

### PUMP INSTALLATION

#### MOUNTING

Flojet 2135 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 Flojet 1720/1740 Series 40 or 20 mesh strainer is available with various connections to fit most installations. For more information, request Form #F100-072. 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.

PRODUCT WARRANTY IS VOID IF INSTALLATION  
INSTRUCTIONS ARE NOT FOLLOWED.

#### ELECTRICAL

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.

#### 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*
2100-030	.062"	06
2100-031	.052"	04
2100-032	.062"	06
2100-034	.036"	02
2100-130	.072"	08
2100-131	.062"	06
2100-132	.072"	08
2100-134	.052"	04

\*Ref. Spraying Systems Catalog

### TROUBLESHOOTING

#### Failure to Prime-

##### 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.
- Defective motor or rectifier.
- Frozen cam/bearing.

##### 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.

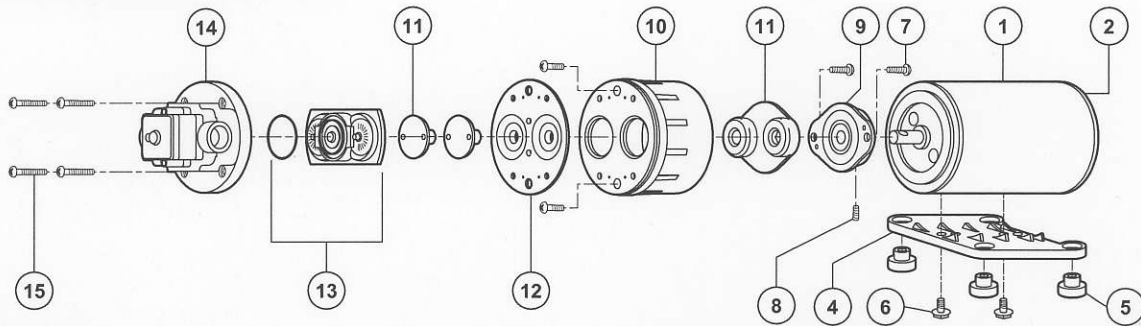
##### Low Flow and Pressure

- 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.

## 2100 SERIES DEMAND PUMP



KEY PART NO.	DESCRIPTION	QTY	PUMP DASH NO.
			-030-130-230
			-031-131-231
			-032-132-232
			-034-134-234
1	02009-004 12 V Motor DC (TENV)	1	x
	02029-000 115 V Motor AC (TENV)	1	x
	02W9-028 230 V Motor AC (TENV)	1	x
—	20252-500 Rectifier Assy. Only (AC)	1	x
2	29115-111 Brush Endbell/Rect. Assy. (AC)	1	x
	29115-116 Brush Endbell Assy. (DC)	1	x
4	11028-101 Baseplate Assy. Plastic (inc. #5 & #6)	1	x
5	20132-000 Grommets	Set of 4	x
6	20131-002 Baseplate Screws	Set of 2	x
<b>CAM BEARING / DIAPHRAGM KIT</b>			
	21004-100 #0 Cam, VITON ® Diaphragm	1	
	21004-200 #0 Cam, BUNA Diaphragm	1	
	21004-400 #0 Cam, SANTO Diaphragm	1	
Kit	21004-101 #1 Cam, VITON ® Diaphragm	1	
Incl.	21004-201 #1 Cam, BUNA Diaphragm	1	
	7 21004-401 #1 Cam, SANTO Diaphragm	1	
	8 21004-102 #2 Cam, VITON ® Diaphragm	1	
	9 21004-202 #2 Cam, BUNA Diaphragm	1	
	11 21004-402 #2 Cam, SANTO Diaphragm	1	
	12 21004-104 #4 Cam, VITON ® Diaphragm	1	
	21004-204 #4 Cam, BUNA Diaphragm	1	
	21004-404 #4 Cam, SANTO Diaphragm	1	

### WARRANTY

FLOJET warrants this product to be free of defects in material and/or workmanship for a period of one year after purchase by the customer from FLOJET. During this one year warranty period, FLOJET will at its option, at no charge to the customer, repair or replace this product if found defective, with a new or reconditioned product, but not to include costs of removal or installation. No product will be accepted for return without a return material authorization number. All return goods must be shipped with transportation charges prepaid. This is only a summary of our Limited Warranty. For a copy of our complete warranty, please request Form No. 100-101.

### RETURN PROCEDURE

Prior to returning any product to FLOJET, call customer service for an authorization number. This number must be written on the outside of the shipping package. Place a note inside the package with an explanation regarding the reason for return as well as the authorization number. Include your name, address and phone number.

KEY PART NO.	DESCRIPTION	QTY	PUMP DASH NO.
			-030-130-230
			-031-131-231
			-032-132-232
			-034-134-234
10	20428-100 Bearing Cover Polypro	1	x
13	20028-051 Check Valve Kit - VITON ®	1	x
	20028-011 Check Valve Kit - BUNA	1	x
	20028-057 Check Valve Kit - SANTO	1	x
14	20316-011 Upper Hsng./Switch Assy.	1	x
15	20131-001 Pump Screws	Set of 6	x
<b>FOR PUMP DASH NO.</b>			
Kit	21094-** Pump Head Assy. (7 Thru 15)		-130-230
			-131-231
			-132-232
			-134-234
<b>FOR PUMP DASH NO.</b>			
Kit	21046-029 Pump Service Kit		-032-132-232

\*Parts included in Pump Service Kit

\*\*Use Pump Dash Number for Pumphead Dash Number.

