

# 65 GALLON OWNERS MANUAL

Since VAN'S EQUIPMENT'S beginnings we have used a generic owners manual. It was just too costly to have printed and keep on hand owner manuals specific to each size and type sprayer we manufacture.

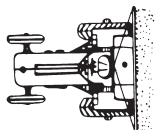
We now have the technology in house to create sprayer specific manuals and to print them only as needed. We think we have made a good beginning, but these manuals are still in the development stage. At this point we would appreciate the input of our end user customer and our dealers as to how we can make these manuals more useful and user friendly.

This is the prototype manual. Please look over the manual and give us your input.

CALL VANS EQUIPMENT AT 1-800-765-1101 AND ASK FOR CRAIG

We appreciate your input on these manuals.

Thanks Vans Equipment



**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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6.....	4 Row Plumbing Changes
7-11.....	Setup, Assembly & Maintance Instructions
12.....	Trouble Shooting
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## 65 GALLON 3-POINT HITCH

The new 65 gallon 3 PH row crop sprayer from Van's was designed to beat high prices without the sacrifice of quality. The compact pipe frame and the vertical 65 gallon poly tank with fold-up manual booms gives you a sprayer with easy maneuverability and long lasting dependability. This unit comes to you with 4 or 6 row fold-up booms, completely field ready.

### 65 GALLON 3 PH 8 WAY BOOM CONTROL

	4 ROW FOLDING	6 ROW FOLDING	HANDGUN ONLY
6 ROLLER	L6514	L6515	L65CS11

Shipping wt. 220 lbs.

**Standard Features include:**

- 1) 65 Gallon Upright Polyethylene Tank
- 2) 5" Fillwell
- 3) 80" Uprights for Higher Crop Clearance
- 4) Manual Folding Booms
- 5) Choice of 4 or 6 Row Breakaway Booms
- 6) 6 Roller Pump
- 7) Manual Boom Control Valve (8 Way on 6 Row, Single Acting on 4 Row)
- 8) Full Set 8003 Tips, Caps & Strainers
- 9) Van's Exclusive 5 Year Structural Warranty
- 10) Fully Assembled & Factory Tested



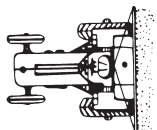
**Options:**

		Part No.
1) AA43L-6 Hand Gun w/Hose Rack		H11F
2) Boomless Nozzle		BNN2
3) Brass Plumbing (4 Row)		-----
4) Brass Plumbing ( 6 Row)		-----
5) Boomless Nozzle with H/G		BNNA

**Boomless Nozzle Only**

6 Roller Pump	L65KLC
6 Roller Pump w/Hand Gun.	L65KLCB

(PRICES SUBJECT TO CHANGE WITHOUT NOTICE)



van's

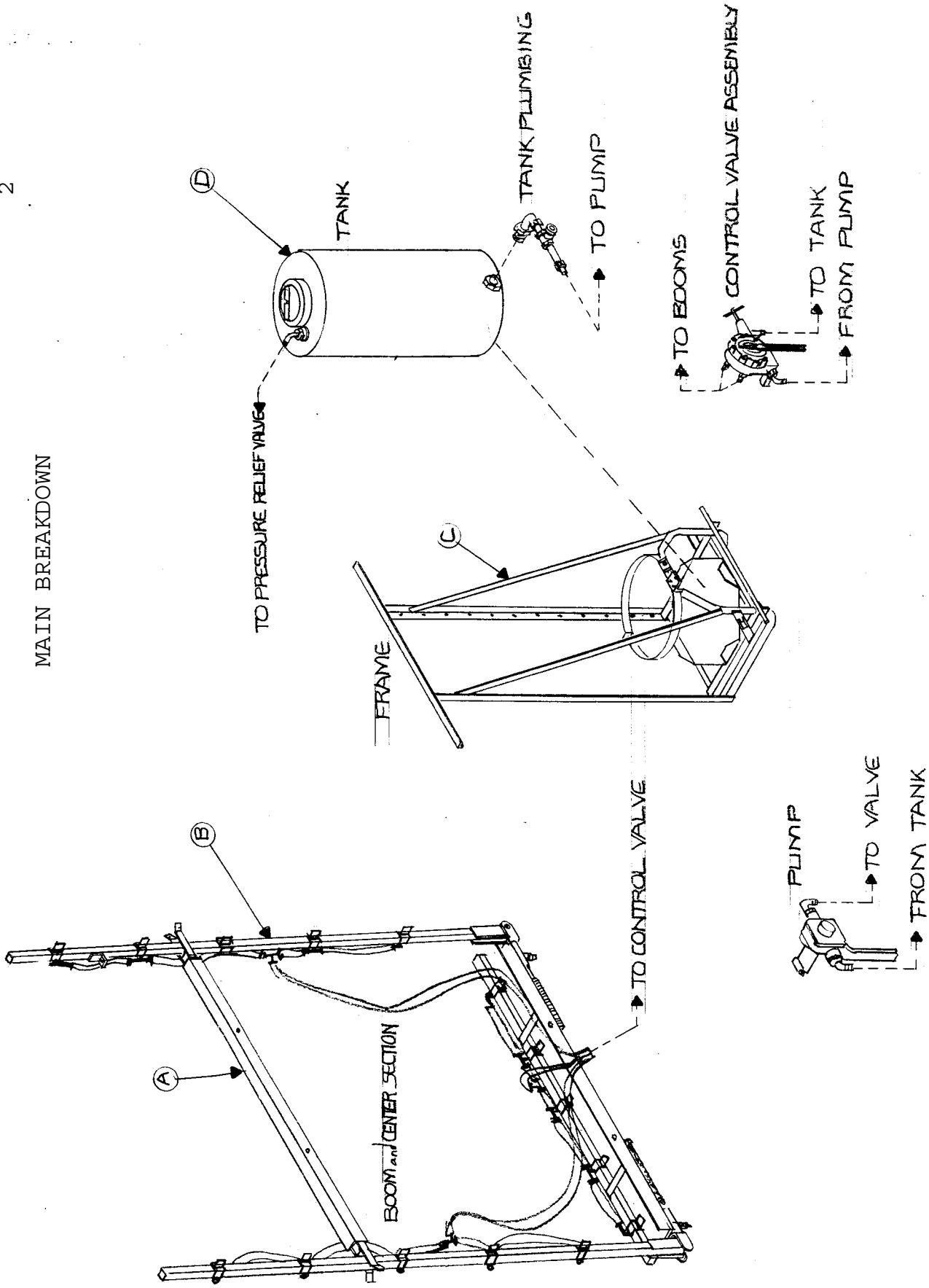
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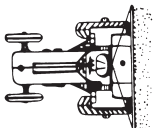
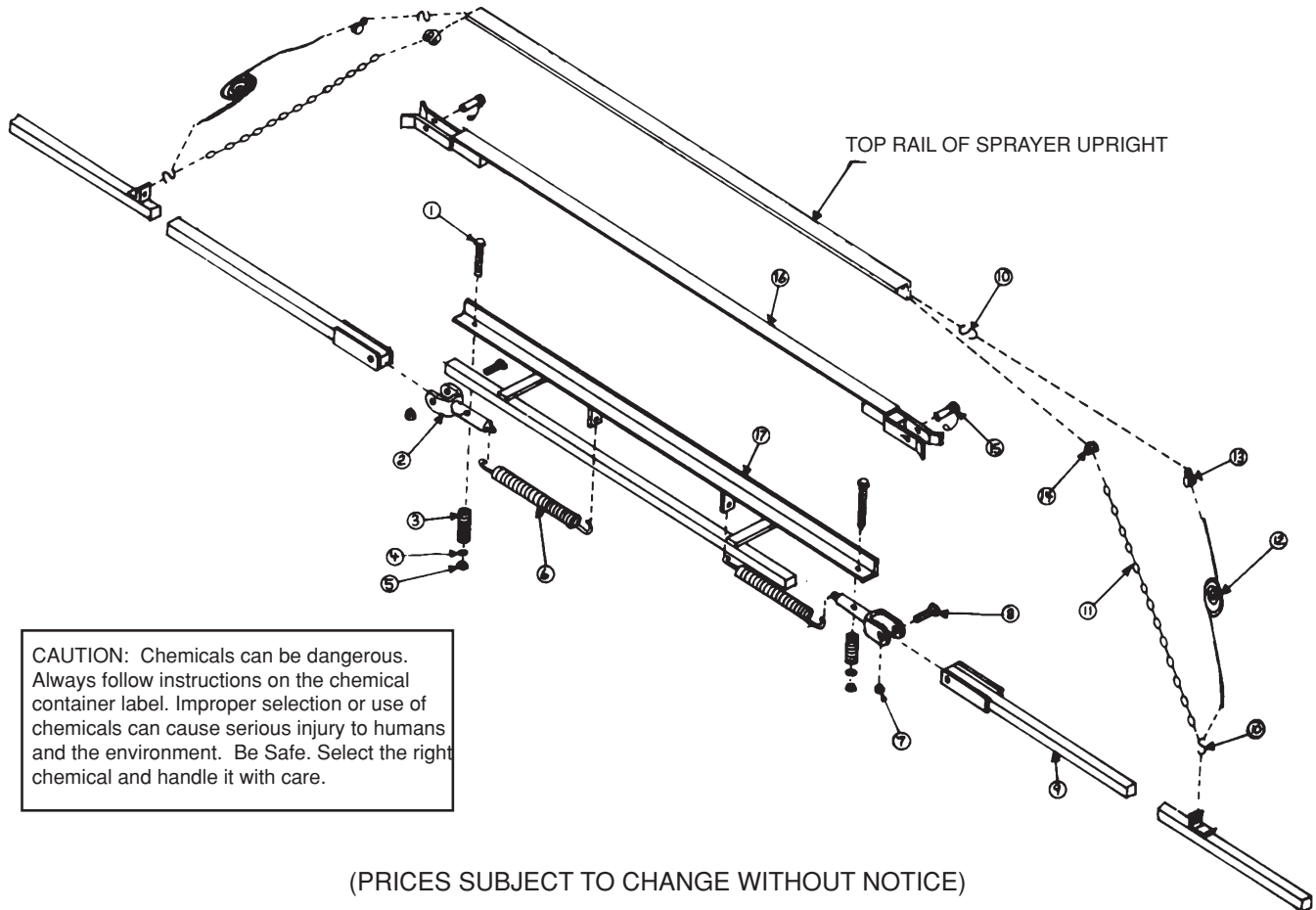
MAIN BREAKDOWN



- A....Transport Bracket, (B55 4 Row, B66 6 Row)
- B....Boom & Center Section, (B5 4 Row, B6 6 Row)
- C....Frame (L65)
- D....Tank (41347)

