

110

210

510H

## **SEALAND® SERIES GRAVITY-DISCHARGE TOILETS INSTRUCTION MANUAL**

### **IMPORTANT NOTICE**

Dometic® sanitation systems must be installed according to Dometic's recommended procedures.



### **WARNING**

This manual must be read and understood before adjustment, maintenance, or service is performed. Modification of this product can result in property damage.

## TABLE OF CONTENTS

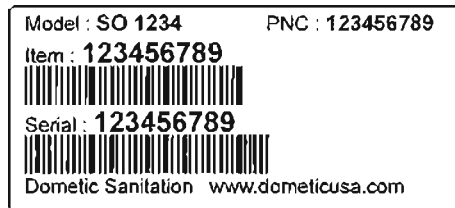
Important Information.....	2	Winterizing .....	4
Toilet Model Identification .....	2	Deodorants and Special Tissue .....	5
How to Use.....	2	Troubleshooting .....	6 - 7
Installation .....	3	Warranty .....	8
Proper Bowl Cleaning .....	4		

## IMPORTANT INFORMATION

- Do not use chlorine or caustic chemicals, such as laundry bleach or drain-opening types, in the system. These products damage the seals in toilets and dump valves.
- Do not permit foreign objects (paper towels, paper cups, diapers, sanitary napkins, etc.) to be flushed through the toilet.
- Mechanical seal toilets, like SeaLand units, are designed to only discharge directly into a holding tank. Horizontal pipe runs as found in conventional residential or commercial plumbing systems cannot be accommodated.
- Toilet bowl must be regularly cleaned and winterized according to "Proper Bowl Cleaning" and "Winterizing" procedures on page 4, or your warranty coverage may be voided.

## TOILET MODEL IDENTIFICATION

The model identification label is located on the toilet base and will show the model number and serial number. For model 210 and 510H toilets, remove base cover to locate identification label (see page 3).



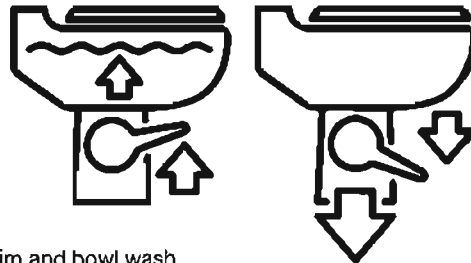
## HOW TO USE

To prepare the SeaLand toilet for use, check to be sure water supply to the toilet is connected. Turn on water supply and check system for leaks. Flush toilet and check for leaks.

To properly use the SeaLand toilet, follow these simple instructions:

- To add water to the toilet**, lift or raise the flush lever until desired water level is reached. Generally, more water is required only when flushing solids.
- To flush toilet**, push lever all the way down until contents leave toilet bowl. Water flow pressures vary at different locations, therefore holding the flush lever down for 4-8 seconds may be required. Minimum flow at the toilet of two gpm (7.6 lpm) is required for proper rim and bowl wash.
- Release flush lever by allowing it to snap back, which permits positive sealing around the flush ball.
- A small amount of water should remain in bowl.

Note: Holding flush lever down longer than necessary results in excessive water usage.



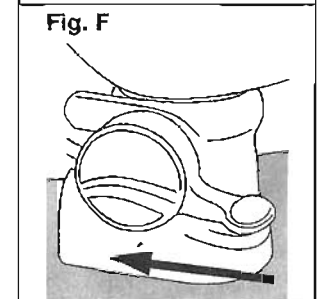
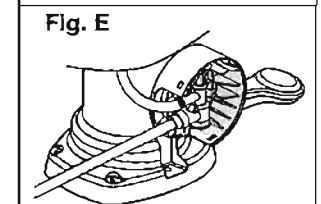
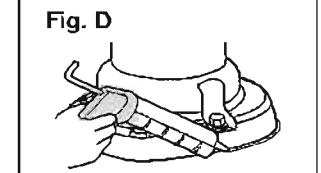
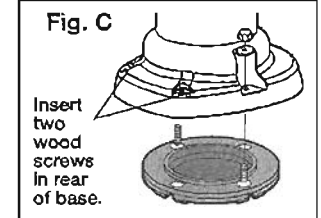
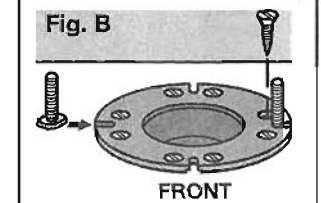
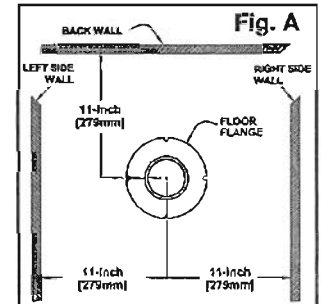
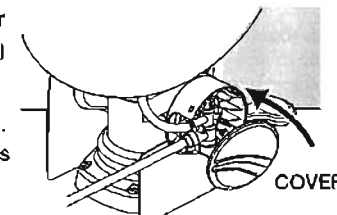
## INSTALLATION

