

FLOJET®

“Quad II Diaphragm” 4406 Series Automatic Water System Pump With Internal Bypass Valve

FEATURES

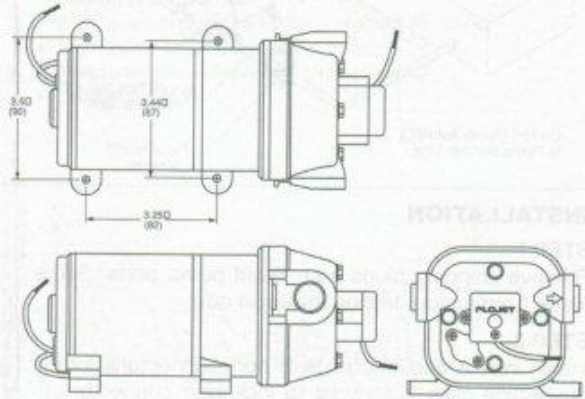
- Self-Priming
- Dry Running
- Soft, Noise Absorbing Mounts
- CSA listed, 12 Volt Model
- CE Models Available (d.c.)

SPECIFICATIONS

Motor: Permanent Magnet, Ball Bearing.

Pump: Four chamber diaphragm design; Self-priming up to 6 ft. suction lift; Pump able to run dry without damage; Removable port to hose connectors.

Note: The built-in bypass valve eliminates the need for an accumulator tank. Do not install in a system with an accumulator tank. The tank will interfere with the internal bypass valve.



Pump Series	Dimensions - Inches (mm)			Weight lb. (kg)
	Height	Width	Length	
4406-XXX	3.75 (95)	6.3 (160)	8.2 (208)	3.9 (1.8)

MODEL*	VOLTS	AMP DRAW @ 10 psi (0.7 bar)	FLOW GPM (l/min)	PRESSURE SWITCH MAX psi (bar)
4406-143	12V dc	3.9	3.3 (12.5)	35 (2.4)
4406-343**	24V dc	2.0	3.3 (12.5)	35 (2.4)
4406-043**	115V ac	0.4	3.3 (12.5)	35 (2.4)

* CE fully suppressed models are identified by a prefix "R" and a CE mark on the label. (i.e. R4406-143).

Self Declaration Of Conformance (SDOC) is available upon request.

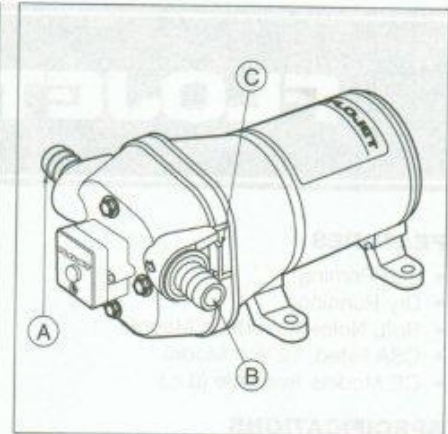
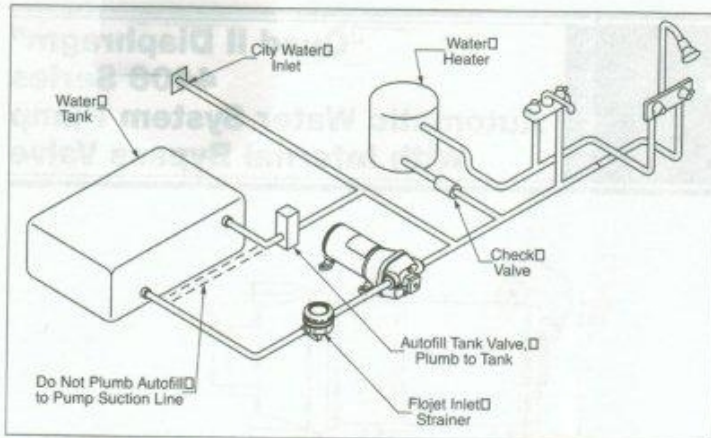
**Not listed with CSA

OPERATION

With pump switch off, and battery fully charged, fill water tank, open all faucets then turn pump switch on. Water will begin to flow, when water is free of air, turn faucets off, remember you are filling the water heater and the toilet and shower lines. When all valves are shut off pump will stop. Should pump fail to stop, turn switch off

and see the trouble shooting guide.

This motor pump unit is equipped with a thermal overload protection device. In the unlikely event the motor overheats, the pump will shut off. Turn off power to pump until motor cools.



