



# **AG SPRAY EQUIPMENT, INC.**

## **OWNERS MANUAL**



### **AG 300 & 500 ROW CROP TRAILER SPRAYER**

**30' & 36' DLX TRUSS BOOM**

**HYPRO 8 ROLLER PUMP**

## AG 300-500 ROW CROP BOOM SPRAYER

### **AG SPRAY EQUIPMENT      OWNER'S MANUAL**

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Congratulations on purchasing your new trailer sprayer. This manual is designed to aid you in operating your new sprayer. Also enclosed are the HYPRO parts list for the pump & a parts list for the pressure regulator and calibration on Spraying Systems nozzles.

#### **WARRANTY**

All Field Sprayers are under warranty by **Ag Spray Equipment, Inc.** for a one year period from the date of purchase. This warranty only applies to defects in workmanship or manufactures 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 before the one year period will be replaced at no charge.

**Ag Spray Equipment, Inc.** must be notified immediately of any defects or broken parts on the sprayer before the one year period occur. Waiting until after the one year period whether the sprayer has been ran **once, twice, or none** at 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, Inc.**  
**1100 New Industry Lane**  
**Hopkinsville, KY 42240**  
**Phone: 1-800-637-7172**

#### **Operation & Instructions of New Sprayer**

First, back your tractor up to the hitch of the sprayer and use a hitch pin to connect tractor to sprayer. Then, connect the PTO coupler on the pump to the shaft by depressing the coupler & sliding it on the shaft letting go of the coupler to allow lock pins to fall into the grooves on the shaft. Wrap chain around draw bar to keep pump from turning. If another pump is used refer to the pump book that comes w/ the sprayer.

Next, fill the tank at least  $\frac{1}{4}$  to  $\frac{1}{2}$  full of just plain water with no chemicals. Make sure that the suction line shut off valve is open; handle should be going with the line. Screw the pressure regulator part of the way out (gray knob) & make sure agitation valve is  $\frac{3}{4}$  of the way open if supplied. This ensures that you do not peg the gauge & break it.

You are now ready to try out your sprayer. By engaging PTO lever & pulling throttle to the 540RPM mark on the RPM gauge turn boom valve on & adjust the desired pressure that you will need to operate at. Adjust pressure with the pressure regulator (gray knob) & not the agitation valve because you need to keep agitation constant.

**\*NOTE:** You may need to move the pressure head stand up towards the hitch for it may have been moved for shipping purposes. This may be done by loosening the 4 -  $\frac{1}{2}$ " x 4  $\frac{1}{2}$ " bolts around the tongue & sliding the plates forward. Electric controls will not have the pressure head stand.

