

HIGH PRESSURE PULL TYPE OWNERS MANUAL

300 AND 500 GALLON PULL TYPE SPRAYER

12,16,18,20, ROW

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.

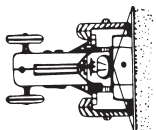
We now have the technology in house to create sprayer specific manuals and to print them only as needed. We think we have made a good beginning, but these manuals are still in the development stage. At this point we would appreciate the input of our end user customer and our dealers as to how we can 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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300 AND 500 GALLON HIGH PRESSURE VEGETABLE SPRAYER

Van's High Pressure Vegetable Sprayer is a proven performer built to exacting specification to meet the needs of the produce farmer. It has evolved into the industry leader in the 300 and 500 Gallon High Pressure Sprayer Market. This superior design and quality construction allows us to offer the only 5 year structural warranty in the Sprayer Industry.



SHOWN P50065



BETA 150 PUMP

BETA 150 PUMP

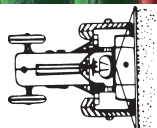
12 ROW	P30065	P50065
18 ROW	N/A	P50045H

Options:	Add:	Part No.
1) Center Section Jack Lift		JL

Standard Features include:

- 1) Polyethylene Tank
- 2) Hydraulic Folding Stainless Steel Booms
- 3) Udor Beta-150 Pump (700 PSI - 40 GPM)
- 4) 800 PSI Hose with Hydraulic Fittings
- 5) Full Length Stainless Steel Sparger Tube Agitation
- 6) 11L-15 Implement Tires
- 7) Full Tip Kit (D3/DC25)
- 8) Radialflex Hose Guards
- 9) 12 Row Maximum Boom Height (66")
- 9A) 18 Row Maximum Boom Height (60")
- 10) Variable Spacing Axel (60"-76")
- 11) Easy Access Step with Hand Rail

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(PRICES SUBJECT TO CHANGE WITHOUT NOTICE)

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 manufacturers 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 unning. 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

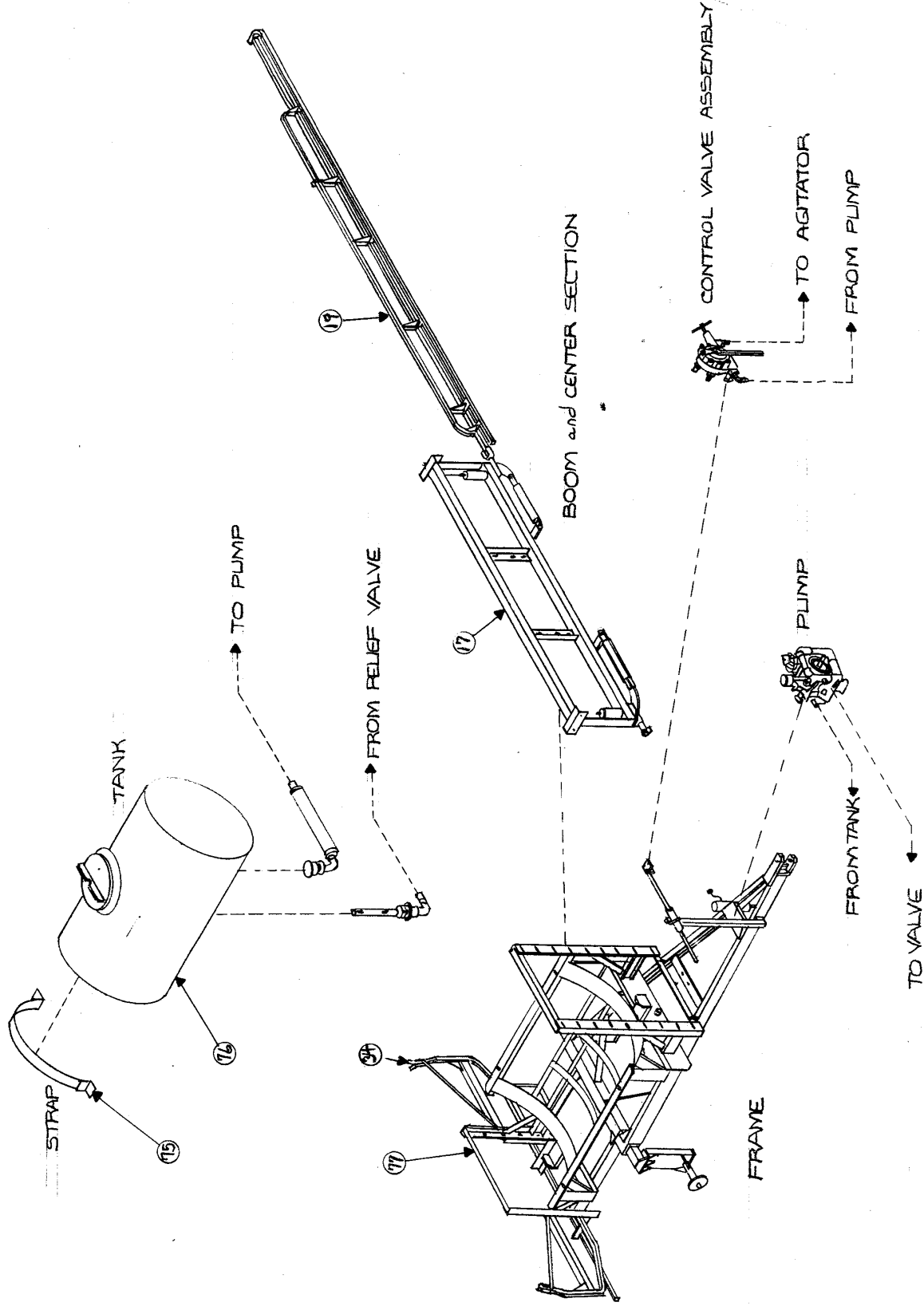
The least expensive thing you can do to prolong your new sprayers life is to keep it clean. Please follow these simple instruction after spraying job is done.

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.

