

FRESH HEAD MANUAL TOILET

for pressurized fresh water rinse

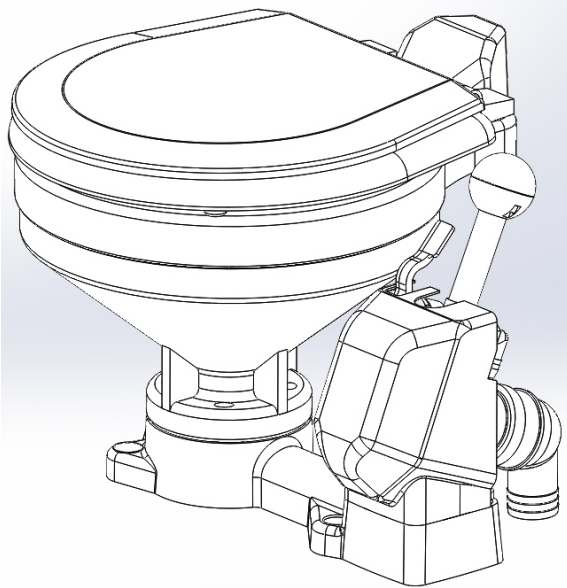
INSTALLATION AND MAINTENANCE INSTRUCTIONS

THE FOLLOWING ARE CAUTIONARY STATEMENTS THAT MUST BE READ AND FOLLOWED DURING BOTH INSTALLATION AND OPERATION

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.*



WARNING: Hazard of Flooding - Any installation made below the waterline must have vented loop positioned properly and all hose connections should be double-clamped. Discharge seacocks if used, should always be in the closed position when the toilet is not in use. Failure to do so may result in flooding, property damage and loss of life.



FRESH HEAD is a manual marine toilet designed to be flushed with pressurized fresh water. Freshwater flushing provides an odor free flush since no sealife can decay in the rim of the bowl. Discharge pump is a diaphragm pump with telescopic handle for ease in flushing. The pump can be locked to prevent waste water back flow.

FRESH HEAD is available in two models:

25M00 Marine bowl

25H00 Household bowl

Both models can have pump installed on right hand or left hand.

Model and Serial #



1-856-825-4900

www.raritaneng.com

OPERATION

1. Check to be sure handle is not in the locked position (Fig 4).
2. Press rinse water lever to wet the bowl before use (Fig 2).
3. Pump waste out using telescopic handle, move handle fully front to back slowly until all waste is evacuated from bowl.

Note: When pumping solids it is normal for a few strokes to feel soft until solids clear the flapper valve.

4. Press rinse water lever
5. Repeat step 3 and 4 as needed.
6. If leaving the boat for extended time, lock the handle to prevent back flow.
 - No special toilet paper is required.
 - Hard objects or stringy substances (paper towels, feminine hygiene products, filter cigarettes, etc.) must not be thrown into the toilet as they will cause damage.
 - Always shut off seacock(s) and pressurized water valve before leaving the boat unattended.

WARNING: Discharge pump locking seal is not intended to prevent flooding.

If difficult to pump, see troubleshooting. Using excessive force on pump handle will damage pump and void warranty.

Cleaning Instructions

IMPORTANT: Do not use cleaners that contain ammonia, ethyl acetate, phosphoric acid or concentrated chlorine bleach. These may cause damage to the toilet.

Using C.P. a bio-enzymatic toilet bowl cleaner (available from Raritan Engineering Part# 1PCP22) will keep the bowl clean and fresh smelling.

Do not use abrasive cleaners or cleaning pads.

