

SV Venture - Systems Notes

Fresh water (and water maker)

There are two freshwater tanks (FWD and MID). Control valves for these are under the hinged floor panel in front of the main circuit board in the galley area. Water will happily gravity feed from the FWD tank to the MID tank. We only ever fill the FWD one and then feed the MID one from there.

The leftmost tap in the gallery delivers filtered fresh water (filter is under sink). The manual pump tap on the right is just a backup to access fresh water should other systems fail.

The water maker delivers fresh water to the FWD tank.

The water maker sea water input is shared with Air Conditioner input. Y valve to switch between the two is accessed via the port lazette or over the engine.

Reach in to the right hand side of the drop-down panel next to the head to access the inline valve that diverts water maker product from the head hand basin (through the tap on the right hand side of the sink which has a zip tie on it to ALWAYS KEEP IT OPEN) where you can sample it before switching the valve (when you are happy with the water quality) to deliver the product to the FWD tank. Once finished, we always return the valve to deliver product to the sink for testing next time the water maker is used.

There is a TDS device to test the water quality to make sure it is safe to deliver the product to the FWD tank. Only divert product to the tank when you are happy with it! (Smell it, test it, taste it). TDS readings < 700ppm are technically safe to drink. We usually get readings of under 600 (or even 500) which is really good quality water.

The water maker should be run (or at least flushed) once a week. If it is not going to be used for longer than a few weeks (or more) then it should be 'pickled'. It can then be left for up to 6 months.

See the SPECTRA manual for general operating / pickling / commissioning instructions.

Electrical Panel

Spare indicator lights are in with all the electrical spares in the mid-locker under the curved settee. A few of these need replacing now.

The current rough plan is:

Green: Ok to leave on as power is only drawn when other switches are used (eg lights, fresh water pump, fans etc). Exceptions are the fridge and 12Volt outlets which we leave on all the time.

Red: Draws power when on such as anchor/nav/running lights etc.

Orange: are all for AC.

Engine / drive train

There are two primary fuel filters fitted in parallel, this allows for 'under way' switching if necessary. We have never had to do this as fuel quality here in Australia is very good.

Kubota engine oil dipstick is on the starboard side of the engine low down. Follow the string from the fuel filter. Has to be inserted by feel so not while the engine is too hot!

We target oil changes every 100 hrs (but the manual suggests 200hrs).

There is no (electric) oil drain pump on the new engine. It was removed by the mechanic when the new engine was installed. It was screwed to the hinge side of the engine room access door and the wiring is still there but blanked off. Oil change is now via a manual pump located in the wet locker to starboard by quarter berth.

The tacho on the engine panel sometime drops to zero. Might need a new pick-up on the engine?

When fitting the new prop-shaft we added a grub screw on the collar of the gear-box drive shaft coupling (the one that the poly-flex coupling attaches to) as an extra safety measure to hold the locking nut in place. This will need to be removed before the locking nut can come off!

Wind Generator

Switch in port cupboard: Up = Off, Middle = free, Down = On

There is a heat sink on the bulkhead under the galley sink. This was required for the old wind generator as it did not have a regulator. This is no longer in use.

Shower Sump

The shower sump pump shares the same electrical supply as the primary water maker filter pump (ie the 5 micron filter against the galley bulkhead accessed from the port lazarette locker). So, switch the pump **off** (on the pump itself) before switching the control panel breaker on (on bottom left of the panel). Then the sump pump can be switched on in the shower. The sump pump then switches on (and off) automatically as the sump fills and drains.

Reverse once done.

We leave the shower seacock closed when not in use. There is a siphon break above the water line for this outlet but if that clogged for whatever reason, water could otherwise siphon back into the shower sump on a port tack.

Electrical

DC outlet above quarter berth is powered from a secondary panel inside the wet locker along with a 240V inverter. 240V outlets above quarter berth are powered from this inverter.

The DC panel inside the wet locker including the inverter, is now powered from a breaker on the port side of the drawer below the quarter berth. The drawer will need to be removed to access it.

The water heater was replaced by an identical unit but the previous owner could not source a 120V element when he replaced it. So it has a 240V element that is connected to a 120→240V

transformer under the sink. This only works when connected to shore power obviously. It has an inbuilt breaker as protection. At the moment this does not seem to be working (new element required?). However, the water heats fine from the engine.

Air conditioner cooling / heating

Is awesome!

Requires connection to on shore power. Previous owner noted that, depending on the voltage delivered to the boat, it can cut out “Low AC” sometimes when boiling a kettle or charging the batteries in bulk mode. He noted that turning it off and on again got it running again fine. However, this has never happened to us.