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### SERVICE TIPS

Refer to exploded view for key number. To disassemble, remove six pump head screws (15), rotate bearing cover (10) so drain notch is aligned with cam/bearing assembly set screw (8), loosen set screw (use 1/8" size Allen Wrench) and slide pump head off shaft. Pistons (11) 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 (11) must be aligned (free to enter) into Hex hole in outer piston set (11). Press pistons together by hand until pistons snap tight. Install flat head screws (7) 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 18 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.

## Flojet



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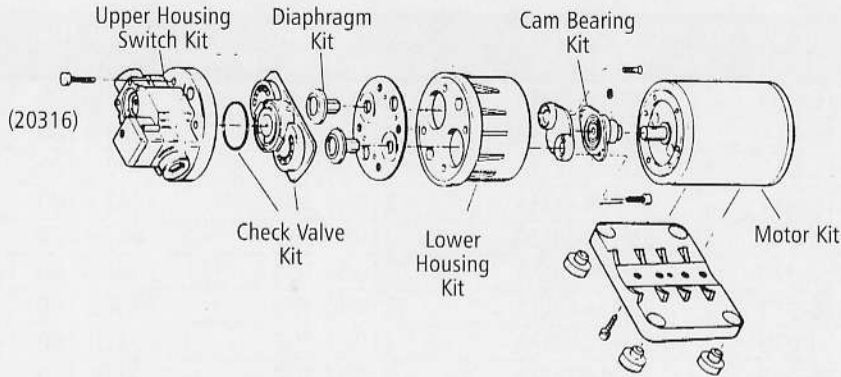
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# SERVICE PARTS KIT LIST

## 2135 SERIES

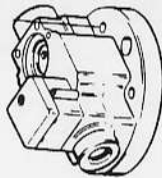
# FLOJET®

### Typical 2135 Series Assembly

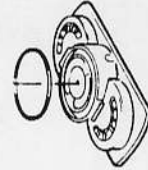


### PARTS KIT DESCRIPTIONS

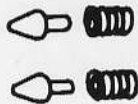
**Switch Kit:**  
Complete pressure switch and upper housing assembly.



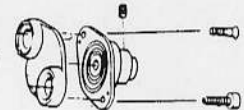
**Check Valve Kit:**  
Check valve assembly with "O" ring.



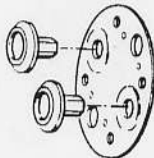
**Bypass Kit:**  
Bypass poppets and springs, two each.



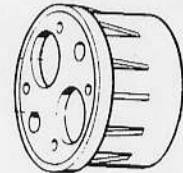
**Cam/Bearing Kit:**  
Cam/bearing assembly with screw.



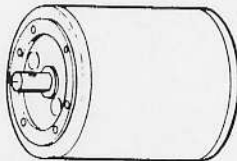
**Diaphragm Kit:**  
Diaphragm with inner and outer pistons and screws.



**Lower Housing Kit:**  
Lower housing with cam, diaphragm and piston assembly.



**Motor Kit:**  
Complete motor assembly (includes any shroud).

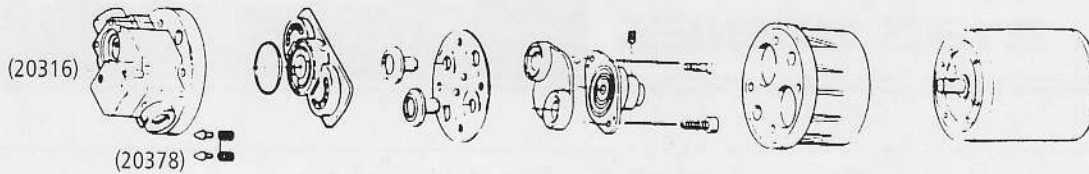


**To find correct parts kits:** Identify the pump model number in the left column and read across to the kit number required.

For individual parts not included in this list, please refer to your installation, operation and service instruction sheet for the particular pump model.

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# 2135 SERIES PARTS KIT LIST



Model #	Upper Hsg SW Kit Bypass Kit	Check Valve Assy Kit	Cam Bearing Diaphragm Kit	Lower Hsg Kit	Motor
2135-022	20316-059	20914-002A	21004-102	20428-100	02029-000
2135-032	20316-011	20914-003A	21004-402	20428-100	02029-000
2135-132	20316-011	20914-003A	21004-402	20428-100	02009-004
2135-134	20316-011	20914-003A	21004-404	20428-100	02009-004
2135-512	20316-042	20914-002A	21004-101	20428-100	02029-043
2135-555	20316-070	20914-002A	21004-104	20428-100	02009-044
2135-557	20316-011	20914-003A	21004-302	20428-100	02029-000
2135-558	20316-079	20914-003A	21004-402	20428-100	02009-015
2135-561	20316-085	20914-002A	21004-202	20428-100	02009-004
2135-564	20316-086	20914-003A	21004-302	20428-100	02039-001
2135-568	20316-082	20914-002A	21004-200	20428-100	02009-004
2135-571	20316-085	20914-002A	21004-402	20428-100	02029-004
2135-574	20316-042	20914-003A	21004-400	20428-100	02009-027
2135-575	20316-042	20914-003A	21004-300	20428-100	02039-027

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