



MODEL NO. 41520, 41521,
41020, 41021 and 41522

SET-UP AND
PARTS LIST

STANDARD SPRAY SYSTEM FOR USE ON THE MULTI-PRO 5200 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° barbed elbow into the bottom of the Tank.

NOTE: Position the barbed elbow as shown in FIG. 1, so that when the Suction Hose is attached, it will angle toward the left front of the Vehicle after the Tank is installed on the Vehicle.

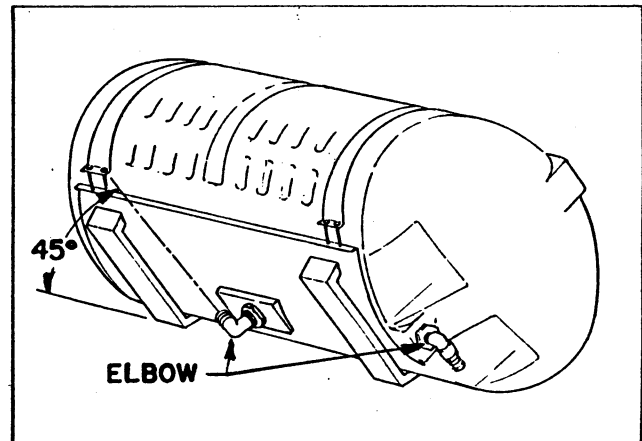


FIG. 1

■ Attach the 1" x 35" Suction Hose to the barbed elbow with a hose clamp. Attach the female Qwik-Coupler to the other end of the Suction Hose with a hose clamp.

■ Attach the 1/2" x 42" Agitator Hose to the fitting at the front of the Tank with a hose clamp. Attach the female Qwik-Coupler to the other end of the Agitator Hose with a hose clamp.

■ 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!

HYDRAULIC SPRAY PUMP: Install the Spray Pump to the mounting bracket on the Vehicle Frame with two 3/8" x 1-1/2" hex hd cap screws and lock nuts.

NOTE: It will be easier to assemble the remaining parts of the Pump Group if the bottom portion of the Suction Strainer is removed.

■ Apply thread sealer and install the Fittings, Ball Valves and Qwik-Couplers as shown in FIG. 2, to connect the Supply, Suction and Agitator Hoses.

■ Connect the two Hydraulic Hoses to the Qwik-Couplers on the Directional Valve.

 **CAUTION!** DO NOT ACTIVATE THE VALVE CONTROL HANDLE UNTIL THERE IS SOME LIQUID IN THE TANK!

CONTROL CONSOLE: Mount the Console Bracket to the left hand side of the Seat Support as shown in FIG. 3. Use one 5/16" carriage bolt through the slotted hole in the Seat Support flange and one in the square hole in the Seat Frame.

■ Use two 1/4" hex washer hd screws, flat washers and hex nuts to install the Mounting Bracket for the Console Control onto the Console Bracket.

■ Place a hose clamp around the Console Cable and using the carriage bolt in the Seat Frame, attach the clamp and Cable to the Console Bracket.

■ 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 Ground 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. 4.

■ Measure carefully and 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. 4.

■ Insert the 20-amp Fuse into the Fuse Block receptacle as shown in FIG. 4.

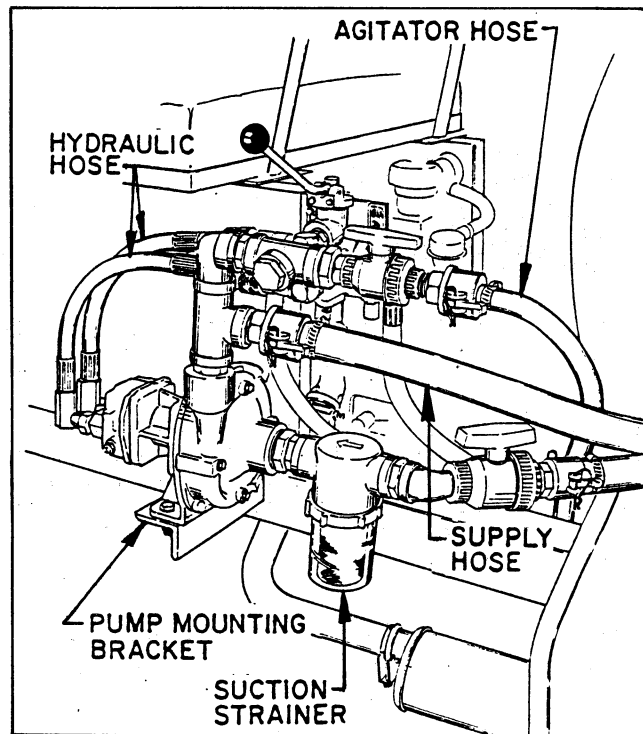


FIG. 2

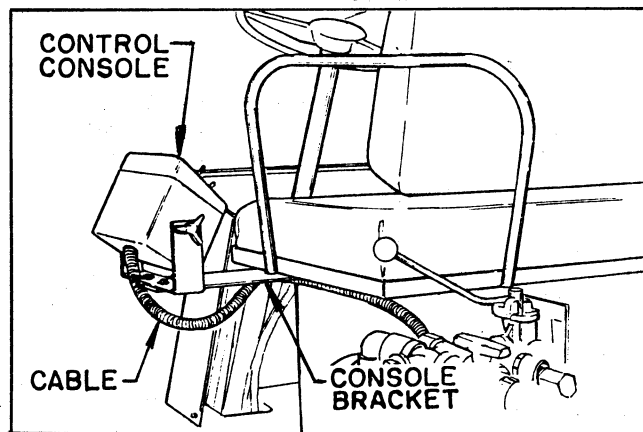


FIG. 3

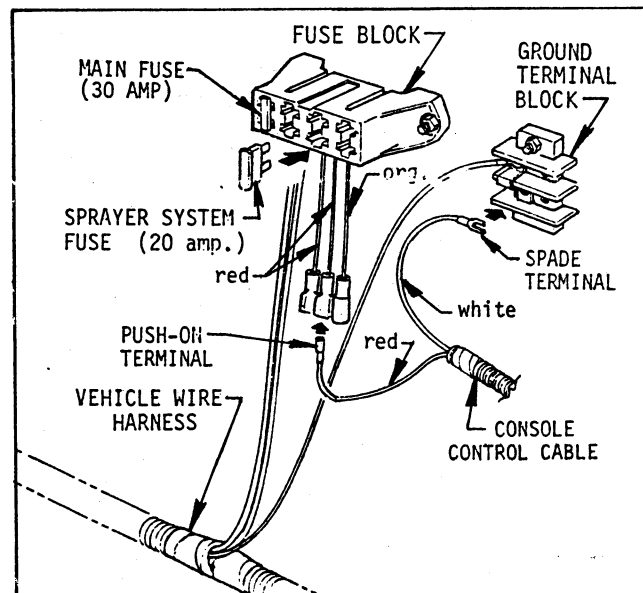


FIG. 4

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. 5. 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. 5 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. 6.

