



MODEL NO. 41120, 41121,
41020, 41021 and 41122

SET-UP AND
PARTS LIST

STANDARD SPRAY SYSTEM FOR USE ON THE MULTI-PRO 1100 VEHICLE

Refer to the illustrated Parts List for the details of parts used in assembling the STANDARD Sprayer System.

"Right" and "Left" as used in the following instructions, refer to the operator's right and left when seated in the normal operating position. Likewise, "Front" and "Rear" as seen from the operator's position.

TANK ASSEMBLY: Cut the shipping straps and remove the Spray Tank and Saddle Assembly from the skid.

- Apply thread sealer and install the 90° street elbow and male Qwik-Coupler into the fitting at the rear of the Tank.

- Attach the 1" x 21" Suction Hose to the barbed elbow in the bottom of the Tank with a hose clamp. Attach the female Qwik-Coupler to the other end of the Suction Hose.

- Attach the 1/2" x 34" Agitator Hose to the barbed elbow in the front of the Tank with a hose clamp. Attach the female Qwik-Coupler to the other end of the Agitator Hose.

- Place the Tank and Saddle Assembly on the Vehicle Frame. Secure to the Vehicle with two 5/8" x 1-1/2" hex hd cap screws and hex nuts through the rear mounting member of the Saddle Assembly.

IMPORTANT!

THE TANK MUST BE CENTERED AND ATTACHED SECURELY TO THE SADDLE! The Tank will RUB on the Vehicle Fenders if it is not centered laterally between the Fenders.

- Route the Suction Hose over the left side of the Vehicle Frame.

CENTRIFUGAL PUMP: Install the Pump Assembly between the mounting lugs on the Vehicle Frame. Secure the Pump to the lugs with the Pivot Shaft and a hair pin cotter.

- Check the alignment of the Pump's Pulley with the Engine Drive Pulley, using a straight edge. Adjust if necessary, by loosening and re-positioning the Drive Pulley.

- Install the Drive Belt and the Pump Cover Clamp.

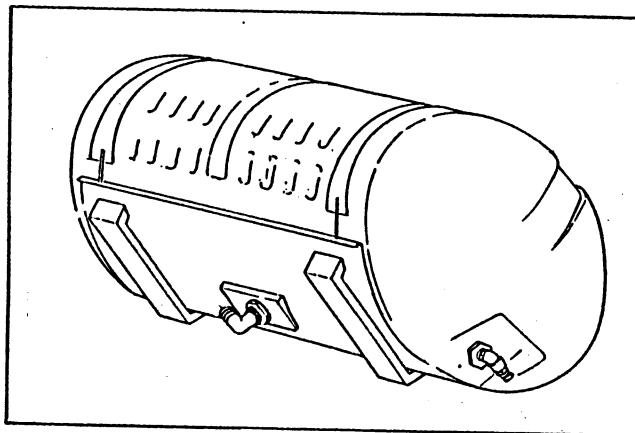


FIG. 1

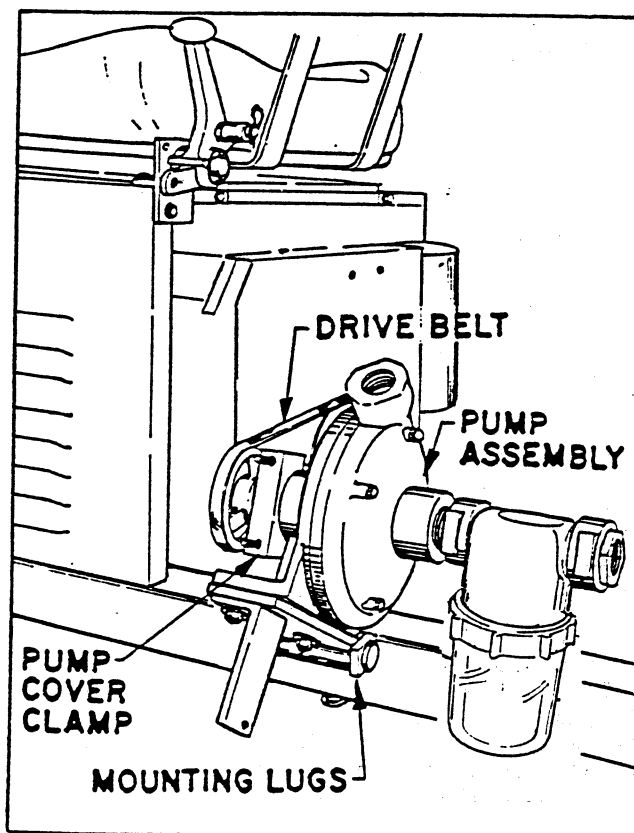


FIG. 2

CENTRIFUGAL PUMP (continued)

■ Install the Pump Belt Cover onto the Pump Cover Clamp and secure with two lock nuts.

■ Insert the 3/8" x 4" cap screw into the hole in the Pump Cable's end fitting and through the Pump Cover. Secure the Cable to the Pump Cover with a lock nut.

■ Attach the other end of the Pump Cable onto the Pin in the Pump Control Handle. Secure with a flat washer and hair pin cotter. Attach the Spring.

■ Engage the Pump Engagement Lever...DO NOT START THE ENGINE. Adjust the Belt Guide to obtain 1/8" clearance between the inside of the Guide and the Belt.

IMPORTANT! For the Pump Engagement to operate properly, it should require a small amount of pressure to snap the Lever "over-center" to disengage the Pump drive.

Adjust if necessary, by loosening the two nuts which secure the Belt Cover to the Clamp on the Pump Shaft and re-positioning the Belt Cover. Tighten the lock nuts after adjustment is complete.

■ Apply thread sealer and install all of the Fittings, Ball Valves and Qwik-Couplers as shown in FIG.4 to connect the Suction, Supply and Agitator Hoses.

CONTROL CONSOLE: Using two 1/4" hex washer hd screws, install the Mounting Bracket for the Console Control on the left side panel of the Seat Support.

■ Route the Cable Assembly along the rear of the Seat Support. Place a hose clamp around the Cable and secure it to the Seat Support with a 5/16" x 3/4" cap screw, flat washer and hex nut.

■ Route the Cable along the left side and to the rear of the Vehicle frame. Secure with plastic Sta-Straps.

■ Measure carefully and determine the length of white wire necessary to reach the Gound Terminal Block. Cut off the excess wire and crimp the spade terminal onto the stripped end. Connect the spade terminal to the Ground Terminal Block as shown in FIG. 5.

■ Measure carefully to determine the length of red wire necessary to reach the Fuse Block. Cut off the excess wire and crimp the push-on terminal onto the stripped end. Connect the push-on terminal to the male terminal on the red wire at the Fuse Block, as shown in FIG. 5.

■ Insert the 20-amp Fuse into the Fuse Block receptacle, as shown in FIG. 5.

