

## Notes from the Owners of Wind Dancer

### Hanse 455

Welcome aboard!

Wind Dancer is a big, beautiful performance boat. She is big enough where all of the spaces are generous. She is a modern design and shows very near like brand new. Each cabin has a queen sized berth with generous full standup dressing area with lots of stowage. There are two heads with two showers, each large enough where a 6'2" man can take a shower with room to spare. The salon and cockpit each can comfortably seat eight. The generous galley completes the picture. The cabin is finished in a beautiful cherrywood and has twelve operative skylights.



Wind Dancer is a wind dancer, she performs. With a performance keel and large sail plan she is very responsive. All lines lead back to the helm, bow thruster, power winches, self tacking jib and a dual screened set of B and G electronics make handling a breeze.

For comfort she has a brand new dodger, Bimini and the side panels will be there for the fall. A full cockpit enclosure with two forced air heating systems for the cabin; she is comfortable in any weather. She has a AB dinghy with a 9.9hp Honda outboard that will plane with two aboard. The dinghy rides on davits which will not slow Wind Dancer down.

Under power, she averages 7.5 knots with a 55hp Volvo diesel. With a good breeze she is faster under sail! I have had her close to ten knots several times. If you want to sail a performance cruiser with three cabins and two heads; this is your boat.

Hanse is a German make and some of their systems are different than Beneteaus or Jeanneaus that are common in charter fleets. Please take the time to read these notes and review the other information provided, you will understand the boat better and your trip will be less stressful. She is a big powerful rig and her skipper should have been on several charters or owns a similar sized boat. If you have the experience and confidence, you will appreciate Wind Dancer's performance and comfort. Happy sailing!

Karl Klokke and Susan Bristol

Owners of the Wind Dancer

## Table of Contents

1. Vessel Information and Specifications .....	3
2. Nuances.....	5
3. Emergency/Safety Equipment .....	5
4. Being Whale Wise.....	6
5. Anchors and Windlass .....	8
6. Barbecue .....	10
7. Batteries, Charging and Inverting.....	10
8. Berths and Bedding .....	13
9. Bilge Pumps.....	13
10. Bow Thruster .....	13
11. Dinghy, Outboard and Davit.....	14
12. Dodger and Bimini .....	16
13. Electrical .....	17
14. Electronics and Instruments.....	18
15. Engine.....	22
16. Entertainment Systems.....	26
17. Fuel.....	27
18. Hatches.....	27
19. Heads and Holding Tanks .....	28
20. Heater (Cabin).....	29
21. Lighting .....	30
22. Refrigerators and Freezer.....	30
23. Sails and Rigging.....	30
24. Showers and Sumps .....	31
25. Spares and Tools .....	32
26. Storage .....	32
27. Stove, Oven and Microwave.....	32
28. Water.....	34
29. Winches.....	34

# 1. Vessel Information and Specifications

## Vessel Information:

**Vessel Official Number** - 1258994 (same number as shown on the Coast Guard Certificate of Documentation found in Section 5 Documentation of the Charter Guest Reference Manual (white binder). Wind Dancer's number is located inside the starboard cockpit locker on the hull. Look for 3" high characters engraved on a red placard.

**Coast Guard Boarding Document** – Refer to the Charter Guest Reference Manual (white binder), Section 5 Documentation. Explains what to expect if you are boarded by the Coast Guard and where to find the information/equipment they may ask to see as part of their safety inspection.

**U.S. Customs Re-Entry Decal (also called User Fee Number)** – Located on the aft side of the port helm binnacle.

## **Clearing U.S. Customs** (re-entering the U.S. from Canada)

Per US Customs and Border Protection, CBP ROAM™ is a free mobile application that provides an option for pleasure boaters to report their U.S. entry to CBP via their personal smart device or a tablet located at local businesses to satisfy reporting requirements. In limited areas, travelers arriving in remote locations may also be eligible to use the CBP ROAM™ app. On September 15, 2021, CBP ROAM™ expanded its capabilities by adding the Cruising License features that allow users to apply for cruising licenses and report arrivals at domestic ports of call.

CBP ROAM™ qualifies as an Alternative Inspection System that satisfies the boat operator's legal requirement to report for face-to-face inspection in accordance with 8 CFR 235.1 with some exceptions:

- Travelers who require an I-94;
- Travelers who must pay duties on imported goods; and
- Other circumstances as applicable.

Travelers input their biographic, conveyance, and trip details and submit their trip for CBP Officer (CBPO) review. Once done, travelers receive push notifications and emails with their admissibility decision and next steps if applicable.

For any questions or concerns about the CBP ROAM app, please email [cbproam@cbp.dhs.gov](mailto:cbproam@cbp.dhs.gov).

## You will need:

1. CBP ROAM™ application installed on one device on the vessel (one person can submit for all passengers).
2. US Passports - physically present for all passengers during the trip.
3. Internet access via cell phone provider since you will likely be outside of any land wifi networks when completing this process.

## Steps:

1. Download the CBP ROAM™ app on at least one device from Google Play Store or Apple App Store
2. Create user ID and password or log in (if an account already exists).
3. [login.gov](https://login.gov) will send a one-time code to login to the account, enter this from text message you will receive after creating account.
4. Prior to crossing the water border, enter passenger data on the **Travelers** tab of the app. You may be able to scan the passport to enter all data or choose manual entry if this is unsuccessful. All passenger data can be found on the individual's passport. Complete this for all passengers. You will be required to take a photograph of the passengers' passports through the CBP Roam app for security. **NOTE: You cannot submit a photo taken directly from your camera. You must have the physical passport available.**
5. Next, enter the vessel information in the **Modes of Travel** tab. You will need the following information. Please note that these details are specific to the Wind Dancer vessel.
  - a. Mode of Travel: **Pleasure Boat**
  - b. Make: **Hanse 455**
  - c. Year: **2014**
  - d. Registration Country: **United States**
  - e. Registration State: **USCG Registered**
  - f. Registration Number: **1258994**
  - g. Name of Boat: **Wind Dancer**
  - h. Length of Boat (feet): **44**
  - i. User Fee Decal Number: **23041295** (valid only for 2023)
  - j. Flag Country: **United States**
6. Once you have crossed the border into the US, Select **REPORT ARRIVAL** from the main screen of the app. Select Please boat (Hanse 455, 2014). DO NOT DO THIS STEP until you have crossed into the US again!
7. The application will use GPS signal to determine your nearest location. (Be sure to have GPS location services active on your device!)
8. Select all passengers and submit for re-entry.
9. The application will submit your information to the customs office. This step takes several minutes and they will either notify you that your reentry has been approved or a customs official may require a video call through the application to ask any questions or request a tour of the boat or to view passenger passports before approving.
10. You will receive a push notification through the app when you have been approved for reentry and are permitted to make physical contact with US soil again. You will also receive an email with this confirmation number, should this be required later.

Please note that applications are updated frequently, and these steps may be slightly different on your device. If you need assistance, please contact USCBP via phone during business hours. You will need to contact the office closest to your reentry point should you need to physically present yourself for re-entry approval.

### **Pleasure Boat Reporting Requirements**

Pursuant to 19 CFR 4.2, operators of small pleasure vessels, arriving in the United States from a foreign port or place to include any vessel which has visited a hovering vessel or received merchandise outside the territorial sea, are required to report their arrival to CBP immediately (see 19 U.S.C. 1433).

The master of the vessel reports their arrival at the nearest Customs facility or such other place as the Secretary may prescribe by regulations. These reports are tracked in the Pleasure Boat Reporting System.

Pursuant to 8 CFR 235.1, an application to lawfully enter the United States must be made in person to a CBP officer at a U.S. Port of Entry (POE) when the port is open for inspection.

Read more about [CBP reporting requirements](https://www.cbp.gov/travel/pleasure-boats-private-flyers/pleasure-boat-locations) (<https://www.cbp.gov/travel/pleasure-boats-private-flyers/pleasure-boat-locations>) if you print this)

Document created on 8/31/23

## **Specifications:**

Year:	2015	Engine:	55 hp Volvo with Sail Drive
Make/Model:	Hanse 455	Fuel (1 tanks):	58 US Gal
LOA:	45'-7"	Water (1 tank):	110 US Gal
Beam:	14'-4"	Holding (2tanks):	Salon 20 US Gal, Fwd 9 US Gal
Draft:	7'-4"	Heads:	2
Displacement:	25,570 lbs. (Dry)	Electronics:	B&G
Mast Height:	68'-0"		
Staterooms: 3 doubles			
Fwd Stateroom:	Headroom: 6'-6", Berth Dimensions: 6'-9"x4'-7" (head), 6'-9"x4'-0" (feet)		
Port Stateroom:	Headroom: 6'-4", Berth Dimensions: 6'-9"x5'-6" (head), 6'-9"x4'-4" (feet)		
Stbd Stateroom:	Headroom: 6'-4", Berth Dimensions: 6'-9"x5'-6" (head), 6'-9"x4'-4" (feet)		
Salon Headroom:	6'-5"		
Main Refrigerator:	13"x21"x21"	Freezer:	12"x4"x9"
Secondary Refrigerator:	13"x7"x18"		

## **2. Nuances**

There are a few things about Wind Dancer that are not 'typical'. These are the things that may require special attention or where it may be best to deviate from customary operating procedures. We have listed some here because we believe they will help you plan your charter.

