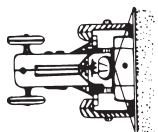


ALL IN ONE LAWN AND GARDEN 12 VOLT SPRAYERS



(PRICES SUBJECT TO CHANGE WITHOUT NOTICE)



van's

EQUIPMENT COMPANY

P.O. BOX 3157 • 2169 SYLVESTER HIGHWAY • MOULTRIE, GEORGIA 31776-3157

We Appreciate You and Your Business!

(229) 985-1101

**VAN'S EQUIPMENT
BUILT FOR FARMING INTEGRITY**

WHEN SELECTING EQUIPMENT FOR FARMING THE NAME VAN'S means availability, reliability, and proven superiority. Maintaining a close association with farming customers has resulted in equipment design and manufacturing philosophy that reflects the exacting requirements of our customers.

Van's Equipment Company, Inc. appreciates your purchase of a new spray unit. This unit, is designed to give years of service with proper care. The following pages will be helpful in set-up and maintenance of your new unit.

PLEASE READ THIS MANUAL CAREFULLY BEFORE INITIAL START-UP IS ATTEMPTED.

**WE APPRECIATE YOU
AND YOUR BUSINESS**

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5.....	LG15/25e Economy Lawn and Garden,Parts Breakdown and Listing
6.....	LG15/25 with 04300-500 Pump and KLC Tip,Parts Breakdown and Listing
7.....	30 & 50 Gallon PCO Lawn & Garden with Handgun ,Bypasss D2131F1311 Pump Parts Breakdown and Listing.
8.....	Handgun Parts Breakdown and Listing
9-10.....	04300-500 Pump Parts Breakdown and Listing
11-12.....	D2131F1311 Pump Parts Breakdown and Listing

**ALL IN ONE
SKID/TYPE
12 VOLT SPRAYERS**



Model L15E/25E Shown

Van's offers a line of personal lawn & garden units in either 15 or 25 gallon sizes. These models are ideally suited for many uses around the home or farm. The skid model is light & easy to handle and can be used with your Riding Lawn Mower, ATV (four wheeler), or truck. It can be mounted almost anywhere and can be operated with any 12 volt battery.

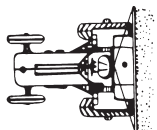
Standard Features Include:

- 1) Choice of 15 or 25 Gallon Polyethylene Tank
- 2) 5" Fillwell for Easy Access & Cleaning
- 3) 15' Clear Braid Hose & Hand Gun
- 4) 12 Volt Pump - 40 PSI
- 5) Molded in Inserts in Bottom of Tank for Mounting
- 6) Complete Wiring Harness

Model LG15 (Standard)	LG15E(Option)	Model LG25 (Standard)	LG25E (option)
30 & 50 Gallon	SKID/TYPE	12 VOLT SPRAYER	
30 Gallon All In One with Flo Jet		02100-835	
Model # LG3011	Price		
50 Gallon All In One with Flo Jet		02100-835	
Model # LG5011	Price		
30 Gallon All In One with Flo Jet		04300-500	
Model # LG3012	Price		
50 Gallon All In One with Flo Jet		04300-500	
Model # LG5012	Price		

All 30 & 50 Gallon
Units Use PCO Tanks

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ALL IN ONE LAWN AND GARDEN SPRAYER : OWNERS MANUAL

ASSEMBLY

Your VAN's ALL IN ONE Sprayer is Fully Assembled and Tested at the Factory. The Only Assembly You Need to do is to Hook the Wiring Harness Clips to a 12 Volt Power Source,(RED WIRE TO POSITIVE +,BLACK WIRE TO GROUND-).

PLEASE NOTE: PUMPS ON THESE LAWN AND GARDEN UNITS ARE FOR INTERMITTENT USE ONLY.

THEY ARE MORE THAN ADEQUATE TO SPRAY THE COMPLETE CONTENTS OF A 50 GALLON TANK.

WE RECOMMEND A 30 MINUTE DOWN TIME AFTER EVERY TANK FULL.

BEFORE USING/OPERATION

- 1 Always Test and Check for Leaks With Clean Water.
- 2 To Start/ Prime Unit the Discharge Line Must Be Open to Allow Traped Air To Escape. Once The Pump Is Running The Pressure Switch Will Shut Off The Pump When Discharge Is Closed,and Open When Discharge Is Opened.
- 3 The Tip On The Spray Gun Is Adjustable and Can Be Set From Straight Stream To Wide Fan Pattern.
- 4 On Units With Secondary Outlets ,Such as A Boom or Flood Tip,There Will Be A Ball Valve In the Feed Line To this Outlet. Release Of The Trigger On The Gun Shuts The Gun Off. These Units Will Also Have A ON/OFF Switch To The Pump. The ON/OFF Switch to the Pump Comes In Handy In Situations , Such As Turning Unit Around,When Secondary Outlet Only Needs To Be Off For A Short Time As It Is Easier To Reach. Turn Ball Valve Off When Using Only Gun.
- 5 Look Inside Tank To Make Sure It Is Clean.

MAINTANANCE AND PRECAUTIONS:

- 1 Be Certain Power Source Comforms To Pump Voltage.
- 2 Be Certain Wiring Harness RED LEAD Goes To Positive(+),and Black To Ground (-).
- 3 Do Not Use To Pump Flammable Liquids.
- 4 Follow All Instruction On Chemical Contianer.
- 5 Flush With Clean Water After Every Use.
- 6 Do Not Restrict Suction Line.
- 7 Do Not Alter Sprayer.
- 8 Do Not Store Chemical In Tank.
- 9 Always Clean Tank Thoroughly Between Sprays or When Switching Chemicals.
- 10 Do Not Run Pump Dry.
- 11 If Freezing Conditions Will Occur , The Pump Must Be Liquid Free or Winterized With Proper Anti Freezing Chemicals.

