

Notes from the Owners of Mouette

Jeanneau Sun Odyssey 469

Dear Friends,

Welcome aboard *Mouette*!

Mouette arrived in the Pacific Northwest from her birthplace in France on August 15, 2013. She was commissioned and underwent sea trials in Anacortes before being delivered, bright and sparkling new, to San Juan Sailing.

Mouette is a 2014 Jeanneau Sun Odyssey 469. Her features include:

- Overnight accommodation for up to eight in three 2-berth cabins and the main cabin. (Occupancy by more than 6 requires approval from SJS.)
- Forward master cabin with queen-sized bed on the centerline, ample storage, vanity table and its own large head with shower. The forward cabin has an aftermarket latex foam mattress that we decided we had to have about three seconds after lying on one in the showroom.
- Two comfortable rear cabins with ample bed and storage space and separated by an insulated equipment tunnel. These cabins share a head/shower.
- Galley with 3-burner stove, oven and microwave plus top and side opening refrigerator and separate freezer.
- Electric flush fresh water heads.
- Upgraded house electrical system with 660 Ah capacity and smart charging functions.
- Custom Ullman laminate sails including a furling headsail and a boom furling main with electric cabin-top winch. Main and headsail sheets are led aft to electric winches located beside the dual helms. A bow-thruster makes docking easy even under challenging conditions. Anchoring is facilitated by an electric windlass with controls at the bow and in the cockpit where there is also a chain counter.
- Raymarine Axiom chartplotters (installed 2021) at both helms are integrated with all navigation electronics, including autopilot and AIS. The display is viewable on the main cabin television screen



and can be remoted to common devices such as laptops, tablets (or even smartphones) with free software download.

- Fully enclosable cockpit for added comfort on those occasional rainy or chilly evenings or passages.
- Very large sail locker forward that can accommodate bags and other stuff that would otherwise have to be stowed in one of the cabins.
- Crane for the dinghy outboard.
- DVD/MP3 video and Pioneer/Bose sound system with docking and cockpit speakers.

There are sure to be lots of little tips we could use to help make *Mouette* more convenient to charter. If you think of anything during your charter, please be sure to let us know. We look forward to hearing all about your adventures aboard *Mouette*!

Questions or feedback? Give us a call at 503-939-5527 or send us an email: halleji@gmail.com

The name? “*Mouette*” is the French name for a small gull. Large gulls, like herring gulls, are called “*goélands*”. John grew up in Geneva where the black-headed gulls (as well as the little boats that operate as taxis around the lake) are called *mouettes*.

Owner Notes Supplement

The Owner Notes that follow provide the basic information that is required for an experienced boater to operate all of the systems on board Mouette. If you require more in-depth supplemental information about each system, then please refer to the separate white binder labeled “Mouette Owner Notes Supplement”, located at the Nav Station in the aft compartment below the shelf.

Happy sailing!

John and Barb Halle
Mouette, LLC

Table of Contents

| | | |
|-----|---|----|
| 1. | Vessel Information and Specifications | 4 |
| 2. | Nuances | 5 |
| 3. | Emergency/Safety Equipment..... | 5 |
| 4. | Anchors and Windlass | 7 |
| 5. | Barbecue..... | 9 |
| 6. | Batteries, Charging and Inverting..... | 9 |
| 7. | Berths and Bedding | 11 |
| 8. | Bilge Pumps | 12 |
| 9. | Bow Thruster | 13 |
| 10. | Dinghy and Outboard..... | 14 |
| 11. | Dodger, Bimini and Cockpit Enclosure..... | 16 |
| 12. | Electrical..... | 17 |
| 13. | Electronics and Instruments | 19 |
| 14. | Engine..... | 23 |
| 15. | Entertainment Systems..... | 27 |
| 16. | Fuel..... | 28 |
| 17. | Hatches | 29 |
| 18. | Heads and Holding Tanks..... | 29 |
| 19. | Heater (Cabin) | 31 |
| 20. | Lighting..... | 31 |
| 21. | Refrigerator and Freezer..... | 31 |
| 22. | Sails and Rigging..... | 32 |
| 23. | Showers and Sumps | 36 |
| 24. | Spares and Tools | 36 |
| 25. | Storage | 37 |
| 26. | Stove, Oven and Microwave | 37 |
| 27. | Swim Platform..... | 39 |
| 28. | Tables | 40 |
| 29. | Water | 40 |
| 30. | Winches..... | 41 |

1. Vessel Information and Specifications

Vessel Information:

Washington State Parks Annual Permit Decal – Located on the cabin exterior, port side aft.

U.S. Customs Re-Entry Decal – Located on the aft side of the starboard helm binnacle.

Vessel Official Number - 1250069 (same number as shown on the Coast Guard Certificate of Documentation found in Section 5 Documentation of the Charter Guest Reference Manual (white binder). Mouette's number is located in the salon, in the center bilge opposite the dinette table on the forward stringer. Look for 3" high characters.

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.

Specifications:

| | | | |
|-----------------|--|-------------------|-------------------------------------|
| Year: | 2014 | Engine: | 54 hp Yanmar 4JH5CE |
| Make/Model: | Jeanneau 469 | Fuel: | 63 US Gal |
| LOA: | 46' 11" | Water (2 tanks): | 106 & 62 US Gal |
| Beam: | 14' 9" | Holding (2tanks): | Both 21 US Gal |
| Draft: | 7' 4" | Heads: | 2, Masterflush fresh water electric |
| Displacement: | 23,830 lbs. (Dry) | Electronics: | Raymarine |
| Staterooms: | 3 doubles | | |
| Forward: | Headroom: 6'-4", Berth Dimensions: 6'-8"x5'-5" (head), 6'8"x4'-8" (feet) | | |
| Aft, Port: | Headroom: 6'-5", Berth Dimensions: 6'-8"x4'-7" (head), 6'8"x4'-5" (feet) | | |
| Aft, Starboard: | Headroom: 6'-5", Berth Dimensions: 6'-8"x4'-7" (head), 6'8"x4'-5" (feet) | | |
| Salon Headrm: | 6'-6" | | |
| Refrigerator: | 12"Wx22"Hx19"D | Freezer: | 24"Wx28"Hx15"D |

2. Nuances

There are a few things about Mouette 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.

Boom Furler

Mouette has a boom-furling mainsail instead of the typical mast-furling mainsail. This system is a pleasure to use but it's essential that you and your crew read and follow the furling instructions contained in this document. Please refer to section 22, Sails and Rigging.

Electric Winches

You may not have had experience using electric winches as they uncommon on most sail boats under 40'. Electric winches are easy to use and make trimming large sails a pleasure, but it's essential that you and your crew read and follow the electric winch instructions contained in this document. Please refer to section 22, Sails and Rigging.

Nav Table

The nav table is attached to rails in the starboard wall of the salon and can be lowered to form a single berth (along with the seats in front of and behind it.) It is not supported on its inboard side in the up position and is therefore unsuitable sitting or leaning hard on it, except in the down position with the legs extended (Refer to Section 7, Berths and Bedding for complete instructions on how to make the berth conversion). Please do not sit, lean or otherwise exert significant pressure on the inboard side of the nav table.

3. Emergency/Safety Equipment

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

Bilge Pump (Manual) and Handle. Located on the inboard face of the propane locker, port side of the cockpit adjacent to the helm. Handle clips to underside of the propane locker lid. Note: if water rises above floorboards, can use shower sump pumps also in emergency.

Carbon Monoxide Detectors. In each stateroom.

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

Emergency Tiller. 5' long, bronze colored pipe with "T" handle, located in the center cockpit floor locker in front of the swim step.

Fire Extinguishers (4): port cockpit locker, cockpit table – forward end, salon – port settee seat base aft end, forward stateroom hanging locker

First Aid Kit. In salon head vanity cabinet.

Flares (Pyrotechnic - 3). Port cockpit locker in green mesh bag.

Flashlights 1 & 2. Nav station forward compartment above seat back and cockpit table forward end.

Flashlight 3 (Searchlight). Nav station forward compartment above seat back.

Horn, handheld. Port cockpit locker in green mesh bag.

Life Raft, Inflatable, Located in the port aft cockpit floor locker, behind the helm. Look for the yellow cover. To inflate, follow the instructions printed on the cover.