■ Position the two Center Boom Angles on the Main Frame Tube as shown in FIG. 6 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. 6. 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.

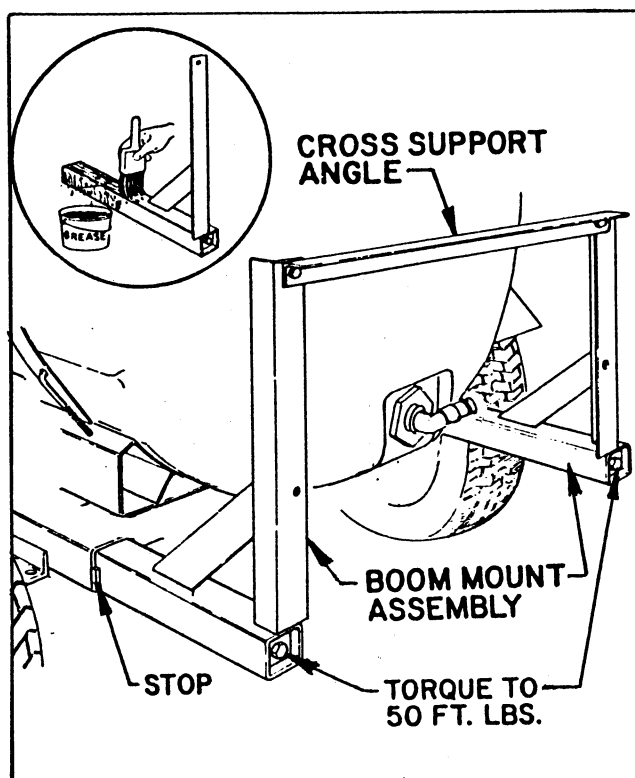


FIG. 5

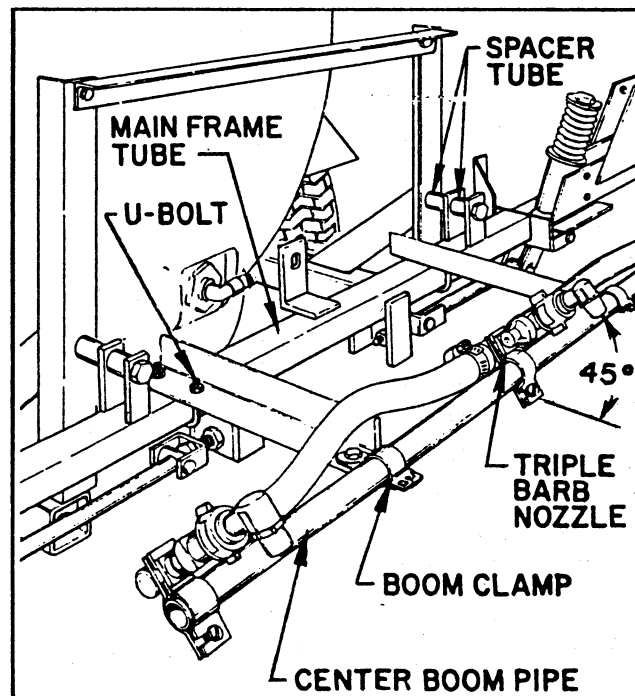


FIG. 6

■ 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. 7. 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. 7. 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 Assemblys on each Extension Boom Pipe as shown in the illustrated Parts List. Nozzles are to be spaced on 20 inch centers. Connect the Nozzle Assemblys 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 Assemblys 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. 8. Use four 5/16" x 1" hex hd cap screws. Place washers below each screw head, between the Strap and the Cross Support and above each hex nut. See page 12.

■ 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.