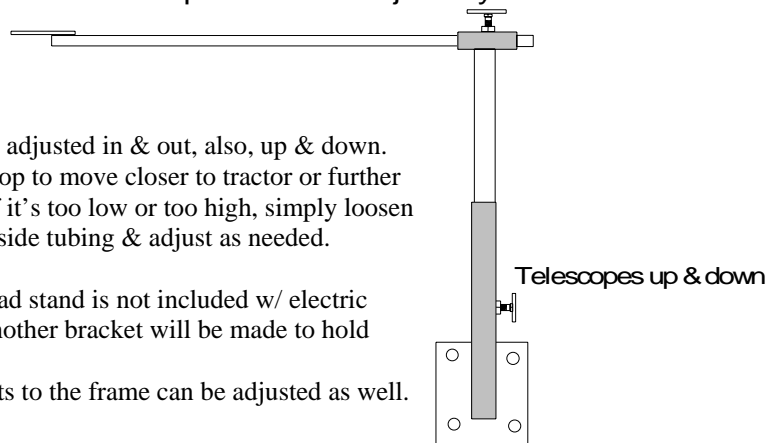
# Pressure Head Stand

Telescopes in & out - Adjust to your tractor

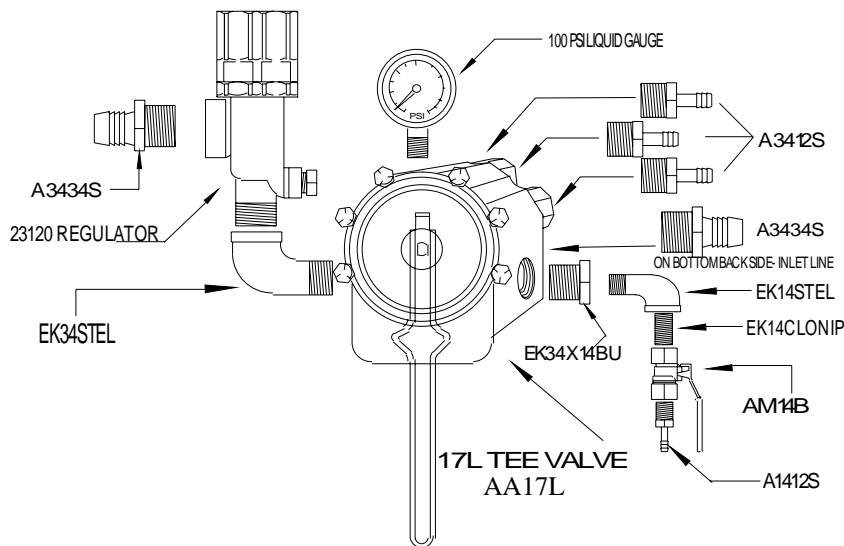
Pressure Head can be adjusted in & out, also, up & down. loosen the T bolt on top to move closer to tractor or further away from tractor. If it's too low or too high, simply loosen the T bolt on bottom side tubing & adjust as needed.

**NOTE:** Pressure Head stand is not included w/ electric controls. Another bracket will be made to hold the valves.

Bottom plate that bolts to the frame can be adjusted as well.



## PRESSURE HEAD FOR AG 300 - 500 TR



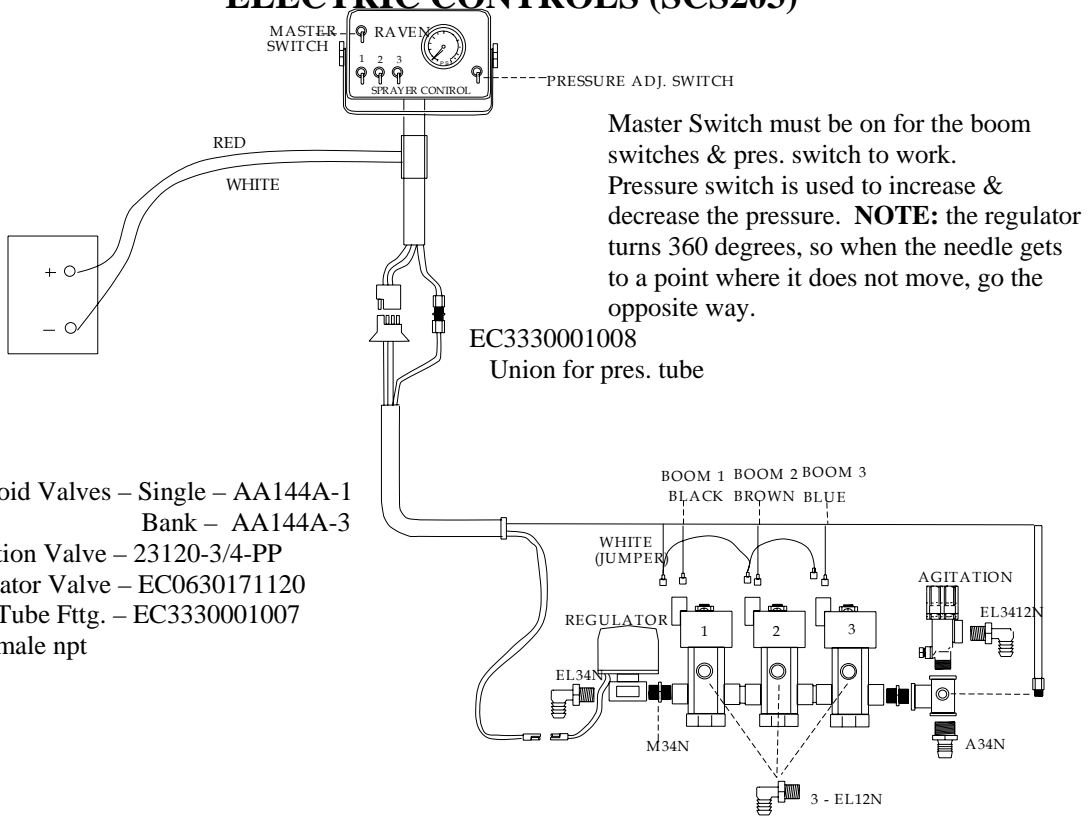
How to use the 17L Tee Valve:

The 17L Tee valve has markings on the dial face L (left), C (center), & R (right). If it reads LCR this means that the left, center, & right booms will be on. If it reads RC this means that right & center only will be on.