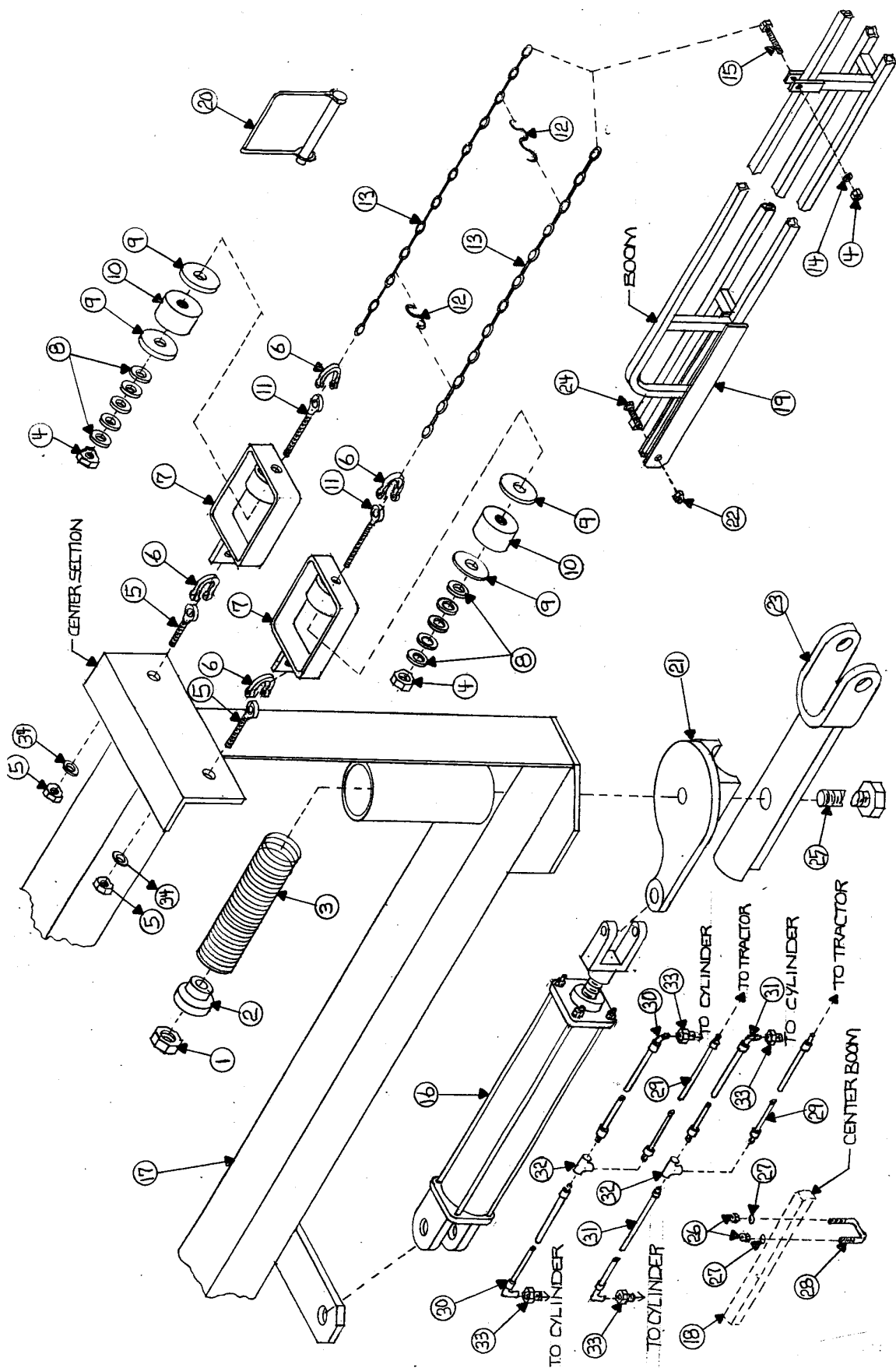
TROUBLE SHOOTING THE SPRAYER

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
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	Replace suction hose
	Moving parts worn	Replace 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