The compressor takes sea water for heat transfer via a valve accessed either over the engine or through the port lazarette (under the plywood cover below the fire extinguisher – you can reach through the hole there where the exhaust pipe comes through too).

Stove / Oven

The oven and hotplates are old but work fine, however the numbers have worn off from around the oven knob. When using the stove (and assuming that the gas is turned on at the tank in the locker), switch on the gas valve (on main panel). When stove isn't being used, make sure panel switch is OFF. If gas has been turned off at the tank or gas valve or stove hasn't been used for any length of time it might take a minute to come through again.

Sails / anchoring

We never touch the boom topping lift or lazy jacks – they seem fine just the way they are!

When raising the main, I just unclip the front top hook on the sailbag and fold it down so I can get access to the sail / reefing points as required. Once the sail is set I then just clip it back on.

Make sure the main sheet is free, the boom brake is off and the vang is also ‘loose’ when raising the main – otherwise you won't get there as the boom will be held down by one of these!

After dropping the main, I sheet the boom in firmly, lock the boom brake and then pull the boom to one side or the other on the traveller to ‘lock’ the boom in place and stop it flip-flopping about at anchor.

The line lock in the end of the boom near the mast for the third reef sheet is a bit stiff. Needs fixing but in the meantime I have just been cleating it off when needed (not that we tend to sail that much in conditions where we need to put the third reef in!). The blue line is the outhaul for a full main, the other three reefing lines have one, two and three knots tied in the end of them to make it easy to know which is which!

I always lower the anchor using the windlass in a controlled manner. And when retrieving the anchor we always take the ‘weight’ of the boat off the chain by gently moving forward as we bring the chain up. And I NEVER use the windlass to pull the anchor up over the bow roller. I always raise it to just below that and then pull it up and onto the bow roller by hand and then lock it off using the clip and rope up there for that purpose.

I ALWAYS use a snubber on the anchor too (and put the lock onto the gypsy – which is also a bit stiff!). I never just leave the weight of the chain sitting on the windlass gypsy at anchor.

Instruments

On our last trip back, we noticed that, on the plotter our boat heading had flipped 180° (ie we seemed to be sailing ‘backwards’! Everything still worked fine, including the autohelm when setting to AUTO (ie ‘keep this course’). After making some enquiries on our return it was suggested that, if that happens, you need to do a full recalibration of the system to ‘reset’ the boat direction. We have not had a chance to do this but the instructions are all in the manuals.

The C80 plotter works well and is easy to use – we love it! We have left all our anchorage (and waypoint) marks in which, of course, can all be deleted as required. If someone wants to replace the plotter, they will also need to replace the radar as I suspect it won’t be compatible with newer plotters.

The old spinning speed impeller / sensor (through hull fitting) doesn’t work. We just use the GPS derived SOG reading we get on the plotter anyway which is a more accurate measure of how the boat is actually travelling. It is, therefore, effectively a ‘spare’ through hull if someone wants to put something else there (eg fishfinder?).

Head

Open the valve (blue handle) next to the head and use the switch on the aft bulkhead to use the macerator / pump. The valve is required as the setup can’t have a siphon valve on the raw water input side because the pump “sucks” the raw water if that makes sense.

ALWAYS leave this valve CLOSED when not in use, otherwise water could siphon back into the toilet bowl.

If you pump for 10 seconds after the bowl empties, then all of the waste is expelled overboard. This is worth doing as it will reduce the calcification inside the waste pipes.

You may not want to be so ‘generous’ when using the holding tank as obviously all output goes into the tank so you will fill it more quickly doing this!

The “Y” valve for overboard and holding tank diversion is low down against the starboard bulkhead inside the port locker under the V-berth mattress. The “Y” valve for diverting from the manual pump out to the deck fitting is on the forward bulkhead inside the same locker.

The overboard waste thru hull valve is inside the locker under the seat in the shower. The waste outlet from the holding tank manual pump is under the cabin sole in the V-berth. Raw water input to the pump is also under the V-berth cabin sole.

There is no level indicator for the holding tank. If it fills completely, it will overflow through the breather on the starboard topsides next to the head. Not nice. We make sure to pump it out as soon as we can after using it. In our experience, 2 people can use the head / holding tank for around 5 days without any overflow problems but again – it depends on how much you use it! The holding tank is 190 ltrs.

Miscellaneous random stuff

Don't forget to 'unlock' the helm (black 'wind in / wind out' lock under instruments on starboard side of pedestal) before heading off otherwise the wheel will feel very stiff!

Keep motor revs low (800-1000) when changing gears and make sure you are FULLY positioned in forward or reverse to properly engage at the gearbox.

Once under way and the engine is off, just briefly put it in forward (or reverse) to 'lock' the shaft, the prop blades will then 'fold' into the water stream.

