
CARAVAN SANITATION SYSTEM

OWNER'S MANUAL

**VacuFlush® 1600 Series Toilets and
Holding Tank Systems for European Caravans (HTS-EC)**

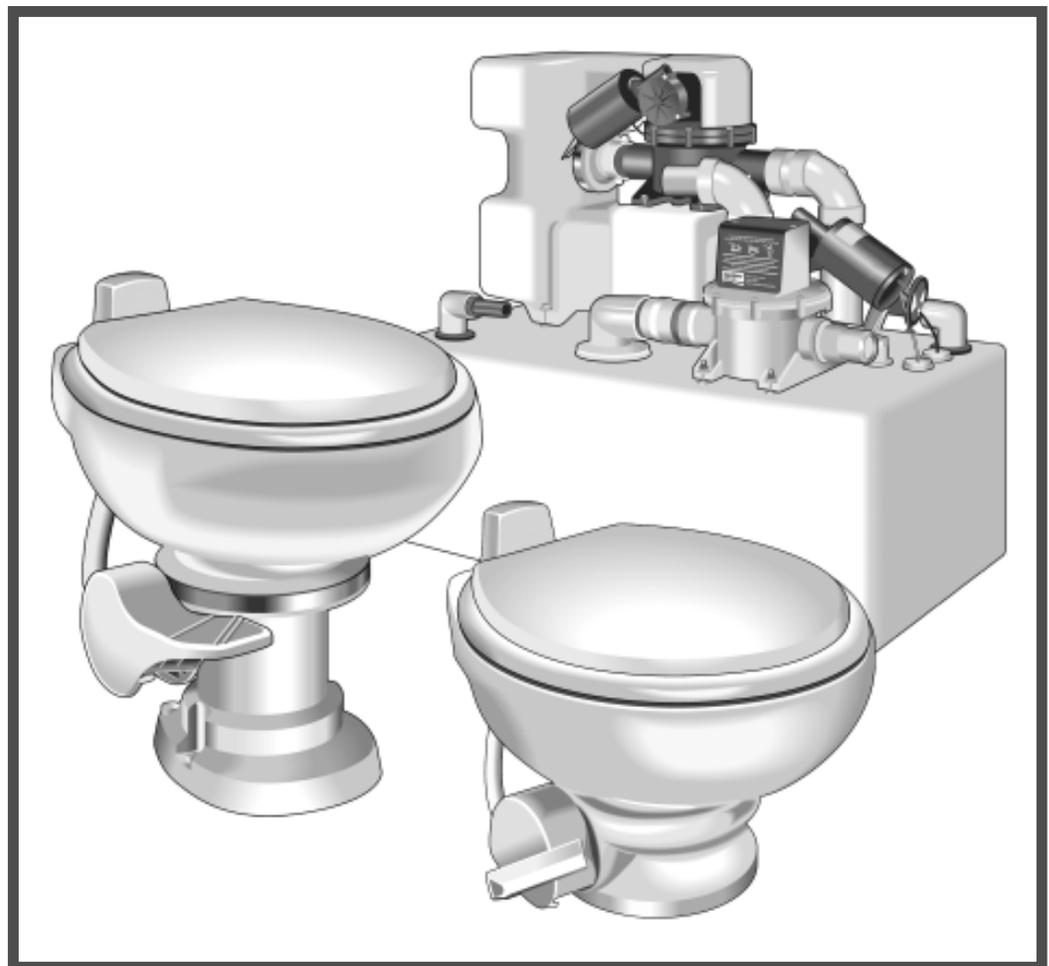


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WARNING – PUMP STARTS AUTOMATICALLY.

Turn off electrical power before servicing.

Read and understand the complete contents of this manual before operating or servicing the holding tank system. Failure to follow these precautions may result in damage to the sanitation system.

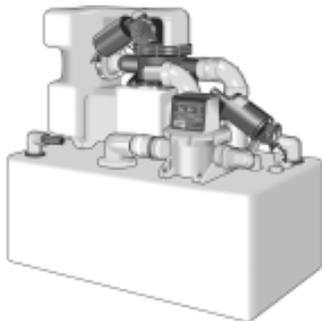
Dometic reserves the right to change specifications without notice.

FEATURES

Dometic Caravan Sanitation Systems are the newest standard in mobile sanitation. Each system is comprised of a VacuFlush 1600 series toilet and a vacuum holding tank system – a fully integrated vacuum generator/holding tank module designed specifically for European caravans.



The Comfortable Choice. Dometic VacuFlush toilets are handcrafted from vitreous china, are easy to clean and are durable – much like the one in your home. The lustrous bowl provides all the beauty and easy cleanability of a household toilet, while the full-size seat and lid provide the same comfort.



Fully Integrated Design. Dometic HTS-EC systems combine the vacuum generator, level indicators, discharge pump and holding tank into one, easy-to-install package. Available in 35-, 60-, and 90-liter capacities.

Extended Tank Capacity. Because the VacuFlush® toilet consumes as little as 0.4 liters of water per flush, the holding tank provides sufficient capacity for several days of travelling without having to empty the onboard system.

Vigorous Flushing Action. Vacuum action clears the bowl in an instant while fragmenting the waste before it enters the holding tank.

No Unpleasant Odours. No Chemicals. The holding tank is fitted outside the bathroom with an in-line filter that stops malodours from escaping through the vent connection.

Easy Operation. The status panel in the bathroom signals when it is okay to flush, when the holding tank is full, and when the vacuum level is too low for flushing. A separate monitor panel displays the tank capacity status. A safety feature automatically shuts down the sanitation system if the holding tank is full.

Unmatched Durability. Holding tank comes with nominal 10 mm wall thickness. All inlet and outlet fittings connect from the top of the tank for easy access.

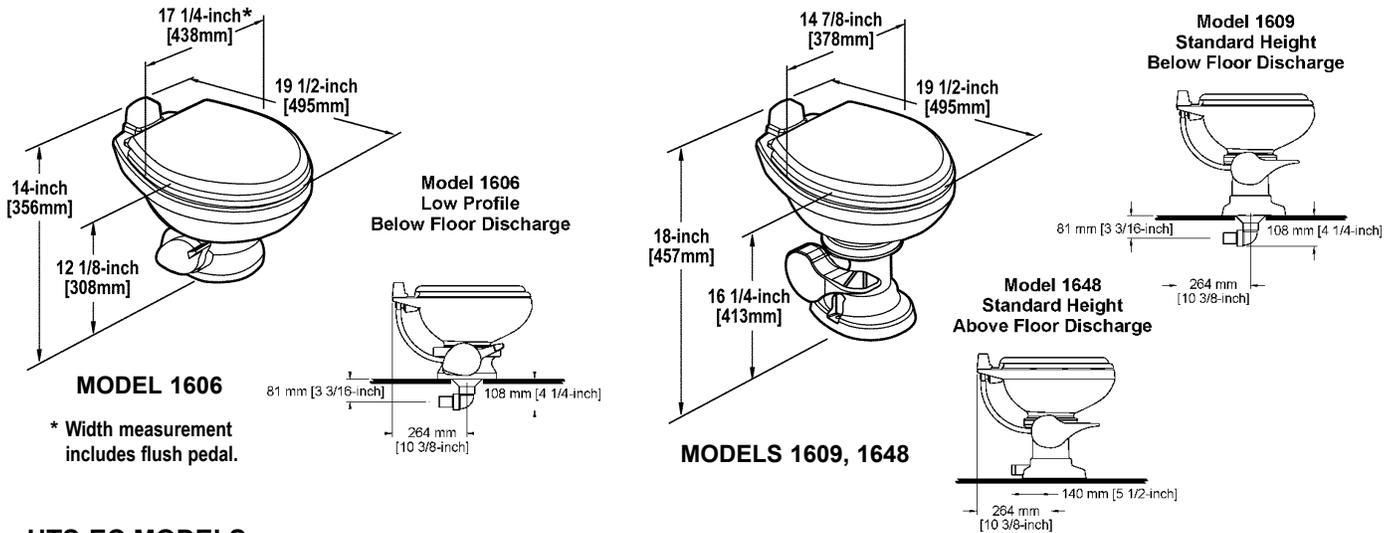
Dumping with a Push of a Button. No cassette tanks to carry – just position your vehicle within a few meters of the dumping station, unroll flexible sanitation hose, and turn on the discharge pump. The tank is emptied in minutes.

MODEL NUMBERS AND DIMENSIONS

1600 SERIES TOILETS

Model	Description	Size	Weight
		Length x Width x Height	
1606	Low-profile vacuum toilet. Below-floor discharge.	495 mm x 438 mm x 356 mm 19 1/2" x 17 1/4" x 14"	10 Kg 22 Lbs.
1609	Standard-height vacuum toilet. Below-floor discharge.	495 mm x 378 mm x 457 mm 19 1/2" x 14 7/8" x 18"	10.4 Kg 23 Lbs.
1648	Standard-height vacuum toilet. Above-floor, rear discharge.	495 mm x 378 mm x 457 mm 19 1/2" x 14 7/8" x 18"	10.4 Kg 23 Lbs.