TROUBLE SHOOTING:

MOTOR FAILS TO PRIME (MOTOR OPERATES,BUT NO PUMP DISCHARGE

- 1 Restricted Intake or Discharge Line.Open All Line Valves,Check For Cloggs or Kinked Lines.
- 2 Air Leak In Intake Line.
- 3 Punctured Pump Diaphragm.
- 4 Defective Pump Check Valve.
- 5 Crack In Pump Housing.
- 6 Debris In Check Valve.

MOTOR FAILS TO TURN ON

- 1 Pump or Equipment Not Connected To Power Source.
- 2 Loose Wiring Connection.
- 3 Pressure Switch Failure.
- 4 Defective Motor or Rectifier.
- 5 Frozen Cam/Bearing.

PUMP FAILS TO TURN OFF AFTER DISCHARGE VALVES ARE CLOSED

- 1 Depletion Of Available Liquid Supply.
- 2 Punctured Pump Diaphragm.
- 3 Discharge Line Leak.
- 4 Defective Pressure Switch.
- 5 Insufficient Voltage To Pump.
- 6 Debris In Check Valve

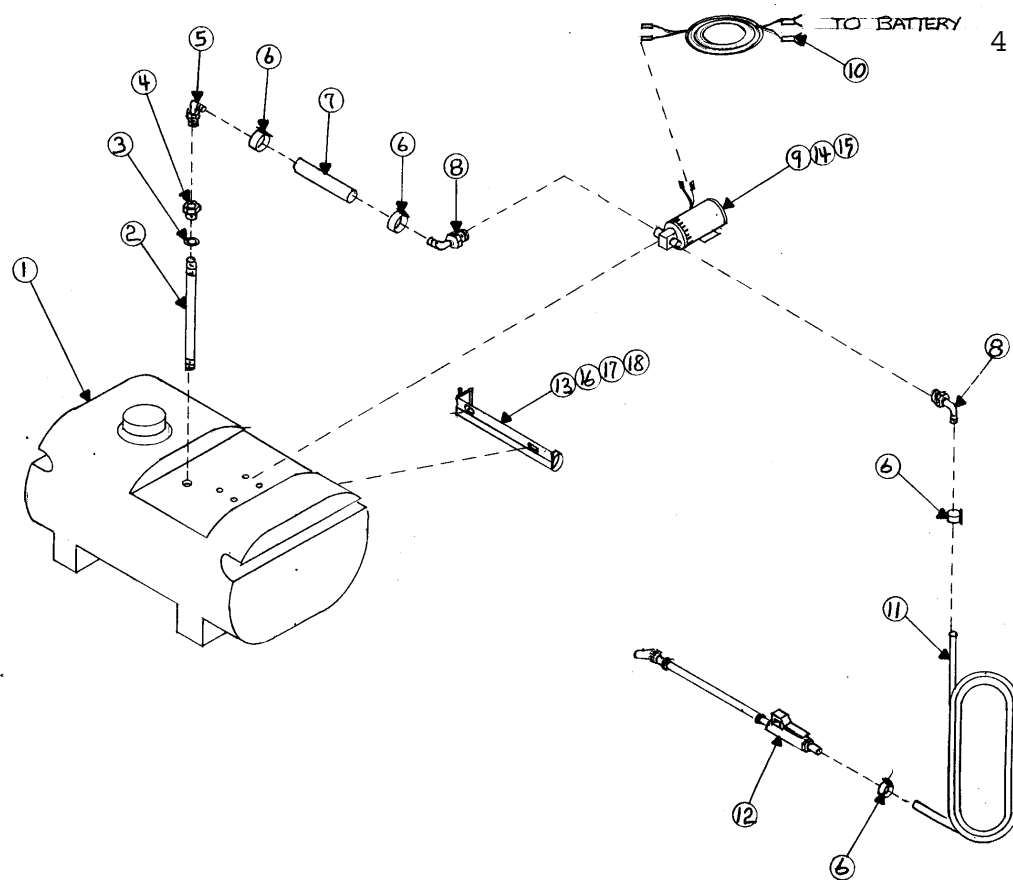
LOW FLOW AND PRESSURE

- 1 Air Leak At Pump Intake.
- 2 Accumulation of Debris Inside Pump and Plumbing
- 3 Worn Pump Bearing(Excessive Noise)
- 4 Punctured Pump Diaphragm
- 5 Defective Rectifier or Motor
- 6 Insufficient Voltage To Pump

