

Connecting Raritan's Lectra/San[®] MC Type I MSD to the VacuFlush[®] Marine Toilet System from Sealand Technology, Inc.

Application Note

WARNING: *Raritan Engineering Company, Inc. recommends that a qualified person or electrician install this product. Equipment damage, injury to personnel or death could result from improper installation. Raritan Engineering Company, Inc. accepts no responsibility or liability for damage to equipment, or injury or death to personnel that may result from improper installation or operation of this product.*

INTRODUCTION

Raritan's Lectra/San[®] MC (LST/MC[™]) can be installed in conjunction with the VacuFlush[®] marine toilet manufactured by Sealand Technology, Inc. The LST/MC[™] treatment unit must be mounted in the discharge line between the output from the vacuum pump or vacuum generator of the VacuFlush[®] toilet system and the boat's discharge seacock/thru-hull fitting or holding tank (Figs. #1 and #2). The VacuFlush operates on pressurized fresh water and the Lectra/San system requires salt water, therefore the Raritan Four Gallon Salt Feed System with Pump (#3*-3003) must also be added to the installation in order to bring the flush water to the same salinity as seawater. A vented loop in the discharge line between the outlet from the Lectra/San and the discharge thru-hull fitting is recommended if any of the system components will be installed at or below the waterline of the boat, refer to LST/MC owner's manual for typical installations.

OPERATION

Push "PUSH TO FLUSH" every time you flush your VacuFlush toilet.

MAINTENANCE

TREATMENT TANK / ELECTRODE CLEANING

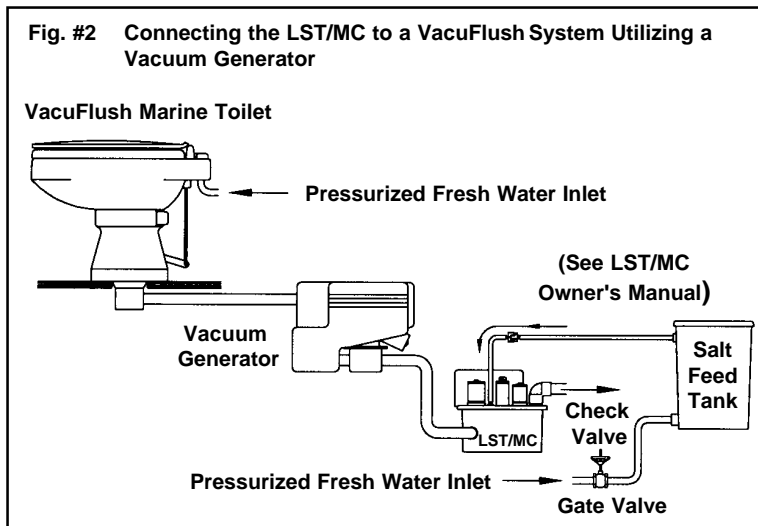
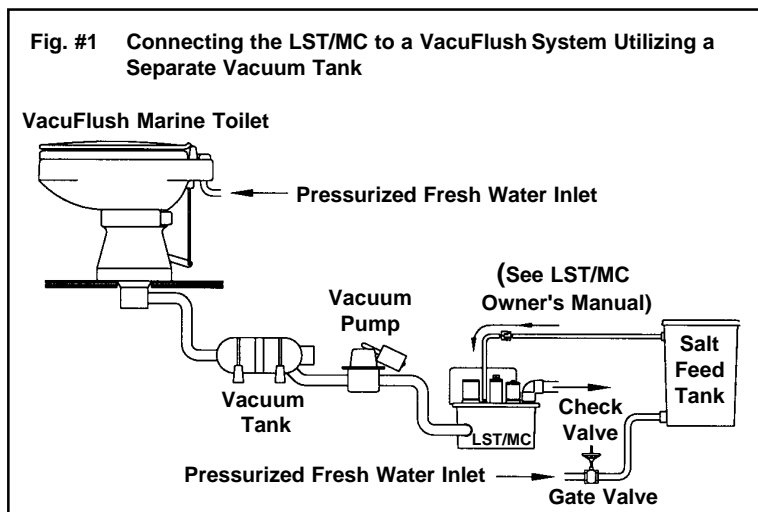
WARNING: Do not follow the cleaning instructions as outlined in the LST/MC

