



AG SPRAY EQUIPMENT

OWNER'S MANUAL



RM 55 HORIZONTAL

HYPRO 6 ROLLER PUMP

**BOOMJET, BOOMEXTENDER, KLC, HAMILTON
&
AG 4 ROW DELUXE BOOM**

RM 55 HORIZONTAL

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OWNER'S MANUAL

Congratulations on purchasing your new three point hitch field sprayer. This manual is designed to aid you in operating your new sprayer. Also enclosed is a parts breakdown on your roller pump, pressure regulator, 43L-AL spray gun, and calibration on the KLC-18, Boomjet, Hamilton, Boomextender boomless nozzles & 4 row deluxe boom.

WARRANTY

All Field Sprayers are under warranty by **Ag Spray Equipment** for a one year period from the date of purchase. This warranty only applies to defects in workmanship or manufacturers defects in their components. This warranty does not cover any misuse, abuse or parts that may freeze & break. Owners are responsible for these issues. Parts proven defective within the one year period will be replaced at no charge.

Ag Spray Equipment must be notified immediately of any defects or parts broken due to shipping during the warranty period. After the one year period, all warranty is void. No product will be accepted for return without authorization. All returned goods must be packaged securely and shipped with transportation charges prepaid.

For further information regarding parts or warranty, contact:

Ag Spray Equipment
1100 New Industry Lange
Hopkinsville, KY 42240
Phone: 1-800-637-7172

Operation & Instructions of New Sprayer

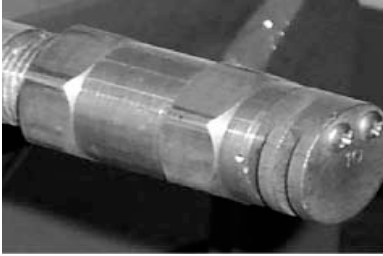
First, back your tractor up to the sprayer, let lift arms all the way down and insert the lift pins into the lift arms of the tractor and secure with lock pins. Secondly, hook up the top link on the tractor to the very top hole of the frame. Connect the pump to the PTO shaft on your tractor by pulling the orange coupler back while sliding it onto the PTO shaft until the balls lock into the grooves on the shaft. After pump is secure take the chain and wrap it around the drawbar of the tractor using the snap link to snap the chain together to keep pump from twisting hoses when PTO is engaged.

Next, fill the tank at least to full of plain water with no chemicals. Screw the pressure regulator (part #23120-3/4-pp) part of the way out (gray knob). This ensures that you do not over pressurize and break the gauge. Also, make sure valve underneath tank is open (handle should be turned going with the line).

You are now ready to try out your sprayer. Engage the PTO lever and pull throttle to the 540RPM mark on the RPM gauge. Turn boom valve on & adjust to the desired operating pressure with the pressure regulator (gray knob, part #23120-3/4-pp).

CALIBRATING YOUR SPRAYER

HAMILTON NOZZLE 654101



CALIBRATING YOUR SPRAYER

To determine pressure & GPA with a boomless nozzle use this calibration formula.

$$\text{GPA} = \frac{495 \times \text{GPM}}{\text{MPH} \times \text{Swath in feet}}$$

EXAMPLE:

$$\begin{aligned} 495(\text{constant}) \times 4.2\text{GPM} &= 2079 \\ 4\text{mph} \times 50\text{ft swath} &= 200 \end{aligned} \quad \frac{2079}{200} = 10.395 \text{ GPA}$$

Refer to Chart

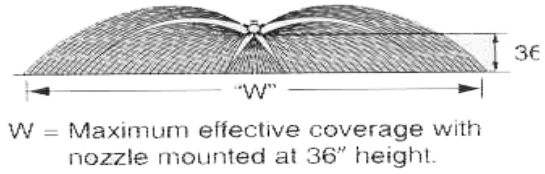
OPERATING DATA OF 180° NOZZLES

SPRAYERS ARE SUPPLIED WITH #10

Office Number	PSI	GPM 180°	Swath 180°	GALLON PER ACRE				
				3 MPH	4 MPH	5 MPH	8 MPH	10 MPH
#10	30	3.7	50 ft.	12.2	9.2	7.3	4.6	3.7
	40	4.2	50 ft.	13.9	10.4	8.3	5.2	4.2
	50	4.6	52 ft.	14.6	10.9	8.8	5.5	4.4
	60	5.0	52 ft.	15.8	11.9	9.5	5.9	4.8

- GPM = Gallons Per Minute
- GPA = Gallons Per Acre
- MPH = Miles Per Hour
- PSI = Pressure Per Square Inch

