are located in the propane locker on the flybridge. This is vented and isolated from the rest of the boat. Any leaks there will move down, out, and away from the boat. The tank can be turned off at night if so desired. While the propane tank normally lasts for 4 weeks or more, San Juan Yachting's staff tops them off every 2 weeks...so you'll have plenty for your cruise!*
- 21. Water Pressure & Tanks.**
- a. **Water tanks.** The fresh water tanks hold 200 gallons and a sight gauge is in the lazarette, just to the left of the tank room door. The water fills are on the side decks just forward of the cockpit and are marked. Make sure they say “WATER”, **NOT** **“DIESEL”**. Use the two pronged key that is located in the uppermost aft drawer of the cabinet under the TV to loosen and tighten. Good water is available in all marinas in the San Juans and many places in Canada. If not sure, please inquire to ensure water is potable. The *Escape* also has a whole system water filter installed just downstream from the water pressure pump.
  - b. **Water pressure.** *Escape* is equipped with a pressure tank that provides approximately 1.5 gallons of tap water before the pump runs. The On/Off switch for the pump is located in the power panel and will be lit when it is ON. *It's okay to leave on while someone is below decks. But please turn “off” when not aboard. You could burn out the domestic water pump should the tanks run dry as it tries in vain to pump water to build pressure. State parks have no pressurized water to refill tanks, but all points of civilization do (ask to ensure it is potable). If your crew does not let the water run*

*continuously while they brush their teeth, shave or shower, you shouldn't need to refill too often.*

- c. **WATERMAKER.** *Escape* is also equipped with a watermaker located in the stbd side of the lazarette. It will produce about 18 GPH of fresh water which flow into the water tanks. To use first turn on breaker on electrical panel. Go into lazarette and turn on switch on front of panel. Wait about 2 minutes for motor to warm up and turn black knob clockwise until gauge indicates 800 PSI, monitor for a few minutes to fine tune. Check fresh water flow in sight gauge to the left of the pressure knob. To turn off, back off knob to reduce pressure to zero, wait about 2 minutes and turn off main switch. Turn off breaker on electrical panel. **NOTE: The watermaker uses a lot of electricity so we always run the generator when making fresh water.**



**Water in marinas and anchorages is much more susceptible to pollution. Even a small amount of petroleum product can adversely affect the membrane. We generally recommend using only while under way.**

**If marked "Pickled" do not use until flushed and filter is installed.**

We know this seems like a lot to absorb but we think you will find that the boat is set up logically and with a lot of thought by the builder. We are confident you will be comfortable running the boat in short order and hope that you have the cruise of your dreams. Hopefully we will see you again next year!