

Instructions For Use:

Winterizing the Engine or Generator

WARNINGS:

Verify that the unit has closed cooling. There must be antifreeze in the engine, not seawater. **If the unit does not have closed cooling, see below.

Check that the level of antifreeze is sufficient for use and storage. Do not remove the cap while the engine is hot.

Make sure the engine compartment is ventilated prior to using the Shop Vac and starting the engine(s) or generator.

Stay clear of all moving parts.

Visit www.seaflush.com for a video demonstration.

Is the boat in water or out of water? If it is out of water, skip steps 3-6.

1. Close the seacock valve and open the sea strainer top. Remove the strainer basket.
2. Put the Sea Flush Reservoir into the sea strainer opening and secure with bungee cords by running the bungee cords around the inlet and outlet hoses then placing the hooked ends through the holes on the Sea Flush Reservoir or by hooking the bungee cord back on itself. (See image glossary)
3. Screw the Shop Vac Insert into the Sea Flush Reservoir and push the Shop Vac hose into the Shop Vac Insert. Friction will hold the hose in place. Ventilate the engine/ bilge area by running the blower.
4. Turn on the Shop Vac, open the seacock valve, and verify that there are bubbles outside of boat.
5. Close the seacock.
6. Remove the Shop Vac hose and Shop Vac Insert from the Sea Flush Reservoir.
7. Fill the Sea Flush Reservoir with biodegradable antifreeze. Ventilate the engine/ bilge area by running the blower.
8. Start the engine/ generator.
9. Continue to add antifreeze until the antifreeze can be seen exiting the engine/ generator exhaust. To avoid damaging the engine or generator, do not run the engine/ generator without antifreeze flowing into the Sea Flush Reservoir.
10. Shut off the engine/ generator when the liquid exiting the exhaust turns the color of the antifreeze.
11. Remove the Sea Flush Reservoir.
12. Replace strainer basket. **Make sure the basket is seated properly so that the strainer lid can fully close.**

13. Tighten/ screw the lid on the sea strainer. If nuts secure the cover, alternate tightening the nuts so the cover sits flat on the strainer and is airtight.

The raw water portion of cooling system is now protected from freezing, based on the freeze rating of the antifreeze used.

**If engine or generator doesn't have a closed cooling system, you can use Sea Flush to winterize, but remove drain plug(s) on the engine to drain raw water. Consult the engine's owner's manual for instructions on how to drain the engine block.

Winterizing an Air Conditioning Unit

WARNINGS:

Make sure engine compartment is ventilated prior to using the Shop Vac.

Visit www.seaflush.com for a video demonstration.

Is the boat in water or out of water? If it is out of water, skip steps 4, 5 & 6.

1. Close the seacock valve and open the sea strainer. Remove the filter basket.
2. Put the Sea Flush Reservoir into the sea strainer opening and secure with bungee cords by running the bungee cords around the inlet and outlet hoses then placing the hooked ends through the holes on the Sea Flush Reservoir or by hooking the bungee cord back on itself. (See image glossary)
3. Screw the Shop Vac Insert into the Sea Flush Reservoir and push the Shop Vac hose into the Shop Vac Insert. Friction will hold the hose in place. Ventilate the engine/ bilge area by running the blower.
4. Cover the teeth of a pair of Vise Grips with Duct tape. Pinch the output hose of the A/C water pump with the taped Vise Grips.
**If the boat has multiple A/C units, see below.
5. Turn on the Shop Vac and open the seacock valve. Verify that there are bubbles outside of boat.
6. Close the seacock valve, turn off the Shop Vac, and remove the Vise Grips.
7. Turn the Shop Vac on and look for a forceful stream of water exiting from the A/C's discharge fitting on the side of the hull. Initially water will blow out of the fitting, followed by air.
8. OPTIONAL STEP FOR VISUAL CONFIRMATION THAT ANTIFREEZE IS IN SYSTEM: Turn off the Shop Vac and remove the hose from the Shop Vac Insert. Pour some antifreeze into the Shop Vac Insert. Replace the hose and turn on the Shop Vac.

Look for a small amount of antifreeze blowing out of the water discharge fitting. Repeat this process until it is visible.

9. Remove the Sea Flush Reservoir.

10. Replace strainer basket. **Make sure the basket is seated properly so that the strainer lid can fully close.**

11. Tighten/ screw the lid onto the sea strainer. If nuts secure the cover, alternate tightening the nuts so the cover sits flat on strainer and is airtight.

**If the boat has multiple A/C units serviced by a single pump, pinch all but one outlet hose to isolate that A/C unit. Air will be forced through each A/C unit one at a time. Have another person watching outside the boat to verify that water is forced through each A/C unit's discharge port.