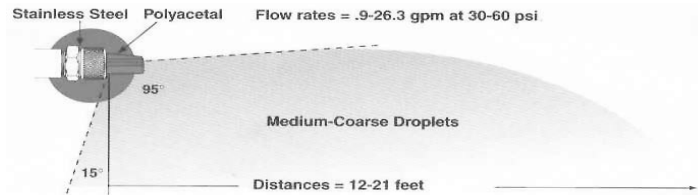
SPRAYING SYSTEMS 5880 BOOMJET NOZZLE



***NOTE:** BOOMJET SPRAYERS ARE STANDARD WITH #10 NOZZLE & HYPRO 6 ROLLER PUMP.

Nozzle	Strainer (2)	Filter (2)	Mesh (1)	PSI	GPM	"W" (FEET)	GPA				
							4 MPH	5 MPH	7.5 MPH	10 MPH	15 MPH
5880-3/4-2TOC10	OC10	H1/4U-0508HE	H1/4VVL-11004 with 50 mesh strainer	20	2.83	39.5	8.9	7.1	4.7	3.5	2.4
				30	3.46	40	10.7	8.6	5.7	4.3	2.9
				40	4.00	40.5	12.2	9.8	6.5	4.9	3.3
5880-3/4-2TOC20	OC20	H1/4U-0520HE	H1/4VVL-9506 with 50 mesh strainer	20	6.08	47	16.0	12.8	8.5	6.4	4.3
				30	7.45	50	18.4	14.8	9.8	7.4	4.9
				40	8.60	52	20	16.4	10.9	8.2	5.5

HYPRO BOOM X TENDER TIPS



Recommended Spray Height is 48"

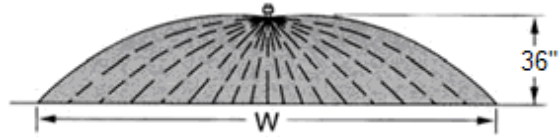
***NOTE:** YELLOW TIP-XT024 IS USED

BROADCAST and TURF Applications		Application Rate (GPA)													US Gal/1000 sq.ft.				Swath Width (ft) @ 40 PSI	
		Thread	Model	PSI	US GPM	Miles Per Hour										Miles Per Hour				
						4	5	6	7	8	10	12	14	16	18	20	2	3		4
1/4" MNPT	XT010	30	0.9	7.0	5.6	4.6	4.0	3.5	2.8	2.3	2.0	1.7	1.5	1.4	0.32	0.21	0.16	0.13	16	
		40	1.0	7.7	6.2	5.2	4.4	3.9	3.1	2.6	2.2	1.9	1.7	1.5	0.36	0.24	0.18	0.14		
		50	1.1	8.5	6.8	5.7	4.9	4.3	3.4	2.8	2.4	2.1	1.9	1.7	0.39	0.26	0.20	0.16		
		60	1.2	9.3	7.4	6.2	5.3	4.6	3.7	3.1	2.7	2.3	2.1	1.9	0.43	0.28	0.21	0.17		
1/4" MNPT	XT020	30	1.7	12.4	9.9	8.3	7.1	6.2	5.0	4.1	3.5	3.1	2.8	2.5	0.57	0.38	0.28	0.23	17	
		40	2.0	14.6	11.6	9.7	8.3	7.3	5.8	4.9	4.2	3.6	3.2	2.9	0.67	0.45	0.33	0.27		
Quick Attach	FC-XT020	50	2.2	16.0	12.8	10.7	9.2	8.0	6.4	5.3	4.6	4.0	3.6	3.2	0.74	0.49	0.37	0.29	18	
		60	2.4	17.5	14.0	11.6	10.0	8.7	7.0	5.8	5.0	4.4	3.9	3.5	0.80	0.53	0.40	0.32		
1/4" MNPT	XT024	30	2.1	14.4	11.6	9.6	8.3	7.2	5.8	4.8	4.1	3.6	3.2	2.9	0.66	0.44	0.33	0.27	18	
		40	2.4	16.5	13.2	11.0	9.4	8.3	6.6	5.5	4.7	4.1	3.7	3.3	0.76	0.51	0.38	0.30		
Quick Attach	FC-XT024	50	2.7	18.6	14.9	12.4	10.6	9.3	7.4	6.2	5.3	4.6	4.1	3.7	0.85	0.57	0.43	0.34	18	
		60	2.9	19.9	16.0	13.3	11.4	10.0	8.0	6.6	5.7	5.0	4.4	4.0	0.92	0.61	0.46	0.37		
3/8" MNPT	XT043	30	3.7	25	20	17.0	14.5	12.7	10.2	8.5	7.3	6.4	5.7	5.1	1.2	0.78	0.58	0.47	18	
		40	4.3	30	24	19.7	16.9	14.8	11.8	9.9	8.4	7.4	6.6	5.9	1.4	0.90	0.68	0.54		
Quick Attach	FC-XT043	50	4.8	33	26	22	18.9	16.5	13.2	11.0	9.4	8.3	7.3	6.6	1.5	1.0	0.76	0.61	18	
		60	5.3	36	29	24	21	18.2	14.6	12.1	10.4	9.1	8.1	7.3	1.7	1.1	0.84	0.67		