PULSATING FLOW-PUMP CYCLING ON AND OFF

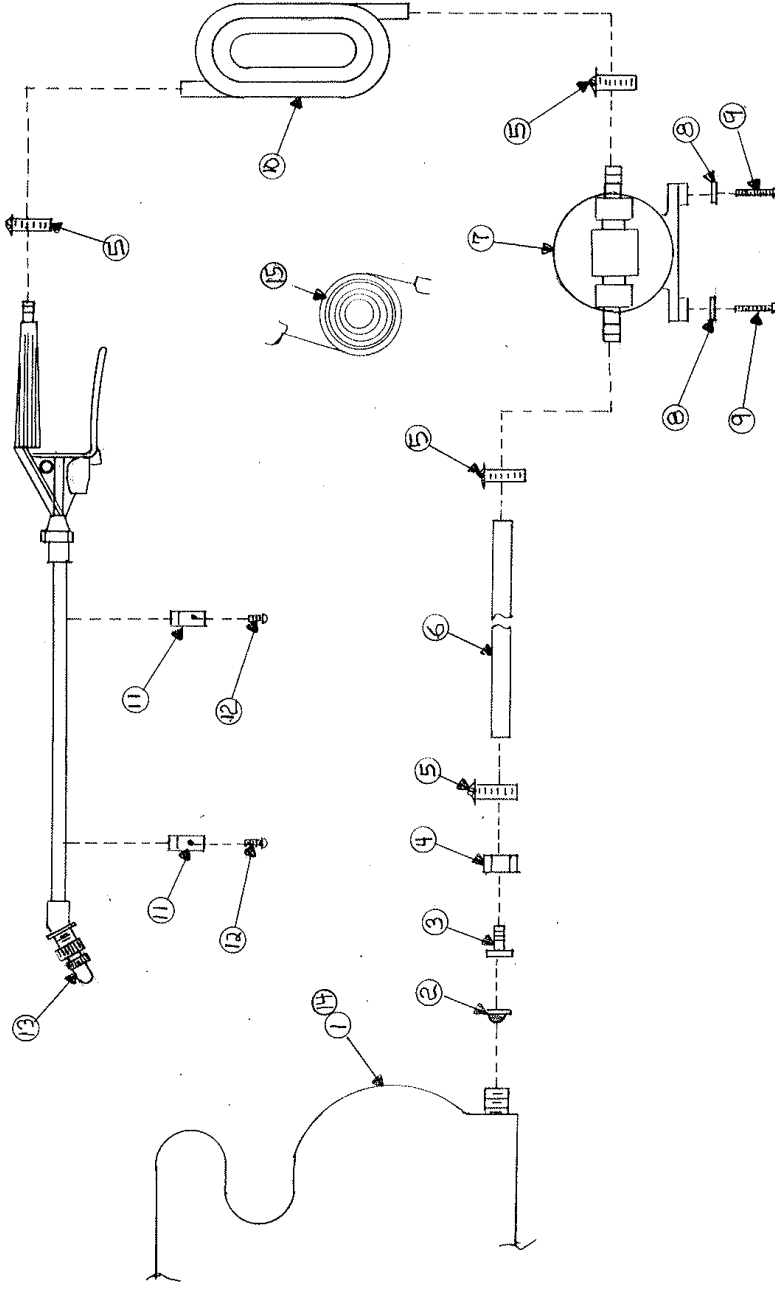
- 1 Restricted Pump Delivery,Check Discharge Line,Fittings,Valves,and Nozzle For Cloggs or Undersizing

LG15/25 with D2131F1311 PUMP and HAND GUN



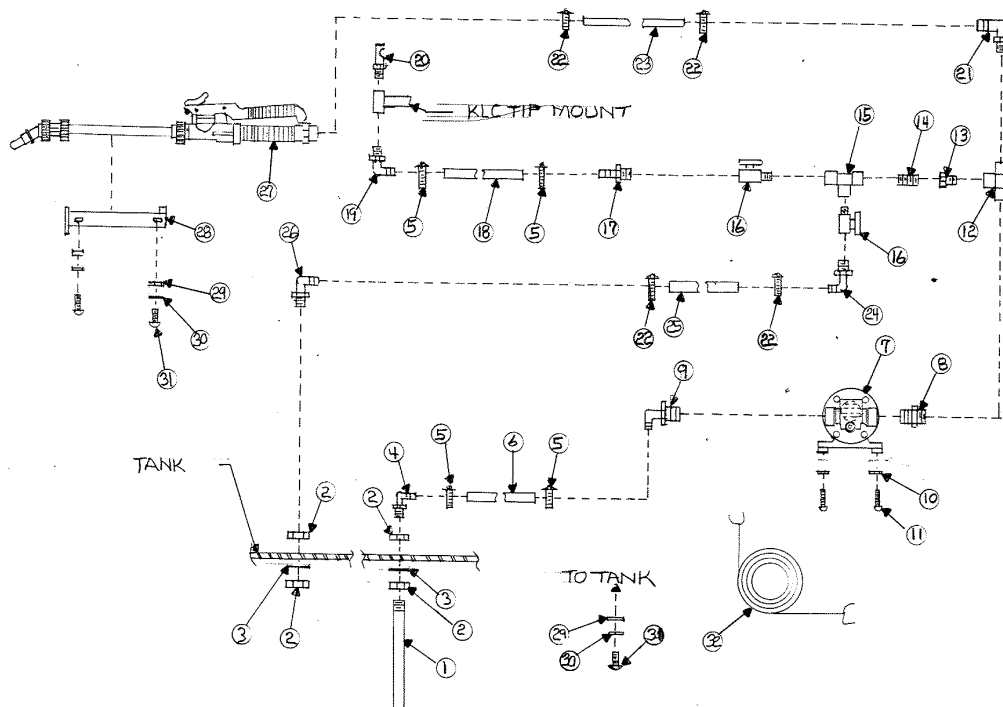
ITEM NO.	DESCRIPTION	PART NO.
1	Tank 15 gallon lawn & garden	47029
1A	Tank 25 gallon lawn & garden	47033
2	Nipple 1/4"x 10" PVC (15 gallon only)	202-100
2A	Nipple 1/4"x 14" PVC (25 gallon only)	202-140
3	O-Ring 3/4" ID x 1" OD x 1/8" diameter	67070
4	Tank fitting brass 1/4"	67069
5	Elbow 1/4" MPT x 3/8" barb 90 nylon	EL1438
6	Hose clamp 1/8"	M4P
7	Hose 3/8" clear braid reinforced thin wall	239002
8	Elbow 3/8" MPT x 3/8" barb 90 nylon	EL38
9	Pump 12 volt	D2131F1311
10	Wiring Harness	WH-L1525
11	Hose 3/8" clear braid reinforced thin wall	239002
12	Spray gun	22670-PP-15-406
13	Gun rack	L15GR
14	10/32" Flat washer	FW10-32
15	10/24" x 3/4" Bolt	10/24-3/4
16	5/16" Flat washer	FW516
17	5/16" Lock washer	LW516
18	5/16" Nut	HN516C