**Bow Thruster:** Fold-a-way type. You may not be familiar with this type but it is becoming common on newer boats. See section 9, Bow Thruster, for operation details.

**Performance Keel:** To enhance sailing performance, the keel is a faired steel plate design with a lead torpedo style bulb at the bottom. You may catch eel grass on the front of the bulb. If your boat speed feels a little slower than normal, try backing up briefly then continue forward.

## **3. Emergency/Safety Equipment**

You are not likely to need many of these items, but must know their location.

**Bilge Pump (Manual) and Handle.** Pump located behind the port helm near floor level. The pump handle is integrated into the pump cover. Note: if water rises above floorboards, can use shower sump pumps also in emergency.

**Carbon Monoxide Detectors.** Located in all three staterooms, mounted on the ceiling.

**Cockpit Cushions.** In case of Crew Overboard, throw anything that floats, quickly.

**Emergency Tiller.** Sail locker, exterior at bow.

**Fire Extinguishers (Portable) (3):** Staterooms – forward and aft starboard, Galley.

**First Aid Kit.** Aft head vanity cabinet.

**Flares (Pyrotechnic - 3).** Starboard cockpit locker in orange plastic box.

**Flare, electronic.** Starboard cockpit locker in orange plastic box.

**Flashlights 1 & 2.** Chart table and mounted at the companionway, starboard side near top of stairs.

**Horn, handheld.** Starboard cockpit locker in green mesh bag.

**Lifesling,** Stern pulpit. Please review the cartoons on the face of the case for procedures. The lanyard is secured to the boat so that tossing the floating harness allows it to tow behind the boat like a ski tow rope. Circling the person overboard will draw the recovery line near them.

**PFDs – Inflatables USCG Type II (6).** Located in the stateroom hanging lockers.

**PFDs - Foam Vests (4).** Located in the exterior bow locker.

**Radar Reflector (tube style).** Mounted on shrouds.

**Spares, engine and general.** Salon, under settee seat, outboard side.

**Spares, long term.** Salon, under settee seat, outboard side.

**Tapered Plug, Universal Foam Orange StaPlug.** Starboard cockpit locker in green mesh bag.

**Tools.** Under the companionway stairs and a supplemental tool kit in the forward stateroom on the starboard side in the lower cabinet.

**VHF Radios.** Channel 16. VHF base unit and handheld VHF at nav station. RAM Mic in cockpit located at the aft end of the table.

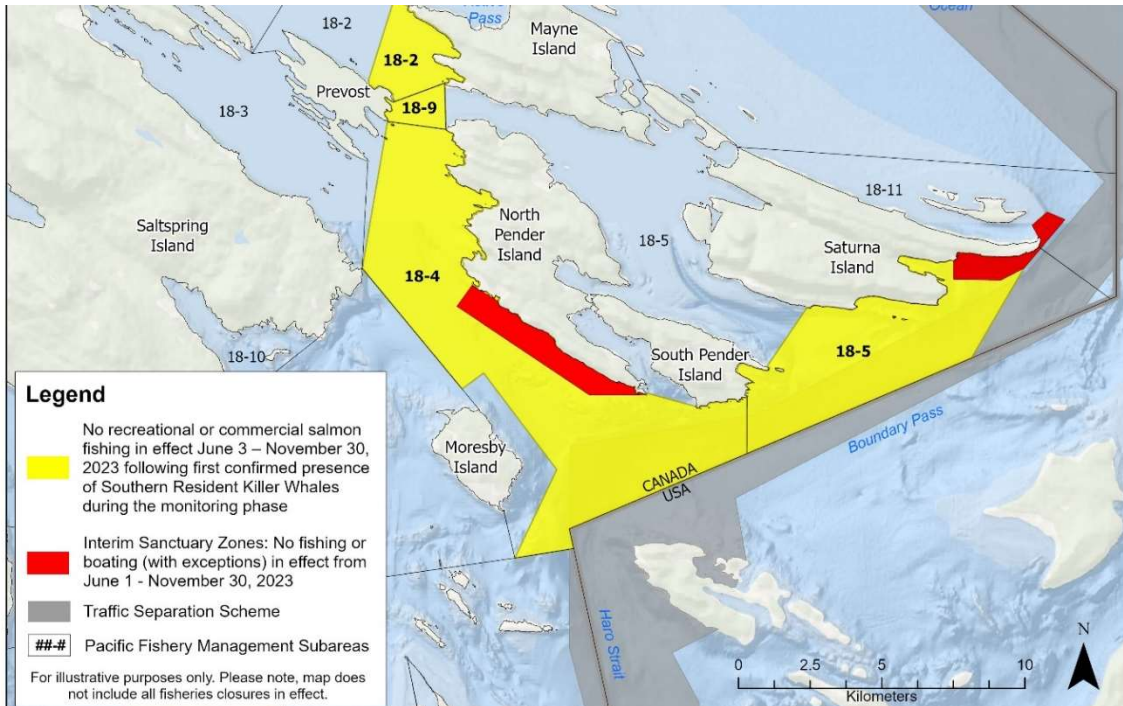
**Windlass Clutch Release/Tighten tool (winch handle).** Use winch handle.

## 4. Being Whale Wise



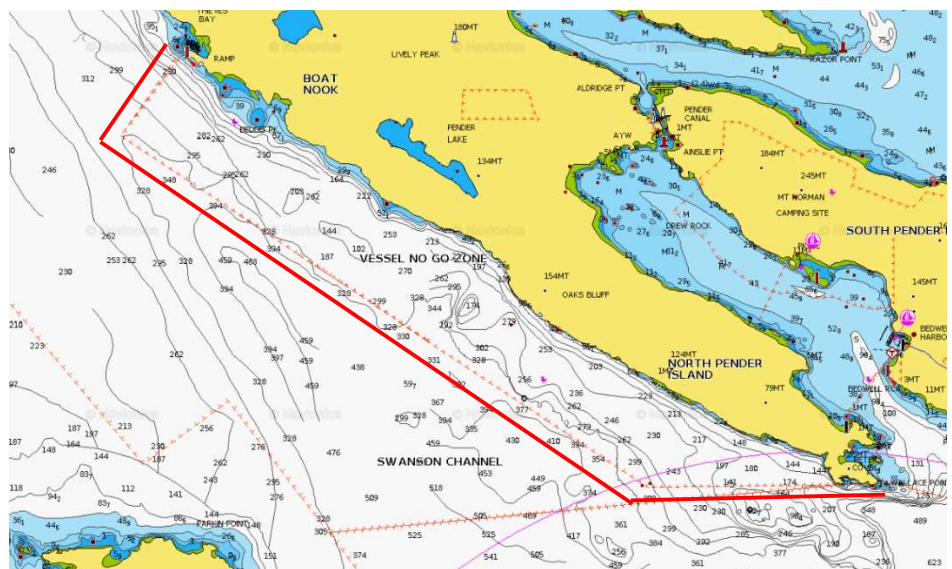
Our local Killer Whales are a wonderful part of the local family. But they are having a difficult time surviving due to declining salmon runs. These whales use echo location to find and catch their food. Therefore, noise pollution from boats and ships make it harder for them to thrive. In an effort to decrease human impact both the Canadian and US governments have implemented rules. We provided you a summary of these rules in the packet you receive when you arrived and there is more information in section 10 of the white reference book onboard Wind Dancer. In general, stay at least 400 ft. away from the whales. Sometimes they come to you, if this happens shutdown the engine and turn off the instruments (assuming this is safe to do). They can hear the pings of the depth sounder – this is why we have you turn off the instruments.

In Canada they have gone a step further by creating some zones where boats are not allowed. This further improves the environment for the whales. The red areas in the diagram below show these zones.



And here is an example of what they look like on Wind Dancer's chart plotter(s). The red lines have been added to help point out the dashed lines, which are what you will see on the plotter.

Note this is just to the west of Bedwell Harbour, so on your way in or out of there be sure to avoid this area.



