

Quantum Leap

Pre-Sail Checklist

- Check boat for damage. If any, note in green blue sheet
- Detach power cord and bring onboard
- Turn off AC switch (shore power) and Turn on DC batteries/helm power, as appropriate.
- Check fuel level
- Start/warm up engine
- Attach life ring/sling to stern

Crew Safety Briefing:

- Location of safety equipment (in cabin, **port side**), boat pole (in cabin, **starboard side**)
- Life jackets (PFDs) are on everyone before leaving dock
- Marine VHF Radio location, using channels 13 & 16, or call 911 (tell everyone how to use phone's GPS locator)
- Hand for self, hand for boat
- Helmsman be aware of surroundings *at all times*
- Overboard: shout, point, litter – tell crew to **not** touch the jib or main sheets and other lines or sheets until instructed; person who sees overboard points until person is actively being pulled back on board.

Post-Sail Checklist

- Turn off engine (pull black plunger), then turn off ignition key
- Tighten wheel hub to prevent rudder from swinging
- Put key back on thru-hull and close seawater intake valve
- Cover sails and equipment
- Re-attach main halyard to boom end
- Coil, lock and hang lines and sheets
- Detach life ring/sling from stern and stow in cabin
- Attach three (3) fenders on dock side: one at midship, one fender 3' forward of midship and another fender 3' aft of midship to protect sides
- Put winch handles put in sink or "emergency" box
- Attach shore power cord
- Sweep floor and empty trash
- Stow life jackets (if onboard ae used)
- Remove personal items
- Close thru hulls
- Turn off batteries
- Rinse entire boat, top and sides

Complete green sheet and pay for fuel, with either cash or Venmo. (\$15 for diesel)

For Urgent Boat Issues, call: 253-383-1774.

You will reach a staff member on call.

Do not call anyone else directly. You will be re-directed to this number.

PUGET SOUND SAILING CLUB



Hunter 28.5 – “Quantum Leap”

For Urgent Boat Issues, call: 253-383-1774. You will reach a staff member on call. **Do not call anyone else directly. You will be re-directed to this number.** For non-urgent issues, use Create Maintenance Request in PSSI site or green slip.

SAFETY EQUIPMENT - located in the cabin.

Emergency box on port side. This box must always remain in cabin on port side.

- Flares
- First aid and band aids
- Hull plugs
- Mallet
- Manual bilge pump handle
- Winch handles (or in sink)

In sink:

- Horns
- Winch handles (or in box)
- Boat keys

Attached to port wall, shin level

- Fire extinguisher – Type B:C Size 1

On seat in cabin on port side:

- Life sling - should be mounted on the starboard stern pulpit. Be sure to tie bitter end of line to a secure point on the boat.

On Starboard side:

- Boat hook

WHEN YOU FIRST ARRIVE TO SAIL

- Inspect boat for condition and note setup of lines, rigging, etc.
 - Dock lines: 2 bow, 1 stern, 1 forward spring, 1 aft spring. Remember: dock lines remain on the dock, unless you know you will need them during your outing.
 - Fenders: at least 3 correctly placed to protect hull and securely tied: one amidship, plus on 3.' Aft of it and one 3' forward of midship.
 - Boat cover (in rainy season).
 - Wheel: loosen wheel hub nut for easier steering.
 - Check hull, deck and rigging for any signs of damage or unsafe condition.
- Remove boat cover (in rainy season) and stow in cockpit locker.
- Unlock cockpit lockers.
- Unlock companionway. Stow hatch in cockpit locker on port side, to the immediate left of companionway.
- Remove and store below the mainsail cover, wheel and winch covers.
- If heater in use, secure from falling off during sail.
- Turn off shore power at dock and unplug from shore first. Carefully unscrew shore power retaining ring at boat. Turn plug about 3 degrees counter-clockwise and gently pull plug out. Close cover. **Take shore power cord on board.**

