

NOTES from March 2020

Also available on www.sydeliefde.com (see link to 'technical notes')

The **power drill** is currently in the main cabin, but had lived in the aft lazarette port side. It's in a black case. Spare drill bits are located in the **toolbag**, main salon, port side aftmost, head height. The main toolbag contains various pliers and screwdrivers. There is also a **socket wrench set** adjacent to the toolbag. There are additional tool boxes — one with miscellaneous tools, and another Husky comprehensive toolkit — in the aft lazarette, port side (where the heater used to be). There is a **bolt cutter** in the cockpit lazarette, port side, under the life jackets. The **power air inflator** is in a black soft bag in the main cabin, port side, forwardmost cubby behind the settee cushion.

The **watermaker** needs a part (the boost pump strainer; the installed part leaks air). The throughhull is aft cabin just as you pass from the galley (sometimes occluded by the aft cabin ottoman). The instrument panel near the companionway ladder lights up with a touch, and takes ten minutes to initialize. The breaker is on the galley panel immediately above the generator battery. Even though the watermaker is dysfunctional, it should be operated ("fresh water flush") **at least once a month**. (Most recently March 21.). The fresh water flush takes about ten minutes and seven gallons from the main tanks. The output tubes for the fresh water maker are located on the starboard side, near the starboard water tank (underneath the settee cushions). During normal operation, one of the three — port, starboard, taster — **MUST** be open. The port tank watermaker valve leaks in the open position. The taster tube is in the engine compartment.

The **generator** is operational. We had an issue requiring replacing two large capacitors; the replacements are not exactly the right size and the physical arrangement is haphazard. Please don't redline the generator. There is a generator output switch (breaker) in the vacuum cleaner closet aft of the nav station.

The **fresh water tank** gauges seem wonky: they may be reversed (port for starboard); and they do not read completely full even after filling the tanks. They do indicate when tanks run low. The tanks are supposed to drain equally automatically but the gauges indicate this may not be happening (also, the time to refill is different by nearly half). The tanks fill on the port side, port / starboard / head supply reading aft to forward (but the port and starboard may be reversed). The air output is at the step leading to the cockpit, also port side. The water pump, and the hot water heater, both function without incident. (In Antigua we repaired a major water leak in a section of tubing just above the main fuse box under the galley step. The water leaked into — flowed into — the battery compartment; the batteries were removed one by one and dried off.). There is some vestige of odour in various spigots, but it dissipates quickly once water is run through the pipes. (This was a big problem last year.). The three spigots at the sink are filtered water (main spigot), doubly-filtered water [though if this is not used regularly, it develops the odour as above], and salt-water for dish rinsing.

The **head system** functions as expected. Lift the lever to run fresh water (from a separate head supply tank) to the bowl; depress to flush. The indicator lights in both

heads are green when vacuum is available, and turn red temporarily when vacuum is being restored (and probably also when the tank is full). When at sea, empty the holding tank using the 'macerator pump' switch on the DC panel. The macerator pump / holding tank output is controlled by a Y-valve (located underneath the salon sole, accessed by the panel under the television), currently set to discharge overboard and otherwise [as in, once in the Chesapeake] set to deck-top/ pumpout. No discharge occurs unless the macerator pump is running. The macerator pump changes its noise pattern distinctly when it has completed emptying the holding tank. Usually this takes several minutes. The pump appears to shut off completely some time after it's finished pumping, but it must also be turned off at the panel (or it will run again at inconvenient times). We do not put paper down the heads; instead we have compost-bin buckets at each head, liners in the aft head. This system seems to work well without significant odour. (The buckets' hinged tops close fully against the liner bag.). **DO NOT POUR SEAWATER** down the heads.

Power management. The **solar panels / wind generator** generally keep up with the refrigerator / freezer on a daily basis. The battery status panel ("Victron") is above the generator on-off panel and is brought to life with the center circular button. There is also a 'Victron display' breaker at the panel. The battery percentage is not calibrated, always reading 100%. We have been successful keeping battery level above 12.5V even at night. It normally restores in the daytime with solar and wind to about 13.2V. The diagrammatic arrows do not reflect solar, wind, or main engine alternator recharge of the batteries. The "120/240V panel" apparently runs Bus A from the inverter and Bus B (including hot water) from the shore power / generator power supply. To recharge the house and engine batteries from the generator or from shore power, the two uppermost breakers on Bus A must be set to on. (We typically turn them on in the afternoon if the solar power has not fully recharged them.) Bus B includes hot water, normally turned to off. The main engine also heats the hot water supply.

We have found the car-battery-sized **Jackery portable battery packs** to be quite useful, for example in powering a CPAP machine all night, or for charging up laptops and iPads. The three smaller units support two hundred watts of output power, and the larger unit five hundred. (Next season, they have come out with a 1000W unit.) We use these in part to collect up surplus power from the solar panels once the house bank is fully charged. They charge from either the DC port currently at the nav station or from the AC outlet currently in the aft cabin starboard side near the interior lazarette door.

