



# 'Spot Sprayer' Pump

**Model  
30814-Series**

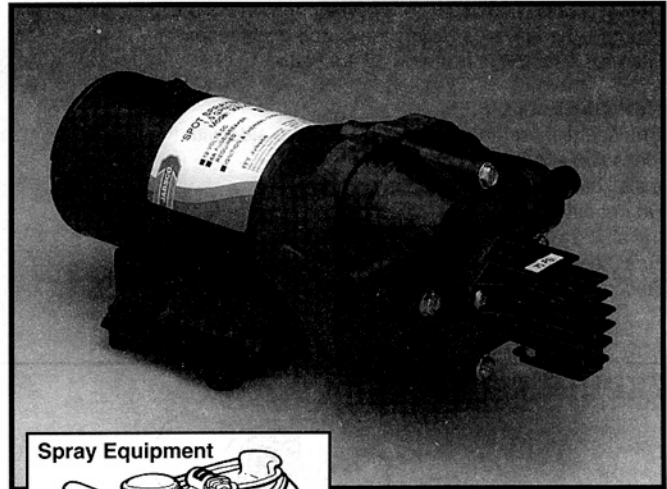
**AGRICULTURAL:** Supply pump for herbicide and pesticide spraying equipment.

## FEATURES

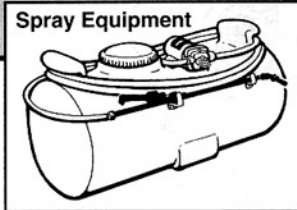
- Self-Priming
- Thermal Overload Protected Motor
- Snap-in 1/2" (13mm) Dia. Hose Barb Port Adaptors
- **CE** Conforms to Electromagnetic Compatibility 89/336/EEC and Machinery Directive 89/392/EEC
- Low Amp Draw
- Run Dry Ability

## SPECIFICATIONS

**Pump Body:** Glass Filled Polypropylene  
**Elastomers:** Santoprene\* Diaphragm, Valves of Viton\*\*  
**Hardware:** Stainless Steel  
**Pump Design:** Multi-Chamber Diaphragm  
**Flow Rate:** 1.2 GPM (4.5 LPM)  
**Suction Lift:** Self-Priming to:  
 10 ft. (3 m) min. (wet)  
 5 ft. (1.5 m) min. (dry)  
**Duty:** Intermittent, Maximum 70 psi (4.8 bar)  
**Ports:** 1/2" (13 mm) Hose Barb  
**Motor:** Permanent Magnet with Thermal Overload Protection.  
**Shipping Weight:** 5.5 lb (2.5 kg) approx.



Models 30814-Series

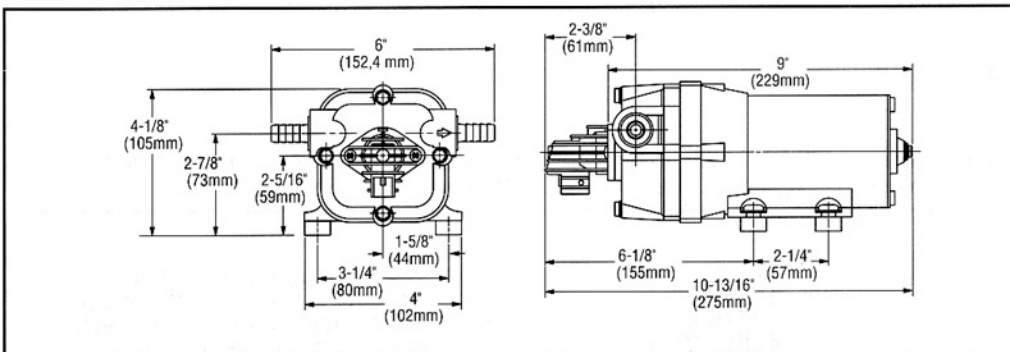


**WARNING** Explosion hazard. Do not pump gasoline, solvents, thinners or other flammable liquids. To do so can cause an explosion resulting in injury or death.

## OPERATION

- WIRING** – Use a minimum of 14 (2.5 mm<sup>2</sup>) gauge wire. The electrical circuit should be protected with an overcurrent protection device 6 amp in the positive lead. Black wire is negative, orange wire is positive.
- PRESSURE** – For intermittent duty, 70 psi (4.8 bar) is maximum discharge pressure.
- PARTICLE SIZE** – Pump is capable of pumping particle laden fluids where the particle size is less than 0.40" (1 mm) in diameter
- VISCOSITY** – The maximum pumped fluid viscosity is 250 centipoise.
- START-UP** – Check level of fluid in tank. Open nozzle. Turn switch on. Flow will become steady as air is bled from system. Close nozzle after flow becomes steady. Pump should shut off soon after closing nozzle. Pump is now ready for automatic operation. Pump will start after nozzle is opened and stop upon closing the nozzle. If pump is to be inoperative for a considerable period of time, flush pump with water, turn off electrical circuit to pump, and bleed system pressure by opening nozzle.