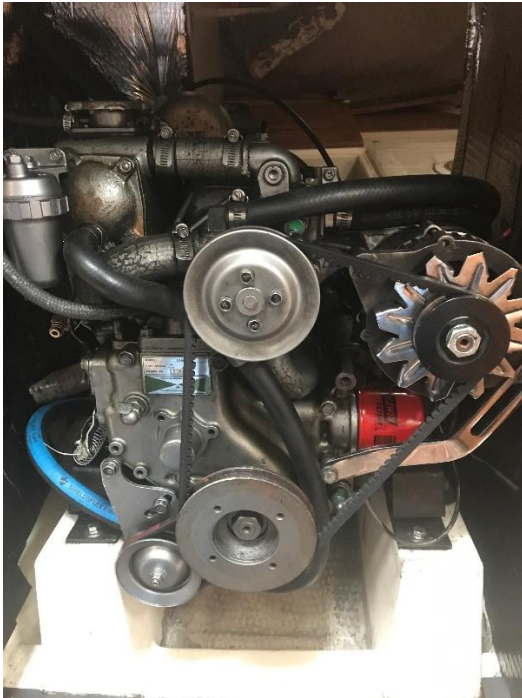
ENGINE PREPARATION

Quantum Leap has a Yanmar 2 GMF diesel engine.

Do the CHOBS checklist

- C - Coolant. Reservoir is in cockpit starboard locker. Shine light behind it to check level.
- H - Hoses. Check for cracks or soft spots.
- ~~O - Oil.~~ Do NOT check oil on Quantum Leap.
- B - Belts. Check for tension and cracks or fraying.
- S - Sea Strainer – in aft quarter berth, port side; check to be sure it is clear of debris. If not, ensure thru hull valve is closed, then remove strainer and clean. If strainer is clear, remove engine key and open thru hull.

ADD PHOTO OF Coolant RESERVOIR and LIGHT here



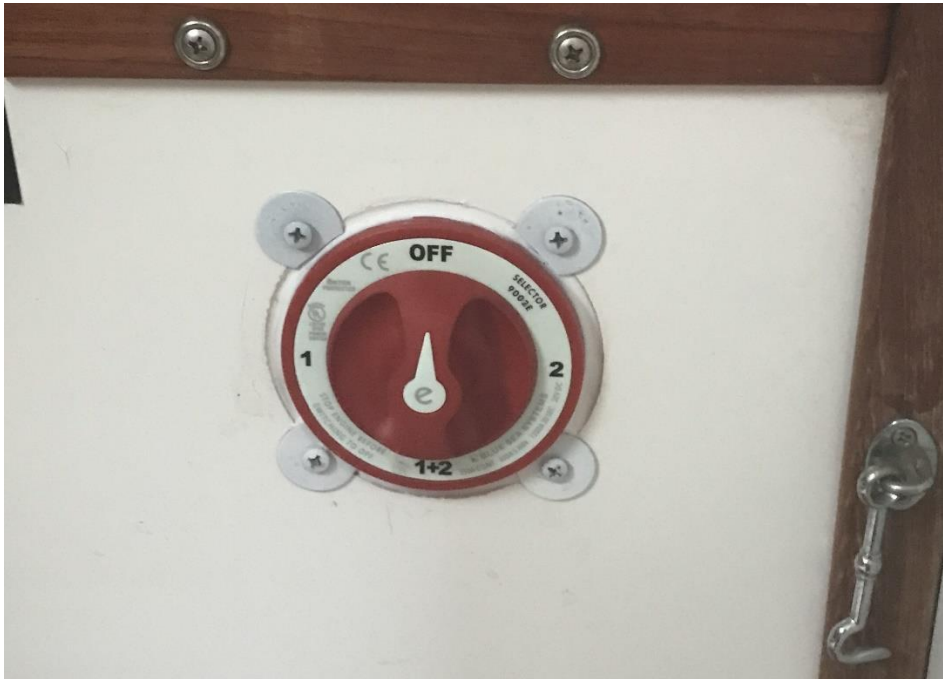
Coolant, Hoses, Belts



Sea Strainer and Thru Hull with Engine Key

ELECTRICAL

Battery Selector Switch



Located in the Head (bathroom), turn red battery selector switch to activate the electrical system.