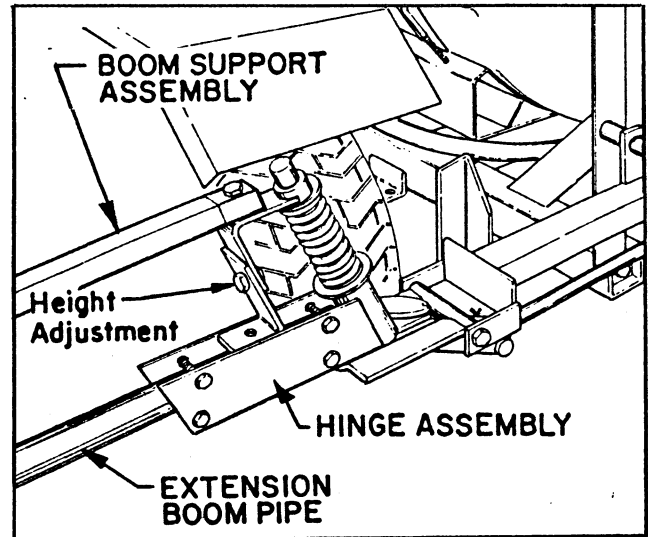


FIG. 7

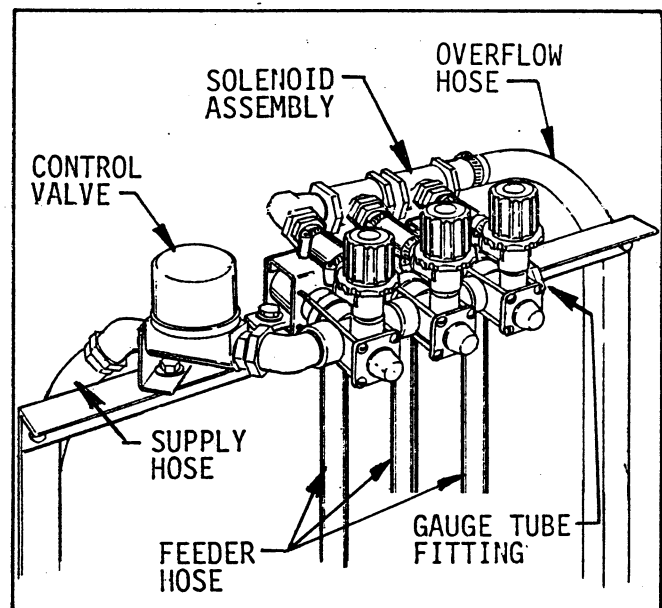
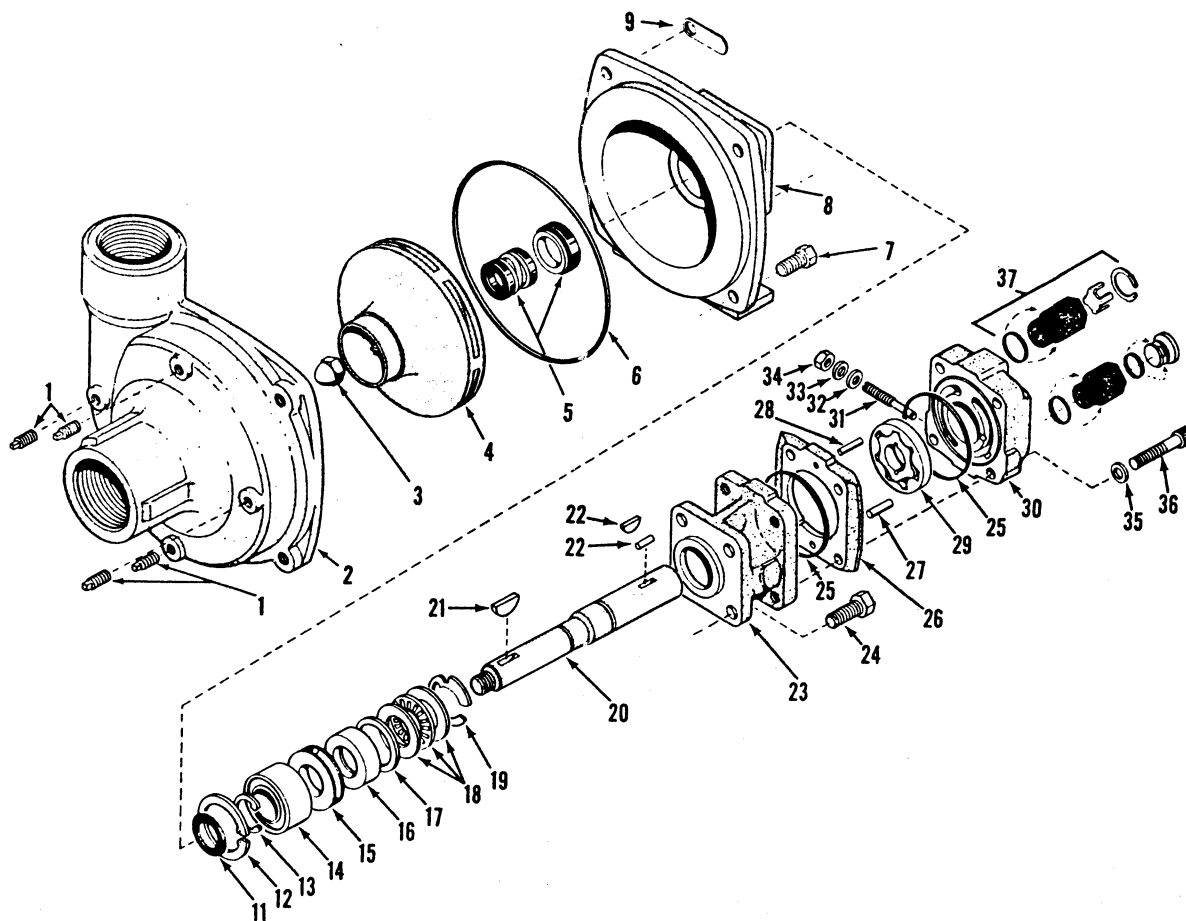