## 5. Anchors and Windlass

### Highlights

- Chain length markings (see photo on right - placard shown above is located in the exterior bow locker at the port aft end affixed to the plywood): 300' of 3/8" chain marked with 1 piece of yellow line at 25' intervals and 2 pieces of yellow line side by side at 100', 200' & 300'. At the end of the chain is 100' of nylon line.
- Red anchor snubber line and chain hook is stowed on deck connected to the anchor chain and cleated to the starboard cleat (see photo on right).
- Anchor washdown pump switch, hose and nozzle located in the exterior bow locker, starboard side.
- Turn on the Anchor Windlass switch on the DC panel at the nav station.
- Windlass controller located in the exterior bow locker aft of the windlass, at aft end of locker up high (see photo on right).
- The primary breaker and disconnect switch for the windlass is located in the forward stateroom on the port side of the island berth base. This breaker rarely trips but is a good one to check if the windlass is not operating.
- The windlass will operate without the engine ignition on but we recommend always running the engine when anchoring unless you are already anchored and just want to make a small adjustment (less than 30 seconds run time).
- Windlass clutch release/tighten tool (use a winch handle). If the windlass slips when raising the anchor, the clutch may need to be tightened. In an emergency, if the anchor needs to be lowered quickly the clutch can be loosened. Keep enough tension on the clutch so the chain pays out at a controlled rate – keep an eye on the chain pile and be prepared to tighten the clutch if a knot of chain is pulled up.
- The windlass gypsy is not designed to hold the boat while anchored, so please use the bridle with chain hook to hold the chain while anchored.
- Please avoid chipping the bow with the anchor by using caution and slowly raising/lowering the anchor when it is out of the water.
- Turn ON the Anchor light overnight. Breaker switch is labeled and located on the upper DC panel at the nav station.
- The Fortress secondary/Spare anchor is stored disassembled in a colored bag in the exterior bow locker, mid-level. Fortress anchor with 30' chain and 100' nylon rope.



### Details

#### To Deploy Main Anchor:



- a) We check tide tables to determine current water level and amount of drop while anchored.
- b) Weather (ch 4, "Northern Inland Waters" or ch 7) helps select a safe anchorage.
- c) Normal for the islands is a 4 to 1 scope, bow to bottom (add 5 feet to depthsounder reading: 4' freeboard and 1' for transducer below waterline) . In San Juans, anchorages are often about 25' bow to bottom, so we often deploy about 100' chain—hence the 10' marker at 100'.
- d) To avoid hitting the hull when initially lowering the anchor, we do the following to prevent the anchor from swinging as it travels over the roller: Push the anchor forward keeping the shank *level* before gradually allowing the shank to rise as we ease it forward slowly into the hanging position (no swing!).
- e) Lower the anchor to approximately the number of feet on the depthsounder so the anchor is on the bottom, either by easing the windlass clutch or depressing the down switch. If easing the clutch, use the small winch handle located in the anchor locker in the white plastic pocket. To loosen, turn counterclockwise, but be sure to keep sufficient tension to control the descent.
- f) A signal to the helmsman prompts reverse at idle speed while deploying rode to the desired scope.
- g) We then allow the anchor to set and to stop the boat while it continues in reverse, idle speed. We then line up objects on shore to determine if we are holding, staying in reverse at idle for about one minute.
- h) Finally, we set the red snubber line with chain hook.
- i) Then ease the windlass until the snubber is tight and the section of chain aft of the chain hook is slack.
- j) If stronger winds are forecast, we test with RPM at half the projected windspeed (1,000 rpm for winds to 20 knots; 1,500 rpm for 30 knots, etc), *after* setting snubber. (We check movement shoreside, not the significant prop current going by the chain.)
- k) In storm conditions (or storm forecast), you can increase scope if there is adequate room to leeward.
- l) The secondary anchor is available for additional holding power if a storm is anticipated, but best if set before the storm hits.
- m) If anchored in a small cove, you may wish to deploy a line ashore. 600' floating polypropylene on a reel resides in the cockpit center floor locker. Use the mop handle as an axle through the reel. Deploy the line with the dinghy while the spool unwinds. If sufficient length, bring the line around a secure shore object and back to the boat to a transom cleat for ease of retrieval.



To retrieve the anchor:

- a) Start the engine, given that the windlass draws from the engine start battery.
- b) Get the washdown hose ready – inside the exterior bow locker. Very important to clean the chain before it goes into the chain locker. Helps prevent tangles next time lowering. The washdown pump switch is also inside the exterior bow locker, up high at the aft end – see photo above.

- c) Take the load off the snubber and remove the chain hook. Leave cleated to deck so doesn't get knocked off the deck.
- d) Depress "up" switch, always assuring the chain is vertical during retrieval—this avoids either towing the boat or dragging the chain against the hull. Into a breeze, we engage forward gear as needed, but exercise care that we don't overstand and drag the chain against the hull.
- e) As the length of rode remaining approaches the water depth, the sound of the windlass laboring alerts us to immediately stop. Sometimes a brief pause will cause the anchor to break free, given the 90 degree angle of pull. A brief tap on the button, if laboring, says to break out the anchor with the engine in idle forward, not with the windlass.
- f) To nest the anchor without chipping the hull, the anchor may need to be swiveled. We use the windlass to bring the anchor shank up and over the bow roller in one continuous motion, then nest the anchor by hand.
- g) After nesting, with a slight *slack in the chain*; we secure the anchor once again with the snubber.

## 6. Barbecue

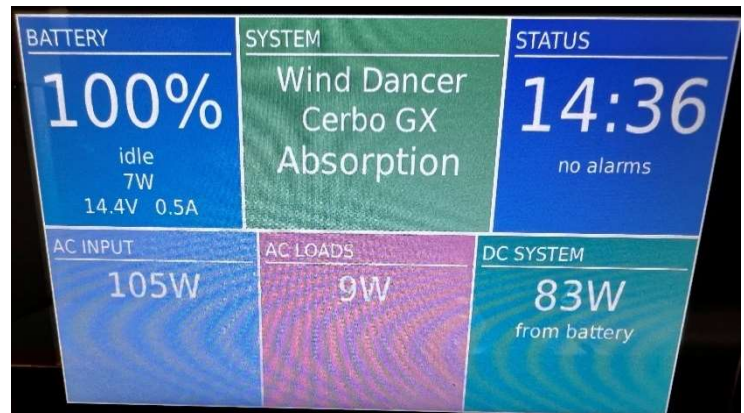
### Highlights

- **Before using the BBQ, the dinghy must be launched and tied-off on the port side and the swim step must be lowered. Ensure all lines are moved away from the grill area.**
- The BBQ is located on the starboard stern rail with a black cover.
- BBQ propane hose is plumbed after the solenoid valve. Solenoid valve switch (labeled LPG CONTROL) is in the galley on the backsplash below the microwave.
- There is also a yellow-handled BBQ hose shutoff valve located in the propane tank locker (located in the lazarette behind the starboard helm). Please keep this valve closed when not using the BBQ to avoid accidentally draining the propane tank (see photo on right). This happens frequently when the temperature control knob on the BBQ is not properly turned off. The valve is closed when the yellow handle is perpendicular to the valve body.
- Please clean grill (using the brush attached with wire lanyard) when finished cooking.

## 7. Batteries, Charging and Inverting

**Highlights**

- Use the Victron energy monitors (located at the nav station) for accurate voltage readings and power data. The voltmeter on the DC panel is not accurate. See photos on right.
- Please keep batteries above 12.2v at all times. 12.8V is fully charged (with all loads turned OFF – including the fridge and when not charging).
- When charging, battery voltage will read above 13V.
- Ensure batteries are charging when connected to shore power – see details below in Battery Charging section.
- When underway, the engine is automatically charging all batteries.
- At anchor, there is no generator on board, but the house battery bank is ample enough to handle normal DC loads including lights, the fridge, diesel cabin heater and entertainment systems.
- Caution is needed when using the inverter to produce 120V power to the outlets. Only low draw (wattage) items like phone charging or computers. High wattage items like microwave oven, hair dryers and electric heaters will quickly kill the batteries.

**Details****BATTERIES:**

Wind Dancer name has the following battery groups on board:

- **Engine** start and **Windlass** (1 x 90 aH AGM - new in 2020).
- **House** (6 x 600aH (500aH usable) Lithium - new in 2023).
- **Bow Thruster** (1 x 90 aH AGM - new in 2020).

All batteries are charged automatically when connected to shore power or while the engine is running at cruise RPM.

**Bow Thruster Battery**

The bow thruster has its own batteries and breaker, *located in the forward cabin under the berth. Under normal circumstances you don't need to do anything with this system. See Bow Thruster section below for detailed description of using the bow thruster.*

## CHARGING AND INVERTING

Wind Dancer has been equipped with a state-of-the-art Victron Energy power management system which includes a charger and a 2000W inverter. The Victron control panel is shown in the photo at right. It is located in the salon at the nav station.



