

Tackle winter jobs

Now's the time to tick-off those jobs you've been putting off all season and get a head-start on the spring rush, says Ali Wood

Are you a winter dabbler, or do you lay up your boat and forget about it? Either way, early maintenance and mid-season boat checks can save you time and money. Come the spring, sailmakers, shipwrights, riggers and other trades will be busy, so the more you can tick off over winter, the smoother your launch will be.

You'll find a detailed winterisation list at pbo.co.uk/winterjobs. However, here are a few things you might wish to tackle over the coming months.

Hull, rudder and keel

Dings to the hull can lead to water ingress. Here, a stitch (or gel coat repair) in time, saves nine, as the saying goes.

Check for gel coat chips, scratches and gouges and fill these before the boat goes back in the water (for details visit pbo.co.uk/gelcoatfix).

If the topsides are looking dull and could use a good polish, it's best to do this before antifouling. And while you could leave antifouling until closer to the spring, bear in mind you need to allow a window of eight hours or more for each coat (a day to be on the safe side), while also finding a patch of mild weather.

Scraping back to gel coat (if necessary) is a hard, time-consuming or costly job. However, even if the antifouling is in good nick and you're just preparing the surface for a new coat, this is actually best done soon after the boat is out of the water as old antifouling and marine growth is easier to remove before it hardens. Find out more about antifouling at pbo.co.uk/antifoultips.

Hopefully, your anodes have been doing their job by protecting underwater metals. If they're even 50% worn away, replace them. Tighten the bolts and use Loctite on the threads.

Check the rudder bearings by moving the rudder from full lock to full lock and give it a light tap with a ball pein hammer to identify any soft spots (for a full guide to rudder checks, see *PBO* December 2023). If you find anything suspect, get a professional to take a look.

Keels are also integral to safety so don't take any risks. In particular, check for cracking and corrosion at the keel/hull joint because failure to spot a problem could lead to disaster as *PBO's* marine surveyor Ben Sutcliffe-Davies pointed out last issue (pbo.co.uk/15things).

Propeller

Clean the propeller and check the blades for any pitting or other issues developing. Lightly tap the tips of the propeller blades with a small hammer. If it sounds very dull then it's likely to be suffering from dezincification. If the shaft is supported in a bearing, check for any play/wear

Tinkering in a boatyard can be a relaxing experience





Polishing the hull will protect the gel coat



Check the state of your anode



Reapply metal antifouling to the propeller and change the anodes if required

developing, and check the propeller is secure with a suitable means to lock the shaft nut.

Ben warns that in many of the locations we moor our craft in, the water type can or may have changed with the higher rainfalls we experience with the changing climate. Some estuaries are becoming less salty and more brackish. For this reason, many anode manufacturers recommend the use of aluminium anodes in both salt and brackish waters to provide the required protection. Use a multimeter to measure the ohms current between the anode and propeller and also check from your rudder stock and anode. You're looking for minimal resistance—ideally below 0.2 ohms to verify the anodes should provide protection. Find out more by watching Ben's YouTube channel, the Marine Surveyor Notebook.

Seacocks

Thru-hull fittings should be serviced annually. Ben doesn't recommend using DZR seacocks, which are only required to last five years, and often fail earlier. If you have this type of seacock—or are lucky enough to have ones made of bronze—use penetrating oil to loosen a seized ball valve. Even if it's working smoothly, take it apart and check for corrosion, clean it and apply fresh waterproof grease. Cone valves (Blakes-style seacocks) also require cleaning and degreasing. Gate valves are especially prone to failure and if the handles stick they'll most likely need to be replaced. Don't take any risks, if the skin fitting and/or seacock is corroded, change them at the same time, ideally for a composite product such as those by Marelon or Trudesign. Many boats have sunk due to corroded seacocks.

Composite seacocks require very little maintenance. You can lubricate them from time to time with non-petroleum grease using a straw to get the grease through elbows and tailpipes. The main thing is →



Composite seacocks require less maintenance



These corroded DZR seacocks from the PBO Project Boat were replaced with TruDesign composites



Winter is a good time to tick-off jobs. Ali varnishes the tiller of a Maxi 84



Check deck fittings for wear and tear



Replace leaky deck fittings



You can remove running rigging and wash if required

Take your sails off the boat, dry them out and check for wear and tear



Check sails are stored in a dry space



to use the valves regularly to avoid marine growth and seizing – the more you exercise them, the less you have to maintain them.

Don't forget to check the hose connections are tight, secured with double clips. Hoses leading to and from seacocks that show signs of cracking, distortion or deterioration need to be replaced.

