



ace recreational  
marine insurance

## Coming Out Of Lay-up

Important recommendations  
from ACE for preparing your  
vessel for the boating season

# Coming Out of Lay-up

Protecting boaters and their vessels, whether they are 20 or 200 feet in length, requires experience, industry knowledge and a degree of creativity. ACE Recreational Marine Insurance® has all this and much more. After two centuries of insuring yachts and boats of all sizes and types – beginning in 1792 when our predecessor company issued the very first marine policy in the United States – ACE stands as the nation’s oldest marine insurance provider, offering our clients unparalleled products, service and stability.

As a leader in promoting maritime safety and as a special courtesy, ACE is pleased to provide you with this exclusive publication on preparing your vessel for the boating season. We hope you will find it both interesting and informative.

## Table of Contents

• <u>Before the Launch</u>	3
<u>Outside the Boat</u>	3
<u>Inside the Boat</u>	4
• <u>During the Launch</u>	5
• <u>Before the First Voyage</u>	6
• <u>Summary</u>	7

When Spring approaches, it's an exciting and busy time of year as you prepare your boat for the coming season. After having been in lay-up through the winter or a long length of time, a boat can have any number of problems brought on by the extended period of inactivity. That's why the Marine Advisory Services team of ACE Recreational Marine Insurance® has prepared this exclusive publication that covers many of the pre-launch and in-water items you should attend to before the season gets underway. Whether you're a sailor or a power boater, you should find this information useful in helping you prepare a potentially safer and more reliable vessel for boating season.

You know that your boat and its equipment will deteriorate over time, both from use during the cruising season and from winter storage. If you pay attention to the things that demand attention when the need arises, you can help minimize that deterioration. By identifying and fixing problems before they become serious, you can help maintain your boat's reliability and value.

As a boat owner, you're responsible for knowing the condition of your boat and its equipment. When the boat is coming out of lay-up, it's a perfect time to take a thorough look at everything that can affect its performance and reliability, as well as the safety of those aboard. This is an ideal time to complete a full inspection while in the process of your spring cleaning, and to take care of any problems you find before the season gets into full swing. The process needs to begin before the boat is launched. It will be quite a while before you see the boat out of the water again, so don't miss this opportunity.

This is also a good time to refresh your memory by rounding up and reviewing all the manuals, instruction sheets and other documents that came with the boat and all the on-board systems. These materials typically contain valuable information about proper operation and maintenance, and will also include contact information for the manufacturers and suppliers if you have questions about your equipment.

Time and space do not allow us to cover every detail that should be considered during pre-launch and launching. So, with that in mind, we're providing general categories and major points that should prove helpful in preparing the boat before, during and after launching.

## Outside the Boat

1. If you plan to apply antifouling paint, do a thorough inspection of the bottom beforehand. If you find any blisters, they can be repaired and faired before painting.
2. If you plan to do any bottom repairs or painting yourself, do not move jackstands; always let the yard employees move stands and blocking.
3. Check all through-hull fittings; scrape inside their openings and be sure the bronze is bright and smooth. If any through-hulls are covered by grates, it may be necessary to remove them to get a good look. Pitting or a pink appearance can indicate corrosion problems.
4. If the struts that support the prop shafts are painted, scrape off a bit of paint so you can inspect them. Be sure all seawater intakes are clear of obstructions.
5. Check all the through-hulls above the waterline. If there are any plastic ones, shine a flashlight into them and look closely for cracks. White plastic through-hulls are deteriorated by sunlight, and they are under tension from the nuts tightened against the inside of the hull; cracks are common, and they can be a cause of sinking. Any questionable through-hulls should be replaced with marine-grade bronze or fiber-reinforced plastic.
6. If there are sacrificial zinc anodes attached to the hull, they should be removed prior to painting. The hull under the zincs can be painted, but take care not to paint the studs to which the zincs attach. You should mask the studs before painting, and be sure they are bright and clean before replacing the zincs. It's important that the studs and the zinc anodes have a good electrical connection. Fresh zinc anodes should be installed if the old ones are half gone.