**IMPORTANT:** The lever must be pulled up to turn booms on. Simply, flip handle back down to shut off booms.

Adjust pressure w/ the regulator (gray knob). Set the agitation valve, brass valve on the side, to  $\frac{3}{4}$  of the way open. Do not adjust the pressure w/ this valve unless the system will not put out enough pressure.

# ELECTRIC CONTROLS (SCS203)



## Tip Chart & Formulas

[Hand Icon] [Nozzle Icon]	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
D25143-UB-8502 (DG, TJ60, TP, XR) 8002 (AI, DG, TJ60, TP, TT, XR) 11002 1/4TTJ02	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
D25143-UB-8503 (DG, TJ60, TP, XR) 8003 (AI, DG, TJ60, TP, TT, XR) 11003 AIUB8503	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
D25143-UB-8504 (DG, TJ60, TP, XR) 8004 (AI, DG, TJ60, TP, TT, XR) 11004 AIUB8504 1/4TTJ04	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

TP8003-VP tips are standard in all our booms unless another tip is requested.

Formula:

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

Example:

$$\frac{20\text{gpa} \times 4\text{mph} \times 20''}{5940} = \frac{1600}{5940} = .27\text{gpm}$$

**\*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:

$$\frac{20\text{gpa} \times 4\text{mph} \times 20'' \times 1.13}{5940} = \frac{1808}{5940} = .31\text{gpm}$$

When the GPM is determined, look down the GPM column on the tip chart & find that GPM w/ the tip that is in the booms. After finding the GPM look to see what pressure is needed for that mph & gpa.

## Boom Parts & Components

REGULAR BODIES – 30', 36' & 45' are ½"

TRIPLE BODY-ELBOW QJ363C-750-1-NY



18639-112-540 Body  
 30' – 13 tees on 20"  
 36' – 15 tees on 20"  
 36' – 13 tees on 18"



18638-111-540 Body  
 30' – 6 elbows on 20"  
 36' – 10 elbows on 20"  
 36' – 10 elbows on 18"



**OPTION:** QJ363C-750-2-NY ¾" TEE

Nozzle body count will be the same on diaphragm bodies & triple bodies.



22251-311-500 ½" DIAP. ELBOW  
 22252-312-500 ½" DIAP. TEE



50 mesh poly screen  
 8079-PP-50  
 30' – 19 on 20"  
 36' – 23 on 20"  
 36' – 25 on 18"



QJ Slotted-Cap  
 25612-2-NYR  
 30' – 19 on 20"  
 36' – 23 on 20"  
 36' – 25 on 20"

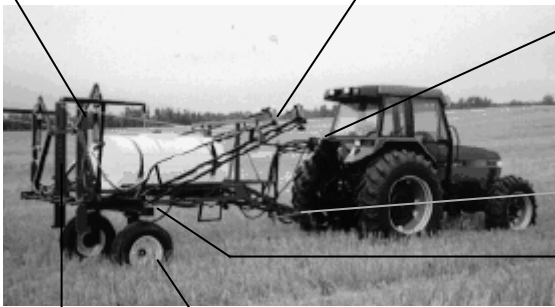
**Diaphragm Bodies** are ½" on 30' & 36', & diaphragm bodies are ¾" on 45' & up.  
**Regular Bodies** are ½" on 30', 36' & 45' standard unless otherwise specified.



QJ111-1 - 1" quick jet square clamps  
 30' – 19 clamps  
 36' – 23 clamps on 20" spac.  
 36' – 25 clamps on 18" spac.

