



GPE SERIES SPRAYERS

**Operation, Service
& Parts Manual For
GPE800P
Engine Trailer Sprayer**

July 2006

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! WARNING !

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

INTRODUCTION

We welcome you as an owner of a Gearmore GPE Series, handgun-boom sprayer. Before you read on to the operation and maintenance of the sprayer, please read the following general information.

Power Source: The Sprayer is designed to be powered by Honda or Briggs & Stratton engine.

Type of Undercarriage: The sprayers are available as trailer or skid mounting and can easily be converted from one to the other by ordering the proper kit.

Pump: The pump on the sprayer is a diaphragm pump. Pistons power the diaphragms that pump the liquid. The unit has protection against corrosion, as the valves are stainless steel and other parts that come in contact with the liquid are plastic coated or brass.

Tank: The tank comes with a mechanical agitation system. It also has a sump so the tank can be completely drained.

Strainers: The sprayer is equipped with two strainers. A large filter screen is located under the tank cover and the main strainer located under the tank. To clean the strainer filter, remove colored knob, either yellow or blue, by turning it 1/2 a turn and pulling it out of the bottom of the filter assembly. This will release the steel rod plunger internally and shut off the liquid from the tank.

BEFORE OPERATING YOUR NEW SPRAYER

1. Inspect for damage and loose or missing parts. Make sure all fitting and drive components are secure.
2. Lubricate. See lubrication section for details.
3. Check tank for any foreign objects.
4. Fill tank 1/2 full with clean water. Do not add spray chemicals until sprayer is started, adjusted, and calibrated.

OPERATING INSTRUCTIONS

1. Connect sprayer to the tractor hitch.
2. Check strainer screen to make sure it is clean.
3. Start engine.
4. Turn on valve for the shower head located in the main tank strainer. Add wettable powders slowly, and be sure to wear goggles for protection.
5. Set regulator pressure as required.
6. If using a handgun to spray, just connect the hose to the hose fitting valve and turn on when using.
7. If you purchased the optional spray boom, connect the 3 hoses from the boom to the 3 on-off valves. Turn hand valves on or off depending on your requirements for left, right, or full boom spraying.

The boom nozzle spray tips are general purpose flat fan type. If other sizes or types are required, use “Spray Systems” or equal.

LUBRICATION

Engine: Refer to engine book for details.

Pump: The clear oil reservoir should be filled to the indicator mark. If oil is low, add SAE 30 weight engine oil.

Mechanical Agitator: The large brass hex nut on the end of agitator shaft has packing inside to prevent leaks. In addition, a grease zerk is provided and should be greased occasionally. If leaking occurs after greasing, the packing may have to be tightened by turning the brass nut. (Be careful to not overtighten the nut) If leaking still occurs the packing may have to be replaced.

PREPARATION

GENERAL MAINTENANCE

Carefully follow all instructions as stated in this operators manual. This includes lubrication, maintenance and operation of the sprayer. The sprayer was designed and built for years of reliable service if properly cared for. However, a sprayer is a precision machine, thus daily attention is required.

1. Check all bolts for tightness.
2. Check sprayer for leaks.
3. Check agitator belt.
4. Check lubrication - see lubrication section.

CLEANING & STORAGE

1. Wash and flush out sprayer after completion of each phase of your spraying program.
2. Flush out sprayer when changing chemicals if there is a possibility of incompatibility.
3. Clean sprayer very thoroughly before storing at the end of the spraying season. If you are in a cold climate, final rinse should be with a sufficiently concentrated anti-freeze to prevent freeze-up in areas that were not thoroughly drained.
4. Check sprayer over for needed repairs before time to spray again.
5. Preparing the sprayer for use in the Spring means completion of all needed repairs, installation of all drain plugs and checking sprayer for leaks with a tank of water.

SAFETY TIPS

Sprayer should be operated only by qualified persons.

Always fill sprayer slowly to avoid spillage.

When starting sprayer, maintain a safe distance from moving parts.

Never run P.T.O. at speeds in excess of 540 rpm.

Do not make adjustment when sprayer is running, unless specifically recommended.

Never leave sprayer unattended while it is running.

Keep hands, feet and clothing away from all moving parts.

Handle chemicals carefully; follow the manufacturer's directions for mixing and applying chemicals.

GENERAL SAFETY INFORMATION

1. Use of pressure relief device on the discharge side of pump is required to prevent damage from pressure build up if the discharge is closed or blocked while the power source is still running.
2. **WARNING:** Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres. The pump should be used only with liquids compatible with the pump component materials. Failure to follow this warning can result in personal injury and/or property damage and will void the product warranty.
3. Do not operate pump above recommended R.P.M.
4. Do not pump at pressure higher than the maximum recommended for the pump (see specifications).
5. Operate pump between 45° and 145° F liquid temperatures.
6. Make certain that the power source conforms to the requirements of your equipment.
7. Provide adequate protection in guarding around the moving parts such as the shaft and pulleys.
8. Disconnect power before servicing.
9. Release all pressure within the system before servicing any component.
10. Drain all liquids from the system before servicing.
11. Secure the discharge lines before starting the pump. An unsecured discharge line may whip, causing personal injury and/or property damage.
12. Check hoses for weak or worn condition before each use. make certain that all connections are tight and secure.
13. Periodically inspect the pump and the system components. Perform routine maintenance as required (see maintenance section).
14. Do no operate a gasoline engine in an enclosed area. Be sure the area is well ventilated.
15. Use only pipe, hose and fittings rated for maximum rated pressure of pump or pressure at which pressure relief valve is set. check with local supplier for proper pressure rating. Do not use used pipe!
16. Do not use these pumps for pumping water or other liquids for human or animal consumption.

PUMP MAINTENANCE

The pump is serviced, tested, and ready for use. Nevertheless, before starting the sprayer, we advise checking the oil level.

The oil level should be filled to the mark on the plastic tube.

When adding oil, remove oil filler cap and fill to level mark with SAE 30 weight engine oil.

- After use, flush pump with clean water.
- Change oil and diaphragms every 500 hours. To drain oil from pump, remove drain plug and rotate the shaft until the oil stops flowing out. To fill pump with oil, slowly pour oil into sight tube while turning the pump shaft. Turning the pump shaft purges all the air out of the crankcase. Always change oil when replacing diaphragms. oil capacity is approximately 2 quarts.
- For winter storage or if freezing condition will be encountered, flush pump with a 50/50 mixture of water and anti-freeze.

DIAPHRAGM & VALVE REPLACEMENT

I. Valve and o-ring replacement

1. Occasionally debris can cause the valves to not seat properly or damage the o-rings. To check for this problem:
 - A. Remove manifold on pump head assembly.
 - B. With manifold removed, valves can readily be removed and checked for debris or wear.
 - C. To replace valves or o-rings, refer to parts list for appropriate kits.

