

JETT TOILET SYSTEM

INSTALLATION, OPERATION 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 marine plumber and 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 damages to equipment, or injury or death to personnel that may result from improper installation or operation of this product.*



WARNING: Hazard of Flooding - Always shut off seacocks before leaving the boat unattended. Toilet station installations should be made at or above the waterline. Station installations made at the waterline must have a vented loop installed between the pump and station and between the station and the discharge thru-hull.



Whenever possible hose connections should be secured using two (2) stainless steel hose clamps. Integrity of clamps, hoses and fittings should be checked periodically.

WARNING: Hazard of Shock - Always use recommended fuse, circuit breaker, wire size and terminals.



Hazard of Fire or Explosion - This unit does not meet U.S. Coast Guard Ignition-Protection requirements. It must not be installed in an area where fuel vapors may be present.

Caution - Do not run pump dry - seal will be damaged. (See page 7 "Initial Commissioning").

INTRODUCTION

The **Jett Toilet** system is designed for use on yachts with large volume waste systems (Type II treatment systems or Type III holding tanks) and seagoing commercial vessels. When the system is activated, a powerful stream of water rinses the bowl and provides a jet that breaks up and discharges waste. A Jett Toilet system can be configured so that several stations can be operated by a single pump. Throughout these instructions, references to "station" refers to what is commonly known as a toilet bowl.

OPERATION

Press the button on the control panel until the bowl is cleared of waste.

The **Jett Toilet Control** has an indicator light that lets the user know when another station is flushing. Wait until the indicator light goes out and then operate normally. Flushing more than one station connected to the same pump results in reduced water pressure and volume to both stations, causing neither to flush properly.

MAINTENANCE

Semi-annually, inspect the base of the toilet and the hose connections for leaks. Inspect wire terminals and connections for corrosion.

CLEANING:

Station: The station should be cleaned with mild soap, detergent or Bon Ami®.

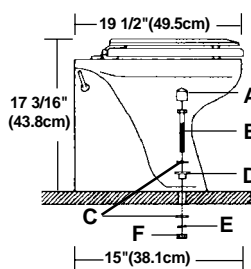
Strainer:

WARNING: HAZARD OF ELECTRICAL SHOCK - Disconnect power before proceeding.

WARNING: HAZARD OF FLOODING - Shut off seacocks before proceeding.

Bon Ami® is a registered trademark of Faultless Starch/Bon Ami Co.

Fig. #1 - Dimensions and Proper Mounting of Bowl



- A. Vinyl cap - #VCap (supplied)
- B. 1/4-20 S/S Bolt, or 1/4 S/S Self Tapping Screw, or 1/4 S/S Lag bolt
- C. Flat Washer, Stainless Steel
- D. Nylon Shoulder Washer - #F071 (supplied)
- E. S/S Lockwasher (used on top and bottom for Nut and Bolt)
- F. 1/4-20 S/S Nut

NOTE: To select proper Screw or Bolt length, measure thickness of deck plus 1 1/8".

The intake raw water strainer should be emptied and cleaned as needed.

Hoses, clamps, fittings and electrical: At the beginning and end of the boating season, or at least every six months, check the integrity of the hoses, clamps, fittings and electrical. Replace any hose or clamp that shows signs of deterioration. Clean electrical terminals and junctions; replace any connections that show excessive corrosion. Be sure that system does not freeze.

WINTERIZATION

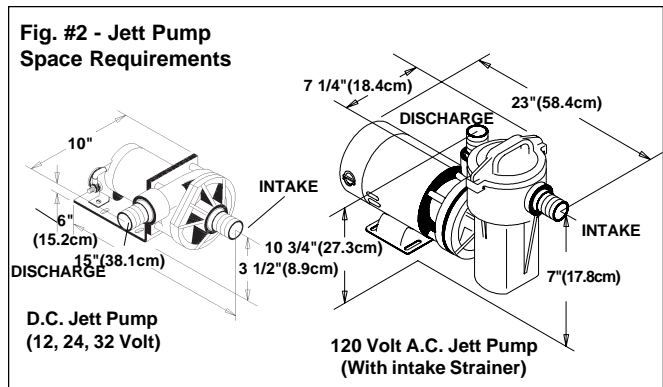
WARNING: HAZARD OF ELECTRICAL SHOCK - Disconnect power before proceeding.

1. Disconnect electrical power to unit. Leave disconnected until recommissioning.
2. Close all seacocks and drain the hoses. Leave seacocks closed until recommissioning.
3. Disconnect the electrical and plumbing lines on the Jett Toilet Pump. Drain any water from inside the pump by loosening the pump cover screws and nuts.
4. Drain any water from inside the Jett Toilet Station and connecting hoses.
5. For solenoid valves and other component parts manufactured by another company, follow the manufacturer's instructions.

SYSTEM COMPONENTS

All Jett Toilet Systems include:

1. **A Jett Toilet Pump** to supply water to flush the bowl. The pump is remotely mounted, usually below the waterline of the boat.
2. **One or more Jett Toilet Stations.** Ceramic bowls that flush water both to the top of the bowl for rinsing and through a jet at the bottom of the bowl for flushing.
3. **A Jett Toilet Control** for each Jett Toilet Station. This is the operating switch which activates the pump to flush the station. It includes a panel with an indicator light to alert the user if another station is flushing.



Additional Requirements for Jett Toilet Systems:

1. Multiple Station single pump installations require an electric solenoid valve at each Station. Upon pushing the switch in the toilet compartment, the valve opens and the pump comes on, supplying high pressure water to toilet Station.
2. Stations installed at the waterline require a vented loop in the discharge line. To retain water in the bowl after flushing, a vented loop must be installed in the discharge line (above the height of the toilet bowl).
3. Multiple station DC (12, 24, 32 volt) single pump installations require the installation of a Wall Switch Bus (#AJH140).
4. 120V AC installations require a Pump Relay Assembly (#AJH150) and multiple station 120 V AC installations also require a Wall Switch Bus (#AJH140). The Pump Relay Assembly is installed near the pump, permitting low voltage wiring to the switch panel in toilet compartment.

Recommended parts and materials not included with the Jett Toilet System:

1. A 1 1/2" check valve (foot valve) insures that the Jett Pump stays primed at all times (not available through Raritan).
2. Intake water strainer (part #RWS) prevent clogging of plumbing passages and is recommended for DC pump installations. AC voltage pumps have a built-in strainer.
3. Miscellaneous hoses and hose clamps, Teflon® tape or paste, plumbing fittings and parts, fasteners and pipe strapping and vented loop as required.

4. Electric wire, circuit breakers and terminal ends.
5. A 15 ampere Ground Fault Circuit Interrupter for all 120 volt AC installations.