Clearing Clogged Thru-Hull Fittings

WARNINGS:

Make sure engine compartment is ventilated prior to using the Shop Vac.

Visit www.seaflush.com for a video demonstration.

1. Open sea strainer and remove strainer basket.

2. Put the Sea Flush Reservoir into the sea strainer opening and secure with bungee cords by running the bungee cords around the inlet and outlet hoses then placing the hooked ends through the holes on the Sea Flush Reservoir or by hooking the bungee cord back on itself. (See image glossary)

3. Screw the Shop Vac Insert into the Sea Flush Reservoir and push the Shop Vac hose into the Shop Vac Insert. Friction will hold the hose in place. Ventilate the engine/ bilge area by running the blower.

IF CLEARING AN A/C UNIT: Use Vise Grips with Duct tape covering the teeth to pinch the output hose of the A/C water pump. This will force air down to the thru-hull fitting.

4. Turn on the Shop Vac and look for bubbles outside of the boat. Depending on the severity of the clog, this may take several minutes. In rare instances a thru-hull fitting may be clogged so badly that the debris needs to be physically removed. In these cases, the Sea Flush method may not be effective.

5. When bubbles are visible, the clog has been cleared.

6. Close the seacock, turn off the Shop Vac and remove the Sea Flush Reservoir.

7. Replace the strainer basket. **Make sure the basket is seated properly so that the strainer lid can fully close.**

8. Tighten/ screw the lid on the sea strainer. If nuts secure the cover, alternate tightening nuts so the cover sits flat on strainer and is airtight.

Freshwater Flush

WARNINGS:

Make sure the engine compartment is ventilated prior to starting the engine.

Stay clear of all moving parts.

Visit www.seaflush.com for a video demonstration.

1. Close the seacock and open the sea strainer. Remove the strainer basket.
2. Put the Sea Flush Reservoir into the sea strainer opening and secure with bungee cords by running the bungee cords around the inlet and outlet hoses then placing the hooked ends through the holes on the Sea Flush Reservoir or by hooking the bungee cord back on itself. (See image glossary)
3. Use the dock hose to fill the Sea Flush Reservoir. Ventilate the engine/bilge area.
4. Start the engine/ generator and continue to add water. Use multiple hoses if needed. The water level should be above the bottom of the Sea Flush Reservoir. This is so the engine's water pump doesn't run dry. Run the engine/ generator for a minute or two in order to flush the corrosive saltwater from the raw water system.
5. Shut off the engine and turn off the water. Remove the Sea Flush Reservoir.
6. Replace the strainer basket. **Make sure basket is seated properly so that the strainer lid can fully close.**
7. Tighten/ screw the lid on the sea strainer. If nuts secure the cover, alternate tightening nuts so the cover sits flat on strainer and is airtight. Note the position of seacock valve.

Warnings:

A. General Safety

Read all instructions before commencing work with Sea Flush. Failure to heed all warnings and cautions described may result in property damage and/ or personal injury. Always fully ventilate the engine/ bilge area before using a Shop Vac or operating engines or generators.

Always stay clear of moving parts.

Always use biodegradable antifreeze that will surpass the freeze protection needed for the geographical region in which it is used.

Personal Safety

Always wear ANSI approved safety goggles during use.

Sea Flush & Shop Vac Use & Care

Inspect bungee cords before each use. Do not use if cord is frayed or if hook is damaged.

Do not over stretch bungee cords.

Keep Shop Vac and power cord away from water.

Be sure that Shop Vac power source is properly grounded and fuse protected. Always fully ventilate the engine/ bilge area before using a Shop Vac or operating engines or generators. Do not use Sea Flush or Shop Vac unless you are fully confident and competent in their proper use.

Disclaimer:

Sea Flush Inc. will not be responsible for any personal injury or property damage resulting from the use of the Sea Flush. Do not use Sea Flush or any Shop Vac unless you are fully confident and competent in their proper use. It is the user's responsibility to confirm that proper methods are used to assure full freeze protection of all systems on his/her boat or the boat the user is contracted to work on. Sea Flush Inc. will not be responsible for any damage resulting from improper or insufficient use that results in damage and/or injury.

Always consult the boat owner's manual for instructions on proper and safe use of boat's components. Sea Flush is not to be used for anything outside of its intended use.

Warranty:

Sea Flush Inc. guarantees this product to be free from defects in materials or workmanship. If a defect appears, the original purchaser may return the product to Sea Flush Inc. along with the original dated sales receipt.

Upon receipt of the product, Sea Flush Inc. will repair or replace the defective part. This warranty shall not apply to product that has been tampered with or subjected to misuse, accident, or damage. In no way shall Sea Flush Inc. be liable for any incidental or consequential damages.

Sea Flush Image Glossary