LG15/25E ECONOMY LAWN and GARDEN



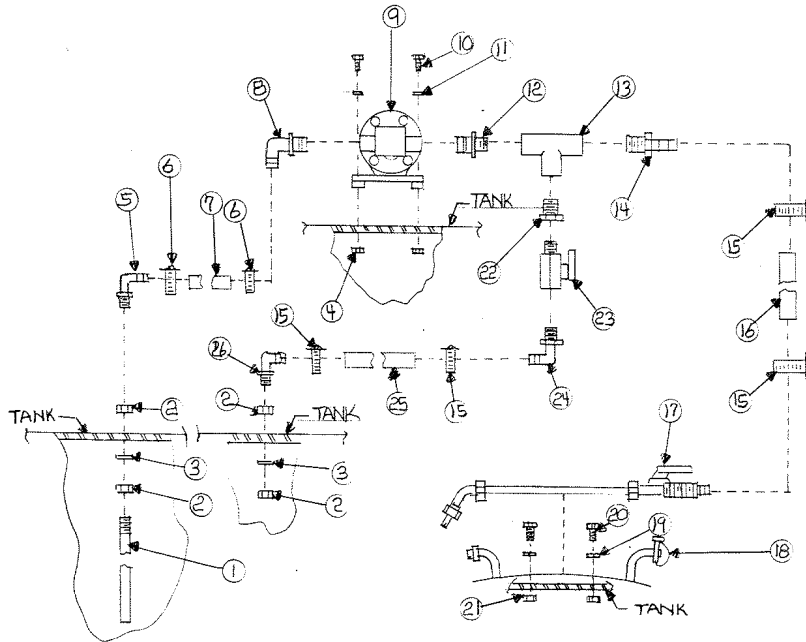
ITEM NO.	DESCRIPTION	PART NO.
1	Tank 15 gallon economy lawn & garden	SB00015
1A	Tank 25 gallon economy lawn & garden	SB00025
2	Black vinyl washer 50/60 mesh	10373
3	Flat swivel nylon 3/8" garden hose	C38
4	Nut brass garden hose thread 3/4"	B33B
5	Hose clamp 1/8"	M4P
6	Hose 3/8" clear braid reinforced	239002
7	Pump 12 volt (1gpm 40psi)	2200-201
8	Flat washer 10/32"	FW10/32
9	Screw 10/24" x 3/4"	10/24-3/4
10	Hose 3/8" clear braid reinforced	239002
11	Gun clip kit	GC-100-KIT
12	Screw 10/24" x 3/8"	10/24-3/8
13	Spray gun	1800-02
14	Wiring harness	WHK-101SBC

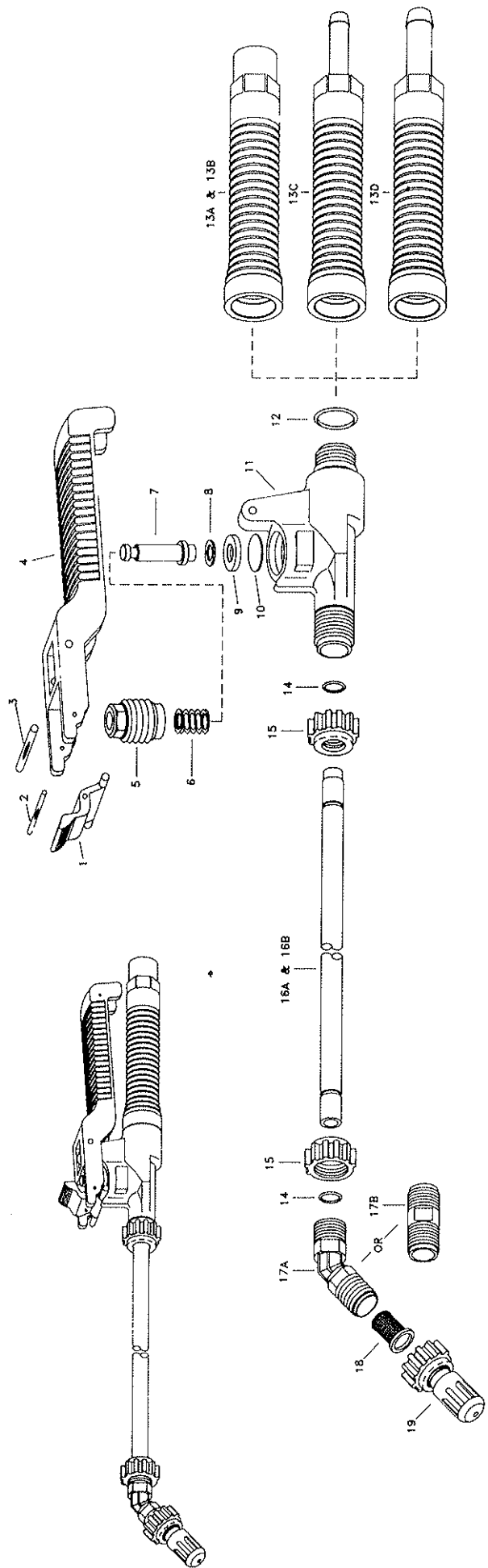
ITEM NO.	DESCRIPTION	PART NO.
1	Nipple 1/4"x14" PVC	202-140
2	Tank fitting brass 1/4"	67069
3	O-Ring 1/4"	67070
4	Elbow 1/4"MPT x 1/2" Barb 90 nylon	EL1412
5	Hose clamp 1/2"	M6P
6	Hose 1/2" clear braid reinforced	239003
7	Pump 12 volt 3.5 gpm	D4300-500
8	Quad fitting 1/2" MPT x snap	20381-000
9	Quad fitting 1/2" barb 90 x snap	20381-009
10	Flat washer 10/32"	FW10/32
11	Bolt 10/24"x 3/4"	10/24-3/4
12	Tee 1/2" FPT nylon	TT12
13	Reducer bushing 3/4" mpt x 1/4" fpt nylon	RB3414
14	Nipple 3/8" x close nylon	M38
15	Tee 3/8" FPT poly	TEE038
16	Ball valve brass (chromed) 3/8" mpt x fpt	90FMB38
17	Hose shank 3/8"mpt x 1/2" barb nylon	A3812
18	Hose 1/2" clear braid reinforced	239003
19	Elbow 1/4"MPT x 1/2" Barb 90 nylon	EL1412
20	KLC nozzle Brass size 18	1/4KLC-18
21	Elbow 1/2"MPT x 3/8" Barb 90 nylon	EL1238
22	Hose Clamp 3/8"	M4P
23	Hose 3/8" clear braid reinforced	239002
24	Elbow 3/8"mpt x barb 90	EL38
25	Hose 3/8" clear braid reinforced	239002
26	Elbow 1/4"MPT x 3/8" Barb 90 nylon	EL1438
27	Hand gun	22670-PP-15-406
28	Gun rack	L15GR
29	Flat washer 5/16"	FW516
30	Lock washer 5/16"	LW516
31	Bolt 5/16"x 3/4"	CS51634C
32	Wiring harness	WHK-101SBC