Decks

Clear cockpit drains of any leaves and check for cracks and disintegrating seals around deck fittings, vents and windows that can lead to water ingress. Replace these if necessary. Give the stanchions a waggle – are they secure? Similarly, check the lashings on the guardwires and the webbing jackstays for UV damage.

Now's also a good time to lay the anchor ground tackle out and inspect for wear and chafe. If your winches are overdue a service, strip, clean and regrease them and replace any broken pawls or springs.

Rig

If your mast is down, check the contacts on the light bulbs, VHF aerial and wind instruments. Check the lenses for your navigation lights are not crazed. Similarly, check the deck navigation lights. Note, that if the mast is up, you can still see a lot with a pair of binoculars.

It's important to check the mast for stress fractures and damage to

T-terminals, spreader roots and the mast heel. Are the sheaves rotating freely?

Examine all rigging terminals. Broken strands of wire are a sure sign of potential failure. Also look out for dents on the boom and mast, corrosion around fittings and that the clevis pins are secure.

If you're not sure what you're looking for or have any doubts whatsoever, ask a rigger to take a look for peace of mind.

Sails, covers and ropes

Remove the sails and take them ashore for laundering. Or if you choose to leave them in situ make sure they're tightly secured with no risk of coming loose.

Some insurance policies won't cover torn sails caused by storm damage.

Similarly, remove sail covers, dodgers and the sprayhood. You can wash these with non-biological washing

powder or a boat cleaning product.

Remove the running rigging. You can wash ropes with a mild soap solution but chemicals can be abrasive. Use a bin or bucket. Don't machine wash as this can agitate and break down the fibres.

Staying dry

Keeping a boat dry and ventilated can be a challenge over winter. Hopefully, you've already removed the soft furnishings – you might even want to take down the curtains and give these a wash.

Each time you return to your boat,

check for leaks around windows and deck fittings, and mop up any water from the floor and deckhead. Leave doors and lockers open to allow air to circulate and lift sole boards.

A dehumidifier will help if you have shore power but is expensive to run. Another option is to plug in a couple of 135W energy-saving tubular heaters to protect against frost. These use less than 50W per foot and have a heat safety cut-out.

A desiccant, such as that from BirchSorb, which is used in shipping containers, is also a cost-effective way to absorb moisture. This will need replacing after a couple of months.

Interior

Now's the time for an early spring clean. Not only will it make you feel better in these short, dark days (and excited about sailing again), but the process can help you identify any faults.

If you've got access to shore power, start by giving the boat a good vacuum. Use the various brush connections to get into nooks and crannies. You can even Hoover the headlining. Use a dustpan and brush if you don't have power.

While you're doing this, check for leaks that may stain woodwork and upholstery. If you can't identify the cause, you could

'Early maintenance and mid-season boat checks can save you time and money'

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While the mast is down, clean and lubricate the parts



Replace any chafed lines



Clean the decks

ask a surveyor to take a look.

Take note of any delamination of veneer panels or moulding. It could be wear and tear but if it gets worse it could be an indication of a problem.

Once you've removed all the dust, it's time to do a top-to-toe clean with a mild detergent or white vinegar.

Clean to Glem does a good range of boat cleaning products - including solutions for canvas and brightwork.

For dirty bilges, start by mopping up leaked oil or fuel with a sponge or rag then switch to a bilge cleaner. AquaMarine's bilge cleaner is especially nice for stinky bilges, and has a long-lasting, fresh smell.

Ideally, the heads would have been flushed through while on the water (see below). If it's still smelly, you can flush a mix of white vinegar and fresh water through the system - add some bicarbonate of soda for descaling. If you don't have a holding tank, though, ensure you have adequate means of catching and disposing of the waste water.

Any salty residue will attract moisture so it's a good idea to wipe clean all surfaces, including the galley, cooker, fridge or coolbox. While in the galley, don't forget to check sink drains, where bacteria can gather.

Water tanks

Fresh water tanks and pipework should be drained annually and filled with a water sterilising mixture such as Milton. Leave it for a couple of days, drain again and leave the system empty until the spring.

Alternatively, you could fit a carbon filter or sub-micron filter.

Be aware that neglected pipes can become contaminated with fungal or algal growth in which case they may well need to be replaced.

Batteries and electrics

You can disconnect batteries and take them home to protect them from the cold, but be sure to keep them charged.

Alternatively, if your batteries are being charged in situ by shore power, exercise them when you next visit the boat by running a few lights and appliances.