MAIN BREAKDOWN

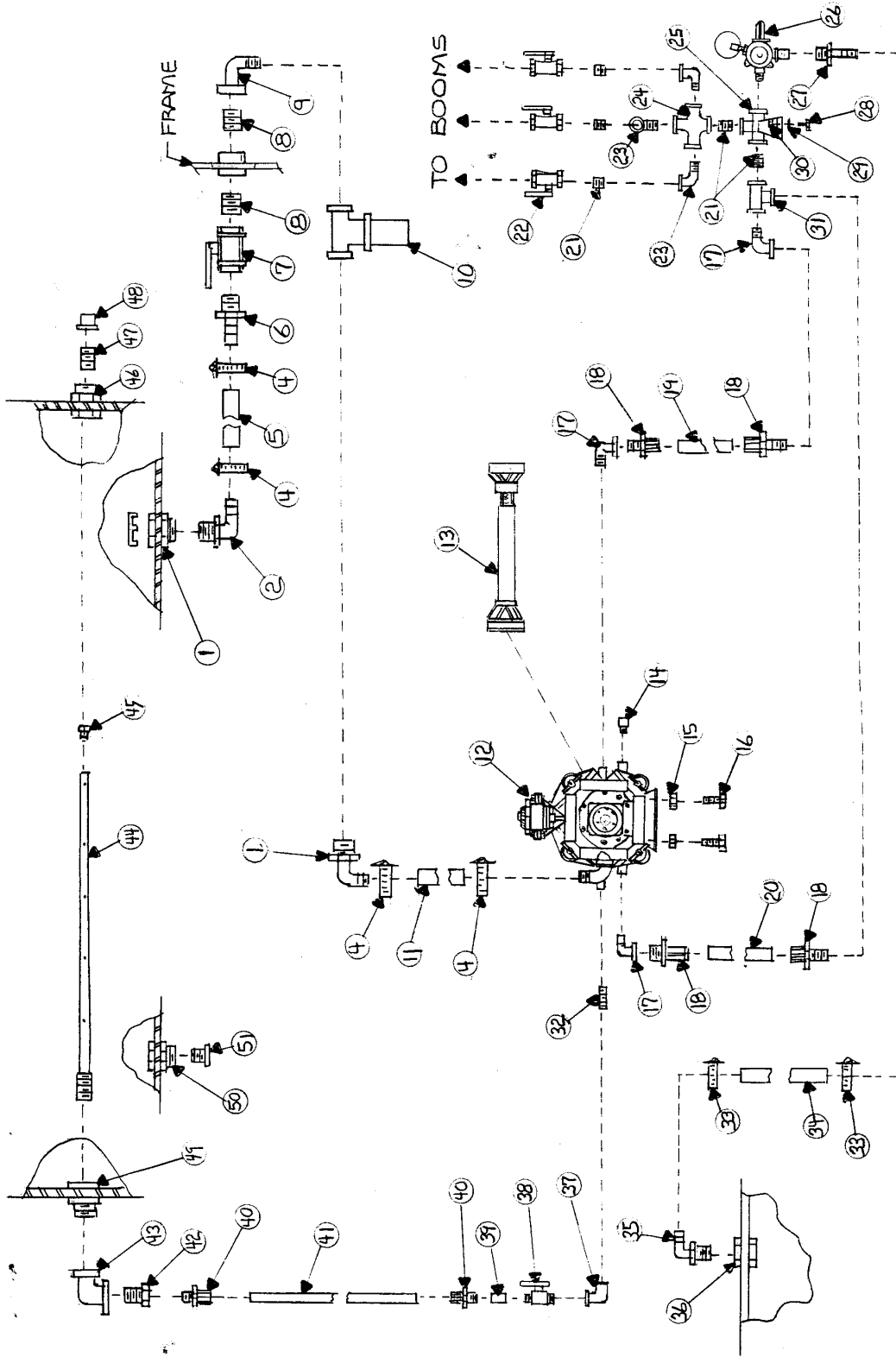


BOOM and CENTER SECTION BREAKDOWN



ITEM NO.	DESCRIPTION	PART NO.
1	Nut 3/4"	HN34C
2	Spring Collar	TV103-D
3	Compression Spring	25-7HD
4	Nut 3/8"	HN38C
5	Eye Bolt 1/2"x 1 1/2"	12112EB
6	Clevis Assembly	G209
7	Boom Cushion Yoke	BCY
8	Flat Washer 3/8"	FW38
9	Fender Washer 3/8"	D36713
10	Shock Cushion	TRW82123
11	Eye Bolt 3/8"x 2 1/2"	38212EB
12	S Hook	SH218
13	3/16" Blue Chrome Chain	2116-503-04
14	Lock Washer 3/8"	LW38
15	Bolt 3/8"x 2"	CS38200C
16	Hydraulic Cylinder	638010
17	Center Section	CS34
18	Center Boom	DCB-A
19	Outer Boom,(8 Row Left)	B9L
19A	Outer Boom,(8 Row Right)	B9R
19B	Outer Boom,(12 Row Left)	B1DL
19C	Outer Boom,(12 Row Right)	B1DR
19D	Outer Boom,(12 Row Extra Length,Onion Boom Left)	B1DAL
19E	Outer Boom,(12 Row Extra Length,Onion Boom Right)	B1DAR
20	PTO Pin	276
21	Cradle Plate Left	TD91LS
21A	Cradle Plate Right	TD91RS
22	Lock Nut 1/2"	HLN12C
23	Boom Yoke	VV102S-HD
24	Bolt 1/2"x 3 1/2"	CS12312C
25	Bolt 3/4"x 14"	CS341400C
26	Nut 5/16"	HN516C
27	Flat Washer 5/16"	FW516
28	U-Bolt 5/16"x 2"x	SQU516200
29	Hydraulic Hose 10 Ft.	HY10
30	Hydraulic Hose 2 Ft.	HY2-90
31	Hydraulic Hose 3 Ft.	HY3-90
32	Tee 1/4" Galvanized	GT1400
33	Restricted Orifice	50349
34	Transport Bracket,(Right & Left)	I-172L&R
75	Tank Strap 300-38	SP72
75A	Tank Strap 500-48	SP90
76	Tank 300-38	47375
76A	Tank 500-48	47330
77	Frame 300-38	P300-2
77A	Frame 500-48	P5002

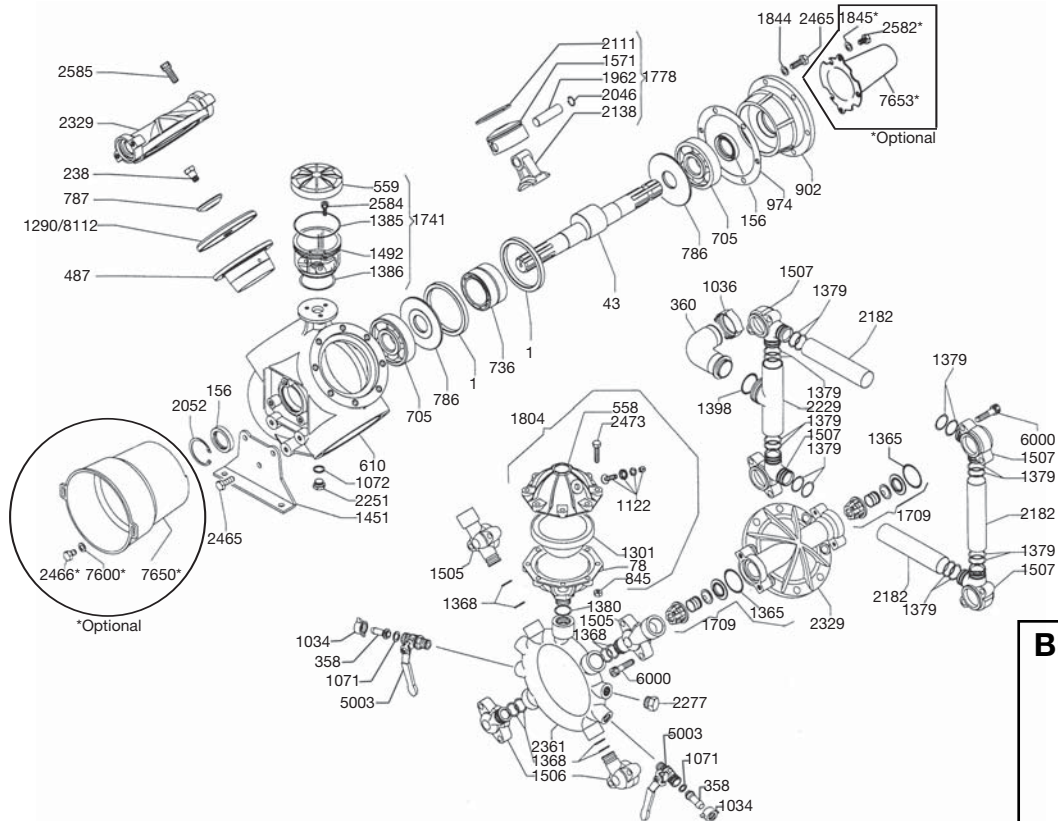
HIGH PRESSURE



HIGH PRESSURE PARTS LIST

PULL TYPE HIGH PRESSURE		
ITEM NO.	DESCRIPTION	PART NO.
1	Tank Fitting 1 1/4" Anit-Vortex	63065
2	Elbow 1 1/4"MPT x 1 1/2" Barb 90 Nylon	EL114112
3	N/A	N/A
4	Hose Clamp 1 1/2"	28H
5	Hose Wire Coil 1 1/2"	12003501
6	Hose Shank 1 1/2" MPT x Barb Nylon	A112
7	Ball Valve FPT 1 1/2" Poly	V-150
8	Nipple 1 1/2" x Close Galvanized	GN1121.75
9	Street Elbow 1 1/2"FPT x MPT Nylon	SE112
10	Strainer 1 1/2" FPT 20 Mesh	3350-012
11	Hose Wire Coil 1 1/2"	12003501
12	Pump	Beta-150
13	Drive Shaft	7105061NN007007
14	Plug 3/8" Galvanized	GP3800
15	Lock Nut 7/16"	HLN716C
16	Bolt 7/16" x 1 1/4"	CS716114C
17	Street Elbow 3/4"FPT x MPT Galvanized	GSE3490
18	Hydraulic Fitting 3/4" MPT Swivel	HU1212MC
19	Hose 1/2" 800 PSI	12-Y-800
20	Hose 3/4" 800 PSI	34-Y-800
21	Nipple 3/4" x Close Galvanized	GN341.5
22	Ball Valve FPT 1/2" Brass	34BBV
23	Street Elbow 1/2" FPT x MPT Galvanized	GSE1290
24	Cross FPT 1/2" Galvanized	GCR1200
25	Tee FPT 3/4"x 3/4"x 1/2" Galvanized	GT343412
26	Relief Valve(Removed From Beta-150	6005.15
27	Hose Shank 3/4" MPT x Barb Nylon	A34
28	Bolt 3/8"x 1 1/4"	CS38114C
29	Lock Washer 3/8"	LW38
30	Nut 3/8"	HN38C
31	Tee FPT 3/4" Galvanized	GT3400
32	Nipple 3/8" x 2" Galvanized	GN382
33	Hose Clamp 3/4"	12H
34	Hose Red Ag. 3/4"	3204-0420
35	Elbow 3/4"MPT x Barb 90 Nylon	EL34
36	Tank Fitting 3/4"	60401
37	Elbow 3/8" 90 Galvanized	GEL3490
38	Ball Valve 1/2" Brass	12BBV
39	Coupling 1/2" Galvanized	GCP1200
40	Hydraulic Fitting 1/2" MPT Swivel	HU0808MC
41	Hose 1/2" 800 PSI	12-Y-800
42	Reducer Bushing 1 1/4"x 1/2" Galvanized	GB11412
43	Elbow 1 1/4" Galvanized	GEL11490
44	Sparge Tube	ST-500

