GEARMORE®

GTE SERIES SPRAYERS

Operation, Service & Parts Manual For GTE200

November 2000

FORM: GTE200Book.QXD

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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 GTE 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. When cleaning main strainer screen, make sure to turn shut-off valve handle 90 degrees from parallel position, which is off.

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. Check strainer shut-off valve, making sure the handle is parallel to piping - the open position.

4. Start engine.

5. 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.

6. Set regulator pressure as required.

7. If using a handgun to spray, just connect the hose to the hose fitting valve and turn on when using.

8. 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^{o} and 145^{o} 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.

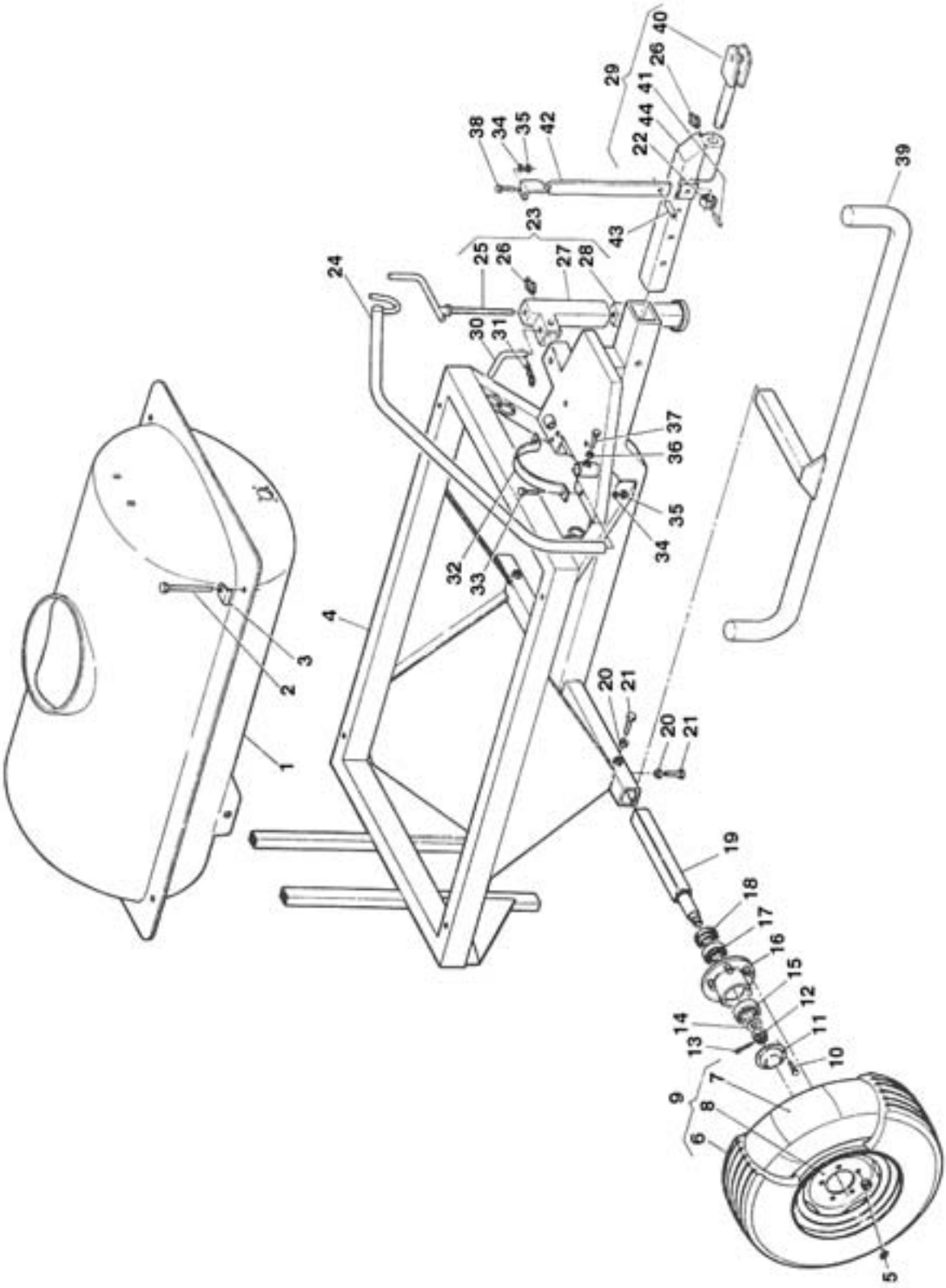
      A. To replace diaphragms order appropriate repair kit. (See parts list)

   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.