LG30/50 PCO ALL IN ONE w/ Hand Gun

ITEM NO.	DESCRIPTION	PART NO.
1	Hose drop 24" long nylon	37033-6
2	Tank fitting 1/4" brass	67069
3	O-Ring	67070
4	Nut 10/24" stainless steel	SSHN10/24C
5	Elbow 1/4" mpt x 1/2" barb 90	EL1412
6	Hose clamp 1/2"	M6P
7	Hose clear braid reinforced 1/2"	239002
8	Elbow 1/2" Quad port fitting	20381-009
9	Pump 12 volt 3.5 gpm	04300-500
10	Bolt 10/24" x 1 1/4" stainless steel	SS10/24-114
11	Flat washer 10/24" stainless steel	SSFW10/24
12	Straight quad port fitting 1/2"	20381-000
13	Tee 1/2" fpt nylon	TT12
14	Hose shank 1/2" mpt x 3/8" barb nylon	A1238
15	Hose clamp 3/8"	M4P
16	Hose clear braid reinforced 3/8"	239002
17	Spray gun	22670-PP-15-406
18	Gun rack	L50GR
19	Flat washer 1/4" stainless steel	SSFW14
20	Bolt 1/4" x 1 " stainless steel	SS14100C
21	Nut 1/4" stainless steel	SSHN14C
22	Reducer bushing 1/2"mpt x 3/8"fpt nylon	RB1238
23	Ball valve brass (chromed) 3/8" mpt x fpt	90FMB38
24	Elbow 3/8"mpt x 3/8" barb 90 nylon	EL38
25	Hose clear braid reinforced 3/8"	239002
26	Elbow 1/4" mpt x 3/8" barb 90 nylon	EL1438
	TANK 30 GALLON PCO	47026
	TANK 50 GALLON PCO	47014






ITEM	PART NO.	DESCRIPTION
1	CP22656-NY	Trigger Lock, Nylon (Gray)
2	CP22671-IZP	Groove Pin, Steel, Zinc Plated
3	CP22672-IZP	Groove Pin, Steel, Zinc Plated
4	CP22655-PP	Trigger, Polypropylene (Black)
5	CP22658-PP	Spring Retainer, Polypropylene (Black)
6	CP22660-PHSS	Spring, Type 17-7PH Stainless Steel
7	CP22667-NY	Stem, Nylon (Gray)
8	CP22676-NY	Gasket, Neoprene
9	CP22659-PP	Washer, Polypropylene (Black)
10	CP22661-VI	Diaphragm, Viton
11	CP22651-PP	Body, Polypropylene (Black)
12	CP7717-2/016-VI	O'Ring, Viton
13A	CP22654-PP	Handle (1/4" NPT (F) Conn.), Polypropylene (Black) For 22670-PP--1/4
13B	CP822654-PP	Handle (1/4" BSPT (F) Conn.), Polypropylene (Black) For B22670-PP--1/4
13C	CP22653-1/4-PP	Handle (1/4" Hose Shank Conn.), Polypropylene (Black) For 22670-PP--300
13D	CP22652-3/8-PP	Handle (3/8" Hose Shank Conn.), Polypropylene (Black) For 22670-PP--406
14	CP7717-2/110-VI	O'Ring, Viton (2 Req'd)
15	CP22668-PP	Cap, Polypropylene (Black) 2 Req'd
16A	CP22663-15-FRP	Extension Tube 15" Length, Polyester (Black), For 22670-PP-15--
16B	CP22663-24-PP	Extension Tube 24" Length, Polyester (Black), For 22670-PP-24--

