

PUMP INSTALLATION

MOUNTING

Flojet 2100 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 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.

CAUTION

(115 Volt AC) UL recognition is based on testing using water

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.
- 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*
2100-030	.072"	08
2100-031	.062"	06
2100-032	.078"	10
2100-034	.052"	04
2100-035	.078"	10
2100-130	.078"	10
2100-131	.072"	08
2100-132	.094"	15
2100-134	.062"	06
2100-135	.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.

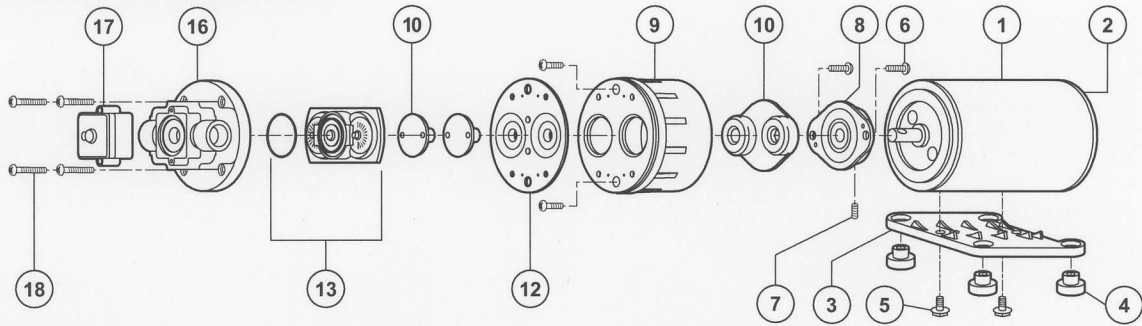
Low Flow and Pressure

- 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.

2100 SERIES DEMAND PUMP



KEY	PART NO.	DESCRIPTION	QTY.
1	02029-000	Motor 115 Volt AC TENV	1
	02029-026	Motor 115 Volt AC TEFC	1
	02039-001	Motor 230 Volt AC TENV	1
	02039-031	Motor 230 Volt AC TEFC	1
	02009-004	Motor 12 Volt DC TENV	1
	02009-015	Motor 12 Volt DC TEFC	1
2	20115-210	Brush Endbell/Rect. Assy. (AC) TENV	1
	20115-219	Brush Endbell/Rect. Assy. (AC) TEFC no bearing	1
	20115-229	Brush Endbell Assy. (DC) TENV	1
	20115-213	Brush Endbell Assy. (DC) TEFC no bearing	1
**	20252-500	Internal Rectifier w/Leads	1
3	11028-101	Motor Base Plate Assy. Plastic	1
4	20132-000	Grommets	Set of 4
5	20131-002	Baseplate Screws	Set of 2
CAM BEARING 1 DIAPHRAGM KIT			
Kit	21004-100	#0 Cam, VITON ® Diaphragm	1
Incl.	21004-200	#0 Cam, BUNA Diaphragm	1
6,7	21004-400	#0 Cam, SANTO Diaphragm	1
8	21004-101	#1 Cam, VITON ® Diaphragm	1
10	21004-201	#1 Cam, BUNA Diaphragm	1
12	21004-401	#1 Cam, SANTO Diaphragm	1