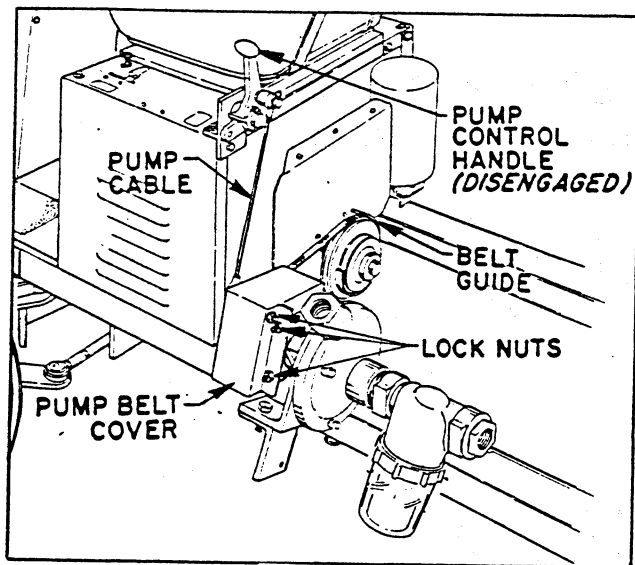


FIG. 3

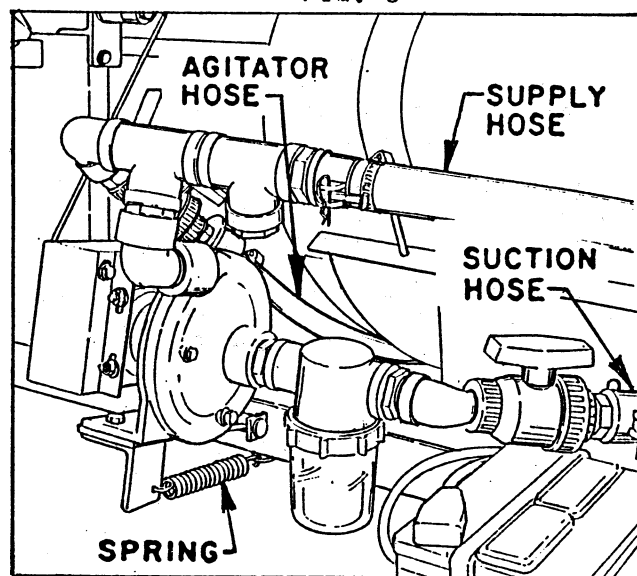


FIG. 4

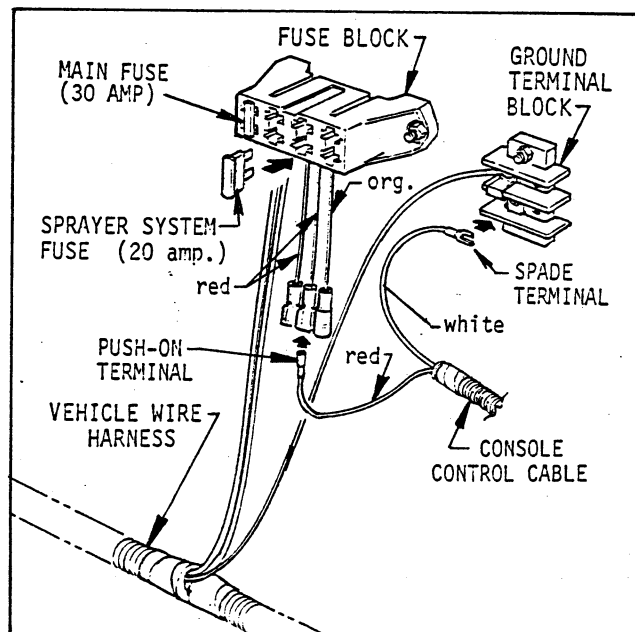


FIG. 5

BOOM ASSEMBLY: Use a paint brush to apply a heavy coating of grease to the tubes which are to be inserted into the Vehicle Frame.

■ Install the two Boom Mount Assemblies into the Vehicle Frame as shown in FIG. 6. Use a torque wrench to tighten the long (1/4" x 8") screws which join the Wedges to the tubes. Tighten to 50 ft. lbs.

CAUTION! FAILURE TO TIGHTEN THESE SCREWS SECURELY COULD RESULT IN THE BOOM FRAME FALLING OFF THE VEHICLE!

THESE INSTRUCTIONS APPLY TO THE ASSEMBLY OF THE MANUAL BOOM ONLY. IF THE OPTIONAL "BOOM PIVOT KIT" IS TO BE INSTALLED, SEE THE INSTRUCTIONS FURNISHED WITH THAT KIT.

■ Position the Cross Support Angle as shown in FIG. 6 and attach it to the Boom Mount Assemblies with two 1/2" x 1-1/4" hex hd cap screws, and lock nuts.

■ Position the Spacer Tubes between the Boom Mount uprights and the lugs on the Main Frame Tube. Use two 1/2" x 4" hex hd cap screws and lock nuts to secure the Main Frame Tube to the uprights. See FIG. 7.

■ Position the two Center Boom Angles on the Main Frame Tube as shown in FIG. 7 and secure them to the Frame Tube with "U"-bolts and lock nuts.

■ Center and attach the Center Boom Pipe to the Center Boom Angles with two clamps, 3/8" x 1" hex hd cap screws, washers and lock nuts.

■ Loosely attach the triple barb Nozzle Assembly in the approximate center of the Center Boom Pipe. For the most uniform spray coverage, position all Nozzle Assemblies at a 45° angle as shown in FIG. 7. Tighten clamp screw to secure the Nozzle to the Boom Pipe.

■ Loosely attach a single barb Nozzle Assembly to each end of the Center Boom Pipe. Place two hose clamps on the two 3/4" x 19" Jumper Hoses and connect the single barb Nozzles to the triple barb Nozzle. Tighten all fasteners securely.

