

### PUMP INSTALLATION

#### MOUNTING

Flojet A SERIES is a self-priming pump. It may be located several feet from the tank, above or below the liquid level (It is not a submersible pump.) For vertical pump mounting be sure that the motor is located on top. This will prevent water from entering the motor chamber in event of a leak. Pump head may be rotated in 90° increments to simplify plumbing.

#### PLUMBING

For best performance, flexible 3/8-inch minimum hose is recommended instead of rigid piping at the pump. *Use plastic fittings at the pump port. Brass fittings will break pump housing if over tightened.* Do not install pump such that plumbing causes excessive stress on either port.

It is essential that a 20 mesh strainer or filter be installed in the tank or in the pump inlet line to keep large foreign particles out of the system. The use of check valves in the plumbing system may interfere with the priming ability of the pump. Check valves, if used, must have a cracking (opening) pressure of no more than 2 psi.

#### ELECTRICAL

On 115 and 230 Volt AC pumps a 6 foot cord with grounded plug is standard. This cord should be plugged into a ground fault interrupter receptacle. On 115 Volt AC pumps, the black wire lead is common, the white is neutral and green/yellow is ground. On 230 Volt AC pumps, the brown wire lead is common, the blue is neutral and the green/yellow is ground. Never connect the green (or green/yellow) wire to a live terminal. On 12 and 24 Volt DC pumps, match red (+) and black (-) power leads with red and black leads on motor or switch.

### TROUBLESHOOTING

#### Motor operates, but no pump discharge

- Restricted intake or discharge line. Open all line valves, check for "jammed" check valve poppets and clean clogged lines.
- Air leak in intake line.
- Punctured pump diaphragm.
- Defective pump check valve.
- Crack in pump housing.
- Debris in check valves.

#### Motor Fails to Turn On

- Pump or equipment not plugged in electrically. Loose wiring connection.
- Pressure switch failure
- Defective motor or rectifier.
- Frozen cam/bearing.

### OPERATION

Allow to prime with discharge line (or spray valve) open to avoid airlock. Built in pressure switch will shut off pump automatically when discharge valve is closed and will restart pump when valve is opened. When pump runs out of liquid, it will continue to operate. Running dry will not damage the pump. Turn off manually.

#### SPRAY TIP

In spraying applications the pressure generated by the pump is generally dependent upon the size of the spray nozzle. An undersized spray nozzle will cause the pump pressure switch to cycle on and off and create a pulsating flow from the pump. To maintain a smooth flow and constant operating pressure, the smallest size spray nozzles that may be used are as follows:

MODEL	MINIMUM NOZZLE SIZE	
	Equiv. Orifice Diam.	Last 2 Digits*
A304010210	.078"	10
A304010220	.078"	10
A304010201	.094"	15

\*Ref. Spraying Systems Catalog

#### Pump Fails to Turn Off after Discharge Valves are Closed

- Depletion of available liquid supply.
- Punctured pump diaphragm.
- Discharge line leak.
- Defective pressure switch.
- Insufficient voltage to pump.
- Debris in check valves.

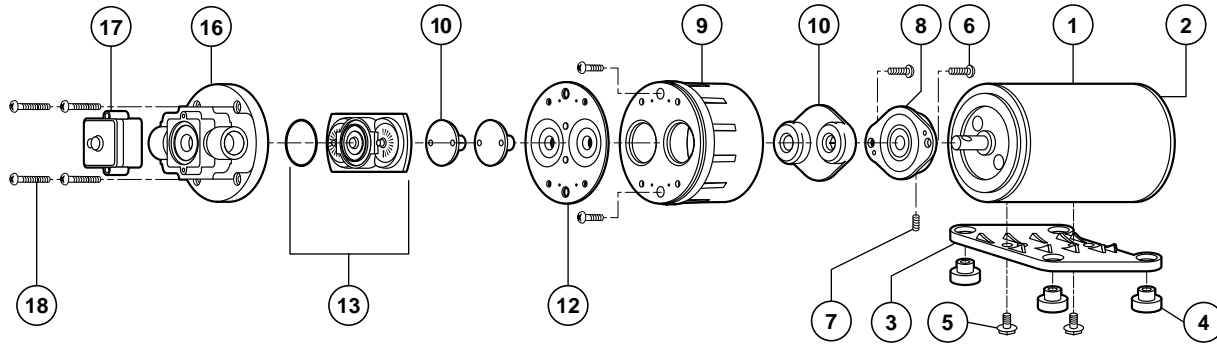
#### Low Flow and Pressure

- Air leak at pump intake.
- Accumulation of debris inside pump and plumbing.
- Worn pump bearing (excessive noise).
- Punctured pump diaphragm.
- Defective rectifier or motor
- Insufficient voltage to pump.

