

## *Cornish Crabbers Club - Technical*

### Winterising Your Crabber – By Simon D’Arcy

Drain the Plastimo water tank; pump out the last gallon or so with some household bleach added or using a sterilisation tablet so the plastic water pipe that runs to the tap which, you can’t drain, is properly cleaned. I take the bladder home and leave it in the airing cupboard to fully dry out; keep an eye on the ‘O’ rings as they are easy to misplace. From now until the frosts are behind us, I only use bottled water. The boat rides higher in the water too, keeping my boot top clean!

Service the GM20 Yanmar engine as per the manual. Irrespective of the number of engine hours over the season, I routinely replace at this time of year:

- The water pump impeller; using plenty of silicone grease to stop water draining back out of the engine past the impeller.
- The two zinc engine sacrificial anodes – one is quite difficult to get at near the fuel pump and care needs to be taken not to damage the pump body.
- The primary and secondary fuel filters. If you find watery sediment in either of them, consider draining your fuel tank to the point where you can remove the fuel content sender unit to see inside the tank then use a Pela pump to Hoover up whatever is lying at the bottom of the tank that shouldn’t be there. You will need a torch. Ideally do this before you top your tank up to the brim unless you have plenty of jerry cans. I inspected my tank internally recently and had to make a fresh gasket; using the old one as a template.
- Replace the alternator and water pump belts. The new belts will need further adjustment after some five hour use while they bed in. If you forget to do this you run the risk that one of them slips (usually the alternator belt) you’ll then find the engine and alternator and cabin steps covered in black belt dust. In which case the belt is probably ruined, so need to start again with a new one. Halfords do a very good anti belt slip aerosol, which I use. Once a new belt is correctly fitted, start the engine and lightly spray for ten seconds. The sticky gloopy stuff covers the belt and pulleys; both conditioning the belt and ensuring it doesn’t slip. We always used it on the farm, in my teenage years, on a combine harvester which had dozens of belts that seemed prone to slipping. It worked wonders.
- The air filter on Equinox is non standard. If yours has the standard paper cartridge it should be replaced if it looks grubby and certainly every other year. I have instead, a foam mesh one which I remove and wash in hot water and detergent, dry then add about half a cup of special filter oil to the mesh which very effectively traps particulates. I’m amazed how much crud comes out while washing it. Apparently foam/oil filters allow the engine to breathe more easily, so aiding their efficiency.

After warming up the engine fully, change oil in both the engine and gearbox - both use the same oil (current Yanmar recommendation for GM20). I use a Pela vacuum pump to make the task easy and mess free. While the engine is running, fire up your boat’s heating system, if you have one. Leave it running for at least fifteen minutes on full before letting it cycle OFF properly.

Check stern gland for leakage and adjust if necessary which requires the cockpit sole to be removed, if it is dripping. You need a fairly long drift and hammer to loosen the locking nut.

While your hands are grubby, it’s a good time to top up the grease reservoir too.

With cockpit sole still up, check the bonding straps from the engine, gearbox and steering gear to the hull sacrificial anode are intact. I've added bonding straps to my engine's seacocks too, as recommended in Practical Boating.

Check and clean out engine inline water intake filter and lightly grease both engine seacocks after cycling them a dozen times. Finally spray engine with WD40 - avoiding the new belts.

Check both batteries and top up with distilled water if necessary; they rarely do unless you deep cycle your batteries and use the engine to charge them up rather than a shore powered battery conditioner.

Clean and Vaseline battery terminals. If each of your batteries has a vent tube connected that runs to the two cockpit breathers, check for kinks in the tube and also make sure there's no water in them.

Turn 'off' and 'on' the main fuel tap a dozen times and lubricate. For some reason mine is and always has been incredibly stiff to operate. Leave it in the 'on' position. If you turn it to 'off' and forget to turn it 'on' next time you start the engine it will run for a few seconds before stopping, leaving you the onerous task of having to bleed the fuel system! I've done it twice!

If extended periods of sub zero temperatures are expected, and I know I'm not going to be able to sail, I completely drain and refill the engine with an antifreeze mix, as the sea water inside Chichester Marina is brackish and freezes regularly - being mostly fresh during the winter months when the lock has little use. I use a meter long length of plastic hose connected ONLY to the inlet side of the water pump, replacing the existing hose that runs from the seacock to the water pump. Place the free end of the plastic hose into a bucket of warm water/antifreeze mix. Start and run the engine until the bucket is nearly empty before switching off. Quickly reconnect the proper hose to the seacock and pump, noting whether water drains back through your water pump. If it does, examine your pump for wear or add more silicone grease to the impeller. If you do it correctly all the water channels in the engine will be filled with antifreeze which contains a rust inhibitor leaving you with nothing to worry about! It also kills any critters living in the hoses.

**IMPORTANT.** This task has to be done when the engine has already been run up to full operating temperature and the thermostat wide open.

Ideally if you're not going to use the boat over the winter I would do this in any case; unless you have a greenhouse heater with a frost stat and leave the engine cover (the steps) open, so the engine is protected by the heater too - I position the heater close to the engine.

As I sail all through the winter I tend to leave a 500 watt thermostatic greenhouse heater on a time switch (twice a day for three hours) which keeps the cabin damp free. The timer has a frost stat which overrides the timer if the temperature drops to below zero.