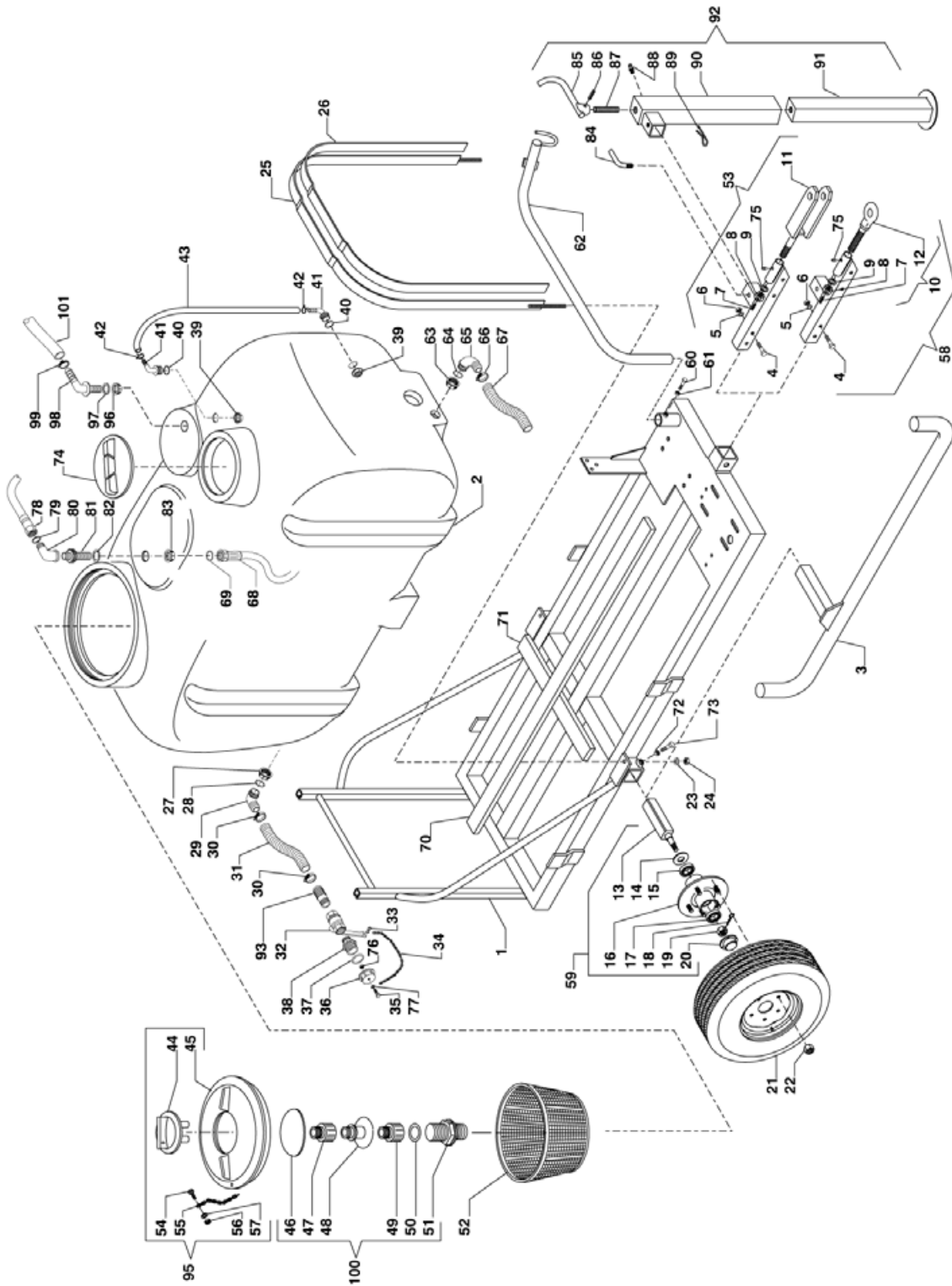
II. Diaphragm replacement

1. Drain the oil from the pump by removing drain plug. Rotate the shaft to remove excess oil.
2. Remove the pump manifold head.
3. Use a box wrench to remove the diaphragm retaining bolt, support washer and diaphragm.
 - A. To replace diaphragms order appropriate repair kit. (See parts list)
4. Turn the crankshaft to bring the piston to its downstroke and seat the new diaphragm into the sleeve groove. Install retaining washer and tighten nut.
5. Refill crankcase with 30 weight engine oil. Rotate the shaft to distribute oil and fill to proper level.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The pump does not draw water	One or more valves are seating improperly.	Examine the valve seatings and clean them.
	Suction line is plugged or collapsed - Clogged strainer.	Examine suction line - clean strainer.
Pressure gauge fluctuates excessively	The pump is sucking in air through the suction union or air has not been entirely evacuated from the pump.	Examine the suction hose and make sure it is firmly secured. Run the pump with the outlet hose open to evacuate air from pump.
The liquid flow is irregular	One or more valves are seating improperly.	Examine the valve seatings and clean them.
Output drops and the pump is noisy	Oil level is too low.	Add oil to correct level (halfway up the sight tube).
Oil comes out of the discharge port	One or more diaphragms split.	Drain the pump of oil. Dismantle the heads and fit new diaphragms. Fill to correct oil level with Motor oil (30W).
Water is pumped at little or no pressure	The sealing valve on the pressure control valve is worn.	Renew washer and, if necessary, the valve seat.

FRAME ASSEMBLY



FRAME ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	0101747	Frame GPE800P
2	1	0600234	Tank
3	2	1400001	Ring Nut 1/2
4	2	1800074	Bolt M14 x 90 UNI 5738-8.8 Galvanized
5	4	1800150	Plain Washer UNI 6592 M.14
6	2	1800195	Nut M14 UNI 5588-6.8 Galvanized
7	1	1800305	Elastic Pin 5 x 45 UNI 6873-C70
8	1	1800230	Nut M30 UNI 5587-6.8 Galvanized
9	1	1800175	Washer 34 x 60 UNI 6592 R 4033 Galvanized
10	1	2100002	Eye M30
11	1	0100468	Fork Drawbar
12	1	2100002	Eye M30
13	2	0101591	Axle A505159
14	2	35X72X10	Seal Ring 35 x 72
15	2	30208	Inner Bearing
16	2	0101594	Complete Hub
17	2	30206	Outer Bearing
18	2	1800372	Split Pin
19	2	0101602	Nut
20	2	0100668	Cap D.52
21	2	0700114	Wheel 20.5 x 8.0 - 10 PR10 TL S368 DELI 5 FORI
22	10	0101602	Nut
23	9	1800120	Flat Washer UNI 6592 M.8 Galvanized
24	2	1800181	Nut Aut. High CL. 8 M 8
25	1	0101748	Clamp Locking Tank
26	3	LGOH000250004	Adhesive List Mousse 25 x 5
27	2	1400024	Ring Nut 1"
28	2	1700016	Gasket D.46 x 33 x 2
29	2	1400065	Elbow Fitting D.30 - 1"
30	6	1500004	Clamp Perfect 21 x 38
31	1	1600762	Spiral Hose D.30 L=200
32	1	1300044	Ball Valve Export 1" A.4170
33	3	1900056	Hook For Chain
34	3	1400007	Plastic Chain D.3.5 L=300
35	1	1800012	Bolt M6 x 25 A2 UNI 5739
36	1	1400010	Female Plug 1" 1/4
37	1	1700011	Gasket D.40 x 25 x 4
38	1	1400232	Nipple MM 1" - 1" 1/4
39	5	1400001	Ring Nut 1/2
40	5	1700001	Gasket D.32 x 21 x 2
41	2	1400130	Elbow Fitting D.13 1/2
42	2	1500030	Clamp BIF. A Spring 173 mm 16.8-17.7
43	1	1600571	Crystal Hose 12 x 17 L=750
44	1	352000	Vent Lid

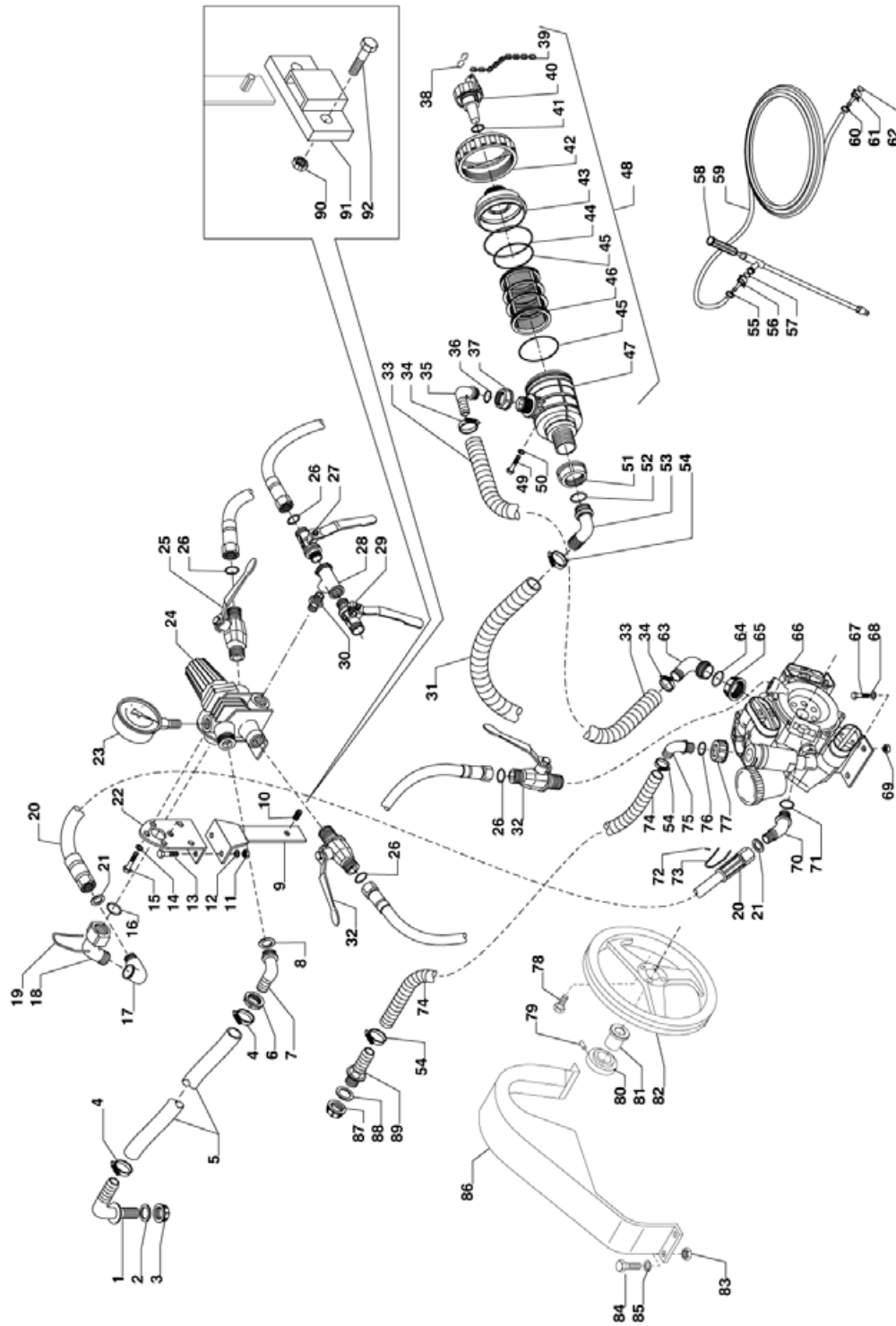
FRAME ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
45	1	3522060	Threaded Cover D.455
46	1	1400006	Shower
47	2	1400004	Adapter MF 1/4 - 3/4
48	1	1400005	Diffuser MF 3/4 - 1/4
49	2	1400004	Adapter MF 1/4 - 3/4
50	1	1700006	OR D.36 x 26 x 5
51	1	1400003	Fitting 1/2 - 3/4
52	1	0600005	Tank Filter
53	1	0100225	Complete Fork Pole
54	1	1800009	Bolt TPS M 5 x 12 UNI 6109-4.8 Galvanized
55	3	1400007	Plastic Chain D.3.5 L=300
56	1	1800177	Nut M5 A2 UNI 5587
57	1	1800113	Washer M6
58	1	0101804	Complete Hook Pole
59	2	0101268	Axle Q.50 L=355
60	1	1800036	Bolt M10 x 25 UNI 5739 8.8 Galvanized
61	1	1800185	Nut UNI 5587 CL.8 M10 Galvanized
62	1	0100037	Hook Support
63	2	1400024	Ring Nut 1"
64	2	1700016	Gasket D.46 x 33 x 2
65	2	1400065	Elbow Fitting D.30 - 1"
66	6	1500004	Clamp Perfect 21 x 38
67	1	1600216	Spiral Hose D.30 L=900
68	1	1600283	Hose Co. PVC 10 x 19 80 Bar L=700
69	2	1700010	Gasket 18 x 12 x 2 White
70	3	LGOH000250004	Adhesive List Mousse 25 x 5
71	3	LGOH000250004	Adhesive List Mousse 25 x 5
72	4	1800190	Nut M 12 UNI 5587-6.8 Galvanized
73	4	1800055	Bolt M12 x 45 UNI 5739-8.8 Galvanized
74	1	1400339	Cover DIA.250 mm
75	2	1800300	Grease Zerk M6 Right
76	1	1800179	Nut M6 UNI 5587-6.8 Galvanized
77	2	1800120	Flat Washer UNI 6592 M.8 Galvanized
78	2	1600082	Hose CO.PVC 10 x 19 80 Bar L=1650
79	2	1700010	Gasket 18 x 12 x 2 White
80	1	1300001	Brass Elbow MF 1/2 - 1/2
81	1	1400002	Nipplo 1/2 - 1/2
82	5	1700001	Gasket D.32 x 21 x 2
83	5	1400001	Ring Nut 1/2
84	1	0100025	Pin D.8
85	1	0100024	Handle
86	1	1800309	Elastic Pin 6 x 26 UNI 6873-C70
87	1	0100023	Filett Pivot M22
88	1	1800300	Grease Zerk M6 Right