KEY	PART NO.	DESCRIPTION	QTY.
Kit	21004-102	#2 Cam, VITON ® Diaphragm	1
Incl.	21004-202	#2 Cam, BUNA Diaphragm	1
6	21004-402	#2 Cam, SANTO Diaphragm	1
7	21004-104	#4 Cam, VITON ® Diaphragm	1
8	21004-204	#4 Cam, BUNA Diaphragm	1
10	21004-404	#4 Cam, SANTO Diaphragm	1
12	21004-105	#5 Cam, VITON ® Diaphragm	1
	21004-205	#5 Cam, BUNA Diaphragm	1
	21004-405	#5 Cam, SANTO Diaphragm	1
9	20428-100	Bearing Cover Poly Pro	1
13	20028-008	Check Valve Assembly (Std) SANTOPRENE	1
	20028-009	BUNA	1
	20028-035	VITON ®	1
16	20500-507	Pump Housing Polypropylene	1
	20500-508	Pump Housing Nylon	1
17	02095-100	Pressure Switch Assy. 60 PSI	1
18	20131-001	Pump Screws	Set of 6
6-18	21050-	Pump Head Assy	
		Use Pump Dash Number for Pump Head Dash Number	
	20132-005	Fan Shroud Kit	1
		Brush Kit	
	20097-000	For 115 & 230 Volt AC Motor	Set of 2
	20097-001	For 12 & 24 Volt DC Motor	Set of 2

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** Not shown in diagram.

TENV Totally enclosed, non-ventilated

TEFC Totally enclosed, fan cooled.

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.

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 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.

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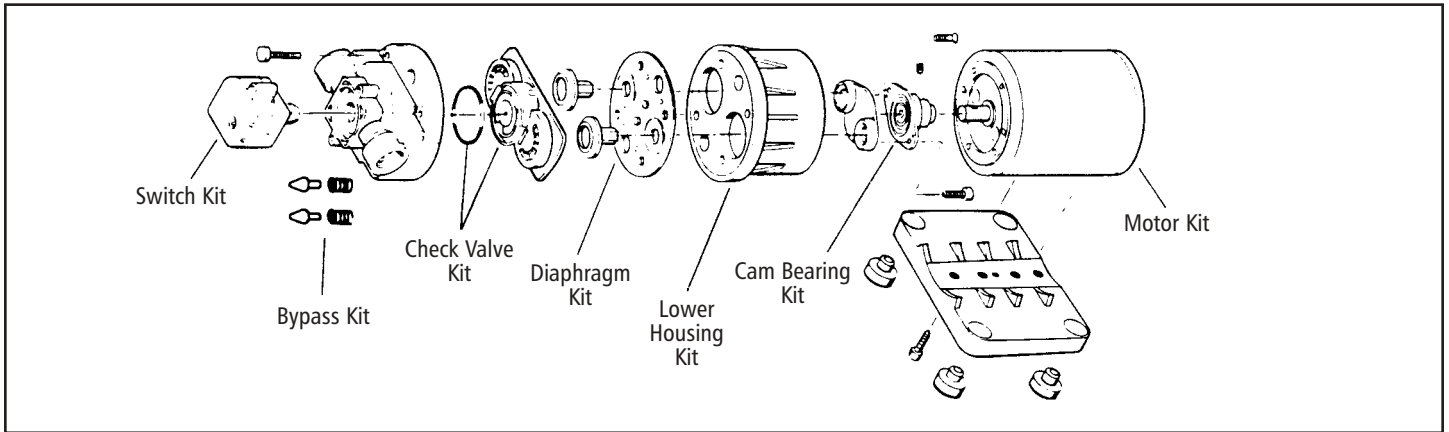
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SERVICE PARTS KIT LIST

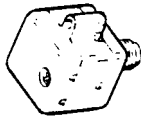
2100 SERIES

FLOJET®

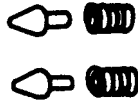


PARTS KIT DESCRIPTIONS

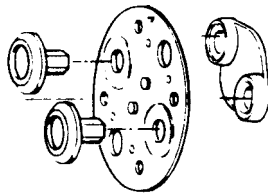
Switch Kit:
Complete pressure switch with wire leads.



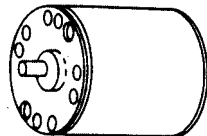
Bypass Kit:
Bypass poppets and springs, two each.



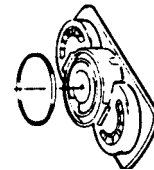
Diaphragm Kit:
Diaphragm with inner and outer pistons and screws.