45	Plug 1/2" Stainless Steel	SSP1200
46	Tank Fitting 1 1/4"	67114
47	Nipple 1 1/4"x Close Stainless Steel	SSN1141.75
48	Cap PVC 1 1/4"	488-012
49	Tank Fitting 1 1/4"	67114
50	Tank Fitting 1 1/4"	67114
51	Plug 1 1/4" Nylon	F114



BETA-150/CC PUMP
Requires **87 oz.**
UDOR LUBE,
or SAE 30W
Non-detergent Oil

REF#	PART#	DESCRIPTION	QTY	REF#	PART#	DESCRIPTION	QTY
1	0001.01	Retainer ring	2	1505	1203.45	Discharge Elbow, 3/4" F	2
43	0002.29	Crank Shaft	1	1506	1203.46	Discharge Elbow	2
78	0003.10	Accumulator Body	1	1507	1203.54	Suction Elbow	4
156	0007.02	Crank Shaft Seal	2	1571	1205.08	Piston	4
238	0102.03	Diaphragm Bolt	4	1709	6006.08	Valve Assembly	8
358	0202.19	1/2" Barb	2	1741	6033.02	Oil Reservoir Kit	1
360	0202.84	Suction Hose Barb	1	1778	6015.01	Piston & Rod Assembly	4
487	0206.12	Piston Sleeve	4	1804	6031.02	Accumulator Assembly	1
558	0208.21	Accumulator Head	1	1844	1403.09	Washer	4
559	0208.22	Oil Reservoir Cap	1	*1845	1403.10	Washer	3
610	0209.17	Pump Body	1	1962	1502.01	Connecting Rod Pin	4
705	0214.11	Ball Bearing	2	2046	1506.02	Snap Ring	8
736	0216.02	Needle Bearing	1	2052	1506.16	Snap Ring	1
786	0301.02	Washer	2	2111	1509.05	Piston Ring	4
787	0301.03	Retainer Washer	4	2138	1519.03	Connecting Rod	4
845	0303.01	Nut	8	2182	1601.27	Suction Tube	3
902	0501.46	Flange	1	2229	1602.30	Suction Tube	1
974	0602.01	Gasket	1	2251	1603.02	Oil Plug	1
1034	0604.09	Barb Nut	2	2277	1603.34	Plug	1
1036	0604.48	Suction Nut	1	2329	1604.54	Head	4
1071	0605.05	Rubber Gasket	2	2361	1605.22	Discharge Manifold	1
1072	0605.09	Aluminum Gasket	1	2465	1804.03	Bolt	10
1122	0608.16	Air Valve Assembly	1	*2466	1804.06	Bolt	3
1290	0903.01	Diaphragm (BUNA-N, Optional)	4	2473	1804.54	Bolt	8
**1301	0903.16	Accumulator Diaphragm	1	*2582	1805.04	bolt	3
**1365	1101.01	O-Ring	8	2584	1805.06	Bolt	3
1368	1101.04	O-Ring	8	2585	1805.08	Bolt	32
1379	1101.31	O-Ring	16	5003	0608.46	Ball Valve (Right)	2
1380	1101.27	O-Ring	1	6000	1805.07	Bolt	16
1385	1101.32	O-Ring	1	*7600	1403.36	Washer	3
1386	1101.33	O-Ring	1	*7650	1219.02	PTO Safety Shield (optional)	1
1398	1101.42	O-Ring	1	*7653	1219.15	Shaft Protector Thru Shaft (optional)	1
1451	1202.14	Base Plate	2	**8112	0903.33	Diaphragm (DESMOPAN, Standard)	4
1492	1203.30	Oil Reservoir	1				

* Parts Included in Diaphragm Repair Kit - #8700.07. (Also available in BUNA-N - #8700.18.)

BETA-150/CC



BETA-150/CC

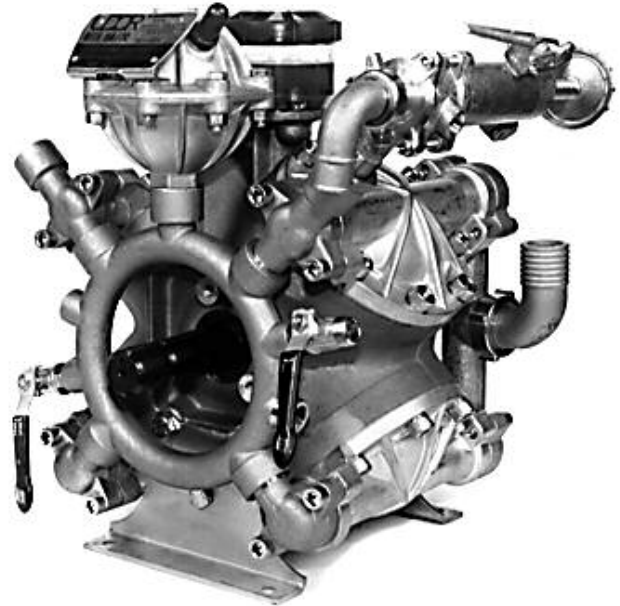
High Pressure Diaphragm Pump

BETA-150/CC high pressure, high volume diaphragm pumps are excellent for various horticultural and agricultural spraying applications. Simplicity of design and common parts allow easy and affordable maintenance. Control valve, pulsation dampener and pressure gauge are standard.

The BETA-150/CC is constructed of aluminum, brass and stainless steel with brass and stainless steel liquid handling parts.

For industrial uses and spraying applications not listed, please consult UDOR U.S.A. For all PTO drive app. safety shield part # 1219.02 is recommended.

Splined Q-2 bushing for pulley drive is available upon request. For thru shaft protection part # 1219.15 is recommended.



SPECIFICATIONS

Maximum Flow	42 GPM
Maximum Pressure.....	700 PSI
Maximum RPM	540 RPM
Maximum Temperature	140°F
Inlet Port Hose Barb	1-1/2"
Outlet Ports	
Hose Barb (Ball Valve Controlled)	1/2" (2)
FNPT	3/4"
MNPT	3/4"
Bypass Hose Barb.....	1"
Dimensions.....	L-21.9" x W-15" x H-16.5"
Weight	130 lbs.
Diaphragm Material	
Standard.....	DESMOPAN
Optional	BUNA-N

NOTE - Protect pumps from freezing. If freezing conditions exist, flush pump and system with a 50/50 mixture of antifreeze and water.



TeeJet® Disc-Core Type Hollow Cone Spray Tips

Typical Assembly with Ceramic Disc and Core



*Use CP20229-NY gasket when 4514-NY Nylon slotted strainer is not used.

