

Boat Clinic

Winter Layup

This time of year, those of us in northern climates start to think about putting the boat away for the winter. That it's a major concern is shown by the number of questions we get. That it's a major problem is shown by the amount of misinformation and controversy surrounding some winter layup practices. Here are some of the most common questions and problems concerning winter boat layup in cold climates.

Should I use a canvas cover, or a plastic one?

Canvas covers are heavy, which can be an advantage on a boat covered up and stored in the water, where it might be difficult to properly tie the cover around the hull. They last longer than plastic covers. The one we had on our last boat was 10 years old when we sold the boat, and it still had a few years of life left in it. They won't last very long if you let them hang in the water all winter, however.

Plastic covers are cheaper and lighter, so they can be removed and installed by one person. They are also subject to deterioration by sunlight, although the UV stabilized covers with built-in fabric scrim are sturdy enough to give several years of service. Don't even think of using clear polyethylene sheeting to cover your boat. Unless it contains a UV inhibitor, it will be in shreds after a month or two.

Whether you use a plastic cover or a canvas one, the support frame should be padded with carpet at all potential chafe points. Any cover will chafe through on a rough edge in a matter of hours during a storm.

The grommets in the edge of a cover can do a lot of damage to your topsides. Some synthetic covers use patent securing devices made of plastic rather than metal grommets. These may pose less of a threat to your boat. You can minimize the risk of damage by using a cover that is wide enough to reach below the

waterline on your boat on both sides. Any scratches in the gelcoat of the bottom will be far easier to repair than the same scratches in your topsides.

Is it okay to leave the boat uncovered?

No, no, a thousand times no. Neither fiberglass nor wood is immune to the effects of cold weather. On a fiberglass deck, minute cracks in the gelcoat may allow water to penetrate into the laminate or core. If the water freezes in the cracks, it can cause delamination, or even cause the core material to rot.

If you have unvarnished exterior teak trim, freezing rain, snow and ice will take their toll on your wood, weathering it severely. In the spring, you'll have to use powerful teak cleaners to get the wood looking good. These cleaners are hard on the wood, greatly speeding up the rate at which it wears away. If you have varnished exterior wood, water freezing on the surface can cause the varnish to lift, and you're back to square one. The varnish will also wear badly if exposed for several months to severe winter weather.

If you cover the boat, ports can be left open for ventilation over the winter-as long as they're equipped

with strong screens to keep little critters like mice and squirrels out. They love to nest in boats, and they can do hundreds of dollars in damage to cushions or woodwork in short order.

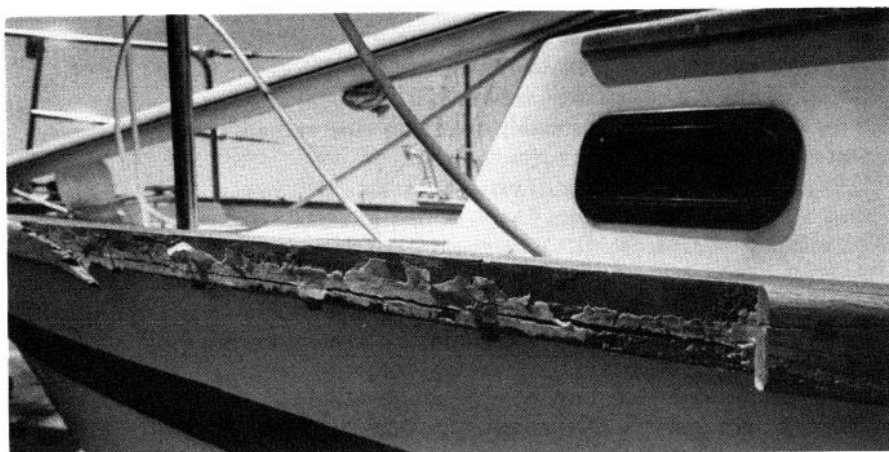
Can my mast stay in, or should it come out?

Take it out. For starters, it's hard to properly cover a boat with the mast in place. In addition, the windage of the spars may be enough to cause the boat to fall over in a winter gale. We've seen it happen.

It's also a lot easier to inspect and repair the rig in the spring if it's down on the ground where you can get to it.

The only disadvantage to taking the mast out is the risk of damage to mast or rigging in unstepping and resteping. You can minimize the risk by removing antennas, wind instrumentation, and the Windex before the mast is unstepped. We once watched our expensive masthead wind speed indicator spin off into oblivion after the masthead came in contact with the crane boom. It can happen, even in the most careful boatyard, and if it does, it's your fault for leaving it in place, not theirs for damaging it.