KLC DIAGRAM & CALIBRATION




1/4 in. KLC 18
NOZZLE



KLC DIAGRAM OF THE
PATTERN

CHART FOR KLC NOZZLE:

Determine speed you will be applying & adjust your pressure according to the gallons per acre (GPA) recommended.

	Pipe Conn.	PSI	Total Capacity GPM	"W" in feet	GPA				Gallons Per 1000 Sq. Ft.			
					3 mph	4 mph	5 mph	8 mph	3 mph	4 mph	5 mph	8 mph
1/4-KLC-18	1/4"	20	2.55	20	21	15.8	12.6	7.9	.48	.36	.29	.18
		30	3.12	21	25	18.4	14.7	9.2	.56	.42	.34	.21
		40	3.60	22	27	20	16.2	10.1	.62	.46	.37	.23

TEEJET SPRAY TIP CALIBRATION

BA4DSQ

All standard booms come w/ 8003VP poly tips.
The 4 Row booms have 9 nozzles.

Formula:

$$\text{GPM} = \frac{\text{GPA} \times \text{MPH} \times \text{Nozzle Spacing}}{5940}$$

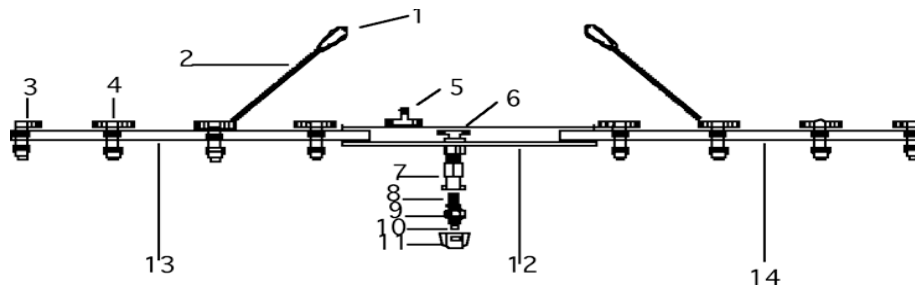
Example:
$$\frac{20\text{GPA} \times 4\text{MPH} \times 20 \text{ in.}}{5940} = \frac{1600}{5940} = .27\text{gpm}$$

Take the GPM that you figured & look down the GPM chart to figure what pressure you need to run at that desired speed.

***NOTE:** If spraying liquid nitrogen you will need to multiply the conversion factor w/ the gpa, mph, & nozzle spacing.

Conversion Factor: 28% Nitrogen - 10.65 lbs. per gal. - 1.13
 32% Nitrogen - 11.00 lbs. per gal. - 1.15

