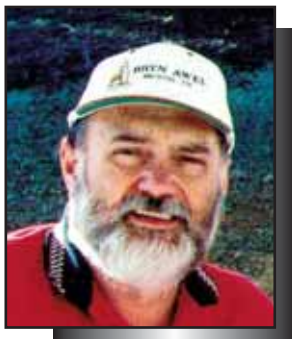

Preparing For Winter

Paul Esterle has been building or repairing watercraft, of all descriptions, for longer than he cares to admit, from hovercraft to power and sailboats. Paul specializes in boat improvement and repair projects utilizing wood, epoxy, and fiberglass. If you have any questions about your boat project, contact Paul at pesterle@comcast.net.

by Paul W. Esterle

Once Labor Day has passed, while there is yet some great boating weather to be had, many of us need to start thinking about winterizing. Most people think only of the engine and water systems when you mention winterizing, but there are really six main areas of concern, not all of which apply to all boats and all storage scenarios:

Cleaning the boat
Winterizing the engine and outdrive
Winterizing the fresh and waste water systems
Preparing the cabin
Inspecting the trailer
Installing the winter cover

Cleaning the Boat

Let's face it, the more you do now, the less you have to do in the spring. This means you should spend the time now and thoroughly clean the boat. That way, the summer's accumulation of dirt and debris won't be fossilizing itself onto your boat during the winter.

Take the time to scrub the nonskid and get out all the dirt. Wash and wax the hull. Get a good bottom cleaner and clean the growth off the bottom now. You will thank yourself in the spring when it comes time to apply another coat of bottom paint.

Don't forget the canvas. Clean off any mold or mildew and clean and polish the clear vinyl. Remove the canvas and take it home, if possible.

Winterizing Engines and Outdrives

This is the area most people think about when you mention winterizing. It can be done quickly if you have all the needed supplies ready.

Oil for engine and outdrive or lower unit
Oil filters
Fuel filters
Fogging oil
Antifreeze
Winterizing kit for antifreeze
Spark plug wrench
Fuel stabilizer

Start the process by warming up the engine or engines. This does two things; it warms up the oil and opens up the thermostat. Once the oil has warmed up, change both the oil and the oil filter. This will leave nice fresh oil sitting in your engine, without the summer's buildup of acid, water, and gunk. It also will be one less thing to do in the spring. If you don't change the oil, at least add some crankcase conditioner to the oil.

While you are at it, change the fuel/water filter and either top up the fuel tank or drain it. Add fuel stabilizer to the tank.

The next task is to run antifreeze through the system. Buy three to five gallons of non-toxic marine antifreeze. Don't use automotive type antifreeze; it is toxic. It also tastes sweet to animals, which will die if they lick up any spills. Marine antifreeze comes in three different temperature ratings: -50°F, -60°F and –100°F. These are the temperatures at which the antifreeze will turn to slush. The -50°F is fine for water systems. Use a –60°F or –100°F for the engine, though. Any residual water in the cooling loop will dilute the antifreeze and impact its ability to protect the engine. The –60°F and –100°F varieties also have more corrosion inhibitors for use in engines.

Most marine stores carry a winterizing kit that includes a plastic container for the antifreeze and a plastic hose to connect to the flushing muff on the outdrive. Some I/Os and inboards will have separate cooling water intakes in the bottom of the boat. In these cases, remove the intake hose from the seacock and place it in a bucket of antifreeze.

With the engine warmed up, begin running the antifreeze through the engine and/or outdrive. As you reach the end of the antifreeze in the container, start spraying fogging oil in the carburetor. Smaller engines and outboards probably will die, while larger engines will just bog down. Shut off the engine, if it didn't shut off itself, as the last of the antifreeze runs through. The fogging oil will give the cylinder walls a healthy coating of oil and corrosion blockers for the winter.

Don't attempt to fog a diesel or a fuel-injected gasoline engine in this manner. In the case of a fuel-injected gas engine, you need to mix a fogging solution and then run it through the fuel system. This typically is an amount of two cycle oil added to the fuel/water separator and allowed to run through the injection system and engine. Your engine manual will spell out the specifics. Do not do this to a diesel!

Drain and change the lower unit or outdrive oil. Check the oil for water (it will look like coffee) and metal chips. Water in the oil indicates a leaking seal and chips indicate mechanical problems. Four-stroke engines, both outboard and sterndrive, need the crankcase oil changed, as well.

Clean the carburetor flame arrestor with carburetor cleaner and lubricate any grease points spelled out in the owner's manual. Check for loose or missing fasteners on the engine and outdrive. Replace the zincs if they are more than 50% gone.

If you haven't checked or changed the water pump impeller recently, do it now.

This is also a good time to check the prop for damage, and it wouldn't hurt to pull the prop and grease the splines while you're at it. If the prop is damaged, the winter season is the ideal time to have it refinished. No sense in waiting until the busy spring season to get it done.