Recommend Visual Inspection

For leaks at toilet and hose connections

- ✓ Hose clamps
- ✓ Condition of hoses
- ✓ Seacocks
- ✓ In-Line Strainer (if you have one)

Fig. 1

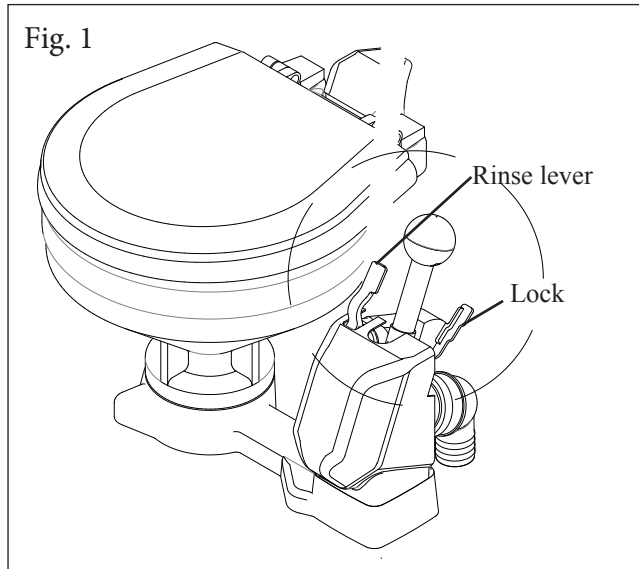


Fig. 2

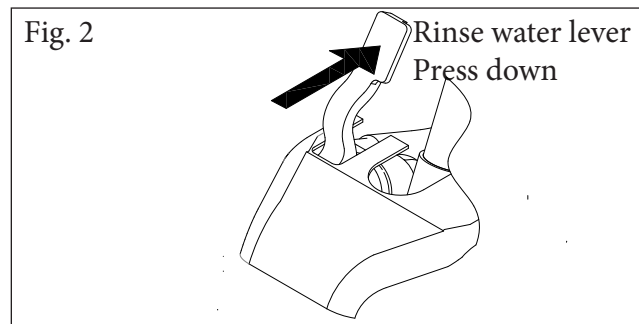


Fig. 3

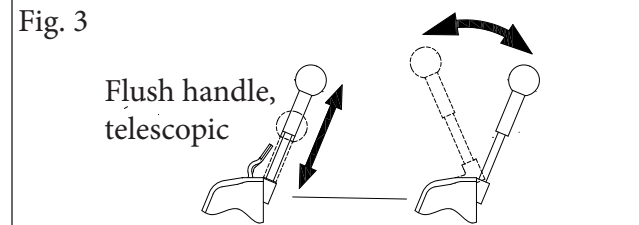
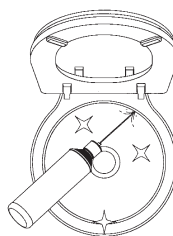
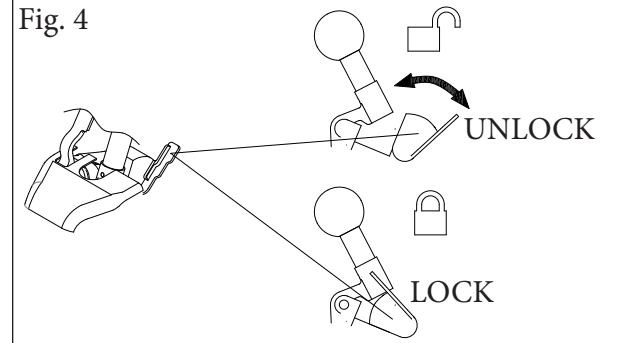


Fig. 4



MAINTENANCE

INSTALLATION OF REPLACEMENT PARTS

Overhaul kits and individual parts for your toilet may be ordered through your dealer or direct from Raritan.

WINTERIZING

Improper winter lay up is a major cause of marine toilet failures.