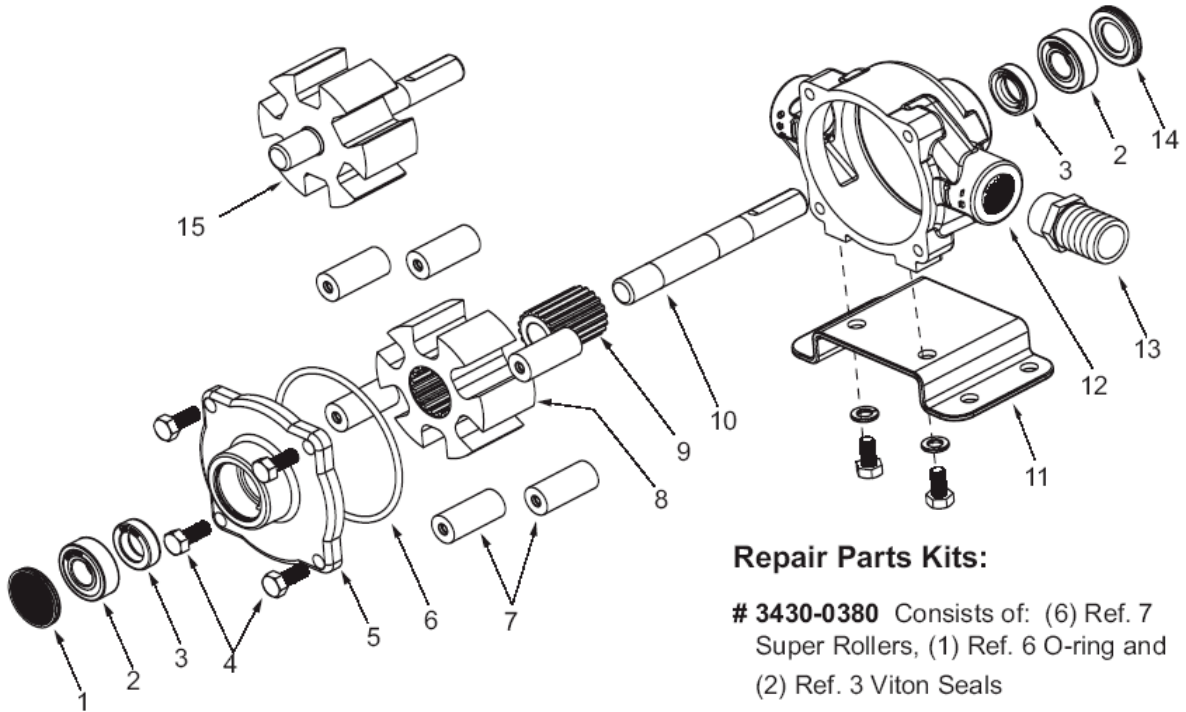
Example:
$$\frac{20\text{GPA} \times 4\text{MPH} \times 20 \text{ in.} \times 1.13}{5940} = \frac{1808}{5940} = .31\text{gpm}$$



- | | |
|---|---|
| 1. Snap Link (SL14) | 8. 50 Mesh Poly Strainer (8079-PP-50) |
| 2. Breakaway Spring (SP4-6) | 9. EPDM Gasket (CP19438-EPR) |
| 3. 18635-111-406 – 3/8” QJ Body – Elbow | 10. 8003VP Tip (TP8003VP) |
| 4. 18636-112-406 – 3/8” QJ Body – Tee | 11. Quick Jet Slotted Cap (25612-2-NYR) |
| 5. T38 N | 12. Center Section |
| 6. NTT38 N | 13. Left Arm Boom Pipe – 6’ Long |
| 7. QJT-NYB Quickjet adapter | 14. Right Arm Boom Pipe – 6’ Long |
| | 15. Boom Clamp (QJ111SQ-1) <i>Not Shown</i> |

TP8002VP	PSI	GPM	GPA 20"											
			4 MPH	5 MPH	6 MPH	7 MPH	8 MPH	9 MPH	10 MPH	12 MPH	14 MPH	16 MPH	18 MPH	20 MPH
TP8002VP	15	0.12	8.9	7.1	5.9	5.1	4.5	4.0	3.6	3.0	2.5	2.2	2.0	1.8
	20	0.14	10.4	8.3	6.9	5.9	5.2	4.6	4.2	3.5	3.0	2.6	2.3	2.1
	30	0.17	12.6	10.1	8.4	7.2	6.3	5.6	5.0	4.2	3.6	3.2	2.8	2.5
	40	0.20	14.9	11.9	9.9	8.5	7.4	6.6	5.9	5.0	4.2	3.7	3.3	3.0
	50	0.22	16.3	13.1	10.9	9.3	8.2	7.3	6.5	5.4	4.7	4.1	3.6	3.3
60	0.24	17.8	14.3	11.9	10.2	8.9	7.9	7.1	5.9	5.1	4.5	4.0	3.6	
TP8003VP Blue-Standard	15	0.18	13.4	10.7	8.9	7.6	6.7	5.9	5.3	4.5	3.8	3.3	3.0	2.7
	20	0.21	15.6	12.5	10.4	8.9	7.8	6.9	6.2	5.2	4.5	3.9	3.5	3.1
	30	0.26	19.3	15.4	12.9	11.0	9.7	8.6	7.7	6.4	5.5	4.8	4.3	3.9
	40	0.30	22	17.8	14.9	12.7	11.1	9.9	8.9	7.4	6.4	5.6	5.0	4.5
	50	0.34	25	20	16.8	14.4	12.6	11.2	10.1	8.4	7.2	6.3	5.6	5.0
60	0.37	27	22	18.3	15.7	13.7	12.2	11.0	9.2	7.8	6.9	6.1	5.5	
TP8004VP	15	0.24	17.8	14.3	11.9	10.2	8.9	7.9	7.1	5.9	5.1	4.5	4.0	3.6
	20	0.28	21	16.6	13.9	11.9	10.4	9.2	8.3	6.9	5.9	5.2	4.6	4.2
	30	0.35	26	21	17.3	14.9	13.0	11.6	10.4	8.7	7.4	6.5	5.8	5.2
	40	0.40	30	24	19.8	17.0	14.9	13.2	11.9	9.9	8.5	7.4	6.6	5.9
	50	0.45	33	27	22	19.1	16.7	14.9	13.4	11.1	9.5	8.4	7.4	6.7
60	0.49	36	29	24	21	18.2	16.2	14.6	12.1	10.4	9.1	8.1	7.3	

HYPRO 6500C, 6500N, & 6500XL



Note: When ordering parts, give quantity, part number, description and complete model number. Reference numbers are used ONLY to identify parts in the drawing and NOT to be used as order numbers.