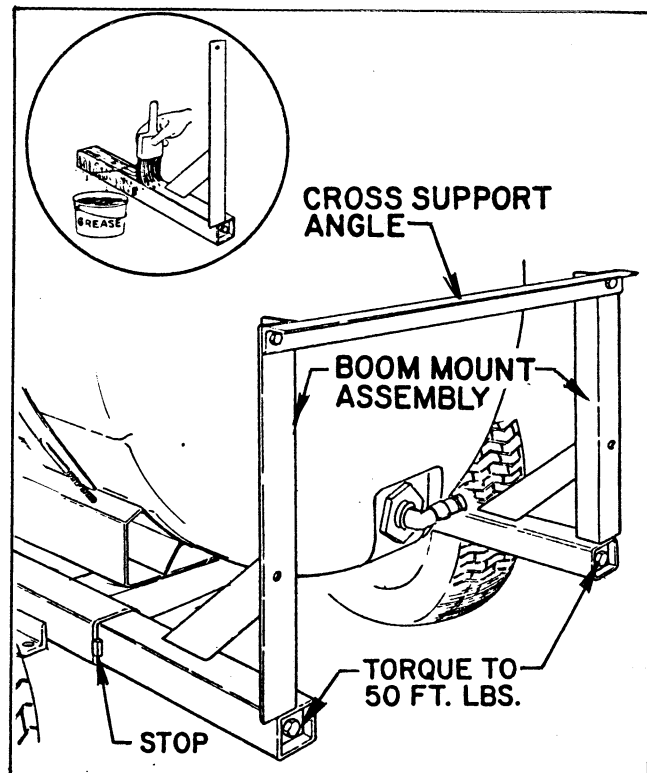


FIG. 6

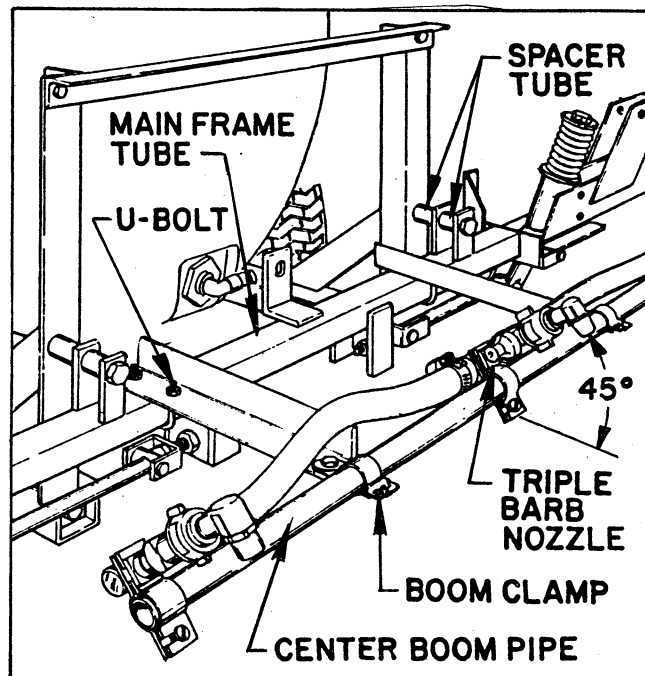


FIG. 7

■ Insert an Extension Boom Pipe into the Pivot Assembly and secure with four 1/4" x 1-1/4" hex hd cap screws and lock nuts. See FIG. 8. Repeat on the opposite side to assemble the other Extension Boom.

■ Attach the Boom Support Assembly to the Pivot Assembly, using a 5/16" x 1-1/2" screw and hex nut. See FIG. 8. Secure the two plates of the Boom Support Assembly to the Extension Boom Pipe, using two U-bolts and four lock nuts.

■ Assemble the Boom Support Assembly to the other Extension Boom Pipe.

■ Attach three double barb and one single barb Nozzle Assemblies on each Extension Boom Pipe as shown in the illustrated Parts List. Nozzles are to be spaced on 20 inch centers. Connect the Nozzle Assemblies with the 3/4" x 19" Jumper Hoses. Secure with hose clamps

If the optional Boom Pivot Kit is to be installed, refer to the instructions furnished with that Kit. The Cross Support to be used with that Kit is different than the Support used on the Manual Boom.

CONTROL VALVE/SOLENOID ASSEMBLY:

■ Apply thread sealer and assemble all components of the Valve and Solenoid Assemblies as shown on page 12.

■ Loosely attach the Control Valve Bracket to the Cross Support with a 5/16" x 3/4" cap screw, flat washer and nut.

■ Slide the Solenoid Mounting Strap into position and mount the complete Control Valve and Solenoid Assembly to the Cross Support as shown in FIG. 9. Use four 5/16" x 1" hex hd cap screws with washers below the screw head, the Strap and the Cross Support.

■ Connect the Overflow Hose to the Qwik-Coupler in the rear of the Tank.

■ Connect the push-on terminals to the Solenoids and connect the plugs on the Control Valve and the Console Cable. See Page 14.

■ Assemble the 1/4" male fitting to the reducer bushing in the end of the Solenoid Valve and connect the Gauge Tube.

■ Connect the Boom Feeder Hoses to the barbs in the Solenoid with hose clamps. The two 3/4" x 50" Hoses are to be attached to the left and right Solenoids. The 3/4" x 36" Hose is to be attached to the center Solenoid.

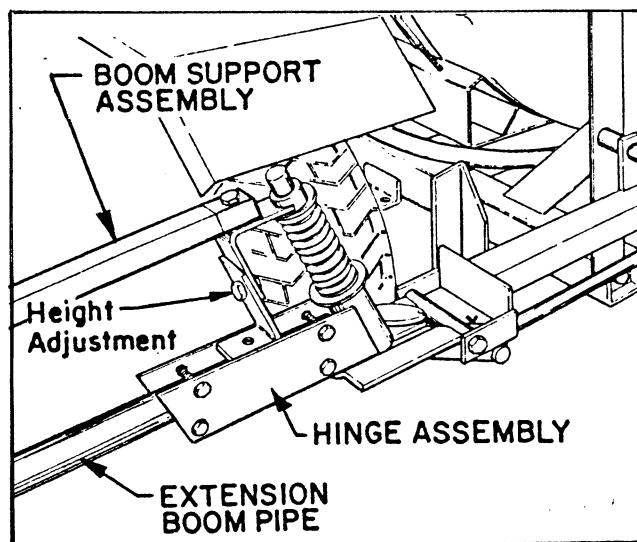


FIG. 8

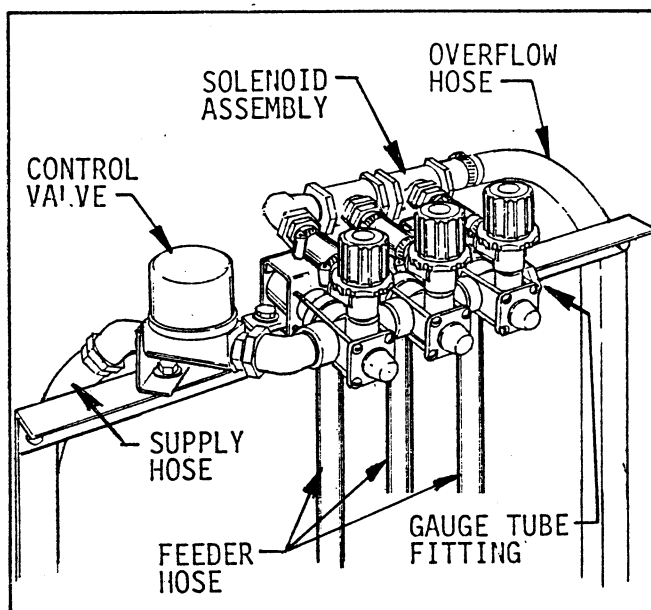
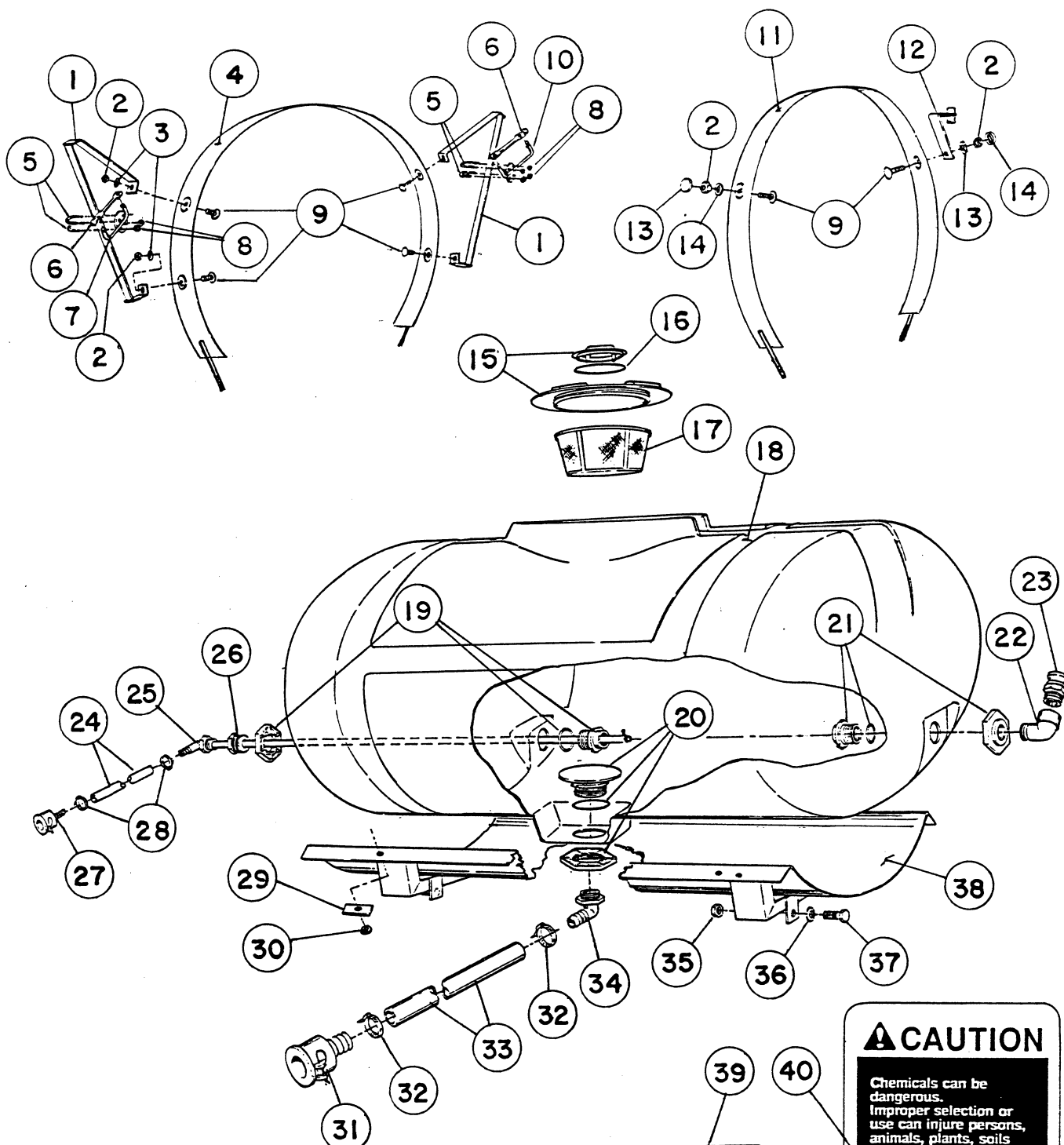