INSTALLATION - GENERAL

Read the entire installation section before proceeding. The design of the entire system must be determined before any individual component is installed.

The maximum recommended length of hose and number of fittings between the pump and any individual station is specified in the Performance Specification Chart.

For questions or concerns, call Raritan Customer Service at Millville, NJ or Ft. Lauderdale, FL.

MOUNTING

Stations:

CAUTION: HAZARD OF FLOODING - Pump must NOT be mounted above the station. DO NOT mount the pump at a height greater than the bottom of the station.

NOTE: See Fig. #1 for proper mounting of bowl. Damage to the bowl may occur if not properly secured.

Tighten both mounting bolts simultaneously. DO NOT overtighten.

1. Mount on solid, smooth, even decking at or above the waterline.
2. Place the Station where it will be mounted.
3. Mark and drill holes for the mounting bolts.
4. Mark and cut hose cutouts.

NOTE: Do not actually mount the Station until the plumbing has been connected and the flush regulator valve has been adjusted. Leave 6"-12" slack in hose connections to move the Station away from the wall for adjustments.

Pump and Motor:

1. Mount the pump and motor assembly in a dry accessible location below the waterline.

NOTE: The pump and motor assembly may be mounted up to 12" above the waterline.

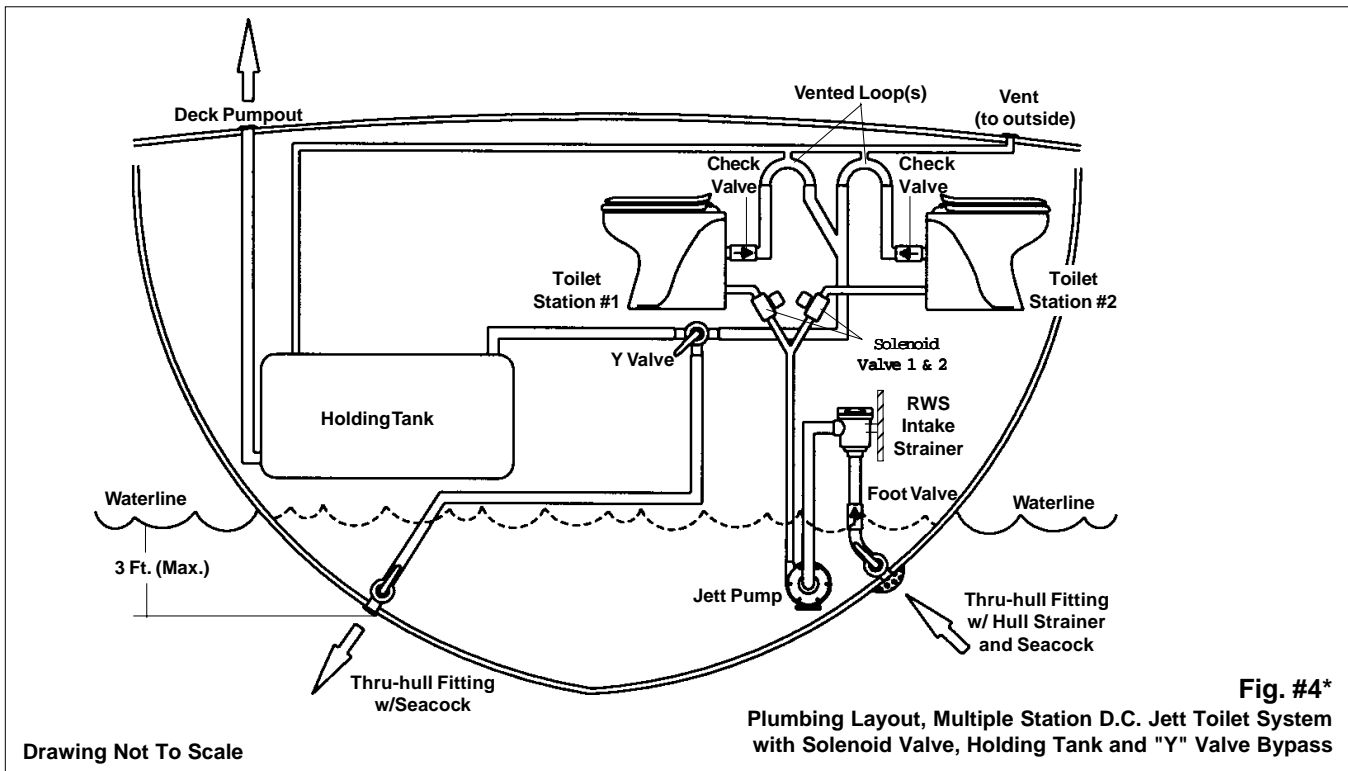
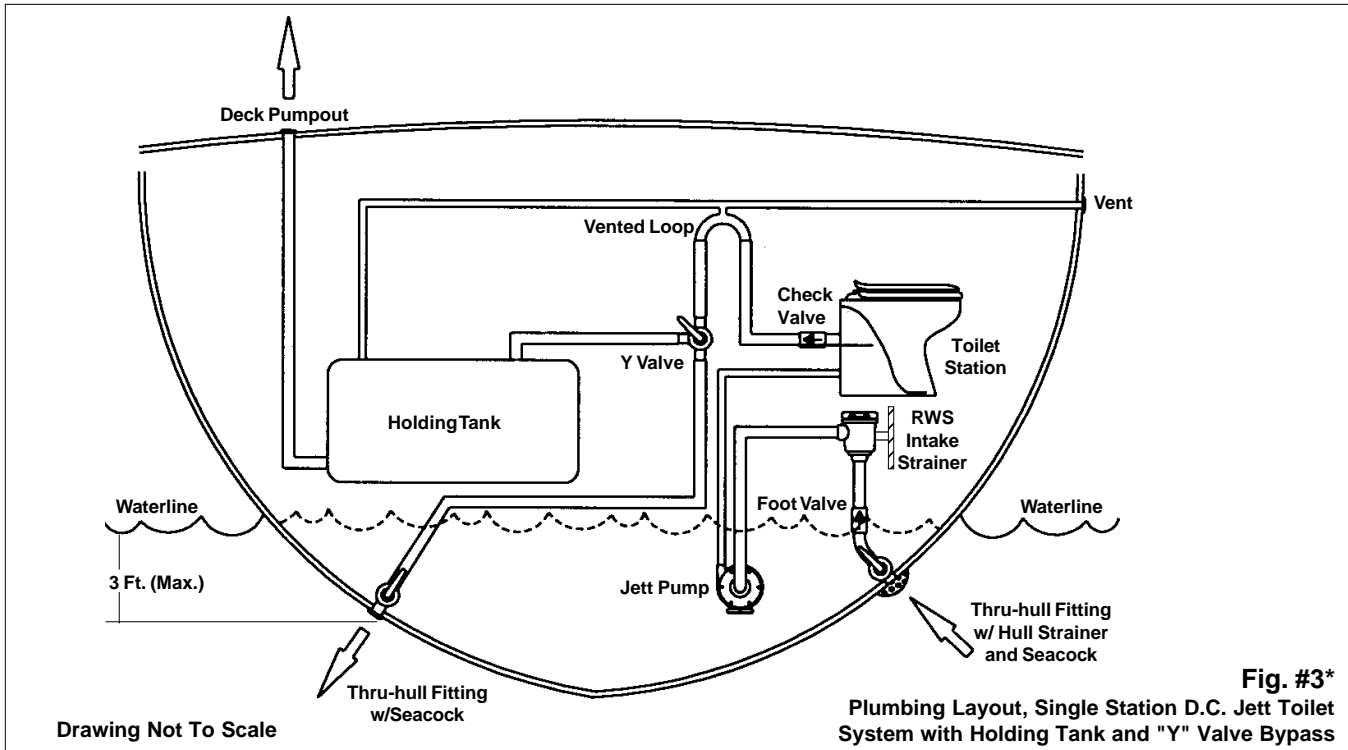
2. Secure pump with 5/16" bolts, washers and locking nuts.
3. 120V AC pumps: when top of stainer is below waterline be sure seacock is closed before removing lid.
4. On 120V AC models install intake and discharge fittings in threaded pump fittings using Teflon® tape or paste to seal the threads. Intake to pump is a single 1 1/2" thread x 1 1/2" hose barb. Discharge from pump uses a 1 1/2" x 1 1/4" thread reducing bushing and a 1 1/4" thread x 1 1/4" hose barb fitting (Fig. #13 and #14). On 12, 24 and 32V models these fittings are installed at the factory.