The **three refrigeration units** are controlled by the three breakers on the DC panel. (This is not the same as the IP manual's wiring diagram, which shows the tray run from AC.). These are a big refrigerator on the left, a big freezer on the right, and a tray (which we use for drinks) underneath the left-hand (foremost) refrigerator. They are in excellent repair. It is possible to inadvertently freeze items that are stored in the fridge unit but near the wall separating it from the freezer, especially if placed deep in the unit.

The **240V outlet** in the kitchen has no separate on/off switch. We use it for the electric kettle and for a few other 240V appliances (spare ice maker, hot sandwich iron, espresso machine). The outlet runs at 60Hz, so non-US appliances are not

guaranteed. These other appliances typically take gobs of power; and the outlet circuitry is not rated for more than about three thousand watts. Thus running microwave and sandwich iron at the same time is not recommended. When running the kettle you can see on the Victron display a jump to a thousand watts, the sandwich iron two thousand.

Underway. The secondary DC panel controls autopilot, nav (labeled electronics), secondary electronics including the two DC power outlets at the nav station, and the VHF. The 12V outlet at the cockpit nav is not functional. The main vhf has a handheld that recharges when the secondary 'electronics' breaker switch is enabled; it is twinned to the main VHF display at the nav station. There are at least two handheld VHF's that we typically recharge from the outlet behind the companionway (where we also plug in the ice maker). This outlet is controlled from the 120V panel switch labeled 'microwave' (you'll hear a high-pitched beep, which is the microwave turning on). We also charge the two searchlights from this outlet.

The **nav** turns on from the breaker switch on the secondary DC panel (labeled 'electronics'). On startup, after some delay, it will ask for 'software update' (please decline, we don't have WiFi) and later still for '**chart source**'. You want **C-MAP NA-Y027** in the Caribbean, not Navionics or US enhanced. For emergencies, the X and checkmark buttons pressed together make the nav system record **MOB** with automatic navigation to that spot.

The **depth finder** is physically located starboard side near the guest cabin (bunk bed room). It is calibrated neither at waterline or under keel but instead with approximately **0.7m** of wiggle room — if the depth shows 1.1m, you should have 1.8m of depth and therefore approximately half a foot under your keel (we draw 5'3" or 5'6" / 1.5m or 1.6m depending on who you ask). We calibrated the depth using a lead line at Jolly Harbour customs dock in Antigua.

The **radar** at the nav station is fully operational but you need to enable it from the radar screen using the 'transmit' button (after which the 'power off' button changes appearance to 'standby', and can be used to return the radar to 'standby' status). When operating the radar supposedly eats power hungrily — I estimate nearly a thousand watts, looking at the 'load current' on the A/C panel — so one tends to turn it on only intermittently. It can also be turned on from the nav. There are forward echo sounders on each side of the boat, but we haven't used either one. I am told they can't be run simultaneously port and starboard, and because of the long keel one needs to refer to both to get a full forward view. This would be useful only if traveling at very low speeds, because the scope of the display is only about one boat length.

The **running lights** system can support either deck-level lighting or tri-color at the top of the mast. Opinions vary as to which is appropriate. The transom white stern light is partially obscured by the dinghy when riding on the davits. The entire 'TriAnchor' rotary switch is controlled by the breaker labelled '**anchor lights**' (DC panel, top right), so this breaker must be on while underway at night if the tri-color lights are to be used. (And it must also be on and the TriAnchor switch must be set to 'anchor' if the top-mast anchor

light is to be enabled, for example at anchor or possibly at a mooring.)

The **floor level lighting** is controlled by a small black on-off switch near the starboard (galley) side handhold. It is extremely convenient at night.

The **dinghy** has a slow leak on both sides. At last use, it was possible to pump it up manually and have good pressure for several hours. We take the pump with us. The dinghy motor is currently mounted on the aft rail and tied down. It operates using the satellite fuel tank (if the switch is turned to 'off') or its internal tank. The external tank is full, but we may choose to empty it before departing for safety. It is currently lashed using paracord to the aft rail, but it could fall 'through the cracks' because the aft seat ('admiral's chair') has broken from its attachment and that area is now vacant. The dinghy engine runs well with no noticeable trouble starting, odd-coloured clouds of smoke, or prop vibration. There are two kill switches in the main cabin, usually located in a basket near the companionway ladder. The keys attached to each should work for two locks (one for each end of the locking chain and the companionway hatch lock). We use the "pineapple" — yellow canister, red top — for useful dinghy items such as cellphones and lights. There are various dinghy repair materials, including a caulking gun, in containers in the aft lazarette. Some of these were deployed this season to try to mitigate the leaks from the dinghy's aft hull covers.

