

FCF AIR CONDITIONING INITIAL START-UP AND GENERAL MAINTENANCE



WARNING: Cancer and Reproductive Harm
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Initial Start-up / Operations Checklist:

1.	Ensure seawater intake ball valve (sea cock) is open.	<input type="checkbox"/>
2.	Turn on the air conditioners circuit breaker. If the seawater pump has its own circuit breaker, make sure to turn it on.	<input type="checkbox"/>
3.	Turn the system on (Press the ON/OFF button once to display temperature and a second time to turn the unit ON – Audible “BEEP” should be heard). Set the desired cabin temperature (set point).	<input type="checkbox"/>
4.	Check for a steady solid stream of water (once the compressor is running) from the overboard discharge. Water flow must be measured to verify sufficient water flow for the size unit.	<input type="checkbox"/>
5.	Verify that there is steady airflow out of the supply air grille.	<input type="checkbox"/>
6.	If the unit does not appear to be operating properly, refer to troubleshooting guidelines. NOTE: Do not turn the unit off and immediately back on. Allow at least 30 seconds for refrigerant pressure equalization.	<input type="checkbox"/>
7.	Cycle the unit into heat mode a minimum of three times to provide lubrication to the reversing valve (a “hissing” sound should be heard when the valve changes).	<input type="checkbox"/>

Maintenance Requirements:

Reversing Valves

Reverse cycle units have a reversing valve; the valve must be energized periodically to keep the internal parts moving freely. To do this, switch the air conditioning unit into heat mode 2-3 cycles per month.

Seawater Strainer

Ensure that your pump receives adequate seawater flow by regularly cleaning the strainer basket. Periodically check the overboard discharge for a steady stream of water. Check seawater intake speed scoop for obstructions. Make sure hoses are not looped, kinked or crushed. Check and clean strainer as needed minimum once per month.

Condenser Coil Cleaning (Seawater Acid Flush)

1. With the system turned off at the circuit breaker on the vessels panel, disconnect the inlet and outlet connections of the condenser coil.
2. Use chemical resistant hoses (5/8" I.D., etc.) to connect the inlet of the condenser coil to the outlet of a chemical resistant, submersible pump and let the hose connected to the condenser coil outlet flow freely into the container mentioned below.
3. Place a strainer or piece of screen over the inlet of the pump and submerge the pump into a container filled with a 5% solution of muriatic or hydrochloric acid and fresh water or use a premixed over-the-counter solution. Use a large container to hold the solution (5-25 gallons).

CAUTION: Avoid spilling or splashing the solution. Remember to wear all necessary protective gear, (i.e. approved safety goggles and chemical resistant gloves). Follow all warnings and recommendations given by the manufacturer of any acids or premixed solutions.

4. Power the pump and circulate the solution through the condenser coil for 15 - 45 minutes depending upon the size of the coils and the extent of the contamination. Visual inspection of the solution in the container should indicate when the contamination has been removed.
5. Circulate fresh water through the coil to flush any residual acid from the system.
6. Restart the system and check operational parameters to ensure thorough cleaning has taken place. Additional cleaning may be necessary with extreme contamination.
7. Minimum once per year or as needed.

WARNING: For the purpose of protecting the environment, dispose of any contaminated acid solutions in accordance with federal, state and/or local regulations.

Return Air Filters

Check the return air filter about once a month and clean as necessary. To clean the filter, remove it from the unit, rinse with water, air dry and reinstall. (Do NOT use compressed air)

Winterization Requirements:

There are several methods of winterization, some of which work better than others. There are various methods employed using a 50/50 non-polluting biodegradable anti-freeze/water solution. Any method that causes the anti-freeze solution to flow downward is the method of choice. By this, the anti-freeze solution will displace any water trapped and eliminate the possibility of freezing in hidden areas. In addition, since the seawater pump utilizes a magnetically driven impeller, the impeller should be removed from the wet end assembly, Wiped with a solution, and stored in a warm, dry area until commissioning takes place.

NOTE: Collect all discharged liquids and recycle or dispose of in a proper manner.