ITEM	PART NO.	DESCRIPTION
17A	CP22673-PP	45° Adapter, Polypropylene (Black)
17B	CP22664-PP	Straight Adapter, Polypropylene (Black)
	22665-15-PP	Extension Tube Sub-Asb. For 22670-PP-15-- (Includes items 14, 15, & 16A)
	22665-24-PP	Extension Tube Sub-Asb. For 22670-PP-24-- (Includes items 14, 15, & 16B)
18	8079-PP-50	Strainer, Polypropylene with Shi. St. Screen
19	5500-PPB-X8-VI	Adjustable ConeJet Tip Asb., Polypropylene (Black)
	No. 22670-PP-15-1/4	TriggerJet® Spray Gun with 15" Extension
	No. 22670-PP-15-1/4	TriggerJet® Spray Gun with 15" Extension
	No. 22670-PP-15-300	TriggerJet® Spray Gun with 15" Extension
	No. 22670-PP-15-406	TriggerJet® Spray Gun with 15" Extension
	No. 22670-PP-24-1/4	TriggerJet® Spray Gun with 24" Extension
	No. B22670-PP-24-1/4	TriggerJet® Spray Gun with 24" Extension
	No. 22670-PP-24-300	TriggerJet® Spray Gun with 24" Extension
	No. 22670-PP-24-406	TriggerJet® Spray Gun with 24" Extension
	PK-AB22670-PP-Kit	Spare Parts Kit (Includes all items marked with *)

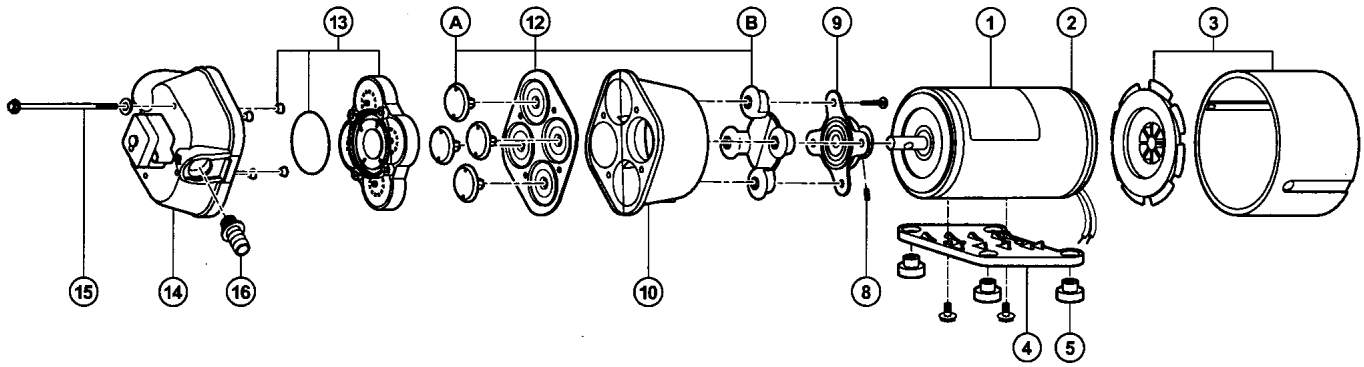
PARTS LIST
NO. 22670-PP--
TRIGGERJET® SPRAY GUN
WITH EXTENSION
AND SPRAY TIP



Spraying Systems Co.
 Spray Nozzles and Accessories
 North Avenue at Schmale Rd. • P.O. Box 7900
 Wheaton, Ill. 60189-7900

DATE 5/4/94 NO. PL 22670-PP

PARTS LIST MODEL 4300 SERIES



KEY PART NO.	DESCRIPTION	QTY	4300 SERIES DASH NO.					
			-042	-141	-242	-500	-501	-502
1	02009-027 12V DC Mtr (TEFC)	1		X		X		X
	02029-039 115V AC Mtr (TEFC)	1	X				X	
	02039-027 230V AC Mtr (TEFC)	1			X			
2	20115-114 Brush Endbell/Rect. Assy. (AC) w/BRG	1	X					X
	20115-219 Brush Endbell/Rect. Assy. (AC) wo/BRG	1	X					X
	20115-213 Brush Endbell Assy. (DC) wo/BRG	1		X		X		X
	20115-113 Brush Endbell Assy. (DC) w/BRG	1		X		X		X
3	20132-005 Fan/Shroud Kit	1	X	X	X	X	X	X
4	11028-101 Plastic Baseplate Assy. with Grommet & Screws	1	X	X	X	X	X	X
5	20132-000 Grommet Kit	Set of 4	X	X	X	X	X	X
8	20552-000 Cam/Bearing Set Screw	1	X	X	X	X	X	X
9	Cam/Bearing Kit w/Set Screw							
	20400-002	1	X	X	X	X	X	
	20400-003	1						X
10	20401-000 Bearing Cover P.P.	1	X	X	X	X	X	X
12	Diaphragm Kit w/Pistons & Screws							
	20403-040 Santoprene ®	1	X	X	X	X	X	X
	20403-050 Geolast ®							

KEY PART NO.	DESCRIPTION	QTY	4300 SERIES DASH NO.					
			-042	-141	-242	-500	-501	-502
13	Check Valve Kit w/"O" Ring & Ferrules							
	20407-020 Viton ®	1				X	X	
	20407-030 EPDM	1	X	X	X			X
14	Upper Housing Assy Kit							
	20404-018 E/S SW45	1	X					
	20404-017 V/G SW45	1						X
	20404-001 E/S SW45	1		X				
	20404-007 V/G SW45	1				X		
	20404-020 E/S SW30	1			X			
	20404-003 E/S SW45	1						X
15	20405-000 Pump Screw Kit w/Washer & Ferrules	1	X	X	X			X
	20405-002 Geolast ®	1				X	X	
16	20381-002 1/2" Port Kit EPOM	2	X	X	X			
	20381-015 1/2" Port Kit Viton ®	2				X	X	
	20381-006 3/4" Port Kit EPOM	2						X
	20381-007 Garden Hose Port Kit	2						X
	Pump Head Assy							
	20406-020A	1	X					
	20406-021A	1					X	
	20406-000A	1		X				
	20406-005A	1				X		
	20406-023A	1			X			
	20406-002A	1						X

SERVICE TIPS

DISASSEMBLY Remove four pump head screws (15). Rotate bearing cover (10) so drain notch is aligned with cam/bearing assembly set screw (8). Loosen set screw with 1/8" allen wrench and slide pump head off shaft. Always use complete FLOJET repair kits upon reassembly.