FIG. 9

■ Place a hose clamp on the center Boom Feeder Hose and attach it to the triple barb Nozzle on the Center Boom Pipe.

■ Place a hose clamp on the right and left Boom Feeder Hoses and attach them to the double barb Nozzles on the right and left Extension Boom Pipes.

FILL THE TANK WITH CLEAN WATER AND CHECK FOR ANY LEAKS.



⚠ CAUTION




TO AVOID ELECTRIC SHOCK AND PERSONAL INJURY TO BYSTANDERS

- INSPECT AREA OVERHEAD FOR WIRES BEFORE RAISING BOOMS.
- KEEP BYSTANDERS AWAY WHILE RAISING AND LOWERING BOOMS.

⚠ CAUTION

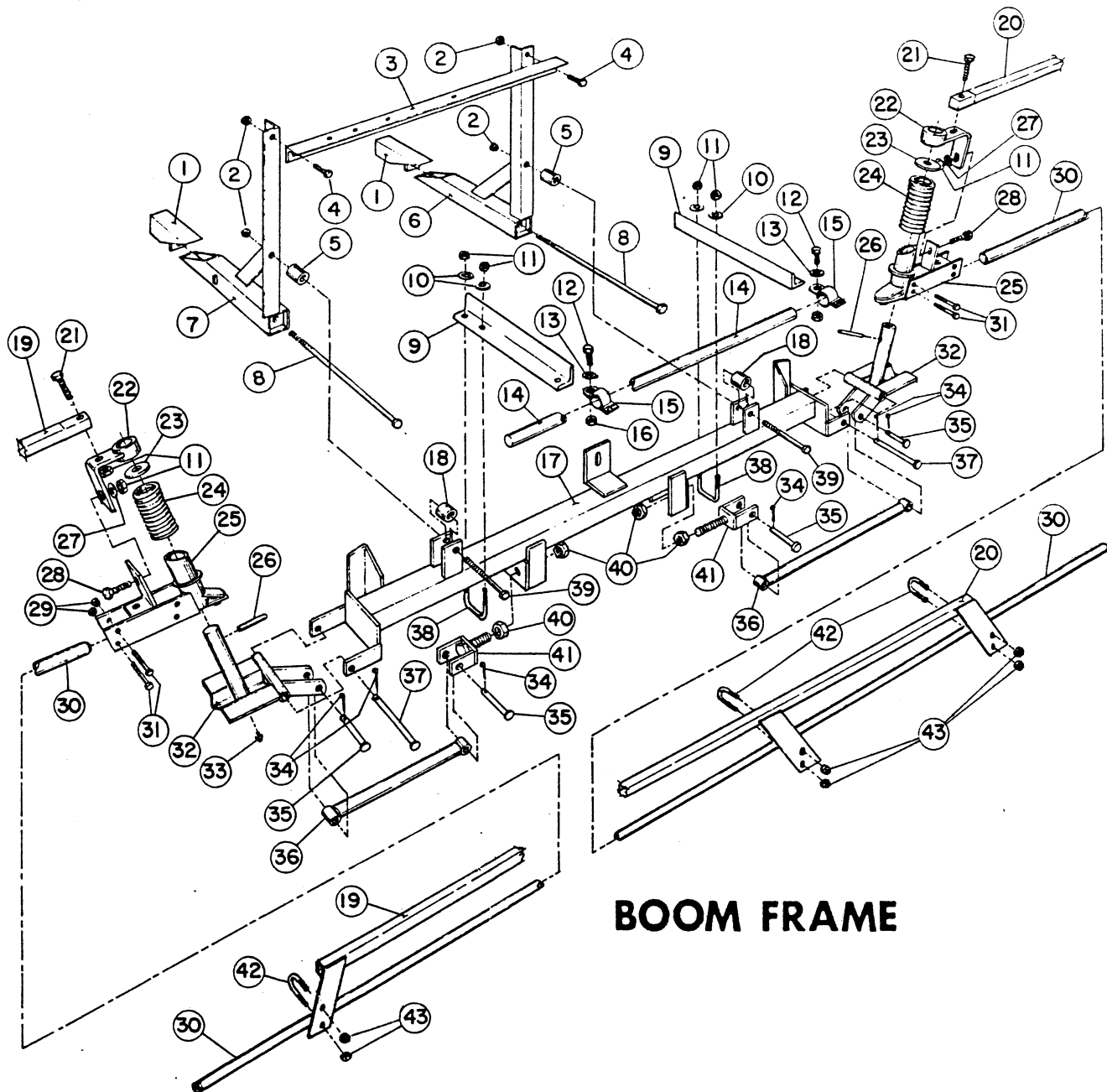
Chemicals can be dangerous. Improper selection or use can injure persons, animals, plants, soils or other property.

BE SAFE

1. Select the right chemical for the job.
2. Handle and apply it with care. Follow instructions issued by chemical manufacturer.