# SPRAYER COMPONENTS

NAPAGas shock #LE40552 30' or 36' Boom



Telescoping pressure head control – slides in & out, up & down, & can loosen 4 bolts to slide whole assembly forward if needed

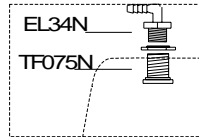
Bulldog Jack 15" Top Wind

Axle adjustment-raise sprayer, loosen 4 bolts & slide out to desired width (see pg 6)

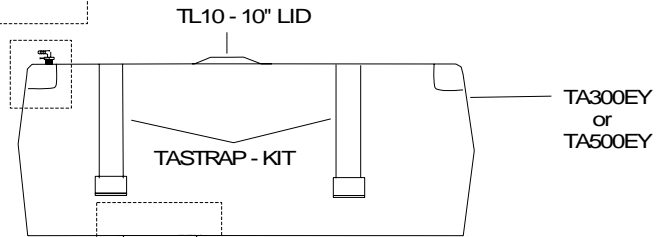
11L-15 Implement tires  
12.5L-15 on 500 gal.

Raise & lower boom height: there are eight 1/2" bolts that holds the boom in place. Top tube rests on two tabs in which helps keep boom in place. Boom is preset to a standard height; adjust as needed. (see pg 5)

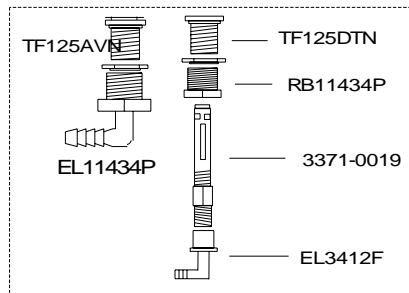
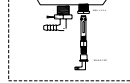
## BY-PASS Fittings



Tank fitting locations & parts used



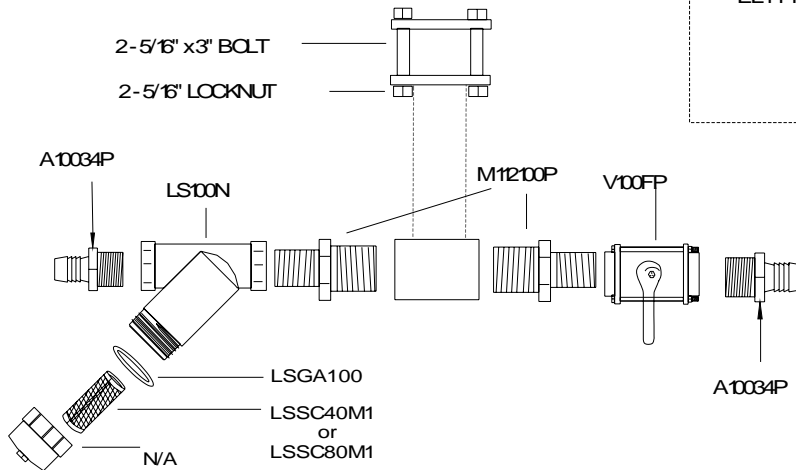
## Suction & Agitator assembly



## Ball valve & strainer assembly

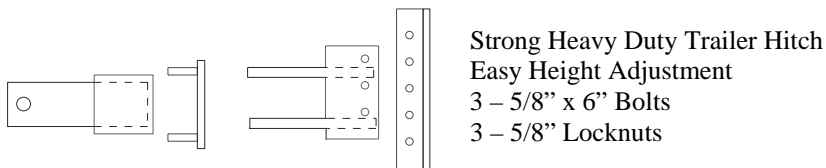
Located underneath platform at the back of tongue