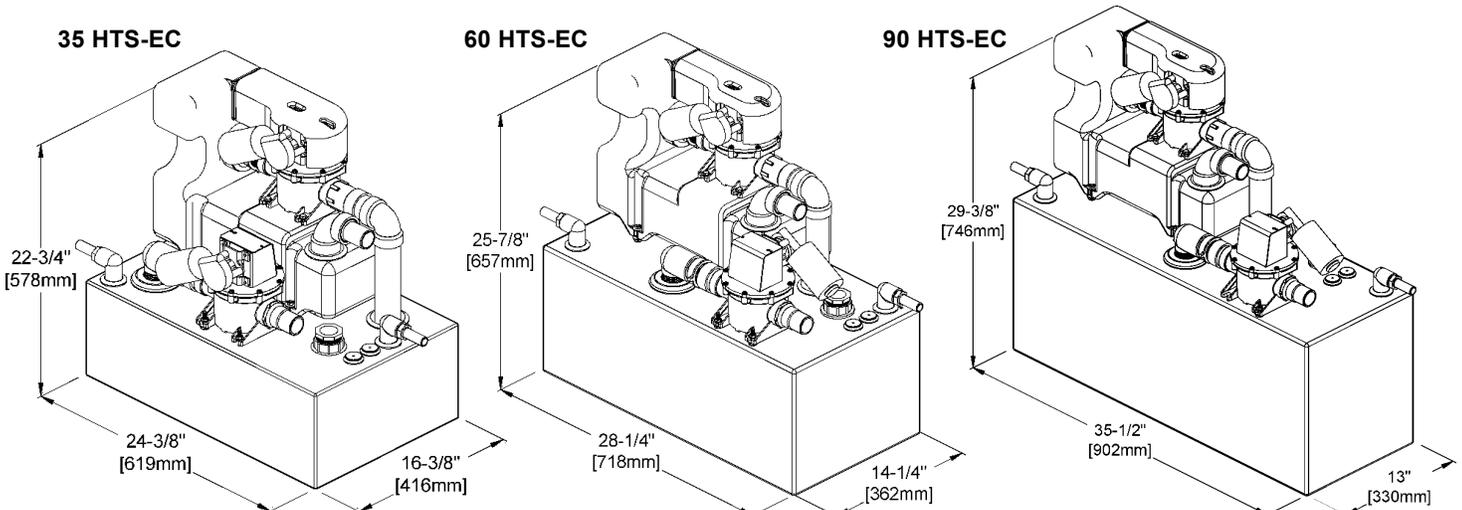
All models flush with as little as .47 liters (1 pint) of water. Dimensions may vary 10mm (3/8"). Weights may vary 5%.



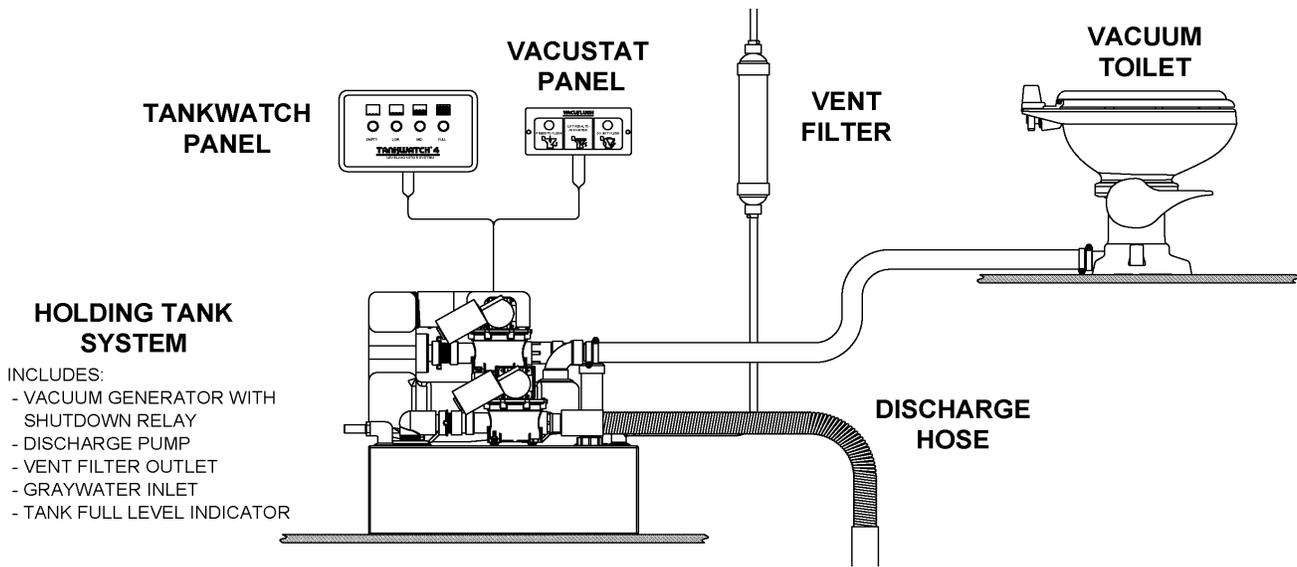
HTS-EC MODELS

Model	Size Length x Width x Height	Usable Capacity	Weight	Max. Weight	Number of Flushes*
35 HTS-EC	619mm x 416mm x 578mm 24 3/8" x 16 3/8" x 22 3/4"	35 Liters 9.2 Gallons	20.2 Kg 44.5 Lbs.	55.3 Kg 122 Lbs.	27
60 HTS-EC	718 mm x 362 mm x 657 mm 28 1/4" x 14 1/4" x 25 7/8"	60 Liters 15.8 Gallons	22.9 Kg 50.5 Lbs.	83 Kg 183 Lbs.	47
90 HTS-EC	902 mm x 330 mm x 746 mm 35 1/2" x 13" x 29 3/8"	90 Liters 23.8 Gallons	27.4 Kg 60.5 Lbs.	117.9 Kg 260 Lbs.	70

* VacuFlush toilets use as little as 0.4 l (0.11 gal.) of water per flush. Because we recommend adding more water when flushing solids, we conservatively estimate average water use at 0.76 l (0.2 gal.) per flush. Total effluent averages 1.29 l (.34 gal.) per flush.



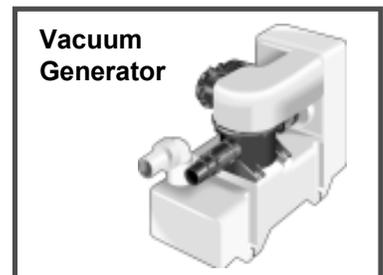
KEY SYSTEM COMPONENTS



Vacuum Toilet: The VacuFlush toilet operates differently as compared to other toilets. VacuFlush systems use a small amount of water (from as little as 400 ml) per flush in addition to a powerful vacuum. The toilet is connected to a pressurized fresh-water system. Because a vacuum generator is located between the vacuum toilet and the waste holding tank, the result is an **odor-free bathroom compartment**. VacuFlush toilets are equipped with an integral anti-siphon vacuum breaker which prevents the possible contamination of the fresh water supply.



Vacuum Generator: The vacuum generator creates the vacuum required to move waste from the toilet to the waste holding tank. It combines a vacuum tank and a vacuum pump in one unit. System vacuum level is monitored by a vacuum switch located on the vacuum tank. When this switch senses a drop in vacuum in the system, it automatically signals the pump to energize and bring the vacuum to operating level. This process is normally completed in less than one minute. The vacuum pump design is both an efficient air and liquid pump that handles solids without a problem. It has two duckbill valves on each side of the pump chamber to maintain vacuum and prevent backflow of waste. It is manufactured of long-lasting polypropylene and draws only 4 to 6 amps of current at 12 volts DC.



VacuStat® Status Panel: The status panel is mounted in the bathroom. A green light indicates that sufficient vacuum is available for the next flush. The red light indicates that the vacuum is building and the pump is running. The red light also indicates that the holding tank is full and the pump has been deactivated until the tank is emptied.



TankWatch® Level Monitor: Includes four tank level indicator lights – Empty, Low, Mid and Full, and international symbology of four tank levels. One light is always on to indicate that system is operating. Panel is connected to three (Empty, Mid, Full) probes in holding tank. No electrical components come in contact with waste or water. Operates on 12 or 24-volt DC. Uses only .017 amps at 12 volts.



VacuFlush Shutdown Relay: To prevent overflowing of a holding tank, a shutdown relay is supplied as standard with the TankWatch panel. The relay shuts off power to the vacuum generator when the holding tank reaches the "Full" level, preventing overflowing of the holding tank.

KEY SYSTEM COMPONENTS (cont'd)

SaniGard™ Holding Tank Vent Filter: The vent filter stops odors that escape from the holding tank vent. It contains odor-removing filter media to keep your boat smelling clean and pleasant. Each cartridge is good for an entire season and is easily replaced for a fresh start.



SaniGard Vent Filter

"Tank Full" Float Switch: The Tank Full Float Switch is mounted in top of the holding tank or vent pipe, and shuts the vacuum pump or vacuum generator off when the float switch is activated by the rising contents of the holding tank. This relay also sends a signal to the status panel red light. This relay is prewired and mounted to the pump on the vacuum generator. For systems using a vacuum tank and separate pump, it is mounted separately during installation and wired accordingly.

Tank Full Float Switch



SaniPump™ Discharge Pump: For thorough, trouble-free holding tank pump-out, our discharge pump offers many benefits. Its specially designed bellows diaphragm allows it to run dry without harm. It handles up to 315 gallons (1192 liters) per hour, while drawing only 6 amps at 12 volts DC.

Discharge Pump



NOTE: On/Off switch for discharge pump is supplied by installer.

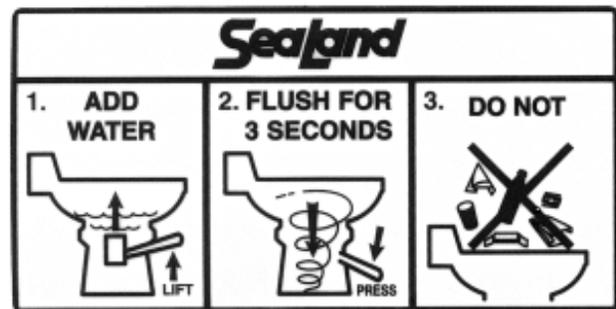
Discharge Hose: Reinforced, 32 mm ID, 3-meter discharge hose. Includes 38 mm adapter to connect to discharge pump outlet.