Store outboard engines upright, on a rack or on the boat.

Winterizing Water Systems

Simple water systems require little maintenance. If you have a portable tank, take it out when you winterize, clean it with a bleach solution and put it away for the winter. If your sink is plumbed to a thru-hull and you are storing the boat on land, make sure the seacock is open and the drain line is empty so that freezing does not rupture the hose or crack the seacock. If you store your boat in the water, add water system antifreeze to the drain line and cycle the seacock to allow some antifreeze to drain through to ensure that the line is completely filled with antifreeze.

The antifreeze must be propylene glycol based and intended for use with water systems. Standard ethylene glycol-based automotive antifreeze is poisonous and should never be used in any water system. Marine/RV antifreeze should not be diluted: use it straight from the jug.

More complex water systems obviously require more work. The usual practice is to drain the water tank and then add several gallons of antifreeze so that it replaces all the water that remains in the system. The amount of antifreeze required is determined by the size of your tanks and the complexity of your water system.

Pump out as much of the water from the fresh water tank as you can and then add several gallons of antifreeze to the tank. Turn the pump on to pressurize the system or pump the antifreeze through your water system until it comes out of every outlet, starting with the one farthest from the tank and working your way back.

Remember to flush the water heater, if you have one, with antifreeze. Make a note and fasten it to the switch that controls power to the water heater to remind yourself to flush the water heater with fresh water before you turn it on in the spring or you will have terribly tasting water from cooked antifreeze.

Have the holding tank pumped. Leaving that stuff sitting in the boat all winter isn't good, even if there is antifreeze in it. After it's pumped, add antifreeze to the head and pump it through to the holding tank. Don't skimp on antifreeze; make sure it gets through all the head hoses to the holding tank.

Don't forget to put antifreeze in the AC cooling loop, hot water heater, shower sumps and any sea strainers you have. If there is usually a little water in the bilge, add a little antifreeze there, too.

Preparing the Cabin

Go through the cabin and remove anything you can to a cool, dry place in your house. Any food or drinks should be removed. Cushions, curtains, life preservers, towels and spare clothing all should be taken home. If possible, remove the electronics and take them home, too. Wipe down the refrigerator or icebox with mildew cleaner or bleach solution and leave the door propped open.

Open all doors, drawers and compartments to minimize closed-in spaces. Place dehumidifier tubs throughout the boat to absorb excess humidity. Don't forget to check them once or twice during the winter, if possible.

Remove the batteries and bring them home. They should be fully charged and stored in a cool dry place, not on a concrete floor in the garage. Don't forget to check the electrolyte levels and add distilled water if necessary. A trickle charge now and then won't hurt, but leaving the battery charger hooked up all winter can cook the batteries.

Preparing the Boat for Shrink Wrapping

Many of us complete our winter preparations with shrink-wrapping. While few of us do the job ourselves, we can save some money by making sure the boat is properly prepared for shrink wrapping and end up with less cleanup work in the spring.

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by Paul W. Esterle

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Fold down any antennas and secure them. Some shrink-wrappers ask that any canvas be taken down before their arrival. At least one company I talked to, Mr. Shrinkwrap, will do it for you, but at a cost.

In some cases, a frame may be necessary to support part or all of the shrink-wrap, to keep it from sagging and allowing puddles of snow melt to collect, freeze, and provide a base for additional snow to collect in such quantities that it could split the film. It may also serve to break up unsupported spans of film into smaller sections and so prevent it from flapping itself to pieces. In some cases, netting or tape straps can be substituted for a rigid frame. Apply padding to any posts or projections that might puncture the film. Most installers will handle all this for you, but again, you may be able to save yourself some money by doing it yourself.

Removing the cover in the spring is simple. Cut it away, being careful not to scratch the gelcoat. Remove any tape, strapping or temporary frames. Don't just dump the film in a dumpster. Most marinas have special bins for the material to make sure it is recycled properly.

Winter Covers and Tarps

There are several good reasons to use a cover or tarp and frame instead of shrink-wrapping. If you plan to keep the boat indoors, for example, an inexpensive cover will suffice to keep the boat clean. If you will keep the boat for several years, the cost of a custom cover and frame can be amortized and cost less than annual shrink-wrapping. A properly designed frame can provide sufficient headroom and access to various parts of the deck to make winter repairs feasible. Finally, you may have an oddly configured boat that may make shrink-wrapping difficult and a precisely fitted cover more practical.

For every boat with a neatly fitted cover, I see a dozen using the old standby, a poly tarp. These tarps come in a wide range of sizes, colors, weights and prices. You used to be able to tell the quality of the tarp by the color, with blue being the lowest quality and silver or green being the best, but this has changed and the color no longer signifies the quality. Probably the best gauge of quality now is the weight; the heavier the tarp, the better the material. Even the highest quality tarps are less expensive than any type of sewn cover.