TANK

REF	PART NO.	DESCRIPTION	QTY
1	42983	Hold-In Brace Assy	2
2	22-12-AJD	Hex Nut, 5/16 NC	6
3	24-10-BD	Flat Washer, 5/16	4
4	42880	Mounting Band (Front)	2
5	5125	U-Bolt, 1/4 NC	4
6	42198	Rubber Hold Down Strap	2
7	42259	Boom Hold-In Assy. - L.H.	1
8	25-25-AGD	Carriage Bolt, 5/16 NC x 3/4	6
9	22-11-AJD	Hex Nut, 1/4 NC	8
10	42316	Boom Hold-In Assy. - R.H.	1
11	43013	Mounting Band (Rear)	2
12	42277	Pressure Guage Bracket Assy	1
13	42452	Protective Cap	2
14	23-10-GD	Lock Washer, 5/16	2
15	42322	Tank Lid (f/w Tank Assy)	1
16	42859	Breather Gasket (f/w Tank Assy)	1
17	42323	Filler Basket - 16" (f/w Tank Assy)	1
18	42879	Tank Assembly - 150 Gals.	1
19	41801	Tank Fitting, 3/4" NPT (f/w Tank Assy)	1
20	41798	Tank Fitting, 1-1/4" NPT (f/w Tank Assy)	1
21	41800	Tank Fitting, 1" NPT (f/w Tank Assy)	1
22	41307	90°St. Elbow, 1" NPT	1
23	40479	Male Qwik Adaptor, 1" MPT	1
24	42988	Agitator Hose	1
25	42981	Agitator Tube Assy	1
	42842	Elbow - Agitator Tube (Barbed)	1
26	41969	Reducer Bushing, 3/4" MPT x 1/2" FPT	1
27	40487	Female Qwik Coupler, 1/2" H.B.	1
28	96609	Hose Clamp	2
29	43014	Backing Strap	4
30	22-13-AJD	Hex Nut, 3/8 NC	4
31	40480	Female Qwik Coupler, 1" H.B.	1
32	21146	Hose Clamp	2
33	42987	Suction Hose	1
34	42057	90°Elbow, 1-1/4" MPT x 1" H.B.	1
35	22-15-AJD	Hex Nut, 1/2 NC	2
36	23-13-GD	Lock Washer, 1/2 Med.	2
37	20-86-AGD	HHCS, 1/2 NC x 1-1/4	2
38	42878	Tank Saddle Assembly	1
39	87-0570	Decal - "Electric Shock"	2
40	41186	Decal - "CAUTION - Chemicals"	1



BOOM FRAME

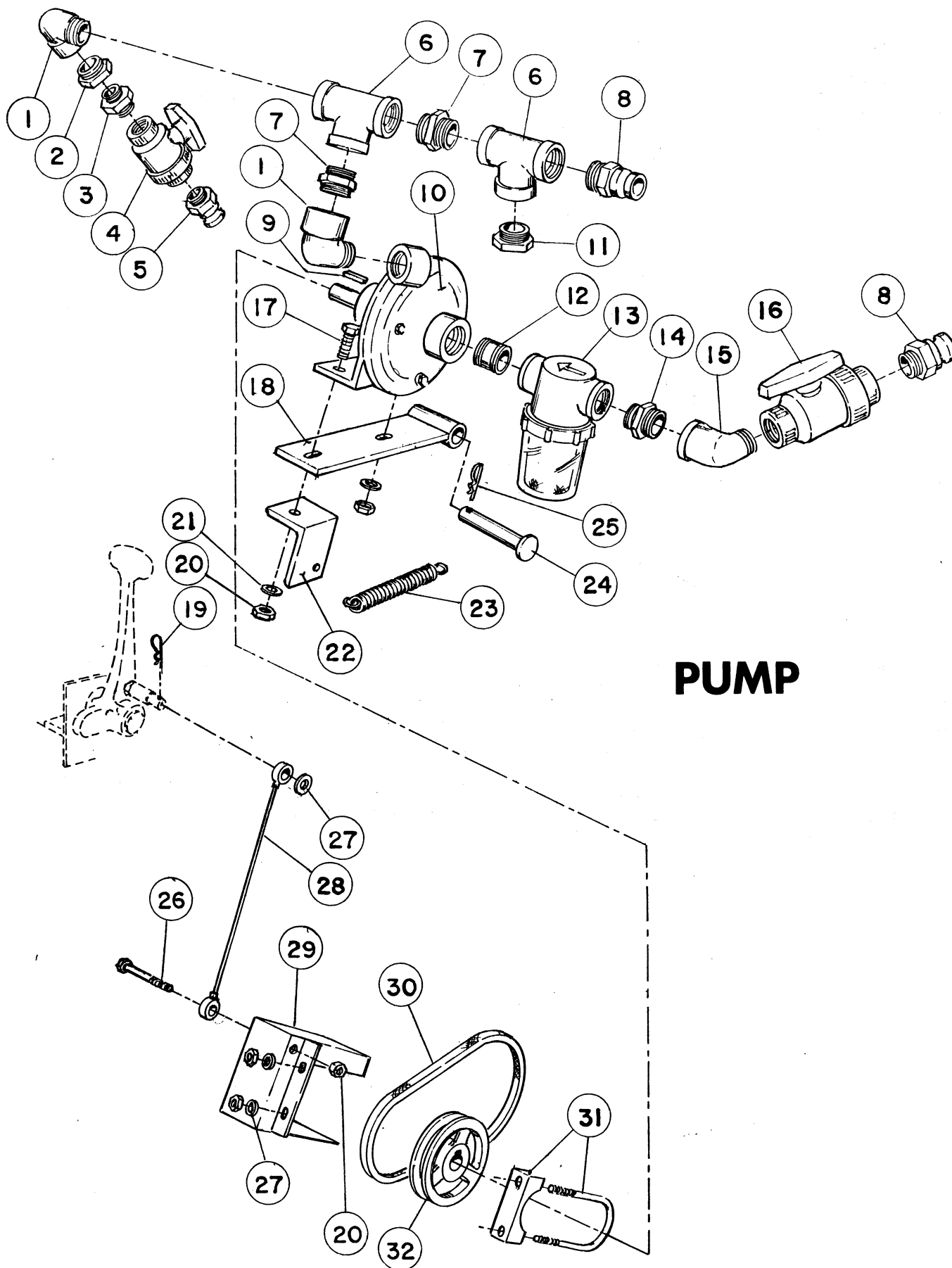
⚠ CAUTION! THE TWO SPRINGS (REF. #24) ARE UNDER APPROX. 150 LBS. OF PRESSURE. BE VERY CAUTIOUS WHEN REMOVING THE SPRING PINS (REF. #26) FOR REMOVAL OF THE SPRINGS.

⚠ CAUTION! THE TWO BOLTS (REF. #8) MUST BE TORQUED TO 50 FT. LBS.