There may not be any separate indicator of **engine battery status**. I don't know whether the solar / wind recharge the engine battery bank automatically.). We believe the engine battery bank includes separate batteries for the engine and the generator, but I haven't located the engine battery. There are also batteries forward to power the bow thruster and anchor windlass — same batteries — and there is a switch and a breaker along the port side of the bed in the v-berth.

The **main engine** is fully operational. The most recent engine check according to the log was on 10 March 2020, at a mooring in the Bight at Norman Island BVI. (The log does not record the engine hours at that time, but right now as of 21 Mar 2020 it reads 2988.4.) The log details the outcome. The diesel tank was filled on 11 Mar 2020 at Sopers Hole BVI. There is an **engine room blower** to relieve temperature extremes, the intake of which is at the cockpit nav station and the outtake at the port side transom. Each of these should be open when the blower is being used, and closed only under severe storm conditions. The blower is controlled by a breaker on the DC panel. It is noisy enough to be annoying in the aft cabin. Temperature in the engine room is exacerbated by the considerable insulation that has been installed, but we did not consistently deploy the blower motor. There are **spare engine parts** — impellers, belt, filters — in the main salon, in a container behind the forwardmost cushion on the port-side settee. There is also a spare prop!

The **safety gear** — inflatable life vests, tethers, crotch straps, lights, whistles — are located in a yellow bag currently starboard side, v-berth. There are additional life jackets for casual use in the cockpit lazarette, port side, under the cushion. (This port side lazarette also has slots to store the companionway hatchboards.). There is a yellow ditch bag on the port side in the v-berth; I recommend reviewing the contents (including

charging up the portable VHF) before departing. There are two **EPIRBs** (one is a smaller PLB) at the companionway hatch, port side. They are both registered using Al Kalfass, my emergency contact in Syracuse NY (+1-315-481-2814), who makes his living managing an emergency rescue service. (Local, not offshore boats.). The life raft and fire extinguishers are all current and compliant, with the exception of some supernumerary Dutch fire extinguishers in the vacuum closet by the nav station. Other safety gear includes a comprehensive **first aid kit** in a blue bag in the v-berth (supplementing the Dutch language first aid kit under the companionway ladder and other minor first aid items in each head), as well as a **puncture repair** kit in an orange case in the vacuum closet by the nav station. (There are also wooden **bungs** in the main cabin port side aftmost head-level cubby adjacent to the toolbag.). **Flares** of various kinds are found in a white canister in the vacuum closet — currently underneath the mini-shop-vac — we keep expired ones around on general principles.

I'm going to fill all available **water jugs** with dock water, which I'm told is municipal water and safe to drink. These jugs include a five-gallon plastic tub with a hand-operated pump.

The **satellite** device (iridium GO) is current. The device uses dedicated apps available for iOS and Android to handle email (sydeliefde@myiridium.net) and telephone (+881 6524 03678), including text messages. Note that if you download text or voicemail to your local device, they are no longer available to anyone else who logs into the GO device. We leave the device plugged into a USB port at the nav station (controlled by the second 'electronics' breaker on the supplementary 12V panel) and running continuously. The local antenna appears to function almost all the time. The PredictWind folks have a tracking system to follow the boat through hourly pings from the GO (at about nine minutes before the hour, an audible chime), and there is a link to our vessel's tracking page (including a wind overlay) at the boat's website **www.sydeliefde.com**.

You should find **paper charts** in the chart slot (under a dog) behind the nav station. Courtesy flags are in the nav station desk. There are various **cruising guides** on the starboard side main salon bookshelf, also Chapman's and various knot and paracord reference books. There is also a surfeit of paracord and paracord supplies port side main salon, as well as a 1000' spool in the aft lazarette, All of the cruising guides are pre-Irma and thus seriously out of date.

You should find **docklines** in either the anchor locker forward or the aft lazarette, or both. There is also at the bottom of the aft lazarette a large black bin with yellow lid with lots of **spare line** in several sizes and colors. There is about six feet of fire hose (white, flattened, aft lazarette) that can be cut up and used as **chafing protection** in a pinch.

Also, the port and starboard **boom preventers** have been de-rigged and placed in that port side lazarette. I don't know how to re-rig them, but the lines lead along the boom and forward of the headstay before going along the side.

The **anchor chain** roller system is functional but needs repair. There is a ceramic

protection ring where the chain feeds into the locker that is broken (one piece is in the main salon near the companionway ladder). This protection ring helps relieve the tendency to tangle, so without it the anchor can get garbled, especially on the way in. The anchor chain itself has markers on it every 12-1/2 feet.

We have been storing **garbage bags** and **spare fenders** in the anchor locker or in the aft lazarette.