PLUMBING

1. All plumbing connections must be the specified size. Using smaller hoses or fittings will lower the pressure and volume of water, reducing overall system efficiency.
2. Hose runs should be as straight as possible and avoid 90° fittings or bends in the line.
3. For installation as well as future servicing allow 6"-12" of slack when running hose from pump to Station, and from Station's discharge to its termination, so that the Station can be pulled away from the wall while still connected.

To Pump:

1. A nominal 1 1/2" foot valve should be installed at or near the seacock to insure that the pump remains primed at all times. A hull strainer is needed to prevent the foot valve from being clogged with debris.
2. The intake connection to the pump is 1 1/2" I.D. hose. A strainer must be installed to prevent debris from entering the pump. AC pumps include a strainer when shipped from the factory. For DC pumps, we recommend the Raritan Raw Water Strainer (#RWS).
3. RWS, if used, must be installed above the waterline (See Fig.# 3 and 4).
4. The seacock, foot valve and strainer connections must all be nominal 1 1/2" NPT.
5. Pump's discharge connection is 1 1/4" I.D. hose.



*90° plumbing angles are for depiction purposes only and should be avoided in the actual installation.

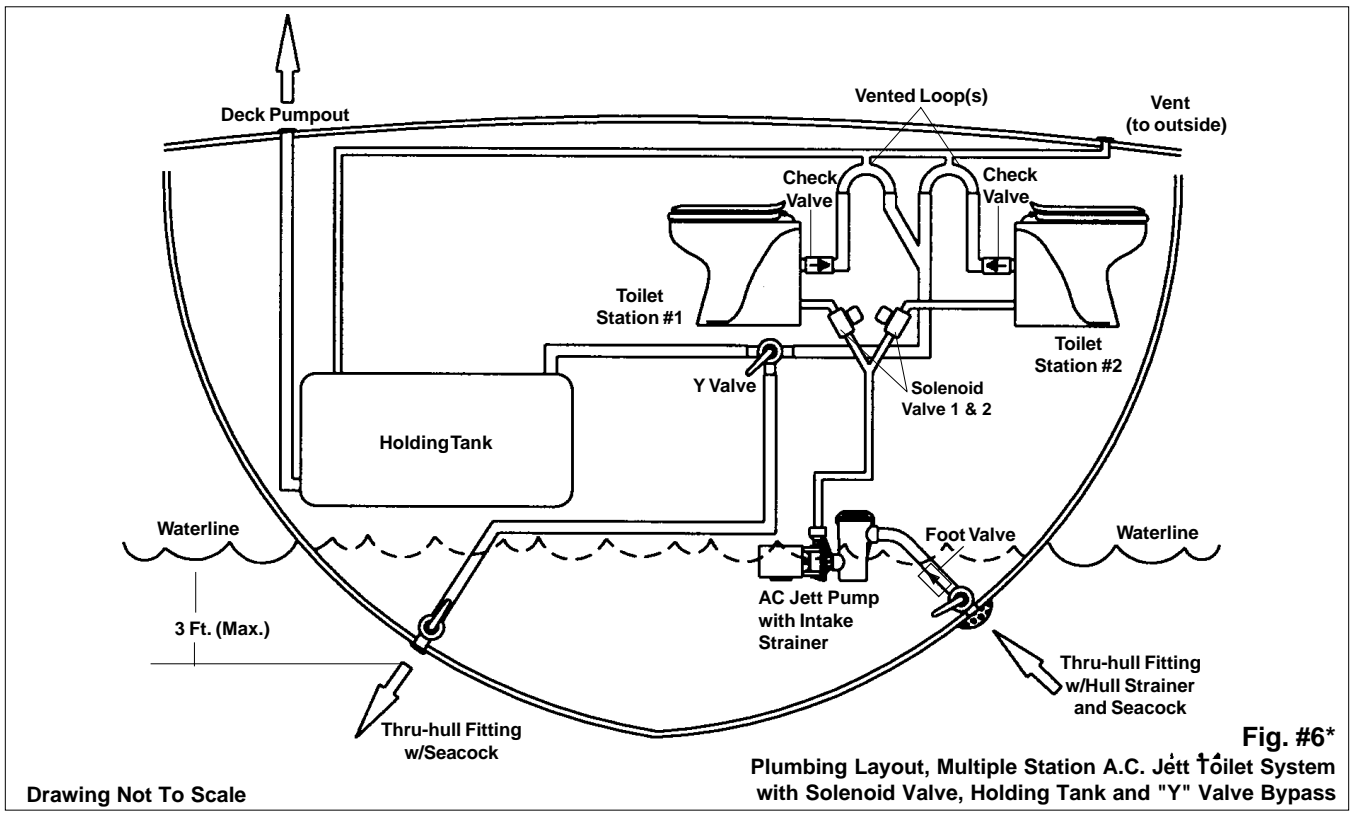
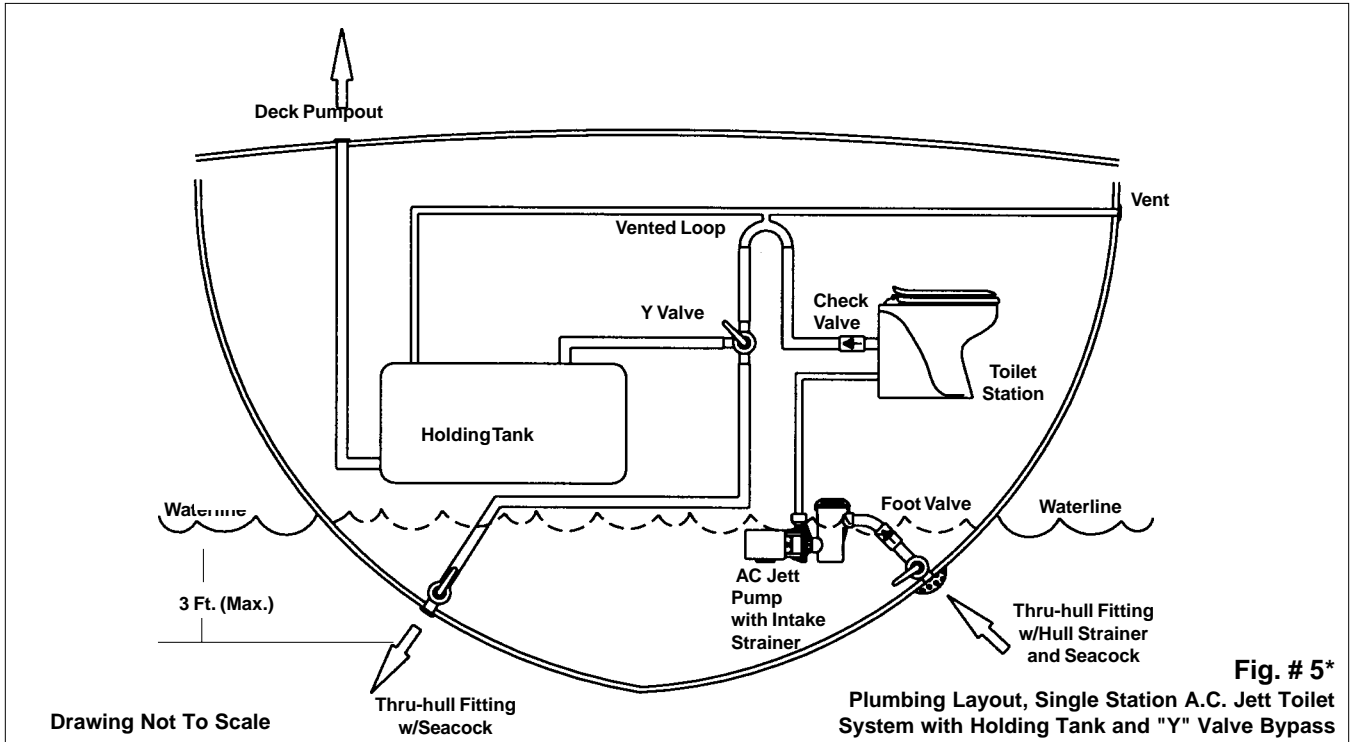
From Pump to Single Station:

NOTE: To retain water in the bowl it may be necessary to install a vented loop several inches higher than the bowl between the pump and the station intake fitting.

1. Connect Station to pump using 1 1/4" I.D. hose capable of withstanding 60 p.s.i. minimum.

From Pump to Multiple Stations:

1. Connections are same as for single Station (Figs. #3 and #5), but output from the pump must be



*90° plumbing angles are for depiction purposes only and should be avoided in the actual installation.

split through "Y" fittings to accommodate the additional Stations (Figs. #4 and #6).

2. A solenoid valve must be installed at each station with direction of flow towards the station. Refer to the instructions enclosed with the solenoid valve for proper mounting and installation.

Table #1 - Wire Gauge and Circuit Breaker Recommendations					
Wire gauge to be upsized accordingly for runs over 50 ft.(ABYC, E-8, E-9)					
Nominal Voltage of Unit:	12 DC	24 DC	32 DC	120 AC	S2
Amperage Draw:	70	40	35	9	3
Circuit Breaker/fuse:	100 A.	60 A.	50 A.	15 A.	10 A.
Wire Gauge: 0-15 Ft.	#4	#10	#10	#10	#14
(AWG 16-25 Ft.)	#2	#6	#8	#10	#14
TYPE THW 26-50 Ft.	#2/0	#4	#6	#10	#14

Station Discharge:

1. Use 1 1/2" I.D. smooth interior, high quality sanitation hose (Raritan #SH or equivalent).
2. Install the included swing check valve in a horizontal position as close to the discharge of the Station as practical. Be sure that the direction of flow for the check valve is away from the station. Allow 6"-12" of slack in the hose (see note under Station Mounting).
3. A vented loop is required to retain water in the bowl after flushing and for anti-siphon protection for installation at the waterline. The vented loop should not be more than 18" above the discharge fitting of the station.

WIRING

DC voltage Jett pumps are Negative Ground Only.

CAUTION: Use only one source of electrical power for all system components. Wiring is to be in accordance with ABYC Standards and Recommended Practices, projects E-8 and/or E-9 (wiring standards).

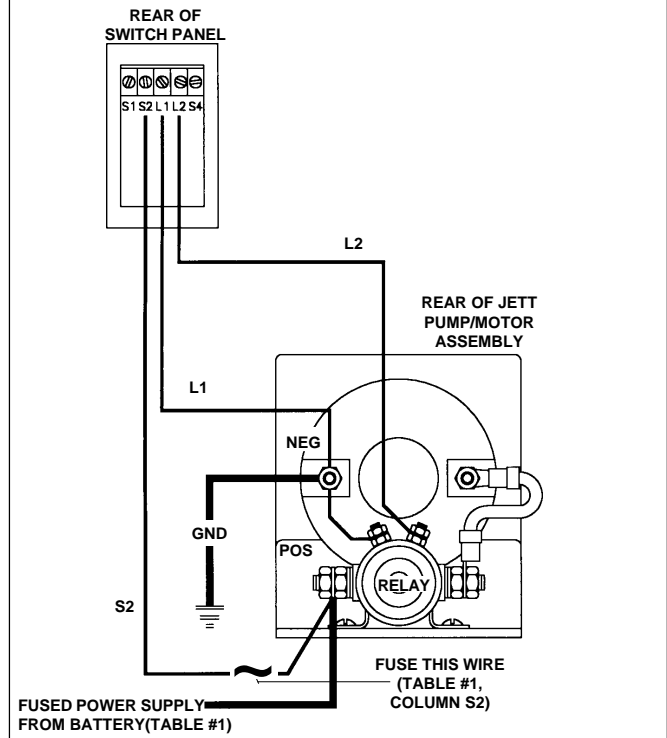
Table #1 lists recommended wire gauge and circuit breaker sizes. The wire distances are calculated from the power source (battery or 120 volt source) to the pump and back to the source.