FRAME ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
89	1	2100006	Pin R2
90	1	0100020	Left Cover
91	1	0100021	Step
92	1	0100380	Jack Stand 600-800
93	1	1400129	Fitting D.30 1"
94	1	1600411	Hose PVC 19 x 26 20 Bar L=3200
95	1	3522060	Tank Cover
96	1	1400001	Ring Nut 1/2
97	1	1700001	Gasket D.32 x 21 x 2
98	1	1400062	Elbow Connector D.20 1/2 G
99	2	1500003	Clamp Perfect 14 x 27
100	1	1400035	Hydraulic Powder Mixer
101	1	1600411	Hose PVC 19 x 26 20 Bar L=3200

PLUMBING



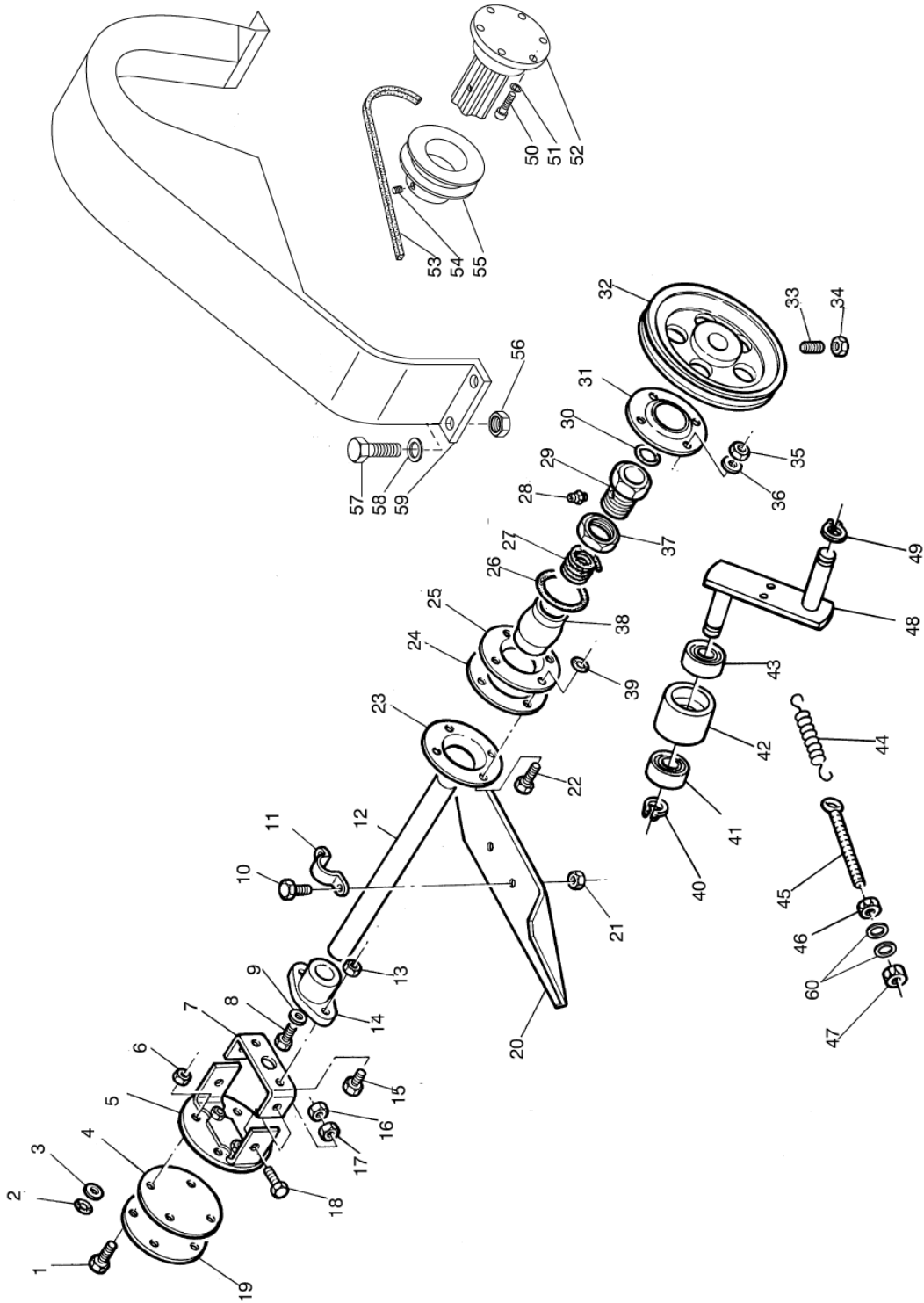
PLUMBING

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	1400062	Elbow Connector D.20 1/2 G
2	1	1700001	Gasket D.32 x 21 x 2
3	1	1400001	Ring Nut 1/2
4	2	1500003	Clamp Perfect 14 x 27
5	1	1600411	Hose PVC 19 x 26 20 Bar L=3200
6	2	AR550450	Ring Nut
7	2	AR550460	Elbow
8	2	AR880831	O-Ring
9	1	0100509	Valve Support
10	1	1800319	Elastic Pin 8 x 20 UNI 6873-C70
11	6	1800180	Nut M8 UNI 5587-6.8 Galvanized
12	9	1800120	Flat Washer UNI 6592 M.8 Galvanized
13	4	1800021	Bolt UNI 5739 8.8 8 x 20 Galvanized
14	2	AR390311	Washer
15	2	AR180431	Bolt M8 x 16
16	4	AR390180	O-Ring
17	1	1300019	Brass Curve MF 3/4 - 3/4
18	1	AR1040770	Coupling
19	2	AR1040690	Fork
20	1	1600211	Hose CO. PVC 13 x 23 100 Bar L=2400
21	2	1700025	OR D.22.2 x 16.2 x 3
22	1	AR1150590	Bracket
23	1	AR550545	Pressure Gauge D.63 0-50 Bar
24	1	AR30716	Regulator RM40S (3 Ways)
25	1	AR130491	Cock R.H. 1/2-3/8" "Meteor" A.5263
26	2	1700025	OR D.22.2 x 16.2 x 3
27	2	AR130491	Cock R.H. 1/2-3/8" "Meteor" A.5263
28	1	1300160	Fitting A T FFF 1/2-1/2-1/2
29	4	AR130492	Valve L.H. 1/2-3/8" A.5264
30	1	1300137	Copper Nipplo 3/8
31	1	1600216	Spiral Hose D.30 L=900
32	3	AR130492	Valve L.H. 1/2-3/8" A.5264
33	1	1600762	Spiral Hose D.30 L=200
34	6	1500004	Clamp Perfect 21 x 38
35	2	1400049	Elbow Fitting D.30
36	2	1700066	OR D.31 x 25 x 3
37	2	1400013	Fly Nut 1" 1/4
38	1	2100153	Armed Draw
39	1	1900056	Hook For Chain
40	1	1400205	Cover Filter Plug
41	1	1700051	OR Viton Dia.31.0 x 2.5
42	1	1400089	Ring Nut
43	1	1400207	Filter Cover
44	1	1400209	OR 5.34 x 91.44 x 102.1
45	2	1700052	OR Dia. 71.1 x 2.6
46	1	1400208	Filter