On C24s the most likely place for damp to become an issue is at the far end of the quarter berth - there's little air circulation down there. Keep an eye open for mold and if you use a dehumidifier on board as many owners do, position it so it stirs the air in that area. I time mine to come on after the heater has been on for three hours. It's on its own timer and comes on for an hour twice a day. Mine sits, wedged on the chart table so water it extracts drains into the sink via a tube.

Through the cockpit locker I spray the throttle quadrant linkages with WD 40 working them through the range as I do.

Brim and keep brimmed the fuel tank. After every sail, unless I've only used the engine to lock in and out of the marina, I top up so there is no air space above the fuel for condensation to form inside the fuel tank. If your fuel does not contain an algaecide; I would certainly add it. Diesel bug is a nightmare and costly to resolve.

Inside the cabin I open all lockers and bins and leave their lids off so air can circulate through every nook and cranny.

Flake out all the anchor chain onto the pontoon hose down and scrub it with a stiff broom letting it dry before feeding it back into the locker. While the locker's empty, I push a hose down the hawse pipe as it is usually quite silty/muddy in there and let it dry out too. If the crud blocks the hose leading back to the bilge you will need to hold the hose directly to the locker drain and flush it through under pressure. You can hear the water run back to fill the bilge: run until clear then pump out the bilge afterwards after adding some detergent. Once the bilge is pumped dry, squirt some more detergent into the empty bilge. It will work wonders on the oily residue that's left behind.

I routinely do this at this time of year, as I doubt I'll be spending too many more nights at anchor from now on, as there are so many empty moorings around to pick up. I've also noticed that without regular use, the anchor chain becomes crusty - covered with a white flaky powder and the links can jam, so the chain doesn't flow in and out of the locker and round the windlass as it should.

It's a good time to strip and clean the anchor windlass too, grease as necessary.

While you have the tube of grease handy, consider stripping all the cockpit winches. I've six on Equinox. Clean and grease. Each takes five minutes at the most. Circlip pliers are needed.

Unfurl foresails and check stitching, especially on UV strip; reverse furling lines after machine washing them to spread wear.

Undo the black electrical connectors in front of the mast and Vaseline the pins. I now remove the deck fittings completely and check the terminals; see an article on the subject I wrote after losing wind information this summer cruising down in the West Country. Check all masthead and stern lights work afterwards. All the connectors on the binnacle mounted Raymarine instruments as well as the Raymarine autohelm and the Yanmar engine control panel are loosened cleaned and smeared with vaseline too - Halfords do an aerosol of something that's similar to Vaseline that's green for battery terminals, which is very good!

I turn off the gas at the regulator on top of the working gas bottle after squirting with WD40. The little screw valve can corrode and seize if not used often.

If you haven't used the anchor over the season or are on a swing mooring, I'd still flush out bilge with plenty of fresh water and a little detergent and pump dry while checking out how effective the pump is.

While the cabin sole inspection cover is up spray WD 40 on the Eberspacher's pipes and wiring connectors (your heating system, if you have one).

Service the heads. Strip, clean and silicon gel the pump workings. Years ago I took photographs of the innards so that I can reassemble it correctly. If you leave strong bleach or conventional lavatory cleaners in the pump workings you run a serious risk of damaging them - now I put a gallon of fresh water in the bowl and pump dry after running lavatory cleaner through the system first to remove stains, etc.

Clean fire escape hatch seals and hinges and check that it opens fully. I NEVER sleep on the boat if the bowsprit is retracted as it would prevent me from escaping through the hatch.

Lift the three floor panels and clean all the crud out that's gathered over the summer.

If you're having your boat lifted, pressure washed and blocked, check the cutlass bearing for wildlife that may be living and blocking the water lubrication channels. If there's some play, you might decide to replace the cutlass bearing. It's not a hard job, but you will need a properly fitting hub extractor to pull the prop off the tapered shaft. I did mine earlier this

year, slipping an engineer working nearby on another boat a £5. It took him less than three minutes!

That just about covers all the jobs I do at this time of year and it is full day's work.

If you don't intend to sail at all, I would think it worthwhile to remove all the sails, Spray hood, dodgers and tonneau cover as well as all bedding, cushions; and of course, your oillies.

Once a month, during the winter, when Equinox has, on the odd occasion, been out on blocks, I turn the engine over using the starting handle. Push both decompression levers forward and on and crank for thirty seconds. It warms you up and at the same time pumps oil around the engine; no bad thing.

I see quite a number of owners blank off their exhausts with a rag. I've never bothered; but maybe I should. Has anyone a viewpoint?

Finally cycle the remaining seacocks a dozen times lubricate and close; leaving only the sink drainer seacock open, if I have left the dehumidifier draining into the sink!

One final Job on board, I've noticed the gaff fitting stiffens up, so that it doesn't sit against the mast correctly. I undo the large bolt that runs through it and add a touch of grease where there's metal to metal contact. Too much and you risk it getting on your sails and rigging. While examining the gaff; have a look at the lino like material that is inside the gaff. Mine was in a terrible state, so I replaced it with leather. You might like to see how I did it in the article posted on the forum.

Check your shore lines. If a blow is expected consider adding extra ones. I also have some scruffy old fenders that look dreadful but are perfectly sound. I position them to share the punishment, adding life to my fender socks and adding a bit of insurance.