**65 GALLON CENTER SECTION  
4 Row and 6 Row  
BREAKDOWN**

REF. NO.	DESCRIPTION	PART NO.	QUANTITY	PRICE EA.
1	1/2" x 4 1/2" Bolt	CS12412C	2	1.44
2	Economy Boom Yoke	JD102	2	21.38
3	Compression Spring	1-25	2	19.37
4	1/2" Flat Washer	FW12	2	.15
5	1/2" Hex Nut	HN12C	2	.26
6	Tension Spring	75-7	2	6.44
7	1/2" Lock Nut	HLN12C	2	.45
8	1/2" x 3" Bolt	CS12300C	2	.91
9A	4 Row Outer Boom	B8C	1	88.00
9	6 Row Outer Boom	B8A	1	101.00
10	#43 S Hooks	SH218	2	1.10
11	2/0 Weld Chain	2/0 CHAIN	20 FT.	8.80
12	Nylon Rope	8SP-1/4	12 FT.	2.88
13	Single Eye Pulley	87-209	2	4.13
14	Clevis Assembly	00948	2	1.98
15	PTO Pin	00276	2	1.28
16	4 Row Center Section Top Rail	B55	1	44.00
16A	6 Row Center Section Top Rail	B66	1	56.00
17	4 Row Center Section	B5	1	205.00
17A	6 Row Center Section	B6	1	219.00



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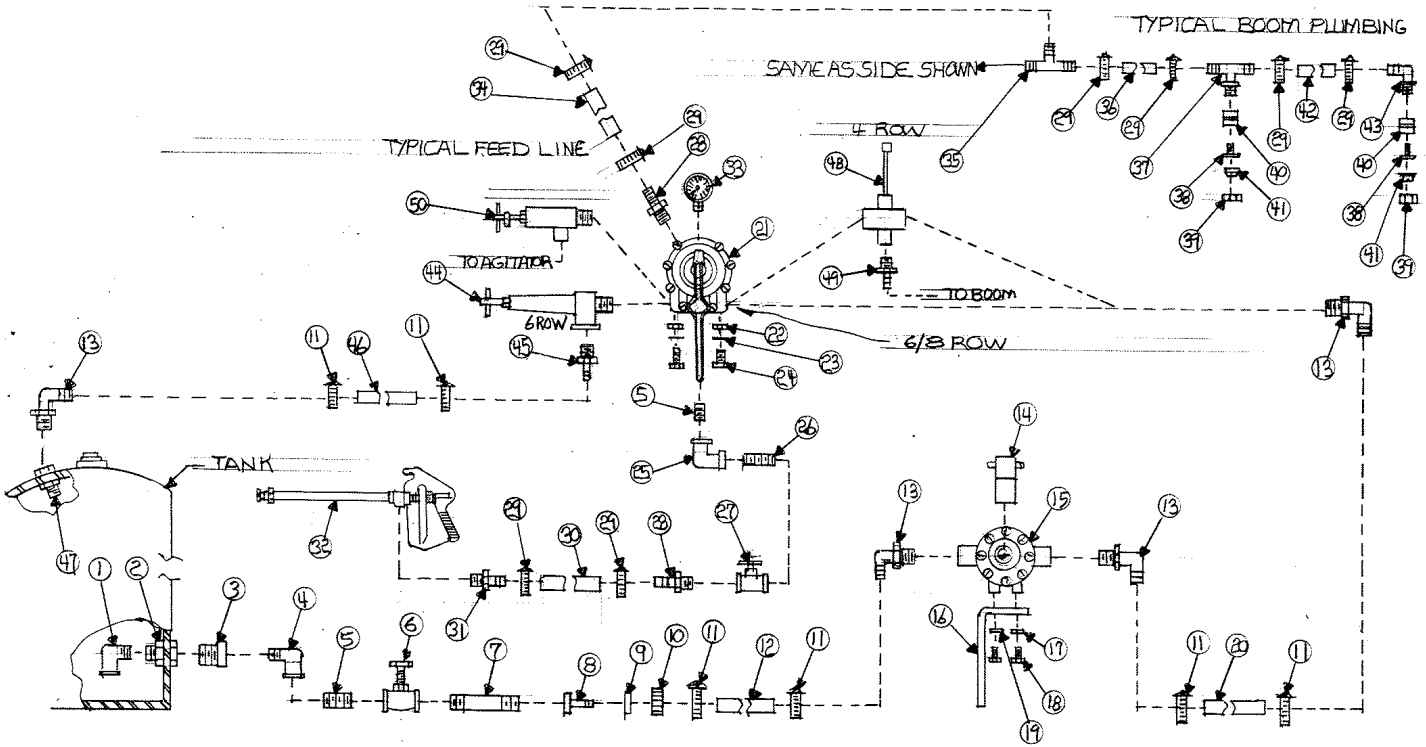
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## L65 Boom Sprayer

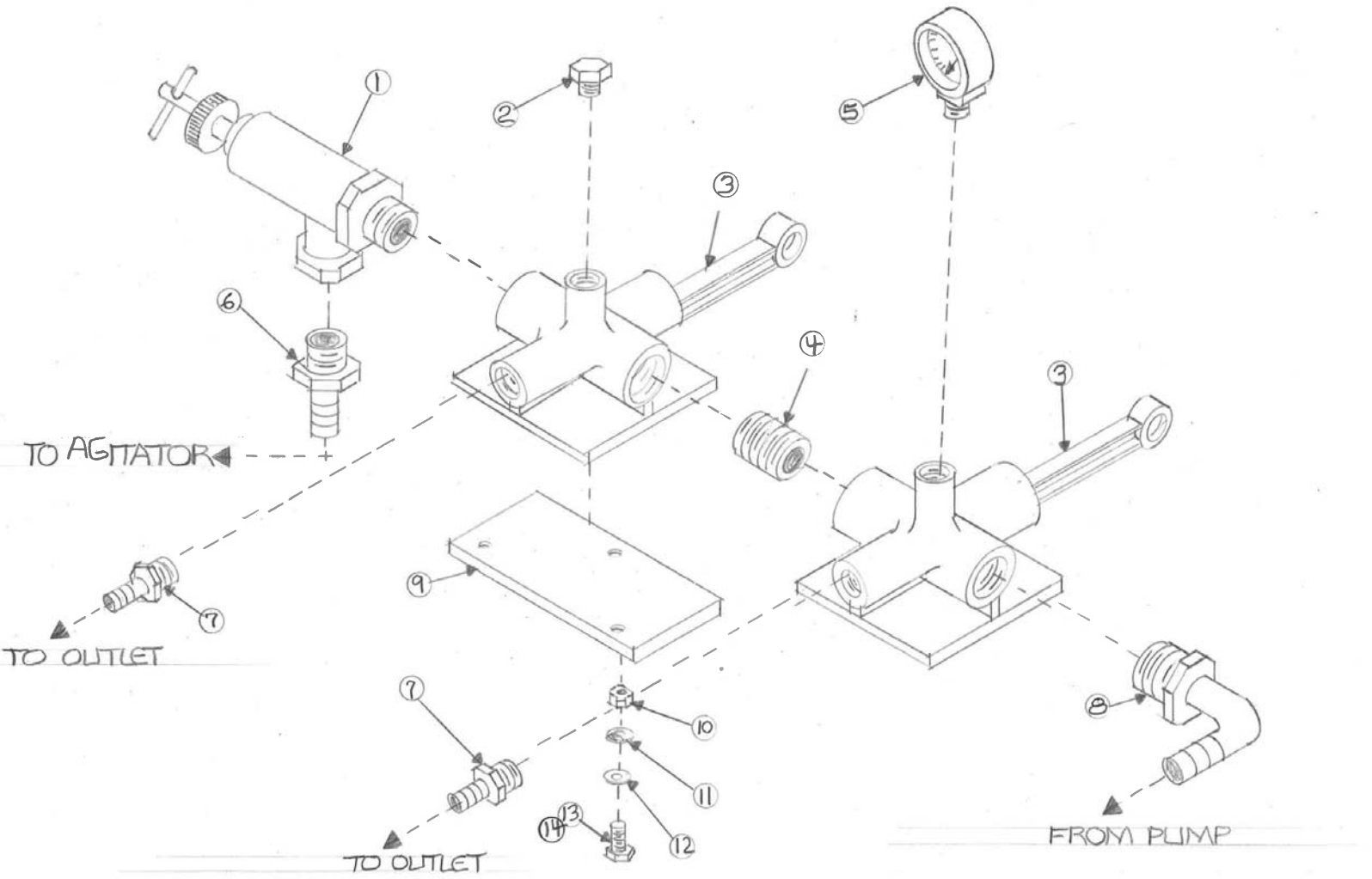
ITEM NO.	DESCRIPTION	PART NO.
1	Street elbow 1 1/4" nylon	SE114
2	Tank fitting 1 1/4" poly	60403
3	Reducer bushing 1 1/4"mpt x 3/4"fpt nylon	RB11434
4	Street elbow 3/4" nylon	SE34
5	Nipple 3/4" x close galvanized	GN341.5
6	Gate valve 3/4" fpt brass	34BGV
7	Strainer 3/4"fpt 50 mesh poly	RVF1212PE40P
8	Flat seat swivel x 1/2" barb nylon( sprayer before 2014)	C12
9	Washer 1"OD x 1/2" ID poly(sprayer before 2014)	W405
10	Nut 3/4" garden hose swivel nylon (sprayer before 2014)	B34
11	Hose clamp 1/2"	8H
12	Hose black ag. 1/2"	10031730
13	Elbow 3/4"mpt x 1/2" barb 90 nylon	EL3412
14	Pump coupler 540rpm 1 3/8"	1321-0006
15	Pump 6 roler	6500C
16	Pump stabilizer	PS
17	Lock washer 5/16"	LW516
18	Bolt 5/16" x 3/4"	CS51634C
19	Flat washer 5/16"	FW516
20	Hose black ag. 1/2"	10031720
21	Control valve	AA17L
22	Nut 3/8"	HN38C
23	Lock washer 3/8"	LW38
24	Bolt 3/8" x 1 1/4"	CS38114c
25	Elbow 3/4"fpt galvanized	GEL3490
26	Nipple 3/4" x 5" galvanized	GN345
27	Elbow 3/4"fpt galvanized	GEL3490
28	Hose shank 3/4"mpt x 1/2" barb	A3412
29	Hose clamp 3/8'	6H
30	Hose black ag. 3/8"	10031720
31	Hose shank 1/2"mpt x 3/8" barb	A1238
32	Spray gun	AA43LA-AL6
33	Pressure gauge 0-160 psi dry	SG-160
34	Hose black ag. 3/8"	10031720
35	Insert tee 3/8" nylon	T38
36	Hose black ag 3/8"	10031720
37	Hose connector 3/8" tee x barb	3NTT38
38	Tip strainer 50 mesh	8079-PP-50
39	Tip cap	CP8027-NYB
40	Boom clamp 1" square	AA111SQ-1
41	Tip( standard)	TP8003
42	Hose black ag 3/8"	10031720
43	Hose connector 3/8" elbow x barb	3NTL38
44	Pressure relief valve	13895-6
45	Hose shank 3/4"mpt x 1/2" barb	A3412
46	Hose red ag	3204-0410

47	Tank fitting 3/4" poly	60401
48	Control valve	AA6B
49	Hose shank 1/2" mpt x 3/8" barb	A1238
50	Pressure relief valve	3/48460





ITEM NO.	DESCRIPTION	PART NO.
1	Pressure Relief Valve	13895-6
2	Plug 1/4" Nylon	F14
3	Control Valve	AA6B
4	Nipple 3/4" x Close Nylon	M34
5	Pressure Gauge 0-160 PSI Dry	SG-160
6	Hose Shank 3/4" MPT x 1/2" Barb Nylon	A3412
7	Hose Shank 1/2" MPT x 3/8" Barb Nylon	A1238
8	Elbow 3/4" MPT x 1/2" 90 Barb Nylon	EL3412
9	Mounting Plate	VS6B2
10	Nut 1/4"	HN14C
11	Flat Washer 1/4"	FW14
12	Lock Washer	LW14
13	Bolt 1/4" x 1"	CS14100C
14	Bolt 1/4" x 1 1/4"	CS14114C



## **MOUNTING AND ASSEMBLY INSTRUCTION**

### **FOR 3 POINT HITCH SPRAYERS 200 AND 300 GALLON 12 ROW**

Mount the sprayer on tractor and use top link to level frame. Use the lift arm adjustments to level tank and frame laterally. Install lift arm stabilizer to eliminate side sway. Attach the pump to tractor.