Repair Parts Kits:

3430-0380 Consists of: (6) Ref. 7 Super Rollers, (1) Ref. 6 O-ring and (2) Ref. 3 Viton Seals

3430-00175 Consists of: (6) Ref 7 Polypropylene Rollers, (1) Ref. 6 Oring, and (2) Ref. 3 Viton Seals

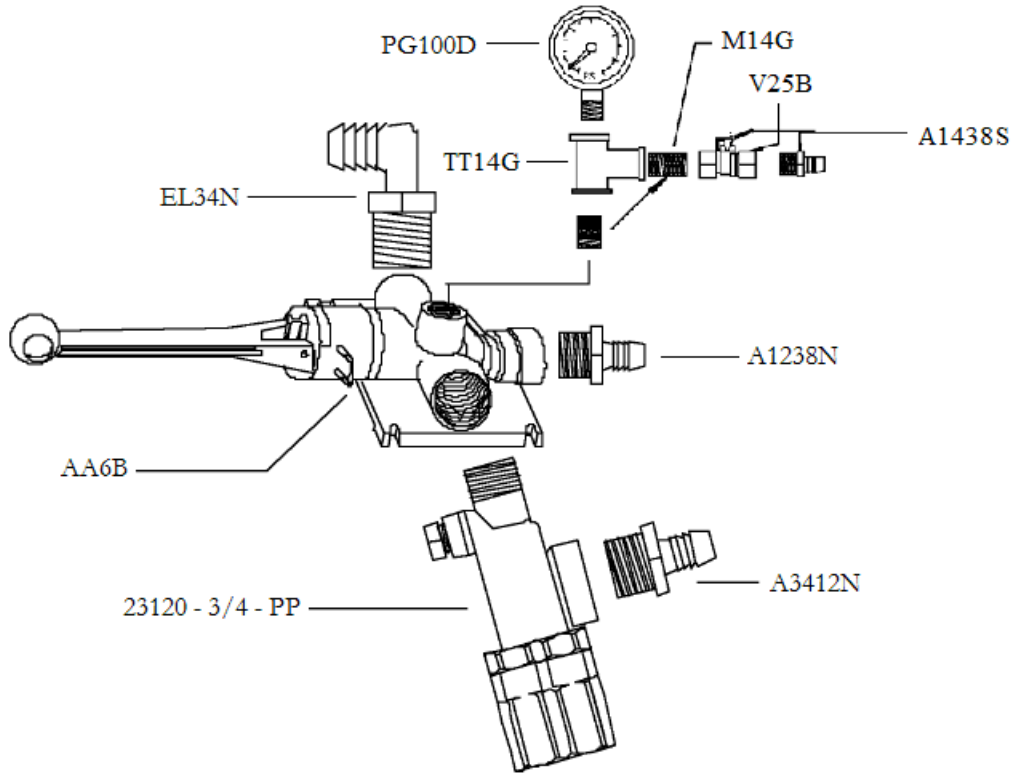
3430-0621 Consists of: (1) Ref 8 Phenolic rotor, (1) Ref 9 Metal insert and (1) Ref 10 Shaft

Ref. No.	Qty. Req'd.	Part No.	Description
1	1	2300-0021	Bearing Cover
2	2	2000-0010	Sealed Ball Bearing
3	2	2107-0002	Viton Seal (Standard)
3	2	2102-0001	Buna-N Seal (Optional)
4	4	2210-0004	Bolts
5	1	0200-6600C	Endplate (Cast-Iron) with seal
5	1	0200-6600N	Endplate (NI-Resist) with seal
5	1	0200-6600X	Endplate (SilverCast) with seal
6	1	1720-0008	Oring Gasket for Endplate
7	6	1005-0004	SuperRoller (Standard)
7	6	1002-0004	Polypropylene Roller (Optional)
7	6	1052-0004	Buna-N Roller (Optional)
7	6	1055-0004	Teflon Roller (Optional)
8	1	0401-6500P	Phenolic Rotor (Standard)