Motor Kit:
Complete motor assembly.



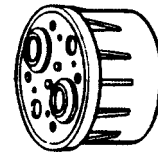
Check Valve Kit:
Check valve assembly with "O" ring.



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




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



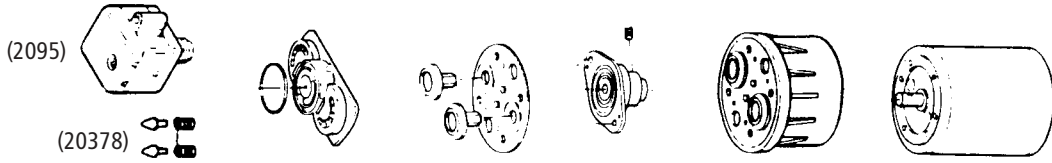
To find correct parts kits: Identify the pump model number in the left column and read across to the kit number required. If pump has a switch and bypass, both are shown in the second column. Complete service kits, available for some models, are shown in the right column. Service Kits include Bypass Kit (where used), Check Valve, Diaphragm and Cam/Bearing Kits.

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

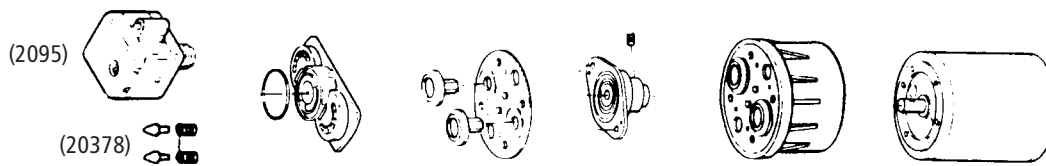


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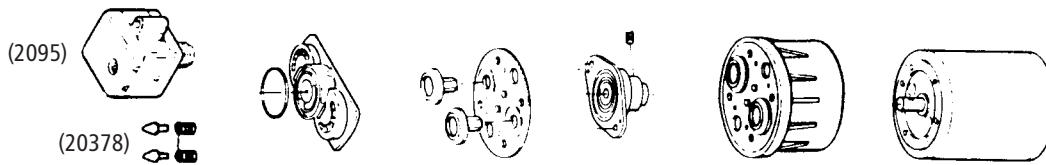
2100 SERIES PARTS KIT LIST