Hollow Cone Spray Pattern
Produced by Cores #13, 23, 25, 45 & 46



Hollow Cone Type Spray Tips

Nozzle	Orifice	Orifice Size	GPM										Angle		
			10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	150 PSI	200 PSI	300 PSI	20 PSI	40 PSI	80 PSI
D1	DC13	.031"	—	—	.059	.066	.078	.088	.097	.115	.128	.152	—	51°	62°
D1.5	DC13	.036"	—	.057	.067	.075	.088	.098	.110	.127	.142	.167	38°	55°	66°
D2	DC13	.041"	—	.064	.075	.08	.10	.11	.12	.14	.16	.18	49°	67°	72°
D3	DC13	.047"	—	.071	.08	.09	.11	.12	.13	.16	.18	.20	53°	70°	75°
D4	DC13	.063"	.070	.09	.11	.12	.14	.16	.17	.20	.23	.27	69°	79°	83°
D1	DC23	.031"	—	.064	.076	.082	.108	.096	.107	.124	.139	.164	—	47°	58°
D1.5	DC23	.036"	—	.064	.076	.086	.103	.117	.130	.155	.175	.210	34°	51°	62°
D2	DC23	.041"	—	.078	.092	.10	.13	.14	.16	.19	.21	.25	51°	63°	70°
D3	DC23	.047"	.065	.087	.10	.12	.14	.16	.18	.21	.24	.28	58°	69°	75°
D4	DC23	.063"	.082	.113	.14	.15	.19	.21	.23	.28	.32	.38	68°	82°	87°
D5	DC23	.078"	.095	.13	.16	.18	.22	.25	.28	.34	.38	.46	79°	89°	94°
D6	DC23	.094"	.112	.15	.19	.21	.26	.29	.32	.39	.45	.54	84°	93°	98°
D1	DC25	.031"	—	.088	.101	.122	.138	.156	.185	.210	.255	—	27°	43°	
D1.5	DC25	.036"	—	.118	.135	.162	.185	.205	.245	.280	.33	—	38°	49°	
D2	DC25	.041"	—	.12	.14	.16	.19	.22	.25	.29	.34	.41	39°	51°	58°
D3	DC25	.047"	.10	.14	.17	.19	.23	.26	.29	.35	.40	.48	52°	61°	67°
D4	DC25	.063"	.15	.21	.25	.29	.35	.40	.45	.54	.62	.75	67°	74°	80°
D5	DC25	.078"	.18	.25	.30	.35	.42	.48	.54	.65	.75	.90	73°	79°	84°
D6	DC25	.094"	.23	.32	.39	.44	.54	.62	.70	.85	.97	1.19	79°	85°	89°
D7	DC25	.109"	.26	.37	.45	.52	.63	.73	.81	.98	1.18	1.37	85°	91°	93°
D8	DC25	.125"	.31	.43	.53	.61	.75	.89	.97	1.19	1.36	1.68	91°	96°	97°
D10	DC25	.156"	.38	.54	.65	.76	.93	1.07	1.21	1.48	1.71	2.1	97°	102°	103°
D12	DC25	.188"	.46	.61	.80	.93	1.15	1.32	1.47	1.81	2.09	2.55	103°	109°	112°
D14	DC25	.219"	.51	.72	.88	1.03	1.26	1.47	1.65	2.02	2.34	2.89	108°	113°	114°
D1	DC45	.031"	—	—	.125	.148	.170	.190	.225	.257	.310	—	22°	34°	
D1.5	DC45	.036"	—	—	.14	.16	.20	.23	.25	.31	.35	.43	—	33°	44°
D2	DC45	.041"	—	.14	.18	.20	.25	.28	.32	.38	.44	.53	32°	46°	55°
D3	DC45	.047"	—	.17	.20	.23	.28	.33	.36	.44	.51	.62	40°	53°	60°
D4	DC45	.063"	.18	.25	.31	.36	.43	.50	.56	.68	.78	.95	62°	69°	72°
D5	DC45	.078"	.23	.32	.39	.45	.55	.64	.71	.86	.99	1.22	67°	73°	76°
D6	DC45	.094"	.29	.41	.50	.58	.72	.83	.93	1.15	1.33	1.64	73°	79°	81°
D7	DC45	.109"	.33	.48	.59	.68	.84	.97	1.11	1.35	1.57	1.94	81°	86°	87°
D8	DC45	.125"	.41	.59	.72	.84	1.04	1.21	1.35	1.68	1.94	2.40	86°	90°	90°
D10	DC45	.156"	.54	.77	.94	1.10	1.35	1.57	1.77	2.18	2.50	3.10	90°	93°	93°
D12	DC45	.188"	.67	.95	1.17	1.36	1.68	1.95	2.20	2.69	3.11	3.80	97°	100°	102°
D14	DC45	.218"	.75	1.07	1.32	1.53	1.89	2.19	2.45	3.00	3.49	4.30	101°	104°	105°
D16	DC45	.250"	.86	1.25	1.54	1.79	2.20	2.57	2.89	3.54	4.11	5.20	108°	111°	112°
D1	DC46	.031"	—	—	.145	.178	.205	.23	.28	.32	.39	—	13°	15°	
D1.5	DC46	.036"	—	—	.213	.260	.300	.33	.41	.46	.56	—	15°	17°	
D2	DC46	.041"	—	.24	.27	.33	.37	.42	.50	.57	.68	—	18°	21°	
D3	DC46	.047"	—	.23	.28	.32	.39	.45	.51	.61	.70	.86	14°	20°	24°
D4	DC46	.063"	.28	.39	.48	.56	.68	.78	.88	1.07	1.23	1.52	23°	29°	33°
D5	DC46	.078"	.38	.54	.66	.77	.94	1.10	1.25	1.50	1.73	2.13	33°	39°	42°
D6	DC46	.094"	.55	.78	.95	1.10	1.35	1.58	1.73	2.16	2.50	3.06	42°	48°	50°
D7	DC46	.109"	—	.98	1.22	1.39	1.72	1.97	2.22	2.73	3.15	3.85	48°	53°	56°
D8	DC46	.125"	—	—	1.59	1.84	2.25	2.62	2.93	3.60	4.17	5.05	—	60°	62°
D10	DC46	.156"	—	—	2.15	2.48	3.05	3.53	3.96	4.83	5.59	6.80	—	66°	68°



CP26277-1-NY Quick TeeJet® Cap
For ceramic disc and core.
See page 57 for ordering information.

How to order:
To order orifice disc only, specify disc number and material.

- Examples:
- DCER-2 – Ceramic
 - D2 – Hardened Stainless Steel
 - DE-2 – Stainless Steel
 - DVP-2 – Polymer

To order core only, specify core number and material.

- Examples:
- DC13-CER – Ceramic
 - DC13-HSS – Hardened Stainless Steel
 - DC13 – Brass
 - DC13-NY – Nylon