- To replace an older toilet, turn off water supply to toilet. Disconnect water line at toilet water valve. Unscrew floor bolt nuts and remove toilet. Discard old floor seal and mounting bolts. The old floor flange may be used if it is in good condition and fastener holes are positioned as shown in Figure A. Make sure center of floor flange is at least 11 inches from back wall (Figure A).
- If installing new floor flange, make certain that the toilet mounting bolts align properly with SeaLand toilet mounting pattern (Figure B).
- Secure flange to floor using at least four flat-head screws (one each at the front, back, right and left sides of flange) through countersunk holes. Insert floor bolts into slotted holes at right and left sides of flange (Figure B).
- Position floor seal by pressing the floor bolts up through holes in the seal.
- Set toilet in place with bolts protruding up through mounting holes in base (Figure C).
- Install washers and hex nuts provided with toilet. Snug nuts down equally with standard 7/16" open end wrench. Install two wood screws provided in two holes at rear of base. (Figure C).
- If toilet is being installed in a shower stall, apply a 1/4" bead of glazing compound around the perimeter of the base (Figure D).
- Connect water supply line to water valve (1/2" MPT) inlet using appropriate fittings or an extension (Figure E).
- Turn on water supply and flush toilet to test for leaks.
- Attach pedal cover to flush pedal (see instructions below) after making sure there are no leaks at connections.
- FOR MODEL 210, put base cover in front of toilet base, aligning flush pedal with opening on side of cover. Push base cover against front of base, making sure it does not interfere with flush pedal operation (Figure F).

FOR MODEL 510H, attach base cover to toilet base in same manner for model 210, then fasten two sides together in back of base using elastic bands.

### Attaching Pedal Cover

- Align cover with pedal and press into place so that tab locks into space at rear of pedal.
- To release cover, press on tab at back of pedal and pull off.



## PROPER BOWL CLEANING

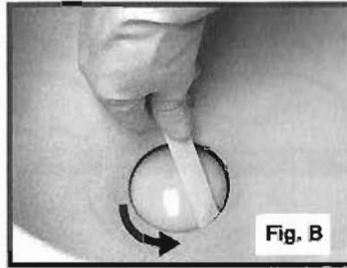
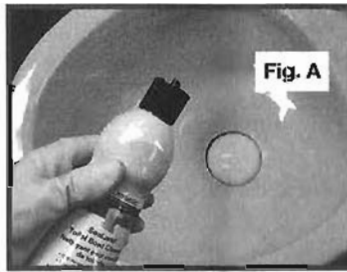
**BOWL CLEANING:** For stubborn stains, use SeaLand® Toilet Bowl Cleaner (Fig. A). Where water is hard, a build-up of lime may dull the toilet bowl finish. Restore the shine with this SeaLand cleaner. If you cannot find it in your area, contact Dometic for your nearest dealer. If the cleaner is not available, use most any non-abrasive bathroom and toilet bowl cleaner (Bar Keeper's Friend® spray cleaner, Clorox® toilet bowl cleaner, SaniFlush® toilet bowl cleaner, etc.). Please follow label instructions.

To avoid damaging the seal, **DO NOT USE:**

- abrasives (Comet®, Soft Scrub® cleansers, etc.)
- caustic chemicals (Drano® clog remover, etc.)
- lubricants and cleaners containing alcohols or petroleum distillates (Pam® cooking spray, Pine-Sol® cleaner, WD-40® lubricant, etc.).