FIG. 8

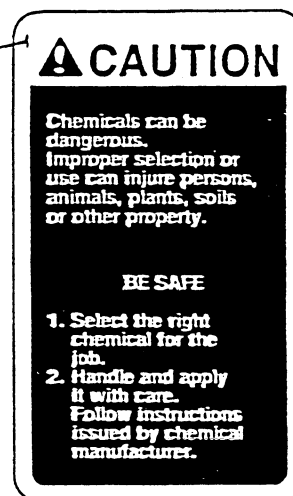
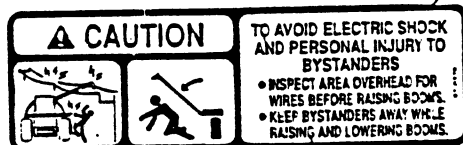
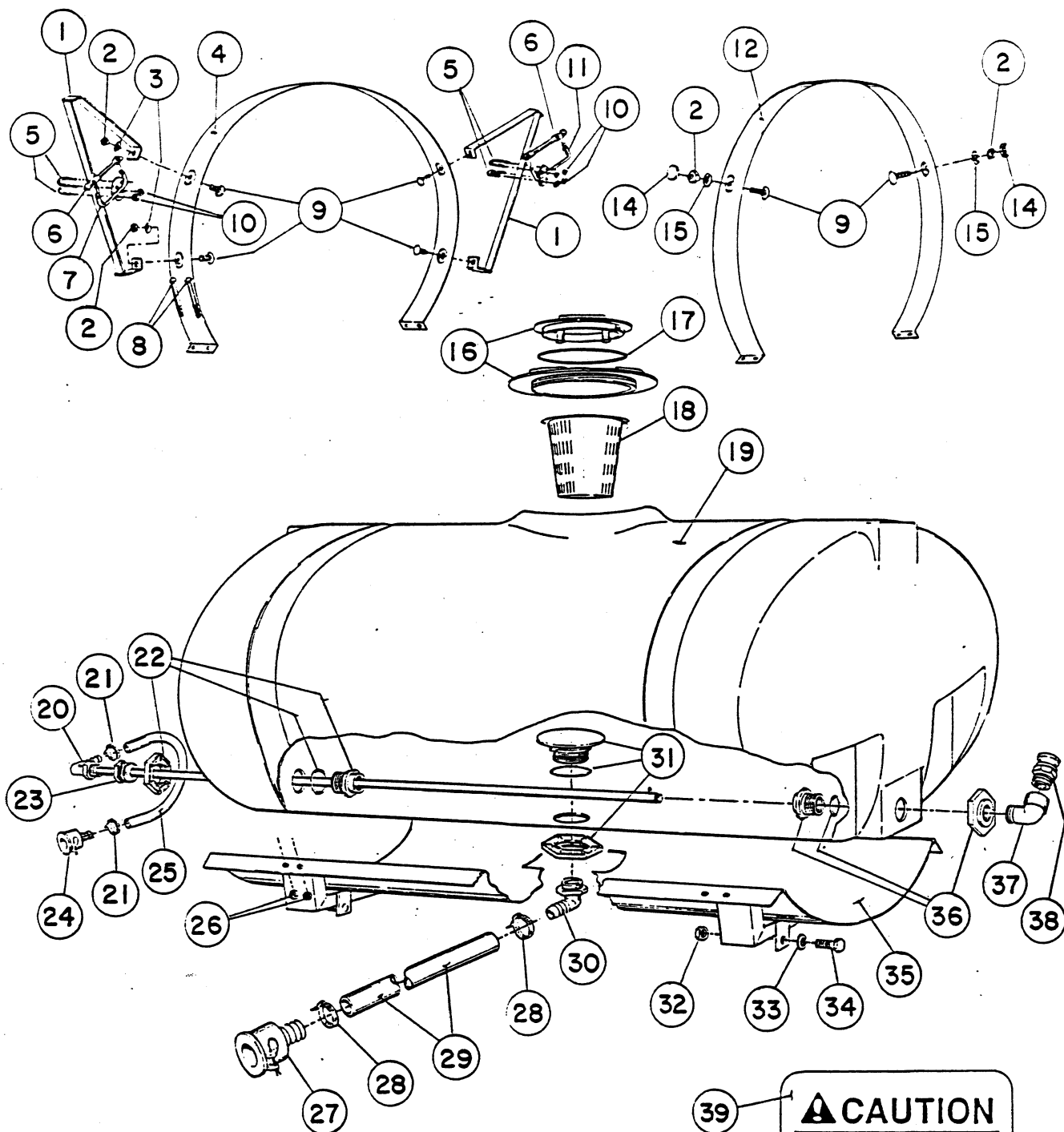
■ Place a hose clamp on the center Boom Feeder Hose and attach it to the triple barb Nozzle on the Center Boom Pipe.

■ 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.