PLUMBING

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
47	1	1400245	Filter Body
48	1	313553	Valve With Filter
49	4	1800021	Bolt UNI 5739 8.8 8 x 20 Galvanized
50	4	1800120	Flat Washer UNI 6592 M.8 Galvanized
51	2	1400013	Fly Nut 1" 1/4
52	2	1700066	OR D.31 x 25 x 3
53	2	1400049	Elbow Fitting D.30
54	6	1500004	Clamp Perfect 21 x 38
55	2	1500036	Clamp 10 x 16
56	2	1300023	Comp. Connector D.10 - 1/2
57	2	1700010	Gasket 18 x 12 x 2 White
58	1	GHT	Handgun 600 ART.338
59	1	G25H	3/8" Hose, 25'
60	2	1500036	Clamp 10 x 16
61	2	1300023	Comp. Connector D.10 - 1/2
62	2	1700010	Gasket 18 x 12 x 2 White
63	1	AR580040	Elbow
64	1	AR390290	O-Ring
65	1	AR580060	Ring Nut
66	1	AR503	Pump AR503
67	4	1800036	Bolt M10 x 25 UNI 5739 8.8 Galvanized
68	4	1800130	Plain Washer UNI 6592 M.10
69	4	1800186	Nut Aut. High CL.8 M10
70	1	AR1040760	Coupling
71	4	AR390180	O-Ring
72	1	AR1040950	Split Pin
73	2	AR1040690	Fork
74	1	1600763	Spiral Hose D.20 L=300
75	2	AR550460	Elbow
76	2	AR880831	O-Ring
77	2	AR550450	Ring Nut
78	6	1800092	Bolt M10 x3 5 UNI 5931-8.8 Galvanized
79	1	1800290	Bolt M8 x 10 UNI 5923-H45
80	1	2300002	Pulley 65 1 A/35
81	1	AR1519	Cardan Joint "C" AR303
82	1	AR1520	Application P D.310 x 3A
83	4	1800179	Nut M6 UNI 5587-6.8 Galvanized
84	4	1800011	Bolt UNI 5739 8.8 6 x 16 Galvanized
85	4	1800111	Washer A 6.4 x 12.5 UNI 6592 R40 Galvanized
86	1	0100508	Carter
87	2	1400001	Ring Nut 1/2
88	2	1700001	Gasket D.32 x 21 x 2
89	1	1400228	Connector D.20 1/2"
90	2	1800180	Nut M8 UNI 5587-6.8 Galvanized
91	1	0100188	Support P.C.
92	1	1800021	Bolt UNI 5739 8.8 8 x 20 Galvanized

ROLLER ASSEMBLY



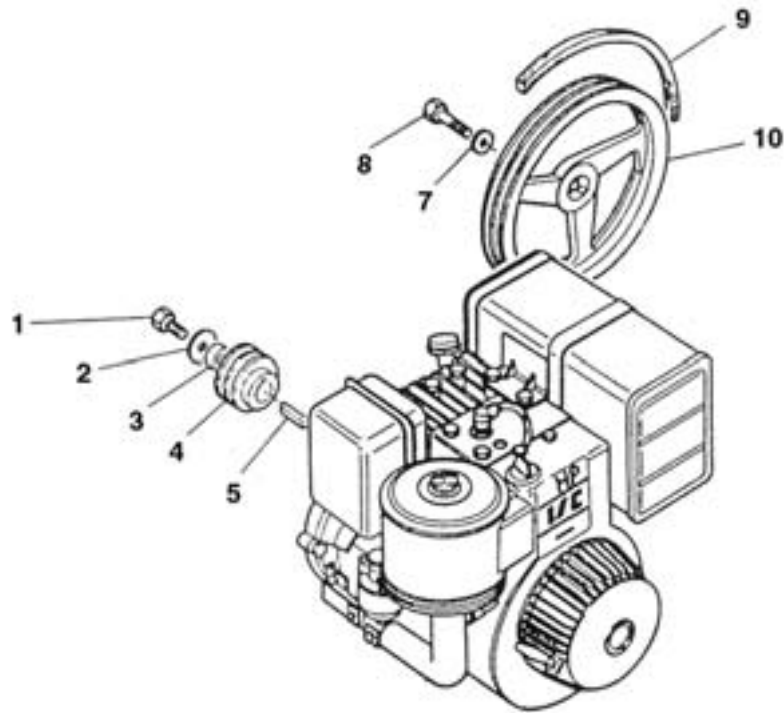
ROLLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	1800012	Bolt M6 x 25 A2 UNI 5739
2	8	1800113	Washer M6 6592 A2
3	8	1700005	OR D.8.84 x 5.28 x 1.78
4	1	1700008	Gasket 80 x 3
5	1	0100044	Clamp
6	18	1800182	Nut M6 A2 UNI 5587
7	1	0100043	Clamp
8	1	1800079	Bolt M6 x 16 A2 UNI 5933
9	1	1800125	Washer M8 x 24
10	4	1800010	Bolt M6 x 16 A2 UNI 5739
11	2	0100041	SS Clamp 16
12	1	0101749	Agitator Shaft D.16 L=1625
13	18	1800182	Nut M6 A2 UNI 5587
14	1	0100045	Shaft Support
15	2	1800012	Bolt M6 x 25 A2 UNI 5739
16	18	1800182	Nut M6 A2 UNI 5587
17	18	1800182	Nut M6 A2 UNI 5587
18	2	1800012	Bolt M6 x 25 A2 UNI 5739
19	1	0100039	SS Blind Flange
20	2	0100487	Propeller 120 x 80 x 2 Mechanical Agitator
21	18	1800182	Nut M6 A2 UNI 5587
22	2	1800012	Bolt M6 x 25 A2 UNI 5739
23	3	0100228	SS Flange D.38
24	1	1700007	Gasket 80 x 46 x 3
25	3	0100228	SS Flange D.38
26	1	1700004	OR D.44.75 x 37.69 x 3.53
27	1	1700003	Packing 5 x 5 L=450
28	1	1800300	Steel Hydraulic Lubricator M6 Right
29	1	0100029	Nut 3/4
30	1	1700002	OR D.20.22 x 15.08 x 2.62
31	3	0100228	SS Flange D.38
32	1	2300001	Pulley 130 1 A/16
33	1	1800293	Set Screw M8 x 30 UNI 5923-H45
34	3	1800180	Nut M8 UNI 5587-6.8 Galvanized
35	18	1800182	Nut M6 A2 UNI 5587
36	8	1800113	Washer M6 PIANA 6592 A2
37	1	0100030	Nut 3/4
38	1	0100040	Ball Joint
39	8	1700005	OR D.8.84 x 5.28 x 1.78
40	2	47112	Circlip E12 UNI 7435-C70 Black
41	2	6001-2RS	Bearing 12 x 28 x 28 6001-2RS
42	1	0100017	Roller
43	2	6001-2RS	Bearing 12 x 28 x 28 6001-2RS
44	1	2500005	Spring 15 x 2.2 x 90

ROLLER ASSEMBLY

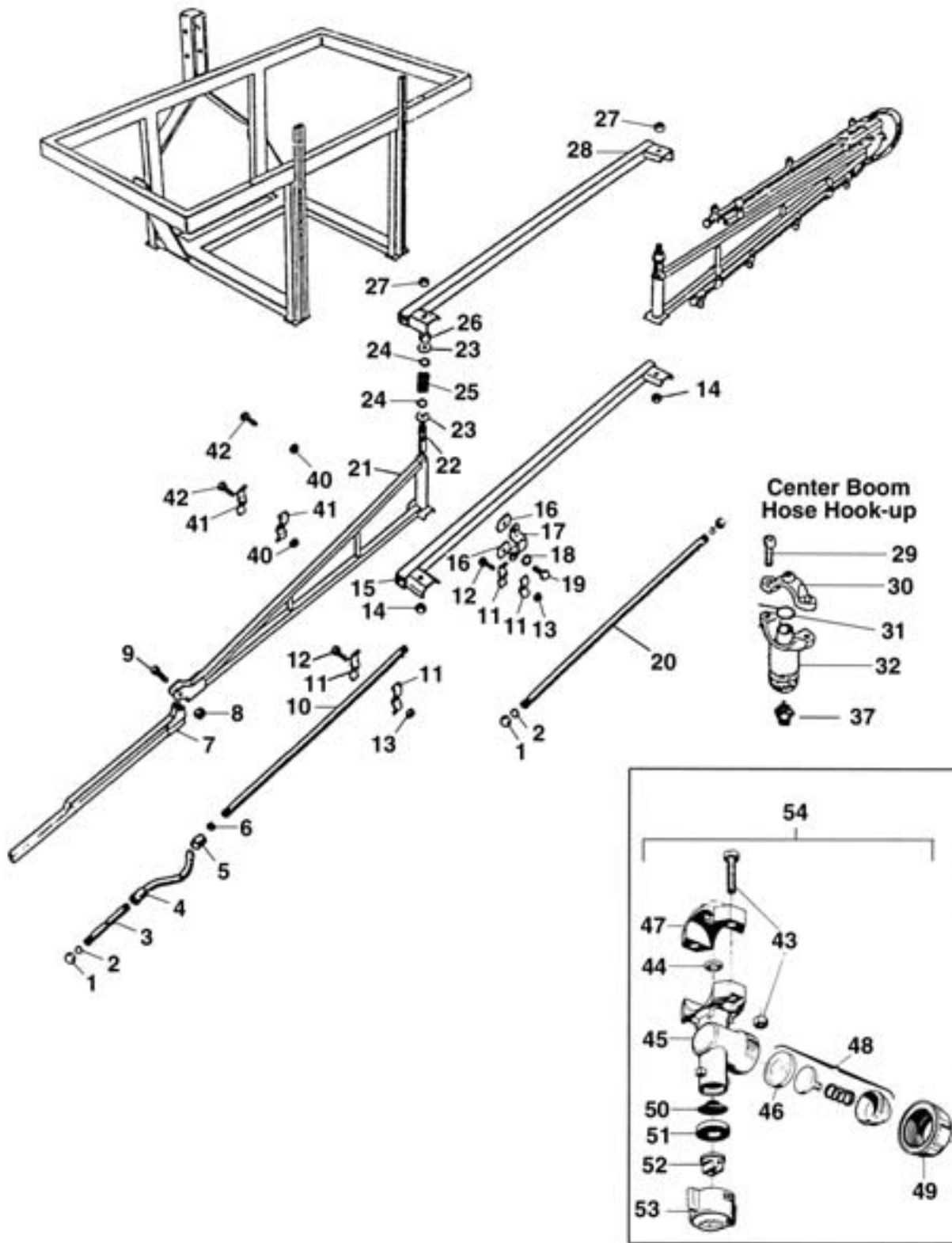
<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
45	1	0100127	Spring Connecting Rod
46	3	1800180	Nut M8 UNI 5587-6.8 Galvanized
47	3	1800180	Nut M8 UNI 5587-6.8 Galvanized
48	1	0100060	Idler Bracket
50	6	1800092	Bolt M10 x 35 UNI 5931-8.8 Galvanized
51	6	1800129	Washer Grower UNI 1751 M.10
52	1	AR1519	Pulley Support
53	1	2200001	Belt A27
54	1	1800290	Bolt M8 x 10 UNI 5923-H45
55	1	2300002	Pulley 65 1 A/35
56	4	1800179	Nut M6 UNI 5587-6.8 Galvanized
57	4	1800011	Bolt UNI 5739 8.8 6 x 16 Galvanized
58	4	1800111	Washer A 6.4 x 12.5 UNI 6592 R40 Galvanized
59	1	0100508	Belt Guard
60	2	1800120	Flat Washer UNI 6592 M.8 Galvanized