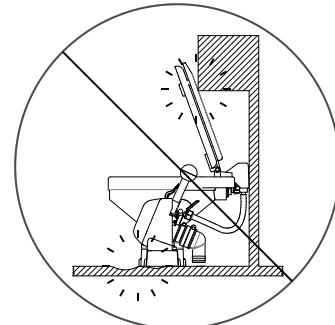
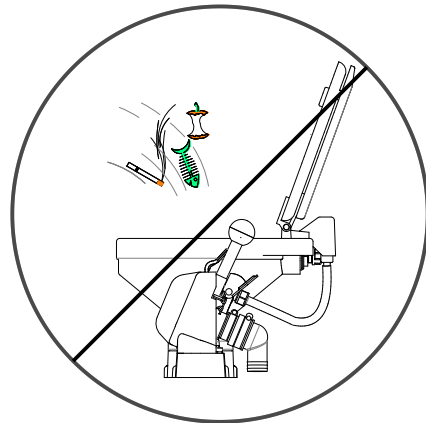
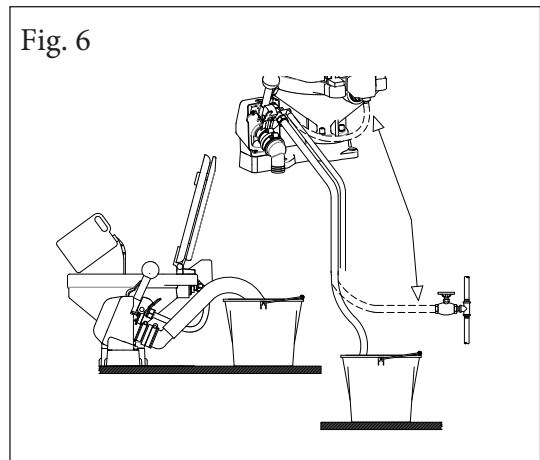
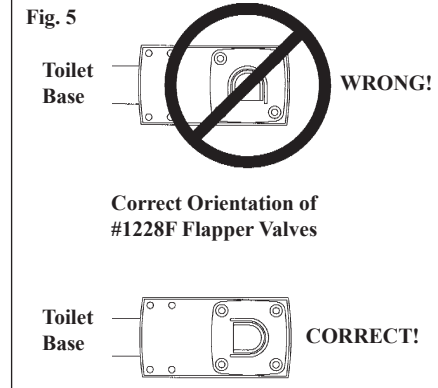
Flush plenty of water through system to ensure discharge lines are clear of sewage.

Parts Required

- 1 1/2" I.D. discharge hose approximately 3 feet long.
 - One bucket
 - Nontoxic antifreeze approximately 1 quart (DO NOT use ethanol based Antifreeze)
1. Close the intake valve and discharge seacock. Disconnect and drain the discharge hose.
 2. Press water rinse lever and let all water drain from inlet and rim. Disconnect intake hose and drain (Fig. 6).
 3. Connect short hose to discharge.
 4. Pour nontoxic antifreeze in the bowl.
 5. Flush toilet until antifreeze begins to be discharged from toilet (Fig. 6).
 6. Antifreeze should remain in the toilet until recommissioning. This will protect the discharge side of the pump. **NOTE: Holding tanks, seacocks and treatment systems need to be independently winterized, stored and recommissioned (see manufacturer's instructions).**

RECOMMISSIONING

1. Reconnect pressurized water hose to inlet valve. Open water valve for pressurized line if closed.
2. Using a bucket, press inlet valve lever and flush the antifreeze out of the toilet into bucket. Dispose of antifreeze properly, in accordance with local and federal regulations.
3. Reconnect the discharge hose and open seacock.
4. Check all connections for leaks with several test flushes.



Tools Required

- 5/16" nut driver to hose clamp
- Wrench or screw driver
- Bit for drilling mounting surface
- Hose cutters
- Tape measure

Additional Parts Required

- 1/2" NPT male adapter for inlet
- Four stainless steel mounting bolts or lag screws (minimum 5/16" [8mm]) and washers
- 1 1/2" I.D. discharge hose
- 1/2" I.D. reinforced intake hose
- Hose clamps (two for each connection below waterline)

MOUNTING

Mounting surface must be flat and solid.

1. Mark location of toilet base mounting holes on mounting surface.
2. Install seat on toilet.
3. Install vacuum breaker cover (Fig. 7).
4. Install flush handle, secure with set screw (Fig. 8).
5. Place toilet where it will be located. Make sure there is room to route hoses. Make sure seat will open properly.
6. Drill holes for toilet mounting bolts/screws.
7. Secure toilet to surface.
8. Place plugs in the mounting holes.