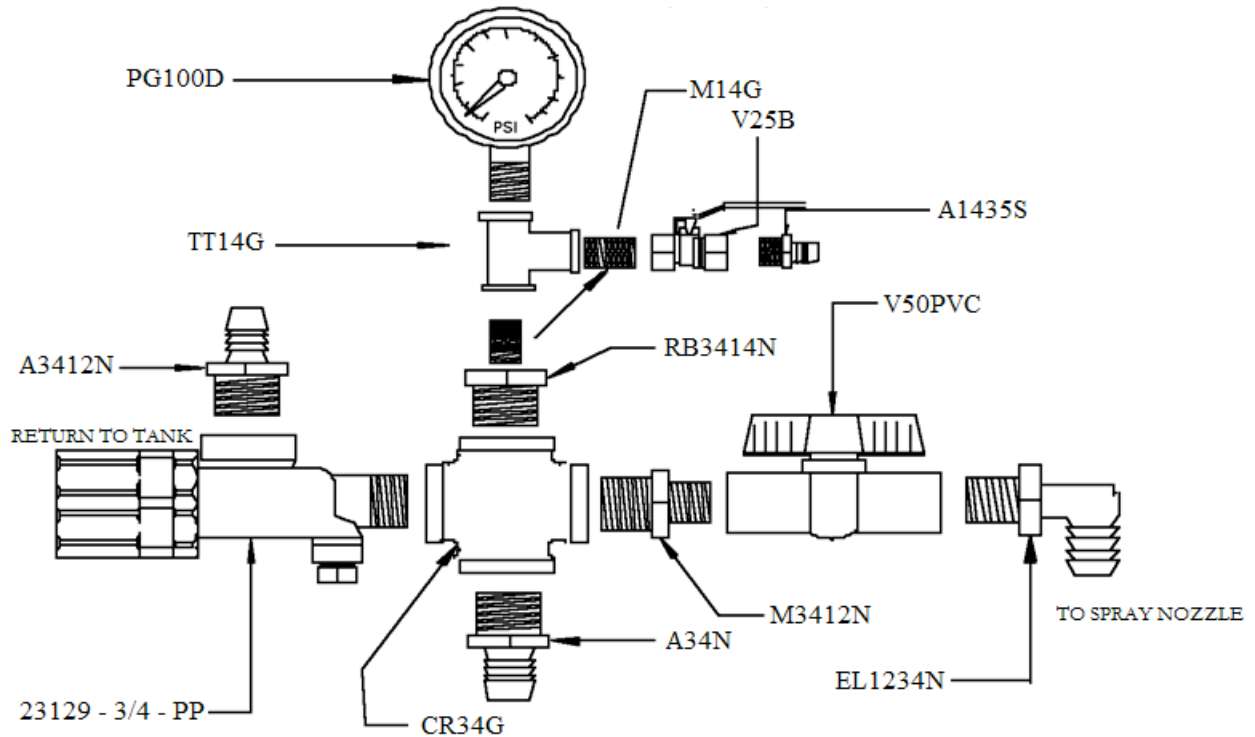
Ref. No.	Qty. Req'd.	Part No.	Description
9	1	1201-0018	Metal insert
10	1	0500-6500	Shaft
11	1kit	3420-0023	Base Kit - Includes: (1) Base, (2) Bolts and (2) Washers
12	1	0100-6600C	Body (Cast Iron) with seal
12	1	0100-6600N	Body (Ni-Resist) with seal
12	1	0100-6600X	Body (SilverCast) with seal
13	1	2404-0052	1" Hose Barb
14	1	2300-0023	Shaft Bearing Cover
15	1	N/A	Metal rotor assy: Replaced by kit 3430-0621 (Phenolic rotor assy)