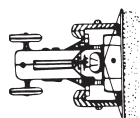
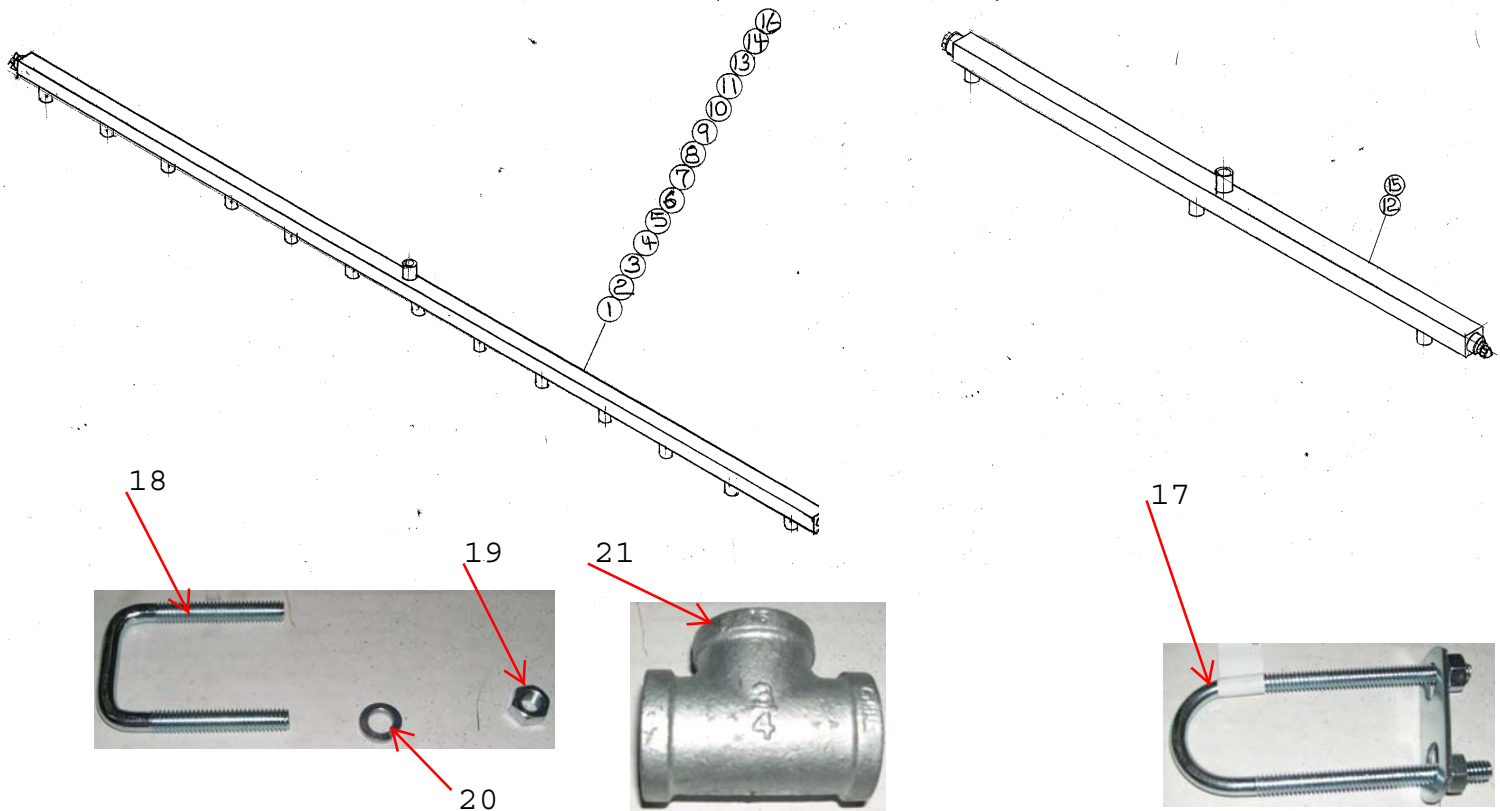
STRAINER NOTE: For nozzles using orifice disc numbers 1, 1.5 and 2, or core numbers 31 and 33, slotted strainer number 4514-20 equivalent to 25 mesh screen size is required. For all other larger capacity discs and cores, slotted strainer number 4514-32 equivalent to 16 mesh screen size is required.

Note: Always double check your application rates. Tabulations are based on spraying water at 70°F (21°C). See pages 124–140 for useful formulas and other information.

HIGH PRESSURE BOOM

SPECIFY LEFT OR RIGHT WHEN ORDERING

ITEM	DESCRIPTION	PART NO.
1	12 row lift type center boom (9 1/2" centers)	I9W-015
2	12 row lift type outer boom (9 1/2" centers)	I9W-016
3	12 row pull type outer boom (9" centers)	I9W-001
4	12 row pull type center boom (9" centers)	I9W-002
5	12 row pull type outer boom (9 1/2" centers)	I9W-003
6	12 row pull type center boom (9 1/2" centers)	I9W-004
7	16 row lift type outer boom (9 1/2" centers)	I9W-012
8	16 row lift type center boom (9 1/2" centers)	I9W-013
9	18 row inner boom (9" centers)	I9W-005
10	18 row middle boom (9" centers)	I9W-006
11	18 row center boom (9" centers)	I9W-007
12	18 row outer boom(9" centers)	I9W-008
13	18 row inside outer boom(9 1/2" center)	I9W-009
14	18 row center boom (9 1/2" centers)	I9W-010
15	18 row outside outer boom (9 1/2" centers)	I9W-011
16	20 row outer boom (9 1/2" center)	I9W-014
17	U-Bolt round 1/4"x1 1/8"x3 1/2"	SQU1418312
18	U-Bolt Square 5 16"x2"x1 3/8"	SQU516200
19	Nut 5/16"	HN516C
20	Lock washer 5/16"	LW516
21	Tee 3/4" fpt galvanized	GT3400



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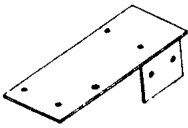
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COMPONENT PARTS