Fig. 7

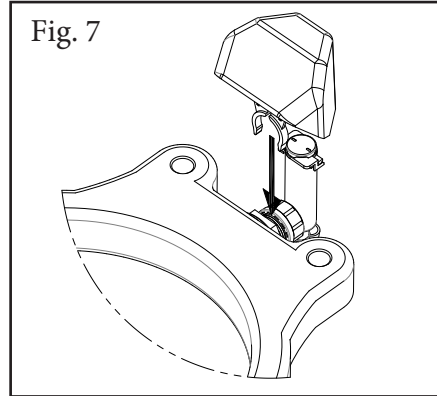


Fig. 8

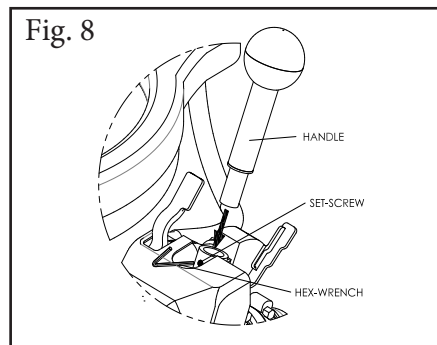
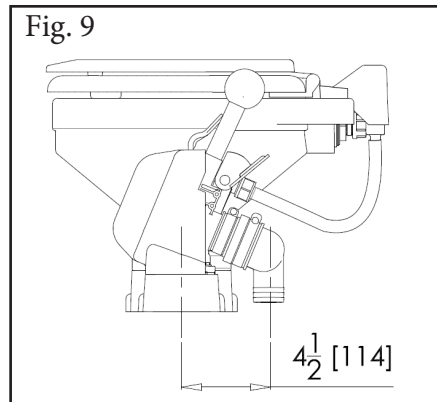


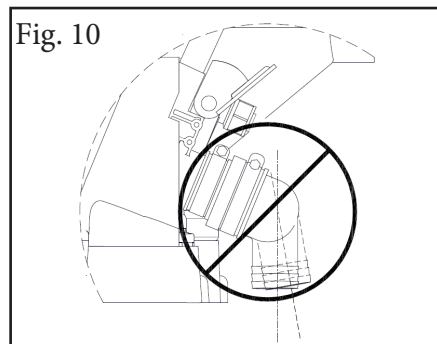
Fig. 9



Replacement of other manufacturer toilets

IMPORTANT: While toilet base mounting is the same as other toilets, the discharge fitting position may differ from original installation (Fig. 9). To ensure that the joker valve performs properly, it is important that the discharge hose is installed on the discharge fitting without forcing it out of position. See Fig.10 for orientation of discharge fitting.

Fig. 10



WARNING: HAZARD OF FLOODING

Toilets mounted at or below the waterline, at greatest angle of heel, and connected to a Seacock/Thru Hull Fitting(s) **MUST** have **VENTED LOOPS** installed in toilet discharge plumbing and between raw water intake pump and toilet bowl.

Install vented loops per manufacturer's instructions. Double clamp all below-waterline connections.

Installing a shut off valve in the pressurized waterline is recommended.

An in-line strainer for pressurized water will help prevent rinse water valve leaks. (part# 190601)

1. Connect pressurized water to rinse water valve using minimum of 1/2" line.

NOTE: DO NOT use metal adapters as the different rates of expansion may cause leakage or cracking of the valve body.

CAUTION: Do not overtighten fitting when making connection to rinse valve.

IMPORTANT: If repositioning of the discharge fitting is required, loosen the clamp closest to the pump (Fig. 12). Rotate fitting into position and tighten the clamp. This will ensure that the joker valve performs properly and the bill of the joker valve is in proper alignment with the discharge fitting (Fig. 12a).