**FLUSH BALL CLEANING:** After a period of time, mineral deposits from hard water may build up on the flush ball where it contacts the seal, resulting in a slow water leak. To prevent this, periodically clean the flush ball.

1. Shut off water supply and drain water from toilet bowl.
2. Apply cleaner onto bristled end of cleaning tool (supplied with toilet).
3. Open flush ball and insert cleaning tool with bristles facing down. Close flush ball and scrub around flush ball 2-3 times (Fig. B). Wait 2-3 minutes for cleanser to loosen mineral deposits.
4. Turn on water supply. Press flush lever to open flush ball, and use cleaning tool and water to rinse away cleanser and loosened deposits.



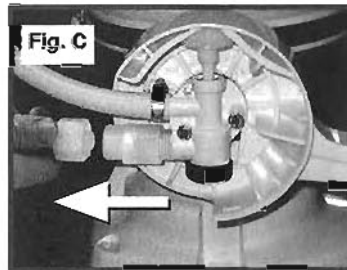
® Bar Keepers Friend is a registered trademark of ScrVas Laboratories Inc.  
 ® Clorox, Pine-Sol and Soft Scrub are registered trademarks of The Clorox Co.  
 ® Comet is a registered trademark of Prestige Brands International.

® Drano is a registered trademark of S.C. Johnson & Son Inc.  
 ® Pam is a registered trademark of ConAgra Foods.  
 ® SaniFlush is a registered trademark of Reckitt Benckiser Inc.  
 ® Teflon is a registered trademark of DuPont Co.  
 ® WD-40 is a registered trademark of WD-40 Company.

## WINTERIZING

At the end of each season, the SeaLand toilet should be winterized for storage by using potable water-safe antifreeze in the toilet system.

1. Thoroughly flush system with fresh water.
2. Drain potable water tank.
3. Add freshwater antifreeze to potable water tank.
4. Flush potable water antifreeze through toilet and into the waste holding tank. Each installation is different, so amounts for adequate protection may vary.



**NOTE:** Use nontoxic antifreeze designated for potable water systems. (See vehicle owner's manual.) Never use automotive-type antifreeze in freshwater systems.

### ADVANCED WINTERIZING OPTIONS

If toilet installation prohibits use of nontoxic antifreeze, use one of these options to protect the water valve from freeze damage:

- A. Shut off water supply to toilet. Remove water valve from toilet and store it in warm place.
- B. Shut off water supply to toilet. Remove water line from water valve (Fig. C). Carefully unscrew black cap from bottom of water valve for complete drainage. **CAUTION:** When re-attaching cap to water valve, make sure cap threads smoothly onto water valve body to avoid cross-threading and damage to valve.

## DEODORANTS AND SPECIAL TISSUE

Your SeaLand toilet requires the regular addition of a deodorant product to reduce malodors and to help break down holding tank contents. Several factors should be considered in selecting a deodorant product.

**Liquid or Granulated.** Liquid products work more quickly by readily going into solution. Granulated powder formulations have the advantage of requiring less storage space and are less likely to leak if the package is inadvertently damaged.

**Formaldehyde versus Non-Formaldehyde.** Dometic manufactures both types of deodorants. Generally speaking, formaldehyde formulas control odor very effectively at all temperatures and with all degrees of water hardness. SeaLand® NATURAL and Clean 'n Green™ brands, which are formaldehyde-free, are similarly effective.

**How Much Deodorant and How to Add It.** The deodorant is added directly into the toilet bowl, then flushed into the holding tank. Follow bottle or package instructions. Conditions of extremely warm weather, longer waste holding time and larger tank capacities may require more deodorant treatment. Also, to maintain optimum efficiency in odor control, the waste holding tank should be cleaned thoroughly at least once or more each season depending on use.

**Why Not Use Household Toilet Paper in Your Toilet.** Household tissues often contain adhesives which bond together the paper fibers from which the tissue is made. The adhesives prevent the tissue from breaking apart, and their use in "ultra-low flow" systems can cause system clogging. SeaLand tissue is especially designed for use in low water toilet systems. Its rapid dissolving properties minimize the amount of residual paper in the holding tank and allow deodorizers to work more efficiently.