This is the typical sequence using the battery switches:

- Battery 2 (Start Battery) - Use to start the motor. Caution: Do NOT use this battery to run anything else, like lights or appliances.
- Once engine is started, turn selector switch to 1+2. When the motor is running, this will recharge both batteries. **NEVER** switch battery to OFF while the motor is still running!
- Once engine has been turned off, switch to Battery 1 (House Battery) - Use Battery 1 when sailing or at anchor - the HOUSE battery energizes the DC SERVICE switches.
- Turn switch to OFF at end of sail.

NEVER switch to OFF while the motor is running!



DC (Direct Current) on left

AC (Alternating Current) on right

DC: The DC (batteries) main “house” switch is on the left. The battery switch turns on the DC side of this panel. This operates all equipment, as labelled, while sailing.

- The Instruments switch turns on the VHF radio. Keep the VHF radio on and monitor Ch. 16 for emergencies or announcements from Coast Guard.

AC: The AC (shore power) switches are on the right. This allows the batteries to be re-charged and to use outlets while docked. When hooked up to shore power you can also heat hot water. Turn off AC prior to sailing.

After docking, plug shore power in (start at the boat outlet). Run the cord through the bow pulpit so it is held by deck and stanchion (not lifeline), lay section of power cord on dock (do not let in water), then plug into the dock breaker box.

Then switch on the **AC double switch** and the “**OUTLETS & CHARGER**” switch below it.

Voltmeter and Charger – connected directly to battery

The remote display screen indicates the charger operation, such as “charging” or “ready.” Typically, during a day sail, there is no action taken with the voltmeter.



Bilge Pump – connected directly to battery, through switch

The bilge pump is set on automatic to operate the bilge float, as automatically needed. The green light, alone, will be showing. If the bilge pump turns on or is turned on manually, the red light will also show. Typically, no action is required with the bilge pump switch before, during or after a sail. If you do manually turn it on, be sure to turn it back to “Auto.”



Throttle and Gear Shift



- The *throttle* is a combination shifter and throttle. The lever is on the right side of the binnacle.
- Idle is straight up.
- Forward gear: as you push the lever forward, it puts the motor into forward gear. To accelerate, continue to push the lever forward.
- Reverse gear: for reverse, from neutral pull the lever back. As you pull it further back, it will accelerate in reverse.
- To increase idle speed, but not put it in gear, depress the black button at the base (pivot point) of the throttle arm then push the throttle arm forward still depressing button. This will allow you to increase idle speed without put the propeller in gear. This can be helpful on a cold start on a cold day, or to increase the RPM to charge the batteries.

Once started (see next page for starting engine),

1. Always lower throttle to neutral/idle before shifting into gear.
2. Shift into gear relatively slowly, but positively.
3. Never run the motor more than 80 % (about 2000 RPM for QL).
4. Any time engine is running, move switch to "1+2" to recharge batteries.



Engine Control Panel in Cockpit

To start the engine:

- 1) Either keep throttle straight up (neutral) or press in black button to keep in neutral while powering forward.
- 2) Turn key ¼ turn clockwise (like starting a car). At this stage the instrument panel should illuminate:
 - i) Red lamp for “low oil pressure” and “voltage “should illuminate.
 - ii) Low oil pressure buzzer should sound.
- 3) Press and hold toggle switch up for 5-10 seconds to heat glow plugs.
- 4) While holding toggle up, push the “START “button and engine will turn over. Hold in position until engine starts. (Do not run starter for more than 15 seconds.)
Note: During a cold start on a cold day, putting the gear in neutral while increasing idle speed may help start the engine.
 - i) All red warning lamps should extinguish and buzzer should stop sounding. The oil pressure lamp may take a few seconds to switch off and the charge fail lamp may remain on until engine rpm is increased to approximately 1,000 RPM.
- 5) **After engine starts, check for water flow out the transom. If no water flow, shut motor down immediately!** Run motor for several minutes to warm up before leaving the dock.