BOOM FRAME

REF	PART NO.	DESCRIPTION	QTY
1	42223	Tube Wedge Assy	2
2	22-15-AJFD	Lock Nut, 1/2 NC	4
3	42225	Cross Support Angle	1
4	20-86-AGD	HHCS, 1/2 NC x 1-1/4"	2
5	42258	Spacer Tube, 1 1/4" lg.	2
6	42222	Boom Mount Assy	1
7	42217	Boom Mount Assy	1
8	42199	HHCS, 1/2 NC x 18"	2
9	42234	Center Boom Angle	2
10	24-10-AD	Flat Washer, 5/16	4
11	22-12-AJD	Hex Nut, 5/16 NC	8
12	20-47-AGD	HHCS, 3/8 NC x 1"	2
13	24-11-AD	Flat Washer, 3/8	2
14	40493	Center Boom Pipe	1
15	40494	Clamp Assy	2
16	22-13-AJFD	Lock Nut, 3/8 NC	2
17	42227	Main Frame Tube-Welded Assy	1
18	42257	Spacer Tube, 1" Lg.	2
19	42711	Boom Support Assy. - L.H.	1
20	42710	Boom Support Assy. - R.H.	1
21	20-28-AGD	HHCS, 5/16 NC x 1 1/2"	2
22	42707	Support Bracket Assy	2
23*	24-18-BD	Flat Washer, 1" S.A.E.	2
24*	42196	Compression Spring	2
25*	42706	Breakaway Pivot Assy	2
26*	29-199-C	Sprin Pin, 1/4 x 2"	2
27	24-10-BD	Flat Washer, 5/16 S.A.E.	2
28	25-25-AGD	Carriage Bolt, 5/16 NC x 3/4	2
29	22-11-AJFD	Lock Nut, 1/4 NC	8
30	42282	Extension Boom Pipe Assy	2
31	20-8-AGD	HHCS, 1/4 NC x 1-3/4	8
32*	42243	Hinge Assy	2
33*	361011	Grease Fitting	2
34	28-18-D	Cotter Pin, 1/8 x 1"	6
35	42195	Clevis Pin, 1/2 x 2"	4
36	42240	Strut Assy	2
37	42194	Clevis Pin, 1/2 x 4-1/2"	2
38	301950	U-Bolt, 5/16 NC	2
39	20-97-AGD	HHCS, 1/2 NC x 4"	2
40	22-17-AJD	Hex Nut, 5/8 NC	4
41	42237	Adjustable Clevis Assy	2
42	5125	U-Bolt, 1/4 NC	4
43	22-11-AJD	Hex Nut, 1/4 NC	8

* Denotes parts that are available in an assembled unit.
Order #42840 Breakaway Assembly