*32-3003 = 12 volt; 33-3003 = 24 volt
 VacuFlush[®] is a registered trademark of Sealand Technology, Inc.
 Lectra/San[®] is a trademark of Exceltec.
 LST/MC[™] is a trademark of Raritan Engineering Co., Inc.

Installation and Maintenance Instructions when using the VacuFlush marine toilet system from Sealand Technology, Inc. Do not pour acid solution into this toilet.

To clean out the treatment tank and electrodes you must:

1. Fill the bowl three-fourths full using flush pedal, then flush toilet. Do this four times, waiting 30 seconds between flushes. Run one treatment



cycle.

2. If the Treatment Unit is mounted below the waterline, disconnect the hose from the vented loop on the Treatment Unit side of the loop. Drain any excess from the hose into a pan for disposal. Clean out vent line.
3. Remove the discharge hose and use a pump to remove as much liquid as possible. Allow time for liquid to drain past electrode pack partition.
4. Remove Treatment Unit cover and electrode pack. Clean plates with a stiff nylon brush.

WARNING: Before using acid, observe safe handling instructions on container.

5. If cleaning with a brush does not remove mineral deposits, immerse electrodes (fins) in a solution of one pint muriatic acid (30-35%) to two gallons of water. Use a plastic bucket rather than a metal one. Allow the electrodes to remain immersed until all bubbling stops and the electrodes are clean. Rinse with clean water and reassemble. The purpose of the acid treatment is to remove calcium carbonate deposits which may build up in the treatment system and reduce conductive surface area on the electrode plates.

Treatment Tank Pre-fill Instructions

Before mounting the treatment unit, add 6 oz. of table salt to each side of the treatment tank through inlet and outlet fittings. Note that adding too much salt will cause fuse to blow in first start up and not adding enough salt will stop cycle due to low treatment.

PLUMBING

Install the LST/MC treatment unit to solid deck construction, following the directions in the LST/MC owner's manual. Install Four Gallon Salt Feed System with Pump following the directions in the owner's manual. The LST/MC treatment unit must be within a six foot hose run from the vacuum pump

or vacuum generator of the VacuFlush toilet system. Plumb the discharge from the vacuum pump or vacuum generator of the Sealand VacuFlush marine toilet to the LST/MC using the supplied fittings. All-stainless steel hose clamps are recommended; double-clamp all joints below the waterline for safety.

ELECTRICAL

Follow the electrical wiring instructions in the LST/MC owner's manual and also the Four Gallon Salt Feed System with Pump owner's manual.

START UP

Before start up check all electrical and plumbing connections.

1. Remove crossover plug in the center of the LST/MC treatment unit (see Installation and Maintenance Instructions for Four Gallon Salt Feed Tank with Pump [Fig. #2]) and manually fill the treatment tank with fresh (dockside) water. If treatment prefill instructions were not done, add 6.5 oz. of table salt in each side of treatment tank.
2. Start the treatment cycle by pressing the "PUSH TO FLUSH" button on panel.
3. Normal operation will be indicated by green light on or blinking.
4. If red or amber lights are on; see troubleshooting section in Lectra/San MC owner's manual.



RARITAN
Engineering Company, Inc.

530 Orange Street P.O. Box 1157, Millville, NJ 08332
Phone (609) 825-4900 Fax (609) 825-4409
www.raritaneng.com
Southern Office and Plant:
3101 SW Second Ave., Ft. Lauderdale, FL 33315
Phone (954) 525-0378 FAX (954) 764-4370