

THE STORAGE OR WINTER LAY-UP REQUIRES SPECIAL preparation to prevent damage to the boat. Since winter storage is an annual event, it presents an excellent opportunity to perform the annual maintenance at this time, depending upon the amount of usage. Check with an authorized MasterCraft dealer's service department regarding the boat's needs to determine if this is the appropriate time for annual service.

Without proper preparation, storage for long periods of time may cause internal parts of the engine and transmission to rust due to lack of lubrication. Also, if the boat has been stored in below-freezing temperatures with water inside the bilge or engine cooling system (including the heater or shower), this condition may result in major damage from freezing, which would not be covered under the warranty.

STORAGE AND WINTERIZATION

Refer to the engine owner's manual regarding oil changes. The boat should have an oil change performed immediately prior to storage to prevent potential damage to the engine.

The following procedures will help avoid most potential types of damage during storage for a period not to exceed five (5) months!

CAUTION

Because of the complexity of preparing a boat for proper winter storage, as well as the possibility of extreme damage to the engine if a preparation error was made during winterization, MasterCraft recommends scheduling an appointment with an authorized MasterCraft dealer's service department to permit a technician to perform all winterization procedures.

To properly winterize the engine, you **MUST** be able to bring the engine up to operating temperature. To accomplish this, the boat must be in the water or attached to a water supply using a hose and suitable adapter that will allow an uninterrupted supply of water to the engine.

General Preparation

Before starting you will need the following supplies:

- Sta-Bil® Gasoline Stabilizer
- Fuel filter
- Low tack tape

Fuel System Treatment

Step 1: If the boat will be placed in storage with fuel (no alcohol in the mix) in the tank, fill the tank with fresh fuel and a sufficient amount of Sta-Bil gasoline stabilizer to treat the entire tank. Follow instructions on the container. **Also review the engine manual instructions regarding storage and winterization procedures!**

Step 2: If the boat will be placed in storage with fuel that contains alcohol, the fuel tank should be drained as completely as possible, the fuel disposed of properly, and Sta-Bil gasoline stabilizer added to any fuel remaining in the tank. Follow the directions on the container.

Step 3: Start the engine and operate at idle until the engine reaches normal operating temperature. (If using a hose and adapter, adjust the faucet to avoid over-cooling the engine at low RPM.) Run the engine for at least fifteen (15) minutes and ensure that the fuel stabilizer enters the engine's fuel system.

Step 4: Perform the annual maintenance as described in this Manual.



General Power Package Preparation

Step 1: Clean dirt, grime and grease from painted surfaces of the engine and drive train.

Step 2: Lubricate the throttle and shift linkages and cables with multi-purpose grease.

Step 3: Disconnect the battery cables from the battery and charge the battery fully. If you remove the battery from the boat, store it in a cool and dry place. **Never store batteries close to heat, spark or flame-producing devices.**

Step 4: Leave the engine box cover propped open about two inches (2") to ventilate the engine compartment.

Other Winterization Preparations

Step 1: Remove the bilge drain plug immediately after taking the boat out of the water. After a general bow-to-stern washing, raise the bow of the boat higher than the stern to allow as much water as possible to drain from the bilge, while performing other storage preparations.

Step 2: Thoroughly clean the hull, deck and interior of the boat as soon as it is removed from the water. Cleaning at this time is easier because any marine growth is still wet. Be sure to allow a few days of air drying to prevent mildew that results from trapped moisture. (See the *Cleaning* section of this Manual.)

Step 3: Apply a coat of wax to the entire surface of the boat. We suggest MasterCraft Premium Marine Wax for excellent coverage.

Step 4: If the boat is equipped with a heater, shower or ballast bags/tanks, be sure to disconnect the hoses and drain any remaining water in the lines to avoid freezing. Even small amounts of water in any of these areas can cause significant damage upon freezing and such damage is not covered under the warranty!