Lifesling, port stern pulpit in blue soft case. 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 (6). Located in the stateroom hanging lockers. NSO: please check for “green” visible at bottom of clear canister before each cruise. That verifies the auto-inflate function when immersed. We wear these at all times when working the deck and often in the cockpit.

PFDs - Foam Vests (4). Located in the stateroom hanging lockers.

Radar Reflector (tube style). Mounted on shrouds.

Spares, equipment. Salon, starboard dinette seat locker forward end.

Spares, spare parts. Salon, port dinette seat locker forward end.

Tapered Plug, Universal Foam Orange StaPlug. Cockpit table, forward end in green mesh bag.

Tools. Port cockpit locker.

VHF Radios. Channel 16. VHF base unit at nav station and handheld in the forward compartment above the nav station.

Windlass Clutch Release/Tighten tool (small winch handle). Bow anchor locker, in white plastic pocket.

4. Anchors and Windlass

Highlights

- Windlass primary controller is in the anchor locker.
- 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).
- There is a secondary windlass controller and chain counter on the aft end of the cockpit table. We recommend only using the controller at the bow to ensure you don't accidentally cause any damage to the windlass or the gelcoat on the bow stem.
- Windlass breaker switch is labeled and located in the aft port stateroom on the base of the berth between the two battery switches (look for the yellow switch tab).
- Chain length markings: 300' of chain marked with 1 piece of yellow line at 25' intervals and 2 pieces of yellow line side by side at 100' and 200'. At 300 feet of chain, it will switch to a 6' nylon line that connects to the boat for safety. The placard shown above is glued to the underside of the anchor locker door.
- Windlass clutch release/tighten tool (small winch handle) is located inside the bow anchor locker in the white plastic pocket. 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 snubber line 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 DC panel at the nav station.
- Secondary/Spare anchor is stowed in the cockpit center floor locker in front of the swim step. The chain is stowed in the port floor locker and the nylon rope is stowed in the starboard cockpit seat locker.

Details

- a) Primary anchor – Delta mounted on the bow, with 300' 3/8" HT chain.
- b) Wash down pumps salt water from bottom of sail locker, circuit breaker on electrical panel.
- c) Snubber – The anchor snubber line with chain hook is located in the anchor locker.
- d) Secondary anchor – Heavy duty but light weight aluminum Fortress anchor with 50' of chain and 200' nylon rope.

CHAIN LENGTH MARKING

2' lengths of line woven into chain:

- 1 piece every 25'
- 2 pieces at 100' + 200'

- e) To Deploy Main Anchor:
- f) We check tide tables to determine current water level and amount of drop while anchored.
- g) Weather (ch 4, "Northern Inland Waters" or ch 7) helps select a safe anchorage.
- h) The windlass circuit breaker is labeled and located in the aft port stateroom on the base of the berth between the two battery switches (look for the yellow switch tab).
- i) 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'.
- j) 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!).
- k) 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.
- l) A signal to the helmsman prompts reverse at idle speed while deploying rode to the desired scope.
- m) 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.
- n) Finally, we reset the snubber.
- o) Then ease the windlass until the snubber is tight and the short section of chain aft of the chain hook is slack.
- p) 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.)
- q) In storm conditions (or storm forecast), you can increase scope if there is adequate room to leeward.
- r) The secondary anchor is available for additional holding power if a storm is anticipated, but best if set before the storm hits.
- s) 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) Depress port "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.
- c) A mountain on chain under the windlass can jam it and in rare cases cause a wild gravity runout of rode. If that happens, stand clear for safety. We avoid that chain "mountain" by "lifting" the chain forward in the well as it is retrieved, using the boat hook. We grab the chain with the boat hook and pull it forward as another crew feeds it by pressing the "up" switch, 2'-3' at a time. Important for the initial chain retrieved. Last 50' can stack under windlass ok.
- d) 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.
- e) 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.
- f) After nesting, with a slight *slack in the chain*; we secure the anchor once again with the light snubber on the windlass-mounted cleat. As noted, the chain is only "unsnubbed" when it is moving in or out.

5. Barbecue

Highlights

- BBQ propane hose is plumbed after the solenoid valve. Solenoid valve switch is located in the galley on the base cabinet face, aft side of the stove.
- Please clean grill (using the brush attached with wire lanyard) when finished cooking.

6. Batteries, Charging and Inverting

Highlights

- 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.

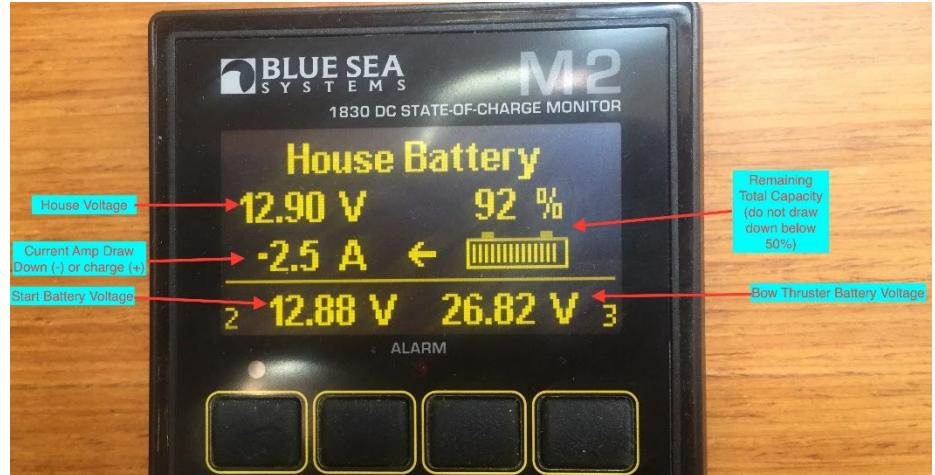
Details

BATTERIES:

Vessel name has the following battery groups on board:

- Engine start and Windlass** (single Group 24 AGM battery)
- House** (6-6V AGM batteries total of 660 AmpHours – 330 usable)
- Bow Thruster** (24V bank AGM Batteries)

All batteries are charged



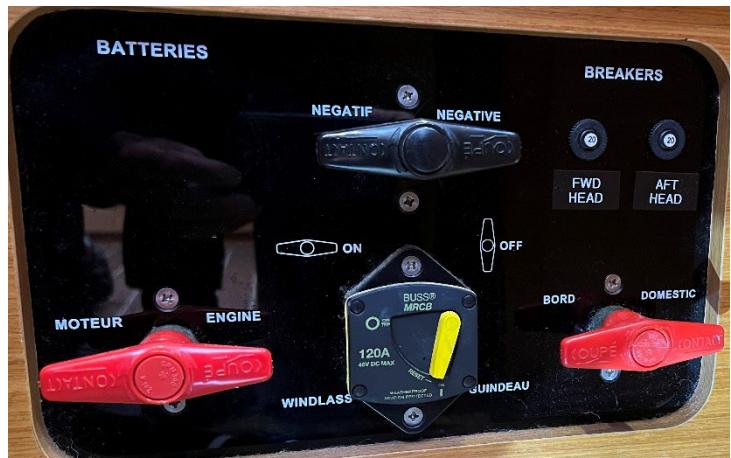
automatically when connected to shore power or while the engine is running. Use the Blue Sea battery monitor (located at the nav station, forward end of the chart table) in photo, above to view the current states. Note that the voltages “2” and “3” displayed below the house battery are the engine start and bow thruster/windlass batteries respectively.

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 Section 9, Bow Thruster, below for detailed description of using the bow thruster and how to reset the primary circuit breaker if it trips.

Battery disconnect switches

- The battery disconnect switches are located on the forward face of the port aft berth.
- The switches should remain in the ON position (handle horizontal).
- Note that it's easy for a crew member to accidentally bump one of the switches and turn it to the off position. If you have a loss of DC power to one or all of the systems then be sure to check these switches first.



CHARGING AND INVERTING

Mouette has been equipped with a state-of-the-art Magnum Energy power management system which includes a charger and an inverter. The Magnum control panel is shown in the photo on right. It is located in the salon on the port side next to the sound system.

**Please do not change any of the settings under the "Setup" button.



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 Mouette is located in the cockpit below the port helm.
- Normally the Magnum panel will automatically start charging (after a 20 second startup) and indicate Bulk, Float or Absorb charging. If not, press the CHG button on the Magnum panel.
- 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. 2. The master shore power breaker on Mouette is tripped. This breaker is located inside the port cockpit floor locker, up high on the forward end, outboard side.