2-5/16" x3" BOLT  
2-5/16" LOCKNUT

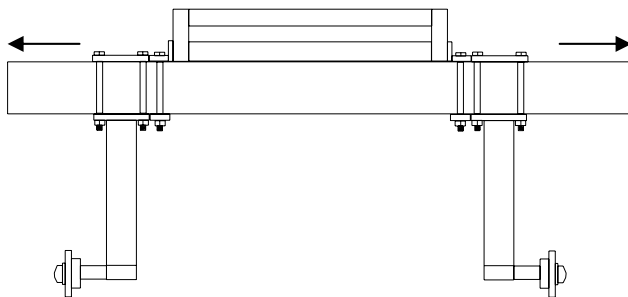


# SPRAYER COMPONENTS

Adjustable Hitch



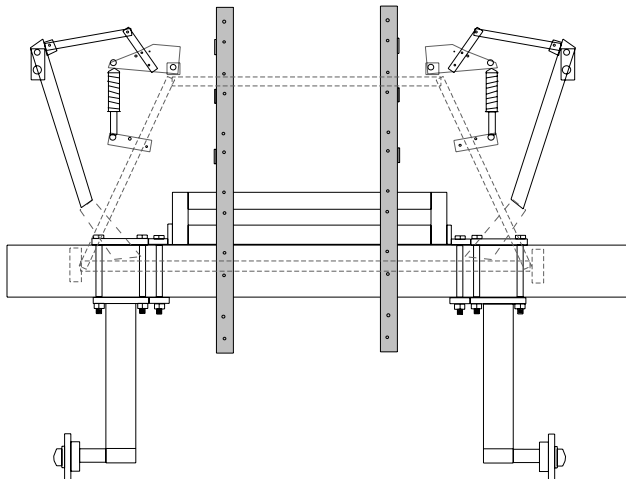
**Axle Adjustment**



Raise rear of sprayer off the ground & loosen the 4 - 3/4" x 6" bolts & nuts. Then, slide the wheel assembly to the desired tire width, tighten, & do the same to the other side. Wheels may also be turned inward, but **caution** should be taken when doing so because the narrow wheel base will make sprayer top heavy.

**Note:** Keep in mind that when wheel base is wide it puts more stress & weight on axle.

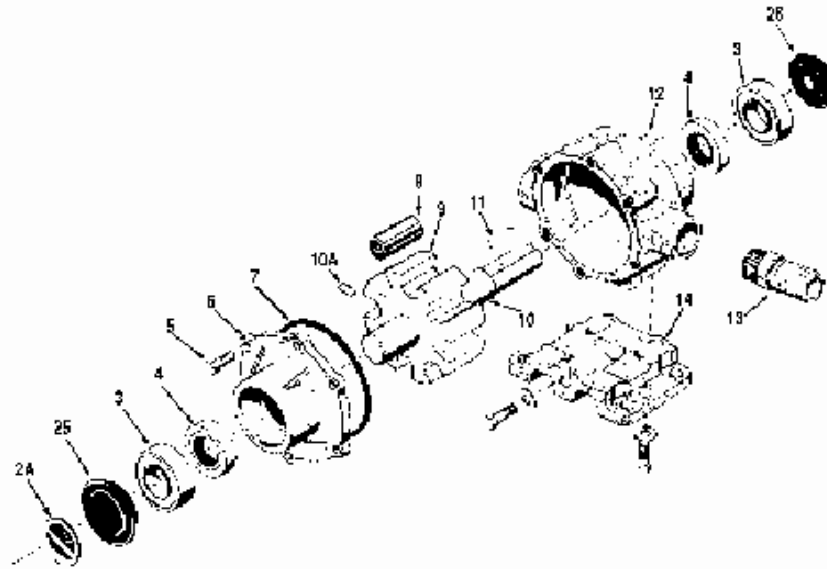
**Boom Height Adjustment**



Take boom off by pulling the pin out of breakaway hinge & undoing the chains. Then take a forklift or tractor w/ loader & chain to the boom back frame. Raise back frame until the slack is out of chain & unbolt the plates holding boom in place. Move the back frame to desired height, place bolts through plates & tighten bolts & nuts.

**HYPRO 8 ROLLER PUMP**

## Hypro Models 7560C, 7560N, and 7560XL



**IMPORTANT:**  
When ordering parts, give **PART NUMBER** and **PART DESCRIPTION**. Reference Numbers are used **ONLY** to point out parts in the drawing and are **NOT** to be used as ordering numbers.