### Charging – Shore Power

- Connect to shore power. Reminder: Make sure the dock pedestal breaker is OFF while connecting both ends of the shore cord. The shore power cord is normally stored in the starboard cockpit locker. The shore power outlet on Wind Dancer is located in the cockpit below the port helm.
- At the nav station, make sure the toggle switch on the Victron Multi Control panel is flipped to the “charger only” position (to the left). See photo upper right.
- The AC panel is located at the nav station next to the DC panel (see photo on right). Check that the AC MAIN and INVERTER breakers are on – these breakers should always remain ON.
- If you don't have power at this point, then most often there are two likely culprits: 1. The dock pedestal breaker is not flipped on or the plug is loose in the outlet. 2. The primary shore power circuit breaker on Wind Dancer is tripped. This breaker is located inside the port cockpit locker, aft end.



### Charging – Engine

- All batteries are automatically being charged when the engine is running. Note that charging is only effective while underway at cruising RPM. Idle RPM won't cut it.

### Inverting

- If 120V power to the salon outlets is needed for low wattage devices when shore power is not available, the 2000W Victron Inverter can be turned on. Flip the toggle switch on the Victron panel to ON (see photo above).
- The inverter powers the 120V outlets including the MICROWAVE OVEN. Please keep microwave use to a minimum – only use low power settings for a few minutes at a time. Monitor house battery voltage.
- Please turn the inverter OFF when not in use.

## 8. Berths and Bedding

*Wind Dancer* is ideal for up to 6 people, but she'll sleep a maximum of 8 - two in the forward stateroom, two in each of the aft staterooms, and two people in the salon on the dinette table berth conversion.

The three staterooms all have queen size beds, hanging lockers and storage areas. There are ample sources of lighting in each berth, with a master switch near the door and individual controls for reading lights. All hatches come equipped with sliding pull-out covers and sliding pull-out screens. In the forward stateroom, you'll find a grey round vent button on the hatch cover. Push this button up to help reduce condensation in the cabin when the hatch is closed.

The salon dinette table in the main salon converts into a full-size bed as follows:

- The dinette table is mounted on a telescoping post. Release the two cam-lock handles on the post and gently push the table down to the seat level, then lock the handles.
- Move the bench seat inboard. It is mounted on swing arms – lift the seat up and pull towards you.
- Place the filler cushion on the table top. The filler cushions are stored in the cubby at the foot of and under the mattress of the forward stateroom berth.

## 9. Bilge Pumps

### Highlights

- Emergency Bilge Pump (manually operated): Pump is located behind the starboard helm near floor level adjacent to the drain. Note: if water rises above floorboards, can use shower sump pumps also in emergency. The pump handle is clipped to the lazarette lid underside located above the pump.
- Electric Bilge Pump: Has automatic float switch. Pump is located in the salon bilge – lift the floor hatch adjacent to the aft end of the settee. Check the strainer on the pump inlet for any clogging debris and remove if needed.
- Please visually inspect the bilge each day for excess water or any oil.

## 10. Bow Thruster

### Highlights

- Fold-away type with drop-down deployment.



- Bow thruster is powered by its own 24V battery bank located near the bow under the berth.
- Turn on the BOW THRUSTER breaker (F6) on the DC panel at the nav station.
- The controller is located at the starboard helm. The two yellow lights slow flash to indicate power is on. Deploy the thruster by pressing and holding the power button for 2 seconds. The two yellow lights will quick flash and sound will beep for about 6 seconds while the thruster is deploying. The lights will turn solid when thruster is ready for use and the sound will beep once every 4 seconds.
- The thruster will retract automatically if not used for about 5 ½ minutes (lights quick flash and sound beeps), and become inactive. You will need to press the power button again to re-activate the thruster.
- Use minimally, in short 5 second bursts. Continual use will overheat the thruster. It will shut down and not restart until cool – 10-15 minutes!
- Most of the vessel maneuvering should be done using the engine and rudder. The thruster is meant to be used for small corrections during your final approach into the slip or emergency situations to keep from hitting another vessel or dock.

*Caution: the bow thruster is very powerful, designed to push into a 30 knot sidewind. It will rotate the boat on its keel and can swing the stern sharply into the dock. Please position a crew with fender between stern and dock when departing and arriving until you get a feel for it.*

## 11. Dinghy, Outboard and Davit

### Highlights

- 9' fiberglass hulled A/B dinghy, 9.9hp Honda outboard.
- Dinghy davit is easy to use by lowering the forward and aft block/tackle lines then detaching the tackle using the quick-release carabiners.
- The hand operated air pump for the tubes is located in the port cockpit locker.
- The Honda outboard is a 4-stroke and takes straight gas.
- The orange fuel tank in the dinghy should be full at the beginning of your charter and you will need to make sure it's full when you return. There is also an extra 1 gallon orange tank stored in the transom recess on the port side. Please check the fuel level before you depart and if it's not full (should be some room at the top for expansion), contact the SJS office and they will get it filled for you.
- It is a Coast Guard requirement to wear or carry PDFs when underway in the dinghy. Please avoid placing the inflatable PDFs on the floor where they will get wet and likely to inflate.



### Details

Davit Operation (refer to photos above and below)

- Rotate the motor so the tiller is on the port side.
- Make sure the drain plug is in and the painter is cleated to Wind Dancer.
- Release the forward and aft stabilizer straps.
- Carefully lower the dinghy by easing the forward and aft tackle lines.
- Use the carabiners at the ends of the tackle to disconnect from the dinghy.
- When hoisting, lead the port side tackle line (at stern of the dinghy) to the electric jib sheet winch (see photo on right). The bow of the dinghy is light enough to hoist by hand.
- You may need to place a fender in between the dinghy and Wind Dancer's transom to keep the dinghy from hitting the BBQ.

Outboard

## To Start:

- Open fuel tank vent, make sure both ends of the fuel hose are connected and squeeze the primer bulb until slightly firm.
- Gear shift in neutral, pull out choke (unless motor was recently running), make sure kill switch clip is on the red button and turn the throttle to start.
- Before pulling on the starter cord, make no person or object is in the line-of-fire of your arm/elbow.
- Slowly push in choke as motor warms.
- Wearing PFDs is recommended.

## To Shut Off:

- Push in the red kill switch button.
- Close the gas tank vent.

## Troubleshooting:

- If the engine won't start, review the steps above to make sure you've done all of them. There is a spare spark plug and spark plug wrench in the tool box in case the engine won't start or is running rough. A new spark plug solves myriad outboard problems. If you use the spare spark plug, notify your check-in skipper upon your return so a new one can be placed aboard for future guests.
- If the outboard is running and you're heading toward shore, and the engine suddenly quits, it's usually that someone has forgotten to vent the fuel cap or the tank or someone's foot is crimping the fuel feed tube.



- If the engine is running fine but the propeller isn't moving, the shear pin is probably broken – just take the cotter pin out to remove the propeller and replace the broken shear pin (a spare pin is located forward of the shaft under the handle grip) and put the propeller and new pin back into place.

### Arriving at the Beach

- Before you hit the beach and while still in a few feet of water, stop the motor by pushing in the red shut-off knob (where the kill clip is clipped in) or just pull the red lanyard until the clip pops off. Close the fuel valve and vent lever (the motor will leak fuel when tilted if these are not closed. Also, the carburetor will be flooded making it hard to restart the motor).
- Tilt the motor out of the water by pulling the motor head forward until it stops – you should here a “click” as the tilt support locks in place. Note that the motor is held in the lowered position by friction from large a rubber clip that grips the shaft. Very little force is needed to pull the motor shaft out of the clip.
- To tilt the outboard back in the water, first pull on the motor head slightly to take the strain off the tilt lock then release the tilt lock by lifting up the black handled lever below the motor head on the starboard side of the shaft.
- Please do not drag the dinghy up the beach over sharp rocks and barnacles.
- Secure the painter to ensure the dinghy doesn't float away on a rising tide.

## 12. Dodger and Bimini

### Highlights

- **Special Note: Please do not remove any of the dodger or bimini panels. They are designed to fit very tight and are extremely hard to put back on and are easily damaged in the process.**
- The Dodger-to-Bimini overhead connector piece can be removed (un-zipped). Please store the connector piece in the port cockpit locker.
- The cockpit enclosure side and rear panels can be removed. Please rinse with fresh water first before removing (see rinsing instructions below). After drying, carefully roll the panels and store in the ceiling tubes located in both aft staterooms.