**SeaLand Brand versus Other Brands.** We constantly strive to provide our system owners with effective products that have minimal environmental impact and good value. Many deodorant products do not measure up to our standards of performance and value.



SeaLand®  
Rapid-Dissolving  
Toilet Tissue  
Four 400-sheet rolls  
Part No. 379441204

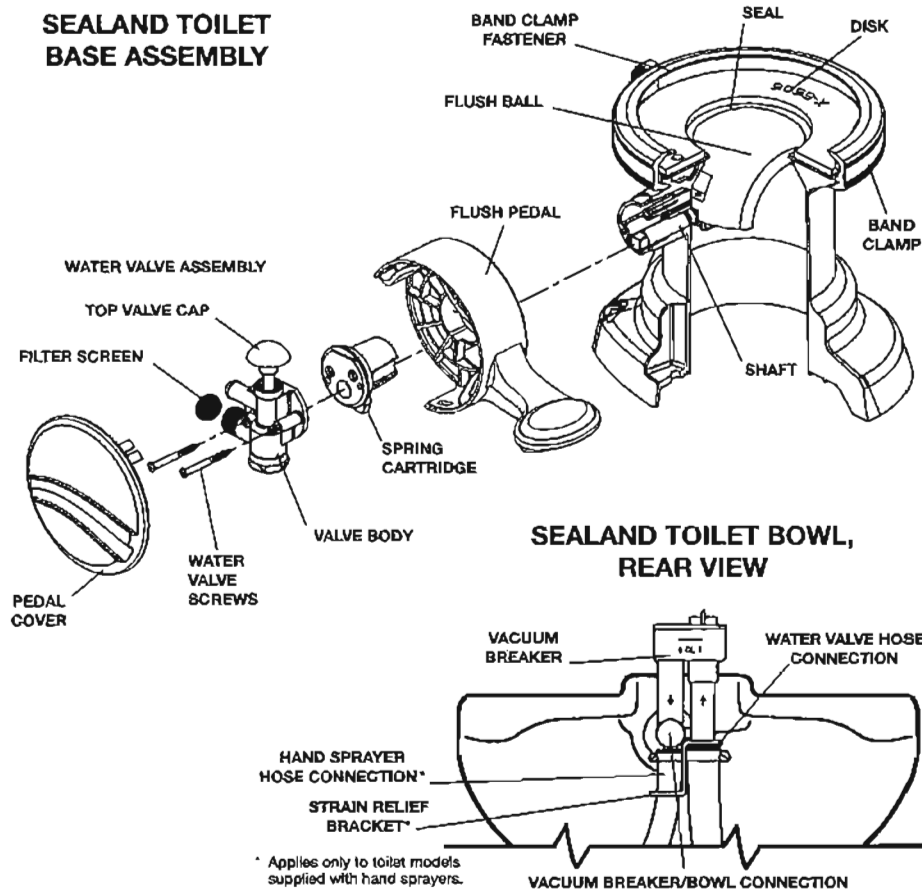
SeaLand®  
Clean 'n Green  
Bowl Cleaner &  
Tank Deodorant  
12-2 oz. drop-in pouches  
Part No. 379512602

SeaLand® NATURAL  
Liquid Deodorant  
32-oz. bottle  
Part No.  
379114032

SeaLand®  
Cleaner  
16-oz. bottle  
Part No.  
379314016

## TROUBLESHOOTING GUIDE

### SEALAND TOILET BASE ASSEMBLY



Problem	Possible Cause	Service Instructions
1. Toilet emits odor (flush ball open).	<ul style="list-style-type: none"> <li>a. Odor emitting from base of toilet.</li> <li>b. Plugged holding tank vent line.</li> </ul>	<ul style="list-style-type: none"> <li>a. Use SealLand brand deodorants.</li> <li>b. Clear obstruction from vent line.</li> </ul>
2. Water will not stay in bowl.	<ul style="list-style-type: none"> <li>a. Loose band clamp.</li> <li>b. Improper seal around flush ball due to dirt or debris on flush ball.</li> <li>c. Worn or damaged seal.</li> <li>d. Worn or damaged flush ball.</li> </ul>	<ul style="list-style-type: none"> <li>a. Tighten band clamp fastener.</li> <li>b. Inspect flush ball for foreign debris. Clean flush ball if needed.</li> <li>c. Replace seal.</li> <li>d. Replace flush ball.</li> </ul>
3. Flush ball will not close completely.	<ul style="list-style-type: none"> <li>a. Too much friction between flush ball and ball seal.</li> <li>b. Water valve screws are too tight.</li> </ul>	<ul style="list-style-type: none"> <li>a. Lubricate between flush ball and seal with lubricant (e.g. silicone spray, furniture polish).</li> <li>b. Loosen screws slightly.</li> </ul>