PRESSURE HEADS

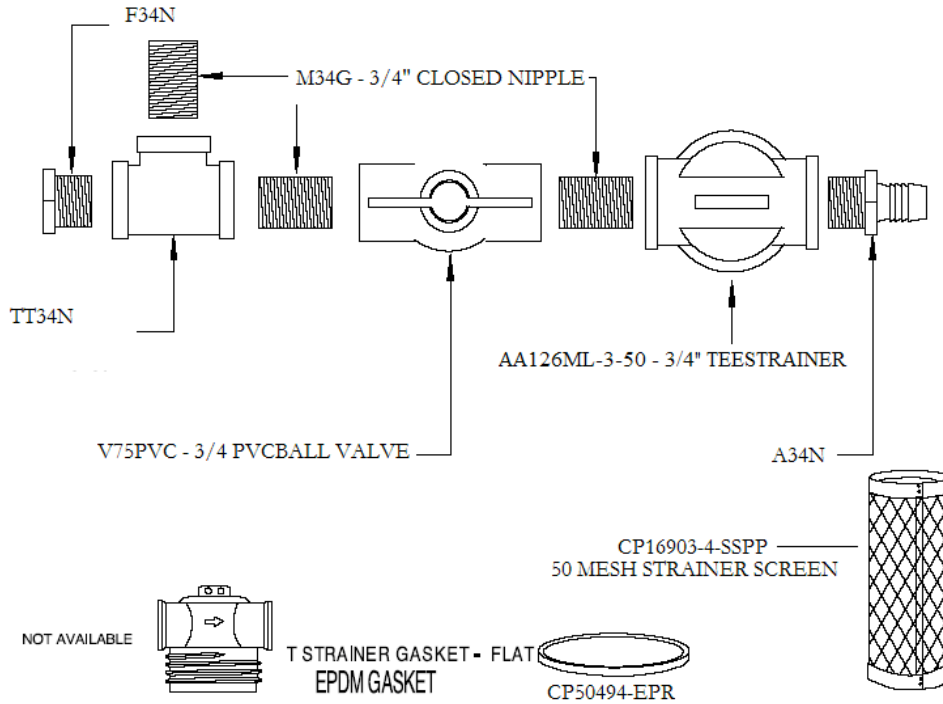
PRESSURE HEAD FOR RM 554DH43L



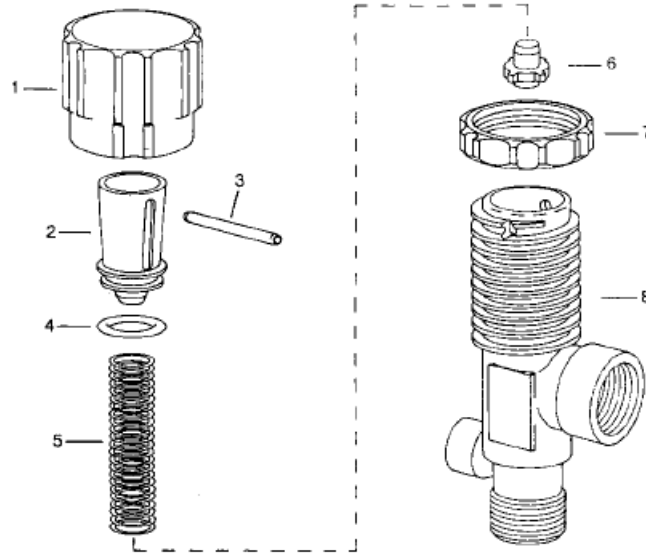
PRESSURE HEAD FOR RM 55 H BOOMJET, HAMILTON, KLC, & BXT



TANK PLUMBING

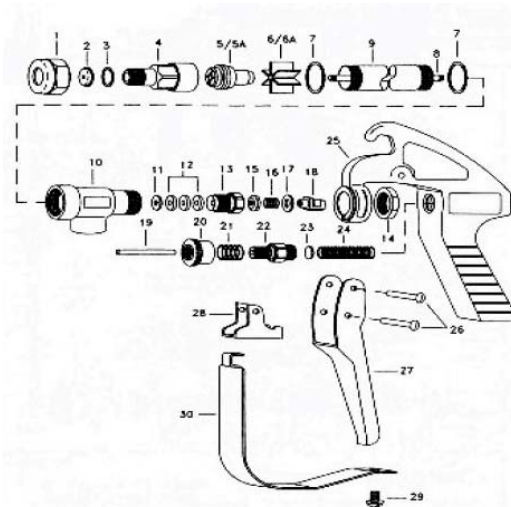


SPRAYING SYSTEMS 23120 REGULATOR



ITEM	PART NO.	DESCRIPTION
1	CP23122-NY	Adjusting Cap, Nylon (Gray)
2	CP23124-PPB	Spring Retainer, Polypropylene (Black)
3	CP23126-302SS	Retaining Pin, Type 302 Stainless Steel
4	CP7717-15	O'Ring
5	CP23127-316SS	Spring, Type 316 Stainless Steel
6	CP23125-PPB	Guide Seat, Polypropylene (Black)
7	CP23123-PP	Lock Ring, Polypropylene (Gray)
8	CP23128-1-PPB	Body, Polypropylene (Black) For Model 23120A-1/2-PP
	CP23121-1-PPB	Body, Polypropylene (Black) For Model 23120A-3/4-PP
		No. 23120A-1/2-PP Pressure Relief Valve
		No. 23120A-3/4-PP Pressure Relief Valve
		PK-AB23120 - Kit - Spare Parts Kit (includes all items marked with *)