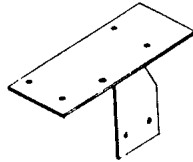
FOR PULL TYPE SPRAYERS

1999 Electric Valve
Roller/Diaphragm Pump



Part No. VS1999

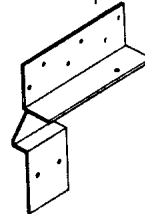
C-Pump



Part No. VS1999C

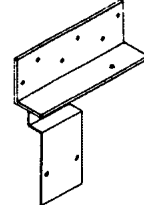
2500 Electric Valve

Roller/Diaphragm Pump



Part No. VS2500-3

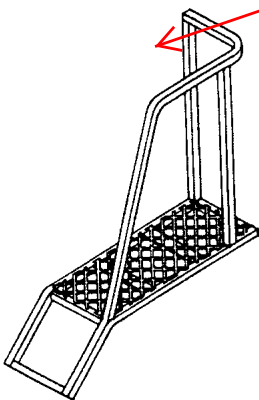
C-Pump



Part No. VS5200-3C

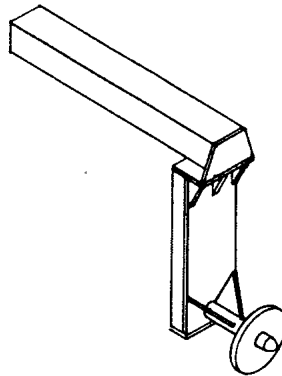
PULL TYPE STAND

Part No. SP1



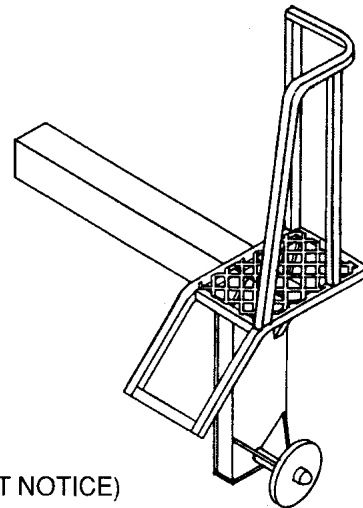
LEFT SIDE SPRAYER LEG

Part No. IY-117

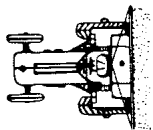


**RIGHT SIDE SPRAYER LEG
(With Stand)**

Part No. IY-117A



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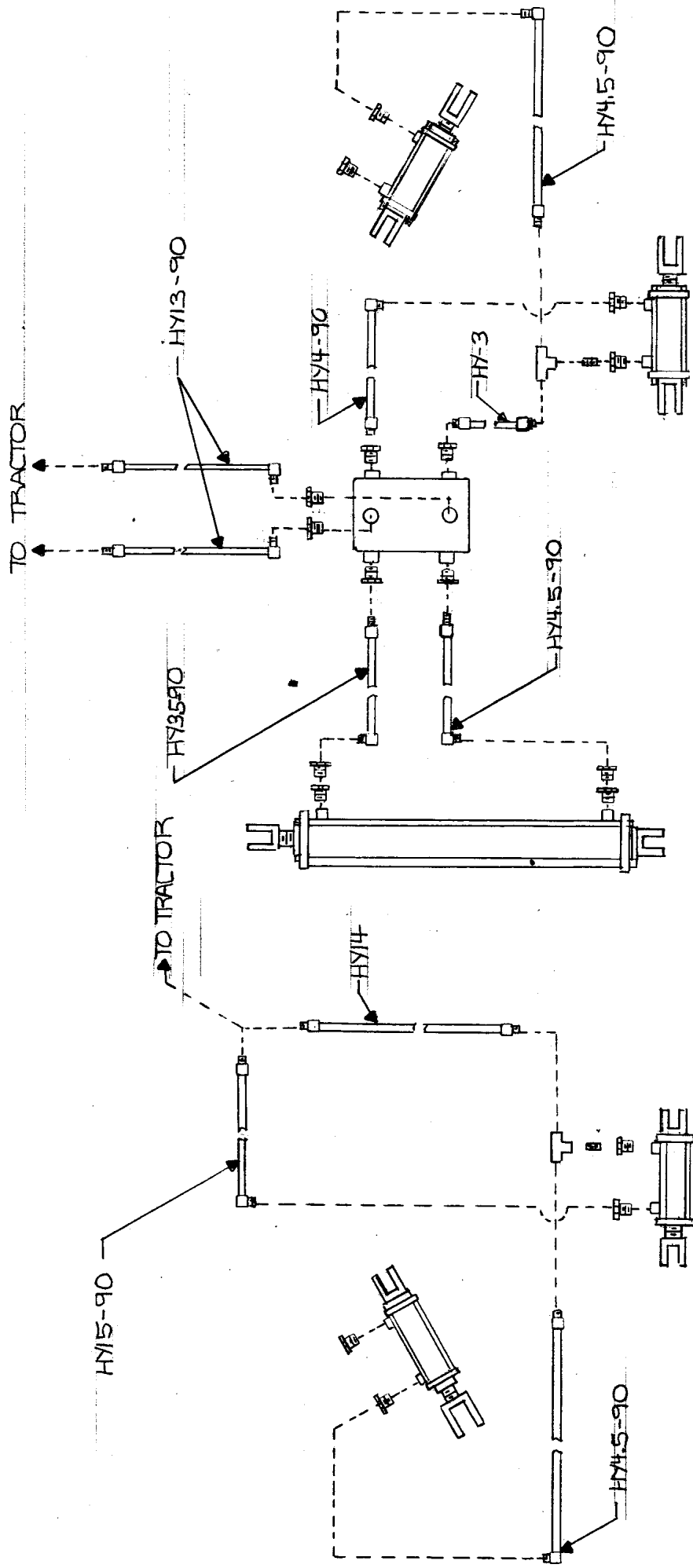
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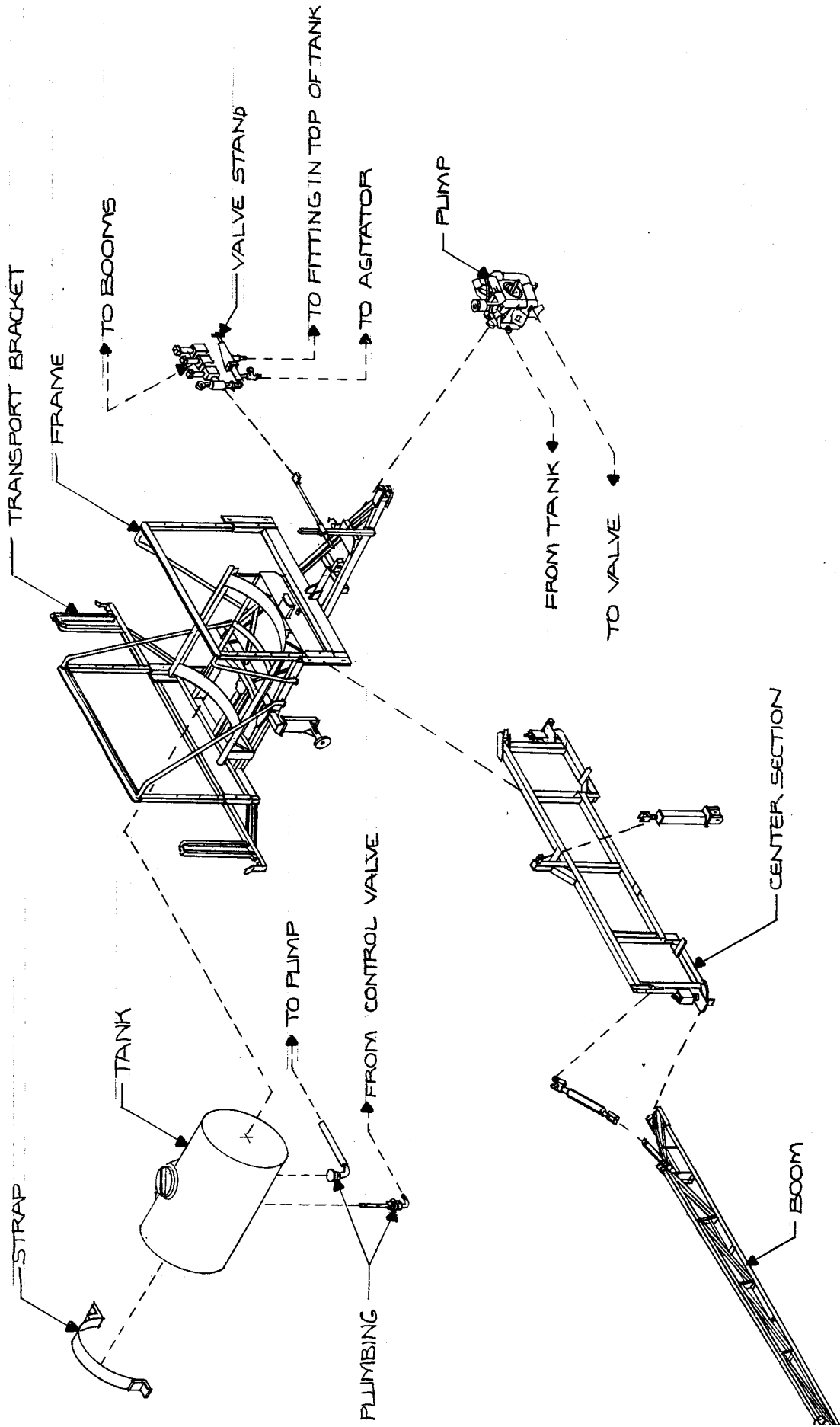
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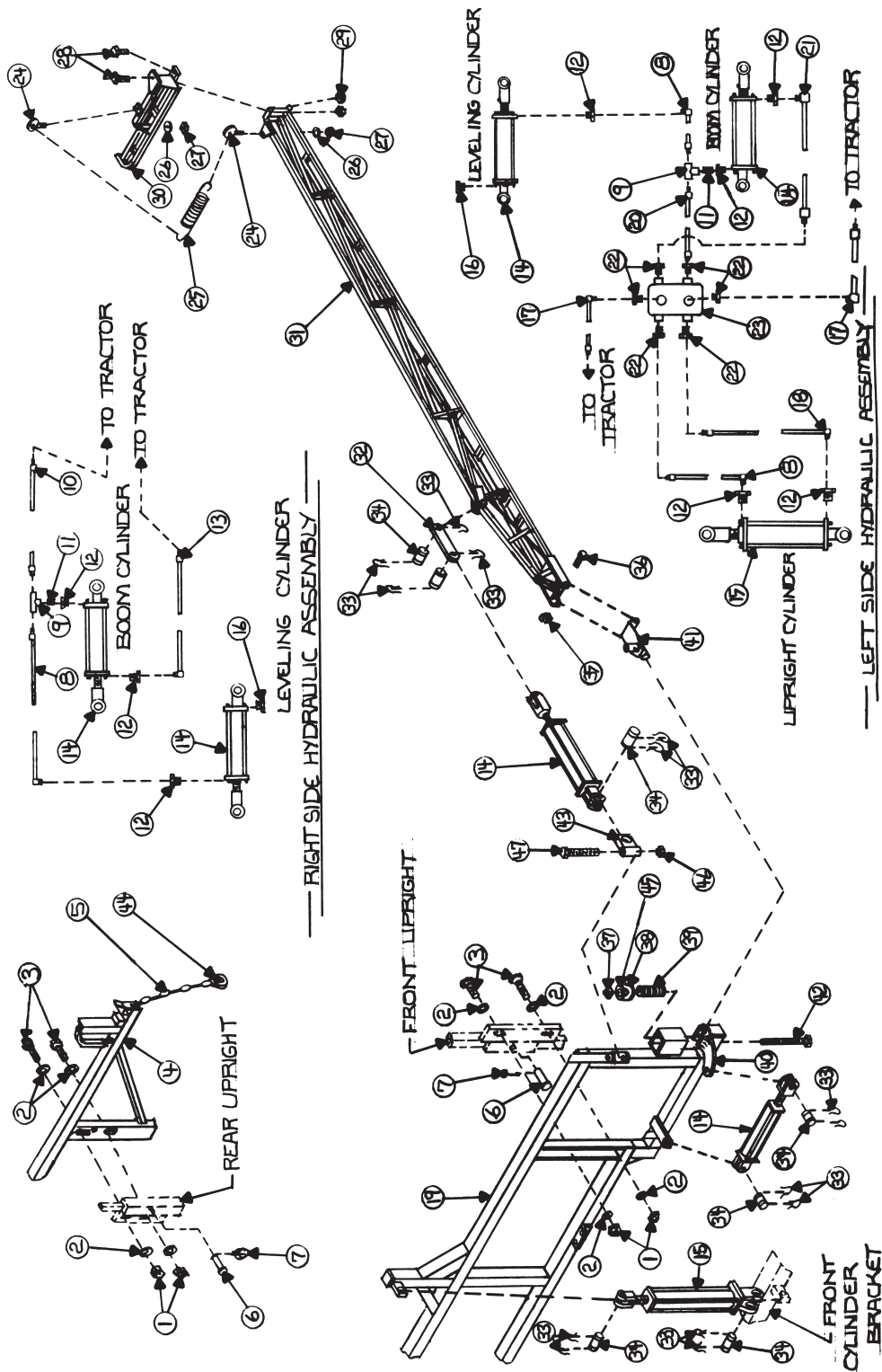
HYDRAULIC PLUMBING SCHEMATIC