## TROUBLESHOOTING GUIDE (cont'd)

Problem	Possible Cause	Service Instructions
3. Flush ball will not close completely. (continued)	<ul style="list-style-type: none"> <li>c. Defective spring cartridge.</li> </ul>	<ul style="list-style-type: none"> <li>c. Check spring tension by pushing flush lever down, then release it suddenly. If lever does not snap back to original position, replace spring cartridge.</li> </ul>
4. Flush ball will not open.	<ul style="list-style-type: none"> <li>a. Broken shaft.</li> <li>b. Shaft not fully engaged in the spring cartridge.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace shaft.</li> <li>b. Rotate flush ball slightly until shaft lines up with square in spring cartridge and is fully engaged.</li> </ul>
5. Water does not shut off in toilet (toilet overflows).	<ul style="list-style-type: none"> <li>a. Worn or defective water valve.</li> <li>b. Worn or defective spring cartridge.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace water valve.</li> <li>b. Replace spring cartridge.</li> </ul>
6. Hand sprayer leaks.	<ul style="list-style-type: none"> <li>a. Hand sprayer is defective.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace hand sprayer.</li> </ul>
7. Water does not enter toilet bowl properly.	<ul style="list-style-type: none"> <li>a. Insufficient water flow rate at toilet.</li> <li>b. Water valve clogged.</li> <li>c. Plugged rim wash holes in toilet.</li> </ul>	<ul style="list-style-type: none"> <li>a. Check water flow rate at toilet. Rate should be 2 gpm (7.6 lpm) at toilet.</li> <li>b. Remove and clean screen located on water valve.</li> <li>c. Clear holes. If still a problem, replace toilet bowl.</li> </ul>
8. Water is leaking from water valve.	<ul style="list-style-type: none"> <li>a. Water valve body cracked due to freeze damage.</li> <li>b. Water line connection is loose or not seated properly.</li> <li>c. Defective water valve.</li> <li>d. Stripped threads.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace water valve.</li> <li>b. Insure that threads are not cross-threaded and tighten.</li> <li>c. Replace water valve.</li> <li>d. Replace water valve.</li> </ul>
9. Water is leaking from bottom of toilet base.	<ul style="list-style-type: none"> <li>a. Toilet is not secured to floor.</li> <li>b. Worn or defective toilet mounting floor seal.</li> <li>c. Cracked base.</li> <li>d. Worn or defective floor flange.</li> </ul>	<ul style="list-style-type: none"> <li>a. Tighten toilet mounting bolts.</li> <li>b. Replace floor seal between floor flange and toilet base.</li> <li>c. Replace base assembly.</li> <li>d. Replace floor flange.</li> </ul>
10. Water is leaking from rear of toilet bowl.	<ul style="list-style-type: none"> <li>a. Worn or defective vacuum breaker.</li> <li>b. Loose vacuum breaker.</li> <li>c. Cracked or defective toilet bowl.</li> </ul>	<ul style="list-style-type: none"> <li>a. Remove white cap from vacuum breaker. Flush toilet. If water leaks during flush, vacuum breaker needs to be replaced.</li> <li>b. Secure vacuum breaker connection. If loose, push breaker into bowl.</li> <li>c. Replace toilet bowl.</li> </ul>
11. Water is leaking from the base/toilet connection.	<ul style="list-style-type: none"> <li>a. Band clamp may be loose.</li> <li>b. Ball/bowl seals may be worn or defective.</li> </ul>	<ul style="list-style-type: none"> <li>a. Remove plastic base cover (on applicable models) and tighten band clamp fastener.</li> <li>b. Replace ball/bowl seals.</li> </ul>