There may also be zinc anodes attached to underwater metal parts, like prop shafts, prop nuts, trim tabs, rudders, bow and stern thrusters and outdrives. Those zincs should be removed, and the surfaces to which they attach cleaned to bright, shiny metal, and the zincs replaced.
7. Other items to be inspected include underwater transducers for depth sounders, fish finders and knot meters. The faces of depth transducers should be clean and free of marine growth. Knot meter paddle wheels should turn easily and smoothly. Transducer faces can usually receive a thin coat of bottom paint; check with their manufacturers before painting them.

8. You should also make careful inspection of propellers, checking for damage and straightness. A screwdriver, held tightly against the hull or against a strut, can be used as a reference. Check prop tips, and the leading and trailing edges of each blade. If you find variances of more than about 1/16 inch, have the yard remove the prop for service. Put a light coat of waterproof grease on the shaft taper and key when installing the serviced prop (hint: the narrow nut goes on first). When the clean, straight props are back on the shafts, check them again. If you still find too much variance, a prop shaft may be bent.
9. Check shaft bearings for wear. Try to move the shaft up and down; a small amount of movement is okay, but too much slack can mean the rubber bearing is worn out. If you're unsure, ask your yard to check them for you. Also, check the rudders by trying to move the bottom of the rudder from side to side, and up and down. Too much slack can indicate a worn bearing, shaft or support collar.
10. Inspect swim step supports, trim tabs, thruster grates and boarding ladders. If the ladder is telescoping and mounted under the swim step, be sure it deploys properly. Operate the trim tabs to be sure they have the proper range of motion.
11. Outdrives often have rubber bellows between the drive and the transom. Those flexible rubber bellows can be damaged by sunlight, marine growth and chemicals, and they can wear out from normal raising and lowering of the outdrive. They don't last forever so inspect them carefully. It may be necessary to raise and lower the drive to see everything.

Pay close attention to the "valleys" in the bellows, where cracks often occur. If a bellows looks less than perfect, have it replaced! Failed bellows are a major cause of sinking of out-drive-powered boats.

Run your finger along the edge of the skeg at the very bottom of the drive. If you find any oil, a seal may need replacing. Changing the oil in the drive would be a good idea. If the oil that's drained out is cloudy or milky, it's another sign that a seal is failing. Have bad seals replaced right away, since water in the oil can ruin expensive internal parts.

12. If the exhaust ports in the hull were plugged to keep critters out, remember to remove the plugs. If the hull has a drain plug, be sure it's in place and tightened securely. Many a boat has sunk because that plug was overlooked!

## Inside the Boat

1. Every through-hull below the waterline must be equipped with a seacock. If it's a sailboat, some through-hulls above the waterline may submerge when heeled under sail; those need seacocks, too. Make sure all seacocks operate smoothly. Be sure their handles are in good condition. If any of the seacocks are gate valves (with round handles like water faucets; common in older boats) you should think about replacing them with proper marine-grade seacocks or ball valves that meet ABYC standards (gate valves do not). Some seacocks have grease fittings; lubricate them if necessary.
2. If the through-hulls are connected together with bonding wires, the connections must be clean and bright to work properly. Be sure to check the bonding connection to the sacrificial zinc, too.
3. Seawater intake strainers should be inspected on engines, generators, air conditioner pumps and any other equipment that requires them. If strainers weren't drained last fall, they could have been damaged by freezing. Disassemble them, clean if necessary, and be sure they go back together properly. Make certain drain plugs are secure, and that gaskets and washers are in good shape. Replace any damaged parts.  
On deep-draft boats, some seawater intake systems are fitted with vented loops that prevent siphons. The vents contain small springs and diaphragms that can fail due to corrosion or scale buildup. Inspecting a vented loop involves removing the small fitting at the top of the inverted U-shaped loop. If a vent is plugged or damaged, it could result in a drowned engine or, worse, a sinking.
4. Inspect the hose clamps and the hoses attached to all the seacocks and through-hulls. Also look at the clamps on the other ends of those hoses, where they attach to the equipment. If you see any sign of rust, replace the clamp with one that is all stainless (many clamps marked "stainless" have screws that will rust; if a clamp is attracted by a magnet, don't use it.) Buy replacements only from marine suppliers.
5. Don't forget to look at stuffing box hoses and exhaust hoses, and examine fill hoses from the decks to the tanks. Exhaust and fuel fill hoses are required to have two clamps at each end, and it's a good idea to have double clamps on every hose that attaches to a fitting below the waterline. When adding a second clamp, be sure there's enough room on the fitting, since a clamp can damage the hose if it only contacts part of the fitting inside the hose.