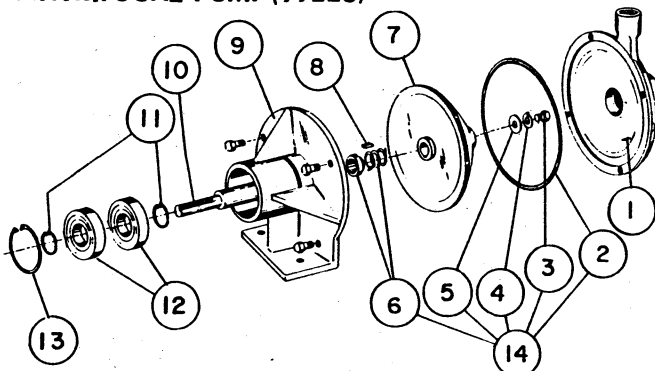


PUMP

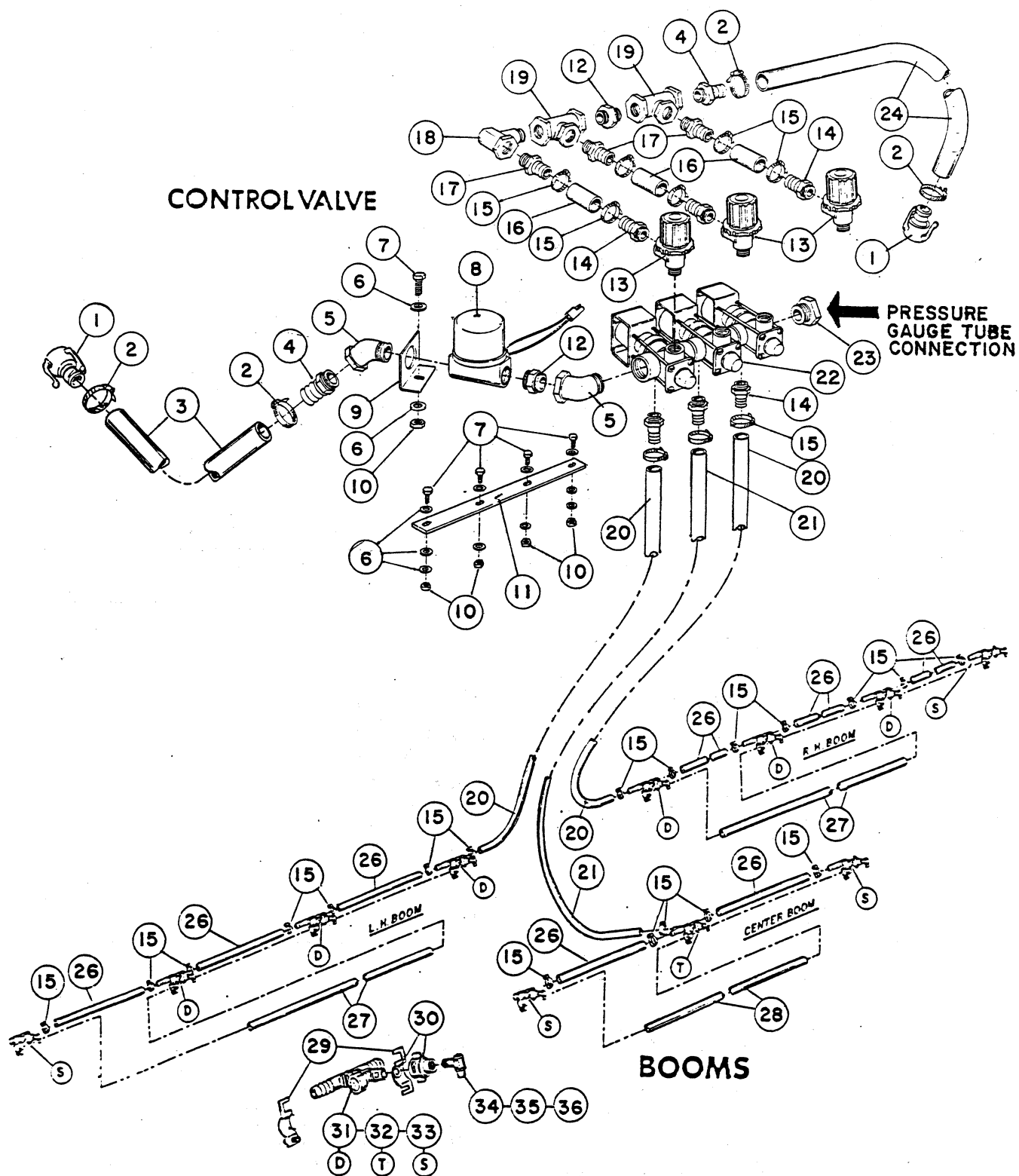
PUMP

REF	PART NO.	DESCRIPTION	QTY
1	41307	90°St. Elbow, 1" NPT	2
2	41306	Reducer Bushing, 1" x 1/2" FPT	1
3	41314	Close Nipple, 1/2" NPT	1
4	40192	Ball Valve, 1/2" NPT	1
5	40486	Qwik Adaptor x 1" MPT	1
	41317	Coupler Dust Cap	1
6	41305	Tee, 1" NPT	2
7	41304	Close Nipple, 1" NPT	2
8	40479	Qwik Apaptor, 1" MPT	1
9	9773	Square Key	1
10	99226	Centrifugal Pump	1
11	41315	Hex Plug, 1" NPT	1
12	9987	Close Nipple, 1-1/4" NPT	1
13	42701	Suction Strainer	1
	42702	Strainer Screen (f/w 42701)	1
	42703	Strainer Gasket (f/w 42701)	1
14	42992	Reducer Nipple, 1-1/4" MPT x 1" MPT	1
15	5706	45°St. Elbow, 1" NPT	1
16	40020	Ball Valve, 1" NPT	1
17	20-49-AGD	H.H.C.S. 3/8 NC x 1-1/2"	2
18	42990	Pump Pivot Plate Assy	1
19	328963	Hair Pin Cotter	1
20	22-13-AJFD	Lock Nut, 3/8 NC	3
21	24-11-AD	Flat Washer, 3/8	2
22	41720	Spring Mounting Angle	1
23	41721	Pump Spring	1
24	40211	Clevis Pin, 1/2 x 3-1/2	1
25	328967	Hair Pin Cotter	1
26	20-59-AGD	H.H.C.S., 3/8 NC x 4"	1
27	24-11-BD	Flat Washer, 3/8 S.A.E.	3
28	42993	Pump Cable	1
29	41142	Pump Belt Cover	1
30	42989	Pump Drive Belt	1
31	31132	Belt Cover Clamp	1
32	40198	Pump Pulley	1

CENTRIFUGAL PUMP (99226)

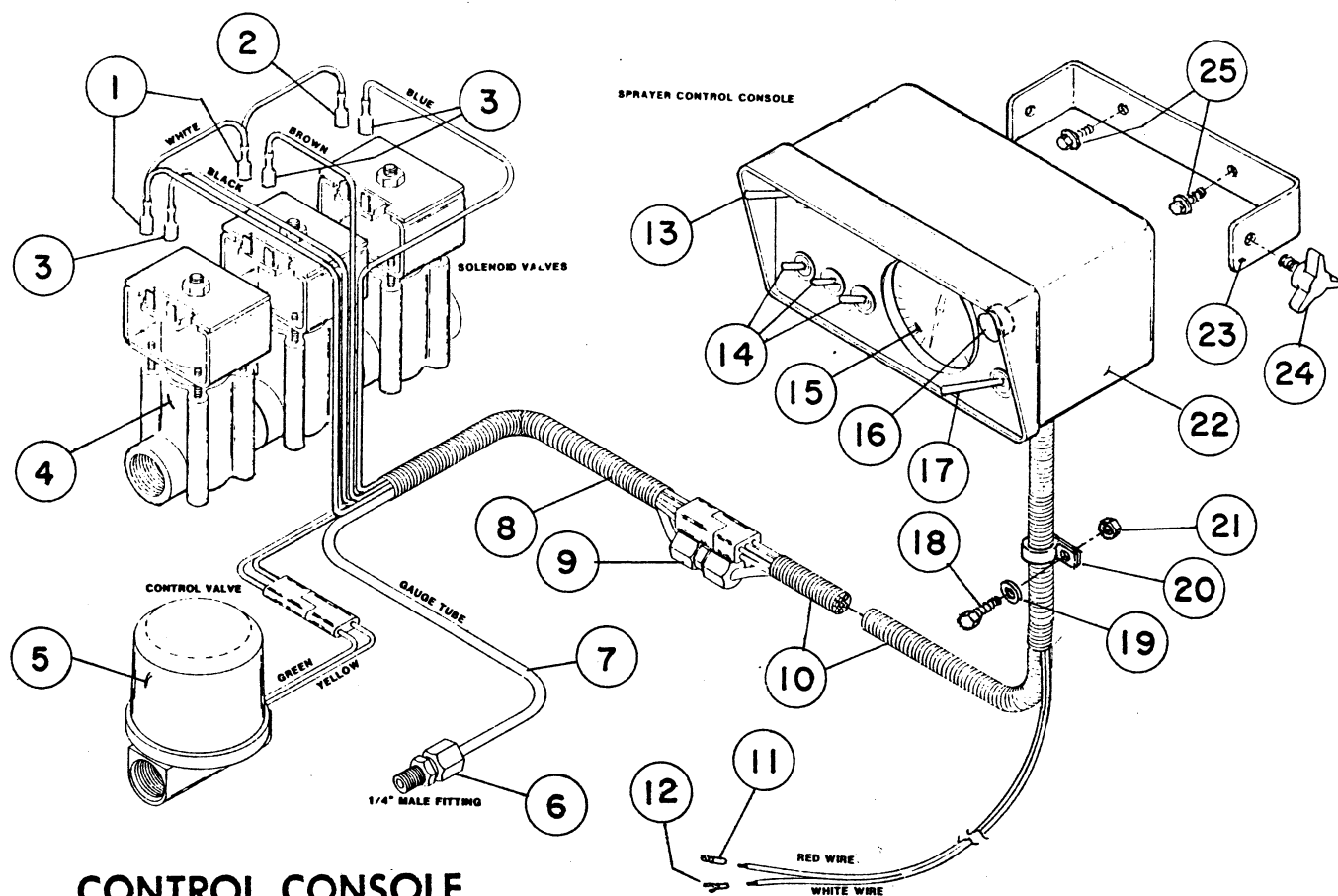


REF	PART NO.	DESCRIPTION	QTY
1	27475	Volute	1
2	27489	O-Ring	1
3	27484	Cap Screw, 5/16 x 1/2 SS	1
4	27485	Lock Washer, 5/16 Stainless Steel	1
5	27487	Flat Washer, 5/16 Stainless Steel	1
6	27478	Shaft Seal	1
	41740	Optional Heavy-Duty Seal	1
7	27482	Impeller	1
8	27486	Square Key, 3/16 x 1/2 Stainless Steel	1
9	27476	Frame	1
10	27477	Shaft, Stainless Steel	1
11	27483	Lock Ring	1
12	27479	Bearing	2
13	27480	Lock Ring	1
14	27490	Repair Kit	AR