ENGINE DRIVE BELT ASSEMBLY



<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	1800093	Bolt 7/16" x 1"
2	1	0100475	Washer 36 x 11.5 x 4
3	1	0100506	Spacer 25.5 x 30 x 20
4	1	2300016	Pulley 50 x 3A x 1"
5	1	1800415	Key 1/4 x 1/4 x 1-1/2
7	3	1800129	Washer Lock 10
8	3	1800050	Bolt Allen M10
9	3	2200022	Belt A49
10	1	0200094	Pulley 310 x 3A

SPRAYER BOOM ASSEMBLY



SPRAYER BOOM ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	4	0100097	Blind Plug 1/2
2	4	1700021	Gasket 19
3	2	2000011	S S Tube 20/500 G28B 41 1/2
4	2	1600024	Complete Hose 10 x 19 l=620
5	4	1300003	Self Lock Nut Connector 10 x 19
6	4	1700010	Gasket
7	2	0100111	Support G28B
8	2	1800186	Self Lock Nut M10
9	2	1800041	Bolt M10 x 45
10	2	2000018	Stainless Steel Tube G14B
10	2	2000002	Stainless Steel Tube G20B
10	2	2000011	Stainless Steel Tube G28B
11	12	0100098	Plate
12	6	1800059	Bolt M8 x 25
13	6	1800180	Nut M8
14	2	1800200	Nut M16
15	1	0100102	Inferior Support G14B & G20B
16	8	0100107	Plate
17	4	0100108	Clamp
18	8	1800130	Washer 10
19	8	1800036	Bolt M10 x 25
20	1	2000012	Stainless Steel Tube G14B & G28B
20	1	2000003	Stainless Steel Tube G20B
21	2	0100118	Support G14B
21	2	0100104	Support G20B
21	2	0100110	Support G28B
22	2	0100105	Pin
23	4	0100106	Washer 20 x 55
24	4	1800165	Washer 20
25	2	2500002	Spring
26	2	1800212	Nut M20 x 1.5
27	2	1800195	Nut M14
28	1	0100103	Superior Support G14B & G20B
36	9-12-17	1700022	Gasket 10
37	1	1300022	Nipple MF 1/2 - 3/8
40	6	1800179	Nut M6
41	2	0100112	Support
42	6	1800014	Bolt M6 x 20
43	18-34	P3400100	Bolt & Nut
44	9-12-17	400020.030	R-Ring D.6 x 2.5
45	9-12-17	402225	Nozzle Body
46	9-12-17	005860.036	Diaphragm, Anti-Drip
47	9-12-17	400020.020	Nozzle Clamp

SPRAYER BOOM ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
48	9-12-17	00.226.011	Anti-Drip Assembly
49	9-12-17	2002030	Nut 3/4" GAS
50	9-12-17	02.311.000-50	Filter
51	9-12-17	02.309.010	Gasket
52	9-12-17	30-04F80RE	Jet 80° (Red)
52A	9-12-17	30-03F110UB	Jet 110° (Blue)
53	9-12-17	402900	Cap, Quick Coupling
54	9-12-17	402225C	Complete Nozzle Assembly (96)

QUANTITY COUNT:

<u>G14B</u>	<u>G20B</u>	<u>G28B</u>
9	12	17

NOZZLE SPACING

$$\text{GPM (Per Nozzle)} = \frac{\text{GPA} \times \text{MPH} \times \text{W}}{5940}$$

$$\text{GPA} = \frac{5940 \times \text{GPM (Per Nozzle)}}{\text{MPH} \times \text{W}}$$

GPM - Gallons Per Minute

GPA - Gallons Per Acre

MPH - Miles Per Hour

- W - Nozzle spacing in inches for broadcast spraying
- Spray width in inches for single nozzles, band spraying or boomless spraying
- row spacing in inches divided by the number of nozzles per row for directed spraying

Tractor Speeds

Speed in MPH (Miles Per Hour)	Time Required in SECONDS to Travel a Distance of:		
	100 feet	200 feet	300 feet
3.0	23	45	68
3.5	20	39	58
4.0	17	34	51
4.5	15	30	45
5.0	14	27	41
6.0		23	34
7.0		19	29
7.5		18	27
8.0		17	26
9.0		15	23

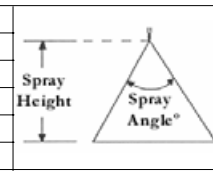
If the nozzle spacing on your boom is different than those tabulated, multiply the tabulated GPA coverages by one of the following factors.

Where Tables Are Based on 20" Nozzle Spacing									
Other Spacing	8"	10"	12"	14"	16"	18"	22"	24"	30"
Conversion Factor	2.5	2	1.7	1.4	1.3	1.1	0.9	0.8	0.7

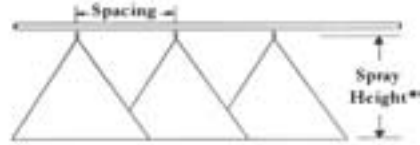
Where Tables Are Based on 40" Nozzle Spacing									
Other Spacing	28"	30"	32"	34"	36"	38"	42"	44"	48"
Conversion Factor	1.4	1.3	1.3	1.2	1.1	1.1	1	0.9	0.8

SUGGESTED MINIMUM SPRAY HEIGHTS

Spray Angle	Spray Height	
	20" Spacing	
65	22" to 24"	
73	20" to 22"	
80	17" to 19"	
110	10" to 12"	