SPRAYING SYSTEMS 43L-AL SPRAY GUN



ITEM	PART #	DESCRIPTION
1	CP1325-AL	CAP, BRASS, or ALUMINUM
2	D6	ORIFICE DISC, HARDENED STAINLESS STEEL
3	CP4743-NY	GASKET, NYLON
4	CP10566-AL	NOZZLE HOUSING, BRASS or ALUMINUM
5A	10565-AL	SEAT PLUG ASSEMBLY - BRASS or ALUMINUM
6	CP10571-3-NYB	GUIDE VANE, NYLON
6A	CP10571-AL	GUIDE VANE, ALUMINUM
7	CP45196-NYB	GASKET, NYLON (2 REQUIRED)
8	CP19238- 416SS	STEM, TYPE 416 STAINLESS STEEL
9	CP6604-AL	TUBING, BRASS or ALUMINUM
10	CP6942-AL	INLET BODY, BRASS or ALUMINUM
11	CP6601-302SS	PACKING WASHER, TYPE 302 STAINLESS STEEL
12	CP6602-LEA	PACKING LEATHER (3 REQUIRED)
	CP6602-TEF	PACKING TEFLON (3 REQUIRED)
13	CP19237-AL	PACKING SCREW, BRASS or ALUMINUM
14	CP6599-IZP	LOCKNUT, BRASS, or STEEL ZINC PLATED
15	CP9641-INP	STEM NUT, STEEL NICKEL PLATED
16	CP6595-SS	TRIGGER STOP SPRING, SS
17	CP7991-SS	WASHER, SS
18	CP6597-INP	TRIGGER GUIDE, STEEL NICKEL PLATED
19	CP6591-SS	SPRING STUD, STAINLESS STEEL
20	CP6589-IZP	STOP ADJUSTMENT NUT, STEEL ZINC PLATED
21	CP6594-SS	SPRING FOR STOP ADJUSTMENT NUT, SS
22	CP6588-IZP	SPRING SCREW, STEEL ZINC PLATED
23	CP6592-302SS	SPRING GUIDE WASHER, TYPE 302 SS
24	CP6593-1-SS	MAIN SPRING, SS for MODEL 43L
	CP6593-2-SS	MAIN SPRING, SS for MODEL 43H
25	CP14477-1-AL	HANDLE BODY, ALUMINUM
26	CP7623-IZP	RIVET, STEEL NICKEL PLATED
27	CP6509-INP	TRIGGER, STEEL NICKEL PLATED
28	CP6510-INP	TRIGGER STOP, STEEL NICKEL PLATED
29	CP11757-SS	SCREW, STAINLESS STEEL
30	CP13798-INP	TRIGGER GUARD, STEEL NICKEL PLATED
		GUNJET No. AA43L - BRASS, FOR PRESSURE UP TO 200 psi
		GUNJET No. AA43L-AL - ALUMINUM, FOR PRESSURE UP TO 200 psi
		GUNJET No. AA43H - BRASS, FOR PRESSURES FROM 200 to 800psi
		GUNJET No. AA43H-AL - ALUMINUM FOR PRESSURES FROM 200 to 800psi
		PK-AB43-KIT SPARE PARTS KIT (includes all items marked)
		PK-AB43-AL-KIT SPARE PARTS KIT (includes all items marked)

TROUBLE SHOOTING

PROBLEM

CAUSE

1. NO PRESSURE

- A. STRAINER CLOGGED
 - B. PUMP SUCKING AIR or PUMP HAS AIR LOCK. CHECK HOSES FOR CRACKS or HOLES. MAKE SURE FITTINGS ARE TIGHT.
 - C. SUCTION LINE COLLAPSING – NEED STIFFER HOSE.
 - D. WORN or LEAKING SEALS.
-

2. PUMP RUNS, BUT LOW PRESSURE

- A. SUCTION LINE & FITTINGS STOPPED UP or HOSE KINKED.
 - B. WORN ROLLERS or PUMP HOUSING.
 - C. STOPPED UP STRAINER.
-

3. PUMP PRESSURE GOOD BUT LOW OUTPUT THROUGH NOZZLES

- A. NOZZLE SIZE MAY BE TOO SMALL. CHECK CALIBRATION & GALLONS PER ACRE.
 - B. INLET LINE TOO SMALL or BLOCKED OFF.
 - C. BY-PASS OPEN TOO MUCH. CLOSE SLIGHTLY.
-

4. EXCESSIVE VIBRATION or NOISE FROM PUMP

- A. POSSIBLE LOOSE COUPLER – DAMAGED SHAFT.
- B. EXCESSIVE PTO or ENGINE SPEED.
- C. ROTOR or INTERNAL PROBLEM.