Above water line installation:

1. A Vented loop in discharge is not required for above waterline installation. However, a vented loop may be required if water retention in the bowl is desired. A Vented loop will enable the toilet to discharge more efficiently and will help to prevent back flow.

Below water line installation:

1. Route discharge hose above discharge outlet with a vented loop.
2. Secure all hose with stainless steel hose clamps.
3. Flush and check for leaks.

Fig. 12

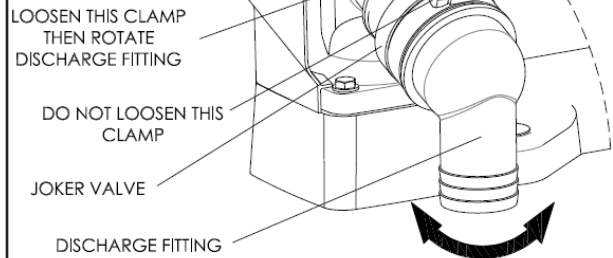


Fig. 12a

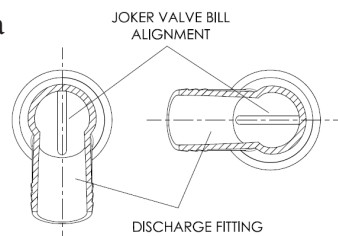
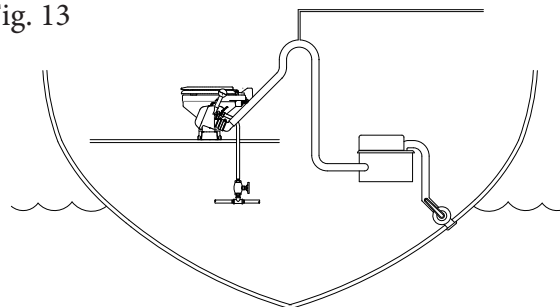
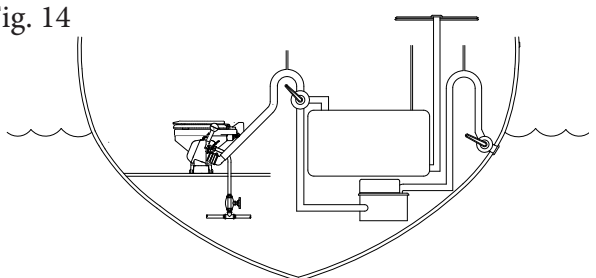


Fig. 13



FRESH HEAD with treatment system above water line

Fig. 14



FRESH HEAD with holding tank and treatment system below water line.

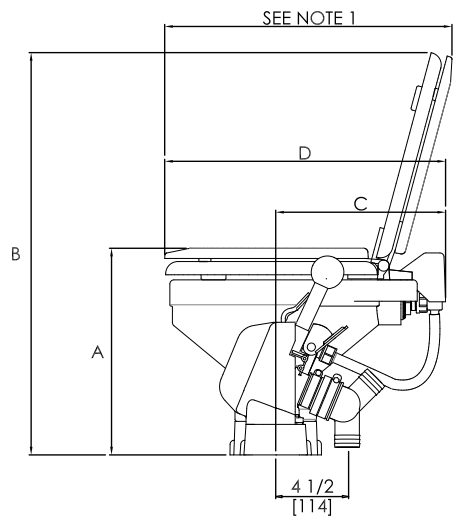
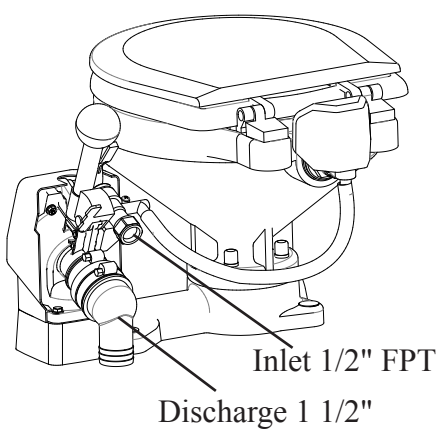
SPECIFICATIONS