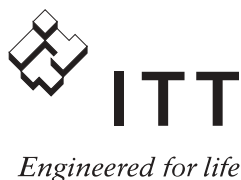
Model #	Switch Bypass Kit	Check Valve Assy Kit	Cam Bearing Diaphragm Kit	Lower Hsg Kit	Motor
2100-012	02090-100	20914-001A	21004-202	21022-012A	02029-000
2100-020	02090-100	20914-002A	21004-100	21022-020A	02029-000
2100-021	02090-100	20914-002A	21004-101	21022-021A	02029-000
2100-022	02090-100	20914-002A	21004-102	21022-022A	02029-000
2100-024	02090-100	20914-002A	21004-104	21022-024A	02029-000
2100-030	02090-100	20914-003A	21004-420	21022-040A	02029-000
2100-031	02090-100	20914-003A	21004-421	21022-041A	02029-000
2100-032	02090-100	20914-003A	21004-402	21022-042A	02029-000
2100-034	02090-100	20914-003A	21004-404	21022-044A	02029-000
2100-035	02090-100	20914-003A	21004-405	21022-045A	02029-026
2100-112	02090-100	20914-001A	21004-202	21022-012A	02009-004
2100-120	02090-100	20914-002A	21004-100	21022-020A	02009-004
2100-121	02090-100	20914-002A	21004-101	21022-021A	02009-004
2100-122	02090-100	20914-002A	21004-102	21022-022A	02009-004
2100-124	02090-100	20914-002A	21004-104	21022-024A	02009-004
2100-130	02090-100	20914-003A	21004-400	21022-040A	02009-004
2100-131	02090-100	20914-003A	21004-401	21022-041A	02009-004
2100-132	02090-100	20914-003A	21004-402	21022-042A	02009-004
2100-134	02090-100	20914-003A	21004-404	21022-044A	02009-004
2100-135	02090-100	20914-003A	21004-405	21022-045A	02009-015
2100-212	02090-100	20914-001A	21004-202	21022-012A	02039-001
2100-222	02090-100	20914-002A	21004-102	21022-022A	02039-001
2100-230	02090-100	20914-003A	21004-400	21022-040A	02039-001
2100-231	02090-100	20914-003A	21004-401	21022-041A	02039-001
2100-232	02090-100	20914-003A	21004-402	21022-042A	02039-001
2100-234	02090-100	20914-003A	21004-404	21022-044A	02039-001
2100-235	02090-100	20914-003A	21004-405	21022-045A	02039-031
2100-311	02090-100	20914-001A	21004-201	21022-011A	02019-001
2100-312	02090-100	20914-001A	21004-202	21022-112A	02019-001
2100-331	02090-100	20914-003A	21004-401	21022-041A	02019-001
2100-332	02090-100	20914-003A	21004-402	21022-042A	02019-001
2100-503	02090-100	20914-002A	21004-200	21022-040A	02029-000
2100-515	N/A	20914-003A	21004-402	21022-042A	02029-000
2100-535	N/A	20914-003A	21004-405	21022-045A	02029-015
2100-544	02090-100	20914-003A	21004-401	21022-041A	02039-005
2100-549	02378-001	20028-061	21004-300	21022-030A	02029-000
2100-551	02090-100	20914-003A	21004-400	21022-040A	02029-009
2100-553	20378-001	20028-001	21004-400	21022-041A	02039-008
2100-556	20378-001	20028-002	21004-400	21022-040A	02039-073
2100-561	N/A	20914-003A	21004-402	21022-042A	02039-023
2100-571	20373-003	20028-022	21004-205	21022-015A	02049-013
2100-573	N/A	20914-003A	21004-402	21022-042A	02009-004
2100-576	N/A	20914-003A	21004-404	21022-044A	02039-001
2100-579	20378-001	20028-002	21004-400	21022-040A	02009-004