### Details

**TIP:** The plastic windows in the panels are vulnerable to scratching from dirt and salt crystals. When salt spray dries on the plastic, tiny salt deposits are left behind and tend to obscure your vision. Please avoid directly touching the plastic with a damp rag or sponge. Salt does dissolve in water, but not as fast as you might think. The salt crystals remain un-dissolved for several seconds. It's like rubbing the plastic with sand paper! To clean, use generous amounts of fresh water in a pan from the galley or dock hose and “flood” the glass to dissolve the salt crystals away. If the panel windows are really clear, you can thank previous guests for their diligence. And we thank you too!

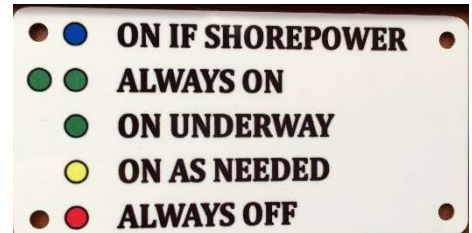
**Caution:** Most spray-on sunscreens and bug-sprays react chemically with the plastic windows. Please inform your crew to spray downwind of all the panels. And please don't lean against the panels with sunscreen on your back and shoulders. Once that chemical reaction takes place, the plastic is ruined.

Thank you for your good care!

## 13. Electrical

### Highlights

- The AC and DC panels are located at the nav station. See photos below.
- The breakers/switches use the color dot convention shown in the photo on the right.
- The panel also displays water and fuel tank levels. The battery voltage display is not accurate. Use the Victron energy display.
- Primary shore power breaker is located inside the port cockpit locker at the aft end.



### DC Panel

- **Bilge Pump:** Is always powered. Normally turned on by a float switch when water accumulates in the bilge. Manual override switch is on the DC panel at the nav station.
- **Freshwater Pump:** If you don't hear the pump start when you turn the breaker at the panel, it means that the system is at working pressure – you should hear the pump start again after you use some fresh water. Note that the marine toilets use raw water and do not impact the fresh water supply. Showers and sinks in the heads use the fresh water supply, as does the cockpit shower. When underway and if no one is below decks, we turn the water pump OFF.
- **Navigation/Electronics:** This breaker powers the chart plotter, autopilot, radar, VHF Radio and wind instruments.
- **Refrigerator/Freezer:** The fridge breaker is always left on during the charter season unless during your charter, the house battery charge level drops to near 12V and you aren't planning to run the engine or connect to shore power, then turn the fridge off overnight. Your provisions will stay cold overnight.
- **"F" buttons on the right side of the panel:** F5 – WiFi, F6 – Bow Thruster.



### AC Panel



- All switches on this panel are normally left on except the WATER HEATER which is turned on only when needed while connected to shore power. Note that this switch does not need to be on for engine heat to heat the hot water tank (which happens automatically whenever the engine is running and is up to operating temperature). Also, the inverter is NOT wired to the hot water tank so you will not drain the house batteries if the WATER HEATER switch is left on after disconnecting from shore power.



## 14. Electronics and Instruments

The chart plotter, radar, autopilot, depth sounder, and wind instruments, are all B&G products and fully integrated.

### CHART PLOTTERS:

As is typical of modern chart plotters, ours can display the following information in addition to the chart: Radar, A.I.S., Autopilot, Depth and Speed.



### Highlights

- Dual B&G Zeus chart plotters at each helm.
- Tablet with Navionics chart at forward end of cockpit under dodger on port side of cabin top inside plexiglass compartment.
- The magnetic compass for the plotters is located in the port aft stateroom, inside the port closet aft side lowest cubby. Do not place electronics or other magnetic (ferrous) equipment (like a portable speaker) near by.
- The **Navigation/Electronics** DC breaker must be flipped on to have all electronics functioning together
- Please refrain from changing settings beyond the typical functions like chart orientation, radar overlay, AIS overlay and range.



- Commonly used chart plotter selections are detailed below. For a more complete orientation of how to operate and get the most value from the B&G chartplotters and instruments refer to the B&G User Manual stored in the chart table.

## Commonly Used Chart Plotter Selections:

### Finding the Navigational Chart:

- Home key (upper left corner on screen or upper right corner on soft key pad).
- Chart (upper left).

### Zooming in and out:

- “+” and “-” icons at bottom of screen or rotate dial on upper right corner on soft key pad.

### Returning the screen to the vessel's current location: ie. Stop Panning or Clear Cursor.

- Clear Cursor at bottom of screen or “X” on key pad.

### Clearing Pre-existing Waypoints, Routes and Tracks:

- Menu icon (array of 9 squares) upper right corner of screen or menu key on pad.
- Find – Waypoints, Routes or Tracks – delete all or selection.

### Chart Orientation: subject to your preference, we recommend Heading Up.

- Menu icon.
- More Options.
- Orientation.

### Display Brightness:

- Press and quickly release the Power button.
- Brightness.
- Adjust brightness slider at bottom of screen.

### Course over Ground (COG) Vector/Line: Ensure the COG line is always ON. If not currently on:

- Press and quickly release the Power button.
- Settings.
- Chart.
- Extension Lines.

### Set the Course over Ground (COG) Vector/Line Length:

- Same as above plus Length – select Infinite.

### Radar:

- Home
- Radar/Chart
- Press and quickly release the Power button.
- 4G-844A – Standby or Transmit as needed.

### AIS Overlay:

- Always on.

## A.I.S. (Automatic Identification System):

### Highlights

- Wind Dancer transmits her position and data via an AIS signal as well as receives AIS signals from other vessels equipped with AIS transmitters (Commercial vessels are required to have AIS, recreational vessels are optional). Wind Dancer is transmitting her position full time (The AIS unit is wired directly to the batteries).
- AIS information supplements marine radar, which continues to be the primary method of collision avoidance for water transport.
- AIS requires each vessel to have a 9 digit MMSI (Maritime Mobile Service Identity) number to transmit position and data. Wind Dancer's MMSI number is 368260080.

### Details

AIS vessels appear on the chart plotter screen as triangles. The triangle points in the direction that the vessel is moving and if you touch the screen over the triangle the system will give you additional information (such as name, size, speed, bearing, etc.) about the vessel. The system also transmits this same type of information about *Wind Dancer* to other vessels with AIS.

The AIS is an added safety feature which allows large commercial vessels to easily see you and your direction/speed. They may try to contact you via VHF channel 16 to verify your course intent. In addition, AIS allows San Juan Sailing/Yachting to provide faster assistance in case of unplanned maintenance issues as well as alert San Juan Sailing/Yachting of *Vessel name's* return approach. Vessels with AIS can be viewed in real-time through mobile device apps and websites like [www.marinetraffic.com](http://www.marinetraffic.com) that will reveal vessel name, course, speed, track, and other information.

### **AUTOPILOT:**

#### Highlights

- Built-in controller located at the starboard helm.
- Handheld remote control stored in the chart table.
- To engage the autopilot, press "AUTO" one time.
- To disengage the autopilot, press "STBY".
- On-deck Watch person must be posted at the helm at all times when underway.



### **VHF RADIOS:**

#### Highlights

- B&G VHF base unit located at the nav station in the salon.
- Handheld VHF stored at the nav station and is available as an emergency backup or ship-to-shore comms.
- The handheld charges automatically via induction when clipped into the charging bracket at the nav station on the forward-facing side of the cabinet above the chart table.
- See **A.I.S. (Automatic Identification System)** section above for detailed description of AIS.
- We recommend that you monitor Channel 16 during your cruise. It is reserved for emergencies and boat-to-boat initial contact. After contact, move to a working channel (68, 69, 72, 74 or 78). We listen to weather channels 1-10 (whichever gives the best reception, normally 4 in the San Juan Islands) before we sail in the morning and prior to anchoring for the evening. Listen for the reports identified as "Northern Inland Waters". San Juan Sailing monitors channel 80 during office hours (closed Sundays).
- **Newer VHF units (including the B&G radios on Wind Dancer) have adopted the latest channel numbering system** – many of the familiar 2-digit channel numbers like 79 & 80 have changed to 4-



digits with the first two digits being 10, (ie. 1079 & 1080). Refer to the new listing in the Charter Guest Reference Manual binder on board, section 7, VHF Procedures & Weather Reporting.