Rinse water for Inlet: 1/2" FPT
 Maximum pressure 150 PSI (10 bar)
 Minimum pressure 5 PSI (0.33 bar)
 3GPM (11.3 L/min)

Discharge: 1 1/2" Hose
 Maximum height 15 feet (4.5 meter)

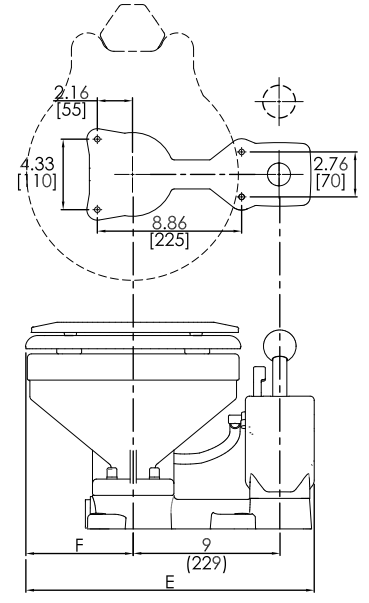
Average Water consumption per use:
 1 pint (.47L) for liquid, 3/4 G (2.8L) for solid use

Shipping weights:
 Model 25M000 - 22 Lbs (10 Kg)
 Model 25H000 - 26.5 Lbs (12 Kg)



BOWL TYPE	A	B	C	D	E	F
MARINE	13 (330)	24 3/4 (629)	10 3/8 (264)	17 1/4 (438)	17 3/4 (451)	6 1/2 (165)
HOUSEHOLD	13 1/8 (334)	27 7/8 (708)	11 1/2 (292)	20 (508)	18 1/4 (464)	7 (179)

INCHES
(MM)



NOTE:
 1. THE SEAT WILL OPEN WITHIN THE DEPTH OF THE BOWL (D). HOWEVER, IT MAY BE DESIRABLE TO INCREASE THIS ANGLE BY ALLOWING MORE ROOM AT THE BACK OF THE BOWL FOR THE SEAT TO OPEN.
 2. DIMENSIONS ARE FOR REFERENCE AS VITREOUS CHINA DIMENSIONS MAY VARY +/- 5%.