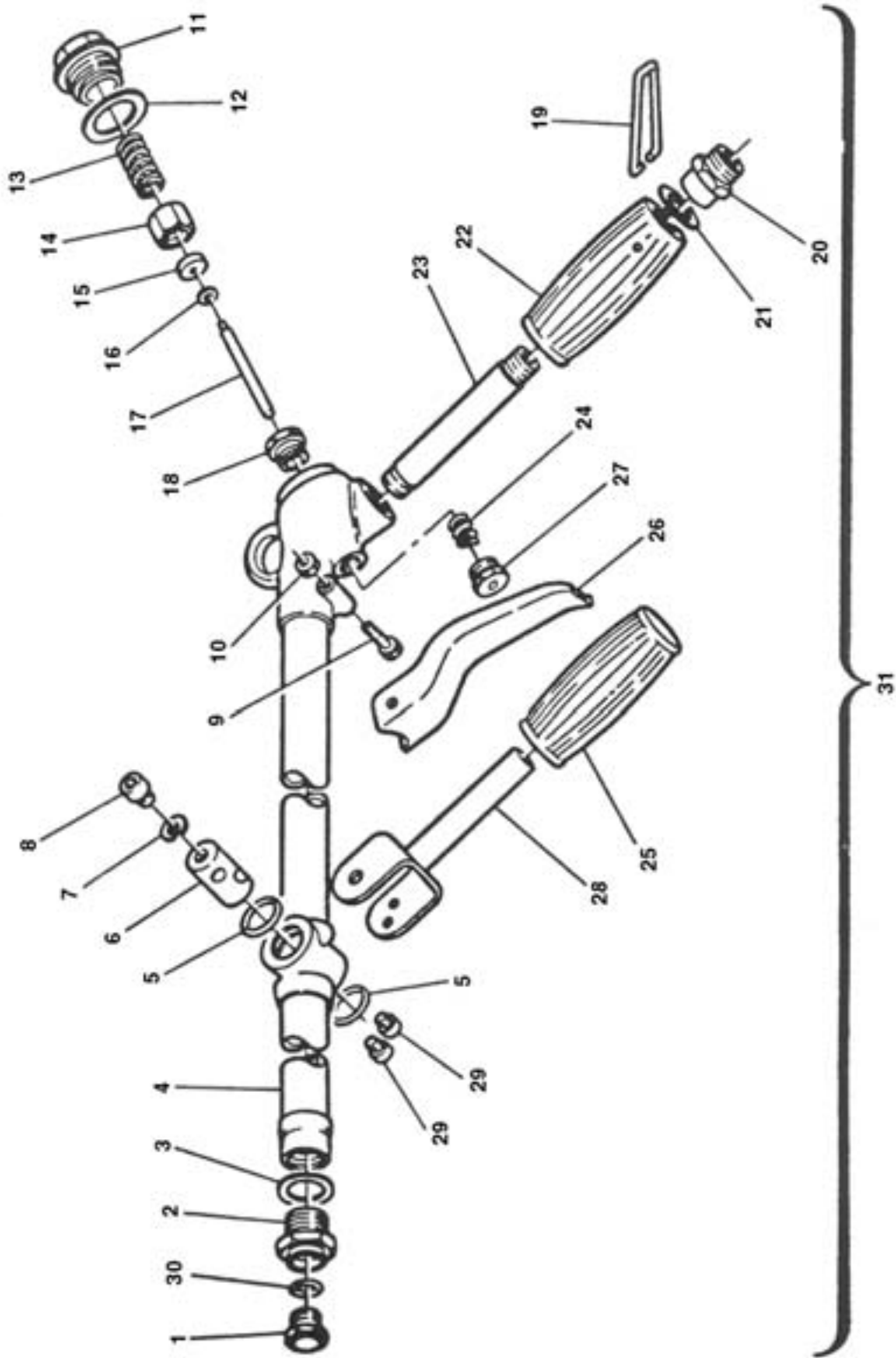
°Spray angles apply to flat spray tips spraying at rated pressure of 40 P.S.I. Lower pressures will result in reduced spray angles, except for the XR TeeJet.



**Adjust spray height in the field to overlap approximately 30% of each edge of pattern.

Tip Color	Tip No. (Strainer Screen Size)	Liquid Pressure in PSI	Capacity 1 Nozzle in GPM	Gallons Per acre - 20" Spacing			
				4 MPH	5 MPH	6 MPH	7 MPH
Orange	8001 LP (100 Mesh)	15	.10	7.4	5.9	5.0	4.2
		20	.12	8.6	6.9	5.7	4.9
		30	.14	10.5	8.4	7.0	6.0
		40	.16	12.1	9.7	8.1	6.9
Green	80015 LP (50 Mesh)	15	.15	11.1	8.9	7.4	6.4
		20	.17	12.9	10.3	8.6	7.4
		30	.21	15.8	12.6	10.5	9.0
		40	.24	18.1	14.5	12.1	10.4
Yellow	8002 LP (50 Mesh)	15	.20	14.9	11.9	9.9	8.5
		20	.23	17.2	13.7	11.4	9.8
		30	.28	21.0	16.8	14.0	12.0
		40	.33	24.0	19.4	16.1	13.8
Blue	8003 LP (50 Mesh)	15	.30	22	17.8	14.9	12.7
		20	.35	26	21.0	17.2	14.7
		30	.42	32	25.0	21.0	18.0
		40	.49	36	29.0	24.0	21.0
Red	8004 LP (50 Mesh)	15	.40	30	27	19.8	17.0
		20	.46	34	27	23.0	19.6
		30	.57	42	34	28.0	24.0
		40	.65	48	39	32.0	28.0
Brown	8005 LP (50 Mesh)	15	.50	37	30	25	21
		20	.58	43	34	29	25
		30	.71	53	42	35	30
		40	.82	61	48	40	35
Grey	8006 LP (No Strainer)	15	.60	45	36	30	25
		20	.69	51	41	34	29
		30	.85	63	50	42	36
		40	.98	73	58	48	42
White	8008 LP (No Strainer)	15	.80	59	48	40	34
		20	.92	69	55	46	40
		30	1.10	84	67	56	48
		40	1.30	97	78	65	55
	8010 LP (No Strainer)	15	1.0	74	59	50	42
		20	1.2	86	69	57	49
		30	1.4	105	84	70	60
		40	1.6	121	97	81	69

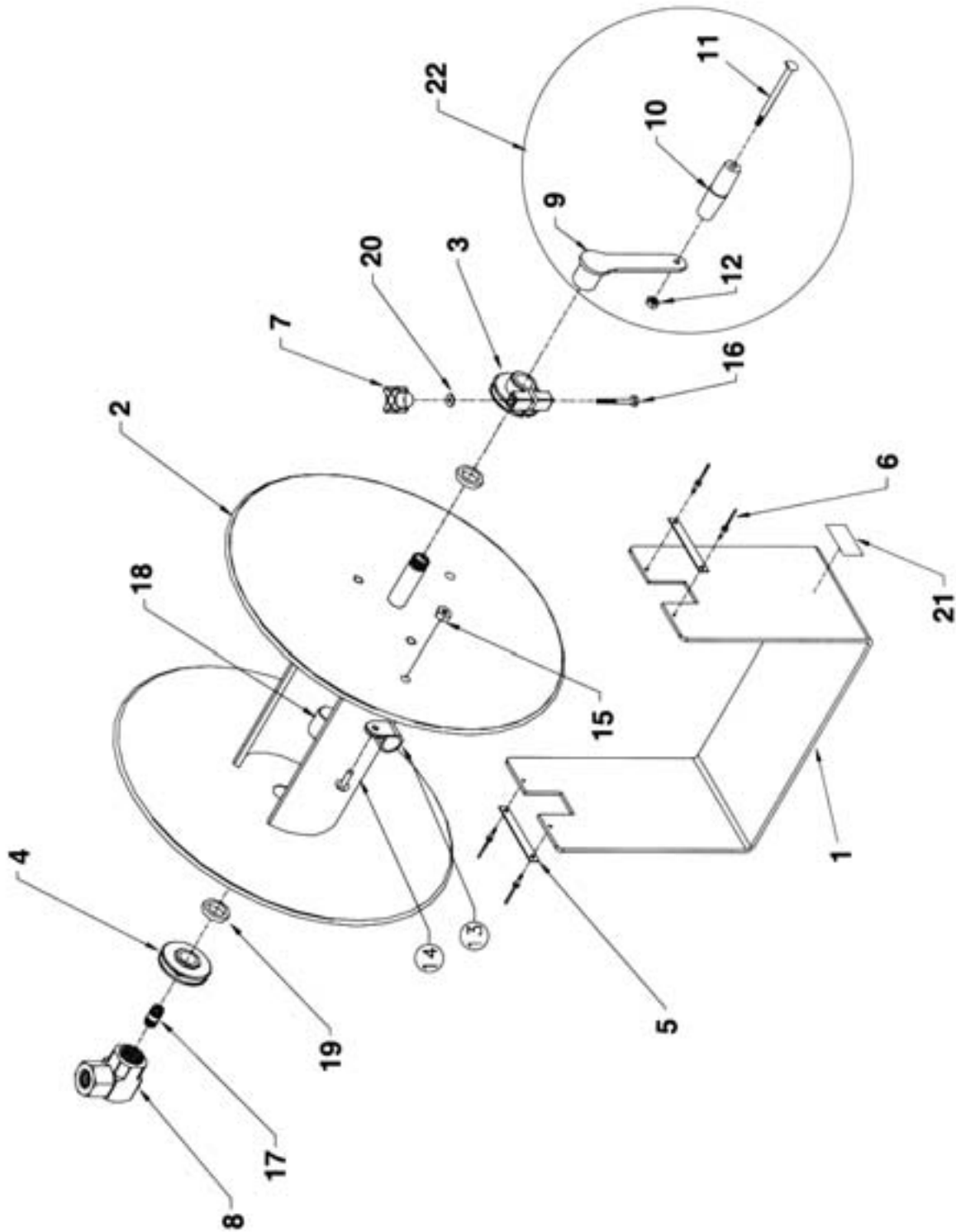
GHT TOMMY GUN ASSEMBLY



GHT TOMMY GUN ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	0800080	Nozzle 1.5
1	1	0800081	Nozzle 1.8
1	1	0800082	Nozzle 2.0
1	1	0800083	Nozzle 2.8
1	1	0800084	Nozzle 3.0
1	1	0800085	Nozzle 3.5
2	1	0800086	Jet Support
3	1	0800087	Gasket
4	1	0800088	Body
5	2	0800089	Gasket
6	1	0800090	Bushing
7	1	0800091	Washer
8	1	0800092	Bolt
9	1	0800093	Bolt
10	1	0800094	Nut
11	1	0800095	Plug
12	1	0800096	Gasket
13	1	0800097	Spring
14	1	0800098	Nut
15	1	0800099	Washer
16	1	0800100	Washer
17	1	0800101	Pin
18	1	0800102	Nut
19	1	0800103	Spring
20	1	0800104	Plug
21	1	0800105	Gasket
22	1	0800106	Handle
23	1	0800107	Shaft
24	1	0800108	Gasket
25	1	0800109	Handle
26	1	0800110	Lever
27	1	0800111	Plug
28	1	0800112	Fork
29	1	0800113	Bolt
30	1	0800114	Gasket
31	1	GHT	Complete Handgun GHT