#### **FOR PTO ROLLER PUMPS:**

**IF YOU EVER INTEND TO USE ROUND-UP OR ANY SUCH CHEMICAL YOU MUST USE THE ROUND-UP READY PUMP.**

Install the pump on the tractor PTO shaft and make sure that the pump you are using is recommended for PTO speed which you intend to use. If in doubt ask your dealer.

If your pump is equipped with a quick coupler, make sure that it is locked onto tractor PTO shaft and tighten set screw.

Fasten the stabilizer to a fixed point on the tractor so that pump will not rotate with shaft.

#### **FOR PTO DRIVEN CENTRIFUGAL PUMPS:**

Make sure pump is recommended for the PTO speed which you intend to use. If in doubt ask your dealer for assistance.

Slip the PTO coupler all the way up on the splined tractor shaft and tighten all set screws making sure the pump is properly centered on the shaft to eliminate wobble.

Make sure the outlet (discharge) port on the pump is mounted in the VERTICAL POSITION. If you are unable to mount the pump in this manner as is, the rear housing plate may be removed and rotated to a vertical position. This is necessary to insure proper priming of pump.

Fasten the stabilizer to a fixed point on the tractor so the pump will not rotate with shaft.

#### **FOR HYDRAULIC DRIVEN CENTRIFUGAL PUMPS:**

Mount a hydraulic centrifugal pump only after reading the complete instruction manual provided by pump manufacturer.

If you do not have this manual, ask your dealer for assistance.

A hydraulic motor driven centrifugal pump is extremely versatile in regard to where it may be mounted, however, one thing you must keep in mind is that the pump must be mounted at /or below liquid level of the tank.

**IMPORTANT:** Be sure to connect hydraulic hoses from the tractor outlet to the hydraulic motor inlet and the tractor return line to the outlet of the hydraulic motor. These hoses must be hooked correctly to

achieve the correct rotation on the pump and to prevent damage to the unit or system. Pump rotation is clockwise when facing the suction port of pump.

#### **FOR DIAPHRAGM PUMPS:**

Always mount pump with the oil sight tube in an upwards position. DO NOT OPERATE without safety shields in place.

#### **BEFORE RUNNING THE PUMP:**

- A. Be sure that oil is halfway up the sight tube. If necessary, fill to correct level with 20W-30W non detergent oil.
- B. Be sure the suction hose barb is tightly screwed onto the suction union.
- C. Do not restrict the pump on the suction side. Use a 2-braid suction hose of at least the same inside diameter as the pump ports—larger with long suction lines. Keep the line as short as possible. Avoid all unnecessary bends, elbows or kinks in hose. Make sure all connections are tight and do not leak air.
- D. Be sure to use line strainer with 20 mesh, this comes standard on any VAN,S sprayer with diaphragm pumps
- E. Be sure to check charge in pulsation damper. Damper should be charged with air to 20 % of operating pressure. Minimum charge should be 5 PSI.
- F. RUN THE PUMP AT ZERO PRESSURE for one minute to remove air from the system. Do not exceed the pump's recommended maximum speed and pressure. There will be no performance advantage and pump life will be reduced. Pumps run over recommended speed or pressure are not subject to warranty.
- G. MAINTENANCE:
  1. After use, flush pump with clean water.
  2. Change oil every 200 hours or at the end of every spray season. To drain oil from pump, remove the drain plug, (see manufacturer's manual), and slowly turn pump shaft until all oil is drained. To fill pump with oil, slowly pour oil into sight tube while turning the pump shaft. Turning the pump shaft purges air out of the crankcase.
  3. For winter storage or if freezing conditions will be encountered, flush pump with 50/50 mixture of water and antifreeze.

#### **NOTES TO REMEMBER FOR ALL PUMPS:**

- A. Be sure to check all arrows on the pump that indicate proper rotation of pump.
- B. Be sure pump is correct for the PTO speed you intend to use.
- C. Be sure that the suction hose from tank to pump is as short as possible—cut if necessary—and be sure that hose is not kinked or collapsed—run it as straight as possible.
- D. Be sure that all hose clamps are tight and in place.
- E. **NEVER OPERATE ANY SPRAYER PUMP DRY**—Be sure pump is primed and supplied with liquid when it is operating. Damage will occur to the seals in a roller pump and also to the rollers. Damage will occur to seal of a centrifugal pump if operated dry.

When starting a new pump and every time it is operated thereafter, the pump should start displacing liquid within 18 seconds. If it does not, stop the pump and check all hoses, valves, and strainer between pump and tank.

#### **BOOM ASSEMBLY AND SETUP:**

The boom on the 200 and 300 gallon 12 row sprayers are detached from boom yoke, (item 20 page 8), for shipping, the chains, (item 14 page 8), are left connected. Reattached booms, with bolt, (item 21 page 8), and nut, (item 19 page 8), if necessary. Make sure the tip bodies face to the rear of sprayer. Be sure boom feed line hoses are correctly connected to control valve. You can determine this by operating sprayer with clear water, and switching hoses if necessary. **BE SURE YOU DO NOT SWITCH ANY HOSES OTHER THAN BOOM FEED LINES.**

Adjust booms to proper height for job you wish to do. If you are unable to determine what is correct for your job, please contact your local county agent or ask your vans dealer. In most cases nozzles are placed 19-20 inches above surface to be sprayed.

Be sure that your booms are level so that the nozzles on outer ends are exactly the same height as those in center.

Before going to the field look at each and every nozzle, make sure they are all the same size, and have tip strainers in place and are clean.

#### **BEFORE GOING TO THE FIELD:**

1. Look inside your new sprayer tank and make sure it is clean.
2. Fill tank about half full with clean water—DO NOT ADD ANY CHEMICALS.
3. Make sure all valves in the suction line on bottom of tank are full open.
4. Turn adjusting screw on pressure regulator valve in the counter-clockwise direction until it is almost all the way out.
5. Start pump slowly and increase speed of tractor to about 1200 RPM while checking to make sure liquid is passing through the pump and back into tank.
6. Turn adjusting screw on pressure regulator clockwise and increase pressure to approximately 10 PSI above the pressure you expect to use in field.
7. Open boom control valve and check all fittings for possible leaks. Check all hose connections and make sure all clamps are tight.
8. **MAKE SURE AT NO TIME WILL THE PRESSURE EXCEED THE CAPACITY OF THE PRESSURE GAUGE.**
9. Inspect the inside of your tank for good agitation while pump is in operation. Your VAN, S Sprayer gives full time agitation while pump is running. If you do not have good agitation, it is possible that some piece of foreign material can enter the system and clog agitator. Check if necessary by removing the agitator for inspection.

If the preceding steps have been followed properly and all corrective action necessary has been taken, you are now ready to calibrate your unit for field operation.

#### **CALIBRATION:**

It is necessary to calibrate your sprayer before beginning the spray job. We will not attempt here to give you a calibration procedure, however we suggest the section in the Spraying System catalog on calibration, your local or state pesticide manual, or calling your VAN's dealer. You can also look on page 11 of this manual for the application table for our standard tip, which unless you specified another tip, is a **TP8003 brass fan tip**.

No matter what method you use, or what you use, please remember the following points:

1. Always calibrate with clean water only.
2. Always calibrate under field conditions.
3. Never rely on a tractor speedometer for accuracy.
4. Make sure all nozzles are the same size, are spraying properly, and all strainers are clean.
5. Due to long boom lines, there can be a loss of pressure between pressure gauge and tips. It is usually normal to indicate a slightly higher reading on gauge, (approximately 5-8 PSI) than that indicated by application chart. For this reason calibrate your sprayer often.

#### **CAUTIONS AND PRE-CAUTIONS, (PLEASE READ CAREFULLY)**

If you have followed all the instructions up to this point, your new VAN'S SPRAYER is ready to go to work and do a good job. These last instructions can and will make your spraying job more pleasant.

- A. NEVER OPERATE SPRAYER WITHOUT PROPER SAFETY PRECAUTIONS.**
- B. ALWAYS FILL TANK AT LEAST HALF FULL AND HAVE PUMP OPERATING BEFORE ADDING CHEMICALS. IF YOU ARE USING WETTABLE POWDER, PRE-MIX IN A BUCKET OF WATER BEFORE ADDING TO TANK.**
- C. NEVER OPERATE PUMP AFTER TANK IS EMPTY-DO NOT OPERATE DRY.**
- D. ALWAYS ADJUST PRESSURE REGULATOR WITH SPRAYER IN OPERATION AND NEVER EXCEED THE CAPACITY OF THE GAUGE.**
- E. NEVER USE A METAL OBJECT TO CLEAN A NOZZLE, A TOOTHPICK, TOOTHBRUSH, MATCH, OR AIR WILL DO A BETTER AND SAFER JOB.**
- F. WHEN TRANSPORTING YOUR SPRAYER ON A ROAD OR HIGHWAY, BE SURE TO SECURE THE BOOMS IN THE BRACKETS PROVIDED FOR THIS PURPOSE. ALWAYS USE FLASHER LIGHTS OR OTHER DEVICES TO GIVE ADEQUATE WARNING TO OTHER VEHICLES.**
- G. REMEMBER-NOZZLES DO NOT CAUSE SPRAY PATTERN DISTORTION AND VARYING SPRAY VOLUME RATES. REPLACE NOZZLES AS OFTEN AS NEEDED TO ASSURE PROPER AND UNIFORM SPRAY COVERAGE AND RATES. CALIBRATE DAILY. STAINLESS STEEL NOZZLES PROVIDE THE MOST WEAR RESISTANCE WHEN COMPARED TO OTHER TIP MATERIAL.**
- H. ALWAYS USE CLEAN WATER AND CHECK STRAINER DAILY.**

- I. **CHECK AGITATION IN TANK FREQUENTLY—AT LEAST TWICE DAILY.**
- J. **KEEP ALL HOSES IN GOOD SHAPE – REPLACE WORN OR DAMAGED HOSE AS NEEDED-BE SURE SUCTION HOSE IS IN GOOD CONDITION.**
- K. **CLEAN UP WHEN JOB IS DONE.ALWAYS CLEAN SPRAYER AFTER EACH USE.**
- L. **NEVER CHANGE FROM ONE CHEMICAL TO ANOTHER WITHOUT THOROUGHLY CLEANING SPRAYER.**