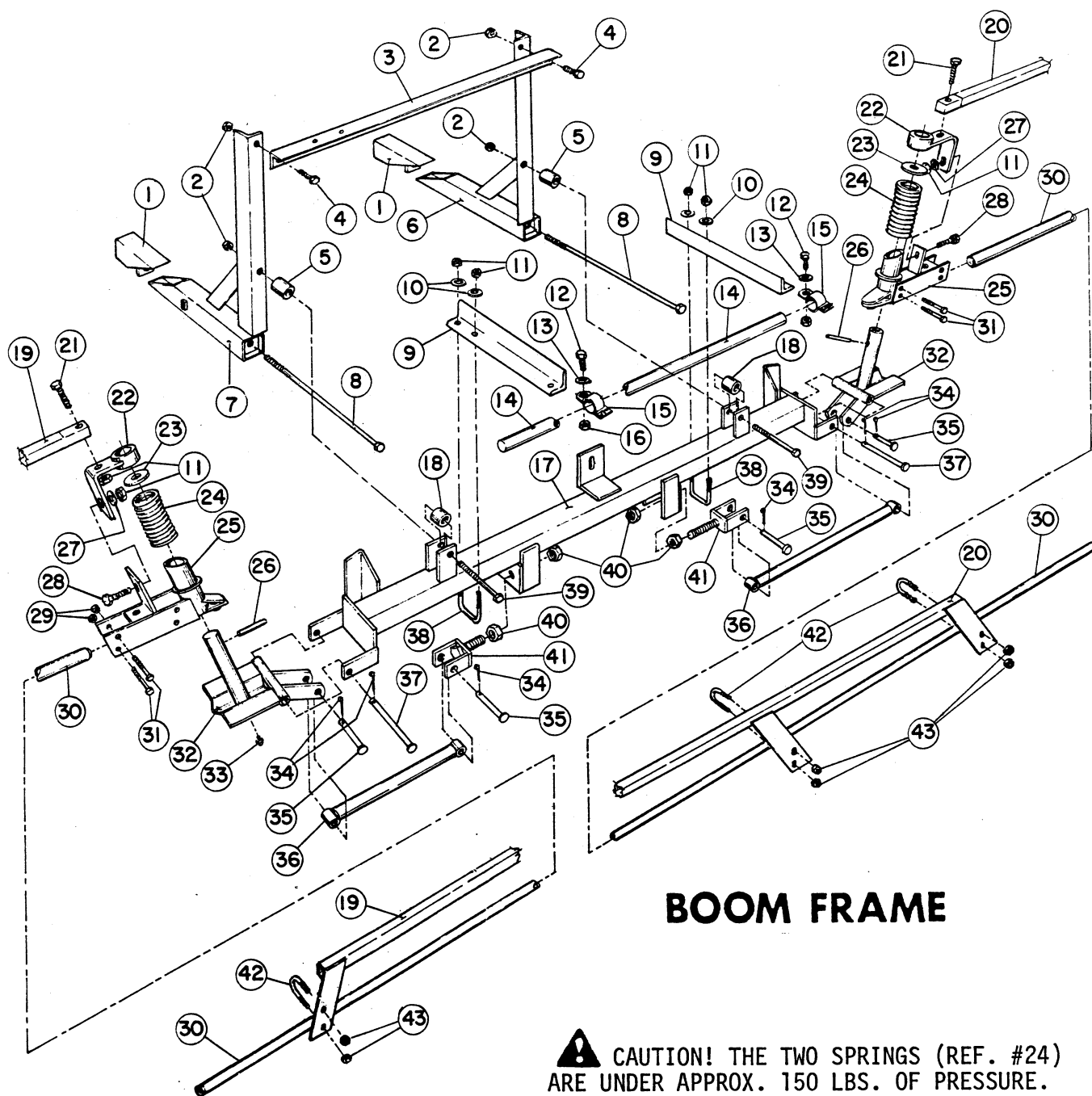


REF	PART NO.	DESCRIPTION
1	42084	Drain/Vent Plug
2	42085	Pump Casing
3	42086	Impeller Nut
4	42087	Impeller
5	42088	Mechanical Seal (Viton)
6	42089	"O"- Ring
7	20-47-AGD	HHCS, 3/8 NC x 1"
8	42090	Mounting Flange
9	42091	Name Plate - Model 9303C-HMI
11	42092	Slinger Ring
12	42093	Retaining Ring
13	42094	Snap Ring
14	42095	Ball Bearing
15	42096	Spacer
16	42097	Shaft Seal
17	42098	Seal Spacer
18	42099	Thrust Bearing Assy. - (Incl. one Bearing & two Races)
19	42100	Snap Ring
20	42101	Shaft
21	42102	Woodruff Key
22	42103	Roll Pin
23	42104	Motor Front Body (Incl. one Main Bearing)
24	20-25-AD	HHCS, 5/16 NC x 7/8
25	42105	"O"-Ring
26	42106	Gerotor Housing
27	42107	Dowel Pin
28	42108	Dowel Pin
29	42109	Gerotor
30	42110	Motor End Plate (Incl. one Main Bearing)
31	42111	By Pass Adjusting Screw
32	42112	Gasket
33	42115	Washer
34	22-13-AJKD	Jam Nut
35	42116	Washer
36	42117	Sckt. Hd Cap Screw, 5/16 NC x 2 1/4
37	42113	Tank Check Valve Assy (Incl. one O-Ring, one Tank) Port Adapter, one Poppet & one Retaining Ring



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	43007	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	41809	Mounting Band Bolt	8
9	25-25-AGD	Carriage Bolt, 5/16 NC x 3/4	6
10	22-11-AJD	Hex Nut, 1/4 NC	8
11	42316	Boom Hold-In Assy. - R.H.	1
12	42215	Mounting Band	2
14	42452	Protective Cap	2
15	23-10-GD	Lock Washer, 5/16	2
16	42322	Tank Lid (f/w Tank Assy)	1
17	42859	Breather Gasket (f/w Tank Assy)	1
18	42323	Filler Basket - 16" (f/w Tank Assy)	1
19	41796	Tank Assembly - 300 Gals.	1
20	42044	Agitator Tube Assembly	1
	42842	Elbow - Agitator Tube (f/w Agitator Tube Assy) ...	1
21	96609	Hose Clamp	2
22	41801	Tank Fitting, 3/4" NPT (f/w Tank Assy)	1
23	41969	Reducer Bushing, 3/4" MPT x 1/2" FPT	1
24	40487	Qwik Coupler x 1/2" Barb	1
25	42946	Agitator Hose, 1/2" I.D. x 42"	1
26	22-13-AJD	Hex Nut, 3/8 NC	8
27	40480	Qwik Coupler, x 1" Barb	1
28	21146	Hose Clamp	2
29	42050	Suction Hose, 1" I.D. x 35"	1
30	42057	90° Elbow, 1-1/4" MPT x 1" Barb	1
31	41798	Anti-Vortex Fitting, 1-1/4" NPT (f/w Tank Assy) ..	1
32	22-17-AJD	Hex Nut, 5/8 NC	2
33	24-15-AD	Flat Washer, 5/8	2
34	20-121-AGD	HHCS, 5/8 NC x 1-1/2" (Grade 5)	2
35	42060	Tank Saddle Assembly	1
36	41800	Tank Fitting, 1" NPT (f/w Tank Assy)	1
37	41307	90° Street Elbow, 1" NPT	1
38	40479	Male Qwik Adaptor, 1" MPT	1
	41318	Qwik-Adaptor Cap	1
39	87-0570	Decal "Electric Shock"	2
40	41186	Decal "Caution-Chemicals"	1



