

Getting ready for the sailing season can mean going back to a boat that has laid dormant for the winter, or doing your annual spring cleaning even if you sail all year long. There are lots of lists available, and while we are going to mention many of the important things we look for, this is not meant to be a spring survey. There are some items which we feel deserve special consideration, so we will spend extra time going a little deeper into them. You will want to consult the manufacturer's manual for your boat and its equipment about maintenance requirements. This will give you more information, not only about the appropriate frequency, but also the process to use in getting your boat ready for the spring. We will mention specific test equipment, but only to let you know it exists - not to indicate that you cannot prepare your boat without it. There is nothing as helpful as a bright flashlight and a multimeter is pretty indispensable. In this article, an asterisk (*) means that we've written a full article on the subject for *48° North*. Figure 1 is a guide to those archives.

Below deck, we start with the stuffing box or shaft seal*. Look for dripping where there should be none. Later, with the engine running, measure the temperature of the metal part that houses the seal. All hose clamps should be inspected. If they are the perforated type, this will require dismounting and remounting them (Figure 2, page 48). All the hoses on the boat should be treated this way, and make sure that any below the waterline are double clamped. Open and close seacocks* and valves, and lube them. There are a range of lubricants; we often use Forespar® products.

Your vessel is full of sensors. Some sound alarms; others activate - most commonly the bilge pump. Activate or test them. The following list could apply to your boat: in the bilge are the bilge pump switch*, high water alarm, and, propane*. Then, check the smoke, CO₂, and low voltage alarms. Inspect the bilge for oil before you do anything to cause an overboard discharge of petroleum - that could be a \$5000 fine*.

Your bonding system* is on the list for annual inspection so this a good time to take care of this.

Batteries* are an important focus

Do a Springtime Preseason Checklist

By Jack and Alex Wilken

How-To

and, of course, if they are flooded batteries, top off with distilled water. Test your batteries for individual voltages whether they are connected in series or parallel as differentials in voltage can cause charging and other problems. Afterwards you could put a clamp meter (Figure 3, page 48) on the system ground just before any battery bank to check for any mystery current drain when everything is off. Make sure you clean off any corrosion on the terminals. Then grease (with dialectic grease), and tighten the connections using hexnuts and lock washers- not wingnuts. GFCIs* are supposed to be checked monthly via the test button, but this does not tell the whole story. We recommend they be checked with a current tester at least once a year.

Test your navigation and deck lights*, inspect antennas, and clean and grease connections. Antenna/radio testers are available. Shorepower cord* and outlet/inlet require constant vigilance and safety here is paramount.

Once your electrical system is secure, turn on the refrigeration and see how cool it is.

Special notes for propane systems*: test by turning on the gas with the appliances turned off. Then, turn off the manual tank valve and note the reading on the pressure gauge. Let it set for 15 minutes; then recheck gauge. It should read close to the same, or start looking for a leak.

The plumbing list depends on whether you winterized your pressure water system or not. If you used anti-freeze, you will want to flush thoroughly. In any

case, fill the boat's empty water tanks with fresh water. You can add chlorine or a commercial tank sanitizer to the water in your tanks and then empty by opening all your valves, faucets, and showers. Now, change the water filter cartridge*, if there is one. Be sure to use one that removes chlorine. Close all the valves and leave the pressure pump on; it should not cycle. If it cycles, something is leaking either externally (look for water exiting the connections) or internally in the pump itself.

The water heater is a prime suspect in stray current problems, so visually inspect it. Test that there is no electrical short (Figure 4, page 48). This is a good moment to clean the shower sump pump screens, and don't forget the level switch inside the shower sump. Pump the head with the Y valve in the holding tank position; make sure it is secured in this position by some visible means like a tie wrap. Lube the head as the manufacturer recommends.