Ref. No.	Qty. Req'd.	Part Number	Description
2A	1	6031-0258	Name Plate (Specify Pump Model #)
3	2	2008-0001	Sealed Ball Bearing
4	2	2112-0003	Viton Seal (Standard)
4	2	2112-0001	Buna-N Seal (Optional)
4	2	2103-0002	Leather Seal (Optional)
5	6	2210-0004	Bolt
6	1	0204-7500C	Endplate (Cast-Iron) with seal
6	1	0204-7500N	Endplate (Ni-Resist) with seal
6	1	0204-7500X	Endplate (SilverCast) with seal
7	1	1720-0014	O-ring Gasket for Endplate
8	8	1005-0004	Super Roller (Standard)
8	8	1002-0004	Polypropylene Roller (Optional)
8	8	1052-0004	Buna-N Roller (Optional)
8	8	1055-0004	Teflon Roller (Optional)

Ref. No.	Qty. Req'd.	Part Number	Description
9	1	0308-7560C	Rotor (Cast Iron) with shaft
9	1	0308-7560N	Rotor (Ni-Resist) with shaft
9	1	0308-7560X	Rotor (SilverCast) with shaft
10	1	0500-7400	Shaft Only
10A	1	2230-0003	Set Screw
10A	1	2230-0007	Set Screw (SilverCast Only)
11	1	1610-0005	Key
12	1	0104-7500C	Body (Cast Iron) with seal
12	1	0104-7500N	Body (Ni-Resist) with seal
12	1	0104-7500X	Body (SilverCast) with seal
13	1	2404-0052	1" Hose Barb
14	1 kit	3420-0003	Base Kit — Includes: (1) Base, (3) Bolts and (3) Washers
25	1	2300-0020	Bearing Cover
26	1	2300-0022	Shaft Bearing Cover

See Page 17 for the proper coupler or adapter.

Repair Parts Kit No. 3430-0343 (Universal) Consists of: (8) Ref. 8 Super Rollers, (2) Ref. 7 O-rings and (4) Ref. 4 Viton Seals of two different sizes.

Repair Parts Kit No. 3430-0376 Consists of: (8) Ref. 8 Super Rollers and (1) Ref. 7 O-Ring Gasket.

Repair Parts Kit No. 3430-0377 Consists of: (8) Ref. 8 Super Rollers, (1) Ref. 7 O-Ring Gasket, and (2) Ref. 4 Buna Seals.

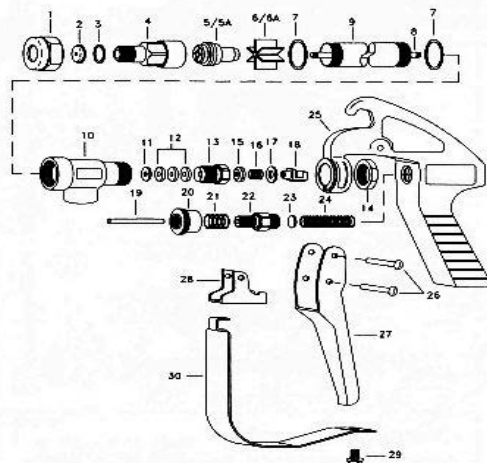
Repair Parts Kit No. 3430-0381 Consists of: (8) Ref. 8 Super Rollers, (1) Ref. 7 O-Ring Gasket, and (2) Ref. 4 Viton Seals.

Repair Parts Kit No. 3430-0154 Consists of: (8) Ref. 8 Polypropylene Rollers and (1) Ref. 7 O-Ring Gasket.

Repair Parts Kit No. 3430-0167 Consists of: (8) Ref. 8 Polypropylene Rollers, (1) Ref. 7 O-Ring Gasket, and (2) Ref. 4 Viton Seals.