BOOM FRAME

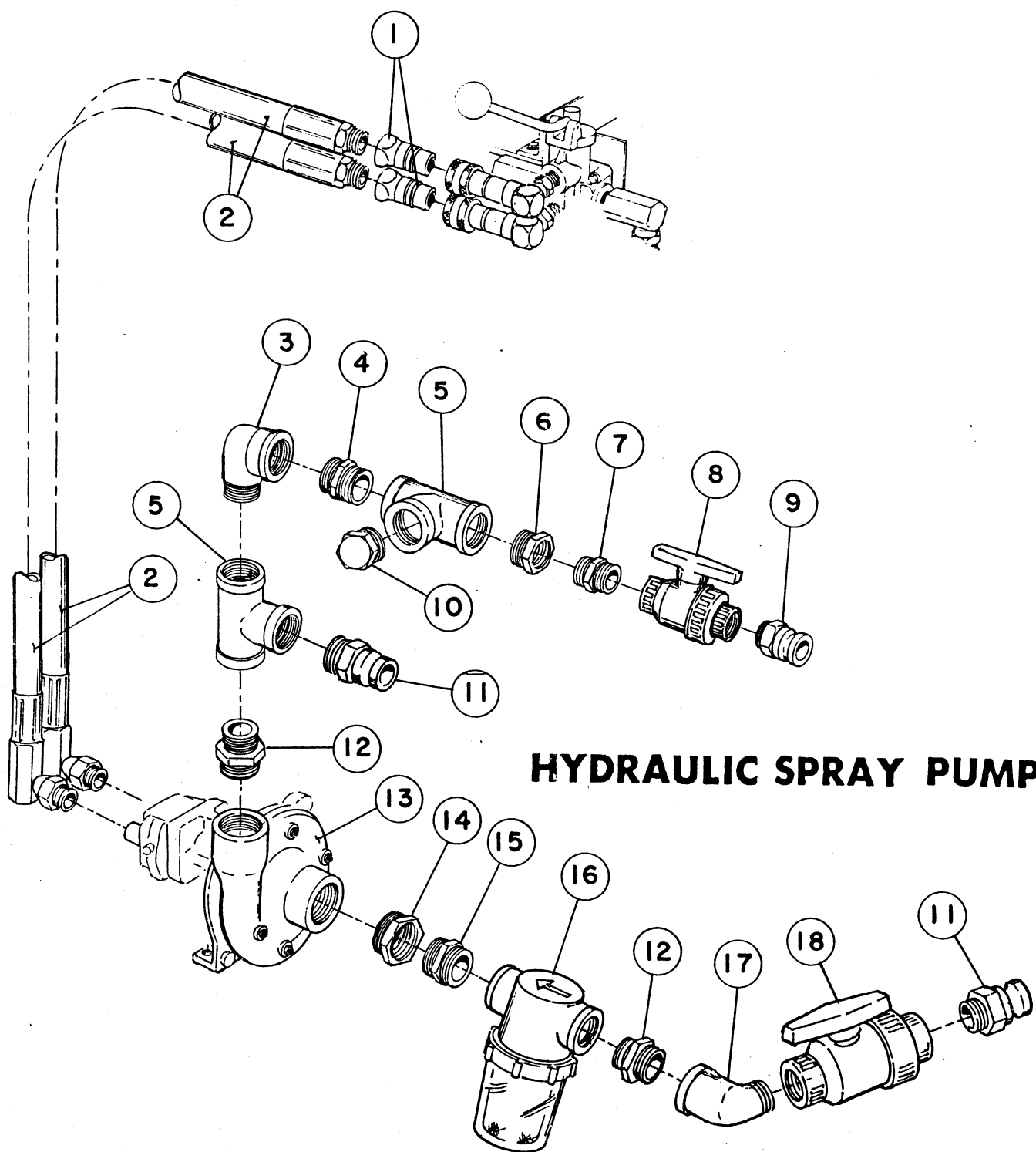
CAUTION! THE TWO SPRINGS (REF. #24) ARE UNDER APPROX. 150 LBS. OF PRESSURE. BE VERY CAUTIOUS WHEN REMOVING THE SPRING PINS (REF. #26) FOR REMOVAL OF THE SPRINGS.

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	42217	Boom Mount Assy	1
7	42222	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

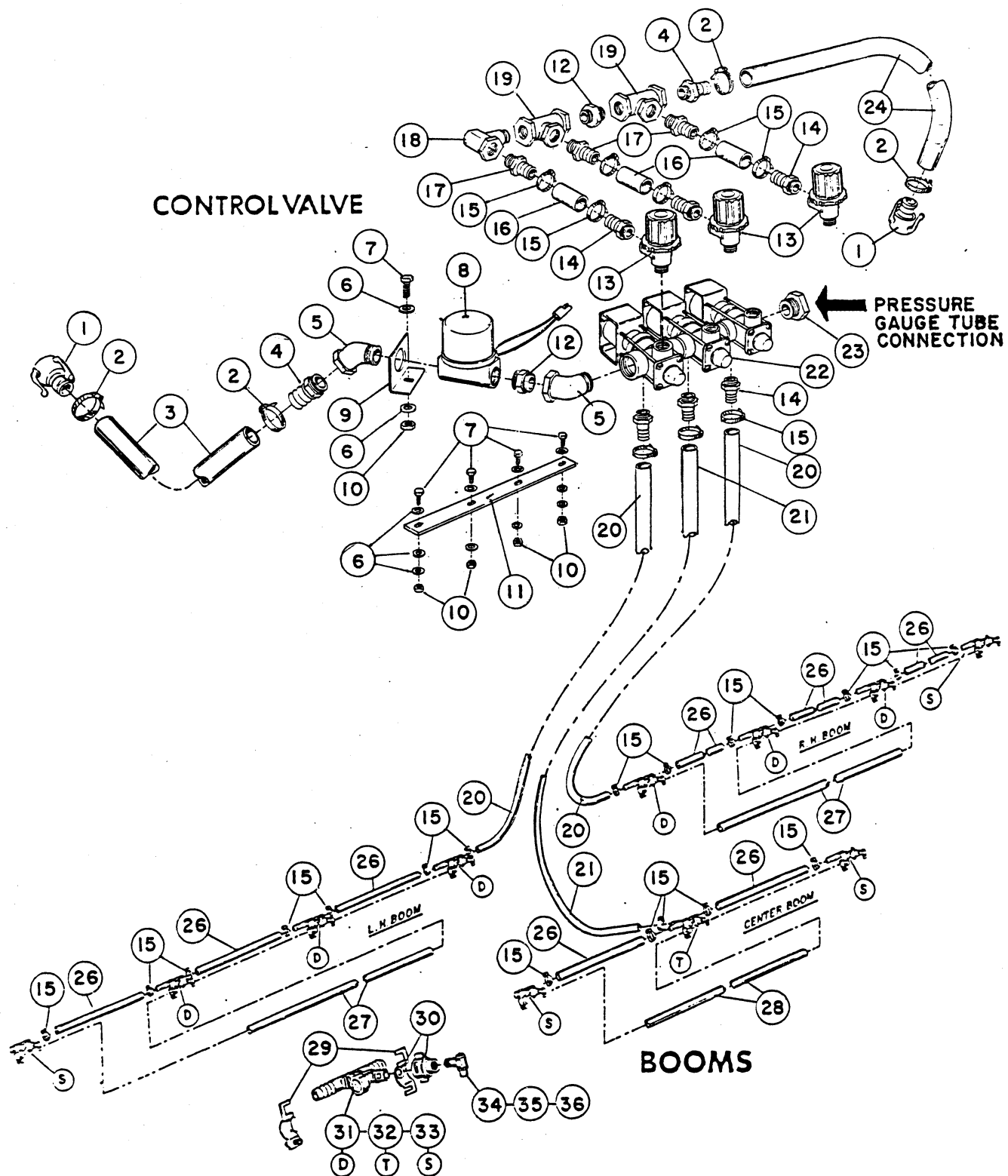
* Denotes parts that are available in an assembled unit.
Order #42840 Breakaway Assembly