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 Inverter can be turned ON.
- 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.
- At the Magnum control panel, press the INVERTER button (one press activates the screen light, second press turns on the inverter).
- On the AC panel, flip both AC PLUGS breakers.
- Please turn the inverter OFF when not in use.

7. Berths and Bedding

Mouette is ideal for up to 6 people, but she'll sleep a maximum of 8 - two in the forward cabin, two in each of the rear cabins, and two people in the main cabin. Each of the cabins will comfortably accommodate two adults and the two rear cabins are separated by an insulated space rather than the sheet of $\frac{1}{4}$ "

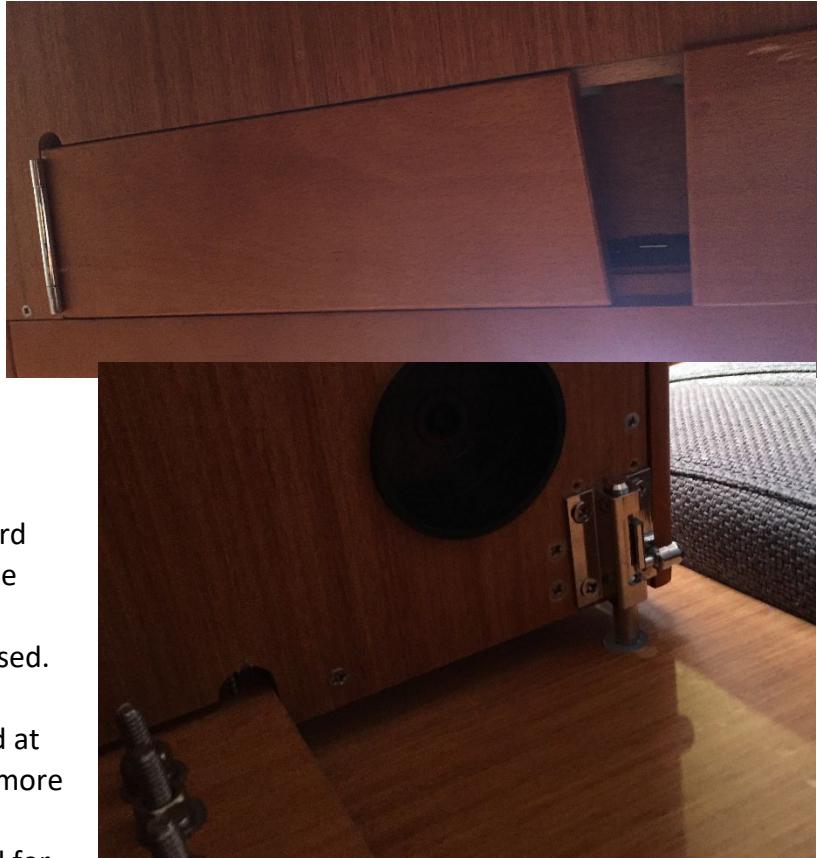
plywood common on many other boats. Additional sleeping area is available on both sides of the main cabin, on the starboard side by lowering the nav table and filling in with a cushion. The main cabin table is not convertible into a sleeping area.

To lower the nav table, fold down the wooden legs underneath on the inboard side and pull out the two deadbolts. The table will then slide down the rails until the legs touch the sole. A cushion can then be placed on top of the nav table to create a single berth with the seats immediately in front of and behind the table. To raise the table, reverse the process.

Dead Bolt Under Nav Table (one on each side)

All hatches come equipped with sliding pull-out covers and sliding pull-out screens. In the forward cabin, 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 forward cabin has a real bed with your head at the bow and feet pointed toward the stern (no more pivoting around to get out of a V-berth). The starboard cabin has its own door to the aft head for additional privacy and convenience.



8. Bilge Pumps

Highlights

- Emergency Bilge Pump (manually operated): located at the port helm. The pump handle is clipped to the underside of the propane locker lid (located at the port helm, outboard side).
- Electric Bilge Pumps: Have automatic float switches. One pump is located in the salon bilge – lift the floor hatch opposite the dinette table. The other is located in the sail locker accessed from the deck at the bow. Check the strainers on the pump inlets for any clogging debris and remove if needed.
- Please visually inspect the bilge each day, which is accessed by lifting the floorboard at the forward end of the salon.

Details

Electric Bilge Pumps

Both are controlled at the electrical panel through a single switch that can be set to AUTO, ON or OFF. Switch should always remain in the ON position except to test pump operation or for maintenance. The ON light glows green only when a bilge pump is operating. If the environment is quiet, the pump noise in operation is audible.

For those of you used to the traditional float switch pumps, the salon bilge pump is a bit different. It is programmed to go on at regular intervals for very brief periods but to turn off again almost immediately unless the pump senses water resistance, in which case the pump will stay on until the water is pumped out. You should only notice the bilge pump working if it is actually pumping water. Noticeable bilge pump activity once or twice a day is normal but, if it occurs more regularly, there may be a problem.

Note: in emergencies, the shower sump pumps can be turned on if water rises into the heads.

9. Bow Thruster

Highlights

- Bow thruster is powered by its own 24V battery bank located near the bow under the berth.
- Activate the controller at the starboard helm by pressing the red and green buttons together for at least one second (see photo on right). A green light in the red button will turn on. The engine must ignition must be on to operate he thruster controller.
- The controller will turn off automatically if it has not been used for 5-10 minutes.
- 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!
- Very infrequently, the master circuit breaker may pop. It's located under the forward stateroom berth, at the forward end (see photo on right). Reset by pressing down on the top black button.
- 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.

10. Dinghy and Outboard

Highlights

- 10' fiberglass hulled Achilles dinghy, 15hp Tohatsu outboard.
- Tow the dinghy 6' off stern using the starboard cleat (the side away from the diesel exhaust). Use a proper cleat hitch and for peace of mind tie off the painter's bitter end to base of the stern pulpit. In very rough conditions, towing the dinghy from the low side makes it unlikely the dinghy will flip in the wind and waves.
- Please don't tow with outboard attached to dinghy or leave on the dinghy overnight.
- Inflatable tube air pump – located in the dinghy seat canvas pouch.
- Inflatable tube patch kit – located in the starboard cockpit locker in the large blue Achilles bag.
- The 15hp Tohatsu outboard is a 4-stroke and takes straight gas.
- The orange fuel tank should be full at the beginning of your charter and you will need to make sure it's full when you return. 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.

Details

Towing the Dinghy

Always remove the outboard motor dinghy before towing. We leave the gas tank in the dinghy, tied off to the transom. Towing works best when the dinghy is brought close to the boat with 4-5 feet of painter line between the stern and the towing bridle of the dinghy. This lifts the bow out of the water and reduces drag. To keep the dinghy away from engine exhaust, tie the painter off at the starboard stern cleat with a standard cleat knot, then attach the bitter end to the stern rail using a rolling hitch or similar secure knot.

Outboard

Outboard Crane:

The outboard is attached to the crane line with a harness with two adjustable straps one of which goes in front of the shaft and the other behind. It has never failed us but, just in case, we attach a safety line to the handle at the top of the engine shaft and tie the other end onto the boat with plenty of slack to allow for the process. The only purpose for the line is to make the engine retrievable in case of a harness failure.

To Start:

- Attach the fuel hose to the engine.



- Open the fuel tank vent (small screw in the center of the fuel cap.)
- Squeeze the bulb in the fuel line until it is hard to squeeze (full of fuel.)
- Make sure gear lever is in neutral. (If you can't pull the start cord, it's not.)
- Make sure the U-shaped kill clip (with the red lanyard) is clipped into the red shut-off knob (forward low on the outboard).
- Turn the throttle handle to "start". The engine has no choke and is easily started with the throttle at the "start" position.
- Pull the cord until it starts. You shouldn't have to pull it more than 2-3 times.

To Shut Off:

- Shut the outboard off by pushing in the red shut-off knob (where the kill clip is clipped in). Or just pull the red lanyard until the clip pops off.
- To avoid prop damage, shut the outboard off and then raise the shaft out of the water before you reach the shore. Unlock the shaft using the tilt lever and pull the outboard forward and out of the water as far as it will go and then turn the engine sideways. To put the outboard shaft back in the water, release the tilt lever.
- If the engine is not going to be used for some time, close the air vent on the fuel tank and disconnect the fuel hose from the engine.