#### **CLEANING- STORING-MAINTENANCE**

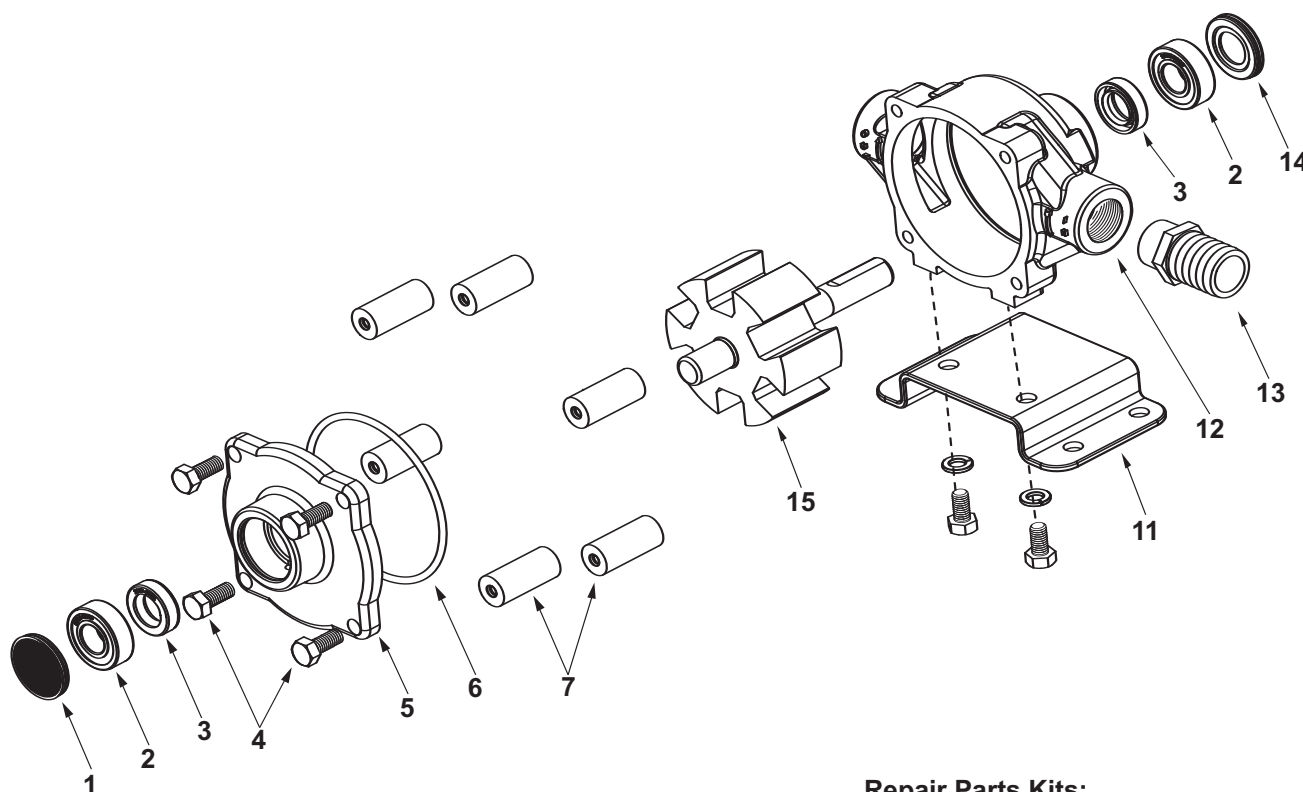
The least expensive thing you can do to prolong your new sprayers life is to keep it clean. Please follow these simple instruction after spraying job is done.

1. Clean thoroughly-Remove any chemical residues from tank,pump,boom strainers,and nozzles by flushing completely the entire system with clean water and follow with a solution of approximately ONE QUART of household AMMONIA to25 gallons water.
2. Remove all nozzle tips and strainers from booms and clean thoroughly with a toothbrush or toothpick. Leave nozzle tip to soak in can of oil or diesel fuel.
3. DRAIN TANK COMPLETELY and leave it to dry outside. Make sure all chemical has been removed THIS IS VERY IMPORTANT WITH WETTABLE POWDERS.
4. Remove pump and make sure no liquid is left inside. Fill pump with radiator rust inhibitor and plug outlets keep inside during storage.
5. Drain complete system and fill with antifreeze during winter storage to prevent freezing.
6. Store complete sprayer in dry place out of weather. Keeping sprayer out sunlight will lessen the UV effects on tank.
7. Caution: Never change from one type of chemical to another without thoroughly cleaning sprayer.

## TROUBLE SHOOTING THE SPRAYER

<b>PROBLEM</b>	<b>PROBABLE CAUSE</b>	<b>POSSIBLE REMEDY</b>
Erratic pressure indication on pressure gauge	air leaking into suction line	Tighten all fittings and hoses between pump and tank
	Trash in control valve or pressure gauge	Remove and clean parts
	Suction line kinked or clogged	Remove suction line and clean-check tank and strainer
	Air leak in suction hose	Replace hose
Pressure gauge fluctuates excessively	Suction hose collapsed	Replace hose
	Pump is sucking in air through the suction line or air has not been entirely evacuated from strainer	Examine the suction hose and make sure it is firmly secured. Run the pump with outlet hose open to evacuate air from pump
Pump loses suction	Suction strainer clogged	Clean strainer and tank
	Air leak in suction hose	Replace hose
	Suction hose collapsed	Replace hose
	Pump air locked	Remove discharge line and pump liquid through pump
	Pump worn and clearances too great	Replace or repair pump
Pump does not draw water	Seals worn out or deteriorated	Replace pump seals
	One or more valves are seated improperly	Examine the valve seatings and clean them
	Suction line is plugged or collapsed clogged strainer	Examine suction line Clean strained
Noisy pump	Excessive pump speed	Slow the pump
	Air leak in suction line	Replace suction hose
	Partially clogged strainer	Clean strainer
Pump shows decreased capacity	Suction strainer clogged	Clean strainer
	Air leak in suction hose	Rplace suction hose
	Moving parts worn	Replce worn parts
	Worn seal	Replace seal
	Pump roller stuck	Clean pump inside
	Pump operating too slow	Speed up pump
	Nozzles too large for capacity of pump	Use smaller nozzles or reduce number of nozzles on boom
Pump leaks	Worn out seal	Replace seal

## Series 6500

**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.

**Repair Parts Kits:**

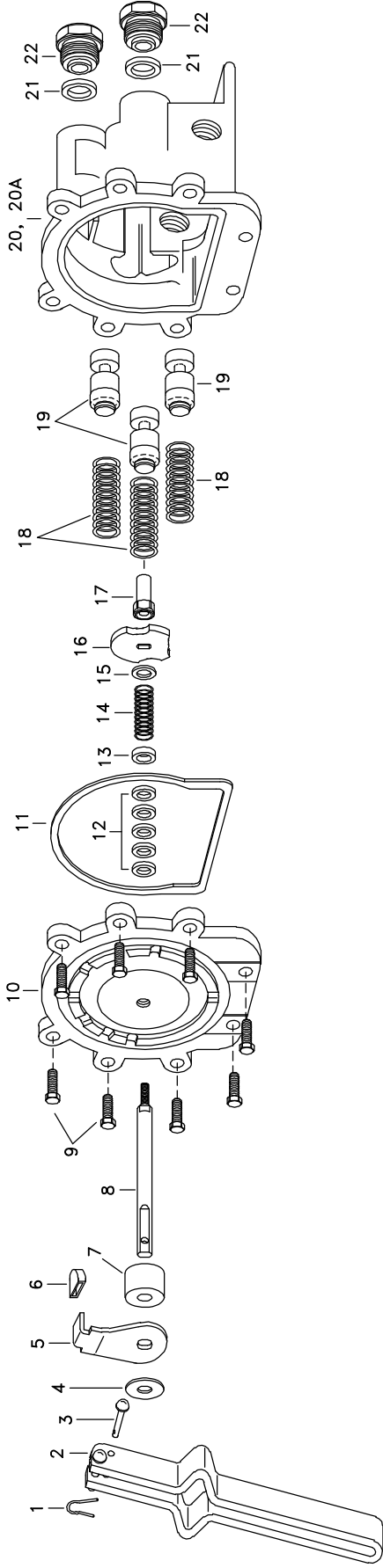
**No. 3430-0380** Consists of (6) Ref. 7 Super Rollers, (1) Ref. 6 O-ring, and (2) Ref. 3 Viton seals.

**No. 3430-0175** Consists of (6) Ref. 7 Polypropylene Rollers, (1) Ref. 6 O-ring, and (2) Ref. 3 Viton seals.

Ref. No.	Qty. Req'd.	Part Number	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)
3	2	2102-0001T	Teflon-coated 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	O-ring Gasket for Endplate
7	6	1005-0004	Super Roller (Standard)
7	6	1002-0004	Polypropylene Roller (Optional)
7	6	1052-0004	Buna-N Roller (Optional)
7	6	1055-0004	Teflon Roller (Optional)

Ref. No.	Qty. Req'd.	Part Number	Description
11	1 kit	3420-0023	Base Kit - <b>Sold Separately</b> 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	0300-6600C	Rotor Assembly (Cast Iron)
15	1	0300-6600N	Rotor Assembly (Ni-Resist)
15	1	0300-6600X	Rotor Assembly (SilverCast)





ITEM	PART NO.	DESCRIPTION
*	CP8012-1/2-SS	1/16" x 1/2" Cotter Pin, Stainless Steel
*	CP6849-1-IZP	Handle and Rivet Sub-Asb., Steel, Zinc Plated and Stainless Steel
*	CP7206-IZP	Rivet, Steel, Zinc Plated
*	CP6976-IZP	Handle Washer, Steel, Zinc Plated
*	CP12128-IZP	Selector Shield, Steel, Zinc Plated
*	CP12127-CE	Selector Shield Tip, Celcon (Gray)
	CP12129-CE	Spacer, Celcon (Gray)
	CP6972-SS	Main Stem, Stainless Steel
*	CP20607-IZP	Hex Head Screw (1/4-20x3/4), Steel, Zinc Plated (8 Req'd)
*	CP12126-AL	Cover Plate, Aluminum
*	CP6975-BU	Gasket, Buna-N
*	CP5809-LEA	Packing, Thermo-Leather (5 Req'd)

