

Do It Yourself, Direct Drive Boat Winterizer Instructions

65506

DIY principle of operation:

The DIY Boat Winterizer provides an easy method of using fresh water to flush the raw water cooling system of particulates and impurities while allowing your engine to reach operating temperature in preparation for winterization. The cooling system thermostat controls the flow of coolant through the engine block as it regulates operating temperature.

When the engine reaches operating temperature, the thermostat is in the open position. Once operating temperature is reached, the engine is flushed of impurities with fresh water until the water supply is replaced with antifreeze to winterize the engine for storage. For additional assurance, the thermostat may be removed. Thermostat removal is not necessary if the following step-by-step instructions are followed explicitly.

APPLICATION:

IMPORTANT: Read all instructions before beginning.

I. Select antifreeze

Select the appropriate propylene glycol antifreeze using the following guidelines:

Never use an antifreeze with a burst protection level of less than -50° F.

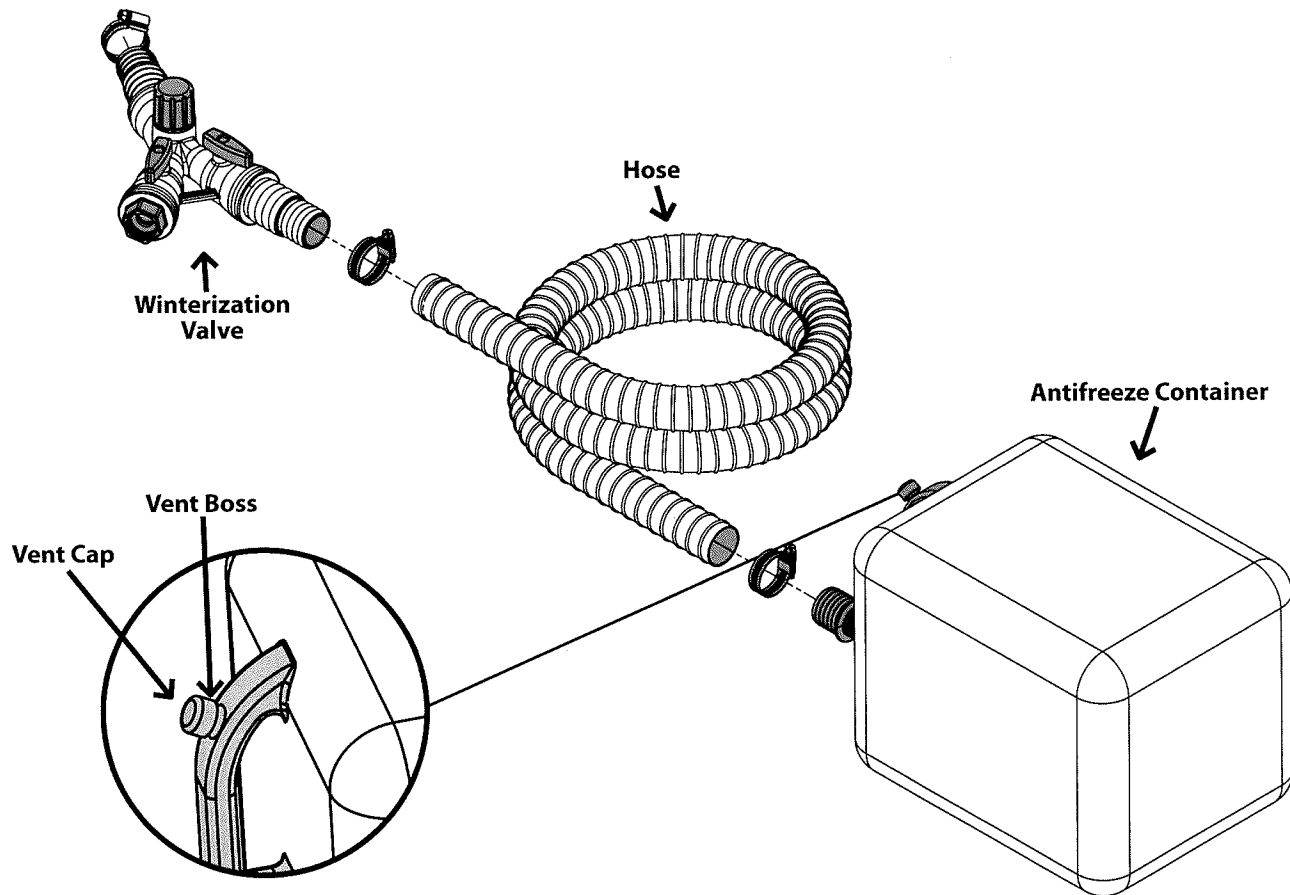
- Allow antifreeze to stand in container(s) at room temperature (60+° F) for several hours prior to winterizing. Warmer antifreeze will flow more freely through the winterizer, pump, and engine.
- Please consult the antifreeze manufacturer instructions for diluting directions. Stronger concentrations may be diluted—allowing antifreeze to flow more freely. Dilution of antifreeze by the customer to a burst protection level of less than -60° F (i.e., -55° F, -50° F, etc.) is not recommended.