## SPRAYING SYSTEMS 43L-AL SPRAY GUN





ITEM	PART #		DESCRIPTION
	BRASS	ALUMINUM	
1	CP1325	CP1325-AL	CAP, BRASS, or ALUMINUM
2	D-**	D-**	ORIFICE DISC, HARDENED STAINLESS STEEL
3	CP4743-NY	CP4743-NY	GASKET, NYLON
4	CP10566	CP10566-AL	NOZZLE HOUSING, BRASS or ALUMINUM
5A	10565	10565-AL	SEAT PLUG ASSEMBLY - BRASS or ALUMINUM
6	CP10571-2-NYB	CP10571-3-NYB	GUIDE VANE, NYLON
6A		CP10571-AL	GUIDE VANE, ALUMINUM
7	CP45195-NYB	CP45196-NYB	GASKET, NYLON (2 REQUIRED)
8	CP19238-416SS	CP19238- 416SS	STEM, TYPE 416 STAINLESS STEEL
9	CP6604	CP6604-AL	TUBING, BRASS or ALUMINUM
10	CP6942	CP6942-AL	INLET BODY, BRASS or ALUMINUM
11	CP6601-302SS	CP6601-302SS	PACKING WASHER, TYPE 302 STAINLESS STEEL
12	CP6602-LEA	CP6602-LEA	PACKING LEATHER ( 3 REQUIRED)
	CP6602-TEF	CP6602-TEF	PACKING TEFLON (3 REQUIRED)
13	CP19237	CP19237-AL	PACKING SCREW, BRASS or ALUMINUM
14	CP6599	CP6599-IZP	LOCKNUT, BRASS, or STEEL ZINC PLATED
15	CP9641-INP	CP9641-INP	STEM NUT, STEEL NICKEL PLATED
16	CP6595-SS	CP6595-SS	TRIGGER STOP SPRING, SS
17	CP7991-SS	CP7991-SS	WASHER, SS
18	CP6597-INP	CP6597-INP	TRIGGER GUIDE, STEEL NICKEL PLATED
19	CP6591-SS	CP6591-SS	SPRING STUD, STAINLESS STEEL
20	CP6589-IZP	CP6589-IZP	STOP ADJUSTMENT NUT, STEEL ZINC PLATED
21	CP6594-SS	CP6594-SS	SPRING FOR STOP ADJUSTMENT NUT, SS
22	CP6588-IZP	CP6588-IZP	SPRING SCREW, STEEL ZINC PLATED
23	CP6592-302SS	CP6592-302SS	SPRING GUIDE WASHER, TYPE 302 SS
24	CP6593-1-SS	CP6593-1-SS	MAIN SPRING, SS for MODEL 43L
	CP6593-2-SS	CP6593-2-SS	MAIN SPRING, SS for MODEL 43H
25	CP14477-1-AL	CP14477-1-AL	HANDLE BODY, ALUMINUM
26	CP7623-IZP	CP7623-IZP	RIVET, STEEL NICKEL PLATED
27	CP6509-INP	CP6509-INP	TRIGGER, STEEL NICKEL PLATED
28	CP6510-INP	CP6510-INP	TRIGGER STOP, STEEL NICKEL PLATED
29	CP11757-SS	CP11757-SS	SCREW, STAINLESS STEEL
30	CP13798-INP	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)

# TROUBLESHOOTING

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<b>PROBLEM</b>	<b>CAUSES &amp; REMEDIES</b>
<b>1. NO PRESSURE</b>	<ul style="list-style-type: none"><li>A. <i>PUMP NOT PROPERLY PRIMED</i></li><li>B. STRAINER STOPPED UP</li><li>C. PUMP SUCKING AIR or PUMP HAS AIR LOCK. CHECK HOSES FOR CRACKS or HOLES. MAKE SURE FITTINGS ARE TIGHT. CENTRIFUGAL PUMP MAY HAVE AIR LOCK. UNSCREW 1/8" PLUG FROM TOP UNTIL WATER SHOOTS OUT OF IT</li><li>D. SUCTION LINE SUCKING TOGETHER – NEED STIFFER HOSE</li><li>E. WORN or LEAKING SEALS</li></ul>
<b>2. PUMP RUNS, BUT LOW PRESSURE</b>	<ul style="list-style-type: none"><li>A. SUCTION LINE &amp; FITTINGS STOPPED UP or HOSE KINKED</li><li>B. WORN ROLLERS or IMPELLAR</li><li>C. STOPPED UP STRAINER</li></ul>
<b>3. PUMP PRESSURE GOOD BUT LOW OUTPUT THROUGH NOZZLES</b>	<ul style="list-style-type: none"><li>A. NOZZLE SIZE MAYBE TOO SMALL. CHECK CALIBRATION &amp; GALLONS PER ACRE</li><li>B. OUTLET LINE TOO SMALL or BLOCKED OFF</li><li>C. BY-PASS OPEN TOO MUCH. CLOSE A LITTLE MORE</li></ul>
<b>4. EXCESSIVE VIBRATION or NOISE</b>	<ul style="list-style-type: none"><li>A. POSSIBLE LOOSE COULER – DAMAGED SHAFT</li><li>B. EXCESSIVE PTO or ENGINE SPEED</li><li>C. IMPELLAR or INTERNAL PROBLEM</li></ul>

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