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 hear a "click" as the tilt support locks in place. Note that the motor is held in the lowered position by friction from a large 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.

Inflating the Dinghy

- If the dinghy needs inflation, the foot pump is in the starboard cockpit locker. The dinghy has three (3) baffles, each with an inflation valve located on the inside of the boat, plus an inflatable keel. The keel's inflation valve is in an opening in the bow floor board. Use the **black** adapter to inflate the main baffles. Use the **grey** adapter to inflate the keel.
- The foot pump is held closed with a locking clasp. Release the clasp, insert the appropriate inflation nozzle onto the valve and give a $\frac{1}{4}$ turn to lock it in place. Inflate the baffle or keel with the foot pump until it is firm. When done, carefully detach the inflation hose. If the valve is still open, press it once to close it.
- If you need to make a repair, the repair kit and instructions can be found in the tools and spare parts storage compartment located under the main salon seat.

11. Dodger, Bimini and Cockpit Enclosure

Highlights

- Our dodger, bimini and enclosure panels can enclose the entire cockpit. We usually sail with the side panels removed, and only put them on when we need the extra space outside during inclement weather. There are 8 side/back panels.
- **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.**
- During the summer months the side and back enclosure panels are normally stored off the boat in the SJS storage locker. If you would like to have the enclosure on board, please request from the SJS office prior to your departure.
- If you need to remove any of the panels during your cruise, please handle and store carefully as the mylar windows are easily scratched and creased. Roll the panels together and place in the canvas storage cover (located in the xxx). Store the panels in the aft port stateroom on the shelf. Please make your entire crew aware to not place any items on top of the panels so they don't get creased.
- The Dodger-to-Bimini overhead connector piece can be removed (un-zipped). The rest of the dodger and the bimini stays in place. Please store the connector piece in the port cockpit locker.

Details

TIP: When not in use, store enclosure panels rolled, never folded, and never with anything on top to weigh them down. Creasing damages the mylar.

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!

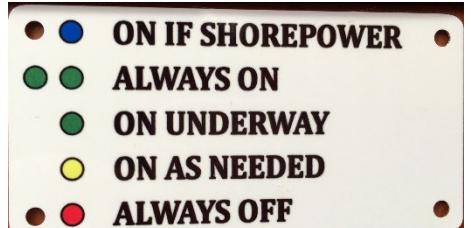
Caution: Most spray-on sunscreens and bug-sprays react chemically with the plastic windows. Please inform your crew to spray downwind of all the panels. And please don't lean against the panels with sunscreen on your back and shoulders. Once that chemical reaction takes place, the plastic is ruined.

Thank you for your good care!

12. Electrical

Highlights

- The AC & DC electrical panels are located at the nav station on the starboard side of the salon, behind the cabinet door just above the nav table.
- The breaker/switches use the color dot convention shown in the photo on the right.
- Main AC breaker/switch is located on the DC panel in nav station.
- Primary shore power breaker is located near the shore power cord outlet below the port helm. Open the cockpit floor locker below the helm, look on the forward bulkhead, up high, outboard side.
- The AC PLUGS breakers at the bottom of the AC panel are powered by either Shore Power or the Inverter.
- The forward AC PLUGS breaker powers all of the outlets EXCEPT the one located at the nav station, in the cubby below the electrical panel. This outlet is powered by the aft AC PLUGS breaker.



Switches and Controls on the Electrical Panel

Here are some notes about the breakers:

AC Panel

- Battery Charger:** This breaker is for the old charger system and is no longer used – leave turned off. Old system left installed as a backup. When connected to shore power, the new charger (Magnum) normally turns on automatically. Check the Magnum controller display (port side of salon behind settee next to stereo). Should display “bulk, float or xxx charging”. If not, press the Charger button twice (1st press turns on the display light, 2nd press turns on the charger). Wait 30 seconds or so for the system to boot up.



- **Water Heater:** Activate the electric hot water heater when you are on shore power if you need more hot water. Engine running at cruise RPM will also heat the water in the tank by circulating hot cooling water.
- **AC Plugs:** Activate both breakers to turn ON the AC electrical outlets located throughout the boat, run the microwave oven, operate the TV/DVD entertainment system, etc.

DC Panel



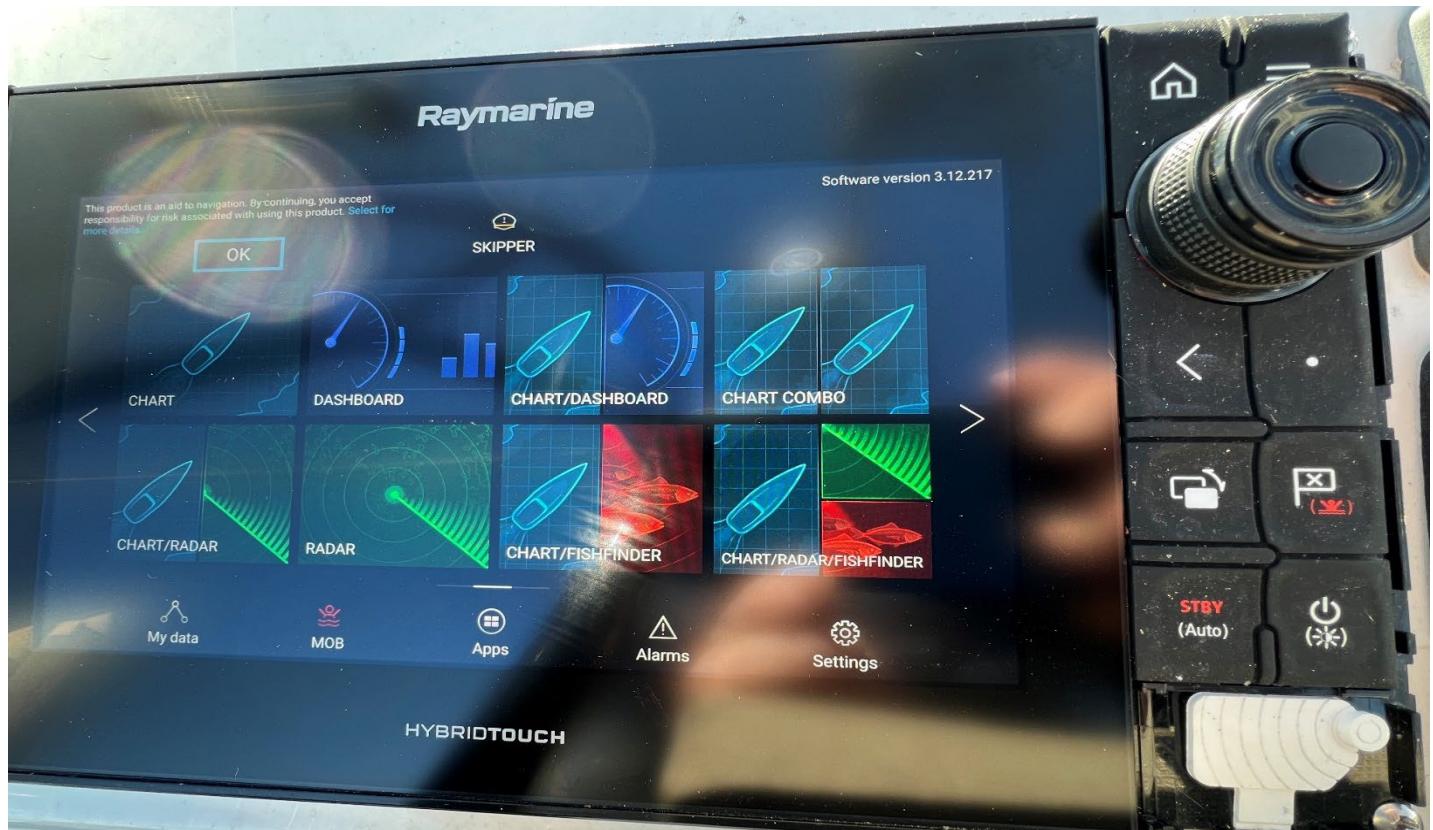
- **Bilge Pump:** Always leave the bilge pump rocker switch in the “Auto” position. Test operation of the pump daily by switching to the “Manual” position and listening for the pump to run, then return it to the “Auto” position.
- **Water Pump:** If you don’t hear the pump start when you turn the breaker 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.
- **Cabin Lights:** This breaker turns ON/OFF DC power to the LED lights located throughout the boat. It must be “ON” before you can turn on any lights on the boat. See Section 20, Lighting, for details on where all the light switches are located.
- **Fridge Unit:** 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.
- **Nav. Instruments:** Turn this switch “ON” to activate the Raymarine electronics, instrumentation, and multi-function displays in the cockpit. This switch also provides power for the radar.