Machinery can vary greatly from one boat to another so this is certainly not a definitive list. Outboard motors like new spark plugs. Look over the

2011	2014
Jan- Bilge pump part 1	Feb- Stern Anchor
Feb- Bilge pump part 2	Mar- Anodes
Mar- Hose Clamps	Apr- Bond system
May- Propane System	May- Water purification
July- Inspecting Rigging	Aug- Raw water impellers
2012	Sept- Dock lines
Mar-Oil Spill	Oct- Shaft Seals part 1
Apr- Pressure Water System	Nov- Shaft Seals part 2
Jul- MOB Pole	2015
2013	Mar- MOB gear
Apr- Winch Maintenance	May- Battery
May- Running Rigging	Jun- Seacocks and thru hulls
Jun- Mast Tuning	Dec- Shore Power Safely
Dec- Navigation Lights	

Figure 1: This is a list of in-depth articles in the archives of *48° North* that will give you more information about the items marked with an asterisk (*).

wires, check for fuel leaks and test the priming bulb for solid pumping action. Lube all moving parts and, if something like the lift hinge will not move, use heat from an electric heat gun to expand the aluminum and get the grease moving (Figure 5). Take a look at the oil in the lower end, and, if it is milky, you are up for a new seal.

On all engines, inspect for parts that may be showing signs of leaking, corrosion or salt collection on joints. Impellers in raw water pumps* should be changed at least every other year. On inboard engines, check the air intake filter, pencil zincs, engine belt tension, oil level, transmission oil, and, with the engine cold, the coolant



Figure 2: Automotive hose clamps like "A" are perforated through the band where the gear (screw) tightens the clamp. This causes the hose to be cut and forced into these openings thereby degrading the hose. These clamps are not 316 SS and are often welded. For this reason, they should be dismantled for inspection periodically.

level at the header tank. Change the oil if you did not do so at the end of the season and fill the overflow tank to the mark. Ensure that you have an extra oil change worth of oil, filter, coolant, and spare engine belts. Cooling hoses should not be cracking, bulging, have soft spots, or be stiff, and again, inspect hose clamps* as above.

Do not forget to inspect and lube the windlass. Check the hydraulic steering for operation. If the level is down, be sure to look for leaks. Insects look for a home during winter, so clean fuel tank vents. Fuel additives and fuel storage over the winter is a subject of its own beyond the scope of this article, but pay attention to your water/fuel separator, and, if you do not have one, consider installing one.

On a sunny day look at the rigging

both for condition* and adjustment*. Wipe the standing rigging with a paper towel to clean it and check for snags or "fishhooks." Look for cracks in swages, barber pole discoloration, broken wires or uneven lay on the wires. Look up the mast for straightness, straight on for the angle on the spreaders, and feel the tension of the stays. Unwrap the turnbuckles and make certain that the threads move freely. If they do not, use the heat gun on the barrel to expand it. Put Teflon grease on them. Before you tape them up, have the cotter pins or ring in place. Give all the sheaves and pulleys a turn to insure free movement. Do not forget the masthead; going aloft is not a must if halyards pull freely under tension. Put one end in each hand and pull back and forth; the movement should feel smooth.

Turn your attention to the running rigging* as it may need replacing, washing, or the ends may require melting and whipping. It's a good idea to service the winches. For the deck, last but not least is inspecting the ground tackle and dock lines*, making sure you have a full complement.

Sails are kind of their own category. Put them up and look for light where



Fig. 3: This clamp on multimeter "A" is attached to the ground cable "B" of this battery bank "C". With all the devices turned off it indicates an unexplained current drain which should now be investigated.

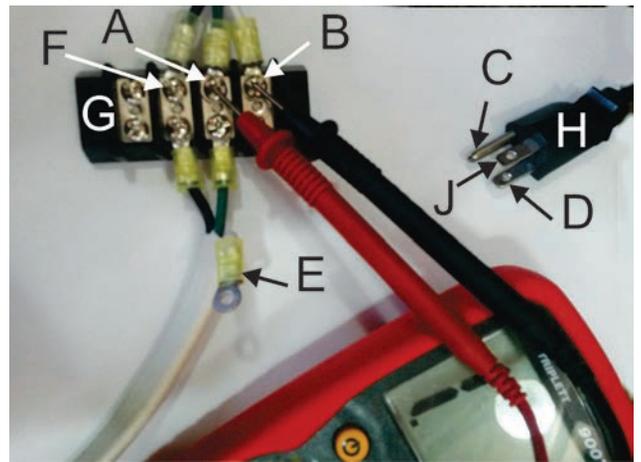


Fig. 4: The water heater is a prime suspect in stray current problems; you can test for a short circuit by putting your multimeter on the continuity setting. Remove the source white "E" and black (not shown as removed) wire on "G", the water heater terminal bar, to isolate the heater from the electrical power. Place the probe tips of your multimeter on the white neutral "B" wire terminal and the green ground "A". Then, do the same thing again, only test from "A" to "F". If your heater is plugged in rather than wired to a terminal bar, remove the plug "H" from the receptacle and test between ground "C" and neutral "D", and "C" with hot "J". This should be done with the heater cold.

there should not be any and evidence of chafing. Take a careful look at clews/tacks/heads and where the sails rub on something solid, like spreaders or radar. Also, look at battens, batten pockets, and seams. Don't forget the sails stored down below, like spinnakers.