The tarp must be longer than the boat to provide enough material to wrap around the bow and stern and tuck into place. Tarps have regularly spaced grommets for tying down, but if you need to tie off at locations where there are no grommets, you can add grommets or use special tarp tie-down fittings, both of which will probably be available where you bought the tarp.

Tarps are much harder to tie down and are more subject to flapping in the wind than other types of covers. Spend the extra time and the extra line to get your tarp tied down securely, and don't expect the tie-downs to remain tight all winter. Check them regularly; if you don't, you risk the cover's shredding prematurely or the loose lines scuffing your gelcoat.

Never tie the tarp or cover to boat stands! The constant motion of the tarp and lines from the wind can work the stands loose, allowing the boat to topple, ruining your whole boating experience, not to mention your neighbor's. Be sure that opposite boat stands are chained together beneath the hull to keep them from "walking" out from under the boat.

Almost every tarp cover requires at least a simple frame to prevent low spots that could collect water or snow. See the following three projects for different approaches.

Wooden Tarp Frames: Wood, PVC, Conduit

One of the most important factors in a successful winter frame is the elimination of sharp corners or rough spots on the frame or the boat. Any of these will ruin a cover or tarp in no time. Pad sharp corners with carpet scraps well fastened in place.

If you plan to reuse your frame next year, mark each piece clearly and make a sketch or diagram for the frame so you know where each piece goes. Depend on your memory and you'll be standing among a bunch of parts wondering where they go.

At one time, almost all frames were made of wood. Some of these frames were works of wood-working art, intricately shaped and assembled with precision. These frames were knocked down and stored each spring for use in the next fall haul-out. Other wood frames were cobbled together from furring strips and common lumber and were often discarded at the end of a season.

The boat owner now has several different choices for frame material and some unique frame parts available. White PVC tubing has been used for frames many times. Individual lengths of tubing are bent into arches and fastened to stanchions with hose clamps, duct tape or large wire ties.

Other lengths of tubing can be run fore and aft to act as rafters and ridgepoles. Fasten these on the inside of the frame to make pulling the cover over the boat much easier. The individual PVC arches may need to be supported in the middle if you are expecting a heavy snow load.

Another option for frame material is electrical conduit or EMT. This tubing is available at any home improvement store, in ten-foot lengths and at a dirt-cheap price. It can be cut to length with a simple tubing cutter. Bending is also simple with an electrician's conduit bender. Split foam pipe insulation works well as padding on conduit as long as it's firmly taped in place.

Do As I Say…

Don't just cover up your boat and wait for spring. Check it regularly for loose ropes, slipped frames, and holes in the cover. Fix the problem before the cover or tarp is ruined and is letting the elements in. There is nothing like trying to horse a heavy cover or large tarp in place during a snowstorm with a –10 chill factor.

Case in point: I didn't check one of my boats for a four week period. During that time we had several rainstorms and a snowstorm. I got a call from a friend whose boat was stored next to mine saying I had a problem. When I checked, I found that part of the PVC frame had broken and allowed the tarp to sag down into the cockpit. Water and ice were collecting in the depression but, luckily, it was a new tarp and it held, keeping the water out of the boat. I should follow my own advice…

Nautical Trivia by Ginny Hauff

1. Did you know that Charlie Noble is an "it," not a "he?" A British merchant service captain, Charles Noble, is said to be responsible for the origin, about 1850, of this nickname for the galley smokestack. It seems that Captain Noble, discovering that the stack of his ship's galley was made of copper, ordered that it be kept bright. The ship's crew then started referring to the stack as the "Charley Noble."

2. Did you that Dungarees is the modern Sailor's work clothes? The term is not modern, however, but dates to the 18th century and comes from the Hindi word dungri, for a type of Indian cotton cloth.

3. Did you know that a coxswain was at first the swain (boy servant) in charge of the small cock or cockboat that was kept aboard for the ship's captain and which was used to row him to and from the ship? The term has been in use in England dating back to at least 1463. With the passing of time the coxswain became the helmsman of any boat, regardless of size.

4. Did you know that One superstition has it that any mariner who sees the ghost ship called the Flying Dutchman will die within the day. The tale of the Flying Dutchman trying to round the Cape of Good Hope against strong winds and never succeeding, then trying to make Cape Horn and failing there too, has been the most famous of maritime ghost stories for more 300 years. The cursed spectral ship sailing back and forth on its endless voyage, its ancient white-hair crew crying for help while hauling at her sail, inspired Samuel Taylor Coleridge to write his classic "The Rime of the Ancient Mariner," to name but one famous literary work. The real Flying Dutchman is supposed to have set sail in 1660.

5. Did you know that Fathom is now a nautical unit of length equal to six feet; it was once defined by an act of Parliament as "the length of a man's arms around the object of his affections." The word derives from the Old English Faethm, which means "embracing arms."