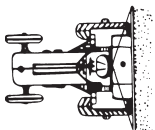
18 ROW MAIN BREAKDOWN



18 ROW BOOM & CENTER SECTION BREAKDOWN



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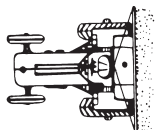
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18 ROW PARTS LIST

REF. NO.	DESCRIPTION	PART NO.	QUANTITY
1	1/2" Lock Nut	HNL12C	8
2	1/2" x 2" O.D. x 1/4" thick Fender washer	Fender 12200	16
3	1/2" x 2" Bolt	CS12200C	8
4	Boom Transport Bracket	IY-217	1
5	3/16" Blue Chrome Chain	2116-503-04	18 FT.
6	Top Link Pin	P772	4
7	Linch Pin	1924	4
8	4 1/2" Ft. Hydraulic Hose Assembly	HY4.5-90	3
9	Galvanized Tee 1/4"	GT1400	2
10	14 Ft. Hydraulic Hose Assembly	HY14	1
11	1/4" x 1" Galvanized Nipple	GN141	2
12	3/8" x 1/4" Restricted Orifice	50349	8
13	15 Ft. Hydraulic Hose Assembly	HY15-90	1
14	2 x 8 Hydraulic Cylinder	638010	4
15	3 x 36 Hydraulic Cylinder	638438	1
16	Breather Plug	F38H	2
17	13 Ft. Hydraulic Hose Assembly	HY13-90	2
18	3 Ft. Hydraulic Hose Assembly	HY3-5-90	1
19	18 Row Center Section	CS18	1
20	3 Ft. Hydraulic Hose Assembly	HY3	1
21	4 Ft. Hydraulic Hose Assembly	HY4-90	1
22	Galvanized Bushing 1/2" x 1/4"	GB1214	6
23	Selector Valve	SD4BADA1	1
24	3/8" x 1 1/4" Eyebolt	38114EB	4
25	Tension Spring	75-7	2
26	3/8" Flat Washer	FW38	4
27	3/8" Lock Nut	HLN38C	4
28	1/2" x 1 1/2" Bolt	CS12112C	4
29	1/2" Lock Nut	HLN12C	4
30	Outer Boom Section B Left	B18LB	1
30A	Outer Boom Section B Right	B18RB	1
31	Outer Boom Section A Left	B18L	1
31A	Outer Boom Section A Right	B18R	1
32	Boom Leveling Bracket	IY-218	2
33	3" Cylinder Latch Pin	640111	4
34	3" Cylinder Pin	640091	2
35	3/4" Lock Nut	HLN34C	2
36	3/4" x 8 1/2" Bolt	CS34812C	2
37	7/8" Nut (Grade 8)	HN78C	2
38	Spring Collar	BY3A	2
39	Compression Spring	35-10	2
40	Boom Cradle Left	TD18L	1
40A	Boom Cradle Right	TD18R	1
41	Boom Yoke	BY3	2
42	7/8" x 17" Bolt (Grade 8)	CS781700C	2
43	Cylinder Hinge	IY-219	2
44	Transport Lock Pin	231	2
45	7/8" Flat Washer	FW78	2
46	3/4" Lock Nut	HLN34C	2
47	3/4" x 5 1/2" Bolt	CS34512C	2

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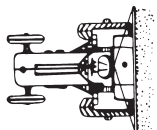
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