HYDRAULIC SPRAY PUMP

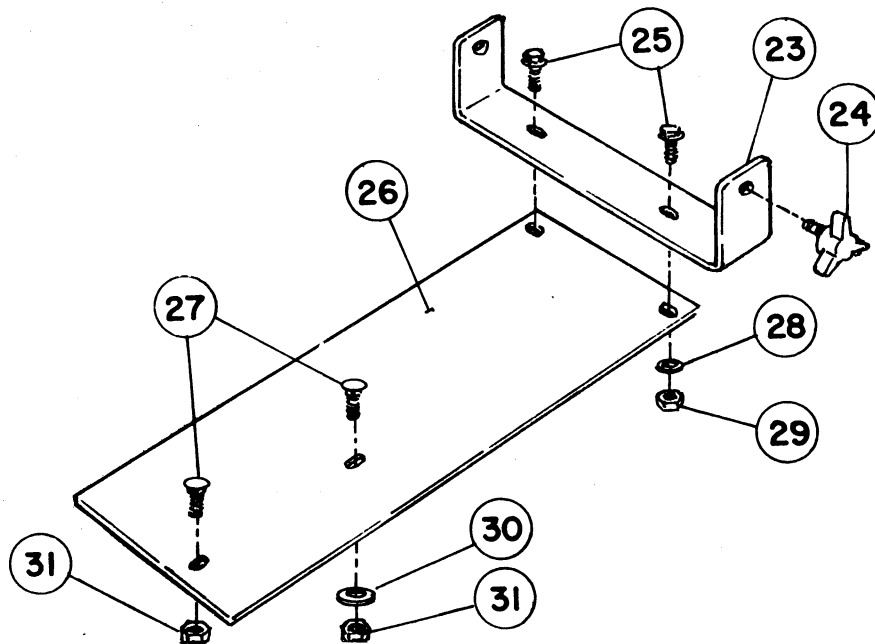
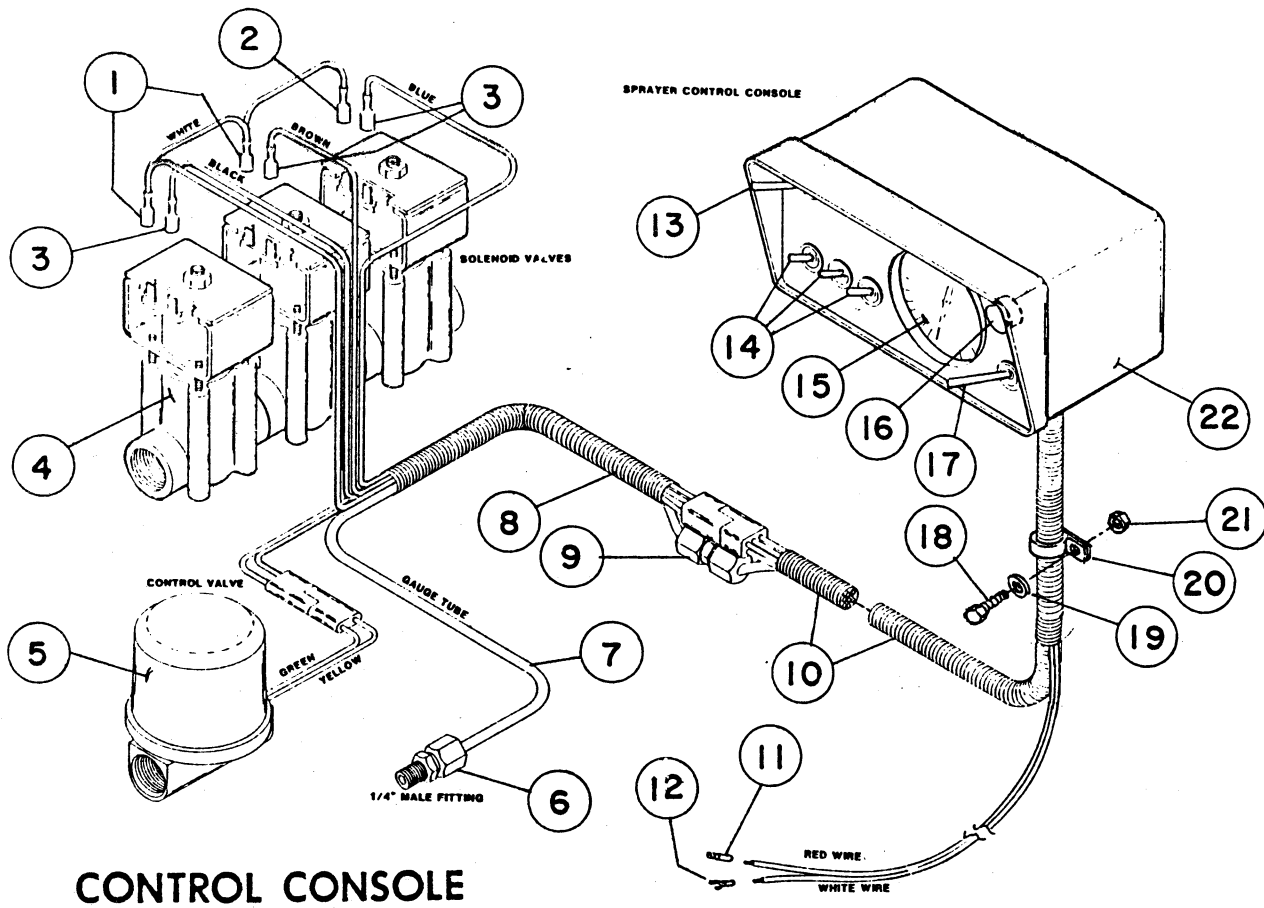
HYDRAULIC SPRAY PUMP