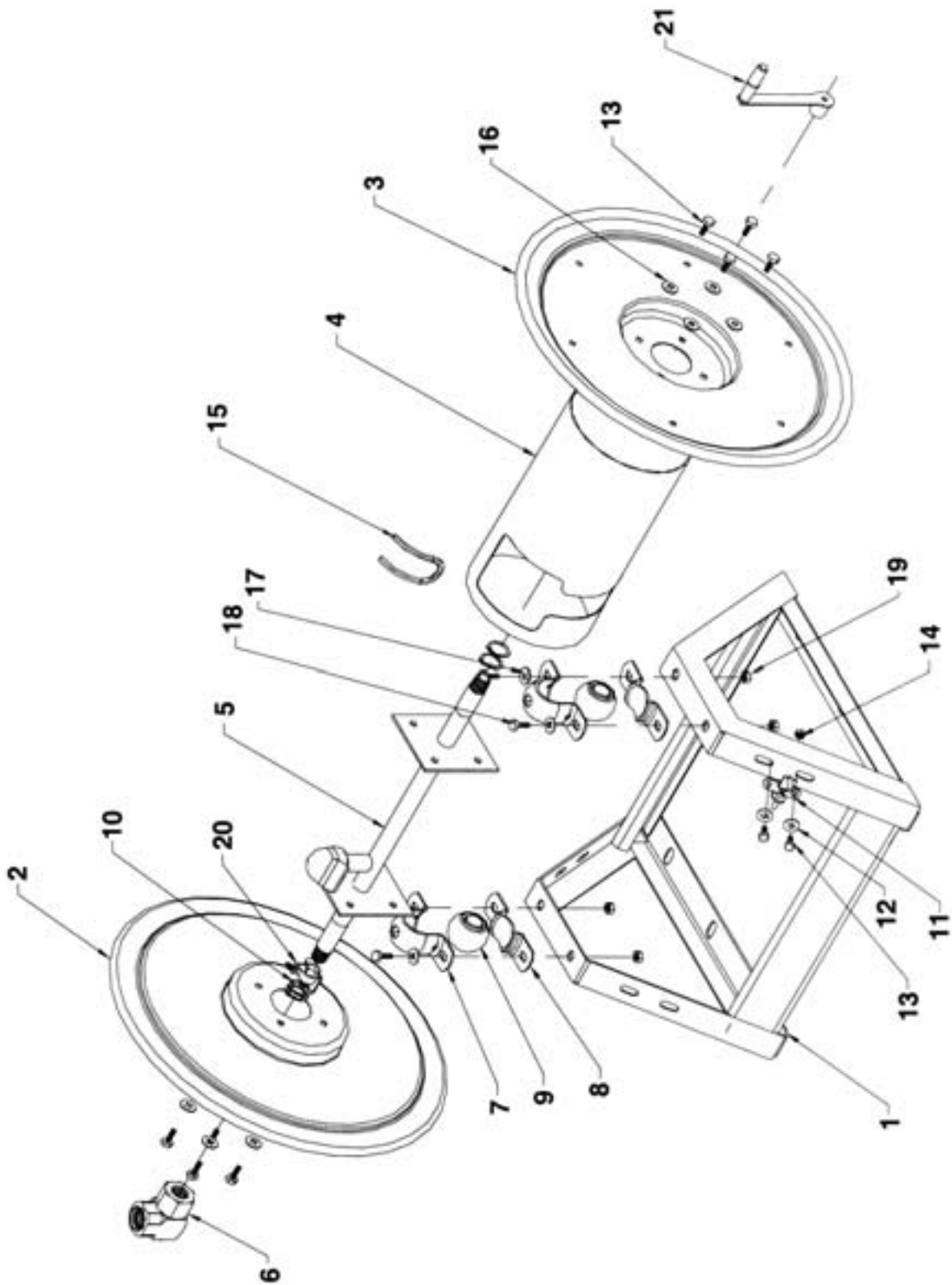
HOSE REEL 112-4-75



HOSE REEL 112-4-75

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	6304-1-12.5	Frame, "U"
2	1	7108-1-12.5	Drum Assembly 1/2" NPT, 5.5" x 12.5"W
3	1	6329-1-1	Bearing, Crank Side
4	1	6328-1-1	Bearing, Plumbing Side
5	2	15711-1	Plate, Keeper Bearing
6	4	7105	Rivet, Pop Aluminum
7	1	15719	Knob, Black
8	1	439	Swivel, 1/2" NPT
9	1	7107	Crank Arm
10	1	6333	Crank Handle
11	1	1621	Shoulder Bolt 5/16 - 18
12	1	111-1	Nut, Lock 5/16 - 18
13	1	383	Hose Clamp
14	1	245	Screw 10-32 x 3/8"
15	1	130	Nut
16	1	7146	Hex Bolt 1/4-20 x 2 1/4" Gr. 5
17	1	7115	Nipple 3/8 - 18
18	1	7116	Axle, Plumbing 1/2 - 14 Coupling
19	2	7145	Spacer
20	1	688	Flat Washer 1/4" SAE
21	1	10925-5	Nameplate, Product, Std Decal

HOSE REEL 1125-4-325

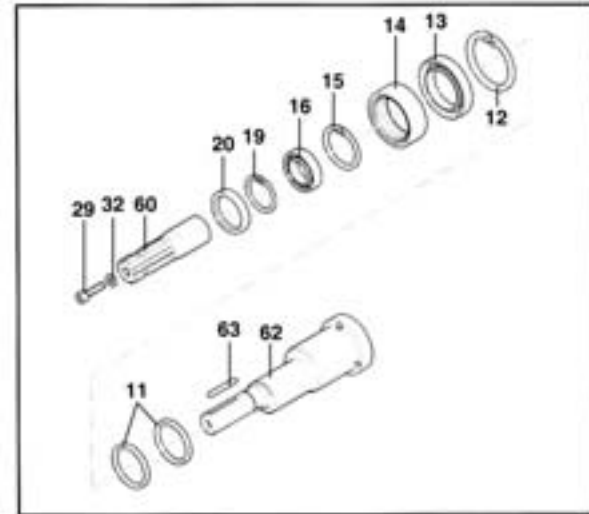
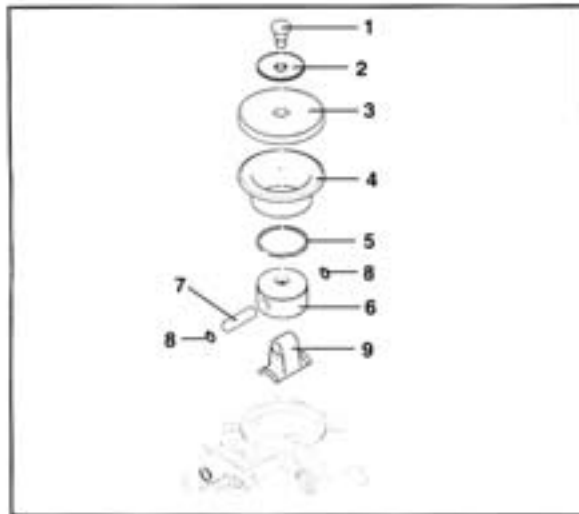
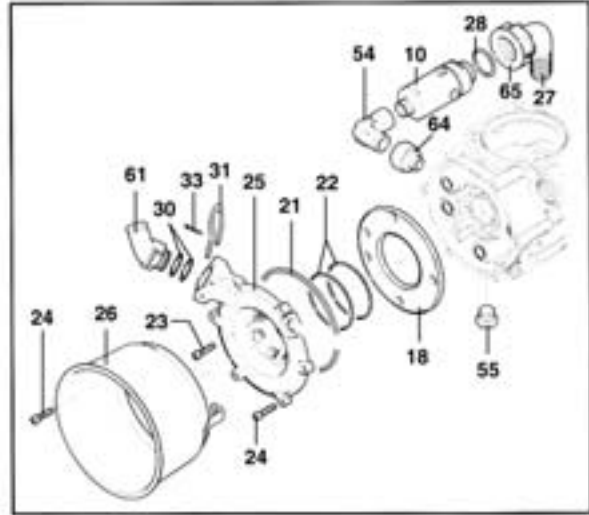
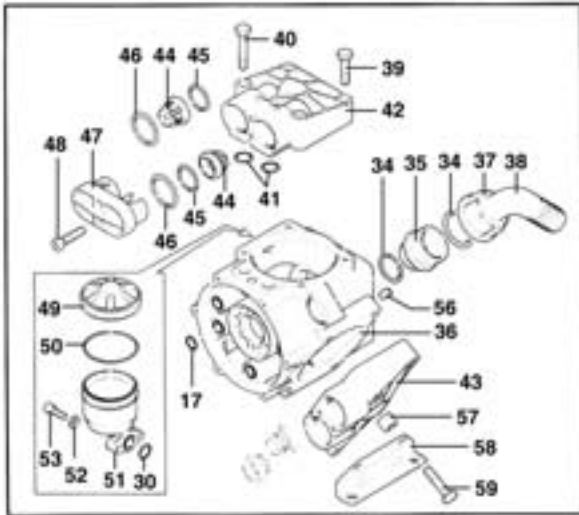