- **Anchor Light:** When anchored or on a mooring ball, turn on the Anchor Light at dusk.
 - **Steaming Lights/Nav. Lights:** Turn on during periods of low visibility.
 - **Deck Flood Light:** Turn on the deck Flood Light if you must go forward on deck at night.
 - **Auxillary:** Powers the Pioneer stereo.
-
- **Circular push button switches and LCD display:** Fuel level, water tank levels (Tank 1 - forward and Tank 2 - aft), battery levels (Domestic and Engine) and breaker icon illumination. The accuracy of the fuel and water gauges can get questionable when they drop to $\frac{1}{4}$ full – at $\frac{1}{4}$ full it's time to find the fuel dock! The light bulb icon at the bottom of the dial turns on the blue lights that illuminate all of the icons on both panels.

13. Electronics and Instruments

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

CHART PLOTTER:



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.

The chartplotter displays can be seen and functions controlled remotely on tablet or laptop computers (and even smart phones) that have downloaded the required software (which is free from Raymarine). If you have an appropriate device and would like to use it in this way, go to the Raymarine website (or iTunes if you do Apple) and download the software. The TV can also be set up to display, but not to control, chartplotter data.

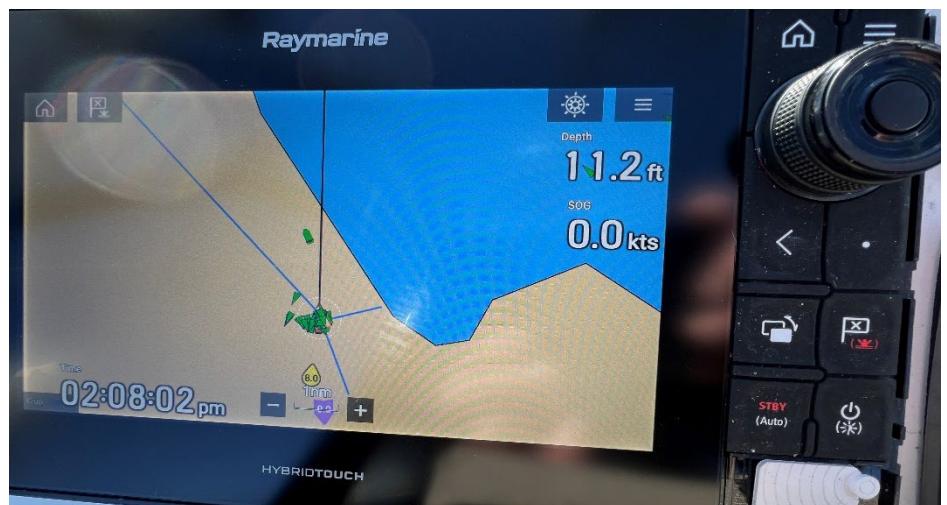
Highlights

- The magnetic compass for the plotters is located in the starboard aft stateroom, inside the hanging locker at the top aft outboard corner (white plastic body). Do not place electronics or other magnetic (ferrous) equipment (like a portable speaker) on the shelf.
- Mouette is equipped with dual Raymarine Axiompro 9S (E70) touch-screen chartplotters, one at each helm. Each one operates independent of the other but note that the plotter at the starboard helm is set as the Master and needs to be turned on in order for the port plotter to function properly. Both units are powered by the single "Nav. Instruments" breaker on the DC electrical panel.
- After power is applied, the system will return to the last formats/settings selected. The most popular selections for screen formats are accessed by selecting Home, then Favorites, then chose the desired app for each plotter.
- 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 a Raymarine chartplotter, you can view the complete Owners Manual on the plotters. [How to open???](#) – Jack will research.

Commonly Used Chart Plotter Selections:

Finding the Navigational Chart:

- Go to the Home screen (press the home/house icon).
- Select desired display combo – ie. chart only, chart/radar, etc. See photo on right.



Zooming in and out:

- Press the "+" / "-" icons at bottom of screen or use 2 fingers on the touch screen to zoom-in (spread fingers) or zoom-out (pinch fingers).

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

- Press the vessel inside the "+" icon in the upper left corner of the screen.

Clearing Pre-existing Waypoints, Routes and Tracks:

- Press the Menu icon (upper right).
- Select Waypoints, Routes, Tracks.
- Select Show/Hide or Delete as desired.

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

- Press the Menu icon.
- Press the Tools icon (at the very bottom of the list – need to scroll down slightly).
- Press View & Motion then Chart Orientation.
- Select North, Head or Course Up.

Display Brightness:

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

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

- Move the cursor over top of the vessel icon – use the inner ring on the control knob or touch the screen.
- Press the center button on the control knob and a Popup dialog box should appear.
- Check the COG and Infinite Vectors boxes.



Displaying and using a Split Screen: Ex. Chart zoomed-in on one side and zoomed-out on the other, Chart on one side and Radar on the other.

- Go to the Home screen (press the home/house icon).
- Select desired display combo – ie. chart only, chart/radar.
- Only one screen at a time is active. Touch the desired screen to make active. The active screen has the red border around it.

Radar:

- Select desired screen setup per above instructions ie. Radar only or chart/radar combo.
- Press Transmit.
- To turn off the radar, press Menu (upper right corner), select Turn Off Transmitter.
- To turn off the scanner, press OFF – Power Down Radar Now? - YES

AIS Overlay:

- Press the Menu icon (upper right).
- Press Settings – Layers – AIS – ON.

Targets:

- Press the Menu icon (upper right).
- Press Targets – select desired (AIS, Settings, Collision)

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

Highlights

- Mouette 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). Mouette is transmitting her position full time (The AIS unit is wired directly to the batteries). **OR** Vessel name is only transmitting her position when the VHF base unit radio is ON.

- On most vessels the VHF base unit radio must be ON to send and receive AIS data. Some vessels will have a separate AIS unit installed and wired to the batteries for full-time transmitting. The chart plotter is tied to the VHF radio or AIS Unit and shows the positions of vessels with AIS as triangles. Make sure the AIS overlay is turned ON in the settings menu. Add details here about how to turn the AIS overlay ON/OFF.
- 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. Mouette's MMSI number is 367587330.

Details

AIS vessels appear on the chart plotter screen as triangles (must have AIS overlay turned ON – see above Quick Notes for how-to). 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 *Vessel name* 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 that will reveal vessel name, course, speed, track, and other information.

AUTOPILOT:

Highlights

- To engage the autopilot, press “AUTO” one time
- To disengage the autopilot, press “STBY”

VHF RADIOS:

Highlights

- Raymarine VHF base unit located at the nav station in the salon in the cubby below the electrical panels and a RAM unit for cockpit control. Turn on the base unit by pressing the PWR button for one second.
- The RAM plugs into the aft end of the cockpit table on the pedestal below the table. Turn on the RAM by pressing the CLR & MENU buttons together for one second.
- The RAM can control all of the base unit functions.
- See **A.I.S. (Automatic Identification System)** section above for detailed description of AIS.

WIND INSTRUMENTS:

Highlights

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

14. Engine

Highlights

- Yanmar 54hp 4-cylinder diesel with Volvo sail drive and Maxprop feathering propeller.
- Moderate port prop walk in reverse.
- The saildrive helps eliminate shaft vibration, noise, and alignment problems. Under engine power, you will find Mouette to be quiet, balanced, maneuverable, and powerful.
- Maximum RPM is 3000. Cruising RPM is 2800 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.
- The Maxprop propeller will normally feather easily if you shutdown the engine with the gear shift still in forward. After a few seconds, shift to neutral and leave in neutral. In the unlikely event that the prop has not feathered and is still spinning, go ahead and shift into reverse for a few seconds then back to neutral.
- 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 cabin (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 the Engine

See photo on right. This is a keyless start system. The main battery engine switch, located in the aft port stateroom, must be in the “ON” position to start the engine. As an anti-theft measure, when docked in a marina or leaving the boat for an extended period, switch the engine battery switch to “OFF” and lock the companionway hatch.