Model #	Switch Bypass Kit	Check Valve Assy Kit	Cam Bearing Diaphragm Kit	Lower Hsg Kit	Motor
2100-591	02090-100	20914-003A	21004-400	21022-040A	02039-001
2100-592	20378-001	20028-012	21004-204	21022-014A	02029-000
2100-597	N/A	20914-002A	21004-221	21022-011A	02009-004
2100-598	02090-100	20914-002A	21004-220	21022-010A	02039-001
2100-599	02090-100	20914-002A	21004-400	21022-040A	02009-004
2100-609	20378-001	20028-048	21004-404	21022-044A	02009-004
2100-610	N/A	20914-001A	21004-202	21022-012A	02009-004
2100-615	N/A	20914-003A	21004-402	21022-042A	02009-004
2100-629	20378-001	20028-048	21004-404	21022-044A	02039-001
2100-636	N/A	20914-003A	21004-402	21022-042A	02009-025
2100-637	N/A	20914-003A	21004-402	21022-042A	02009-002
2100-773	02090-100	20914-002A	21004-101	21022-021A	02029-000
2100-777	02090-100	20914-002A	21004-400	21022-040A	02009-004
2100-779	02090-100	20914-002A	21004-404	21022-044A	02049-001
2100-780	02037-8001	20028-045	21004-300	21022-130A	02029-000
2100-782	N/A	201914-001A	21004-205	21022-015A	02029-096
2100-783	N/A	201914-003A	21004-404	21022-044A	02039-091
2100-789	02090-100	201914-002A	21004-402	21022-042A	02049-001
2100-790	N/A	201914-002A	21004-402	21022-042A	02029-000
2100-792	N/A	201914-002A	21004-100	21022-020A	02029-000
2100-802	02090-100	201914-002A	21004-104	21022-024A	02009-071
2100-803	N/A	201914-003A	21004-401	21022-041A	02009-004
2100-815	N/A	201914-001A	21004-220	21022-010A	02029-000
2100-822	02090-100	201914-002A	21004-102	21022-022A	02009-015
2100-825	20357-005	20028-080	21004-121	21022-021A	02039-008
2100-831	20378-001	20028-078	21004-402	21022-042A	02009-004
2100-835	20378-003	20028-078	21004-402	21022-042A	02009-015
2100-840	20378-012	20028-022	21004-202	21022-012A	02009-015
2100-848	N/A	20914-002A	21004-402	21022-042A	02009-015
2100-851	20378-002	20028-003	21004-401	21022-041A	02029-000
2100-855	20378-001	20028-078	21004-102	21022-022A	02029-000
2100-856	02090-104	20914-002A	21004-202	21022-012A	02029-000
2100-858	02090-100	20914-003A	21004-402	21022-042A	02029-000
2100-859	02090-103	20914-003A	21004-302	21022-032A	02039-001
2100-869	N/A	20914-001A	21004-202	21022-112A	02009-015
2100-871	N/A	20914-003A	21004-402	21022-042A	02029-000
2100-872	20378-003	20028-022	21004-202	21022-012A	02049-018
2100-877	20378-000	20028-028	21004-204	21022-014A	02039-001
2100-882	20378-003	20028-003	21004-400	21022-040A	02029-068
2100-883	20378-003	20028-003	21004-400	21022-040A	02039-001
2100-884	20378-001	20028-003	21004-402	21022-042A	02009-015
2100-888	20378-000	20028-022	21004-202	21022-012A	02009-015
2100-894	N/A	20028-078	21004-202	21022-012A	02009-004
2100-895	N/A	20194-003A	21004-400	21022-040A	02019-001
2100-899	N/A	20194-003A	21004-402	21022-042A	02029-031



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2100-901	20378-001	20028-078	21004-102	21022-022A	02009-004
2100-902	N/A	20194-001A	21004-204	21022-014A	02009-004
2100-904	N/A	20194-002A	21004-200	21022-010A	02009-004
2100-907	20378-001	20028-078	21004-202	21022-012A	02009-004
2100-910	N/A	20194-001A	21004-201	21022-011A	02009-015
2100-914	20378-002	20028-008	21004-202	21022-012A	02029-000
2100-929	20378-011	20028-011	21004-400	21022-042A	02029-013
2100-931	N/A	20194-001A	21004-202	21022-012A	02019-013
2100-942	02090-100	20194-003A	21004-405	21022-045A	02009-015
2100-943	02090-103	20194-004A	21004-301	21022-031A	02009-004
2100-945	02090-100	20194-003A	21004-402	21022-042A	02029-000
2100-947	N/A	20194-003A	21004-400	21022-040A	02039-001
2100-959	20378-003	20028-045	21004-400	21022-040A	02009-061
2100-971	02090-103	20194-003A	21004-402	21022-042A	02029-014
2100-972	20378-003	20028-078	21004-202	21022-112A	02009-063
2100-973	20378-004	20028-003	21004-402	21022-042A	02029-072
2100-974	20378-001	20028-002	21004-400	21022-040A	02029-031
2100-978	02090-100	20194-003A	21004-402	21022-042A	02039-001
2100-979	20378-003	20028-003	21004-400	21022-040A	02029-074
2100-983	20378-001	20028-022	21004-202	21022-012A	02009-068
2100-984	20378-002	20028-078	21004-402	21022-042A	02009-043
2100-987	02090-119	20194-002A	21004-201	21022-011A	02009-070
2100-996	02090-117	20194-002A	21004-122	21022-022A	02039-023



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