HOSE REEL 1125-4-325

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	7455-18	Frame
2	1	7415	Disc, Swivel Side
3	1	7416	Disc, Crank Side
4	1	7414-18	Center Drum
5	1	7408-18	Axle Assembly
6	1	439	Swivel
7	2	20064-T	Pillow Block, Mtg, Top
8	2	20064-B	Pillow Block, Mtg, Bottom
9	2	20649	Bearing
10	4	153	Ring
11	1	20843	Lock Pin Assembly
12	2	20171	Flat Washer 5/16"
13	10	312	Bolt 5/16 - 18 x 3/4" Lg
14	2	111	Locking Nut 5/16"
15	1	7460-9.75	Trim
16	8	112	Lock Washer 5/16"
17	4	157	Flat Washer 3/8"
18	4	20016	Bolt 3/8 x 16 x 1" Lg
19	4	435	Locking Nut 3/8"
20	1	7429-4	Drag Brake
21	1	7419-1	Hand Crank

PUMP ASSEMBLY

AR503



PUMP ASSEMBLY

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	3	580360	Bolt
2	3	1040180	Retaining Washer
3	1	1986	Diaphragm Kit
3	3	620081	Diaphragm Viton (optional)
4	3	1300110	Sleeve
5	3	160230	Piston Ring
6	3	620120	Piston
7	3	380300	Pin, Connecting Rod
8	6	380080	Retainer Ring
9	3	1300140	Connecting Rod
10	1	1433	Relief Valve
11	2	1300120	Retainer Ring
12	1	47270	Circlip I70
13	1	55X70X8	Oil Seal
14	1	HK5520	Bearing
15	1	47252	Circlip I52
16	1	6205	Bearing
⊖ 17	5	OR14178	O-Ring 14 x 1.78
18	1	1300020	Manifold Plate
19	1	47125	Circlip E25
20	1	25X35X7	Oil Seal
⊖ 21	1	1300270	O-Ring 126.67 x 2.62
⊖ 22	2	OR60262	O-Ring 60 x 2.62
23	6	880280	Bolt M6 x 18
24	6	1040370	Bolt M6 x 22
25	1	1300030	Discharge Manifold
26	1	1500130	Shield, PTO
27	1	00.055.046	90 Degree Elbow D.18
28	1	OR1588262	O-Ring 15.54 x 2.62
29	1	680350	Bolt M8 x 35
⊖ 30	3	OR1872262	O-Ring 18.72 x 2.62
31	1	1040690	Clip
32	1	961340	Washer D.8.5
33	1	1040950	Cotter Pin
⊖ 34	2	OR293	O-Ring 29 x 3
35	1	450120	Adapter 1" - 1 1/4"
36	1	1300010	Housing, Pump
37	1	580060	Nut 1 1/4
38	1	580040	90 Degree Elbow D.30
39	4	200230	Bolt M10 x 45
40	4	640230	Bolt M10 x 60

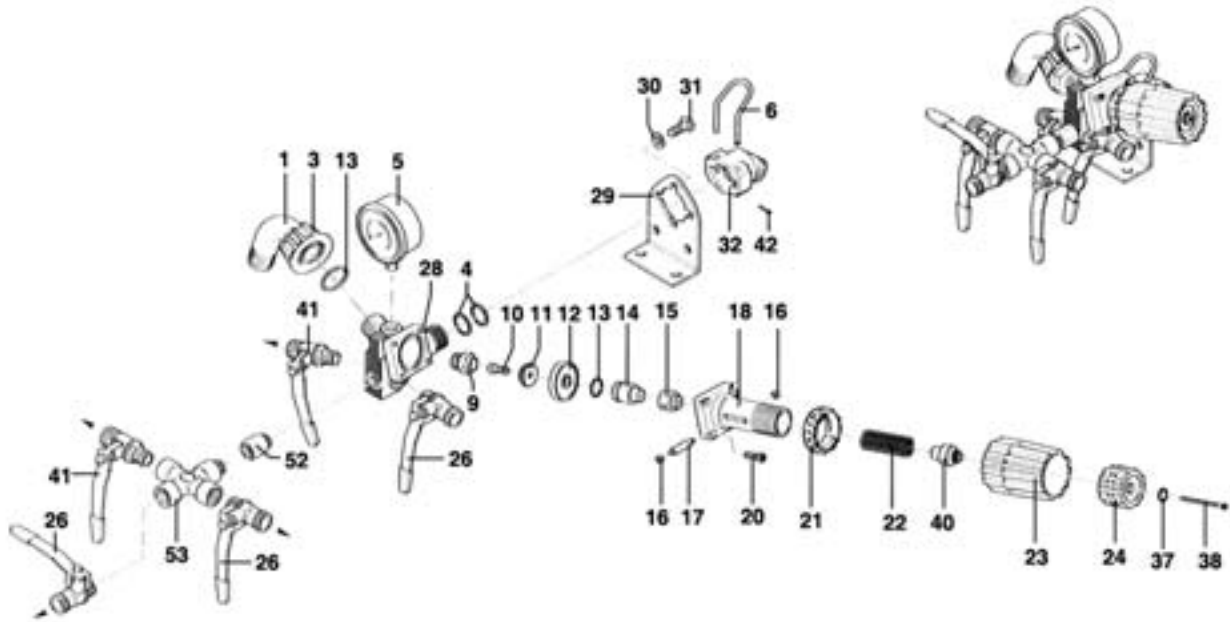
PUMP ASSEMBLY

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
⊖ 41	6	OR1713262	O-Ring 17.13 x 2.62
42	2	1300101	Head, Pump R.H.
43	1	1300102	Head, Pump L.H.
44	1	1987	Valve Kit (includes Ref. #45 & 46)
⊖ 45	6	OR2580353	O-Ring 25.80 x 3.53
⊖ 46	6	OR3305178	O-Ring 33.05 x 1.78
47	3	1300190	Valve Head
48	6	620610	Bolt M8 x 30
49	1	1040322	Cap, Oil Bowl
⊖ 50	1	OR5364262	O-Ring 53.64 x 2.62
51	1	1040310	Oil Bowl
52	2	550331	Washer D.6.5
53	2	850850	Bolt M6 x 30
54	1	881560	Elbow
55	1	880530	Plug
56	1	770070	Plug, Allen Head
57	2	1300280	Spacer
58	2	1300090	Mount Bracket
59	4	1300360	Bolt M10 x 65
60	1	1518	PTO Adapter
61	1	1040760	Adapter
62	1	1300160	Crankshaft
63	1	650250	Key
64	1	881461	Adapter

⊖ 1984 O-RING KIT	
<u>REF.</u>	<u>QTY.</u>
17	6
21	1
22	2
30	3
34	2
41	6
45	6
46	6
50	1

VALVE ASSEMBLY

RM40S



<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	550460	Elbow 18
3	1	550450	Nut Plastic 3/4" GAS
Δ ● 4	7	390180	O-Ring 3075 18.72 x 2.62
5	1	550545	Pressure Gauge
● 6	1	1040690	Lockclip
● 9	1	1150520	Valve Seat
10	1	680560	Bolt, 6 x 15 Allen
● 11	1	1040640	Valve Seat
● 12	1	1040631	Diaphragm
Δ ● 13	2	1988	O-Ring 3062 15.54 x 2.62
14	1	1040620	Piston
● 15	1	1150560	Spacer
16	2	1150600	Bushing
● 17	1	1150540	Roll Pin
18	1	1150510	Valve Body
20	4	780330	Bolt, 6 x 20 Allen
● 21	1	1150530	Control Nut
● 22	1	394760	Spring

VALVE ASSEMBLY

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
●23	1	1150550	Control Knob
●24	1	1150570	Control Knob
26	3	130491	Ball Valve 3/8
28	1	1150500	Valve Body
29	1	1150590	Mounting Bracket
30	2	390311	Washer 8.5
31	2	180431	Bolt, 8 x 16
32	1	1040770	Fitting Pressure
37	1	480550	Circlip
38	1	1150650	Allen Bolt M3 x 60
40	1	1150660	Spacer
41	2	130492	Left Valve
42	1	1040950	Split Pin
52	1	1041210	Extension
53	1	1041220	Adapter

△ KIT 1988 O-RING			● KIT 1989 VALVE			
<u>REF.</u>	<u>QTY.</u>		<u>REF.</u>	<u>QTY.</u>	<u>REF.</u>	<u>QTY.</u>
390180	7		390180	4	1150530	1
880830	2		394760	1	1150540	1
			480550	1	1150550	1
			880830	1	1150560	1
			1040630	1	1150570	1
			1040640	1	1150650	1
			1040690	1	1150660	1
			1150520	1		

LIMITED WARRANTY



GEARMORE, INC., warrants each new Gearmore product to be free from defects in material and workmanship for a period of twelve (12) months from date of purchase to the original purchaser. This warranty shall not apply to implements or parts that have been subject to misuse, negligence, accident, or that have been altered in any way.

Our obligation shall be limited to repairing or replacement of any part, provided that such part is returned within thirty (30) days from date of failure to Gearmore through the dealer from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature, direct, consequential or contingent, to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting or any other expenses, for any other reasons.

Gearmore in no way warrants engines, tires, or other trade accessories, since these items are warranted separately by these respective manufacturers.

Gearmore reserves the right to make improvements in design or changes in specification at any time, without incurring any obligations to owners or units previously sold.

GEARMORE, INC.
13477 Benson Ave.
Chino, CA 91710

Always refer to and heed machine operating warning decals on machine.

The serial number of this product is stored in our computer database, thus submitting a warranty registration card is not required.