1. Ensure that the throttle/gearshift is in neutral.
2. Turn on the ignition panel by pressing and quickly releasing the “I” button (bottom right) – do not hold the button or it will turn the ignition back off. Red lights will illuminate on the tachometer dial.
3. Press and hold the start button (“rotation” icon at the top right) and release when engine starts up. Do not crank more than 4 seconds at a time.
4. Listen/look for water discharging from the aft starboard end of the hull. If water is not in the exhaust, immediately shut the engine down and contact SJS.
5. Check your fuel level Check the fuel tank level using the gauge on the right side of the electrical panel at the nav station in the salon.



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

- 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.

Shutting Down the Engine

1. Allow the engine to idle for a few minutes in neutral to cool down.
2. Press and release the middle "STOP" button, which will stop the engine.
3. After engine stops press and hold the bottom power "I" button for a few seconds until you no longer hear the ventilation fan in the engine compartment. The red lights on the tachometer will turn off. If the bottom power button is not turned off, an alarm will sound periodically.

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

Mouette 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 port 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.

15. Entertainment Systems

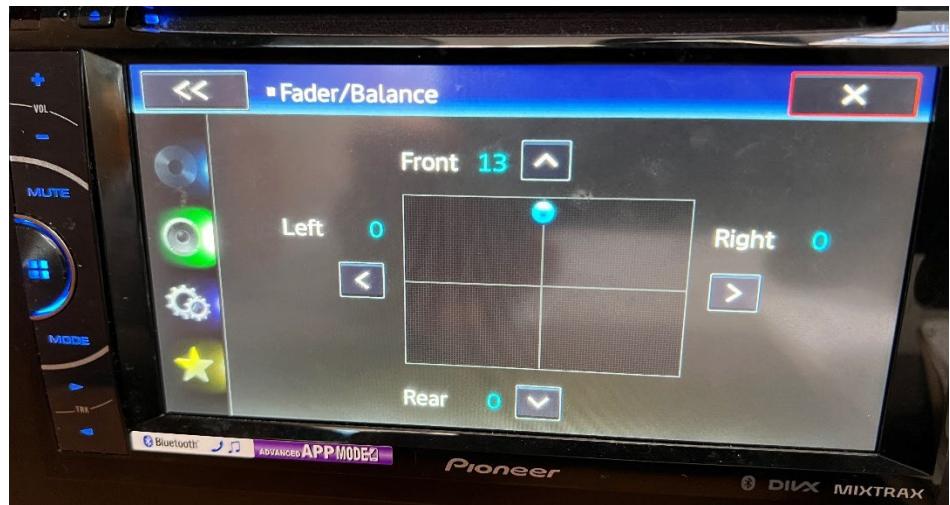
Mouette has a Pioneer Radio, DVD, Bluetooth, USB sound system with Bose speakers in the main cabin and cockpit and an Insignia TV system.

The Pioneer unit has both a touchscreen and hard keys.



Speakers – Controlling Salon and Cockpit Levels:

- Press the Menu button (left side, middle – four squares icon).
- Press Audio on the screen (bottom bar).
- Press Fader/Balance on the screen (at top of the Audio list).
- Move the ball in the grid to select desired speaker balance (see photo on right)



- “Front” is the salon speakers and “Rear” is the cockpit speakers.
- Please be mindful of others around you when playing the cockpit speakers. Sound carries far and loud over the water.

Bluetooth:

- Press the Menu button (left side, middle – four squares icon).
- Press Bluetooth Audio on the screen (bottom bar).
- Press Connect.
- Look for “AVH-X2500BT” on your device.

TV:

You can watch DVDs or other content that you bring with you. (There are a few “house DVDs on board as well.)

16. Fuel

Highlights

- The diesel fuel tank holds 63 gallons.
- The engine consumes about 1-1.5 gallons of diesel per hour depending on cruising RPM.
- The fuel gauge is located on the electrical panel at the nav station in the salon.
- Refuel when gauge reads $\frac{1}{2}$ or greater.
- Fuel deck fill is near the stern on the port side deck.

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 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.

17. 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.
- Some of the 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 cabin 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 will get into either or both of the two front cabin hatches if the vents are open and will make an annoying wet spot on the bed 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 $\frac{1}{4}$ 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.

18. Heads and Holding Tanks

Highlights

- Only what has been eaten goes in the toilet.
- Both toilets are Dometic electric macerating flush using fresh (potable) water piped from the water tanks.
- 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. Both tanks are 20gal each and on average should be emptied every second day. More or less depending on use.
- The holding tanks do not have level gauges. Check tank levels by accessing each tank and shine a flashlight on the tank to see the top of the liquid. The tanks are located behind and above the toilets. Pull the top access panel towards you a few inches then lift up.
- The holding tanks are gravity draining (no macerator pump) if you are in a location that's legal to dump overboard. See Details below.
- The holding tank overboard discharge seacocks have large red “T” handles. The forward head seacock is located inside the base of the sink cabinet on the outboard side (difficult to see but is reachable). The aft head seacock is located under the dinette seat at the aft end outboard side. The tanks will empty in

a minute often ending with a “whooshing” sound. Close the seacocks when done. Very important otherwise each time someone flushes a toilet, the waste will instantly discharge overboard.

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

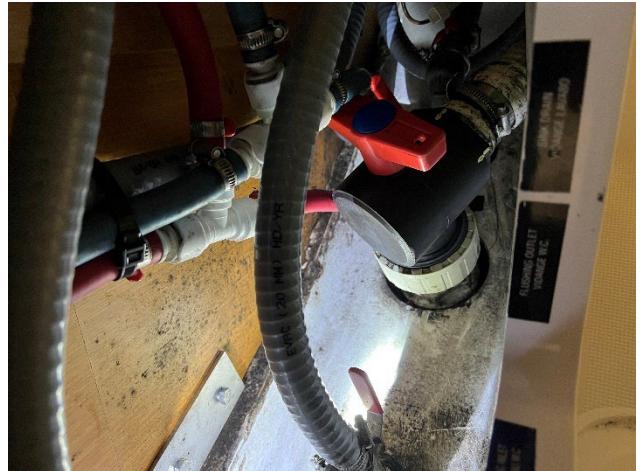
1. Deck Pumpout
2. Overboard Discharge (**where legal**)

1. Deck Pumpout

The holding tanks can be pumped out via the labeled deck caps. 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**)

The holding tanks are gravity drain, there is no macerator pump. They will normally drain in less than a minute (you may hear them finish with a ‘whoosh’ if the engine is not running). The holding tank overboard discharge seacock have large red “T” handles. The forward head seacock is located inside the base of the sink cabinet on the outboard side (difficult to see but is reachable – see photo on right). The aft head seacock is located under the dinette seat at the aft end outboard side. Close the seacocks when done - very important otherwise each time someone flushes a toilet, the waste will instantly discharge overboard.



19. Heater (Cabin)

Highlights

- Webasto diesel-fired furnace, forced air cabin heat.
- Takes a few minutes to cycle-up before warm air starts blowing out the vents.
- Thermostat located on the salon bulkhead at the aft end of the dinette seating.
- Not efficient to run all night, noise wakes light sleepers, draws down the house batteries.
- After turning the heater off, the fan will continue to run for about 5 minutes while the unit is cooling down and cycling off.

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.

At the thermostat, press the Power switch on and select the fan speed and desired cabin temperature. After the cabin warms up we normally leave the fan on the low setting.

We close the companionway to retain heat in the cabin.

20. Lighting

Highlights

- Flip on the CABIN LIGHTS breaker on the DC panel at the nav station (upper left corner).
- Salon Ceiling light switches are located on the ceiling above the galley standing area.
- Stateroom and Head ceiling light switches are located on the ceiling just inside the doorways.
- All other lights have switches on the base of the fixtures.

21. Refrigerator and Freezer

Highlights

- During the charter season, the FRIDGE UNIT breaker on the DC panel is always left ON unless you need to conserve battery power at night.
- The Freezer breaker (labeled AUXILLARY on the panel) is on when needed.
- The fridge thermostat dial is located inside at the top back. Start with a setting mid-way between Min and Max. If set too cold, items at the bottom will freeze.
- Check to be sure there is sufficient battery power to operate the refrigeration equipment all night. Usually there is.