INSTALLATION

STEP 1

Remove shipping plugs from Quad pump ports. Some water from factory testing may spill out.

STEP 2

Install inlet A and discharge B port connectors. Firmly push slide clips C forward to lock port connectors in place.

STEP 3

Slide rubber mounts fully into 4 mounting tracks.

STEP 4

Mount pump vertically, with pump head down or horizontally in an accessible location. If mounting vertically, motor up, attach motor mounts first, then pump head mounts, while supporting weight of pump.

STEP 5

Use 1/2" I.D. flexible hose (preferably braided or reinforced). Use hose clamps on the slip-on barb hose connectors.

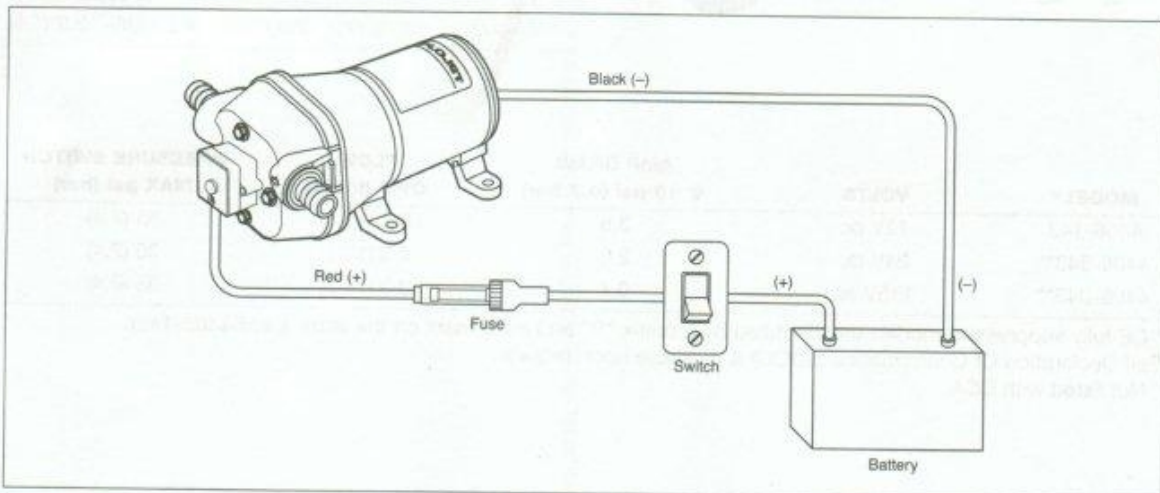
STEP 6

Install no less than 3/8" I.D. hose for feed lines to fixtures. Use high pressure hose on all city water lines.

STEP 7

Install a Flojet strainer in an accessible location (for inspection and cleaning) between the tank and pump inlet. This strainer or equivalent is required for pump warranty to be valid.

NOTE: Do not use with an accumulator tank.



WIRING

STEP 1

Use 14 gauge stranded wire to 20', 12 gauge to 50', from power source.

STEP 2

Use a 10-15 amp rated on-off switch on the (+) positive (red) motor lead.

STEP 3

Install 10-15 amp fuse or breaker between the power source and the positive lead for the -143 models and a 4 amp fuse for -343 models.

TROUBLESHOOTING

WARNING: BEFORE SERVICING PUMP, TURN OFF PUMP AND DRAIN WATER FROM SYSTEM!!

Failure to Prime - Motor operates, but no pump discharge

- Restricted intake or discharge line
- Air leak in intake line
- Debris in pump
- Punctured pump diaphragm (pump leaking)
- Crack in pump housing

Motor fails to turn on

- Loose wiring connection
- Pump circuit has no power
- Blown fuse or open thermal protector
- Pressure switch failure
- Defective motor

Pulsating Flow - Pump cycles on and off

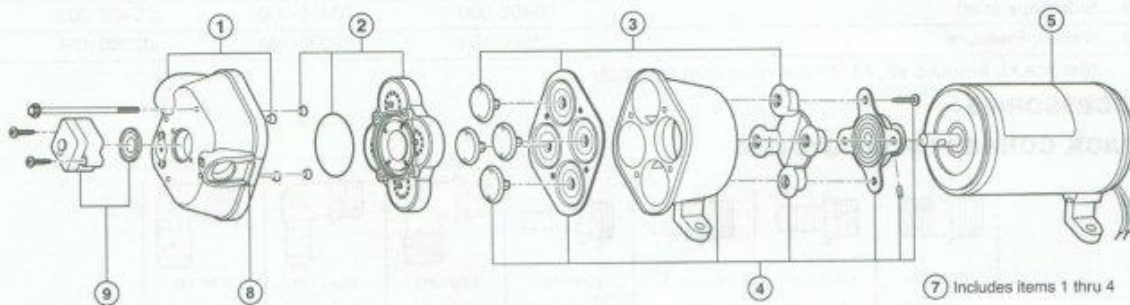
- Restricted pump delivery. Check discharge lines, fittings and valves for clogging or undersizing.