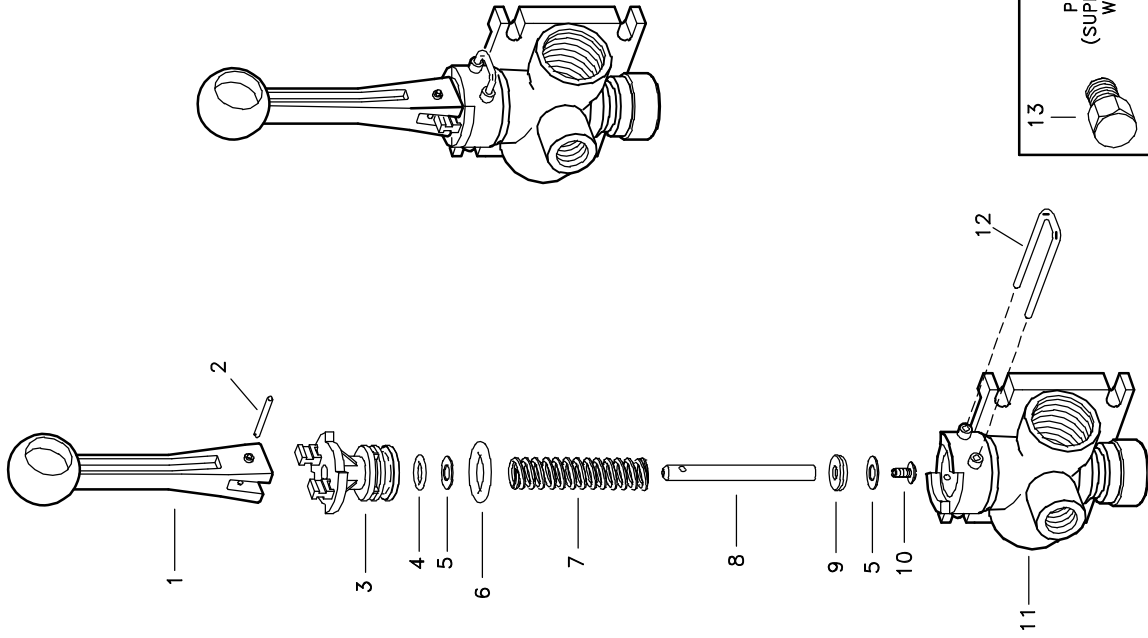
ITEM	PART NO.	DESCRIPTION
13	CP12130-SS	Packing Gland, Stainless Steel
14	CP7254-SS	Main Spring, Stainless Steel
15	CP7987-SS	Washer, Stainless Steel
16	CP6971-AL	Selector Cam, Aluminum
17	CP6973-SS	Guide Nut, Stainless Steel
18	CP6959-SS	Valve Spring, Stainless Steel (3 Req'd)
19	CP6956-CE	Valve Stem, Celcon (3 Req'd)
20	CP6934-3/4-AL	Body, Aluminum (For AA17L)
20A	CP6934-13/4-AL	Body, Aluminum (For AA17Y)
21	CP6958-POL	Seal Plate, Polyethylene (3 Req'd)
22	CP7902-AL	Outlet Adapter, Aluminum (3 Req'd)
	No. AA17L, TeeValve Control Valve	
	No. AA17Y, TeeValve Control Valve	
	PK-AB17-KIT -Spare Parts Kit (Includes all items marked with *)	

DESCRIPTION:  
AA17  
TEEVALVE® CONTROL VALVE



**Spraying Systems Co.®**  
Spray Nozzles and Accessories  
P.O. Box 7900 • Wheaton, IL 60189-7900


Rev. No. 4  
Parts List No.  
PL 17  
SHEET OF



ITEM	PART NO.	DESCRIPTION
1	CP36301-NY	HANDLE, NYLON (GRAY)
2	CP36308-SS	GROOVE PIN, TYPE 303 STAINLESS STEEL
3	CP36302-PP	BODY INSERT, POLYPROPYLENE (BLACK)
4	CP7717-2/108-VI	O-RING, VITON
5	CP36307-PPB	WASHER, POLYPROPYLENE (BLACK) 2 REQ'D
6	CP7717-2/209-VI	O-RING, VITON
7	CP36306-302SS	SPRING, TYPE 302 STAINLESS STEEL
8	CP36304-SS	STEM, TYPE 303 STAINLESS STEEL
9	CP38726-VI	SHUT-OFF WASHER, VITON
10	CP38725-SS	PHILLIPS HEAD SCREW, TYPE 302 STAINLESS STEEL
11	CP36303-PP	BODY (NPT), POLYPROPYLENE (BLACK) (FOR MODEL AA6B)
	CPB36303-PP	BODY (BSPT), POLYPROPYLENE (BLACK) (FOR MODEL AAB6B)
12	CP36309-302SS	RETAINING CLIP, TYPE 302 STAINLESS STEEL
	8400-1/4-PPB	PIPE PLUG (NPT), POLYPROPYLENE (BLACK) (FOR MODEL AA6B)
13	B8400-1/4-PPB	PIPE PLUG (BSPT), POLYPROPYLENE (BLACK) (FOR MODEL AAB6B)
No. AA6B DIRECTOVALVE MANUAL CONTROL VALVE (NPT THREADS)		
No. AAB6B DIRECTOVALVE MANUAL CONTROL VALVE (BSPT THREADS)		
PK-AB6B-KIT SPARE PARTS KIT (INCLUDES ALL ITEMS MARKED WITH *)		

13  
 PIPE PLUG  
 (SUPPLIED LOOSE  
 WITH UNIT)

DESCRIPTION:  
 AA(B)6B  
 DIRECTOVALVE®  
 MANUAL CONTROL VALVE  
 (NPT & BSPT VERSIONS)



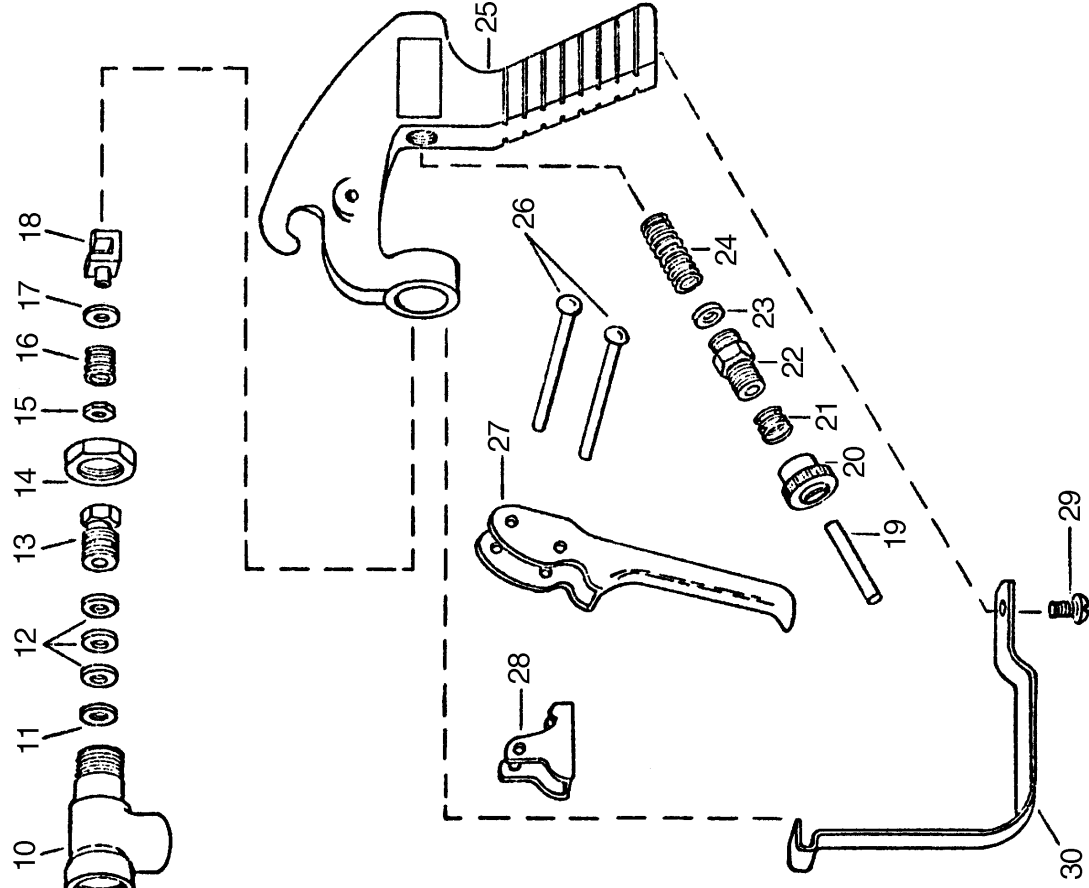
**Spraying Systems Co.**  
 Spray Nozzles and Accessories  
 P.O. Box 7900 - Wheaton, IL 60189-7900

Parts List No.  
**PL 68**

Rev. No. 1  
 Ref.

SHEET OF

# No. 43L & No. 43H GUNJETS (13" Extension)



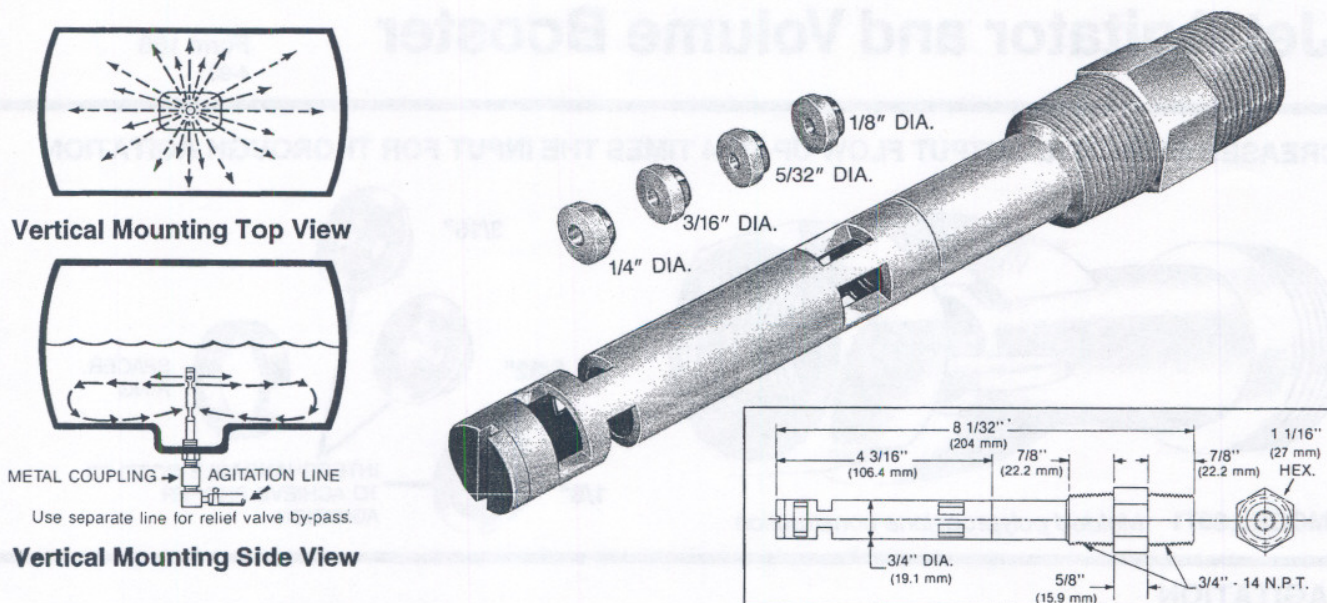
Item	Part No.	Description
1	Brass (#43-)	
2	Aluminum (#43-AL)	
3	1325-AL	Cap, Brass or Aluminum
4	D-**	Orifice disc, hardened stainless steel
5	4743-NY	Gasket, nylon
6	10566-AL	Nozzle housing, brass or aluminum
7	10565-AL	Seat plug, seat plate, washer & core subassy.
8	10571-AL	Guide vane, brass or aluminum
9	6943-AL	Gasket, aluminum (2 Req'd)
10	19238-416SS	Stem, type 416 stainless steel
11	6604-AL	Tubing, brass or aluminum
12	6492-AL	Inlet body, brass or aluminum
13	6601-302SS	Packing washer, type 302 stainless steel
14	6602-LEA	Packing, leather (3 Req'd) (Standard)
15	6602-TEF	Packing, teflon (3 Req'd) (Optional)
16	19237-AL	Packing screw, brass or aluminum
17	6599-IZP	Locknut, brass or steel-zinc plated
18	9641-INP	Stem nut, steel-nickel plated
19	6595-SS	Trigger stop spring, stainless steel
20	7991-IZP	Washer, steel-zinc plated
21	6597-INP	Trigger guide, steel-nickel plated
22	6591-SS	Spring stud, stainless steel
23	6589-IZP	Stop adj nut, steel-zinc plated
24	6594-SS	Spring for Stop adj nut, stainless steel
25	6588-IZP	Spring screw, steel-zinc plated
26	6592-302SS	Spring guide washer, type 302 stainless steel
27	6593-1-SS	Main spring, stainless steel (For #43L-)
28	6593-2-SS	Main spring, stainless steel (For #43H-)
29	14477-1-AL	Handle body, aluminum
30	7623-IZP	Rivet, steel-zinc plated (2 Req'd)
31	6509-INP	Trigger, steel-nickel plated
32	6510-INP	Trigger stop, steel-nickel plated
33	11757-INP	Screw, steel-nickel plated
34	13798-INP	Trigger Guard, steel-nickel plated
35	Gunjet No. 43L- Brass, complete, for pressures up to 200 PSI	
36	Gunjet No. 43L-AL- Aluminum, complete, for pressures up to 200 PSI	
37	Gunjet No. 43H- Brass, complete, for pressures from 200 to 800 PSI	
38	Gunjet No. 43H-AL- Aluminum, complete, for pressures from 200 to 800 PSI	
39	AB43-KIT Spare Parts Kit (Includes all items marked with *)	
40	AB43-AL-KIT Spare Parts Kit (Includes all items marked with *)	
41	ABCK43-KIT (Conversion kit for Adj. stem) - items 8, 13 & 15	
42	ABCK43-AL-KIT (Conversion Kit for Adj. Stem) - Items 8, 13 & 15	