- The fridge has a drain pump. The switch is a silver push button and is located inside the small cabinet below the sink at the back on the outboard side. There may be a stopper in the drain hole inside the fridge that will need to be removed.

22. Sails and Rigging

Highlights

- Boom-furling main, 106% furling jib, and available to those with experience, an asymmetric spinnaker.
- All lines led aft to the cockpit.
- Single line reefing from the cockpit.

Details

Mainsail

Mouette is equipped with a Leisure Furl furling boom and associated mainsail. The manual for the Leisure Furl system is on board and contains much useful information. However, the system functions differently on different boats and with different sails. The following instructions are intended to provide additional guidance based on our experience of how the system works on *Mouette*. The system is far easier to operate than a conventional setup but it must be configured and operated correctly to avoid damage.

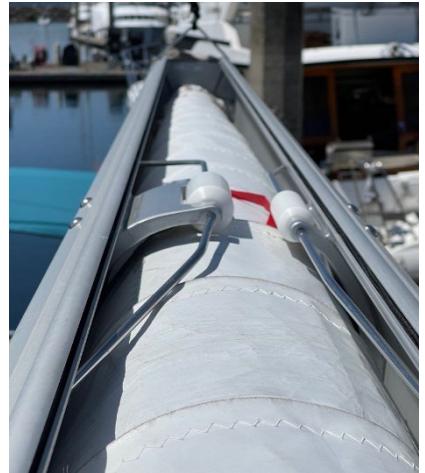
Boom Angle (the angle between the boom and the mast) is critical to the operation of the Leisure Furl system – both when raising and furling (lowering).

- Boom Angle is controlled by the rigid boom vang.
- Correct boom angle is obtained when the blue tape on the vang compression line is centered on the black plastic ring at the bottom of the vang outer tube (see photo on right).



Fouling the Mainsail Guides

The mainsail is guided onto or off of the boom mandrel by rollers mounted on stainless steel bars that are riveted into the boom just above the mandrel (see photo on right). If the sail gets sloppy (loose roll) during a hoist or furl, it is possible for it to get jammed around these guides. The force of the electric winch will bend the guide bars and create a jam that will prevent the sail from being raised or furled at all. At that point, the only option will be to lower the sail by flaking it on top of the boom, after which a repair will be necessary before further sailing is possible. To prevent this highly unpleasant outcome, two things help: first, use the slow speed on the winch until you are sure that the process is going smoothly and, second, at the very first sign of a hang-up, stop the winch and investigate.



Raising the Mainsail.

- Set the correct boom angle using the boom vang as described above.
- Retract the sail cover by pulling on the two bottom ends of the black lines that come out of the forward end of the boom. (see photo on right).
- The mandrel ratchet lock at the forward end of the boom on the bottom side is normally left disengaged at all times (see photo on right). If engaged, pull down on the ring that hangs from the lock shaft and rotate it 90 degrees so that the lock cannot re-engage.
- Steer head-to-wind.
- Uncleat the furling line. Maintain moderate frictional pressure on the furling line as the sail is being raised to ensure the line rolls up cleanly on the furling drum up at the mast.
- Hoist the main using the winch on the port side of the cabintop.

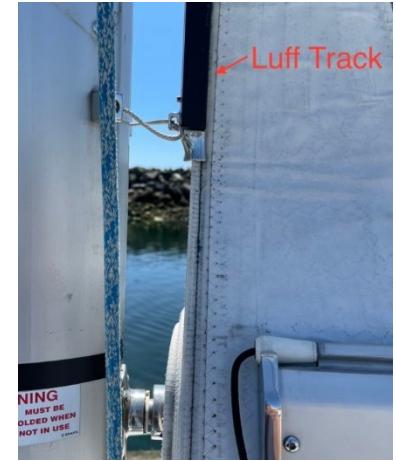


Furling (lowering) the Mainsail. This is done with the furling line wrapped on the port cabin top winch (see photo on right). The furling line is 6mm blue dyneema and will require nine wraps around the winch to ensure that it won't slip.

- Helmsperson steers head-to-wind. If only 2 people on board, set the autopilot and then helmsperson performs 1st crew duties below.
- 1st crew – sets the correct boom angle using the boom vang as described above.
- 1st crew – wraps the boom furling line 9 times around the port cabin top winch (this ensures it won't slip).
- 2nd crew stands at the mast ready to control the halyard so the main lowers at the same rate as the sail is being furled into the boom (to keep a tight wrap) as well as making adjustments or halting the procedure as needed. See details below.
- 1st crew uncleats the main halyard when 2nd crew is ready at the mast.

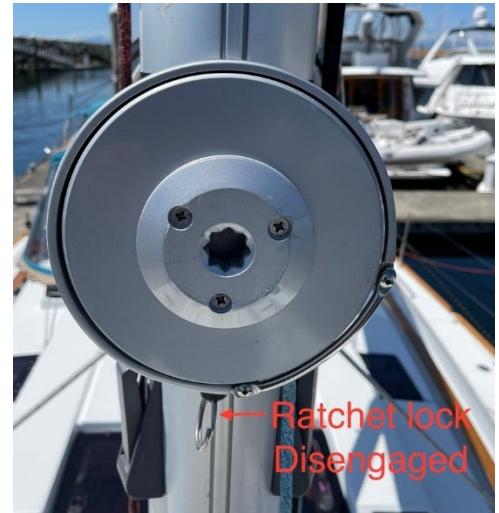


- 2nd crew: The object is to get the luff to roll up on the mandrel directly below the luff track (see photo on right) and keep the sail rolled tight in the boom. If the boom angle is properly set and some tension is maintained on the halyard, this should happen naturally but small changes in wind can cause small tendencies for the sail to pull forward (where it would eventually jam against the mast) or backward (where it would pull the luff track out of alignment.) Varying tension on the halyard will correct these movements: increase halyard tension if the luff is moving forward and decrease if the luff is moving backward. Closely observe the sail as it is taken up by the boom and halt the furling if there appears to be a jam. Leisure Furl does not describe this process as necessary and advises that the winch operator can just apply modest tension on the halyard while operating the winch but we do it every time because it is easy and because it gives us a much better sense for whether anything is going wrong. The sail should be furled until approximately one foot of luff remains in the track.
- The sail should be furled so that the luff rolls up directly below the bottom of the luff track. Small variances are fine but any variance that causes the luff track to bend significantly forward or aft is a problem. As long as the boom angle is correct, varying tension on the halyard will ensure this result.



Alternative Furling Method

If the furling line breaks or otherwise becomes unusable, the sail can be furled using a winch handle inserted into the front of the furling line spool (see photo on right). The handle can be used to rotate the mandrel as necessary to furl the sail. To prevent an unwanted counter rotation, the ratchet lock should be engaged during this process by rotating the ring 90 degrees and pushing the lock shaft upward into the ratchet.



Reefing the Mainsail

The mainsail can be reefed to any point throughout its range, although Leisure Furl suggests that the arrangement works best if the reef aligns one of the battens with the mandrel. To reef, simply furl the sail to the desired point, close the halyard clutch and adjust the luff tension by increasing or decreasing tension on the furling line.

Mainsheet Control

For anyone used to a conventional setup in which the jib sheets are led aft and everything else is led to the cabin top, the setup on *Mouette* is a bit different in that both the jib and the main sheets are led aft to the helms. The mainsheet is a continuous line from one helm, through the boom/traveler blocks to the other helm. It can be pulled in or let out from either helm, although it can, over time, get to be too long on one side and too short on the other and need to be readjusted. In light conditions, such adjustments can be made manually. In heavier conditions, a winch is desirable or mandatory. Because there is a single winch for each helm, the easiest way to adjust the main sheet on a winch is using the winch on the lazy jib sheet side. It is also possible to clutch the working jib sheet and remove it from the winch while adjusting the main sheet.

Traveler Control

Mouette has an electric cabintop winch which makes light work of traveler adjustments, **but please make sure the leeward traveler line has been released first before winching the traveler up to windward!**

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

Simply 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.

Tacking the Jib

Anyone who has ever got their jib hooked on the radar antenna during a tack will recognize this one: Mouette's jib is not big enough to snag the radar antenna but the furling spool is mounted forward of the mast about three feet above the deck and is well positioned for a snag. If you try to do the world's snappiest tack by jumping the gun on winching in the new working jibsheet before it gets past the mast, there is a good chance that the leech will hang up on the furling spool. If it does, no problem – just head back into the wind, let the sheet back out and release the leach but best practice is to start winching the sheet in only after the leach has definitively passed in front of the mast.