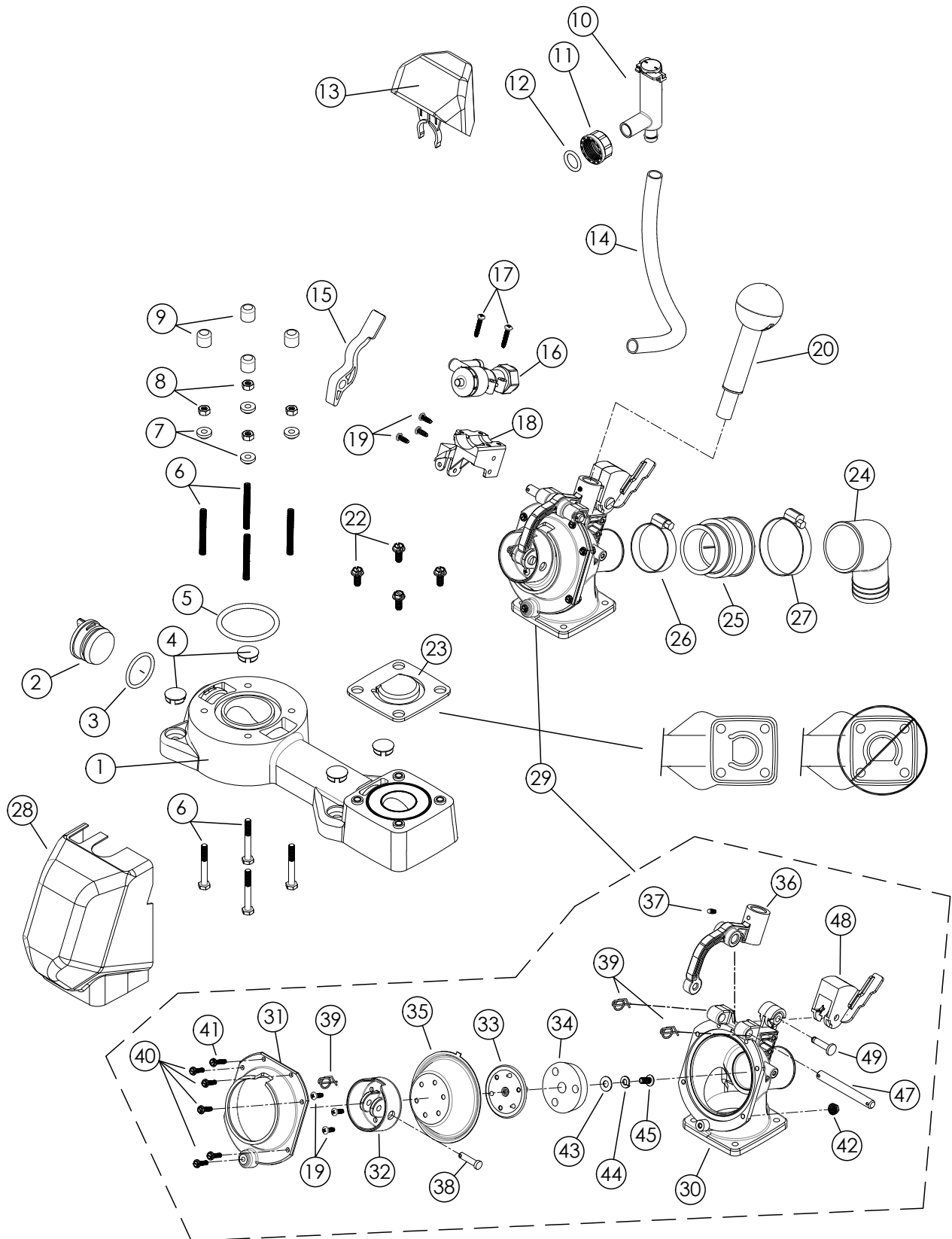
EXPLODED PARTS VIEW

PARTS LIST

ITEM #	PART#	DESCRIPTION	ITEM #	PART#	DESCRIPTION
1	25101	Base	26	25216	Joker Valve Hose Clamp (Small)
2	25102	Base Drain Plug	27	25217	Joker Valve Hose Clamp (Large)
3	25103	Base Drain Plug O-Ring Seal*	28	25214	Pump Cover
4	25104	Base Mounting Hole Plugs (4)	29	25200	Pump Assembly
5	25105	Bowl Gasket O Ring*	30	25201	Pump Base
6	F081	Bowl Bolt 1/4" - 20 X 2" S/S Hex Head (4)	31	25202	Pump Top
7	RNI	Nylon Shoulder Washer (4)*	32	25203	Diaphragm Piston
8	1226B	Nut: 1/4"-20 S/S (4)	33	25204	Diaphragm Piston Cap
9	VCAP	Vinyl Cap (4)*	34	25206	Discharge Shut Off Seal*
10	221300	Vacuum Breaker Assembly	35	227015	Diaphragm*
11	25309	Nut: Nylon Ribbed	36	25207	Piston Lever SS
12	221360	BSP Nut: O Ring	37	F352	Socket Set Screw
13	168006	Cover, Vacuum Breaker Assembly	38	25208	Clevis Pin
14	PLH-50P	Hose, 1/2"	39	1210B	Cotter Pin, Rue Ring (3)
15	25215	Inlet Valve Lever	40	F400	Screw: #8-32 X 5/8" S/S (6)
16	25300	Inlet Valve Assembly	41	F401	Screw: #8-32 X 3/4" S/S
17	F409	Screw:Phil. Thread-Forming, #8 X 1" S/S (2)	42	F402	Nut: #8-32 S/S (7)
18	25310	Inlet Valve Bracket	43	F404	Washer: 1/4" Flat S/S
19	F403	Screw:Phil. Thread-Forming,#8 X 1/2" S/S (6)	44	F405	Lock Washer: 1/4" Split S/S
20	25220	Discharge Pump Flush Handle	45	1124	Screw: 1/4-20 x 1/2" S/S
22	F408	Screw: 1/4"-20 X 5/8", S/S (4)	47	25209	Piston Shaft
23	1228F	Flapper Valve*	48	25210	Shut Off Lever
24	25212	Discharge Elbow	49	25211	Shut Off Lever Pin
25	25213	Joker Valve*			