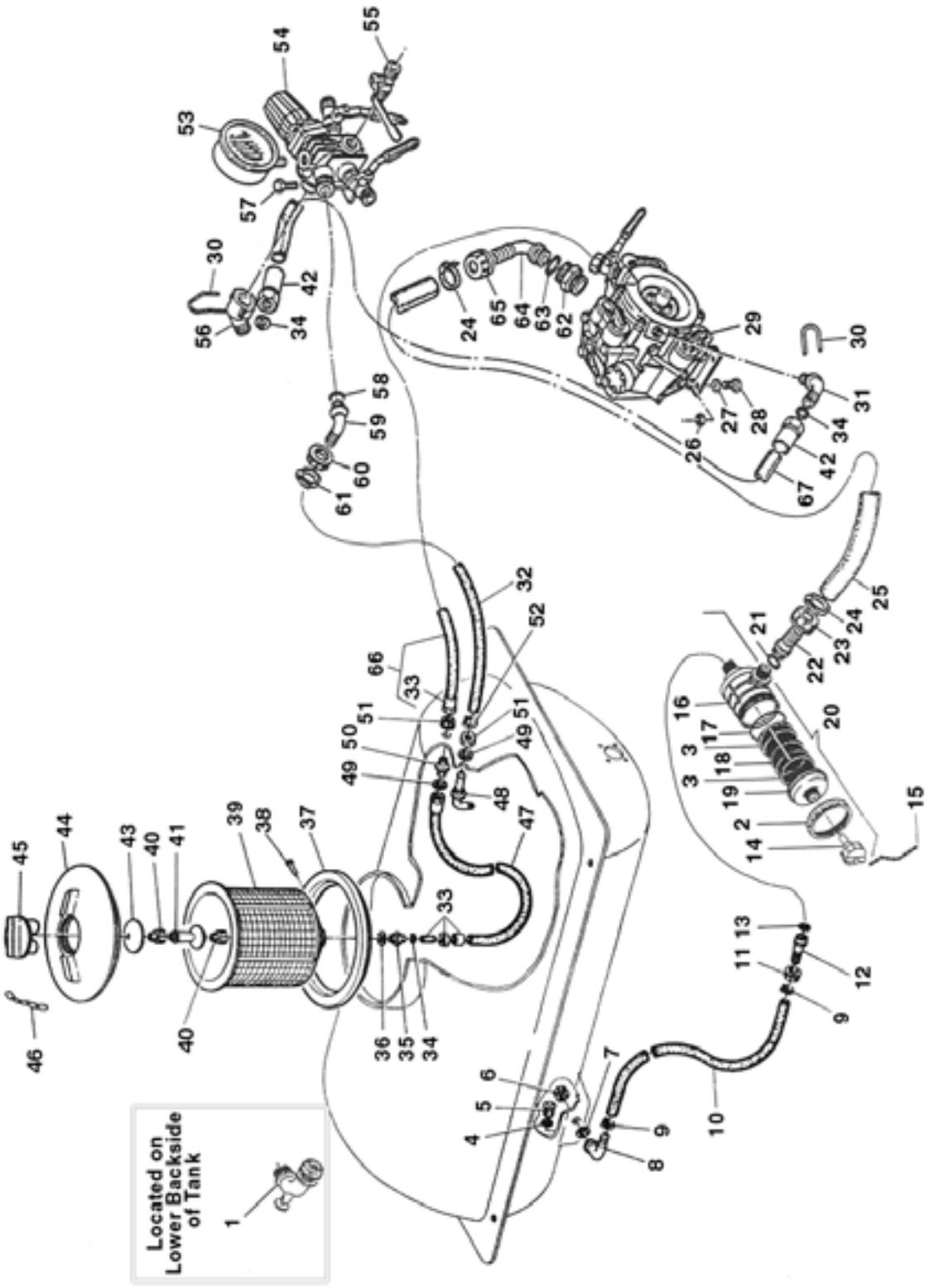
FRAME ASSEMBLY



FRAME ASSEMBLY

REF#	QTY.	PART NO.	DESCRIPTION
1	1	0600017	Tank 200 Gal.
2	4	1800038	Bolt M10 x 35
3	4	0100206	Clamp
4	1	0100220	Frame
5	10	0100179	Nut M16
6	2	0700006	Tire 215/75-14
7	2	0700007	Tube
8	2	0700008	Rim
9	2	0700018	Complete Tire Assy.
10	4	1800001	Bolt M5 x 10
11	2	0100011	Cover
12	2	200701	Castellated Nut M18 x 1.5
13	2	Obtain Locally	Cotter Pin
14	2	1800162	Washer D.18
15	2	30206	Bearing
16	2	0100222	Hub
17	2	30207	Bearing
18	2	42X72X10	Oil Seal
19	1	0100223	Spindle R.H.
19	1	0100217	Spindle L.H.
20	4	1800190	Nut M12
21	4	1800053	Bolt M12 x 35
22	1	1800230	Nut M30 x 2
23	1	001001	Complete Jack
24	1	0100037	Support
25	1	0100024	Handle
26	2	1800300	Grease Zerk M6
27	1	0100022	Jack Upper 1/2
28	1	0100021	Jack Lower 1/2
29	1	0100187	Tongue Assy.
30	1	0100025	Pin
31	1	2100006	Hair Pin
32	1	0100227	Shield Belt
33	2	1800021	Bolt M8 x 20
34	4	1800120	Washer D.8
35	4	1800180	Nut M8
36	1	1800185	Nut M10
37	1	1800036	Bolt M10 x 25
38	2	1800021	Bolt M8 x 20
39	1	S200	Skid Assy (Optional)
40	1	2100009	Hitch
41	1	200191	Pin 8 x 35
42	1	000336	Support
43	1	1800320	Pin 5 x 50
44	1	0100148	Tongue