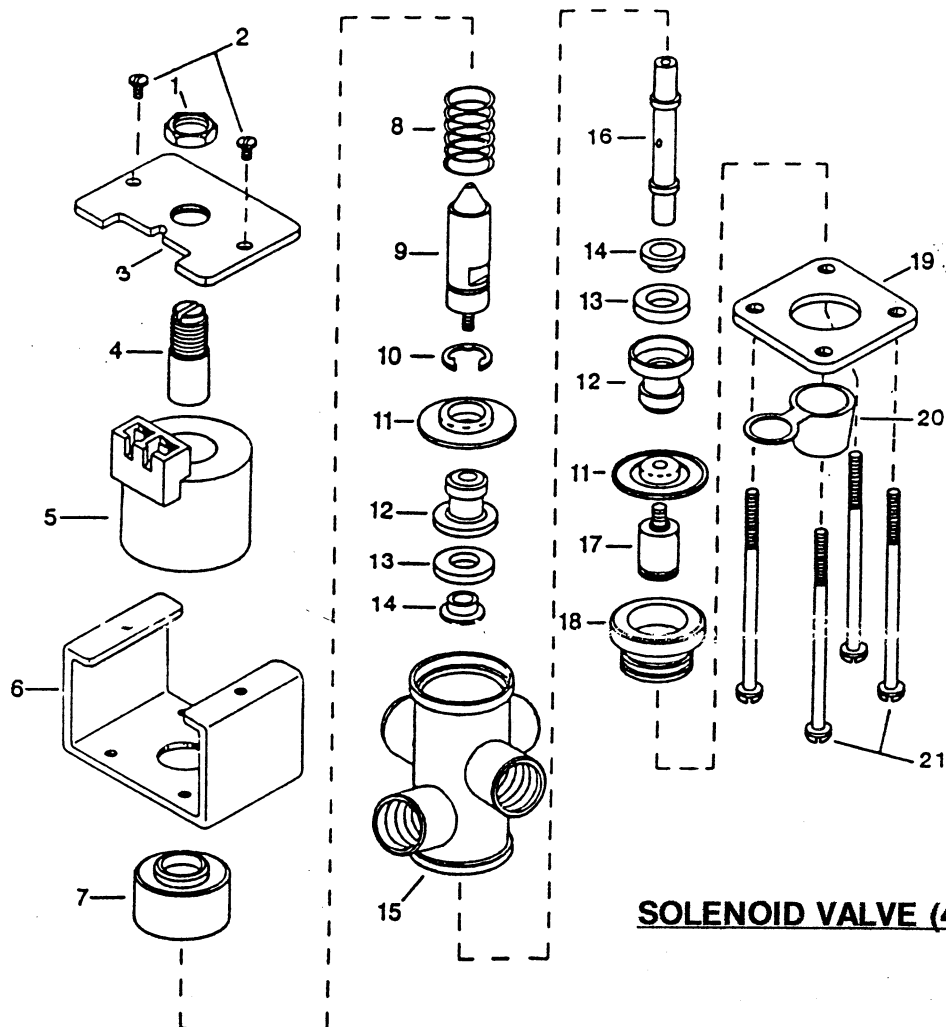
CONTROL VALVE & BOOMS

REF	PART NO.	DESCRIPTION	QTY
1	40480	Qwik Adaptor x 1" H.B.	2
2	21146	Hose Clamp	4
3	42994	Supply Hose, 1" I.D. x 53"	1
4	41730	Hose Barb, 3/4" MPT x 1" H.B.	2
5	42939	45 St. Elbow, 3/4" NPT	2
6	24-10-BD	Flat Washer, 5/16 S.A.E.	11
7	20-26-AGD	H.H.C.S. 5/16 NC x 3/4	5
8	42936	Control Valve	1
9	42938	Control Valve Mounting Brkt	1
10	22-12-AJD	Hex Nut, 5/16 NC	5
11	41325	Solenoid Valve Mounting Strap	1
12	41294	Close Nipple, 3/4" NPT	2
13	42872	Throttling Valve	3
14	41313	Hose Barb, 1/2" MPT x 3/4" H.B.	6
15	6350	Hose Clamp	9
16	42944	Connector Hose, 3/4" I.D. x 2-1/2"	3
17	41257	Hose Barb, 3/4" MPT x 3/4" H.B.	3
18	42940	St. Elbow, 3/4" NPT	1
19	42941	Tee, 3/4 NPT	2
20	41340	Boom Hose, Right & Left	2
21	42274	Boom Hose, Center	1
22	42870	Solenoid By-Pass Valve	1
	42871	Single Solenoid	AR
	41611	Seal Kit for Solenoid	AR
23	41310	Reducer Bushing, 3/4 MPT x 1/4 FPT	1
24	40165	Overflow Hose, 1" I.D. x 29"	1
26	40506	Jumper Hose, 3/4 x 19"	8
27	42282	Extension Boom Pipe Assy	2
28	40493	Center Boom Pipe	1
29	40999	Clamp Assy	11
30	40997	Adaptor Cap & Seat Gasket Assy	11
	40998	Seat Gasket (f/w 40997)	AR
31	41001	Nozzle Body & Check Valve (Double Barb)	6
32	41002	Nozzle Body & Check Valve (Triple Barb)	1
33	41000	Nozzle Body & Check Valve (Single Barb)	4
	41003	Diaphragm (f/w 41000, 41001 & 41002)	AR
34	40444	RA-10 Raindrop Nozzle (Std.)	11
	40223	RA-15 Raindrop Nozzle (Optional)	11
	41088	RA-6 Raindrop Nozzle (Optional)	11
	42828	RA-8 Raindrop Nozzle (Optional)	11
35	41481	Flow Control Cable (6 Ft.)	1



CONTROL CONSOLE

REF	PART NO.	DESCRIPTION	QTY
1	42933	12-10 AWG Female Terminal	2
2	42934	16-14 AWG Female Terminal	1
3	42932	Insulated Female Terminal	3
4	42870	Solenoid Valve	1
5	42936	Control Valve	1
6	42931	Male Fitting	1
7	42930	Guage Tubing	1
8	42935	72" Cable Assem. (Solenoid Hook-Up)	1
9	42929	Union Fitting	1
10	42928	96" Cable Assem. (Enclosure Hook-Up)	1
11	41276	Push-On Terminal	1
12	42875	#10 Spade Terminal	1
13	42923	Master Switch	1
14	42921	Boom Switch	3
15	42924	Pressure Guage (P.S.I.)	1
16	42925	Fuse Holder	1
17	42926	15 Amp Fuse	1
18	42927	Pressure Adjust Switch	1
19	20-26-AGD	H.H.C.S., 5/16 NC x 3/4	1
20	24-10-BD	Flat Washer, 5/16	1
21	41230	Hose Clamp	1
22	22-12-AJD	Hex Nut, 5/16 NC	1
23	42937	Console	1
24	42920	Mounting Bracket	1
25	42922	Knob	2
	34-140-AMVD	Hex Washer Hd. Self-Tap Screw, 1/4 NC x 5/8	2



SOLENOID VALVE (42871)

REF	PART NO.	DESCRIPTION	QTY
1	42125	Jam Nut, Nickel Plated	1
2	42126	Screw, Stainless Steel	2
3	42127	Coil Cover	1
4	42128	Armature Stop, Nickel Plated	1
5	42129	12 V. Coil Assy, Nylon Encapsulated	1
6	42130	Strap, Steel-Epoxy Painted	1
7	42131	Upper Diaphragm Housing, Nickel Plated	1
8	***	Spring, Stainless Steel (f/w 42942 Kit)	1
9	42132	Armature, Nickel Plated	1
10	42133	Retainer Ring	1
11	***	Diaphragm, Rubber (f/w 42942 Kit)	2
12	43002	Seat Washer Retainer, Stainless Steel	2
13	***	Seat Washer , Rubber (f/w 42942 Kit)	2
14	42136	Spacer, Stainless Steel	2
15	42885	Body, Polypropylene	1
16	42886	Stem, Stainless Steel	1
17	42139	Lower Diaphragm Piston, Stainless Steel	1
18	42140	Lower Diaphragm Housing, Stainless Steel	1
19	42141	Bottom Plate, Steel-Epoxy Painted	1
20	42142	Boot, EPOM Rubber	1
21	42887	Screw, Stainless Steel	4

Indicates parts included in spare parts kit #42942