Batteries don't like to be left fully charged, so leave them unplugged for a few weeks then top them back up. Or better still, leave them connected to a solar panel over winter so they get topped up, or 'trickle-charged' with winter sunshine.

Check the instruments and lights are working. If they're not, you may need to replace a fuse in the switch panel.

It's also important to check the condition of the electric and manual bilge pumps. Are the float switches working? Ensure both the strum boxes and the outlet hoses are clear of debris.

Heads

Marine toilets need to be drained to protect against frost and prevent anaerobic bacteria from growing in the pipework. Your marine toilet manual should explain how to drain the system ashore. Steps typically include opening the secondary valves, removing the base drain plug, disconnecting the

FROST PROTECTION

The Haven Knox-Johnston insurance crew have some tips

- Seawater that has collected in cooling or exhaust systems can freeze at temperatures of just -4°C. Drain all water from inboard engines and other machinery. Alternatively, add a mixture of water and antifreeze to the raw water cooling system.
- Keep sterndrives and outboard motors in the down position to allow water to drain out. Do this whether ashore or afloat.
- Small outboards should be stored upright to ensure that water can drain from them.
- Fresh water systems are vulnerable and should be drained completely. Alternatively, toilets and shower pumps can be protected by adding a mixture of water and glycol-based antifreeze (it's impossible to ensure it penetrates the complete system so drainage is preferable).
- Seacocks should be kept closed to prevent the boat sinking if a pipe was to freeze and burst.
- Clear any build-up of snow: extra weight can lower the waterline, putting the boat at risk of sinking.
- Heaters are only as reliable as the power source provided. Power loss can happen in cold weather.

Clean bilges and check the pump float switch is working



Check safety equipment



Look for moisture in fuel tanks



Faulty gas systems can lead to boat fires

discharge flange from the pump, loosening the hose clips and disconnecting the hose end from both seacock hose tails. Pump the handle to drain the toilet pump.

Holding tanks should have been pumped out prior to liftout. However, if you decide to clean an empty tank ashore, most have inspection panels that can be removed to provide access.

If your heads needs a service, kits are available containing all the perishable parts. Note that cleaning hoses is a false economy as they harden over time and won't compress with jubilee clips. It's best to use new ones.

To prevent water from coming back out of the bowl, check the swan neck/anti-syphon loop is at least 20cm above the dynamic (heeled over) waterline. Check also that the heads seacocks work. If the toilet pump squeaks, squirt in some vegetable oil to lubricate the diaphragm.

Find out more about heads at pbo.co.uk/heads.

Diesel engine

Hopefully, you've already winterised your engine – a job which involves flushing the raw-water cooling system with fresh water and filling it with antifreeze.

Over winter, why not refresh your knowledge with the troubleshooting and fault-finding sections of your manual?

Regular fuel system checks are necessary throughout the year, and while you've probably already changed your filters, check you've ordered spares of these and anything else that's been replaced such as the impeller, engine oil and alternator belt. Parts4Engines supplies aftermarket parts for Perkins, Volvo Penta and Yanmar engines.

We asked PBO's Stu Davies to service our Project Boat engine. Read the article and watch the videos at pbo.co.uk/engine-service.

Fuel

Traditionally, boaters were advised to top up diesel tanks over winter, but due to the short shelf-life of modern biodiesel it's best to keep fuel tanks as low as possible, protected with a fuel additive, and top them up with fresh diesel (and more additive) in the spring. Check the tank for condensation – which is how diesel bug thrives – and that the fuel filler cap isn't leaking. If you find water or crud, remove it via the drain plug if you have one. PBO's Tony Davies designed his own system for removing water, but this depended on having an inspection hatch and him drawing a fine sieve across the bottom of the tank. In his subsequent boat, he fitted a Diesel Dipper tank cleaning system from Marine16. Read his review at pbo.co.uk/dieseldipper.

If you do find diesel bug, you need to apply a treatment and remove the water from the fuel. Consider getting the tank steam cleaned.

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Outboard engine

Don't forget to service your outboard engine too. Typically, winterisation of a petrol engine includes desalting and lubrication. Flush the motor with fresh water, ensuring there are no blockages, add a fuel treatment to stabilise the fuel, spray fogging oil through the carburettors, change the engine oil and spark plugs (spray the latter in fogging oil before replacement), spray the power head with WD-40 or a similar water repellent, clean and regrease control linkages and grease points and change the gearbox oil as recommended by the manufacturer.

Electric outboards require much less maintenance. Check the anode, pin and propeller blade for wear and damage. You may need to replace them after 200 hours. Greasing may also be required, but as with petrol outboards, always check the manual for details.