* = Included in 2500RK Repair Kit

EXPLODED PARTS VIEW



BOWL & SEAT

- 1236AW Spud Assembly
- 1237W Marine-Size Bowl Assembly
- 1244W White Household-Style Bowl Assembly
- 1238SC Marine-Size Seat & Cover
- 1245SC White Household-Style Seat & Cover

NOT SHOWN:

- 25306 Inlet Diaphragm*
- 25307 Plunger O-ring*

* = Included in 2500RK Repair Kit

TROUBLESHOOTING

No inlet water	Bowl fills with water from discharge side
1. Check that supply valve is open	1. Joker valve not sealing 2. Flapper valve not sealing, replace valves as needed
Inlet water does not shutoff	Pump too hard
1. Check if rinse water lever is moving freely 2. Replace inlet valve 3. Low water pressure	1. Closed seacock--open 2. Blocked holding tank vent--clear 3. Clogged hose, pump--clear

SAVE THESE INSTRUCTIONS

Should a problem arise, please feel free to contact Raritan Technical Support at either the Millville, NJ or Fort Lauderdale, FL office.

LIMITED WARRANTY

Raritan Engineering Company warrants to the original purchaser that this product is free of defects in materials or workmanship for a period of one year from the product's date of purchase. Should this product prove defective by reason of improper workmanship and/or materials within the warranty period, Raritan shall, at its sole option, repair or replace the product.

1. TO OBTAIN WARRANTY SERVICE, Consumer must deliver the product prepaid, together with a detailed description of the problem, to Raritan at 530 Orange St., Millville, N.J. 08332, or 3101 SW 2nd Ave. Ft. Lauderdale, FL 33315. When requesting warranty service, purchaser must present a sales slip or other document which establishes proof of purchase. THE RETURN OF THE OWNER REGISTRATION CARD IS NOT A CONDITION PRECEDENT OF WARRANTY COVERAGE. However, please complete and return the owner Registration Card so that Raritan can contact you should a question of safety arise which could affect you.
2. THIS WARRANTY DOES NOT COVER defects caused by modifications, alterations, repairs or service of this product by anyone other than Raritan; defects in materials or workmanship supplied by others in the process of installation of this product; defects caused by installation of this product other than in accordance with the manufacturer's recommended installation instructions or standard industry procedures; physical abuse to, or misuse of, this product. This warranty also does not cover damages to equipment caused by fire, flood, external water, excessive corrosion or Act of God.
3. ANY EXPRESS WARRANTY NOT PROVIDED HEREIN, AND ANY REMEDY FOR BREACH OF CONTRACT WHICH BUT FOR THIS PROVISION MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, IS HEREBY EXCLUDED AND DISCLAIMED. ALL IMPLIED WARRANTIES SUCH AS THOSE OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, IF APPLICABLE, AS WELL AS ANY IMPLIED WARRANTIES WHICH MIGHT ARISE BY IMPLICATION OF LAW, ARE EXPRESSLY LIMITED TO A TERM OF ONE YEAR. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG A LIMITED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.
4. UNDER NO CIRCUMSTANCES SHALL RARITAN BE LIABLE TO PURCHASER OR ANY OTHER PERSONS FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT, OR OTHERWISE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.
5. No other person or entity is authorized to make any express warranty, promise or affirmation of fact or to assume any other liability on behalf of Raritan in connection with its products except as specifically set forth in this warranty.
6. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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