Agitate all dilutions for 3-4 minutes.

- Propylene glycol antifreezes with burst protection levels of -50° F will begin to form a “slushy” appearance at +10° F to +13° F. These same antifreezes will continue to “harden” when cooled further, but will not pose a threat to equipment until the temperature approaches -50° F. A minimum -50° F burst protection level is extremely important in order to overcome the dilution that may occur in small cavities inside the engine during the winterization process.
- Always double-check burst protection levels with a refractometer when possible.

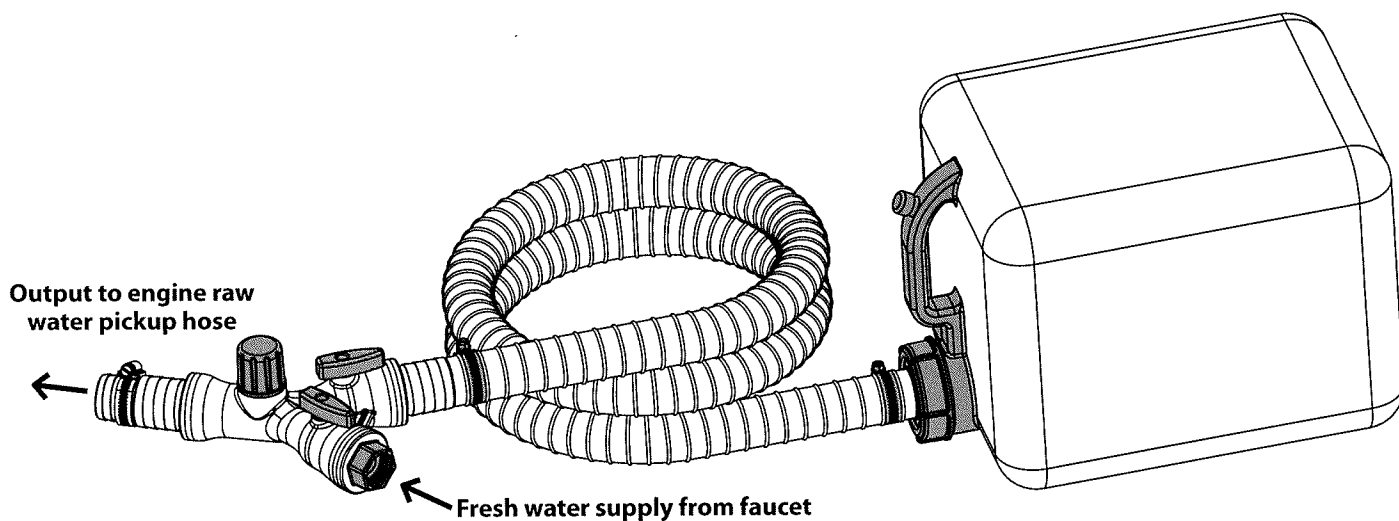
II. Prepare and fill antifreeze tank

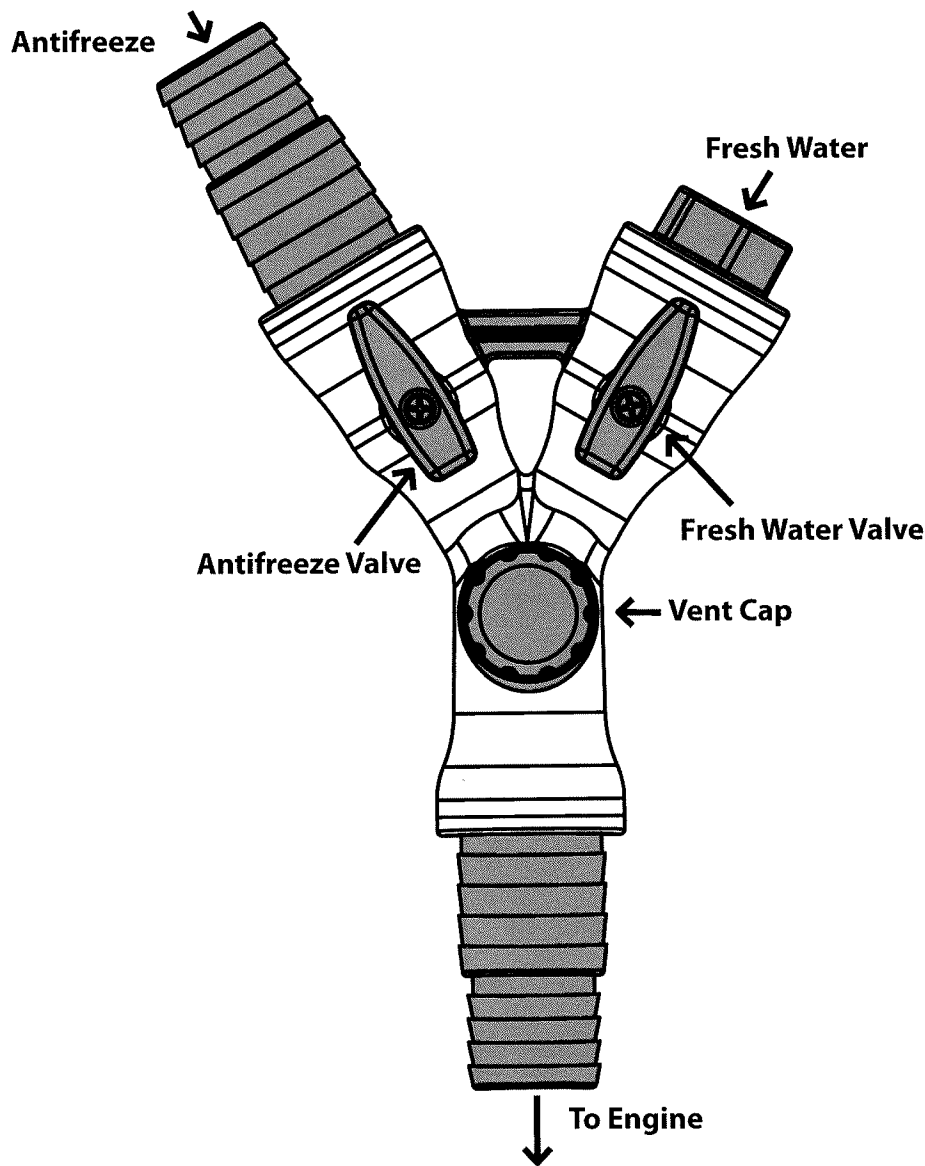
- Prepare antifreeze container by removing cap and connecting it to threaded hose fitting. Puncture 3/16" hole in vent boss and reinstall vent cap.
- Fill antifreeze container with marine engine winterizing antifreeze.
- Close valves and vent cap on winterization adapter. Install cap on antifreeze container.



III. Connect water supply to engine raw water pickup hose

- Connect fresh water supply line from faucet to winterization valve.
- Locate the engine raw water pickup hose. Please consult your water craft product manual for instructions. Connect raw water pickup hose to winterization adapter. Secure with provided hose clamp.
- Place filled antifreeze container on a surface higher than the engine intake & winterization adapter.





IV. Winterize engine

- Open fresh water supply valve on winterization adapter, open fresh water faucet, and confirm water flow to raw water pump.
- Start engine and run it at idle speed, until it reaches operating temperature.
- Monitor the water supply hose and make sure it does not collapse. This may happen if the water supply is low and does not keep up with the engine water pump. In the case the hose collapses, simply turn the vent cap on your winterization adapter counter-clockwise to allow it to take in some air along with the water.
- Remove vent cap from antifreeze container.
- Once operating temperature is achieved, open antifreeze container valve and simultaneously close fresh water supply valve.
- Antifreeze will begin flowing from container into raw water cooling system.
- Shut down engine IMMEDIATELY once antifreeze container is empty.
 - If necessary, refill the antifreeze container and restart the engine to fill the system while still at operating temperature.
 - Repeat shutdown procedure once antifreeze container is emptied.
- Allow engine to cool. Disconnect engine raw water hose from winterization adapter and reconnect to intake strainer on boat hull. Properly secure the connection. This connection is below the water line— vessel may take on water if not properly secured.
- Finally, remove DIY Winterization Kit components and flush with fresh water and allow them to dry for seasonal storage.

Your boat is now winterized and ready for the off-season!