Note: Be sure that hoses will not become entangled in the engine V-belt when the engine turns over or the hose and/or the belt will be damaged.

Step 5: Use duct tape to seal the exhaust flaps to prevent dirt and nesting rodents from entering.

Step 6: Cover the boat with a boat cover or tarp.

Note: If the boat is to be stored outside and subject to accumulations of snow, water and ice, a support should be made for the boat cover so that it will not sag, rip or tear, thereby allowing water to enter the boat. Two-inch diameter PVC plumbing pipe is ideal for this purpose. It is readily available at local hardware stores, and it is easy to work with. Also, its rounded shape will prevent damage to the canvas.

Ballast System Preparations

Step 1: Attach a hose to the starboard side ballast hose that comes out of the deck at the rear seat.

Step 2: Place the other end into a gallon of non-toxic, RV-type anti-freeze.

Step 3: Turn the pump on to empty and pump anti-freeze into the system until anti-freeze comes out of the thru-hull on the side.

Step 4: Turn the pump on to fill and pump anti-freeze back into the jug.



Re-Activating the Boat After Storage

Step 1: Remove the duct tape from the exhaust flaps.

Step 2: Charge the battery and install it in the boat, following all safety precautions associated with changing batteries.

Step 3: Re-install the drain plugs or petcocks on each side of the engine block. EFI engines have a knock sensor located in one or both of the drain holes. **This/these unit(s) must be re-installed in the drain hole(s).** Carefully install this unit without any additional thread sealant. Be careful to avoid over-tightening this unit. Torque specifications for installation of the knock sensor is 14-16-ft-lbs.

Step 4: Re-attach the large diameter hose to the water circulation pump.

Step 5: Re-install the transmission cooler hose connection.

Step 6: Install the raw water impeller and reconnect the hoses to the raw water pump. Use a new gasket, even if the one removed at winterization time appeared in good condition.

Step 7: Install new spark plugs.

Step 8: If applicable, reconnect the hoses to your heater or shower.

Step 9: Check the engine compartment and bilge for signs of nesting animals. Clean as necessary.

Step 10: Check the condition of the distributor cap and rotor (where applicable). Replace if either shows signs of wear, damage or corrosion.

Step 11: Check the entire engine system for fluid, oil and coolant levels. Add as necessary.

Step 12: Check the entire engine for cracks or leaks caused by freeze damage.

Step 13: Check all hose clamps for tightness. Install the bilge drain plug and the rear drain plug in boats equipped with certain types of ballast systems.

Step 14: Grease the propeller shaft taper and install the propeller.

Step 15: Perform the daily maintenance as noted previously in this Owner's Manual. If it was not done prior to storage, perform the annual maintenance as well.

Step 16: If the boat is equipped with the optional fresh water cooling system and was drained for storage, fill the system with fresh coolant solution per instructions.



Step 17: Check the alignment between the output flange on the transmission and the propeller shaft flange. If the maximum feeler gauge that can clip between the flange faces at any point is 0.003", the unit is properly aligned. If a thicker gauge can be inserted at any point, the engine must be re-adjusted until proper alignment is obtained. This should be performed by an authorized MasterCraft dealer's service department.

Step 18: For all models, with the boat in the water, cycle the key ON and then OFF two (2) or three (3) times, allowing ten (10) seconds between key cycles, before cranking the engine. This allows the fuel pump to prime the fuel lines; then start the engine. In the event the engine does not respond, allow a two-minute cool-down period for every thirty (30) seconds of cranking. When the engine fires, keep a close watch over the gauge readings and check for leakage and abnormal noises. Keep speeds low for the first fifteen (15) minutes to allow the engine to reach normal operating temperatures.

Step 19: In ProStar 197s equipped with ballast bags, when reconnecting the hook-ups, be sure to squeeze the prongs to help slide the connector back on. Dish soap or some similar product will help slide the connects back together. Note that the red ring goes over the raised ring to ensure a working connection.