Troubleshoot: If engine does not start on first key turn, start over by turning key again and holding toggle up

To stop the engine: NEVER attempt to stop a diesel engine by turning the key OFF. This will damage the alternator.

1. Throttle down, shift into neutral and **pull the STOP lever** next to the RPM gauge.
 2. Only after engine stops running and buzzer sounds, push the stop lever in, then turn key to OFF.
 3. Remove key and put in sink, so that you don't step on it and break it while sailing, and others can get to it.
- Before stopping engine after docking, allow engine to cool down by idling engine for several minutes.

CONTENTS OF COCKPIT STARBOARD LOCKER

There is no reason to step down into this locker. But there are a few vital items you will want access to and can be seen or reached from the cockpit:



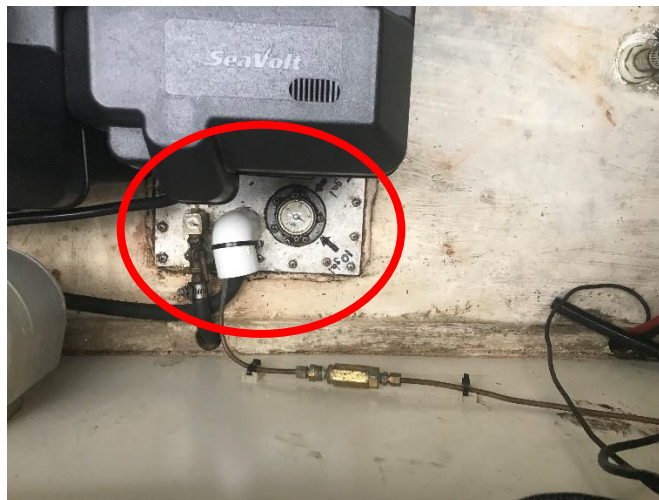
Engine Coolant Reservoir

Check the Engine Coolant Reservoir to make sure it is about half full. As long as there is coolant in the reservoir, there is enough in the engine.