Discharge Hose



IMPORTANT INFORMATION BEFORE OPERATION

1. Fill freshwater tank and add deodorant to holding tank through toilet bowl.
2. Make sure all guests understand the operation of the VacuFlush system and the instruction label is in plain sight and easy for guests to read. **If this label is not included in this manual, please contact Dometic's Customer Service Department immediately.**
3. Remember the vacuum pump starts automatically. Shut off the electrical power to the system before servicing and **do not** leave the recreational vehicle with toilet system breaker on.
4. **Never use drain openers, alcohol, solvents, etc. in the system.**
5. If the system does not function properly, refer to the Troubleshooting Section of this manual and repair as necessary. If problem persists, contact your local Dometic product dealer or see the Customer Service section of this manual.



SYSTEM START-UP

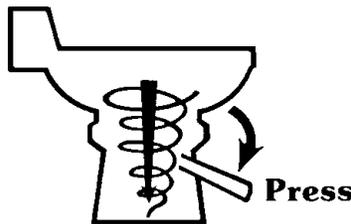
1. Turn on electrical power to sanitation system.
2. Flush water into system by depressing flush lever on toilet until water starts flowing through the vacuum pump and into the holding tank (blackwater tank). This wets the pump interior for efficient operation. If the vacuum pump does not run, check for loose electrical connections. Refer to the system Wiring Diagram.
3. The vacuum pump will run for approximately 30 to 90 seconds until the system reaches operating vacuum level and then will shut off.

VACUUM TOILET OPERATION

1. To add water to the toilet before using, raise flush lever until desired water level is reached. Generally, more water is required only when flushing solids.



2. To flush toilet, press flush lever sharply down to the floor until contents clear bowl. A sharp popping noise is normal when the vacuum seal is broken and flushing action begins. Be sure to hold lever down for three seconds. If flush lever is accidentally released before waste clears bowl, do not attempt to flush toilet again until vacuum pump stops running. A small amount of water should remain in the bowl after flushing.



3. Do not dispose of sanitary napkins or other non-dissolving items in toilet, such as facial tissue or paper towels. These items can cause plugging of the system. Refer to the Deodorants and Special Tissue section in this manual for more information.



HOLDING TANK OPERATION – DISCHARGE

1. Position vehicle close to sewage dumping facility.
2. Unroll discharge hose, remove plastic cap, and insert end into dumping facility.
3. Activate discharge pump.
4. After tank is empty, the tank can be rinsed. (Note: Rinsing systems vary by vehicle. Consult vehicle dealer.)
5. Discharge rinse water into dumping facility. Drain all water from discharge hose. Put plastic cap on end of hose. Roll up and store hose.

CLEANING – HOLDING TANK

A small amount of water remains in all holding tanks. It is good practice to rinse the tank after the contents have been discharged. This can be accomplished by adding water to the toilet bowl. Add 237 ml (8 oz.) of SeaLand® Holding Tank Deodorant to the bowl. Flush the entire contents into the holding tank and continue flushing until the discharge from the holding tank is clear.

Do not use chlorine-based cleaners, caustic cleaners or chemicals, such as drain-opening products, as they may damage the system's seals and hose.

WINTERIZING – HOLDING TANK

If using antifreeze to winterize the holding tank system, use only propylene glycol freshwater antifreeze that **does not contain alcohol**. Antifreeze that contains alcohol will result in damage to your sanitation system.

1. Pump out holding tank.
2. Thoroughly flush the system with fresh water before adding propylene glycol freshwater antifreeze to the HTS.
3. Turn off electrical power.

PROPER TOILET CLEANING AND MAINTENANCE

Dometic china toilets should be cleaned regularly for maximum sanitation and operational efficiency. You can clean it just as you would a household toilet. **Do not use caustic chemicals, such as drain-opening types, as they will damage the seals.**

BOWL CLEANING: For stubborn stains, use SeaLand® Bowl and Seal Cleaner (Fig. A). It's manufactured especially for use with Dometic toilets. In certain locations 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 this cleaner is not available, you can also use Bar Keepers Friend® cleanser. It is not necessary to vigorously scrub with either product. Please follow label instructions.



SEAL CLEANING: After an extended time, mineral deposits from hard water can build up under the edge of the rubber bowl seal, resulting in a slow leakdown of water from the bowl. To prevent this mineral build-up, periodically clean under the bowl seal with SeaLand Bowl and Seal Cleaner (Fig. B).



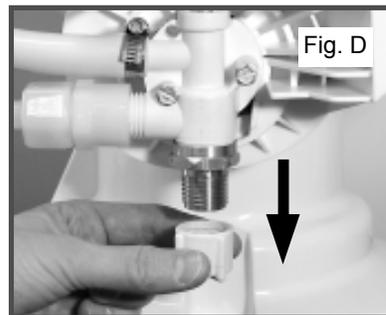
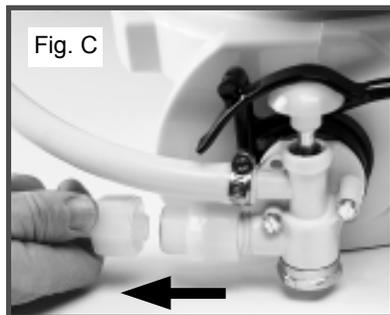
1. Shut off water supply and power to vacuum pump or vacuum generator.
2. Apply cleanser onto a cleaning brush, open the flush ball by pressing on flush lever, and scrub under the seal. Make sure to push brush bristles between bottom of seal and top of flush ball surface to scrub all parts of seal that come into contact with flush ball.
3. Close ball and wait 2-3 minutes.
4. Open flush ball. Use brush and water to rinse away cleanser and loosened deposits.
5. After cleaning, turn on water and electrical power to toilet system.

WINTERIZING – TOILET

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

To drain:

1. Thoroughly flush system with fresh water.
2. Empty holding tank.
3. **Model 1606 only:** Shut off water supply to toilet(s), and remove inlet waterline (Fig. C). **Do not remove brass cap on bottom of valve.**
Model 1609, 1648: Shut off water supply to toilet(s), and remove plastic cap from bottom of brass fitting (Fig. D). **Do not remove brass fitting on bottom of water valve.**
4. Press flush lever until all water is drained from toilet(s).



MAINTENANCE SCHEDULE

Maintenance intervals and normal parts replacement vary widely depending on numerous factors such as frequency of system use, quality of flushing water, etc. The following chart is intended strictly as a general guide in keeping the sanitation system 100% ready for any conditions of use.

Maintenance Procedure	Recommended Date of Service	Parts Required
ROUTINE MAINTENANCE		
Toilet flush ball seal cleaning	Monthly	SeaLand Bowl and Seal Cleaner
Tighten toilet seat mounting hardware	Monthly (or as needed)	N/A
MAJOR SYSTEM MAINTENANCE		
Replace duckbill valves in vacuum generator or vacuum pump	Every three years	Duckbill Valve Kit: Item No. 310076 (2)
Replace flush ball seal and flush ball (if needed)	Every three years	Flush Ball Seal: see Parts List Flush Ball: see Parts List

SPARE PARTS

It is recommended that the following parts be kept at all times. They are especially important for vacuum system emergency repair when you are in areas where replacement parts are not readily available.

Description	Part Number	Quantity	Where Used
Flush Ball Seal	see Parts List	1	Vacuum Toilet
Flush Ball	see Parts List	1	
Water Valve	see Parts List	1	
Vacuum Breaker Assembly	see Parts List	1	
Vacuum Switch Kit	see Parts List	1	Vacuum Generator (or Vacuum Pump and Vacuum Tank)
1.5-inch Duckbill Valve Kit (2 ea. per kit)	310076	2	

SERVICE TIP

Checking for water leaks behind or under toilets or other appliances can make it difficult to locate the source. Dripping water at room temperature makes it difficult to feel wetness. Taking four or five sheets of toilet tissue and wiping all seams and waterline connections offers a simple means of locating the general area of the leakage. Start at the top of the unit since gravity will cause a leak to run downward. When the tissue comes in contact with the leaking water, it will immediately change texture.

ORDERING PARTS

Dometic is ready to assist you in the event that service is required. Before calling your local dealer or parts distributor, please have the following information available. Your cooperation in having this information ready is appreciated.

1. Toilet Model Number (See following section.)
2. Serial Number
3. Part Number, Description and Quantity (See Parts List information.)

TOILET MODEL IDENTIFICATION

The model identification label is located on the toilet base, and will show the model number and serial number. The label for Model 1606 is located on the base under the pedestal cover. VacuFlush 1609 and 1648 models' identification labels are on the back of the base. If label is not available, please refer to "Model Numbers and Dimensions" on page 3 for toilet model identification.

DOMETIC CORPORATION

P.O. BOX 38, 13128 STATE RT 226 (800) 321-9886
BIG PRAIRIE, OH 44611 USA

MODEL NO. **000**

SERIAL NUMBER

000000

SPECIAL TOILET TISSUE AND CLEANER

Why Not Use Household Toilet Paper in Your Dometic 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 tissues are especially designed for use in low water toilet systems. Their rapid-dissolving properties minimize the amount of residual paper in the holding tank and contribute to more through pump-out of the waste holding tank.

SeaLand Bowl and Seal Cleaner: This cleaner is specially formulated to clean quickly and effectively without harming the vitreous china finish, as well as the vacuum and water seals in the VacuFlush system. Refer to page 7 for proper cleaning procedures.