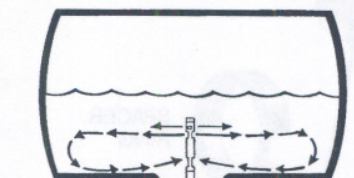
\*\*Specify Orifice Disk Size

## JET AGITATOR and VOLUME BOOSTER MODEL 3371-0019

The versatile Hypro, venturi type, 3371-0019 Jet Agitator adapts to your installation, fits directly into 3/4" NPT tank opening. Mounts vertically or horizontally. (For horizontal mounting, just remove end cap from agitator. The full flow is then directed across the tank.) The overlapping 4-port side outlet provides full 360° agitation for thorough mixing in the vertical position. Molded polypropylene construction provides rigidity and strength. Choice of four nozzles assures proper agitation for your spraying.



Vertical Mounting Top View



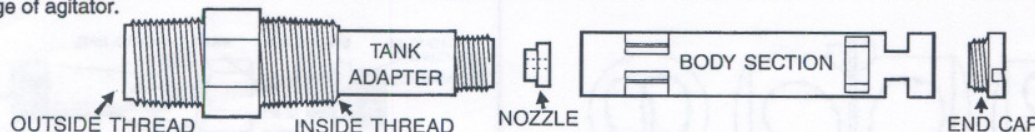
Vertical Mounting Side View

Use separate line for relief valve by-pass.

Vertical Mounting Side View

### ASSEMBLY INSTRUCTIONS

1. Agitator is packaged for shipment disassembled in a see-through plastic envelope. Select your nozzle size and assemble as shown on the sectional drawing. Insert small diameter of nozzle into tank adapter. Thread parts together in order shown. Note that body section end with vertical slots screws into tank adapter (other end is for cap).
2. Wrap teflon tape on the inside 3/4" NPT thread on agitator before installing to tank. This assures a tight seal and will prevent agitator from loosening because of vibration.
3. Apply teflon tape on the outside 3/4" NPT thread for agitator line and install a metal coupling. This will assure a tight seal and prevent breakage of agitator.



### SELECTING THE PROPER NOZZLE FOR SPRAY TANK AGITATION

The right nozzle is the one which provides ample agitation to keep the wettable powders in suspension, but not too much as to cause foaming of spray material.

PERFORMANCE TABLE MODEL 3371-0019

Nozzle Diameter	Input to Agitator in GPM	Input to Agitator in L/min.	Agitator Pressure in PSI	Agitator Pressure in KPa	Agitator Output in GPM	Agitator Output in L/min.
1/8"	2.1	7.9	25	172.4	6	22.7
1/8"	2.9	11	50	344.7	8.8	33.3
1/8"	4.1	15.5	100	689.4	13.9	52.6
5/32"	3.1	11.7	25	172.4	7	26.5
5/32"	4.5	17	50	344.7	11.5	43.5
5/32"	5.8	22	100	689.4	16.2	61.3
3/16"	3.8	14.4	25	172.4	8.5	32.2
3/16"	5.9	22.3	50	344.7	12.8	48.4
3/16"	8.2	31	100	689.4	17.2	65.1
1/4"	5.9	22.3	25	172.4	11.9	45
1/4"	9.8	37.1	50	344.7	17.1	64.7
1/4"	13.5	51.1	100	689.4	20	75.7

# TeeJet® VisiFlo® Flat Spray Tips

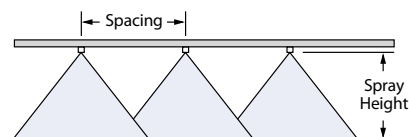
## Features:

- Tapered edge flat spray pattern for uniform coverage in broadcast spraying.
- VisiFlo color-coded version available in stainless steel, ceramic and polymer in 80° or 110° spray angles in selected sizes.
- Available in ceramic 80° capacities 01–20 and 110° capacities 01–015. See XR and XRC TeeJet® tips on pages 12 and 13 for larger capacities.

- Standard version (not color-coded) available in 15°, 25°, 40°, 50° and 65° spray angles in brass, stainless steel or hardened stainless steel.
- See page 39 for TeeJet even flat spray tips.
- Automatic spray alignment with 25612\*-NYR Quick TeeJet® cap and gasket. Reference page 63 for more information.
- Automatic spray alignment for sizes 10 through 20 with 25610\*-NYR Quick TeeJet cap and gasket. Reference page 63 for more information.