ASSEMBLY Install new single-piece outer piston (B) into lower housing (10) with piston tops pointing away from motor. Slightly bend outer piston (B) along premolded crease to aid assembly. Place diaphragm in lower housing (10) with the molded o-ring seals facing away from motor. Insert each inner piston (A) through diaphragm into outer piston. Turn each piston until fully seated. Align cam/bearing assembly (9) with outer piston (B). Secure with cam/piston screws using 18 inch pounds of torque. Reassemble lower housing (9, 10, 12) to motor. Set screw MUST be positioned over shaft indentation and secured tightly. Reassemble pump upper housing (13-16). Check that ferrules are installed in upper housing and O-ring is properly seated before inserting check valve assembly (13) into upper housing (14). Align pump assembly to motor and tighten pump head screws evenly with 25 inch pounds of torque.

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.

Flojet



U.S.A.
Flojet
20 Icon
Foothill Ranch, CA 92610-3000
Tel: (949) 859-4945
Fax: (949) 859-1153

UNITED KINGDOM
Jabsco/Flojet
Bingley Road, Hoddesdon
Hertfordshire EN11 0BU
Tel: +44 (0) 1992 450145
Fax: +44 (0) 1992 467132

CANADA
Fluid Products Canada
55 Royal Road
Guelph, Ontario N1H 1T1
Tel: (519) 821-1900
Fax: (519) 821-2569

JAPAN
NHK Jabsco Company Ltd.
3-21-10, Shin-Yokohama
Kohoku-Ku, Yokohama, 222
Tel: 045-475-8906
Fax: 045-475-8908

GERMANY
Jabsco GmbH
Oststrasse 28
22844 Norderstedt
Tel: +49-40-53 53 73-0
Fax: +49-40-53 53 73-11

FLOJET

Model 4300 Industrial Series "Quad" Demand Pump

Model 4300 Industrial Series

PUMP INSTALLATION

MOUNTING

Flojet 4300 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.

PLUMBING

For best performance, flexible hose is recommended instead of rigid piping at the pump. Flojet 4000 Series ports are a push in type retained by a "C" clip. To install the 4000 ports move "C" clips to rear of pump. Push the port until snug. Slide "C" clip forward to front of pump. 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 1600 Series 40 or 20 mesh strainer is available with various connections to fit most installations. For more information, request Form No. 81000-072. The use of check valves in the plumbing system may interfere with the priming ability of the pump. Check valves, if used, must have cracking (opening) pressure of no more than 2 psi.

**PRODUCT WARRANTY IS VOID
IF INSTALLATION INSTRUCTIONS
ARE NOT FOLLOWED**

TROUBLESHOOTING

Motor operates, but no pump discharge (Failure to Prime)

- Restricted intake or discharge line. Open all line valves.
- Check for debris in check valves.
- Check for clogged inlet filter.
- Air leak in intake line.
- Punctured pump diaphragm.
- Defective pump check valve.
- Crack in pump housing.

Motor Fails to Turn On

- Pump or equipment not plugged in electrically.
- Loose wiring connection.
- Defective motor or rectifier.

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 five 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 pump to prime with discharge line (or spray valve) open, to avoid airlock. Built-in pressure switch will shutoff 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*
4300-042	9/64"	30
4300-142	9/64"	30

*Ref. Spraying Systems Catalog

Pump Fails to Turn Off after Discharge Valves are Closed

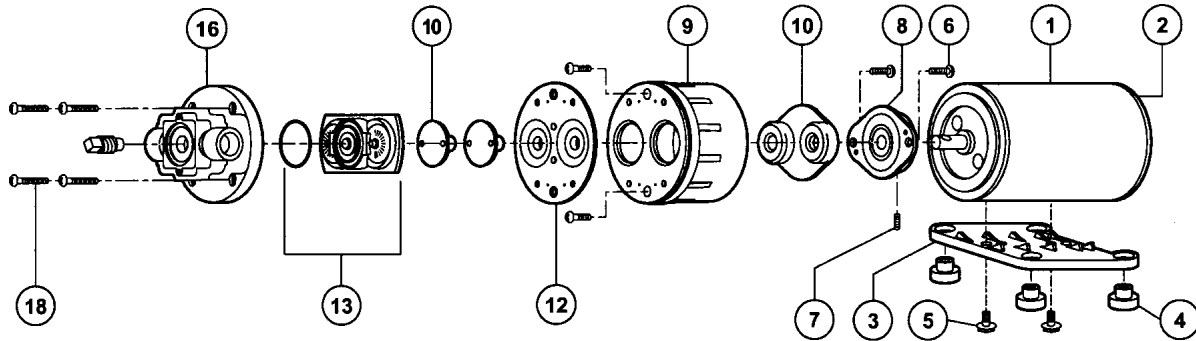
- Depletion of available liquid supply.
- Punctured pump diaphragm.
- Discharge line leak.
- Defective pressure switch.
- Insufficient voltage to pump.