PLUMBING



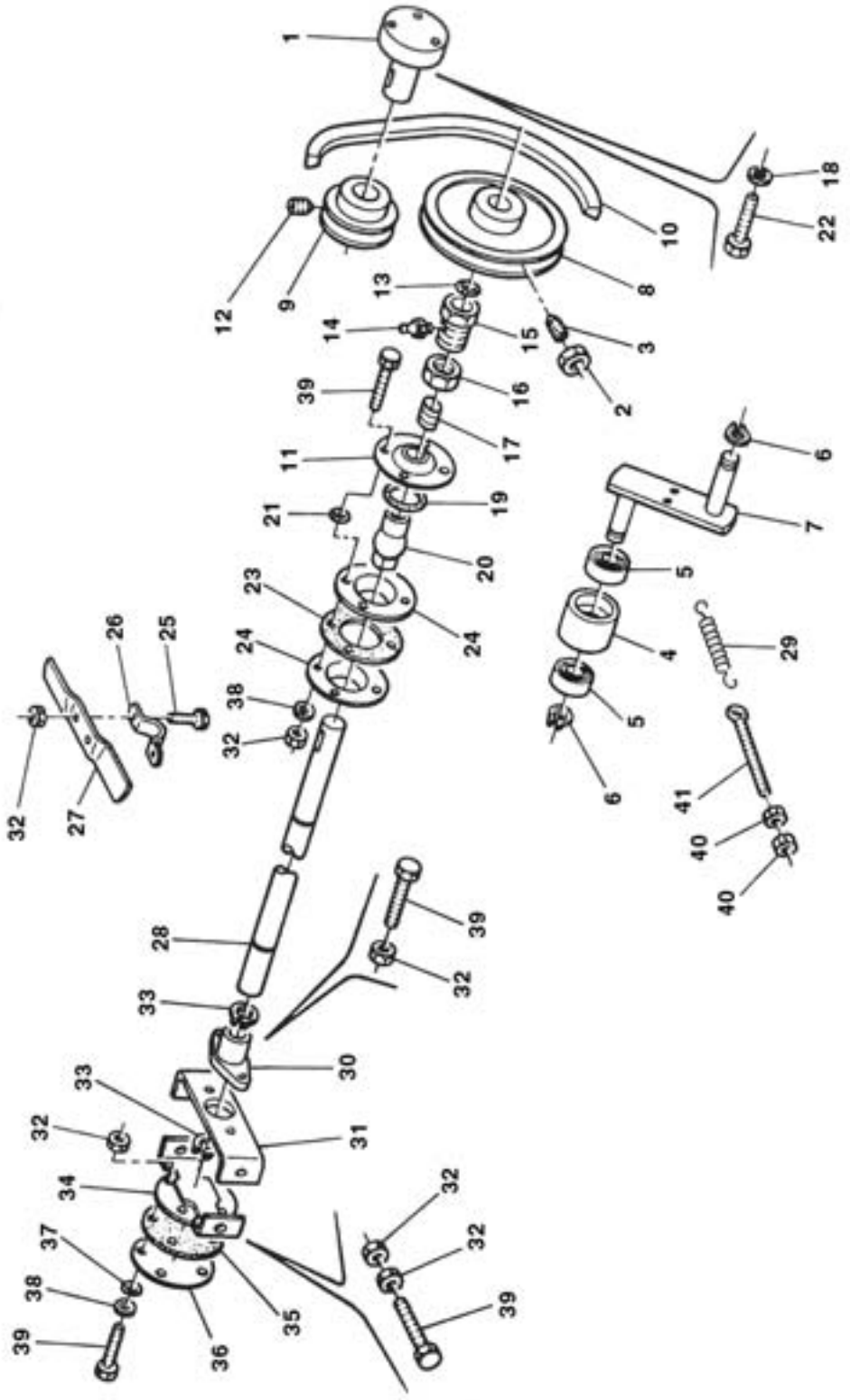
PLUMBING

REF#	QTY.	PART NO.	DESCRIPTION
1	1	1400212	Drain Valve
2	1	1400206	Ring Nut
3	2	1400209	O-Ring 89.2 x 82.14 x 3.53
4	1	1700015	Gasket
5	1	1400009	Ring Nut
6	1	1400024	Ring Nut
7	1	1700016	Gasket
8	1	1400027	Elbow 35 mm
9	4	1500004	Strap Ring 25 x 45
10	1	020188	Hose 25 x 37 L=1220
11	2	1400013	Ring Nut
12	1	1400025	Connector
13	1	1700039	O-Ring 33 x 2.5
14	1	1400205	Filter Shut-Off Valve
15	1	1400007	Plastic Chain D.3.5 L=300
16	1	1400210	Filter Body
17	1	OR.006.375	O-Ring 94.62 x 5.33
18	1	1400208	Strainer
19	1	1400207	Bowl
20	1	1400197	Filter Assembly
21	1	1700012	O-Ring 31.89 x 26.65 x 2.62
22	1	1400048	Connector 30
23	1	1400013	Ring Nut
24	2	1500005	Strap Ring 35 x 50
25	1	02.215.000	Hose D.30 Per Foot
26	4	1800186	Lock Nut M10
27	4	1800131	Washer 11 x 30
28	4	1800036	Bolt M10 x 25
29	1	AR503	Pump Assembly
30	2	1040690	Clip, Lock
31	1	1040760	Fitting