Tip	PSI	DROP SIZE	CAPACITY ONE NOZZLE IN GPM	CAPACITY ONE NOZZLE IN OZ./MIN.	20°										GALLONS PER 1000 SQ. FT.				
					GPA														
					4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	12 MPH	15 MPH	20 MPH	2 MPH	3 MPH	4 MPH	5 MPH			
TP650050†	30		0.043	5.5	3.2	2.6	2.1	1.6	1.3	1.1	0.85	0.64	0.15	0.10	0.07	0.06			
TP800050†	35		0.047	6.0	3.5	2.8	2.3	1.7	1.4	1.2	0.93	0.70	0.16	0.11	0.08	0.06			
TP1100050†	40		0.050	6.4	3.7	3.0	2.5	1.9	1.5	1.2	0.99	0.74	0.17	0.11	0.09	0.07			
	50		0.056	7.2	4.2	3.3	2.8	2.1	1.7	1.4	1.1	0.83	0.19	0.13	0.10	0.08			
	60		0.061	7.8	4.5	3.6	3.0	2.3	1.8	1.5	1.2	0.91	0.21	0.14	0.10	0.08			
TP650067†	30		0.058	7.4	4.3	3.4	2.9	2.2	1.7	1.4	1.1	0.86	0.20	0.13	0.10	0.08			
TP800067†	35		0.063	8.1	4.7	3.7	3.1	2.3	1.9	1.6	1.2	0.94	0.21	0.14	0.11	0.09			
TP1100067†	40		0.067	8.6	5.0	4.0	3.3	2.5	2.0	1.7	1.3	0.99	0.23	0.15	0.11	0.09			
	50		0.075	9.6	5.6	4.5	3.7	2.8	2.2	1.9	1.5	1.1	0.26	0.17	0.13	0.10			
	60		0.082	10	6.1	4.9	4.1	3.0	2.4	2.0	1.6	1.2	0.28	0.19	0.14	0.11			
TP6501†	30	F	0.087	11	6.5	5.2	4.3	3.2	2.6	2.2	1.7	1.3	0.30	0.20	0.15	0.12			
TP8001	35	F	0.094	12	7.0	5.6	4.7	3.5	2.8	2.3	1.9	1.4	0.32	0.21	0.16	0.13			
TP11001	40	F	0.10	13	7.4	5.9	5.0	3.7	3.0	2.5	2.0	1.5	0.34	0.23	0.17	0.14			
	50	F	0.11	14	8.2	6.5	5.4	4.1	3.3	2.7	2.2	1.6	0.37	0.25	0.19	0.15			
	60	F	0.12	15	8.9	7.1	5.9	4.5	3.6	3.0	2.4	1.8	0.41	0.27	0.20	0.16			
TP65015†	30	F	0.13	17	9.7	7.7	6.4	4.8	3.9	3.2	2.6	1.9	0.44	0.29	0.22	0.18			
TP80015	35	F	0.14	18	10.4	8.3	6.9	5.2	4.2	3.5	2.8	2.1	0.48	0.32	0.24	0.19			
TP110015	40	F	0.15	19	11.1	8.9	7.4	5.6	4.5	3.7	3.0	2.2	0.51	0.34	0.26	0.20			
	50	F	0.17	22	12.6	10.1	8.4	6.3	5.0	4.2	3.4	2.5	0.58	0.39	0.29	0.23			
	60	F	0.18	23	13.4	10.7	8.9	6.7	5.3	4.5	3.6	2.7	0.61	0.41	0.31	0.24			
TP6502†	30	M	0.17	22	12.6	10.1	8.4	6.3	5.0	4.2	3.4	2.5	0.58	0.39	0.29	0.23			
TP8002	35	M	0.19	24	14.1	11.3	9.4	7.1	5.6	4.7	3.8	2.8	0.65	0.43	0.32	0.26			
TP11002	40	F	0.20	26	14.9	11.9	9.9	7.4	5.9	5.0	4.0	3.0	0.68	0.45	0.34	0.27			
	50	F	0.22	28	16.3	13.1	10.9	8.2	6.5	5.4	4.4	3.3	0.75	0.50	0.37	0.30			
	60	F	0.24	31	17.8	14.3	11.9	8.9	7.1	5.9	4.8	3.6	0.82	0.54	0.41	0.33			
TP6503†	30	M	0.26	33	19.3	15.4	12.9	9.7	7.7	6.4	5.1	3.9	0.88	0.59	0.44	0.35			
TP8003	35	M	0.28	36	21	16.6	13.9	10.4	8.3	6.9	5.5	4.2	0.95	0.63	0.48	0.38			
TP11003	40	M	0.30	38	22	17.8	14.9	11.1	8.9	7.4	5.9	4.5	1.0	0.68	0.51	0.41			
	50	M	0.34	44	25	20	16.8	12.6	10.1	8.4	6.7	5.0	1.2	0.77	0.58	0.46			
	60	F	0.37	47	27	22	18.3	13.7	11.0	9.2	7.3	5.5	1.3	0.84	0.63	0.50			
TP6504†	30	M	0.35	45	26	21	17.3	13.0	10.4	8.7	6.9	5.2	1.2	0.79	0.60	0.48			
TP8004	35	M	0.37	47	27	22	18.3	13.7	11.0	9.2	7.3	5.5	1.3	0.84	0.63	0.50			
TP11004	40	M	0.40	51	30	24	19.8	14.9	11.9	9.9	7.9	5.9	1.4	0.91	0.68	0.54			
	50	M	0.45	58	33	27	22	16.7	13.4	11.1	8.9	6.7	1.5	1.0	0.77	0.61			
	60	M	0.49	63	36	29	24	18.2	14.6	12.1	9.7	7.3	1.7	1.1	0.83	0.67			
TP6505†	30	C	0.43	55	32	26	21	16.0	12.8	10.6	8.5	6.4	1.5	0.97	0.73	0.58			
TP8005	35	M	0.47	60	35	28	23	17.4	14.0	11.6	9.3	7.0	1.6	1.1	0.80	0.64			
TP11005	40	M	0.50	64	37	30	25	18.6	14.9	12.4	9.9	7.4	1.7	1.1	0.85	0.68			
	50	M	0.56	72	42	33	28	21	16.6	13.9	11.1	8.3	1.9	1.3	0.95	0.76			
	60	M	0.61	78	45	36	30	23	18.1	15.1	12.1	9.1	2.1	1.4	1.0	0.83			
TP6506†	30	C	0.52	67	39	31	26	19.3	15.4	12.9	10.3	7.7	1.8	1.2	0.88	0.71			
TP8006	35	C	0.56	72	42	33	28	21	16.6	13.9	11.1	8.3	1.9	1.3	0.95	0.76			
TP11006	40	C	0.60	77	45	36	30	22	17.8	14.9	11.9	8.9	2.0	1.4	1.0	0.82			
	50	C	0.67	86	50	40	33	25	19.9	16.6	13.3	9.9	2.3	1.5	1.1	0.91			
	60	C	0.73	93	54	43	36	27	22	18.1	14.5	10.8	2.5	1.7	1.2	0.99			
TP6508†	30	C	0.69	88	51	41	34	26	20	17.1	13.7	10.2	2.3	1.6	1.2	0.94			
TP8008	35	C	0.75	96	56	45	37	28	22	18.6	14.9	11.1	2.6	1.7	1.3	1.0			
TP11008	40	C	0.80	102	59	48	40	30	24	19.8	15.8	11.9	2.7	1.8	1.4	1.1			
	50	C	0.89	114	66	53	44	33	26	22	17.6	13.2	3.0	2.0	1.5	1.2			
	60	M	0.98	125	73	58	49	36	29	24	19.4	14.6	3.3	2.2	1.7	1.3			
TP6510†	30		0.87	111	65	52	43	32	26	22	17.2	12.9	3.0	2.0	1.5	1.2			
TP8010†	35		0.94	120	70	56	47	35	28	23	18.6	14.0	3.2	2.1	1.6	1.3			
TP11010†	40		1.00	128	74	59	50	37	30	25	19.8	14.9	3.4	2.3	1.7	1.4			
	50		1.12	143	83	67	55	42	33	28	22	16.6	3.8	2.5	1.9	1.5			
	60		1.22	156	91	72	60	45	36	30	24	18.1	4.1	2.8	2.1	1.7			
TP6515†	30		1.30	166	97	77	64	48	39	32	26	19.3	4.4	2.9	2.2	1.8			
TP8015†	35		1.40	179	104	83	69	52	42	35	28	21	4.8	3.2	2.4	1.9			
TP11015†	40		1.50	192	111	89	74	56	45	37	30	22	5.1	3.4	2.6	2.0			
	50		1.68	215	125	100	83	62	50	42	33	25	5.7	3.8	2.9	2.3			
	60		1.84	236	137	109	91	68	55	46	36	27	6.3	4.2	3.1	2.5			
TP6520†	30		1.73	221	128	103	86	64	51	43	34	26	5.9	3.9	2.9	2.4			
TP8020†	35		1.87	239	139	111	93	69	56	46	37	28	6.4	4.2	3.2	2.5			
TP11020†	40		2.00	256	149	119	99	74	59	50	40	30	6.8	4.5	3.4	2.7			
	50		2.24	287	166	133	111	83	67	55	44	33	7.6	5.1	3.8	3.0			
	60		2.45	314	182	146	121	91	73	61	49	36	8.3	5.6	4.2	3.3			



## Optimum Spray Height

Tip Angle	Optimum Spray Height
65°	35"
80°	30"
110°	20"

See pages 173–187 for drop size classification, useful formulas and information.

## How to order:

Specify tip number.

Examples:

- TP8002VS – Stainless Steel with VisiFlo color-coding
- TP11002VP – Polymer with VisiFlo color-coding
- TP11001VK – Ceramic with VisiFlo polymer color-coding
- TP11002-HSS – Hardened Stainless Steel
- TP8002-SS – Stainless Steel
- TP8002 – Brass

**Note:** Always double check your application rates. Tabulations are based on spraying water at 70°F (21°C). †Available in all brass, stainless steel and hardened stainless steel only.



# Technical Information

## Useful Formulas

$$\text{GPM (Per Nozzle)} = \frac{\text{GPA} \times \text{MPH} \times \text{W}}{5,940}$$

$$\text{GPM (Per Nozzle)} = \frac{\text{GAL}/1000\text{FT}^2 \times \text{MPH} \times \text{W}}{136}$$

$$\text{GPA} = \frac{5,940 \times \text{GPM (Per Nozzle)}}{\text{MPH} \times \text{W}}$$

$$\text{GAL}/1000\text{FT}^2 = \frac{136 \times \text{GPM (Per Nozzle)}}{\text{MPH} \times \text{W}}$$

GPM – Gallons Per Minute

GPA – Gallons Per Acre

GAL/1000FT<sup>2</sup> – Gallons Per 1000 Square Feet

MPH – Miles Per Hour

W – Nozzle spacing (in inches) for broadcast spraying

– Spray width (in inches) for single nozzle, band spraying or boomless spraying

– Row spacing (in inches) divided by the number of nozzles per row for directed spraying

## Nozzle Spacing

If the nozzle spacing on your boom is different than those tabulated, multiply the tabulated GPA coverages by one of the following factors.

20"	
Other Spacing (Inches)	Conversion Factor
8	2.5
10	2
12	1.67
14	1.43
16	1.25
18	1.11
22	.91
24	.83
30	.66

## Useful Formulas for Roadway Applications

$$\text{GPLM} = \frac{60 \times \text{GPM}}{\text{MPH}} \quad \text{GPM} = \frac{\text{GPLM} \times \text{MPH}}{60}$$

GPLM = Gallons Per Lane Mile

**Note:** GPLM is not a normal volume per unit area measurement. It is a volume per distance measurement. Increases or decreases in lane width (swath width) are not accommodated by these formulas.

## Measuring Travel Speed

Measure a test course in the area to be sprayed or in an area with similar surface conditions. Minimum lengths of 100 and 200 feet are recommended for measuring speeds up to 5 and 10 MPH, respectively. Determine the time required to travel the test course. To help ensure accuracy, conduct the speed check with a partially loaded (about half full) sprayer and select the engine throttle setting and gear that will be used when spraying. Repeat the above process and average the times that were measured. Use the following equation or the table at right to determine ground speed.

$$\text{Speed (MPH)} = \frac{\text{Distance (FT)} \times 60}{\text{Time (seconds)} \times 88}$$

## Speeds

Speed in MPH	Time Required in SECONDS to Travel a Distance of:		
	100 Feet	200 Feet	300 Feet
1.0	68	136	205
1.5	45	91	136
2.0	34	68	102
2.5	27	55	82
3.0	23	45	68
3.5	19	39	58
4.0	17	34	51
4.5	15	30	45
5.0	14	27	41
5.5	—	25	37
6.0	—	23	34
6.5	—	21	31
7.0	—	19	29
7.5	—	18	27
8.0	—	17	26
8.5	—	16	24
9.0	—	15	23

30"	
Other Spacing (Inches)	Conversion Factor
26	1.15
28	1.07
32	.94
34	.88
36	.83
38	.79
40	.75
42	.71
44	.68

40"	
Other Spacing (Inches)	Conversion Factor
28	1.43
30	1.33
32	1.25
34	1.18
36	1.11
38	1.05
42	.95
44	.91
48	.83

## Miscellaneous Conversion Factors

One Acre = 43,560 Square Feet  
= 43.56 1000FT<sup>2</sup> Blocks  
= 0.405 Hectare

One Hectare = 2.471 Acres

One Gallon Per Acre

= 2.9 Fluid Ounces per 1000FT<sup>2</sup>  
= 9.35 Liters Per Hectare

One Gallon Per 1000FT<sup>2</sup> = 43.56 GPA

One Mile = 5,280 Feet  
= 1,610 Meters  
= 1.61 Kilometers

One Gallon = 128 Fluid Ounces  
= 8 Pints  
= 4 Quarts  
= 3.79 Liters  
= 0.83 Imperial Gallon






One Pound Per Square Inch

= 0.069 bar  
= 6.896 Kilopascals

One Mile Per Hour = 1.609 Kilometers Per Hour

## Suggested Minimum Spray Heights

The nozzle height suggestions in the table below are based on the minimum overlap required to obtain uniform distribution. However, in many cases, typical height adjustments are based on a 1 to 1 nozzle spacing to height ratio. For example, 110° flat spray tips spaced 20 inches apart are commonly set 20 inches above the target.

	(Inches)			
				
TeeJet® Standard, TJ	65°	22–24"	33–35"	NR*
TeeJet, XR, TX, DG, TJ	80°	17–19"	26–28"	NR*
TeeJet, XR, DG, TT, TTI, TJ, DGTJ, AI, AIXR	110°	16–18"	20–22"	NR*
FullJet®	120°	10–18"***	14–18"***	14–18"***
FloodJet® TK, TF	120°	14–16"***	15–17"***	18–20"***

\* Not recommended.

\*\* Nozzle height based on 30° to 45° angle of orientation (see page 30 of catalog).

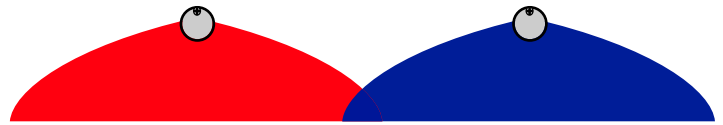
\*\*\* Wide angle spray tip height is influenced by nozzle orientation. The critical factor is to achieve a double spray pTtern overlap.