#### Pulsating Flow- Pump Cycles on and off

- Restricted pump delivery. Check discharge lines, fittings, valves and spray nozzles for clogging or undersizing.

## A SERIES DEMAND PUMP



KEY	PART NO.	DESCRIPTION	QTY.
1	02029-014 02039-026 02009-004	Motor, 115 Volt AC 6' Cord Motor, 230 Volt AC 6' Cord Motor, 12 Volt DC	1
2	20115-107 20115-115 20115-116	Brush Endbell/Rect. Assy 115 Volt with 6' Cord Brush Endbell/Rect. Assy. 230 Volt with 6' Cord Brush Endbell Assy. (DC)	1 1
3	11028-101	Motor Base Plate Assy. Plastic	
4	20132-000	Grommets	Set of 4
5	20131-002	Baseplate Screws	Set of 2
*6	21131-000	Cam/Bearing Screws	Set of 4
*7	20552-000	Cam/Bearing Set Screw	
*8	21033-002	Cam/Bearing Kit (incl. #7) For A 304010210 For A 304010220 For A 304010201	1 1 1
9	20428-100	Bearing Cover Poly Pro	1
*10	21041-001	Piston Inner & Outer Diaphragm Kit (Incl. #10 & #7)	Set of 2
*12	21195-001 21195-002 21195-003	Diaphragm Kit VITON ® Diaphragm Kit BUNA Diaphragm Kit SANTOPRENE	1 1 1

KEY	PART NO.	DESCRIPTION	QTY.
*13	20028-008 20028-009 20028-035	Check Valve Assembly (Std) SANTOPRENE BUNA VITON ®	1
16	211017-000A	Pump Housing with Switch	1
17	02095-100	Pressure Switch Assy, 60 PSI	1
18	20131-001	Pump Screws	Set of 6
		Lower Housing Assy Kit (incl. #6 through #12) BUNA No. 1 Cam Poly 21022-011 BUNA No. 2 Cam Poly 21022-012 VITON ® No. 1 Cam Poly 21022-021 VITON ® No. 2 Cam Poly 21022-022 SANTO No. 1 Cam Poly 21022-041 SANTO No. 2 Cam Poly 21022-042	1 1 1 1
	20097-000 20097-001	Brush Kit** For 115 & 230 Volt AC Motor For 12 & 24 Volt DC Motor	Set of 2 Set of 2

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\* Parts included in Pump Service Kit.

\*\* Not shown in diagram.

## SERVICE TIPS

Refer to exploded view for key number. To disassemble, remove six pump head screws (18), rotate bearing cover (9) so drain notch is aligned with cam/bearing assembly set screw (7), loosen set screw (use 1/8" size Allen Wrench) and slide pump head off shaft. Pistons (10) should always be replaced when new diaphragm is installed. Replace worn parts and reassemble. Be sure raised side of diaphragm faces the motor and radiused corner of pistons face diaphragm. Hex stem of inner piston (10) must be aligned (free to enter) into Hex hole in outer piston set (10). Press pistons together by hand until pistons snap tight. Install flat head screws (6) through outer piston set and tighten screws partially, center pistons in diaphragm than tighten screws securely. Place cam bearing assembly over outer piston set, align locating pins in the holes in cam bearing assembly. Install round head screws and tighten securely. (Torque to 17 inch pounds, coat motor shaft with grease prior to assembly.)

Reassemble bearing and cam bearing assembly to motor and retighten the set screw securely. Set screw **MUST** be positioned in shaft indentation.

Position of the screw is critical to avoid misalignment and subsequent diaphragm damage.

Reassemble remaining pump head parts, using care to properly seat "O" ring (13) in check valve assembly and tighten pump head screws evenly.

## WARRANTY

Flojet Corporation guarantees that each new Flojet pump is built of quality material and that it is free of defects in material and/or workmanship.

Flojet will repair or replace (at their option), at no charge, pumps proven defective within one year from date of purchase. In the absence of proof of the purchase date, the date of manufacture as shown on the pump will be used.

No product will be accepted for return without express authorization. All returned goods must be securely packaged and shipped with transportation charges prepaid.

Flojet is not liable for incidental or consequential damage. labor or expense incurred arising from use of its product

# Flojet



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