Winterizing Racor VMT Watermakers

(Excludes LT series)

Technical Application Publication

Freeze Protection

There is a good probability of damaging your watermaker by exposing it to temperature below 32 F (0 Celsius) conditions. Therefore protecting your watermaker against freeze damage is recommended. The following information provides steps towards safeguarding your watermaker and extending its plumbing life against freezing temperatures.

If long term storage is planned perform preservation on the watermaker before winterization. See owners manual or preservation technical application publication for preservation instructions.

Contact Information:

Parker Hannifin Corporation
Racor Division/Village Marine Tec.
2630 E. El Presidio Street
Carson, CA 90810

phone 310 516 9911
fax 310 538 3048
racor@parker.com
www.villagemarine.com

www.parker.com/racor

CAUTION:

- Do not use ethylene glycol (found in automotive anti-freeze products).

Step 1: Close inlet seacock and flush unit with fresh water. Refer to your owners manual for fresh water flushing procedure.

Step 2: Remove the micron filter(s) (depending on unit) from the prefilter housing and empty the prefilter housing(s).

Step 3: Pour the Parker Racor VMT Winterizing Solution #40-0005 into filter housing, top off with non-chlorinated fresh water if needed, then reattach the prefilter housing(s).

Step 4: Verify black high pressure bypass valve is in the CLEANING POSITION and that the gray cleaning valve is positioned to CLEANING.

Step 5: Switch ON the watermaker breaker at main breaker panel to power up the unit.

Step 6: Start the low pressure boost pump by pressing the low pressure pump button located on the master control center. (This step only applies to watermakers with the electronics package).

Step 7: Start the high pressure pump by pressing the high pressure pump button located on the master control center. (This step only applies to watermakers with the electronics package).

Step 8: Verify the vacuum pressure gauge reads more than zero (0 psi), (if equipped) if not more than 0 psi recheck the valve positions from step #1 or perform another fresh water flush to release any remaining trapped air in the system.

Step 9: Allow the watermaker unit to run for at least 15 minutes to circulate the winterizing solution into the membranes, hoses, fittings, and pumps.

Step 10: Turn off the high pressure pump and low pressure pump respectively. Switch OFF the watermaker breaker at the main breaker panel.

The unit can be left for up to 6 months. The freeze protection solution is now circulated throughout the feed and reject sides, including the membrane and the pumps. To protect the product side, open all blue hoses and drain out the water from the membrane outlets, product manifold, product flow meter, product relief valve and solenoid valve (if equipped).

To flush winterization solution from the RO unit

To return your machine to operating condition after freeze protecting it, adhere to the following steps.

Step 1: Verify the high pressure bypass valve is in CLEANING MODE (ensuring zero pressure in system). Turn the gray cleaning valve to NORMAL / REVERSE OSMOSIS position.

Step 2: Open the micron filter housing(s) (depending on RO model) and put in new micron filter(s). Fill the prefilter housing(s) with non-chlorinated freshwater.

Step 3: Open the sea cock to the watermaker.

Step 4: Turn ON watermaker breaker in main electrical panel.

Step 5: Start the low pressure boost pump by pressing the low pressure pump button located on the master control center. (This step only applies to watermakers with the electronics package). Allow the unit to prime a few seconds prior to start of the high pressure pump.

Step 6: Start the high pressure pump by pressing the high pressure pump button located on the master control center. (This step only applies to watermakers with the electronics package).

Step 7: Flush the unit with raw seawater for 20 minutes.

Step 8: After raw water flushing the unit for 20 minutes, shut down the high pressure pump and low pressure pump respectively.

Step 9: Your watermaker is ready for normal operation.

Freezing Points of Propylene Glycol – Water Mixtures

Percent Propylene Glycol (wt. %)	Freezing Point (°F)	Freezing Point (°C)
0	32	0
10	26	-3
20	20	-7
30	10	-12
36	0	-18
40	-5	-20
43	-10	-23
48	-20	-29
52	-30	-34
55	-40	-40
58	-50	-46
60	-60	-51

Alternative freeze protection method

Instead of applying the winterizing solution **Parker Racor VMT Winterizing Solution #40-005** to the watermaker system, an alternative method to freeze protect the watermaker is available.

Step 1: Perform a chemical #3 preservation to the unit. To preserve your unit refer to instructions in your owners manual or preservation technical application publication.

Step 2: Remove membrane vessels from the boat, placing caps over the fittings. This is a more practical alternative for the MODULAR system.

REMINDER: Membranes must be kept wet with preservative solution.

Step 3: Store the membranes in an environment protected from freezing.

Step 4: Refresh the preservative every 6 months as recommended.

Step 5: Drain the entire watermaker of all water.

CONSUMABLES: The consumables required for any six month operation of the watermaker. Use ONLY Racor Village Marine approved filters and chemicals.

Description	QTY	Part No.
Chemical Cleaning Cartridge Kit #1, #2	1ea/box	85-0102
Preservative Cartridge Kit, Chemical #3	2/box	85-0103
Filter, 5 micron, 10 sq-ft.	1ea	33-0117
Filter, Carbon, 10 sq-ft.	1ea	33-0311
High Pressure Pump Oil	1 qt	85-0050
Economy Mini Water Tester, TDS	1 ea	99-1990
Winterization Solution, 16 Oz Bottle	1 ea	40-0005

To maintain peak performance always use genuine Parker Racor Village Marine replacement parts.
We reserve the right to change our specifications or standards without notice.

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