## Nozzle Height Adjustment

Nozzles can be used at various heights within the recommended range. However, this will affect the spray pattern width and the gallons per acre (GPA) applied. Refer to conversion formulas on page 11.

## Multi-Pass Spraying

When multi-pass spraying, be sure to overlap the ends of spray patterns 12 - 16 inches to ensure even coverage.



## Adverse Wind Conditions

With boomless spray nozzles, as with other spraying methods, high or gusty wind conditions can cause drifting or pattern movements, adversely affecting spray coverage. If this occurs, wait for more favorable conditions before continuing.

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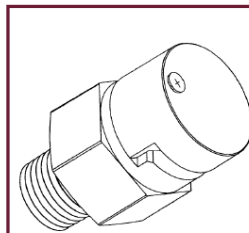
## CONVERSION FORMULAS

$$\text{Gallons per 1000 sq. ft.} = \frac{\text{GPM} \times 136}{\text{MPH} \times \text{Spray Width in Inches}}$$

$$\text{Gallons per Acre} = \frac{\text{GPM} \times 5940}{\text{MPH} \times \text{Spray width in Inches}}$$

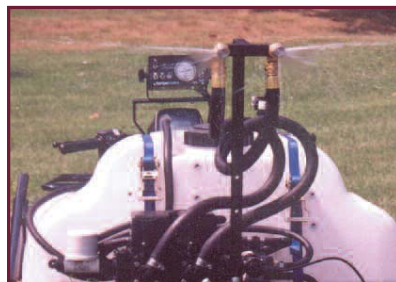


TOW BEHIND SPRAYER WITH FULL PATTERN BOOMINATOR® SPRAY NOZZLE



### YOU CAN TELL It's A BOOMINATOR® NOZZLE ON SIGHT

Boominator's® unique round head shape lets you know it is a genuine Boominator® nozzle. It is also patented and with patents pending. Boominator®.



ATV MOUNTED SPRAYER WITH 2 REGULAR PATTERN BOOMINATOR® NOZZLES



TRUCK MOUNTED SHORT PATTERN BOOMINATOR® SPRAY NOZZLES

# BOOMINATOR®

All Regular Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.)

## SPRAY NOZZLES REGULAR PATTERN

\* Water was used for all calculations listed.

1400 RIGHT or LEFT	(1/4" MNPT)			SPEED (MPH)										
	PSI	GPM	SPRAY PATTERN	2	3	4	5	6	7	8	9	10	11	12
				GALLONS PER ACRE										
	20	1.7	17 ft.	25	17	12	10	8	7	6	5.5	5	4.5	4
	30	2.0	17 ft.	30	19	15	12	10	8	7	6.5	6	5	4.5
	40	2.5	17 ft.	36	24	18	15	12	10	9	8	7	6.5	6

### Roadside Spray Nozzles

All Roadside Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.)

These nozzles are designed for right-hand mounting ONLY and provide a wide spray pattern without kickback under the nozzle.

These nozzles are designed for road-side and right-of-way spraying.

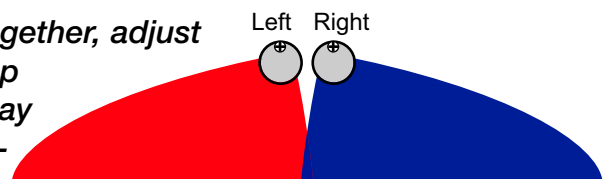
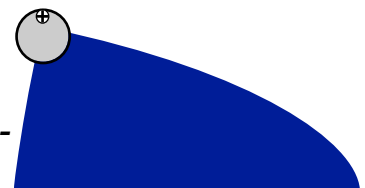


### Regular Pattern Spray Nozzles

All Regular Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.)

These nozzles are designed for left-hand or right-hand mounting and provide a wide spray pattern with approximately 15° of kickback under the nozzle.

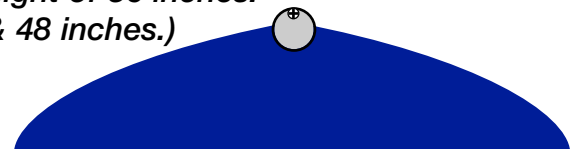
When using left-hand and right-hand nozzles together, adjust the nozzles to allow for enough kickback overlap between the nozzles to prevent streaking in spray coverage. Nozzles can be rotated to adjust distance of spray pattern outward or amount of kickback under the nozzle.



### Full Pattern Spray Nozzles

All Full Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.)

These nozzles are designed to provide a full left-hand to right-hand spray pattern from a single centrally mounted nozzle.



### Spraying Safety

**ALWAYS WEAR PROTECTIVE CLOTHING WHEN SPRAYING AND / OR HANDLING ANY AND ALL CHEMICALS.**



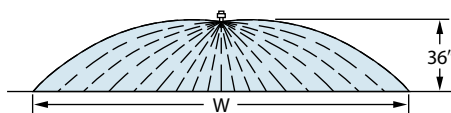


**Type 1/4-KLC and Type 3/4-KLC**  
 1/4" NPT male and 3/4" NPT male  
 pipe connections



The KLC FieldJet nozzle is typically used to spray areas not accessible with a boom sprayer. Its one-piece nozzle design projects spray to both sides to form a wide swath flat spray. The round orifice minimizes clogging. Uniformity across the swath is not as good as with a properly operated boom sprayer.\* Available in brass or stainless steel.

\*Uniformity can be optimized by double overlapping spray swaths on successive sprayer passes. Remember, this also doubles the application volume.



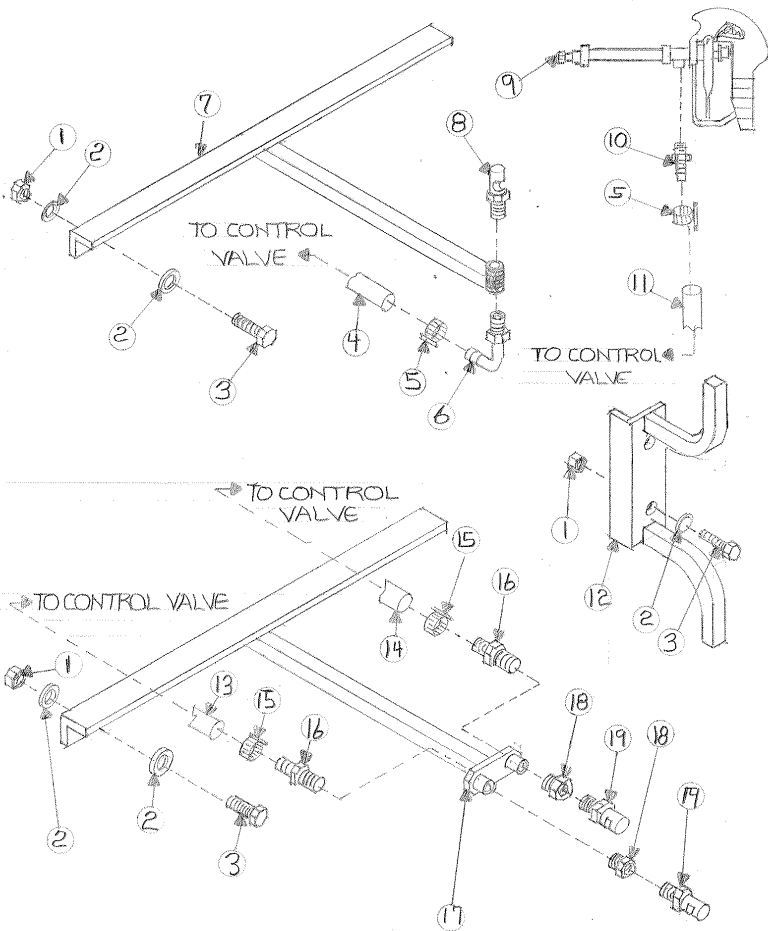
**How to order:**

Specify part number and material.

Example: 1/4KLC-SS18 – Stainless Steel

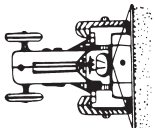
NOZZLE	PIPE CONNECTION	PSI	CAPACITY ONE NOZZLE IN GPM	"W" IN FEET	GPA				GALLONS PER 1000 SQ. FT.			
					3 MPH	4 MPH	5 MPH	8 MPH	3 MPH	4 MPH	5 MPH	8 MPH
1/4-KLC-5	1/4"	20	0.71	17	6.9	5.2	4.1	2.6	.16	.12	.09	.06
		30	0.87	18	8.0	6.0	4.8	3.0	.18	.14	.11	.07
		40	1.00	21	7.9	5.9	4.7	2.9	.18	.13	.11	.07
1/4-KLC-9	1/4"	20	1.27	18	11.6	8.7	7.0	4.4	.27	.20	.16	.10
		30	1.56	19	13.5	10.2	8.1	5.1	.31	.23	.19	.12
		40	1.80	21	14.1	10.6	8.5	5.3	.32	.24	.19	.12
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
1/4-KLC-36	1/4"	20	5.09	22	38	29	23	14.3	.87	.66	.52	.33
		30	6.24	24	43	32	26	16.1	.98	.74	.59	.37
		40	7.20	26	46	34	27	17.1	1.0	.78	.63	.39
3/4-KLC-50	3/4"	20	7.07	23	51	38	30	19.0	1.2	.87	.70	.44
		30	8.66	26	55	41	33	21	1.3	.94	.75	.47
		40	10.0	28	59	44	35	22	1.3	1.0	.81	.51
3/4-KLC-72	3/4"	20	10.2	25	67	50	40	25	1.5	1.2	.92	.58
		30	12.5	29	71	53	43	27	1.6	1.2	.98	.61
		40	14.4	31	77	57	46	29	1.8	1.3	1.1	.66
3/4-KLC-108	3/4"	20	15.3	28	90	68	54	34	2.1	1.5	1.2	.77
		30	18.7	33	94	70	56	35	2.1	1.6	1.3	.80
		40	21.6	36	99	74	59	37	2.3	1.7	1.4	.85

**Note:** Always double check your application rates. Tabulations are based on spraying water at 70°F (21°C). See pages 173–187 for useful formulas and information.



ITEM NO.	DESCRIPTION	PART NO.
1	Nut 3/8"	HN38C
2	Flat washer 3/8"	FW38
3	Bolt 3/8" x 1 1/2"	CS38112C
4	Hose black ag 3/8"	10031720
5	Hose clamp 3/8"	6H
6	Elbow 1/4"mpt x 3/8" barb 90 ny	EL1438
7	Tip mount L65 only (klc)	H14
8	KLC tip size 18	1/4KLC-18
9	Hand gun	AA43LA-AL6
10	Hose shank 1/2"mpt x 3/8" barb	A1238
11	Hose black ag 1/2"	10031730
12	Gun rack	H11R
13	Hose black ag 1/2"	10031730
14	Hose black ag 1/2"	10031730
15	Hose clamp 1/2"	8H
16	Hose shank 3/8"mpt x 1/2" barb	A3812
17	Tip mount L65 only (boominator)	H17
18	Bushing 3/8"mpt x 1/4"ft galv.	GB3814
19	Tip boominator	BN1400L/R

# 65 GALLON OWNERS MANUAL



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