### Details

Listed below are instructions on how to use some common features:

- **Turning On and Off the radios** – Base unit: Turn the Volume knob on the upper right of the unit. Handheld: Long press the power button (upper right). Turn off by long pressing the power button.
- **Silencing a DSC Alarm** – When another boat (or the Coast Guard) sends out a DSC signal on a radio, it will activate an alarm on the radios of all boats in the area. To silence this alarm, press any key on the radio.
- **Changing from High to Low transmit power** – Press the H/L button on the mic. The LCD display shows HI or LO. HI is 25W and LO is 1W. When channel 16 is selected, the unit will automatically switch to Hi power. On the handheld, make a long press of the OK / H/L button (in the center) to change power.
- **To quickly get to channel 16** – press the green 16/9 button. A long press will take you to channel 9.
- **Accessing the weather channels** – Pressing the WX / NAV button will toggle between weather channels and normal channels.
- **Adjusting Volume and Squelch**
  - Base Unit: The upper right knob is the Volume and ON/OFF control.
  - On the handheld, the Volume +/- soft key is on the right side of the unit.
- **Changing between USA, International & CANADA channel modes**
  - Open the main menu with a long press of the CALL / MENU button (lower right).
  - Select RADIO SETUP then UIC then USA, INT'L, or CANADA. The radios should be left in USA mode.
  - The lower right corner of the LCD shows the channel mode selected.
- **How to set up and use Dual Watch Channel Scanning**
  - Channel 16 is automatically included in the Dual Watch scan.
  - Dial-up the second channel you want to include in the scan. Leave the radio set to this channel.
  - To start scanning, press the SCAN button.
  - The display indicates the unit is scanning by “blinking” the displayed channel. When a transmission is received on either 16 or the channel you selected to scan, the radio will stop scanning at the channel received.

### **WIND INSTRUMENTS:**

#### Highlights

- Wind speed and direction (true or apparent) can be displayed on the chartplotters or repeater.

## 15. Engine

### Highlights

- 55HP Volvo diesel engine with saildrive and 3-blade MaxProp feathering propeller.
- Slight starboard prop walk in reverse.
- Maximum RPM is 3000. Cruising RPM is 2400 or less. Idle is around 800 RPM. It's okay and in fact preferred to vary engine speed as you cruise. Please try not to exceed the cruising RPM range.
- There is an engine compartment vent fan that turns on when the ignition is on and stays for a short time after the ignition is turned off. With the engine running it is not audible but you may hear it after you turn the engine off. If it keeps running for any significant time with the ignition off, please report that to SJS.



### Details

#### Inspecting the Engine

Engine access is provided by lifting the companionway stairs, which operate on hydraulic lifts – there are no latches, just lift it up, push it down. Side access is provided via hatches in the aft staterooms.

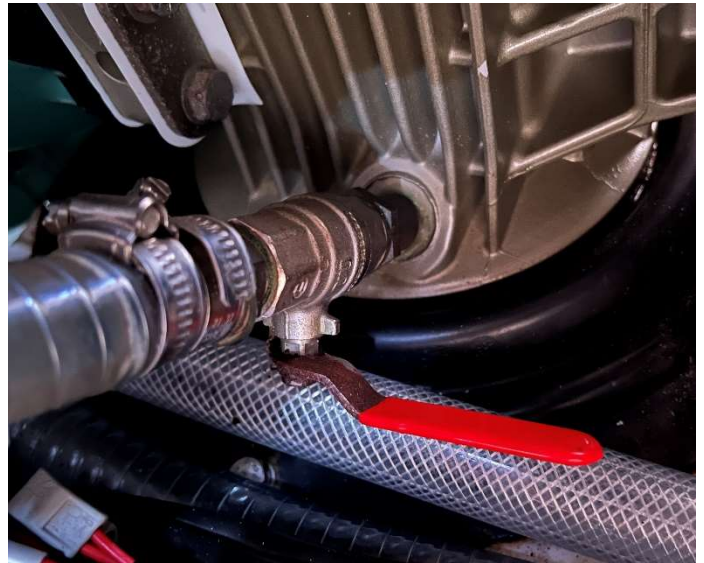
We recommend performing the following inspections each morning before getting underway:

- Check the fuel tank level using the gauge on the right side of the electrical panel at the nav station in the salon.
- Look around and below the engine for any signs of oil or other fluid leaks.
- Check the coolant level. Anywhere between the two lines (high and low) on the overflow reservoir is where you want to be.





- *Inspect the raw water strainer for debris.* In case of an engine overheat alarm, check for eelgrass clogging the strainer. Unscrew the top of the strainer, clean out any debris, then replace it, making sure the rubber o-ring is in place and cap is not cross-threaded.
- *Check belt tightness* by deflecting the belt inward with your fingers; it should not depress more than an inch or so.



For longer charters (> 7 days), check the oil level once a week. The dipstick is on the starboard side of the engine and can be accessed from the starboard stateroom (look down and to your left). If you need to add oil, there is spare oil stored in the forward end of the engine compartment. Do not overfill, add no more than a cup at a time and re-check the oil level after a few minutes to let the added oil settle into the oil pan.

### Starting/Stopping the Engine

- The shift/throttle and engine panel are at the starboard helm.
- Ensure that the throttle/gearshift is in neutral (see photo on right).
- Press and release the upper left ON/OFF button. This turns on the panel, fan and warning buzzer.
- Press the START button and hold until the engine runs or no longer than 5 seconds.
- Listen/look for water discharging from the aft port side of the hull. If water is not in the exhaust, immediately shut the engine down and contact SJS.
- Check your fuel level. Check the fuel tank level using the gauge on the top of the DC panel at the nav station in the salon.
- To stop the engine, press and hold the STOP button until the engine shuts down, then press and hold the ON/OFF button until the warning buzzer turns off. The fan will turn off a few seconds later.



**OPERATING TIP:** Allow a few minutes of warm up before placing a load on the engine. It stresses a diesel engine to be placed under load when cold. Conversely, allowing a diesel engine to idle too long will cause carbon build-up.

### Running the Engine

- The red button at the bottom of the shift lever is used to disengage the transmission if the engine is cold at start up and running a little rough you can increase the RPM a few hundred.



- Engage forward or reverse gear by moving the transmission/throttle lever directly from Neutral to Idle-Forward or Idle-Reverse (the transmission will click into each setting), pause momentarily, then move the throttle forward/backward smoothly to your desired RPM setting. Engaging the transmission in jerky incremental steps can slip the clutch, causing damage over time.
- To keep the transmission “healthy” when shifting from forward to reverse and vice-versa, pause ~2 seconds in the 12 o'clock neutral position (say “one and two and”) before shifting gears.
- An economical cruising speed of 5-7 knots is achieved at 2000-2500 RPM, which uses about 1 to 1.5 gallons of diesel per hour. Please do not exceed 3000 RPM for more than brief periods because it's hard on the diesel and fuel consumption increases substantially with very little increase in speed. We recommend keeping the engine speed under 2800 RPM for most operating conditions.
- To avoid sucking in air or sludge when the fuel level approaches  $\frac{1}{4}$  of a tank, refuel when the fuel drops below  $\frac{1}{2}$  full and before it reaches  $\frac{1}{4}$  full. The tank holds 53 gallons, so topping up at about 25 gallons is a reasonable exercise and doesn't take too long.

**SAFETY REMINDER** – Never stop the engine by turning off the ignition panel or the battery switch. Doing so will seriously damage the diodes on the alternator and the batteries will no longer charge.

### **Boat Handling with the Engine**

Wind Dancer has a large deep rudder and a deep 7'4" keel, and is keenly responsive and able to turn in a narrow radius.

San Juan Sailing offers free handling instruction before you leave for your charter if you'd like to practice or just bone up on your boat handling skills. Spending 30-60 minutes practicing getting in and out of the Bellingham marina can be a great experience.

### **Forward**

Because the saildrive/propeller is almost directly below the engine, the wash from the prop takes a moment to reach the rudder; anticipate this delay when maneuvering in tight spaces. A short burst of throttle will direct water at the rudder, which if already turned, will result in a short, sharp turn with little forward movement – a strategy that can be handy when turning in confined spaces.

### **Reverse**

Prop walk is moderate to starboard in reverse. Driving in reverse is a pleasure. Grip the wheel firmly when in reverse: water pressure on the aft edge of the rudder can push the rudder over to one side, which is hard on the steering mechanism (and your arms).

### **Docking**

Unless there are high winds, we typically motor in the marina in Idle-Forward, which will produce a boat speed of about 2 knots. About 4 slips from our target dock, we shift to neutral and glide in. **Very important to use the engine to stop the boat at the dock (do not rely on your crew and mooring lines to stop the boat)**, and don't shut down the engine until all mooring lines are secured to the dock. If you end up too far away from the dock and your crew can't step off calmly, then back-out of the slip and try again.

When coming into our docks in strong winds, or if you'd just like a little assistance on arrival, hail "San Juan Sailing" on **VHF Channel 80**. They'll be glad to offer some coaching and/or catch your lines. In fact, most marinas in the Islands will help you if you hail them and ask for assistance. Asking for docking assistance is a sign of smart seamanship.

**SAFETY REMINDER** –Whenever you are departing or arriving at the dock have a crew member designated as the "roving fender" team mate. If you are going to accidentally "touch" a boat or other object, lower the fender to the point of contact.