D.C. Pumps (Single Station):

All DC (12, 24, 32 volt) pumps are equipped with a relay mounted on the pump assembly.

1. Connect a fused wire from the Positive DC source (battery) to the large stud on the relay marked "POS", following wire size recommendations.
2. Connect the wire from the Negative DC source to the stud on the pump motor marked "NEG", following wire size recommendations.
3. Run a #14 gauge wire from a fused (Table #1 - S2) power source to position S2 on the Switch Panel Assembly. A second wire is run from L2 on the Switch Panel Assembly to the positive terminal of the solenoid coil. A third wire is run from L1 on the Switch Panel Assembly to Ground. It may connect to the "NEG" terminal on the motor, if desired (See Fig. #7 for wiring).

Fig. #7 - Wiring a Single Station DC Installation



4. Wires are run from S1 and S4 on the Switch Panel Assembly to the solenoid valve, if used. If a solenoid valve is not used, S1 and S4 on the Switch Panel remain unused.

Multiple Station Installations With a D.C. Pump:

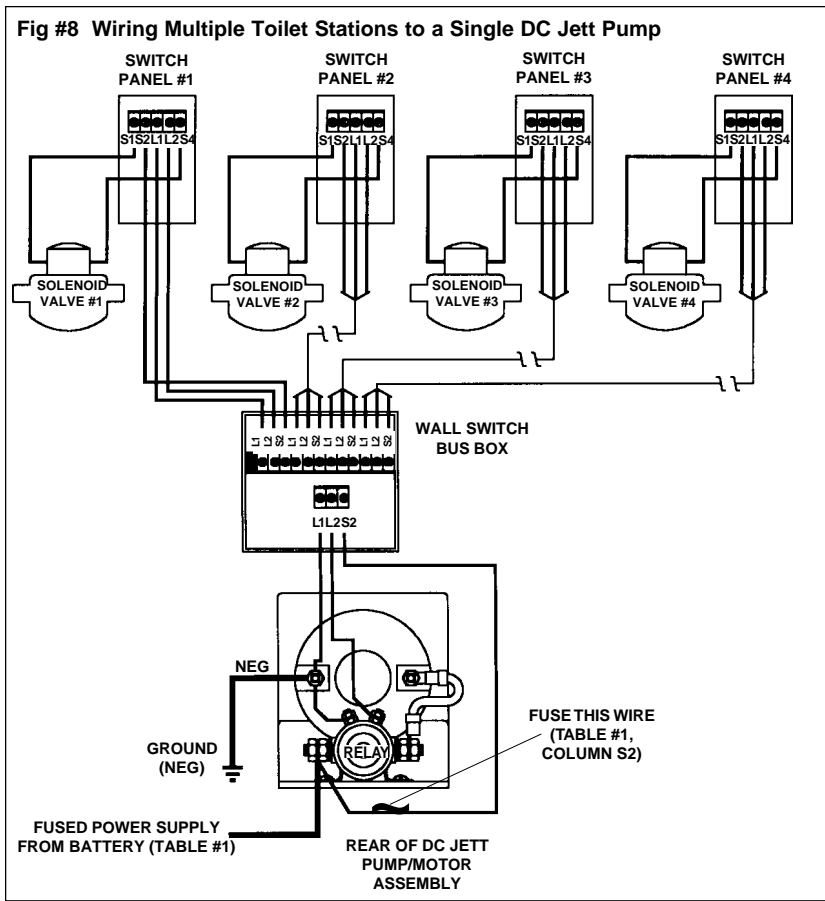
Multiple Station installations require a Wall Switch Bus between the pump and the Switch Panels.

1. Connect wires between the pump and L1, L2 and S2 on the Wall Switch Bus (Fig. #8).
2. Connect wires from output side of Wall Switch Bus to the individual Switch Panels and solenoid valves (Fig. #8), following wire size recommendations.

A.C. Pumps (Single Station) (See Fig. #9):

120V AC installations require a Pump Relay Assembly, allowing a high voltage pump to be activated by a low voltage Switch Panel.

1. Strip the cut end of the cable supplied with the pump/motor assembly, approximately 2"; strip the individual black, white and green wires approximately 3/8". Crimp captive spade or ring terminals (#6 screw and #14 wire) onto the three wires and connect to terminals inside Pump Relay Assembly marked "VAC OUT" (Fig. #9).



- Run #14 gauge wire between one set of L1, L2 and S2 terminals on the Pump Relay Assembly and the corresponding terminals at the rear of the Switch Panel Assembly.
- Run #14 gauge wire from the "VAC IN" terminals to a Ground Fault Circuit Interrupter (GFCI), then to the power source for 120V AC current.

WARNING: A GFCI is a required safety item to avoid electric shock. Be sure to shut power off during the wiring operation.

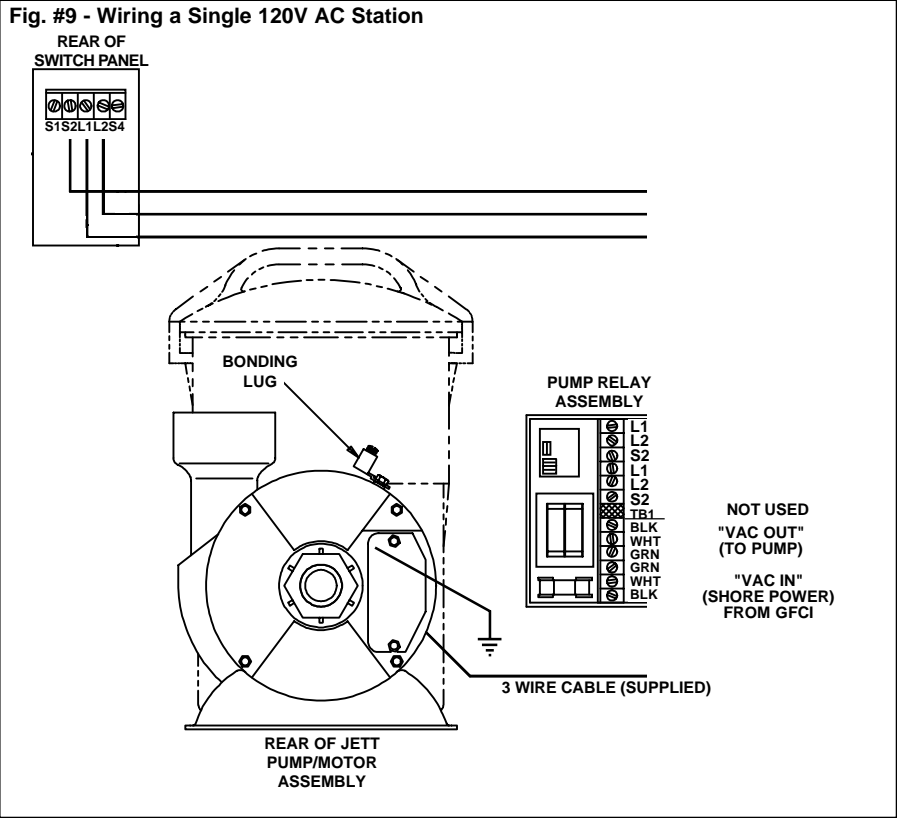
- An external copper bonding lug is provided to connect to the ship's bonding system (Fig. #9).