SeaLand versus Other Brands: Dometic constantly strives to provide our system owners with effective products that have minimal environmental impact and good value. Many other competitive products do not measure up to our standards of performance and value.



**SeaLand®
Ultra 2-Ply
Rapid-Dissolving
Toilet Tissue**

Four 500-sheet rolls

**Part No.
379441205**



**SeaLand®
Cleaner**

16-oz. bottle

**Part No.
379314016**



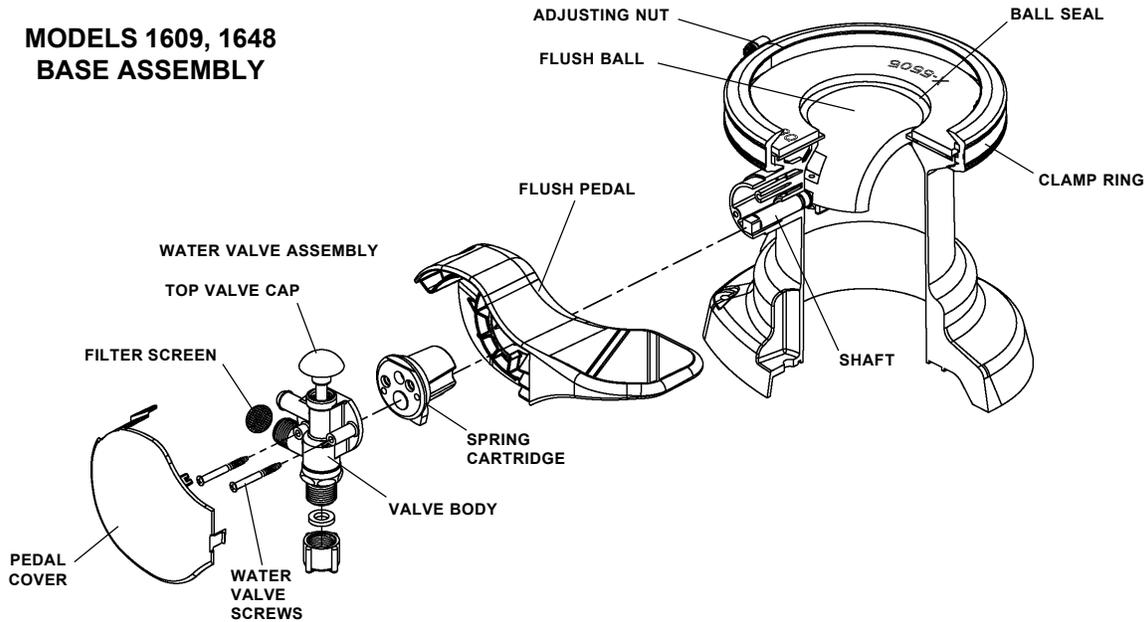
**SeaLand®
Rapid-Dissolving
Toilet Tissue**

Four 400-sheet rolls

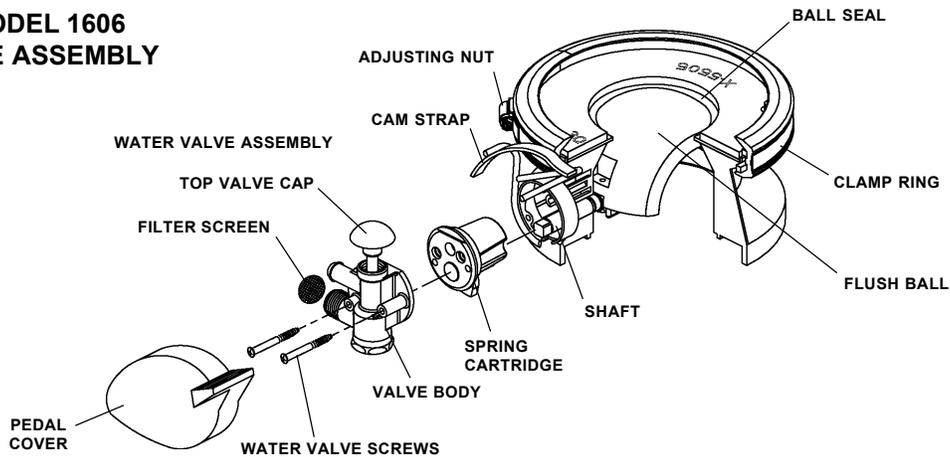
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379441204**

TROUBLESHOOTING GUIDE

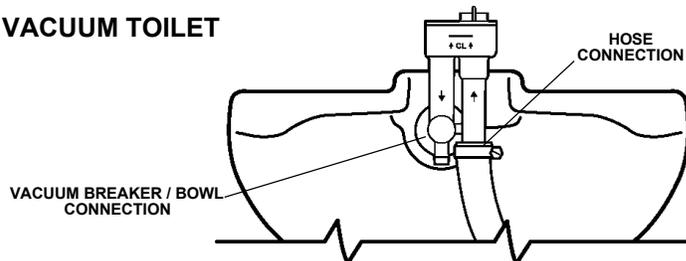
MODELS 1609, 1648 BASE ASSEMBLY



MODEL 1606 BASE ASSEMBLY



REAR VIEW, VACUUM TOILET



Problem	Possible Cause	Service Instructions
1. Water will not stay in bowl.	<ul style="list-style-type: none"> a. Loose clamp ring. b. Improper seal around flush ball due to dirt or debris on underside of ball seal. c. Worn or damaged seal. d. Worn or damaged flush ball. 	<ul style="list-style-type: none"> a. Tighten clamp ring adjusting screw. b. Inspect flush ball and underside of seal for foreign objects. Clean under seal if needed (see page 7). c. Replace seal. d. Replace flush ball.

TROUBLESHOOTING GUIDE

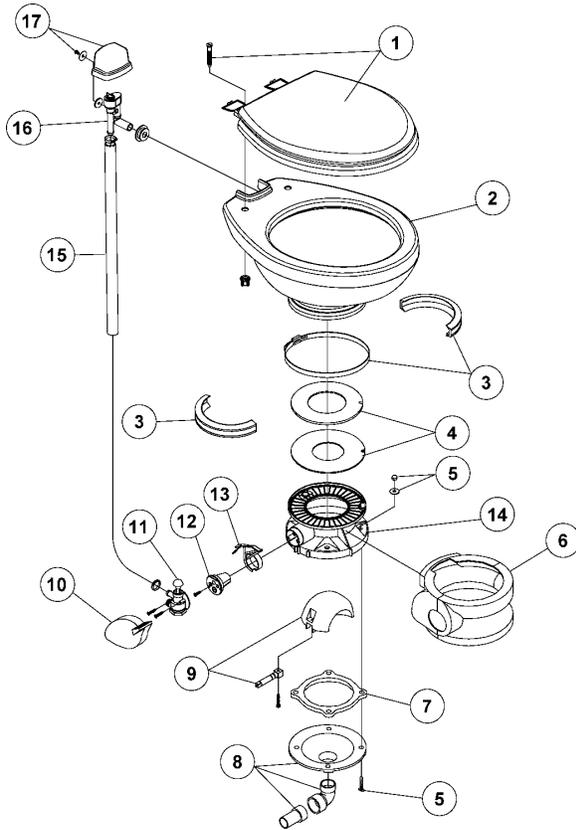
Problem	Possible Cause	Service Instructions
2. Flush ball will not close completely.	<ul style="list-style-type: none"> a. Clamp ring is overtightened, causing too much tension on seal and flush ball. b. Weak or defective flush lever return spring. 	<ul style="list-style-type: none"> a. Loosen clamp ring. b. Check spring tension by letting up on flush lever suddenly. If lever does not snap back, replace spring cartridge assembly.
3. Water does not shut off in toilet (toilet overflows).	<ul style="list-style-type: none"> a. Dirt lodged in water valve seat. b. Flush lever cam strap is bent down, holding water valve open. c. Worn or defective water valve. d. Worn or defective flush lever return spring. 	<ul style="list-style-type: none"> a. Disassemble and clean water valve. b. Bend front of cam strap up about 1/16" (1.6mm). (Model 1606 only) c. Replace water valve. d. Replace spring cartridge.
4. Water does not enter toilet bowl properly.	<ul style="list-style-type: none"> a. Low water pressure. b. Water valve clogged. 	<ul style="list-style-type: none"> a. Check incoming water pressure. b. Remove and clean filter screen inside water valve inlet.
5. Water leaking from water valve. (See Service Tip on page 8.)	<ul style="list-style-type: none"> a. Loose connection. b. Worn or defective water valve. c. Water line connection not seated properly. 	<ul style="list-style-type: none"> a. Tighten bottom cap, inlet fitting and outlet hose clamp. b. Replace water valve. c. Remove water line and assemble correctly.
6. Water leaking from rear of toilet bowl. (See Service Tip on page 8.)	<ul style="list-style-type: none"> a. Loose hose connection. b. Loose vacuum breaker. c. Defective vacuum breaker. d. Cracked or defective toilet bowl. 	<ul style="list-style-type: none"> a. Tighten hose clamp. b. Check breaker/bowl connection. If loose, push breaker into bowl. c. Replace vacuum breaker. d. Replace toilet bowl.
7. Vacuum pump running too much between flushes. (See Vacuum Tester information on page 7.)	<ul style="list-style-type: none"> a. Flush ball leaks. b. Vacuum line leak. c. Duckbill valves in pump not sealing. (This problem occurs gradually. The pump takes longer periods of time to shut off between flushes.) d. Pump bellows worn or damaged. 	<ul style="list-style-type: none"> a. Leave small amount of water in toilet. If water is sucked from bowl, see problems 1 and 2. b. Check all piping connections between toilet and vacuum tank. c. Disassemble inlet and outlet fittings on pump and inspect all four duckbill valves. If valves are not sealing, replace them. d. Inspect bellows in pump for small hole or rip. Replace if necessary.
8. Toilet will not flush. (No vacuum.)	<ul style="list-style-type: none"> a. Vacuum pump will not run. b. Plugged vacuum line between toilet and vacuum breaker. c. Duckbill valves or vacuum pump installed backwards. d. Vacuum pump inlet or outlet lines plugged. e. Plugged vacuum tank or vacuum generator. 	<ul style="list-style-type: none"> a. See problem 9. b. Disconnect line and clear plug. c. Make certain pump and duckbill valves are installed correctly. Replace valves if stuck open. d. Disassemble and clean. e. Unplug vacuum tank or vacuum generator.