6. Suction hoses from seacocks to pumps should be heavy-wall or wire-reinforced; they should stay round when you try to pinch them. Replace any soft hoses in these locations, and any other hoses that show signs of bulging, cracking or damage.  
Also, pickup hoses on non-submersible bilge pumps should be oil-resistant, and should feel firm when pinched. While you're down there in the bilges, lift the float switches and make sure your bilge pumps and high water alarm operate properly.
7. Engines and generators may have sacrificial zinc anodes in their cooling systems. Check and replace them if necessary. To find them all, refer to your engine manuals or ask your mechanic. These zincs are important! Neglecting them can result in a cooling system failure, which could ruin your engine.
8. Check all the V-belts on the engines, too. They should be properly tensioned and in good condition. If you're not sure if the condition of a belt is fine, take it off the engine, turn it inside-out and bend it sharply. Any signs of cracking mean it's time to replace the belt. A full set of belts should be carried in your spares kit, along with extra fuel filters and other service parts.
9. If the knotmeter transducer is removable from its through-hull, pull it out and inspect the O-rings. Turn the unit on and have a helper watch the display while you give the paddle-wheel a spin to be sure it's working. Apply a light coat of waterproof grease to the O-rings and be sure the transducer tube is clean before re-inserting the transducer.
10. If the water-lift exhaust muffler on a generator or sailboat engine was drained last fall to prevent freeze damage, be sure that the drain plug is in place! All mufflers should be inspected for signs of rust or peeling paint, which can indicate a dangerous exhaust leak.
11. Operate the steering gear lock-to-lock and be sure it's firm against the stops if it is hydraulic, or be sure there's no slack if it's cable steering. Have a helper turn the wheel while you observe the rudder gear at the stern. Make certain that all fittings are tight, and that there's nothing stowed near the rudder gear.
12. If you removed the batteries for winter storage, clean the terminals and the clamps on the cables before you connect them. Pay attention to polarity. Be sure the batteries are fully charged.

## During the Launch

As the weather warms up, boatyards get very busy, often launching several boats an hour. Sometimes, when they're so busy, yard employees don't take the time to properly check for leaks after the boat goes in the water. You, or someone else who knows the boat, should be there when she is launched.

1. As soon as the boat is in the water, get below with a bright light and check for leaks. Remember to check prop shaft and rudder stuffing boxes.
2. If your sailboat's mast was removed for winter storage, the yard will usually step it when the boat is in the water. It's easy to get the rig ready for sailing if you remembered to measure the turnbuckles, and to inspect all the standing and running rigging, last fall. Be sure all turnbuckles are secured with cotter pins once the rig has been tuned.
3. Before you start an engine, be sure the seawater intake seacock is open. As soon as the engine is running, check for exhaust water flow.
4. As you move the boat to her mooring, watch the temperature gauge to make sure the engine's cooling system is working properly. If an engine won't start right away, don't crank it for very long; water can collect in the muffler and drown the engine.

# Before the First Voyage

Now that the boat is on her mooring or in her slip, spend some time checking everything before you depart on your first cruise. Start on the foredeck and work your way aft before going below.