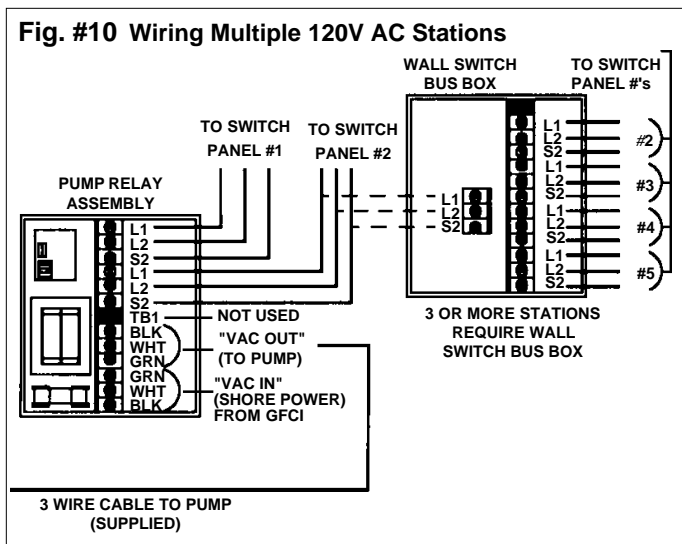
Two Stations With 120V AC Pump (Fig. #9):

- When connecting two Jett Toilet Stations to a single 120V AC pump, the Pump Relay Assembly accepts wiring for both Switch Panels.
- Run #14 gauge wire between one set of L1, L2 and S2 terminals on the Pump Relay Assembly, connecting to the corresponding terminals on the second Switch Panel.
- Use the second set of L1, L2 and S2 terminals on the Pump Relay Assembly and connect to the corresponding terminals on the second Switch Panel.
- Wire each solenoid valve to terminals S1 and S4 on each corresponding Switch Panel.

Three or Four Stations With 120V AC Pump (Fig. #10)

- When connecting three or four Jett Toilet Stations to a single 120V AC pump the Wall Switch Bus box accepts the additional Switch Panels.





2. Connect one of the L1, L2 and S2 outputs from the Pump Relay Assembly to the input L1, L2 and S2 of the Wall Switch Bus (Fig. #10).
3. Connect the L1, L2 and S2 outputs from the Wall Switch Bus to the corresponding terminals on the Switch Panel Assembly.
4. Wire each solenoid valve to terminals S1 and S4 on each corresponding Switch Panel.

RECOMMISSIONING

The pump is not self-priming. The pump chamber, raw water strainer and connecting hoses must be filled with water before activating the pump.

1. With seacock closed remove the priming plug (DC models) or strainer lid (AC models) to displace air trapped in the pump. Fill with water. Replace priming plug or strainer lid.
2. Open seacock and check for leaks.
3. Pull each toilet station away from the wall to allow access to the Bowl Rinse Valve (located inside the rear of the bowl).
4. Press the push button switch and flush each of the toilets. Inspect all areas of the system and check for leaks. If all areas are fine, then proceed.

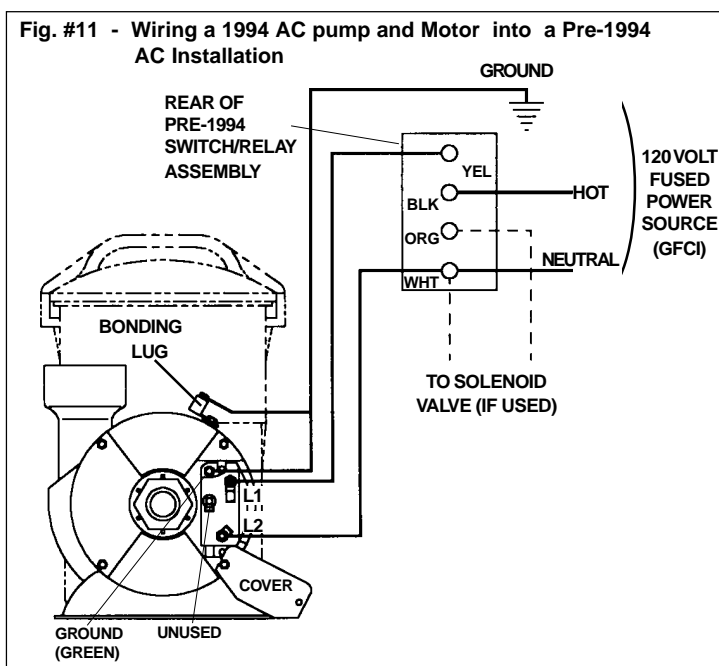
5. Press the push-button switch on the Switch Panel to flush the toilet, then adjust the valve to give the optimum rinse/flush proportion. Just enough water should come down the inside of the bowl to wash away any paper that may stick to the inside of the bowl.
6. Repeat process at each toilet station.
7. Upon completion of the above, the bowl(s) may be mounted to the deck. The toilet(s) may be operated normally.

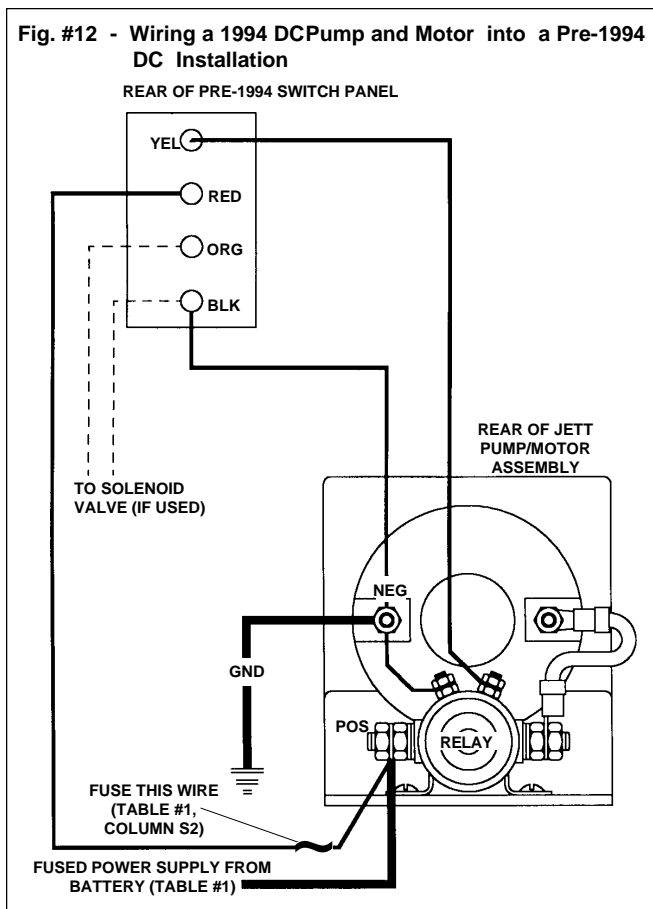
PUMP RETROFIT:

Replacing Pre-1994 DC Jett Toilet Pump/motor Assembly (JHP&M) with Current Model (AJHP*V DC):

1. Turn off any circuit breakers or fuses (disconnect power to system).
2. With seacocks closed disconnect hosing and remove wires from pump/motor assembly.
3. Remove old pump/motor assembly and replace with new pump/motor assembly. The same mounting bolt pattern is used for both series.
4. Install hose barg adapters, see MOUNTING. Some modification to existing hoses and fittings may be required to adapt to new hose barb requirements.

* Specify Voltage





1. Turn off any circuit breakers or fuses (disconnect power to system).
2. With seacocks closed disconnect hosing and remove wires from pump/motor assembly.
3. Remove old pump/motor assembly and replace with new pump/motor assembly.

NOTE: The new pump and motor assembly does not have the same mounting bolt pattern as the former pump and motor assembly.

4. Install hose barb adapters, see MOUNTING. Some modification to existing hoses and fittings may be required to adapt to new hose barb requirements.
5. Remove the wire junction cover from the rear of the new pump/motor assembly, exposing three terminals (Fig. #11).
6. Remove the wires from the terminals and discard the cable.
7. Move the "grounding wire" from the old pump/motor assembly to the green terminal in the new pump/motor assembly.
8. Move the "neutral wire" (originates from the white terminal of the wall switch) to L2 in the new pump/motor assembly.
9. Move the "switched hot wire" (originates from the yellow terminal of the wall switch) to L1 in the new pump/motor assembly.
10. Use a UL approved strain relief device, following standard marine electrical practice, to complete the installation.
11. Replace the terminal cover on the rear of the new pump/motor assembly.
12. Connect plumbing.
13. Refer to Recommissioning.

5. To wire new pump into existing switch installation, use Fig. #12 as a guide and do the following: Solenoid wires from the orange and black switch terminals, if used, remain intact; the wire at the yellow switch terminal equates to L1 (Fig. #12); the wire at the red switch terminal equates to S2; the second wire at the black switch terminal equates to L2. All other information relative to the DC pump/motor installation remains the same as before.
6. Refer to Recommissioning.

Replacing Pre-1994 120V AC Jett Toilet Pump/motor Assembly (JHP&M) with Current Model (AJHP 120):

NOTE: Older series JHP&M pumps used AC/DC motors; current AJHP120 pumps are AC only. Before proceeding, have your system checked by an electrician to ensure that AC current is available. If your system is 120V DC, the new series pump will not work and will be ruined by application of DC power.

TROUBLESHOOTING

WARNING: Before beginning any work on the Jett Head Toilet be sure that all power to the unit has been turned off and that the seacocks are in the CLOSED or OFF position.

Should you have any questions regarding servicing or operation of the Jett Head, contact our Customer Service Department in Millville, NJ or Fort Lauderdale, FL. Please have model and serial numbers of unit before calling.

PROBLEM	POSSIBLE CAUSE	CORRECTION
A. Pump not running.	A1. Power turned off. A2. Fuse blown or circuit breaker tripped. A3. Loose connections. A4. Damaged relay assembly. A5. Damaged switch assembly. A6. Internally corroded pump motor.	A1. Restore power. A2. Replace fuse or reset circuit breaker. A3. Inspect and correct. A4. Replace relay assembly. A5. Replace switch assembly. A6. Repair or replace pump motor.
B. Little or no flush water entering bowl.	B1. Pump intake clogged. B2. Air lock in pump. B3. Solenoid valve not opening. B4. Flush regulator valve inside toilet not set correctly. B5. Pump motor not performing properly.	B1. Clean strainer basket. Clean thru-hull and/or seacock. B2. Re-prime pump. Check foot valve for correct operation. B3. Check power to coil when button is pushed. Clean out valve. Repair, rebuild or replace valve as needed. B4. Correct adjustment. B5. Check voltage to pump while running. If motor brushes are worn, return to Raritan for servicing.
C. Poor or no discharge.	C1. Swing check valve clogged. C2. Inadequate water supply due to low voltage. C3. Clogged discharge line. C4. Restricted intake water flow (solenoid valve). C5. Full holding tank. C6. Clogged holding tank vent. C7. Clogged vented loop vent. C8. Inadequate water supply due to clogged intake strainer or thru-hull.	C1. Clean valve as needed. C2. Check voltage to pump while running. If motor brushes are worn, return to Raritan for servicing. C3. Clean or replace connecting hoses or pipes. C4. Clean, repair or replace solenoid valve; be sure there is no restriction in water lines. C5. Pump out holding tank. C6. Clean vent as needed. C7. Clean vent as needed. C8. Clean strainer or seacock as needed.

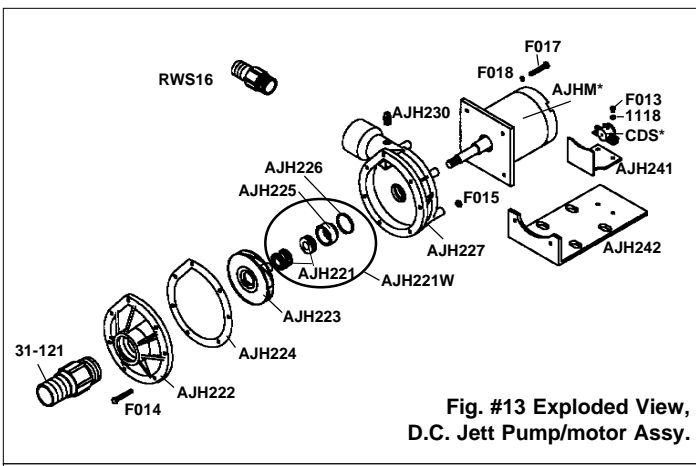


Fig. #13 Exploded View, D.C. Jett Pump/motor Assy.