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

Pulsating Flow- Pump Cycles on and off

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



KEY	PART NO.	DESCRIPTION	QTY.
1	02029-000	Motor 115 Volt AC TENV	1
	02039-001	Motor 230 Volt AC TENV	
	02009-004	Motor 12 Volt DC TENV	
	02019-001	Motor 24 Volt DC TENV	
2	20115-111	Brush Endbell/Rect. Assy. (AC) TENV	1
	20115-219	Brush Endbell/Rect. Assy. (AC) TEFC N/BRG.	
	20115-116	Brush Endbell Assy. (DC) TENV	
	20115-213	Brush Endbell/Rect. Assy. (DC) TEFC N/BRG.	
	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 / DIAPHRAGM KIT

	21004-100	#0 Cam, VITON ® Diaphragm	1
	21004-200	#0 Cam, BUNA Diaphragm	1
	21004-400	#0 Cam, SANTO Diaphragm	1
	21004-101	#1 Cam, VITON ® Diaphragm	1
Kit	21004-201	#1 Cam, BUNA Diaphragm	1
Incl.	21004-401	#1 Cam, SANTO Diaphragm	1
6	21004-102	#2 Cam, VITON ® Diaphragm	1
7	21004-202	#2 Cam, BUNA Diaphragm	1
8	21004-402	#2 Cam, SANTO Diaphragm	1
10	21004-104	#4 Cam, VITON ® Diaphragm	1
12	21004-204	#4 Cam, BUNA Diaphragm	1
	21004-404	#4 Cam, SANTO Diaphragm	1
	21004-105	#5 Cam, VITON ® Diaphragm	1
	21004-205	#5 Cam, BUNA Diaphragm	1
	21004-405	#5 Cam, SANTO Diaphragm	1

KEY	PART NO.	DESCRIPTION	QTY.
9	20428-100	Bearing Cover Poly Pro	1
*13		Check Valve Assy. (Single Bypass)	1
	20028-002	SANTOPRENE	
	20028-012	BUNA N/FAB	
	20028-045	VITON ®	
		Check Valve Assy (Double Bypass)	
	20028-003	SANTOPRENE	
	20028-022	BUNA N/FAB	
	20028-078	VITON ®	
		Check Valve Assy (Single Bypass Vented)	
	20028-048	SANTOPRENE	
	20028-079	VITON ®	
	20028-028	BUNA N/FAB	
*14		Bypass Springs & Poppet Kit	
*15	20378-000	For 30 PSI Bypass Nominal (Yellow)	Set of 2
	20378-001	For 50 PSI Bypass Nominal (Blue)	Set of 2
		Standard Bypass Springs shown above. For correct bypass spring part number for your model, request specific parts list, giving the complete pump model number.	
	20500-507	Pump Housing Poly Pro	1
16	21050**	Pump Head Ass'y. Use Pump Dash Number for Pumphead Number	
18	20131-001	Pump Screws	Set of 6
6-18		Brush Kit	Set of 2
	20097-000	For 115 & 230 Volt AC Motor	Set of 2
	20097-001	For 12 & 24 Volt DC Motor	Set of 2
	20132-005	Fan Shroud Kit	1

* Parts included In Pump Service Kit ** Not shown in diagram

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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 then 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 pump head parts, using care to properly seat "O" ring (13) in check valve assembly. With lower housing held vertically, place bypass poppet(s) (14) and spring(s) (15) on locating post(s) molded on diaphragm. Place pump head with check valve and "O" ring installed, over bypass poppet(s) making sure poppet(s) are aligned into bypass ports in check valve housing (13). Tighten pump head screws (18) evenly.

Flojet



ITT Industries
Engineered for life

U.S.A.
Flojet
20 Icon
Foothill Ranch, CA 92610-3000
Tel: (949) 859-4945
Fax: (949) 859-1153

UNITED KINGDOM
Jabsco/Flojet
Bingley Road, Hoddesdon
Hertfordshire EN11 0BU
Tel: +44 (0) 1992 450145
Fax: +44 (0) 1992 467132

CANADA
Fluid Products Canada
55 Royal Road
Guelph, Ontario N1H 1T1
Tel: (519) 821-1900
Fax: (519) 821-2569

JAPAN
NHK Jabsco Company Ltd.
3-21-10, Shin-Yokohama
Kohoku-Ku, Yokohama, 222
Tel: 045-475-8906
Fax: 045-475-8908

GERMANY
Jabsco GmbH
Oststrasse 28
22844 Norderstedt
Tel: +49-40-53 53 73-0
Fax: +49-40-53 53 73-11

FLOJET

Model 2100 Industrial Series Bypass Pump

Model 2100 Bypass Pump

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.

The bypass and standard pump (no bypass, no switch) must be started and stopped by an electrical (on-off) switch.

OPERATION

Allow pump to prime with discharge line (or spray valve) open, to avoid airlock. Built-in bypass will allow the pump to bypass internally when discharge is restricted or closed and will stop bypassing when the discharge valve is open.

When liquid supply to pump is depleted pump will continue to operate. Running dry will not damage the pump. Turn off manually.

When the bypass type pump is allowed to run against a closed valve the internal bypass will automatically recirculate the flow within the pump at the preset bypass pressure.

Caution: The standard series pump is not equipped with a bypass or pressure switch. Allowed to run against a closed valve the excessive pressure developed by the pump will cause system or pump damage.

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.

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

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.

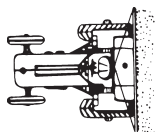
RETURN PROCEDURE

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.

ALL IN ONE LAWN AND GARDEN 12 VOLT SPRAYERS



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