1. Be sure the anchor and rode are secured properly and ready to use. The “bitter end” of the anchor line must be attached to a strong point inside the boat. All shackle pins must be secured with seizing wire. If there’s a windlass, make sure it works properly.
2. If the boat has wire lifelines, be sure they are properly secured and tensioned. If you see cracks in vinyl wire covers, or rust or cracks at end fittings, replace the wire. Be sure pulpits, stanchions and ladders are secure and in good repair, and all setscrews are tight.
3. Look over mooring lines, fenders and life ring lines. Replace any that are suffering from chafe or sunlight damage. If the boat is kept on a mooring, pay extra attention to the mooring bridle.
4. Set up and inspect all of the canvas.
5. Make sure all windows, portlights and hatches are secured, and give the boat a thorough washing. As soon as you’re done, go below and look for leaks. Don’t forget to look at chainplates on sailboats. Use a good light and look at as much of the hull-to-deck joint as you can see. Make a note of any leaks you find, so they can be repaired before the next storage season. Remember that water may be getting into the boat some distance away from where you find it inside. Chasing leaks can involve some careful detective work.
6. Before you plug into shore power, inspect the ends of the cord, and the receptacle that’s mounted on the boat for any signs of heat damage. Replace anything that’s not in like-new condition. Plug the boat in, turn on the battery charger and be sure the voltage rises in the batteries. Be sure battery water levels are correct. If the charger is portable, don’t leave it connected when you’re not aboard. After dark, make sure the running and anchor lights work.
7. Start engines and generators, warm them up thoroughly, and change the oil and filters. This should be done even if oil was changed last fall, since condensation will contaminate the oil over the winter.
8. While you’re warming up engines, check battery voltage. If alternators are working properly, a 12-volt system will charge at close to 14 volts. Also, while engines are running, inspect fuel, cooling and exhaust systems for leaks. Any leaks, no matter how minor, should be corrected. Be sure fuel filters are clean.
9. Check your engine mounts and make sure all the locknuts are tight. Since you checked prop and shaft condition prior to launch, any vibration you notice while under way may mean an engine needs aligning. Alignment is most likely to change when motor mounts are new, since they settle as they “break in,” so it’s important to monitor alignment for the first few seasons on a new boat or after a repower.

Alignment can’t be checked when the boat is hauled out; the hull will change shape slightly when it’s in the water. After the boat has been afloat for a day or two, alignment can be checked with a feeler gauge between the halves of the output coupling. There should be less than one thousandth (.001) of an inch of tolerance per inch of coupling diameter. It takes experience and special tools to move engines into proper alignment, so this may be a job for your mechanic.
10. If the domestic water and waste systems were winterized, they will need draining and flushing, and any fittings that were disconnected need to be secured. When the tanks are full and the system is pressurized, check all the fittings for leaks.
11. If you have a propane system, open the valve on the tank, turn on the remote solenoid switch if there is one, and light a burner on the stove. Then turn off the burner, leave the remote switch on, go back to the locker, note the reading on the pressure gauge, and close the valve on the tank. Wait 10 minutes and look at the gauge again. If there’s any change in the reading, there’s a leak somewhere. Use soapy water to find the leak; never use a flame!
12. Check the lifejackets, flares and first aid kit, and have the fire extinguishers serviced. Replace anything that’s missing, damaged or out of date, including the fire extinguishers if they’re more than 10 years old. Replace the batteries in your carbon monoxide and smoke detectors. If you have an EPIRB, make sure its battery is up to date.

# Summary

Now that you've done your spring chores, you can spend a relaxing season enjoying your boat. Keeping a few final tips in mind can help throughout the season and as you prepare for lay-up later in the year.

1. Keep a "punch list" throughout the season so you can take care of those items when you lay her up again.
2. Make certain the boat's papers, e.g., state registration or federal documents, are up to date.
3. Inventory all equipment and outfitting on board, and update it during the season. It is a good idea to list all personal items aboard as well. A complete list of personal items and equipment could come in handy in the event of an insurance claim.
4. Before you haul out this fall, ask your marine insurance agent for a copy of *Going Into Lay-up*, another useful source of information that is available at no charge from the Marine Advisory Services professionals of ACE Recreational Marine Insurance. Have a great summer!

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## ace recreational marine insurance

**ACE Recreational  
Marine Insurance**  
436 Walnut Street  
WA 11F  
Philadelphia, PA  
19106

[recreational.marine@acegroup.com](mailto:recreational.marine@acegroup.com)

[www.acemarkineinsurance.com](http://www.acemarkineinsurance.com)

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