If the mast comes out, make sure the rigging is properly tied off to the mast before it's put away. Make sure that the mast isn't lying on its rigging in the mast rack, and make sure that the mast is evenly supported, without sagging either at the ends or in the middle. There should also be carpet pads on the arms of the rack supporting the mast, unless the rack is made of wood. Even so, padding is a good idea, particularly on a painted aluminum spar, and is absolutely essential on a wooden spar.



This Southern Cross, stored with its mast up, suffered severe damage to the hull-to-deck joint when it blew over in a storm

How should the boat be trimmed in the yard?

The important thing is that the decks and cockpit drain completely. Once the boat is blocked up, run a hose on deck to see if all water drains off through the deck or toerail scuppers. Check the cockpit in the same way. If the cockpit drains are equipped with shutoff valves-as they should be if they're at or below the waterline-make sure that the valves are open. On a small powerboat without a self-bailing cockpit, be sure the transom plug is pulled. If there's no transom plug, install one.

You may also need to check the drains and scuppers several times over the winter to make sure that they're not clogged by leaves or other debris.

What about the drinking water system?

There are antifreeze solutions for fresh water systems, but they require flushing out in the spring, a chore that we've never cared for. The antifreeze tastes lousy if you don't get it all out of the system, even though it is non-toxic. We prefer draining the system.

The only tricky part is making sure that all the water is out. You may need to install couplings or a drain valve in the low point in the plumbing system. You must also make sure that there is no water left in either the manual water pump or the pressure water pump, if there is one.

If you open joints in the plumbing to drain it, leave them open over the winter to take care of condensation. But put a big red tag on each open joint, so you'll remember to hook it back up in the spring. Be sure to put a note on your spring recommissioning list to hook the plumbing back up, too. By the way, never leave joints in the engine's fuel system open over the winter. A bilge full of fresh water, because you forgot to reattach a hose before refilling a tank, is only an inconvenience; a bilge full of gasoline or diesel fuel in the same situation could ruin your whole spring commissioning.

I've been thinking about leaving my fiberglass boat in the water over the winter . . .

Don't, unless you really plan to use it during the winter months. While there are many factors contributing to the possibility of the hull gelcoat blistering, one potential cause is the total amount of time the hull spends



A good cover will protect gelcoat, paint, and varnish from the ravages of winter

immersed.

In addition, a boat left in the water over the winter is going to have to be tended by someone, either you or the boatyard. Lines have to be checked for chafe, the bilges have to be checked for water, you'll have to make sure the fenders stay in place.

While the water definitely offers better support of the hull, a properly supported fiberglass hull ashore should run little risk of distortion.

Wooden boats are another story. Plank-on-frame boats should be stored wet whenever possible. The yearly cycle of saturation of the wood when the boat is in the water, drying of the wood when the boat is hauled, can cause long-term distortion of the individual timbers and planks. In addition, a dried-out wooden boat loses some of its structural stiffness, since the tight fit of timber to timber is one source of that stiffness. As the boat dries out, the fits become looser, the boat less rigid. Improper cradling can then lead to permanent distortion of the hull.

You can treat a cold-molded wooden hull like a fiberglass boat: storing it dry is better.

Can I tie my winter cover to the boat's cradle?

Only if you have a very strong cradle which fits the boat perfectly. The strains of the cover in the wind can be enough to tear a weak cradle apart. We would still tie the cover around the hull both forward and aft of the cradle for the sake of safety.

Don't ever tie the winter cover to screw jack boat supports. They're too easily pulled out of position by a flapping cover in a strong wind.

Should the diesel fuel tank be full or empty?

Full, in most cases. Black iron tanks depend on the oiliness of diesel fuel to exclude moisture and keep the inside of the tank from rusting. In aluminum, monel, or stainless steel tanks, contamination of fuel due to condensation will be minimized if the tank is full.

Possible exceptions to the full tanks rule are fiberglass or rubber bladder tanks. Fiberglass is not perfectly impermeable to diesel fuel. Over the years, the laminate of the tank may gradually be permeated with fuel. If the tank is left empty, however, condensation will develop, and the tank should be drained and dried in the spring before filling with fresh fuel. Bladder tanks don't last forever, and we suspect that storing them full over the winter will shorten their lives.

Gasoline tanks present another set of problems. Because gasoline is so explosive, some boatyards don't want you to store a boat with full gas tanks. If they're empty, however, you have the same condensation problems as you do with diesel fuel tanks. If you have to pump them out, there's a real fire risk while transferring the fuel. Even empty tanks are not safe, as the residual fumes can easily form an explosive fuel/air mixture. We vote for full gasoline tanks, but we also vote for telling the yard they're full in case there's a fire over the winter.

Conclusions

Owning a boat is a year-round proposition. If you want the pleasure of a boat in the summer, you may have to pay for the privilege by going through a fair amount of hassle in the winter. It's worth it.