The **propane system** is fully functional, including the oven, if a lighter or match is used to ignite the burners. There is no emergency off switch at the stove. There is a red-light LP GAS breaker switch on the DC panel. The starboard side propane locker holds two tanks, at least one of which is currently full. The port side propane locker holds one tank, believed full, and two or three small canisters that can be used with the deck-mounted grill. We filled one tank in St Maarten.

The **television** works off the starboard 110V outlets. At present it has an Amazon Fire connected to its HDMI input. The television is plugged into a power extension cord near the nearest starboard outlet. The remote on-off switches for the television appear to reboot it rather than take power off. There is a white rocker power switch just above the salon floor near the television that turns the television on and off. If this is accidentally switched on, you can also turn power off to the unit by unplugging the extension cord at the wall socket, head level, starboard side.). There are a few DVDs in the forwardmost sliding cubby starboard side main salon, together with a low-cost **portable DVD player**. Also dominoes and playing cards.

The **boat documentation** is in a boat bag, orange sailcloth briefcase-style hanging near the nav station. This includes the USCG certificate, the insurance binder, and various clearances in and out. Most recently, the vessel and its four crew — Anderson, two Campbells, and a MacDonald — cleared in at Cruz Bay St John without incident.

Foul-weather gear can be found in the ottoman (portable storage box with hinged lid) in the aft cabin. Also a couple of spare **blankets** in case it gets cold.

There is a supply of AA and AAA **batteries** in a container under the aft cabin bed. In a similar container in the clothes locker aft cabin (starboard side, shelved, near the interior lazarette door) there are portable charge-packs. Other more weatherproof **personal charging packs** (orange and black, the Jackery color scheme) are distributed about the main salon. The larger, car-battery-sized Jackery packs are described above. **Cables** for these devices (USB-C, USB / micro, USB / lightning) can be found in various places about the boat, but most especially in a folding-top bin in the aft cabin.

The **air conditioner** is functional, after a fashion. Apparently, according to one technician, one of the two compressors suffers an internal blockage, leading to differential pressure readings and a system fault. That compressor has been bypassed, so the system is functioning to half capacity, without its customary spare. The main salon has the central control unit; individual cabins supposedly have independent temperature controls but these appear to not function correctly. The individual units —

aft cabin, guest cabin, v-berth — and the main unit — salon and ‘chiller’ — are controlled by breakers on the AC panel, Bus B. They will not operate under battery alone, needing either shore power or the generator. If the generator is running the air conditioner, there is insufficient output to also run the battery charger. Do not run the generator for both air conditioning and battery charging at the same time. The forward-most unit (the v-berth) appears to be completely dysfunctional, possibly as a consequence of where it was installed. The guest cabin (bunk bed room) aircond works poorly. The aft-most unit (aft cabin) we think has to be turned on at the main breaker for the cold air to make its way to the salon’s unit, but it can be turned off at its local panel to avoid over-chilling the aft cabin. The aft cabin’s sensor appears defective or defectively installed, because it apparently runs at full coldness regardless of ambient temperature. It can be set to run at low fan speed, and/or for a limited time (such as an hour) using the screen in the aft cabin. The aft cabin aircond also supplies the galley through a small outlet underneath the portable vacuum. There is a bleeder valve just past the raw water pump, which is located under the galley salon near the throughhull. Last year the throughhull got clogged with seaweed. Also, when underway the raw water outtake can develop an airlock, requiring a bleed at the pump when turning the aircond on after journey’s end.

The air conditioner generates considerable water through **condensation**. A sump pump with a water level float has been installed in the aft cabin; that sump is controlled by a breaker at the main DC box. There is no corresponding sump in the forward section of the boat, and quite a bit of water can accumulate in the three hull sections underneath the floorboards of the bunk-bed room. A hand pump for water (“thirsty-mate”) and another for air (“peak”) can be found in the aft lazarette. There is also a dirty-water, three-gallon, cap-less water jug for collecting pumped out bilge water. (Remember: no seawater down the heads.). I found about five gallons of what I think is condensate — yellowed, dirty — in the three compartments under the guest room (bunk-bed room) cabin sole.

The **bilge pump** is set to auto, and its controls are on the battery panel in the galley. (There is a non-functioning ‘bilge pump’ rocker switch, originally designed for the anchor locker bilge pump.). It operated only once on this trip. There is a light at the main cockpit instrument panel designed to alert the helm to the operation of the bilge pump. There is an **emergency bilge pump** located in the galley aft of the sink. There is an **emergency tiller** in two parts in the lazarette — right now, to port of the stairs leading into it from the deck — that fits in a slot accessible by winch handle just forward of the aft lazarette outside hatch. The lazarette hatch is heavy and can close without warning (there are no hydraulic stops any more).