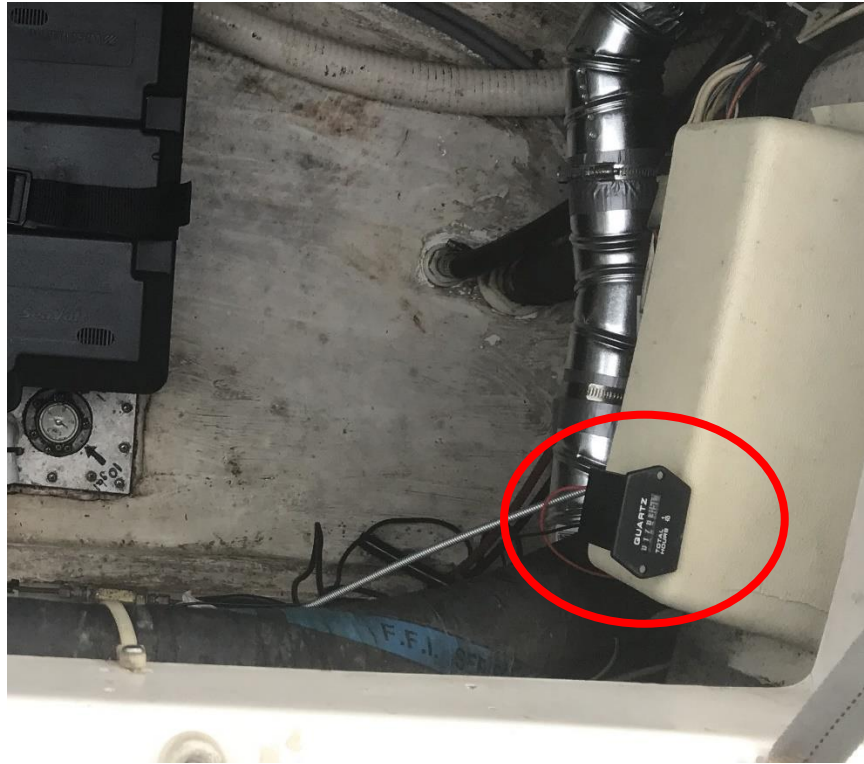
Fuel Gauge

Check to make sure you have enough diesel fuel for your journey. A few gallons are all that are needed for a typical day sail. You'll want ten or more gallons for an extended trip. Regardless, indicate on the green sheet if the tank is less than half full. Thanks.



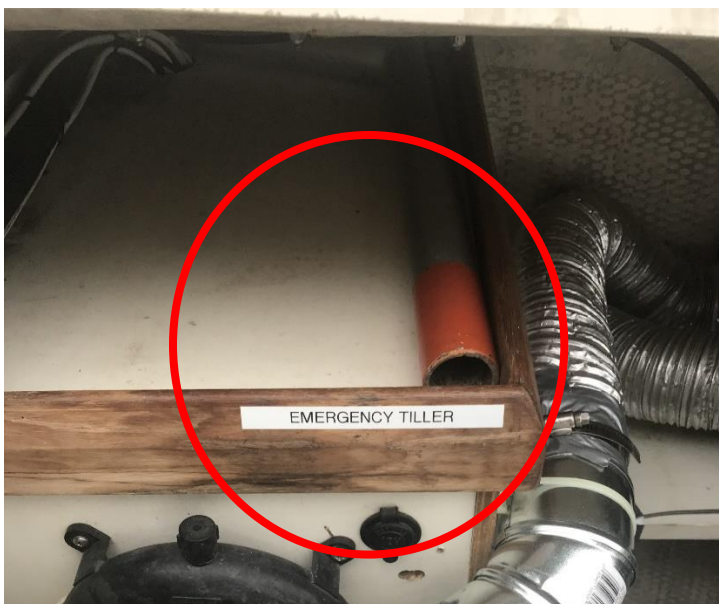
Hour Meter

If you are going on an overnight trip, mark down the start and end readings of the odometer and report that number to the Office Manager. Fuel costs for the trip are calculated using this number.



Emergency Tiller

The emergency tiller is kept on the shelf in the locker and the location is marked. The hand end of the tiller can be seen here.



Cabin Heater Switch – wired directly to battery switch – see operation instructions on later pages

Along with the Espar heater button located on the wall next to the Navigation/Captain's desk, flip the two switches to on in the cockpit starboard locker. See below for full instructions to turn on diesel cabin heater.



- To flush, flip the lever on the starboard side of the head to the left as you face it (“Flush/Wet Bowl” position) and pump the handle up and down; this brings seawater in to flush. Switch the lever back to the right (“Dry Bowl” position) and pump enough water at least 8 times to move solids to holding tank.
- Leave valve in “Dry Bowl” position when not using head to avoid water syphoning into toilet and possibly flooding.
- USE TP SPARINGLY; if the head clogs there will be a repair charge or you can repair the toilet clog yourself.

NOTE: IF YOU USE THE HEAD YOU MUST GO TO THE PUMP OUT DOCK AND PUMP OUT THE HOLDING TANK!! The pump out station is near our slip at the end of the dock. Unscrew the holding tank cap (in the starboard side of the cockpit by the engine instrument panel). Attach suction hose to the opened fitting (it goes inside and seals). Turn on the pump switch to suck out contents of holding tank. If possible, add water to emptied holding tank and pump again to flush tank. Replace waste cap when finished.