The boom brake is awesome but the DB line running around the drum is getting a bit 'fluffy / sticky'. I would be replacing this sometime soon, and perhaps with a slightly less 'grippy' braid.

The air conditioner works great but the drain from the condenser (under the forward part of the curved seat) runs to the bilge so when you use the air conditioner, the bilge pump might go off occasionally.

We removed the Magma BBQ (now in the aft lazarette) and mounted the new liferaft on the aft starboard rail instead. Having sailed around like this for a while I think I would now relocate the liferaft forward onto the deck in front of the coachroof (leaving room for the BBQ then again if desired). The same liferaft cradle can be used. I think that would look a bit neater that way.

The main inverter unit is in the port lazarette and we leave that switched on, controlling it from the switch under the DC panel.

We have never tested the wind vane steering but a previous owner used it exclusively across the Pacific. There's a tiller pilot in the V-berth hanging locker (along with the vanes and oar) that attaches to the post next to the GPS unit on the stern and can substitute for the actual vane if the main auto-pilot fails. It plugs in behind the stern lazarette hatch. The vane connects to the wheel via lines and a strap stored in the cockpit shower locker. Emergency tiller is attached high inside the stern lazarette and feeds through the hole forward of the stern hatch right down onto the top of the rudder post.

The connector by the cockpit shower locker is for the anchor windlass. But the previous owner replaced the windlass remote and it uses a different connector now. We always use the remote up by the anchor but the cockpit wiring is still there if someone wanted to change the fitting in the cockpit. There are two working remotes on the boat.

Note that the starboard cockpit locker can double as an ice box! Fantastic.

The max prop is awesome but it does need maintenance. There are grease nipples in the nav desk. You use an allen key to remove the blanks (positions are marked) on the prop to install them. Pump waterproof grease in till it oozes out around the base of the blades whenever you haul the boat.

The aft water tank deck fill plug has blue tack in the key holes. This was so that we never accidentally fill the water tank with diesel or the diesel tank with water. To fill the aft tank, open the valve under the mid galley cabin sole hatch to fill the tank from the forward tank by gravity. We normally keep that valve closed and fill the aft tank as required.

When checking tank levels using the meter just under the basin in the head, for some reason when you switch it on you need to ‘cycle through’ (past the first diesel reading) and past the water tank readings to get back to the diesel tank reading which will then work fine?! Go figure...

Periodically (and when defrosting the fridge), note that there is a ‘fridge drain’ valve under the floor where the water tank valves are. Open to drain and then close again (otherwise all your lovely cold air will end up in the bilge!)

The top of the fuel tank is also accessible from this space where you can dip the tank (there is a marked dowl there to do that – just unscrew the small S/S cap and lower it in).

When we got the boat there were big, boxy, Bose speakers in the saloon; one just above and to the right of the ‘rum locker’ and another on the wall at the aft end of the sea-berth settee. We removed them as we just used portable wireless speakers (we never used the boat’s sound system but it does work!). The speaker wires are still there (the rum locker one behind the teak access plate for the chainplates) if someone wants to use them.

The boat used to have side solar panels on the aft side rails (as well as on the davits). When we upgraded the solar / wind systems, the new rear panel on the davits delivered as much power as the three old ones! So, we just left it at that. We did, however, get the electrician to cap off the side wires (with waterproof plugs) so if someone wanted to put new side panels on too, that wiring is still there (this would obviously then have to be incorporated into the new power control panel in the forward locker under the quarter berth).

The galley sinks have ‘screw in’ plugs. Best to have these ‘screwed in’ when under way, especially when on a hard starboard tack as the water line is not far under the galley sink drains.

Similarly, if you are running the water maker when on a hard starboard tack you may find some water gathering on the floor at the port cockpit drain. This is because the water maker brine discharge joins the cockpit drain hose just before the outlet and the extra ‘pressure’ of being under way on a starboard tack seems to slow down the flow through the outlet a bit.

All the portholes are fantastic and provide for great ventilation. However, when it rains make sure AT LEAST the aft rectangular ones on each side of the saloon are CLOSED, otherwise water running off the coach roof will run down into the cabin and wet the couches. As a rule, when it rains, close all the side hatches and leave the top hatches open a crack if required. Note also that the hatch lock-handles can loosen off a bit so may need to be tightened with an allen key to seal the hatches properly (there’s one sitting just below the big saloon mirror just for this purpose!). And, after the rain, watch for water pooled in the bottom of the hatches before opening them!

There is a full set of Shade Tree covers (in two parts) in the Aft Lazarette – one cover for forward of the mast and another from the mast back. These are serious covers that require a bit of setting up (see manual on board and <http://shadetreefabricselters.com/index.htm>) but are pretty amazing once in place!

Happy sailing!