TROUBLESHOOTING GUIDE

Problem	Possible Cause	Service Instructions
9. Vacuum pump will not run.	<ul style="list-style-type: none"> a. No electrical power. b. "Tank full" float switch is stuck c. Loose or broken electrical wiring. d. Faulty vacuum switch. e. Faulty motor. 	<ul style="list-style-type: none"> a. Check input power, circuit breaker. b. Remove switch and clean or replace. c. Tighten or reconnect wires at vacuum pump, vacuum generator, vacuum tank, status panel, "tank full" float switch relay. d. Replace vacuum switch. e. Replace motor.
10. Vacuum pump will not shut off.	<ul style="list-style-type: none"> a. Excessive vacuum leak. b. Faulty vacuum switch. c. Duckbill valves in vacuum pump are defective. d. Vacuum pump or vacuum generator needs primed. e. Improper wiring. 	<ul style="list-style-type: none"> a. See problem 7. b. Replace vacuum switch. c. Replace duckbill valves. d. Prime pump by charging system with water. e. Check wiring. Refer to wiring diagram.
11. Vacuum pump running too slow, overheating, or tripping circuit breaker.	<ul style="list-style-type: none"> a. Low voltage. b. Loose or corroded wiring. c. Wire size is too small. d. Discharge line is blocked between vacuum pump and holding tank, causing high back pressure. e. Plugged or defective duckbill valve in vacuum pump. f. Plugged holding tank vent line. g. Pump motor worn or defective. h. Pump bellows clogged with tissue. 	<ul style="list-style-type: none"> a. Check for low voltage. b. Tighten loose connections, replace corroded wiring. c. Replace with proper size wire. d. Disassemble and clean discharge line. e. Disassemble pump and clean or replace duckbill valves. f. Disassemble and clean vent line. g. Check motor and replace if necessary. h. Remove and clean. Use more water during flushing.
12. Vacuum pump emits odor.	<ul style="list-style-type: none"> a. Loose or defective hose connections on pump. b. Torn or punctured pump bellows. 	<ul style="list-style-type: none"> a. Tighten connections. b. Replace pump bellows.
13. Blockage between toilet and vacuum generator or vacuum tank.	<ul style="list-style-type: none"> a. Collapsed vacuum line. b. Too many elbows or bends in vacuum line. c. Improper operation of toilet. d. Flushing foreign objects down toilet. 	<ul style="list-style-type: none"> a. Inspect vacuum line for collapsed condition and replace line. b. Reconfigure vacuum line to reduce number of elbows. c. Make sure toilet is being operated correctly. d. DO NOT flush any non-dissolving items (i.e. sanitary napkins, facial tissue, wet strength tissue, paper towels, etc.) or excessive toilet tissue down toilet. Rapid-dissolving SeaLand® toilet tissue is best.

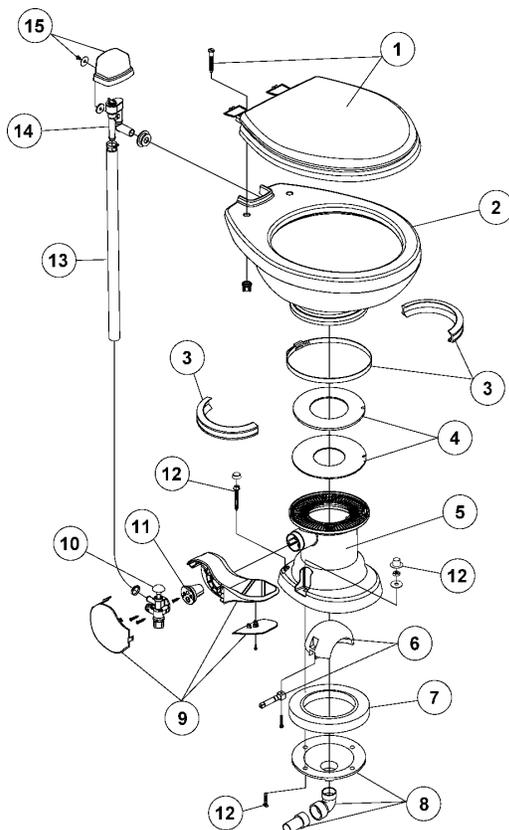
PARTS LIST

MODEL 1606



Item	Part No.	Description
1	385344088	Seat Assembly, White
2	385310790	China Bowl Kit, White
3	385310048	Ring & Half Clamp Kit, White
4	385316140	Teflon® & Rubber Seal Kit
5	385310064	Floor Bolt Mounting Kit
6	385310108	Pedestal Cover Kit, White
7	600341549	Floor Flange Seal
8	385318864	Funnel Kit (includes item 7)
9	385318162	Ball, Shaft & Cartridge Kit
10	385310117	Pedal Cover Kit, White
11	385314349	Water Valve Kit
12	385236096	Spring Cartridge Kit
13	600340825	Flush Lever
14	385310943	Base Kit, White (includes items 3-13)
15	600340177	Supply Hose
16	385310687	Vacuum Breaker Kit
17	385310795	Vacuum Breaker Cover Kit, White

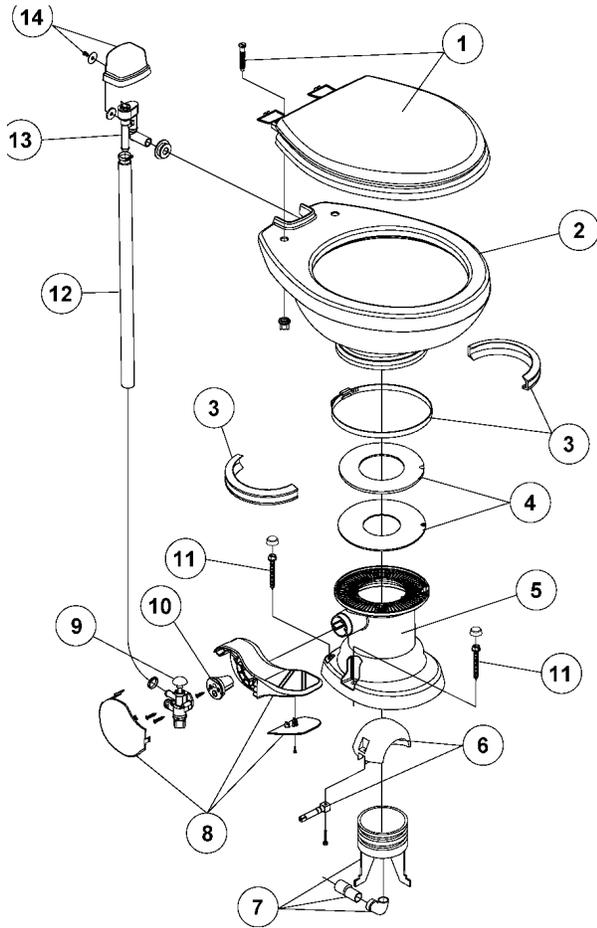
MODEL 1609



Item	Part No.	Description
1	385344088	Seat Assembly, White
2	385310790	China Bowl Kit, White
3	385310025	Ring & Half Clamp Kit, White
4	385316140	Teflon® & Rubber Seal Kit
5	385310942	Base Kit, White (includes items 3-11)
6	385310954	Ball, Shaft & Cartridge Kit
7	600343938	Floor Flange Seal
8	385310944	Funnel Kit (includes item 7)
9	385310682	Flush Pedal Kit, White
10	385310966	Water Valve Kit
11	385310683	Spring Cartridge Kit
12	385310794	Mounting Kit
13	600340177	Supply Hose
14	385310687	Vacuum Breaker Kit
15	385310795	Vacuum Breaker Cover Kit, White

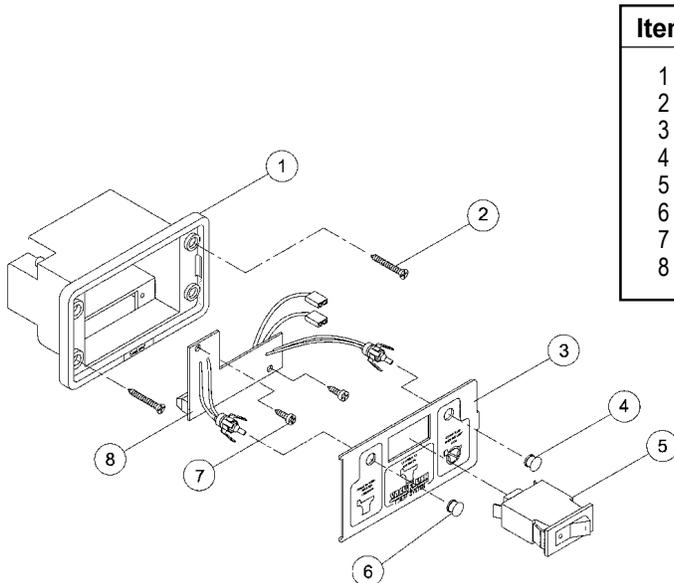
PARTS LIST

MODEL 1648



Item	Part No.	Description
1	385344088	Seat Assembly, White
2	385310790	China Bowl Kit, White
3	385310025	Ring & Half Clamp Kit, White
4	385316140	Teflon® & Rubber Seal Kit
5	385310941	Base Kit, White (includes items 3-11)
6	385310954	Ball, Shaft & Cartridge Kit
7	385318741	Funnel Kit
8	385310682	Flush Pedal Kit, White (includes item 12)
9	385310966	Water Valve Kit
10	385310683	Spring Cartridge Kit
11	385310940	Mounting Kit
12	600340177	Supply Hose
13	385310687	Vacuum Breaker Kit
14	385310795	Vacuum Breaker Cover Kit, White