Pump Fails to Turn Off After All Fixtures Are Closed

- Empty water tank
- Insufficient voltage to pump (low battery)
- Punctured pump diaphragm (pump leaking)
- Discharge line leak
- Defective pressure switch

Low Flow and Pressure

- Air leak at pump intake
- Accumulation of debris inside pump and plumbing
- Worn pump bearing (excessive noise)
- Punctured pump diaphragm (pump leaking)
- Defective motor



Quite often when a pump is worn or defective the one failed component has overburdened others. To avoid frequent aggravating repairs, Flojet offers service kit assemblies making repairs as quick and easy as possible.

DISASSEMBLE

Upper Housing

1. Remove switch (9). Disconnect switch wires.

Upper Housing

2. Loosen but do not remove four pump head screws and carefully remove upper housing assembly (1)
3. Inspect check valve (2) for debris
4. Reassemble new upper housing (1)

Check Valve Assembly

- Follow step 2
3. Replace check valve (2)
4. Reassemble upper housing (1)

Lower Housing, Diaphragm, Motor

- Follow step 2, then slide rubber foot from mounting track.
3. Rotate lower housing (4) so mounting notch opening on lower housing exposes set screw which holds bearing housing to shaft.
4. Loosen this set screw by inserting wrench 1/8" Allen wrench into mounting notch opening. Then, slide lower housing (4) off motor shaft.

Diaphragm Cont'd 5.

5. Loosen four cam piston screws with Phillips head screw driver and pull apart cam from inner pistons. (Pistons should always be replaced when a new diaphragm is installed.)

Motor Cont'd

5. Replace Motor

REASSEMBLE

Motor

1. Reassemble lower housing assembly (4) to motor. (Follow steps 4 to 10.)

Diaphragm

2. Lower housing is assembled with:
 - Flat side of diaphragm and outer pistons facing motor
 - Hex stem of inner pistons must be aligned into hex holes in outer pistons (4).
 - Outer pistons must be aligned with alignment slots on cam assembly making sure screw holes align in cam assembly, otherwise diaphragm will leak.
3. Tighten cam piston screws partially, center piston in diaphragm, then tighten screws securely (18 in. lbs. torque)

Lower Housing

4. Reassemble lower housing assembly (4) to motor.
5. Retighten set screw securely. Set screw head must be positioned facing motor covering seam (indentation). (Positioning of this screw is critical to avoid misalignment and subsequent diaphragm damage.)

Upper Housing, Check Valve

6. Reassemble upper housing (1) and slide clips (8)
7. Properly seat O-Ring in check valve assembly (2) and check if ferrules and screen are in place on upper housing (1)
8. Install check valve (2) into upper housing (1) and push in.
9. Assemble on to lower housing (4), align 4 screws on to motor by rotating lower housing (4) if necessary to align feet.
10. Tighten screws evenly to 30 in. lbs. torque.

Pressure Switch

1. Place switch against front of pump (9), insert screws and take care not to cross thread or strip out threads in housing.
2. Reconnect wires.

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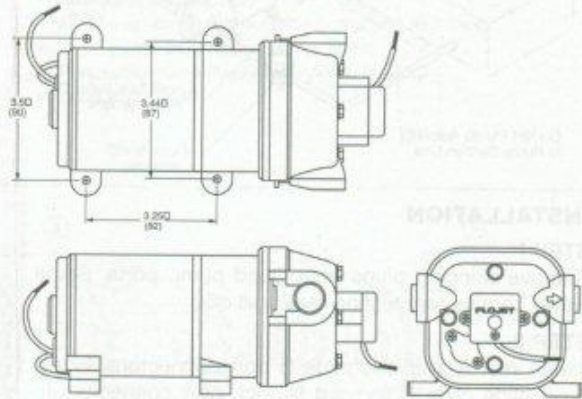
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