SAILING

- Store dock lines and fenders in starboard cockpit locker.
- Make sure boat is head to wind before hoisting the main so that sails will luff and you can hoist completely. **Keep motor running** slowly in gear to maintain steerage.
- Shackle main halyard to head of main. Loosen mainsheet, reef lines and boom vang before hoisting mainsail.
- Remove sail ties. You can use the starboard cabin top winch to hoist the main. But if you feel excess resistance, stop and check that slides are not bound up.
- Once sailing close reach under main, throttle down and shift motor into neutral and SHUT DOWN by pulling the “STOP” lever. Turn off key. LEAVE ENGINE IN NEUTRAL.
- To unfurl the head sail, ease the furling line (line at aft starboard side with a cam cleat) as you pull the leeward jib sheet. Again, you want the sail to luff while unfurling and you must keep some tension on the furling line to prevent rapid unfurling.
- The jib sheets go through blocks on the deck and to the cockpit winches.
- Outhaul, reef # 1 and reef # 2 exit the boom at the gooseneck and have built in stoppers.
- The topping lift cleats on the mast near the boom.
- After sailing, furl the head sail. Keep a little tension on the jib sheet while pulling in the furling line. If there is more than a corner of sail left unfurled, the sail is furled too tight and you will need to unfurl it and do again.

RETURNING TO THE SLIP

- Return to the slip from which you sailed.
- Fenders (3) attached on dock side – one amidship, then one forward of it $\approx 3'$ and one aft of it $\approx 3'$, bottom of fender just off the water.
- Secure boat with dock and spring lines. Where present, the tape colors should match and align on the first wrap of the line on the cleat. See diagram.
- Check that the lines are **tight enough to prevent the boat from springing forward into the dock.**

CLOSING BOAT FOR THE DAY

1. Ensure all thru hull valves closed. Put engine key on handle of closed engine cooling water thru-hull valve.
2. Hose boat off, deck and sides, even on a rainy day.
3. Wash down deck (**leave no footprints**) and sides, and take out your trash and personal items.
4. Turn off electrical switches on electrical panel and turn DC main switch to OFF.
5. Plug in the shore power cord at the boat end first. Then attach power line to breaker box on dock. Make sure breaker at dock station is turned back “ON”. Check that the **AC main** and **“OUTLETS & CHARGER” switches** are on.
6. Turn on heater to MEDIUM heat (during rainy season).
7. Ensure lockers are locked.
8. Lock up the hatch.
9. Put covers back on: mainsail, tiller, winches. Lock wheel and put cover on.
10. Put on boat “tent” cover (rainy season).
11. Wipe down cockpit and side deck leaving no footprints or any trash.
12. Use Venmo or put \$10 in the blue vinyl envelope.

13. Note on the Checkout Form if any problems occurred during the sail or any deficiencies noted.

USE CLEANING SUPPLIES – to properly close the boat, sweep the interior floor and clean off footprints



LEAVE NO FOOTPRINTS



Four Thru Hulls – make sure they are closed at end of sail



Seawater Thru Hull to Cool Engine



Head Thru Hull to Flush



Galley Sink Thru-Hull Drain



Head Galley Sink Thru-Hull Drain

Various Appliances to Make Your Trip More Enjoyable

Note: Use only battery #1 position for lights and charging phones, and anything else you brought aboard. Never use the starting battery #2 for anything except starting engine. If you cannot start engine because of dead starting battery, maybe call TowBoatUS.

The appliance indicated as “wired directly to battery,” is to alert you to the potential of accidentally draining the battery when not connected to shore power. To recharge battery, with the black button on the throttle depressed, run the engine at 1500 RPM for 30 minutes.