## DIMENSIONS



## PERFORMANCE

psi (bar)	GPM (LPM)
10 (0.7)	1.20 (4.5)
20 (1.4)	.80 (3.0)
30 (2.1)	.70 (2.7)
40 (2.8)	.60 (2.3)
50 (3.5)	.55 (2.1)
60 (4.2)	.50 (1.9)

VARIATIONS		FLOW GPM (LPM)	VOLTAGE	AMP DRAW @ 10 psi	RECOMMENDED FUSE/BREAKER† SIZES
MODELS	<b>CE</b>				
30814-1012	no	1.2 (4.5)	12 Vdc	2	7 1/2
30814-1092	yes	1.2 (4.5)	12 Vdc	2	7 1/2
30814-1024	no	1.2 (4.5)	24 Vdc	1	7 1/2

**NOTE: MODEL -XX9X  
CONFORMS TO  
89/336 EEC AND 89/332/EEC**

\* Santoprene is a registered trademark of Monsanto Corporation    \*\* Viton is a registered trademark of Du Pont Dow Elastomers L.L.C.

## SERVICE INSTRUCTIONS

**NOTICE:** Before servicing pump, turn off electrical power and open discharge valve to relieve pressure in pump, and neutralize any chemicals prior to disassembly.

### PUMP DISASSEMBLY

1. Push port clips back and disconnect plumbing from pump.
2. Remove the four (4) screws and separate the body from the motor assembly.
3. Remove valve housing with **O-RING** from the body.
4. Remove the four (4) piston screws and piston caps.
5. Remove diaphragm from the center plate.

### PUMP ASSEMBLY

1. Replace diaphragm, making sure that the side with the ridges faces **AWAY** from the motor assembly.
2. Install the four (4) piston caps and screws. Do not overtighten.
3. Install the valve housing and **O-RING** into the body.
4. Reassemble the body to the motor assembly.
5. Reconnect plumbing to pump and push clips forward.

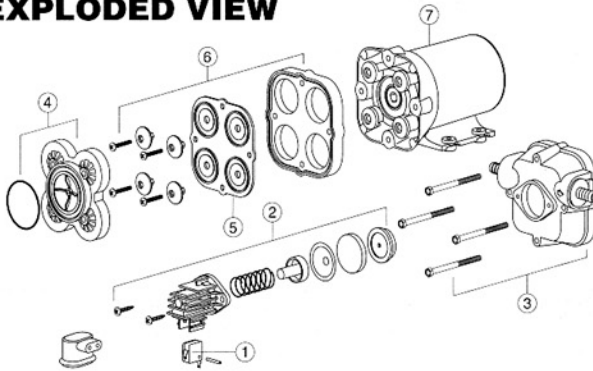
## SWITCH REPLACEMENT

1. Disconnect power leads from switch.
2. Remove switch from pump by removing two screws located on switch flange.
  - CAUTION** These screws hold down a strong spring. Hold switch firmly. Personal injury could result if switch body is allowed to fly loose.
3. Remove switch cap assembly leaving diaphragm and plunger on pump body.
4. Reassemble complete assembly to pump noting stack up in exploded view.
5. Hold firmly, and retain switch to body using two screws provided.
6. Reconnect switch power leads using spade terminals.

## TO REPLACE MICROSWITCH

1. Using a small punch, remove roll pin by pushing pin out right to left (when looking at front of switch).
2. Remove switch by depressing actuator (clicker) and pulling switch out bottom of switch cap.
3. Insert new Micro Switch into switch cap with switch actuator button facing the motor.
4. Replace roll pin by inserting from left to right through switch cap assembly.

## EXPLODED VIEW



## PARTS LIST

KEY	DESCRIPTION	QTY	30814-0012	CE Model 30814-0092
1	Micro Switch	1	18753-0141	
2	Pressure Switch Kit (includes Micro Switch)	1	44050-1001	
3	Body Kit	1	30608-1004	
4	Valve Kit	1	30613-2004	
5	Diaphragm Kit	1	30617-1000	
6	Plate/Piston Kit	1	30682-1000	
7	Motor Kit 12 Vdc	1	18753-0626	18753-0627
	24 Vdc	1		18753-0631
Note:	Port Kits: 1/2" (13 mm) barb	2	30654-1004	

## TROUBLESHOOTING

### PULSATING FLOW – PUMP CYCLES ON AND OFF

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

### FAILURE TO PRIME – MOTOR OPERATES, BUT NO PUMP DISCHARGE

- Restricted intake or discharge line.
- Air leak in intake line.
- Punctured pump diaphragm.
- Debris under flapper valves.
- Crack in pump housing.

### MOTOR FAILS TO TURN ON

- Loose wiring connection.
- Pump circuit has no power.
- Blown fuse/Thermal Protector Tripped.
- Pressure switch failure.
- Defective motor.

**CAUTION** Pumps have thermal overload protected motors. The motor will automatically shut off as temperature rises due to an overload condition. If the motor shuts off in this manner, close all nozzles or valves. After a cooling off period, the pump will automatically re-start.

### PUMP FAILS TO TURN OFF AFTER ALL VALVES ARE CLOSED

- Empty water tank.
- Punctured pump diaphragm.
- Discharge line leak.
- Defective pressure switch.
- Insufficient voltage to pump.
- Debris under flapper 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 motor.

# Jabsco



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