VACUFLUSH STATUS PANEL

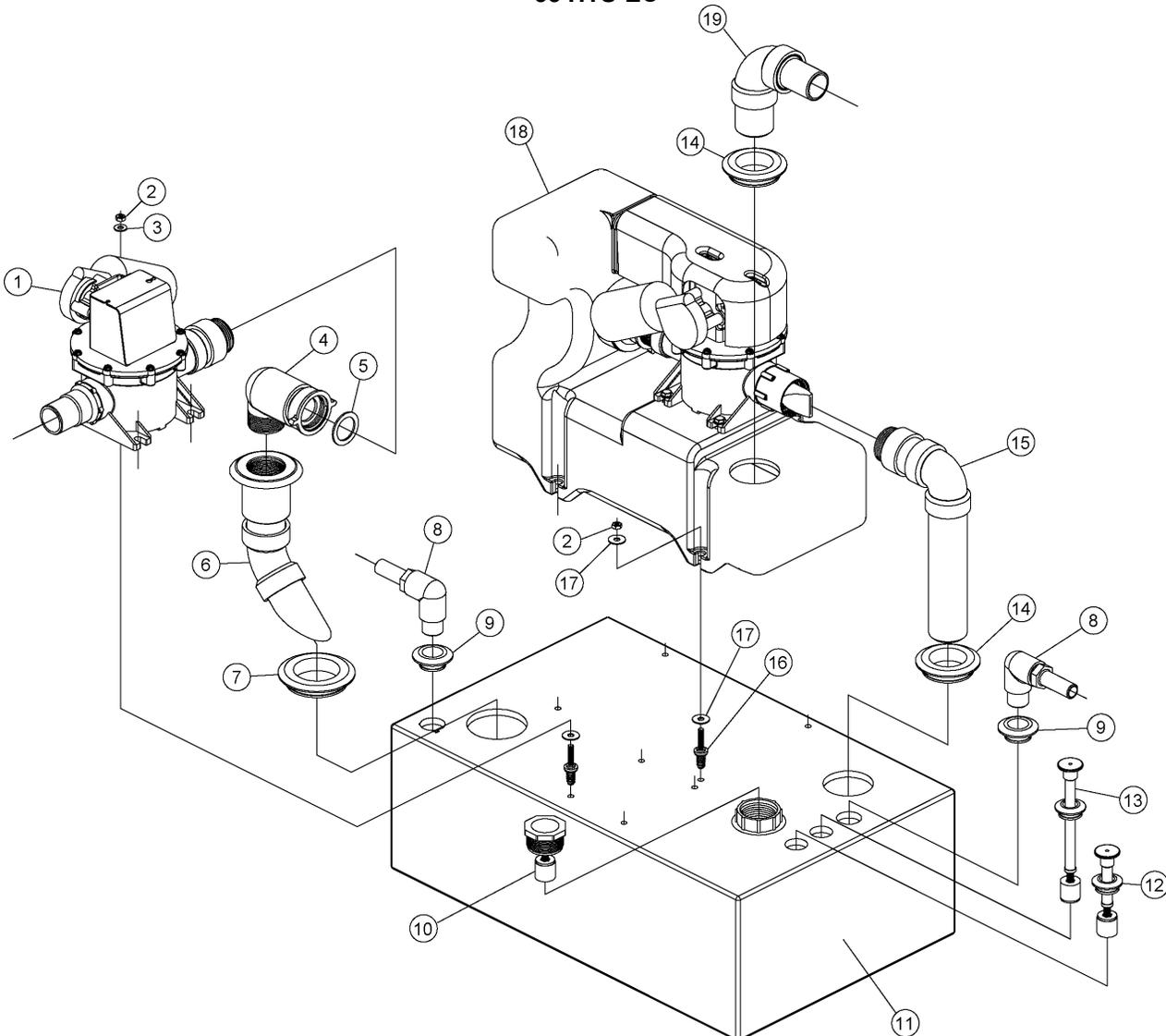


Item	Part No.	Description
1	600342400	VacuFlush Status Panel Housing
2	600340471	#6 x 1" Long Oval Phillips Head Screw
3	600343786	VacuFlush Status Panel Face Plate
4	600342493	Red Lens
5	600342652	Circuit Breaker, 10 amp
6	600342495	Green Lens
7	600340488	#6 x 3/8" Long Pan Phillips Head Screw
8	385310730	RV VacuFlush Status Control Panel

PARTS LIST – 35 HTS-EC

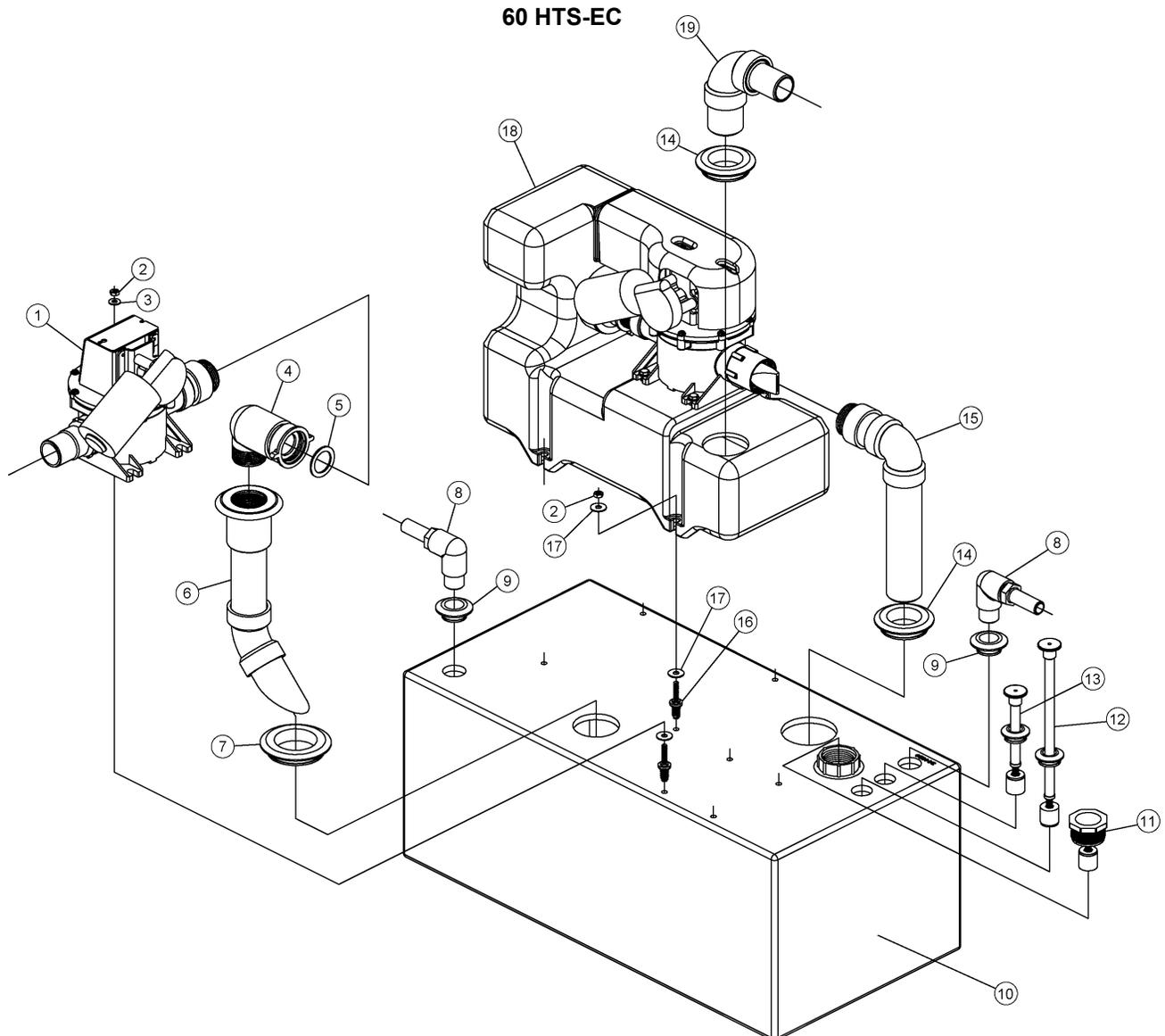
Item	Part No.	Description
1	385310930	Discharge Pump, 38 mm Adapter, Deutsch Connectors, 12 VDC
2	600346604	Nut, 1/4-20, SS
3	600346795	Washer, .625" x .281" x .05", SS
4	385310931	Quick-Connect 38 mm MPT Elbow
5	600342781	Slip Nut Seal
6	385310937	Diptube Kit
7	600343023	51 mm Uniseal®
8	385310938	19 mm Inlet Elbow
9	600343689	19 mm Uniseal
10	313900100	Tank Full Float, MPT Style
11	385310932	35 HTS-EC Tank
12	385310933	Kit, Mid Level Probe
13	385310934	Kit, Empty Level Probe
14	600342932	38 mm Uniseal
15	385310935	Kit, VG Elbow Outlet to Tank
16	385310939	Kit, Component Mounting Insert
17	600347167	Washer, .850" x .294" x .05, SS
18	317759012	Vacuum Generator, 12 VDC
19	385310635	Inlet Elbow