Fresh Water Tank

- Upon request ahead of an overnight sail, we will fill the fresh water tank on the boat. This is in case you want to shower or use the galley sink. We do not recommend using it for drinking and cooking.

Head

- To use the head, you must first open the yellow ballcock valve to the head (toilet) located on its left as you face it. If the handle of the ballcock is 90 degrees from water line, it is closed. Open is handle aligned with the water hose.



Galley Sink and Thru Hull

Use like a regular sink, but open sink's drain using the thru hull – the red handle. Be sure to close the thru hull when you are done.



HEAD SINK and THRU HULL

Use like a regular sink, but open the sink's drain using the thru-hull – the red handle. Be sure to close the thru hull when you are done.



Cabin Heater – Espar diesel – wired directly to battery



Switches are in cockpit starboard locker



Heater Control above Electrical Panel

To use the Espar cabin heater, first turn on the electrical switches in the **starboard cockpit locker**. There are two switches that must be turned on, by flipping switches to up position.

At electrical panel in cabin, turn on the Espar power using the control. If the Espar gauge reads, “Heater Stopped Maintenance Req’d,” press button again to switch it to “Heater Enables.” Then adjust heat temperature to the desired setting. Give the heater several minutes to warm up.

If, after about 10 minutes, the heater cycles through but doesn’t heat up, it is possible your batteries are low. Check the battery monitor panel. If they are low, shut off the heater and start the motor and run it at 1200 RPM to charge the batteries then restart the heater.

To turn heater “off,” depress Espar button for a few seconds until you hear it cycle down. Before leaving the boat, turn switches in starboard cockpit locker to off.

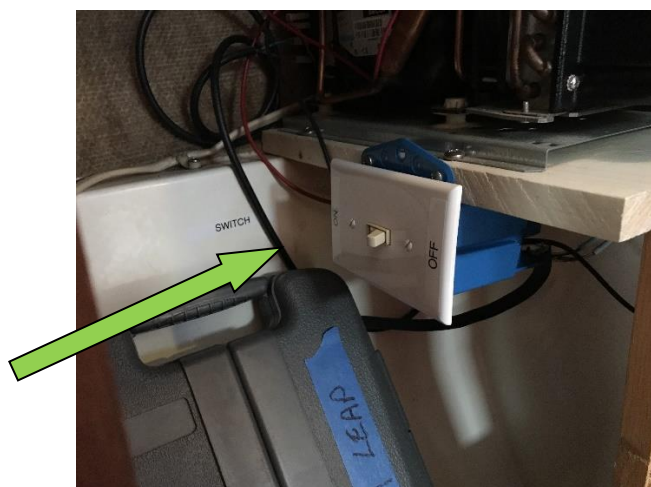
Two Burner Propane Stove – wired directly to battery



1. Turn the propane on at the tank (the tank is located off the port transom).



2. The stove solenoid switch is located in the cabinet in the quarter berth labelled “Refrigeration and Stove Solenoid Switch.”



3. Turn on LP Gas Control & Detection System, located above sink counter in galley area.



- If “DETECTOR ON” light is flashing, press “TEST MUTE” button. Wait a minute or two. This should make the flashing green light turn to a solid green light.
- Once the green light is solid, then push and hold the “ON” button until the “VALVE ON” green light turns solid on.

4. There are two burners. Each burner will be ignited separately, but the same way. Press the burner knob in and rotate it counter clockwise so that there is gas flowing. Keep holding it in and then press and hold the “Igniter” button on the front of the stove to light the burner. Keep the burner knob pushed in at least 30 seconds after it is lit to allow thermo-couple to warm up.