Reefing Guidelines

Mouette 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.

Asymmetric Spinnaker

We have an asymmetric spinnaker that is available to charter guests upon completion of an additional resume showing proficiency. If you have the necessary experience and would like to use this sail, please contact SJS in advance of your trip. The asymmetric is enclosed in a sock, is hoisted with the spinnaker halyard and attached at the tack to the anchor roller. Sheets are led aft through a block to the main winches. The sail jibes forward

of the bow to avoid entanglement with the furled jib. It is a *very* large and delicate sail, suitable for breezes under 15 knots apparent.

23. Showers and Sumps

Highlights

- Each head has a shower stall.
- Transom/swim platform shower with hot/cold fresh water.
- 168 gallons total fresh water in two tanks.
- 6 gallon hot water tank.
- Turn faucet handle clockwise for hot.
- Water pump breaker on the electrical panel at the nav station.
- Sump pumps activated by push button switches on the sink cabinets. Pumps run on a timer and shut off after a few minutes. Restart pump as needed.

Details

The heads on Mouette are among the loveliest we have ever seen. This is in part because of the nice paneling on the walls and the shower seat. To keep it looking as lovely as it does now, when you have finished your shower, please towel off the area wherever the water has splashed on it.

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.

Note: shower sumps can become emergency bilge pumps if water rises to that level.

24. 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 salon, in the under seat storage compartment at the forward inboard end of the dinette seat.

Long Term Spares: Located in the salon, in the under seat storage compartment of the forward nav station seat. Alternator, starter motor, house water pump and internal and external engine water pumps. 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: Located in the port cockpit locker.

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

25. Storage

Mouette has loads of storage space in cupboards in each sleeping cabin and the main cabin. There is additional storage under the seats in the main cabin and under the floor boards in the bilge area. The bilge can get wet, so use waterproof plastic boxes to store items under the floor boards.

There is a huge sail locker forward (so huge it has a ladder to climb down into it.) You can use this to store fenders and lines but that won't begin to fill the space up. Unless you brought your Louis Vuitton set along, we suggest you store luggage and other stuff you are not going to use on the cruise in the sail locker so you don't trip over it all week and it doesn't crash around when you sail. Extra drinking water goes pretty well there too.

The magnetic compass for the autopilot/chart plotter is located in the starboard aft stateroom, inside the hanging locker at the top aft outboard corner (white plastic body). Do not place electronics or other magnetic (ferrous) equipment (like a portable speaker) on the shelf.

26. 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 aft side of the stove on the face of the galley cabinet. Press top of the rocker switch to turn on. A green light will appear when on.
- There are two 2.5 gallon aluminum propane tanks in the cockpit propane locker, under the port helm seat. The locker 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.
- The microwave oven is plugged into a 120V outlet in the galley. The forward 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 (spark) and push the burner temperature knob in and turn counterclockwise $\frac{1}{4}$ 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 spark isn't working, light a BBQ lighter and hold the flame near the burner edge then push in the temperature knob.
- Turn the knob to the desired heat level. See the temperature chart below. Note that actual temperatures may vary from the chart.

| Gas Mark | Fahrenheit | Celsius | Description |
|----------|------------|---------|---------------------|
| 1/4 | 225 | 110 | Very cool/very slow |
| 1/2 | 250 | 130 | --- |
| 1 | 275 | 140 | cool |
| 2 | 300 | 150 | --- |
| 3 | 325 | 170 | very moderate |
| 4 | 350 | 180 | moderate |
| 5 | 375 | 190 | --- |
| 6 | 400 | 200 | moderately hot |
| 7 | 425 | 220 | hot |
| 8 | 450 | 230 | --- |
| 9 | 475 | 240 | very hot |

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 $\frac{1}{4}$ 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:

- Located in the upper cabinet above the fridge.
- Make sure the forward AC PLUGS breaker on the electrical panel is flipped on.
- Leave the cabinet door open while cooking to allow heat to dissipate from microwave.
- 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.

27. Swim Platform

The center section of the transom lowers to create a large swim platform. The platform itself is electrically operated. It makes getting into or out of the dinghy very simple and is also useful if you dock stern-in at a marina. You can leave it up while docking (and either throw lines to helpers on shore or send your crew over the side with the lines) or you can lower it and step off onto the dock. If you do the latter, please rig a fender aft of the platform so you do not inadvertently crunch the platform. Please do not attempt stern-in docking at all if you are not experienced doing it.

Lowering/Raising the Platform:

- Unlock the transom spring-loaded deadbolt located on the port, upper corner of the platform (see photo on right). **NOTE:** The deadbolt must remain in the unlocked position whenever the transom is open to prevent its sticking out when the transom is raised, which will bring the raise to a halt and potentially damage the stern gelcoat, the deadbolt, or the motor.
- The black rocker switch for turning on the platform lower/raise motor is located under the propane locker lid (adjacent to the port helm) at the aft end (see photo below). Press the aft end of the switch to lower, forward to raise. The raise/lower rope feeds out of the port side of the platform.
- Initially, the platform will not start lowering on its own – needs to be manually pushed outward until it swings past vertical and then gravity will take over. You may



need to feed out several inches of the hoist line to give enough slack to swing the transom out (see photo below). But not too much or the platform slam down against the rope!

- There is also a remote control for the transom motor, stored in the nav table, that can be used to raise the transom from the dock or dinghy if you are going to leave the boat and don't want an invitation to all and sundry to just step aboard (including seals and otters!).
- NOTE:** Very important to only raise the transom to just short of vertical otherwise you will have to manually pull it open again to get it started lowering.
- The swim ladder is embedded so you just lift it and push (or pull) it aft. Once in the water, it will telescope out. You can use it if you are going to try swimming but its primary use in the cruising area is to get back on the boat should you happen to fall overboard. If you manage this feat with the transom closed, all is not lost. There is a ring low on the transom. If you pull it out, a rope ladder will emerge that will allow you to climb into the boat.



28. Tables

The main cabin table can be extended to its maximum size by folding the top leaf on the forward side to the aft side. For ease of access to the seats, or storage fold the leaf back forward. The main cabin table cannot be lowered.

The nav table can be lowered to form a single bench seat or small berth.

The cockpit table has two folding leaves. To raise them, lift the leaf until it clicks into place. To lower them, reach under the leaf and release two (forward and back) catch levers. The leaves can then be lowered.

29. Water

Highlights

- Two water tanks totaling 168 gallons. Tank 1 (forward) 106 gal, Tank 2 (aft) 62 gal.
- Water pressure switch and Tank level gauge are on the DC panel in the nav station.
- Water tank selection valves are located in the salon, behind the starboard, forward nav station seat back. See photo on right. Open only one tank at a time, starting with the forward (#1) tank.



- Deck fills are located above the tanks – one near the bow on the port side and one near aft end of the cockpit on the starboard side.
- Hot water is produced by two methods: 1. Shorepower, 2. Engine. See details below.

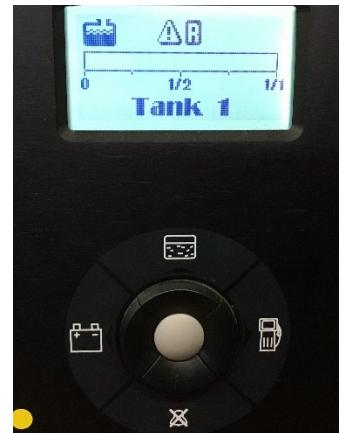
Details

Water Pressure Switch:

Please turn off the water pressure switch when the system is not being used (note: the water pressure needs to be on for the toilets to flush). 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.

Water Level Gauge:

The water tank level gauge is located on the right side of the electrical panel in the salon at the nav station. Press the black ring below the water tank icon to see Tank 1 (forward tank) then press again for Tank 2 (aft tank).



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.

30. Winches

- The two jib sheet winches and the port coachroof winch are 2-speed electric and are controlled by two buttons (low and high speed) nearby.
- We advise that you use the slow speed while you are getting used to the winches and at any time when something could jam up.
- **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 circuit breakers found in the port aft cabin on the base of the berth.
- 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.
- The starboard coachroof winch is manual.

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