Make sure outboard engines are stored in a dry, well-ventilated area (upright, if a petrol engine).

Kit

If you don't have an inventory on board, why not make one over the winter months so you don't end up buying double of spares you didn't realise you had, or storing out-of-date safety equipment?

An inventory is also useful should you ever come to sell the boat. Go through each locker and check the condition and expiry date of your boating gear. Make a note of what needs replacing. It may help to buy some boxes to keep small items together. Once you've done that, sketch a diagram of the boat, labelling which lockers contain what so you don't have to waste valuable time searching in the future. If you're really organised you could even list the location of items in an A-Z index file.

Dinghy

Inflate your dinghy and check it for chafe, wear and any holes. Keep the inflation valves clean and check the O-rings.

Gas locker and fittings

All too often, marine surveyor Ben Sutcliffe-Davies comes across boats with a faulty gas locker and non-approved fittings which could lead to an explosion.

All fittings, hoses, regulators and valves should be marine-grade, LPG-approved, in good condition and in-date. The normal service life of a gas hose would be around five years after installation (the date should be on the hose), but that's not to say it won't need replacing sooner if you find nicks or degradation.

Gas lockers need to be airtight with a drain overboard. If you're not sure if yours is, throw a bucket of water into the locker and check it doesn't leak into the boat. Check the regulator for corrosion, that the cylinders are secure and that the burners on the cooker are clean and not corroded.

Check your gas and carbon monoxide alarms are working.

STORM PROTECTION

"There's no one cause of a specific weather event, but it's widely accepted that ever-warming oceans provide increased energy to power damaging storms," warns the sales and marketing manager of Haven Knox-Johnston, Paul Knox-Johnston. "As such we are probably going to have to get used to more storms and in turn make sure our boats are as safe and sound in their berths as possible."

Paul spoke with Yachtmaster Instructor Colin Stracey, principal at Premier Sailing on the East Coast, about protecting your boat from storms. Here are some of Colin's tips:

Sails

Make sure sails are stowed correctly and not able to come loose. If you have a furling genoa don't rely on a clutch or the furling line being turned round a self-tailing winch; always cleat it off. Colin cites an occasion in 2015 when the genoa on a nearby boat rolled out in a storm, the backstay gave way and the mast fell down.

"The other thing to remember with a genoa is that if it's not rolled up tightly it can billow out halfway up the forestay putting huge pressure on the rigging and ripping itself to pieces. Tie the sheets so the sail can't billow. It's also good practice to tie a sail tie or rope around the sail (through the clew)."

Mooring lines and fenders

Colin often finds people will put extra ropes onto their boats but to the same few cleats. Most cleats only have an M10 bolt and it's not unheard of for cleats in marina berths to move. Think of the extra stress caused by the forces of the storm.

If possible, spread the load by



Insurance companies may not insure against ripped sails

Are your mooring lines up to the job in a storm?



attaching ropes to other cleats. There's no harm putting ropes to the windward pontoon cleats to keep the boat clear of other vessels and pontoons.

Make sure fenders are well positioned and long enough to not ride up or down as the vessel heels. Colin cites a vessel in his marina that heeled so much during storm Arwen that the fenders went below the pontoon, leaving the hull and pontoon to grind into each other. Don't forget to put fenders on both sides to protect your boat from other vessels.

Cockpit drains

Make sure cockpit drains are clear prior to bad weather. Colin has seen a centre cockpit yacht with a cockpit enclosure nearly sink after heavy snow fell from the spreaders and demolished the cockpit tent. Melted snow, ice and the subsequent rain then filled the cockpit and found its way into the boat because the owners had closed the cockpit drains.

Swinging moorings and trots

On a swinging mooring or trot, Colin suggests attaching extra lines to the buoys, rigged like a bridle to spread the load around the cleats.

He also shares a tip from an RNLI crewman who suggested taking lines to a winch rather than a cleat as this can handle a higher shock load.

In areas where there is a lot of swell, it may be useful to wrap or protect the lines with plastic hose where they come over the gunwale and through the fairlead, so they can't chafe.

On a swinging mooring, the tiller should be lashed to one side. Don't rely on a clove hitch though – they can come undone when bounced around. A round turn and two half hitches is better as this is secure but can still be undone under load. In fact, fenders are best secured with a round turn and two half hitches for the same reason.

Spend time walking around your boat, thinking about the vulnerable areas and double checking everything is secure. This can make the difference between needing to make a claim or not after a storm.

■ Thanks to Paul Knox-Johnston of Haven Knox-Johnston Insurance for compiling this advice. havenkj.com