### **Using the Bow Thruster**

The bow thruster allows you to control bow alignment using short bursts when docking or departing (see Bow Thruster section in these notes for details).

### **Troubleshooting Engine Problems**

Yanmar engines are incredibly durable and you shouldn't have any problems on your voyage. Nevertheless, there are a few things to watch out for.

#### **Engine Overheating**

If the engine overheat buzzer sounds while the engine is running, it's usually no more serious than eelgrass plugging up the raw water strainer. The solution to this problem is prevention – keep an eye out 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 collects in the raw water strainer.

To clear eelgrass from the raw water strainer, stop the engine, twist off the clear screw-top and extract the eelgrass. Replace the lid and tighten by turning it clockwise until the lid is seated firmly on the rubber gasket. Don't over tighten as the lid can crack. Make sure the lid's threads are not crossed as this can give the appearance of a tightened lid but the gasket won't seal. Then restart the engine.

If after restarting the engine it overheats again, check the seal between the strainer, the rubber gasket, and the lid. If the strainer is drawing air, it won't draw water. If needed, open and then retighten the lid on the strainer and check to make sure the rubber gasket is in place in the lid (and not lying in the bilge.)

If the above steps fail to solve the problem, call San Juan Sailing for assistance.

#### **Loss of Oil Pressure or Coolant**

If the engine loses oil pressure, the warning buzzer will sound and the oil icon warning light on the tachometer will light up, so check which light is showing red. If it's the oil light, shut down the engine, check the oil level, and contact San Juan Sailing.

The alarm buzzer is more likely to indicate engine overheating, and the temperature icon light will light up. Before you shut down the engine, check for water gurgling out the exhaust. If you have a "wet exhaust," check the coolant level in the overflow reservoir bottle. If none is seen, add enough to reach the top-level line on the bottle. After the engine cools down, remove the cap on the engine block and add coolant. And check the bilge for a light green liquid (coolant). If coolant is found in the bilge, call San Juan Sailing immediately.

If the coolant reservoir bottle is full, check to see if the engine threw a belt. With no belt to drive the pumps there's no cooling. Replacement belts are in the engine spares kit. One other possibility is that the impeller in the raw water pump has failed. While they are replaced each spring with a new one, it's still possible that a hard object may be drawn in and break off an impeller blade. A replacement impeller is found with the engine spares. Call San Juan Sailing if you suspect you have an impeller problem.

**OPERATING TIP: Bottom line – you're on vacation!** If the engine is giving you problems, call SJS for assistance. They have repair teams in the Islands to assist you.

## 16. Entertainment Systems

*Wind Dancer* has a Fusion radio system with, DVD, Bluetooth, USB capabilities.

### Speakers – Controlling Salon and Cockpit Levels:

- Turn large volume knob - salon and deck (cockpit) levels will appear in display (see photo on right).
- Press volume knob to highlight the zone (or zones) to adjust then turn the volume knob to change.
- Please be mindful of others around you when using the cockpit speakers. Not everyone will like your music as you do!



### Bluetooth:

- Press arrow icon soft key at top right of volume knob repeatedly until "BT" is displayed.
- Turn on your device Bluetooth and pair with MS-205. Accept the confirmation code.

### Media Player:

- Use the Fusion media player (photo on right) unit to the left of the stereo to connect your device via USB cable.



### TV:

You can watch DVDs or other content that you bring with you.



## 17. Fuel

### Highlights

- 58 gal diesel fuel tank.
- Fuel tank level gauge located on the DC panel at the nav station. Press the up arrow until "Diesel 1" is displayed. Tank is full when gauge reads about 95%.
- Refuel at or before the tank is ½ full.
- Fill slowly when refueling as the fill pipe is prone to foaming.

### Details

#### Fueling:

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 first from the vent onto the side of the hull and then out the fill pipe onto the deck. It takes only a few drops of diesel fuel in the water to cause oil 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, 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 on the LCD display on the DC electrical panel. If the gauge does not show Full, continue filling very slowly. When you think you're finished fueling, check the fuel gauge one last time to make sure it's reading "Full." That way, SJS will not charge you a fueling charge plus the cost of fuel.

## 18. Hatches

- **Always close hatches when under sail or motoring in heavy seas.** A raised hatch is a magnet for jib sheets and could be seriously damaged if caught. If there is any chance of a wave causing water to land on deck, you may discover how hard it is to dry out a mattress.
- The salon hatches have vents that allow air to enter even when the hatch itself is closed. These vents are controlled by a gray plunger in the center of the hatch that is open when it is up (and looks closed) and closed when it is pulled down (and looks open.) The vents will not allow rain to enter the stateroom under most conditions but larger quantities of water, particularly if it arrives other than from directly overhead, can get through the vents. If you are sailing in fresh conditions or high waves, it is very likely that you will take water over the bow. We discovered that water

may get into either or both of the hatches if the vents are open and will make an annoying wet spot directly underneath.

- Hatches with lever locks can be locked in either of two positions: one is dogged down tight, which you should always use when under sail or motoring in serious swell; the other is raised slightly (about ¼ inch) to allow a small draft. At anchor or slip, hatches can be raised on the arms and clamped in a raised position using the grey twist handles on the support arms. Be sure to loosen the grey twist grips before trying to close the hatches. Forcing them will result in damage.
- The larger hatches have built in “slide-over” netting or shades.

## 19. Heads and Holding Tanks

### Highlights

- Only what has been eaten goes in the toilets.
- Both toilets are Dometic Masterflush electric macerating fresh water flushing.
- Turn on the FRESHWATER PUMP breaker on the DC panel.
- Press the left rocker switch to do a normal flush.
- Press the right rocker switch top to fill the bowl and press the bottom to empty the bowl.
- The toilet discharge hoses do NOT have Y-valves. When you flush the toilets, the waste always goes directly into the holding tanks.
- Each head has its own holding tank. The salon tank is 20 gal and the forward tank is 9 gal and on average should be emptied every second day. More or less depending on use.
- Tank levels can be checked using the Gobius tank level gauges located in the heads behind the sink. (see photo on right). Blue light at bottom indicates gauge is on. Green is about 1/3 full, yellow 2/3, red full.
- See “Emptying the Holding Tanks” section below for details about deck pumpout or overboard discharge.



### Details

Please do not put anything in the toilet that has not been eaten. Experienced sailors deposit toilet paper in a wastebasket in Ziploc baggies, not down the toilet because paper tends to clog the hoses.

The San Juan Sailing safety briefing/orientation video that you watch prior to arrival for your charter does an excellent job discussing holding tanks and pump outs. Our one plea is this: please don't over fill the holding tanks as leaking sewage is most unpleasant! Thank you.

Please note that in U.S. waters it is illegal to discharge holding tanks overboard. While in Canadian waters outside of bays and harbors overboard discharge is allowed.



## Emptying the Holding Tanks

### 1. Deck Pumpout

The holding tanks can be pumped out via the labeled deck caps located near each head. Pumpout stations in the San Juan Islands are shown in Section 6 of the white Charter Guest Reference binder on board. After pumping out the holding tanks, please refill each tank with about 5 gallons of fresh water through the deck fitting to rinse, and then pumpout again. This will help keep the waste system smelling fresh! Thank you!

### 2. Overboard Discharge (where legal)

- Both holding tanks are gravity discharge – no macerator.
- Aft head discharge seacock is located in the aft head inside the sink cabinet (see photo on right).
- Forward head discharge seacock is located in the forward head inside the sink cabinet (see photo on right).



## 20. Heater (Cabin)

### Highlights

- Diesel-fired, forced air system.
- Two controllers (thermostats), one in salon at the nav station and one in the forward stateroom.
- System is split into two zones – port side and starboard side. The controller at the nav station controls the port side.
- The controller in the forward stateroom controls the starboard side. It is located at the head of the berth inside the lower right cubby.
- Press the heat arrows icon soft key to turn the system on.
- Press the "O" icon soft key to turn the system off.
- **NOTE: There are two exhaust ports at the stern: one port side and one starboard side. Make sure there are no lines or fenders over these ports – they WILL burn.**



### Details

The furnace draws from the main diesel fuel tank. In our waters, we use the heater on cool evenings or to take the chill off in the morning.

We close the companionway to retain heat in the cabins.

## 21. Lighting

The salon lights are operated by an electronic controller located on the inboard end of the galley "L" cabinet. After turning on the "CABIN LIGHTS" breaker on the DC Panel at the navigation station, a quick press on the Power Button followed by a press the S1 button will turn on all lights at once. Press the S2 to turn off all lights.

There is also a single entry light located on the salon ceiling on the port side when standing at the bottom of the companionway stairs to provide light when you first enter the boat. Press the light fixture to turn on. The CABIN LIGHTS breaker on the DC panel does not need to be on for this light to work.