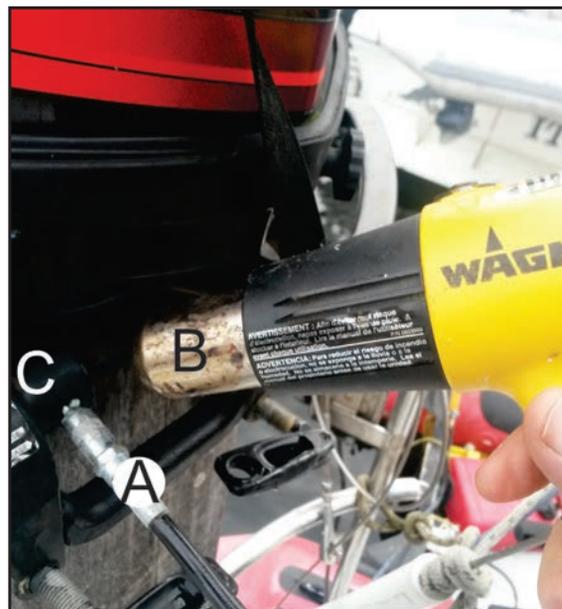
Double check your safety gear: PFDs for all aboard including pets, one throwable Type IV device, EPIRB & Personal Locator Beacon, MOB gear*. Check first aid supplies and signaling devices, including flares, for expiration and replace or buy electronic flares.

Fire extinguishers are on your boat to protect you from a disaster and to satisfy the USCG minimum requirement. The USCG only requires type B (flammable liquid) & C (electrical), and not type A (combustibles, wood or fiberglass etc.). To add to the confusion, the maintenance for a rechargeable and a non-rechargeable extinguisher is different; they both must be inspected monthly for serviceability and logged. The maintenance for a rechargeable is done by a qualified servicing agency at least once a year, and the non-rechargeable one can be done by a vessel's owner or someone they

appoint as long as they keep a written record. The former may include disassembly, while the later only includes visual inspection to insure it is not more than 12 years from the date of manufacture, the pressure indicator is within the operable range, and there is no physical damage to the extinguisher or bracket, no broken seals, signs of corrosion, leakage or clogged discharge nozzle. Remember, an extinguisher and the bracket must be USCG approved; the bracket that comes with an extinguisher is normally not USCG approved. Another thing to consider is the cleanup if you put out a fire. Both dry agents leave a residue. The ABC agent is corrosive, difficult to cleanup, and harmful to electronics. The BC agent is messy. CO₂, BC rated, on the other hand leaves no residue, is more expensive to buy, and must go in for maintenance every year. Halotron (also rated BC) is even more costly, but, again, is clean, with extended range. Having lost a boat to fire, we put cost to the bottom of the priorities.

Finally, replenish spare parts, pump up your inflatable, update charts

Figure 5: "A" is the grease gun nozzle on the grease fitting. When full pressure was applied, no grease flowed into the hinge "C" on this outboard motor until the heat gun "B" was aimed at the hinge. This expands the aluminum housing of the hinge and liquefies the grease between these two things and the grease starts to flow. This can work with parts that are frozen up very badly.



and check anodes. Free vessel safety inspections are available at <http://wow.uscgauz.info/content.php?unit=V-DEPT&category=i-want-a-vc>.

Here are some words about radio checks: The first choice is call a friend. There are automated radio checks on Ch. 28 in the area of Friday Harbor & Port Ludlow, and Ch. 25 for Lake Washington. Do not call the USCG on Ch. 16! Here in the Pacific Northwest they will respond on 22A.

As we have said, adjust all the above to fit your vessel and make this

process part of your saying 'hello' to your boat for the spring.

Jack and Alex Wilken are experienced boat builders and have cruised extensively. They each hold a 100-ton USCG Captain's License and are the owners of Seattle Boat Works LLC in Seattle.

Get your boat ready for the season!

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