REF	PART NO.	DESCRIPTION	QTY
1	41790	Hydraulic Qwik Coupler (Male)	2
2	42947	Hydraulic Hose Assembly	2
3	41307	90°St. Elbow, 1" NPT	1
4	41304	Close Nipple, 1" NPT	1
5	41305	Tee, 1" NPT	2
6	41306	Reducer Bushing, 1" MPT x 1/2" FPT	1
7	41314	Close Nipple, 1/2" NPT	1
8	40192	Ball Valve, 1/2 NPT (Agitator)	1
9	40486	Male Qwik Adaptor, 1/2" MPT	1
	41317	Qwik-Adaptor Cap	1
10	41315	Plug, 1" NPT (Accessory Port)	1
11	40479	Male Qwik Adaptor, 1" MPT	2
	41318	Qwik-Adaptor Cap	2
12	42992	Reducer Nipple, 1-1/4 x 1" MPT	2
13	41776	Hydraulic Spray Pump	1
	42088	Hydraulic Spray Pump Seal	AR
14	42056	Reducer Bushing, 1-1/2 MPT x 1-1/4 FPT	1
15	9987	Close Nipple, 1-1/4 MPT	1
16	42701	Suction Strainer	1
	42702	Strainer Screen (f/w 42701)	1
	42703	Strainer Gasket (f/w 42701)	1
17	5706	45°St. Elbow, 1" NPT (Suction)	1
18	40020	Ball Valve, 1" NPT (Suction)	1



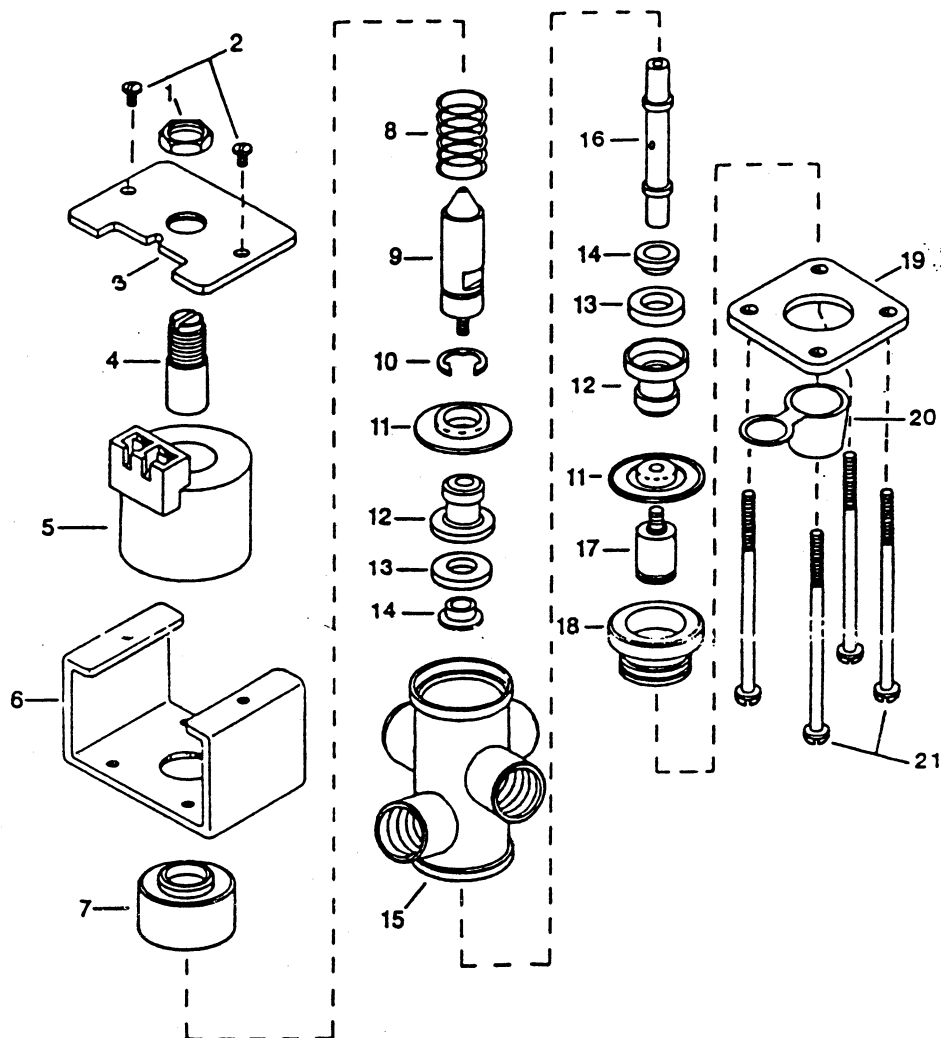
MOTORIZED CONTROL VALVE & BOOMS

REF	PART NO.	DESCRIPTION	QTY
1	40480	Qwik Adaptor x 1" H.B.	2
2	21146	Hose Clamp	4
3	42997	Supply Hose, 1" I.D. x 92"	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
	42942	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
	42926	15 Amp Fuse	1
17	42927	Pressure Adjust Switch	1
18	20-26-AGD	H.H.C.S., 5/16 NC x 3/4	1
19	24-10-BD	Flat Washer, 5/16	1
20	41230	Hose Clamp	2
21	22-12-AJD	Hex Nut, 5/16 NC	1
22	42937	Console	1
23	42920	Mounting Bracket	1
24	42922	Knob	2
25	34-140-AMVD	Hex Washer Hd. Self-Tap Screw, 1/4 NC x 5/8	2
26	42943	Control Console Bracket	1
27	25-25-AGD	Carriage Bolt, 5/16 NC x 3/4	2
28	24-9-AD	Flat Washer, 1/4	2
29	22-11-AJD	Hex Nut, 1/4 NC	2
30	24-10-BD	Flat Washer, 5/16 S.A.E.	1
31	22-12-AJD	Hex Nut, 5/16 NC	2



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