The overhead lights in the staterooms and heads are switched on and off by pressing the light itself.



## 22. Refrigerators and Freezer

### Highlights

- During the charter season, the REFRIDGERATOR/FREEZER breaker on the DC panel is always left ON unless you need to conserve battery power at night.
- Check to be sure there is sufficient battery power to operate the refrigeration equipment all night. Usually there is.
- There are two refrigerators in the galley: The main unit with freezer is on the forward side of the stove and has access from above and below. A second smaller unit is contained in a pull-out drawer on the aft side of the stove.
- The thermostat for both units is in the aft unit.

## 23. Sails and Rigging

### Highlights

- Self-tacking, roller furling jib.
- Stack-pak type hoisting main with 2 reef points. Single line reefing from the cockpit.
- All lines led aft to the cockpit.

- Gennaker available by request in advance of your charter. Must have previous experience to qualify. Please contact SJS office.

## Details

### **Jib**

The jib is standard roller furling. Whether fully or partially deployed, you'll have good sail shape. Slight hand-over-hand tension on opposing lines – furling line and sheets – prevents problems such as a rat's nest on the furling drum (should the wind catch the sail and unwrap it violently) or a baggy furled sail. The easiest way to unfurl the headsail is to put the working sheet on the leeward winch and use the electric motor to deploy the sail. Once the sail is deployed, it will be on the winch and can be adjusted by electrically or manually reeling it in or manually easing it out. In light winds, the headsail can easily be deployed manually without the winch but you will probably want to put the working sheet on the winch anyway.

### **Furling or Reefing the Jib**

Ease the jib sheets (keeping control of them) while pulling in the jib furling line until only the amount of sail you desire is deployed. If you are going to reef the jib, make sure that you keep tension on the furling line both during and after the reef to prevent the reef from coming out. The most common problem is forgetting to take a jibsheet off the winch or not opening the appropriate clutch.

### **Reefing Guidelines**

Wind Dancer will sail comfortably in full rig in apparent wind speeds into the upper teens using standard depowering techniques at the top end of the range. If you anticipate (or find yourself in) stronger conditions, you may wish to partially furl either or both sails. If the boat develops excessive heel or weather helm, reefing may correct the problem, make your ride more enjoyable, keep loose gear from rocketing around the boat and improve performance. Everyone likes "rail in the water" shots but no sailboat sails efficiently that way.

With a reefed main, you may wish to balance the rig by partially furling in the jib. Correct balance should result in slight weather helm so that, if the wheel is released, the boat has a tendency to round up into the wind.

## **24. Showers and Sumps**

### Highlights

- The aft head includes a shower stall. The shower stall in the forward stateroom is separate from the head and is located on the starboard side.
- 118 gallons total fresh water in one tank.
- 6 gallon hot water tank.
- Water pump breaker on the DC panel at the nav station.
- Sump pumps activated by float switches in the sumps.

### Details

Experienced cruisers know the sailor's shower: get wet, turn off the water, soap up, rinse off. If the shower basin overflows, you're using too much water.

The transom shower features both hot and cold water. To operate, pull the T handle toward you. That brings water to the shower head. Turn the T handle left or right to adjust temperature. Depress the spring loaded top of the shower head for spray.

## 25. Spares and Tools

It is our goal and hope that you will not need to make repairs during your trip. That said, we have provided a good selection of tools and spares in case you need them. For a complete listing of spares and tools refer to Section 2, Inventory, of the white Charter Guest Reference binder, normally located at the Nav Station.

Engine and General Spares: Located in the port aft stateroom, under the forward end of the berth

Long Term Spares: Located in the exterior bow locker, on the floor below the shelves. Unless you are an experienced mechanic, you should generally try to find a professional to change any of these out for you or, at least to get a pro online to talk you through the process.

Tools: A toolbox is located under the companionway stairs and a supplemental tool kit is located in the forward stateroom on the starboard side in the lower cabinet.

If you have any problems that you are not comfortable handling please call the SJS office for assistance.

## 26. Storage

The magnetic compass for the autopilot/chart plotter is located in the port aft stateroom port locker aft side lower cubby (white plastic body). Do not place electronics or other magnetic (ferrous) equipment (like a portable speaker) nearby.

## 27. Stove, Oven and Microwave



**Highlights**

- The gimbaled stove/oven is propane-fired.
- Stove has 3 burners and the oven has a broiler.
- The propane solenoid switch is located at the nav station. Look for the Trident Marine control panel (see photo on right).
- There is a 2.5 gallon aluminum tank located in the starboard cockpit lazarette behind the helm. The lazarette is vented overboard for safety.
- The San Juan Sailing staff checks these tanks weekly to assure that you don't run out.
- For safety, we turn off the solenoid switch after stove use and the BBQ shutoff valve after grill use (refer to the BBQ section 5 near the beginning of the owner notes).
- The microwave oven is plugged into a 120V outlet in the galley. The AC PLUGS breaker on the AC panel powers this outlet.
- If not connected to shore power the microwave can be powered by the battery inverter. Please only use for short (2-3 minute) cook times or you will rapidly drain the house batteries.
- Caution: propane is heavier than air. If leak is detected, extinguish all flames and open all hatches and doors and close the hand valves on the propane tanks.

**Details****Lighting a Stove Burner:**

- Make sure the propane tank hand valve is open and the solenoid valve switch is on.
- Make sure the gimbal lock at the bottom of the stove/oven is secured. That way, if someone leans on the stove or grabs the oven handle, it won't tip and spill pot/pans on the cooktop.
- Press the electric ignition button (sparker) and push the burner temperature knob in and turn counterclockwise ¼ turn to the first (large) flame symbol position. Hold the knob pressed in for a few seconds after the burner lights then release.
- If the sparker isn't working, light a BBQ lighter and hold the flame near the burner edge then push in the temperature knob.

**Lighting the Oven Burner:**

- Make sure the propane tank hand valve is open and the solenoid valve switch is on.
- Make sure the gimbal lock at the bottom of the stove/oven is secured. That way, if someone leans on the stove or grabs the oven handle, it won't tip and spill pot/pans on the cooktop.
- Push the oven temperature knob in and turn counterclockwise ¼ turn and press the igniter button.
- After the burner lights, hold the knob in for a few seconds to heat the safety "thermocouple", then release.
- Turn the knob to the desired heat level.
- If the igniter isn't working, insert a BBQ lighter into the 3/4" hole in the burner cover plate (front edge in middle) and light.

**Microwave Oven:**

- Make sure the AC PLUGS breaker on the electrical panel is flipped on.
- If not connected to shore power the microwave can be powered by the battery inverter. Please only use for short (2-3 minute) cook times or you will rapidly drain the house batteries. See Section 6, Batteries/Charging/Inverter for instructions on how to use the inverter.

## 28. Water

### Highlights

- One 110 gal water tank in bow.
- Tank level indicator panel is located on the DC panel in the salon at the nav station. Press the up arrow repeatedly until "Fresh Water 1" is displayed.
- Deck fill cap is located near the bow on the starboard side.
- Fresh water pump breaker is on the DC panel at the nav station.
- Hot water is produced by two methods: 1. Shorepower, 2. Engine. See details below.

### Details

#### Water Pump:

Please turn off the water pressure breaker when the system is not being used. If one of the water tanks runs dry the pump will run continuously and burn out. You will likely not hear the pump running over the sounds of motoring or sailing.

#### Hot Water Heater:

The 6 gal hot water tank is located behind the engine and can be accessed via either aft stateroom.

- It takes about 30 minutes of running the engine under load to get the water hot. CAUTION: Engine heated water may be scalding hot. Please BE CAREFUL!
- When on shore power, you can heat your water using electric coils by turning on the WATER HEATER switch on the AC panel.

State parks do not have pressurized water to refill tanks, but all points of civilization do.

## 29. Winches

- The two aft primary sheet winches are electric and are controlled by the black buttons nearby.
- Turn on the Winches breaker on the DC panel.
- **Please be particularly alert when using a winch electrically to any problem that seems to be developing.** The electric winches will continue to crank as long as you continue to push the button. They are powerful enough to break gear if something gets jammed or just if the winch is cranked too long. You won't feel a thing if this happens so, if you are not visually alert during the process, your first indication that something is wrong may be a loud bang.
- The winches are protected by the circuit breaker on the DC panel.
- The electric feature only works to haul lines in so lines must be let out manually.
- The electric winches can also be operated manually using a standard winch handle. To operate manually, it is necessary to use the handle to push the pin down in the receiving end, which disconnects the electrical function until the winch is again used electrically (without the handle installed) at which point the pin will pop back up.

-----  
We hope this information helps. Have a great time!!  
-----