35 HTS-EC



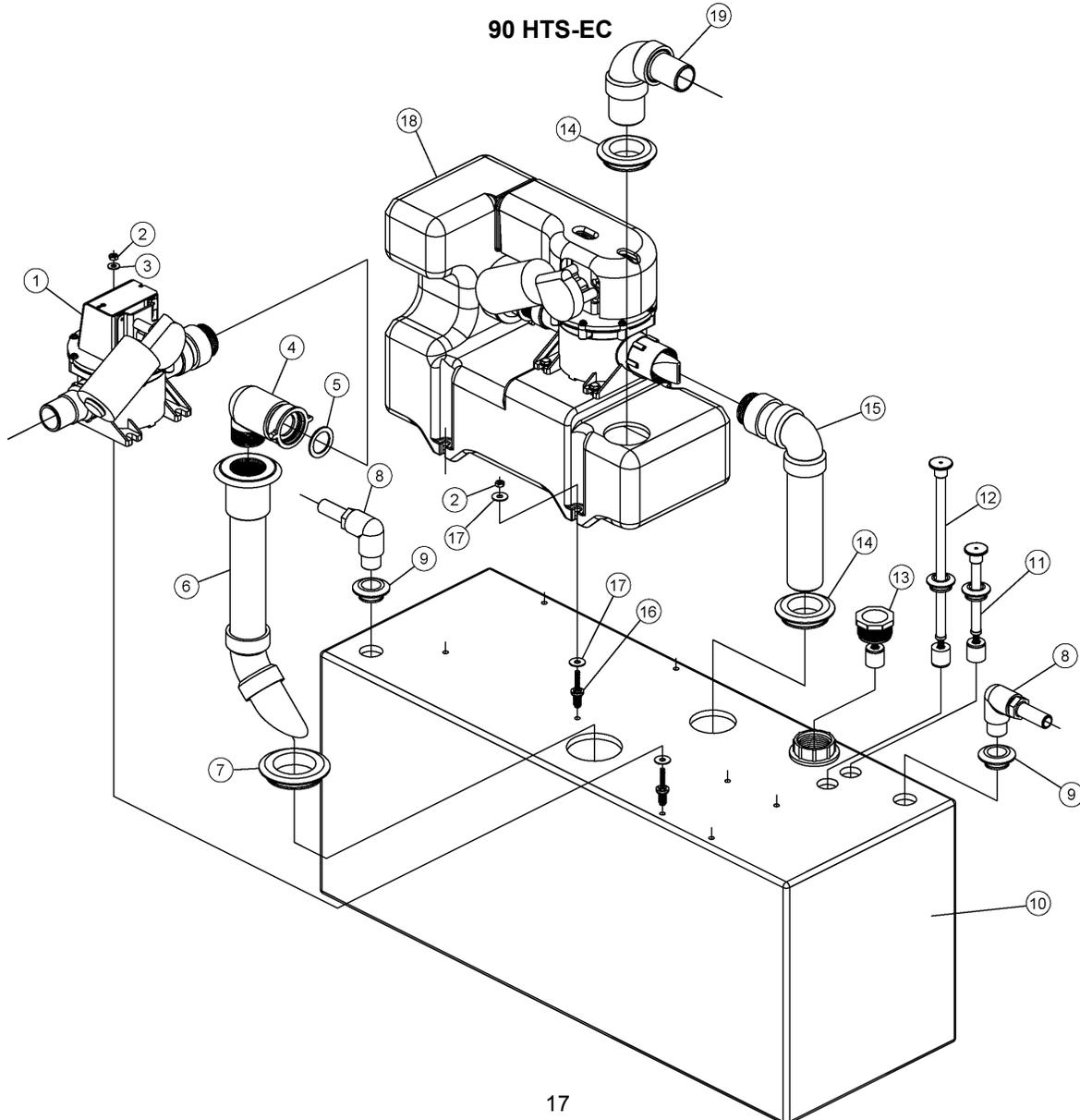
PARTS LIST – 60 HTS-EC

Item	Part No.	Description
1	385310945	Discharge Pump, 38 mm Adapter, Deutsch Connectors, 12 VDC
2	600346604	Nut, 1/4-20, SS
3	600346795	Washer, .625" x .281" x .05", SS
4	385310931	Quick-Connect 38 mm MPT Elbow
5	600342781	Slip Nut Seal
6	385310946	Diptube Kit
7	600343023	51 mm Uniseal®
8	385310938	19 mm Inlet Elbow
9	600343689	19 mm Uniseal
10	385310947	60 HTS-EC Tank
11	313900100	Tank Full Float, MPT Style
12	385310948	Kit, Empty Level Probe
13	385310949	Kit, Mid Level Probe
14	600342932	38 mm Uniseal
15	385310935	Kit, VG Elbow Outlet to Tank
16	385310939	Kit, Component Mounting Insert
17	600347167	Washer, .850" x .294" x .05, SS
18	317759012	Vacuum Generator, 12 VDC
19	385310635	Inlet Elbow



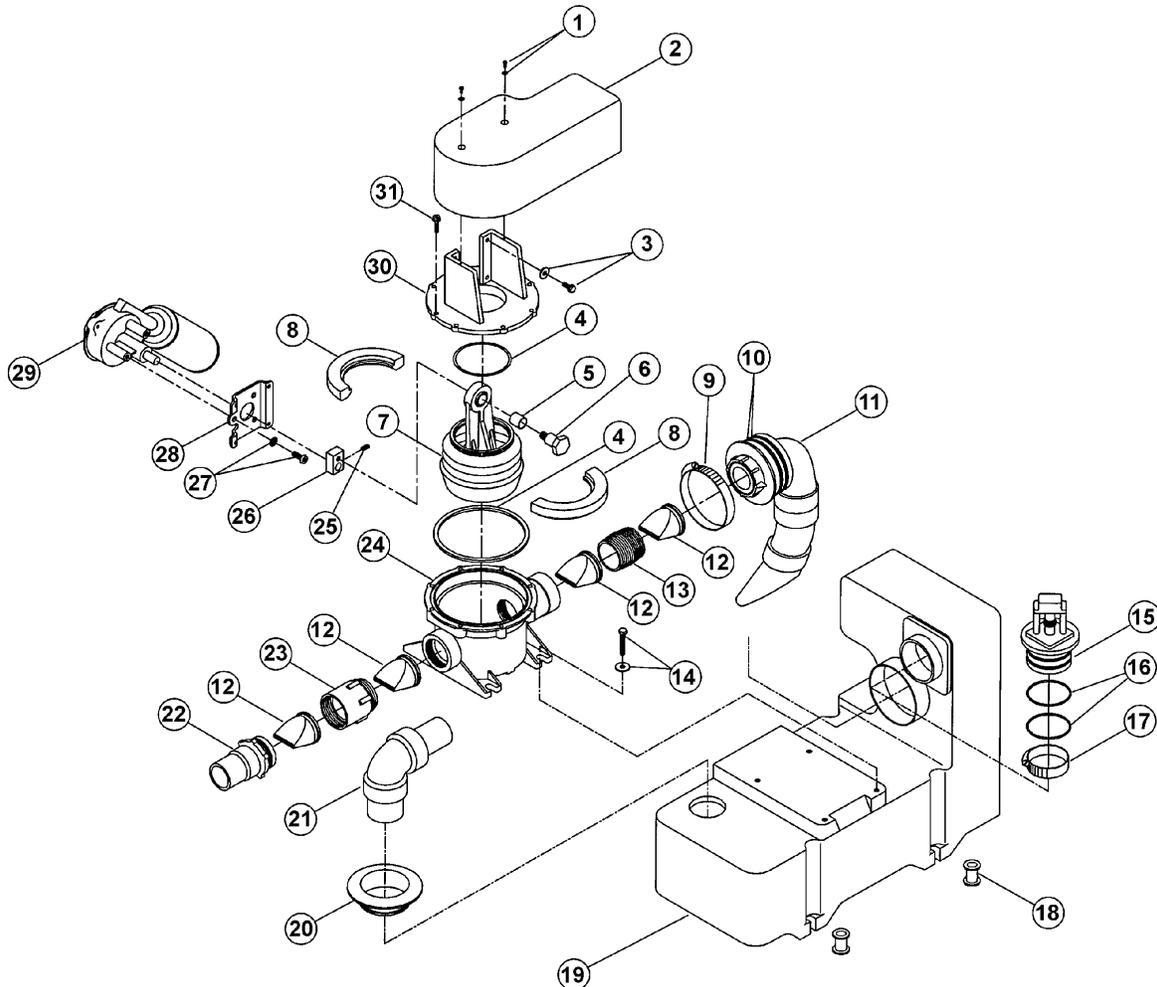
PARTS LIST – 90 HTS-EC

Item	Part No.	Description
1	385310945	Discharge Pump, 38 mm Adapter, Deutsch Connectors, 12 VDC
2	600346604	Nut, 1/4-20, SS
3	600346795	Washer, .625" x .281" x .05", SS
4	385310931	Quick-Connect 38 mm MPT Elbow
5	600342781	Slip Nut Seal
6	385310950	Diptube Kit
7	600343023	51 mm Uniseal®
8	385310938	19 mm Inlet Elbow
9	600343689	19 mm Uniseal
10	385310951	90 HTS-EC Tank
11	385310952	Kit, Mid Level Probe
12	385310953	Kit, Empty Level Probe
13	313900100	Tank Full Float, MPT Style
14	600342932	38 mm Uniseal
15	385310935	Kit, VG Elbow Outlet to Tank
16	385310939	Kit, Component Mounting Insert
17	600347167	Washer, .850" x .294" x .05, SS
18	317759012	Vacuum Generator, 12 VDC
19	385310635	Inlet Elbow