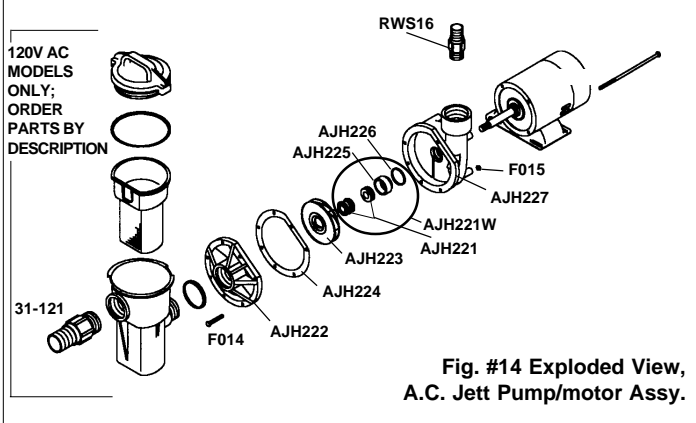


Fig. #14 Exploded View, A.C. Jett Pump/motor Assy.

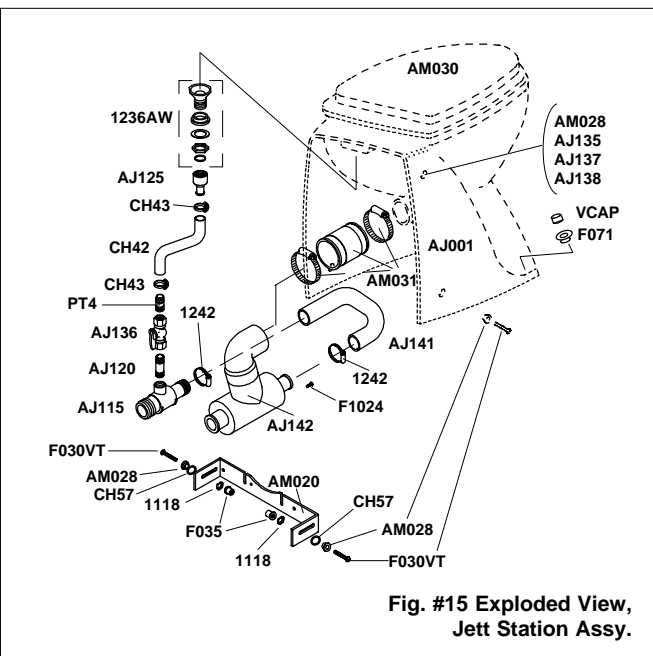


Fig. #15 Exploded View, Jett Station Assy.

INSTALLATION AIDES AVAILABLE FROM RARITAN

Part#	Quantity	Description
RWS	1	Raw Water Strainer
SH	1	Sanitation Hose
VL1 1/2	1	Vented Loop
YV	1	"Y" Valve 1 1/2"

SWITCH ASSEMBLY PARTS

Part#	Quantity	Description
AJH140	1	Wall Switch Buss
AJHS12	1	12V Switch Assembly
AJHS24	1	24/120V Switch Assembly
AJHS32	1	32V Switch Assembly

JETT HEAD STATION PARTS

Part #	Quantity	Description
1118	2	Lock Washer
1236AW	1	Bowl Spud Assembly
1242	2	Hose Clamp
31-121	1	Insert Male Adapter 11/2" (not shown)
AJ001W	1	Jett bowl and spud assembly, white
AJ001AW	1	Jett bowl and spud assembly, almond
AJ115	1	Intake Adapter
AJ120	1	Nipple
AJ125	1	Spud Adapter
AJ135	1	Nylon Screw 1/4"-20 x 1" (not shown)
AJ136	1	Regulator Valve
AJ137	1	Nylon Nut 1/4"-20 (not shown)
AJ138	1	Nylon Washer (not shown)
AJ141	1	"J" Assembly
AJ142	1	Jet Assembly
AM020	1	Mounting Bar
AM028	3	Mounting Bushing
AM030	1	Seat and Cover
AM031	1	Discharge Hose Assembly (w/clamps)
CH42	1	Connecting Hose
CH43	2	Hose Clamp
CH57	2	Slinger
F030VT	2	Bolt
F035	2	Isolation Nut
F071	2	Shoulder Washer
F1024	1	#10-24" x 1/2" Screw
JHSTF3	1	1 1/2" Swing Check Valve (not shown)
PT4	1	Adapter Nipple
VCAP	2	Vinyl Cap

PUMP AND MOTOR ASSEMBLY PARTS

Part #	Quantity	Description
1118	2	Lock Washer
31-121	1	Adapter
AJH150	1	115V Pump Relay Assembly
AJH221	1	Two Part Seal Assembly
AJH221W	1	Pump Head Seal Assembly Complete (Includes AJH221, AJH225 and AJH226)
AJH222	1	Pump Head Housing Cover
AJH223	1	Pump Head Impeller
AJH224	1	Pump Head Housing Gasket
AJH225	1	Seal Insert
AJH226	1	"O" Ring
AJH227	1	Pump Head Housing
AJH230	1	1/8" NPT Plug
AJH241	1	D.C. Pump Assembly Support Bracket
AJH242	1	D.C. Pump Assembly Mounting Bracket
AJHM*	1	Motor
CDS*-P	1	Solenoid
F013	2	1/4" - 20 X 1/4" Screw
F014	7	Pump Head Cover Screw
F015	7	Pump Head Cover Nut
F017	4	Pump Head Mounting Screws (DC models only)
F018	4	Lock Washer
RWS16	1	1 1/4" insert x 1 1/2" MNPT

SOLENOID VALVE PARTS

Part#	Quantity	Description
JHSD*	1	Solenoid Valve
JHSCAC	1	120V Solenoid Valve Repair Kit
JHSCDC	1	DC Solenoid Valve Repair Kit

* Specify Voltage

PERFORMANCE SPECIFICATIONS CHART

Station Distance in Feet above the water line	Max. # of Fittings (in excess of Fig.4)	Max. Feet of Hose Smooth Interior
1	12	40
2	11	37
3	10	34
4	9	31
5	8	27
6	7	24
7	6	21
8	5	18
9	4	15

Refer to Figs. #7 and #8, in this manual.

Hose sizes: Intake Seacock to pump - 1½" I.D., Pump to Station 1¼" I.D., Station to Discharge - 1½" I.D.
Volume of Discharge: 3.5 gallons per 10 second flush cycle
Maximum Inlet Run: 40 feet
Maximum Height of Loop: 18" above Discharge Fitting of Station
Maximum Distance Between Station and Loop: 4 Feet

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.

SAVE THESE INSTRUCTIONS

**To order replacement parts or to request additional information
or assistance, contact Raritan Customer Service at:**



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