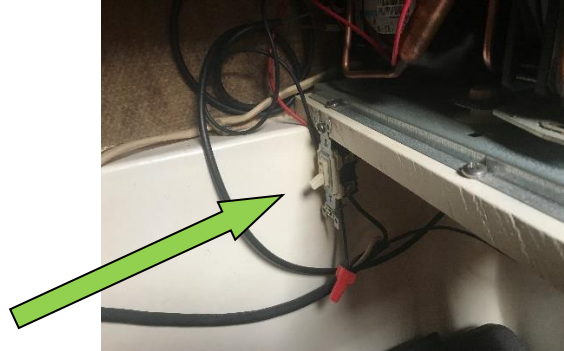
5. When you are done, reverse the sequence:

1. Press “OFF” button on the LP Gas Control & Detection System, and wait until the burner flames extinguish, to purge the lines of gas.
2. Turn burner handles to the off position.
3. Flip Stove Solenoid switch to off position in the cabinet.
4. Close valve on propane gas tank.

At the end of using the stove, make sure all burners are off and the propane tank is closed.

Refrigerator – wired directly to battery

There are two switches that must be turned on to cool (refrigerate) the cooler next to the gallery sink. The first switch is located in the cabinet in the quarter berth labelled “Refrigeration and Stove Solenoid Switch.” This turns the refrigeration unit on.



The next switch is a “dial” that controls the temperature of the cooler. This dial is located in the upper corner of the cooler itself. Start by turning the dial clockwise to coldest position. It will take a few minutes for the refrigerator compressor to activate. Then, turn dial to reduce coldness, as necessary.

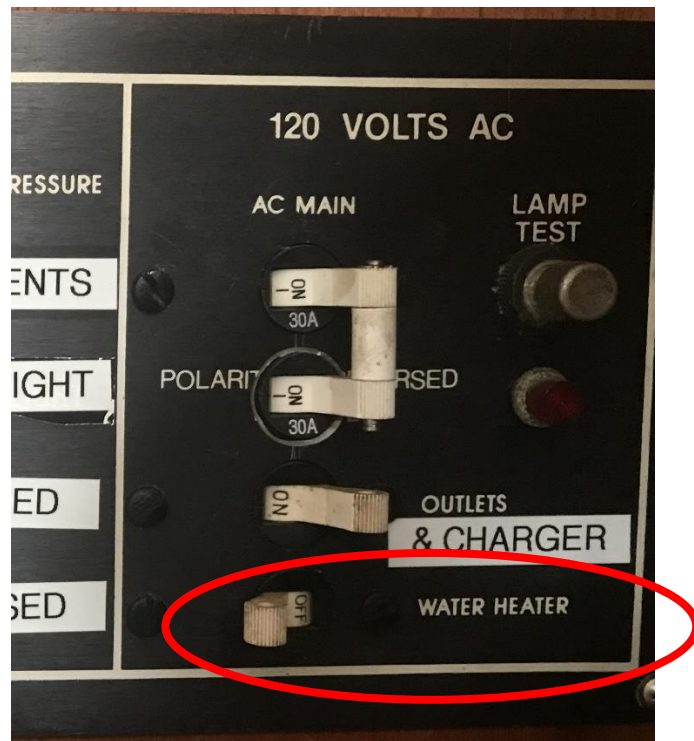


The temperature dial will turn compressor off if it has been turned counterclockwise all the way straight up to the “OFF” position. At end of sail, be sure refrigerator switch in cabinet is off.

Water heater switch – wired to AC

Can only be used while connected to AC shore power. Before turning the water heater switch on, run water from the faucet you will be using to ensure water is in the line for the heater.

Turn the switch on. Give it a few minutes to warm up. Then turn on faucet and wait for cool water to become warm water – just like home.



THE FINE PRINT

Empty holding tank if you have used the head. See instructions under “Down Below”.

Failure to empty the holding tank or leave the boat in the condition you found it will result in a \$75 fee as specified in the member contract.

FAILURE TO REPORT LOST ITEMS OR DAMAGE TO BOAT WILL RESULT IN FORFEITURE OF YOUR CLUB SECURITY DEPOSIT.

Lost key fee is \$50.

THANK YOU AND HAPPY SAILING!