PARTS LIST – VACUUM GENERATOR

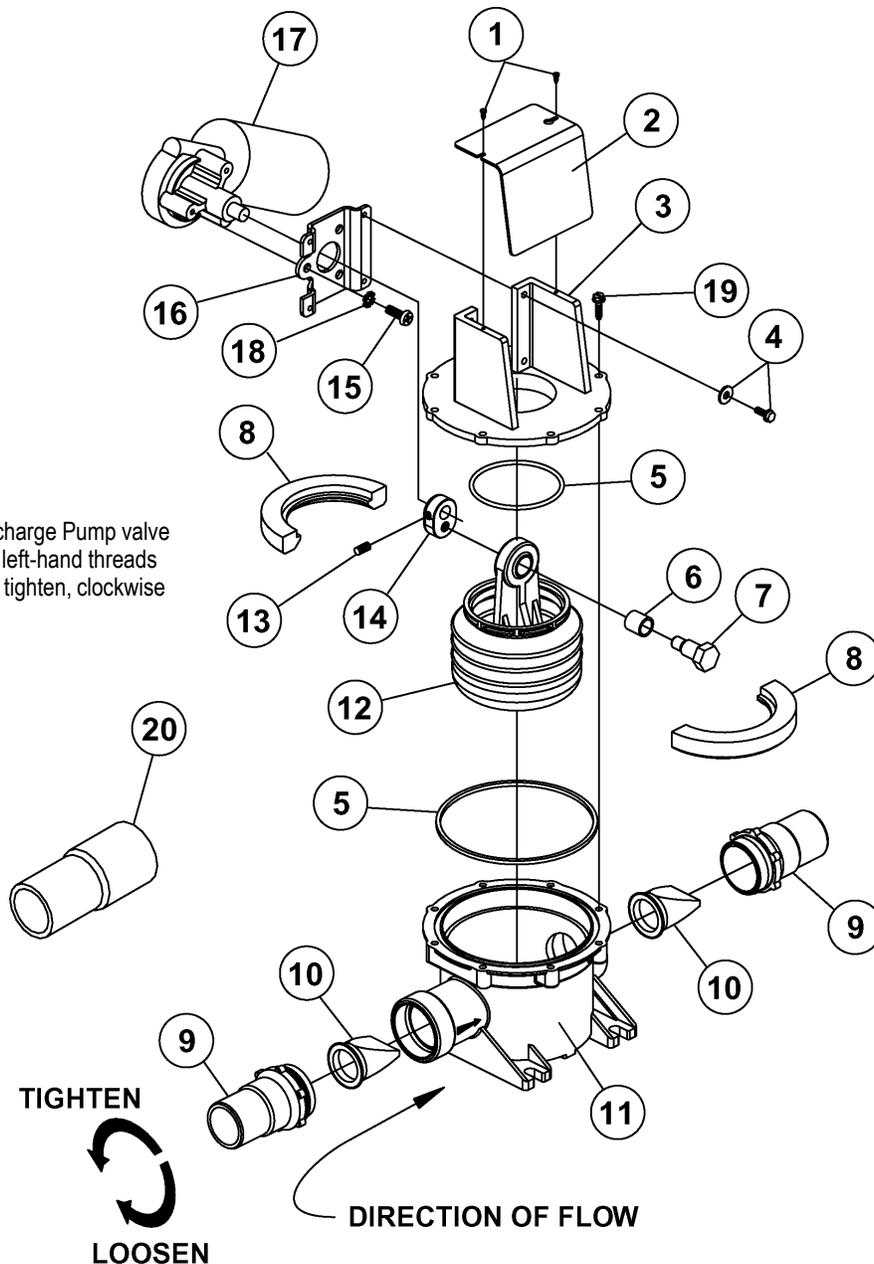
Item	Part No.	Description	Item	Part No.	Description
1	600340237	Pan Phillips Head Screw, #4 x 3/8", SS	16	600342778	O-Ring, 2" ID x 2-1/4" OD
	600343027	Flat Washer, .312" OD x .030 Thick, SS	17	600342782	2 1/2" Diameter Worm Gear Clamp
2	600342804	Motor/Switch Cover	18	600342798	Mounting Spindle
3	600342332	Hex Washer Head Screw, #10-32x1/2", SS	19	385310542	Vacuum Generator Tank
	600344087	Flat Washer, #10 x 5/8" OD, SS	20	600342932	1 1/2" Uniseal®
4	385310151	O-Ring Kit	21	385310635	Inlet Elbow Kit (Includes Item 20)
5	600340664	Bushing	22	600347800	Valve Nipple
6	600343006	Shoulder Screw, 1/2 x .687 x 3/8-16	23	600347801	Valve Adapter
7	385230980	Bellows Assembly	24	600341504	Pump Body
8	600347807	Bellows Clamp	25	600347788	1/4-28 x 5/16" Set Screw, 1/2 Dog Point
9	600342783	3-3/4" Diameter Worm Gear Clamp	26	600343005	Pump Eccentric
10	600342779	O-Ring, 3" ID x 3 1/4" OD	27	600340017	1/4-28 x 1/2" Round Phillips Head Screw, SS
11	385310539	Diptube Assembly Kit (Includes Item 10)		600346615	Lock Washer, External Tooth, 1/4"
12	385310076	Duckbill Valve Kit (2)	28	600340008	Motor Mounting Bracket
13	600342789	1 1/2" NPT Close Nipple	29	385310245	12 VDC Motor
14	600342467	1/4-20 x 3/4" Hex Head Screw, SS		385310246	24 VDC Motor
	600346795	Flat Washer, .625" OD x .281" ID x .050	30	600341506	Pump Top Closure
15	385310540	Vacuum Switch Kit (includes items 16 & 17)	31	600341503	#10-12 x 7/8" Hex Washer Head Screw, SS



NOTE: When reassembling pump, tighten screw (Item No. 31), to 20 ±2 lbs., or until snug. Overtightening will cause holes to strip.

PARTS LIST – DISCHARGE PUMP

Item	Part No.	Description	Item	Part No.	Description
1	600340237	#4 x 3/8" Pan Head Screw	13	600347788	Set Screw, 1/4-28 x 5/16"
2	385640239	Pump Cover Kit	14	600344470	Eccentric
3	600341502	Pump Top Closure	15	600340017	1/4-28 x 1/2" Phillips Head Screw
4	600342332	#10-32 x 1/2" Hex Head Screw	16	600340008	Motor Mounting Bracket
5	385310151	O-Ring Replacement Kit	17	385310245	12 VDC Motor
6	600340664	Bushing		385310246	24 VDC Motor
7	600343006	Shoulder Screw, 1/2" x .687 x 3/8-16	18	600346615	1/4" External Tooth Lock Washer
8	600347807	Bellows Clamp	19	600341503	#10-12 x 7/8" Hex Washer Head Screw
9	600340669	Valve Nipple	20	600341113	1" x 1 1/2" Reducing Adapter
10	600347802	1 1/2" Duckbill Valve			Not Shown
11	600341489	Pump Body		385310250	Pump Assembly Less Motor
12	385230980	Bellows Assembly			(includes items 3, 5, 6, 8, 9, 10, 11, 12, 19)



PARTS DISTRIBUTORS

There is a strong, worldwide network to assist in servicing and maintaining your sanitation system. For the Authorized Service Center near you, please call from 8:00 a.m. to 5:00 p.m. (ET) Monday through Friday. You may also write us at Dometic Corp., P.O. Box 38, Big Prairie Ohio 44611.

Telephone: 1 800-321-9886 U.S.A. and Canada
330-496-3211 International

You may also contact or have your local dealer contact the Parts Distributor nearest you for quick response to your replacement parts needs. They carry a complete inventory for the Dometic toilet product line.

Fax: 330-496-3097 U.S.A. and Canada
330-496-3220 International

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E-mail: sales@leesan.com
Contact: Chris Coburn

DOMETIC CORPORATION AND SALES OFFICES

Dometic is the leading worldwide provider of product systems for increased convenience away from home. Dometic provides RV and Pleasure Boat Systems, Silent Refrigeration Systems and Medical Systems. Dometic continuously applies the group's industrial and technological expertise to new, related fields of

business. Dometic has production facilities in 10 countries, its own sales and marketing operations in 35 countries plus approximately 65 distributors globally. Listed below are Dometic sales companies for RV sanitation systems.

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MANUFACTURER'S ONE-YEAR LIMITED WARRANTY

Dometic Corporation warrants, to the original purchaser only, that this product, if used for personal, family or household purposes, is free from defects in material and workmanship for a period of one (1) year from the date of purchase.

If this Dometic product is placed in commercial or business use, it will be warranted, to the original purchaser only, to be free of defects in material and workmanship for a period of ninety (90) days from the date of purchase.

Dometic reserves the right to replace or repair any part of this product that proves, upon inspection by Dometic, to be defective in material or workmanship. All labor and transportation costs or charges incidental to warranty service are to be borne by the purchaser-user.

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To obtain warranty service, first contact your local dealer from whom you purchased this product.



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