32	1	020195	Hose 16 x 24 L=2650
33	4	1300003	Fitting Assembly
34	2	1700010	Gasket
35	1	1400003	Nipple 3/4” x 1”
36	1	1700006	O-Ring
37	1	0600004	Threaded Ring
38	10	1800350	Rivet
39	1	0600005	Basket
40	2	1400004	Reducer M-F 1/4 x 3/4
41	1	1400035	Shower Head
42	2	1300004	3/4” Fitting Assembly
43	1	1400006	Cover
44	1	0600006	Lid 17-7/8”

FRAME ASSEMBLY

REF#	QTY.	PART NO.	DESCRIPTION
45	1	0600007	Vent Lid
46	1	1400007	Chain
47	1	020197	Hose 10 x 19 L=950
48	1	220029	Curve Connector
49	1	1700001	Gasket
50	1	1400002	Connector
51	2	02.458.000	Ring Nut
52		Obtain Locally	Clamp 18 x 28
53	1	550545	Gauge
54	1	RM40S	Control Valve
55	2	130491	Ball Valve R.H.
55	2	130492	Ball Valve L.H.
56	1	1040770	Fitting, Pressure
57	2	1800021	Bolt M8 x 20
58	1	390180	O-Ring 18.72 x 2.62
59	1	00055046	Connector D.16
60	1	1400055	Ring Nut
61	2	1500003	Strap Ring 18 x 25
62	1	450120	Reducer
63	1	390290	O-Ring
64	1	580040	Elbow D.30
65	1	580060	Fly Nut
66	1	020069	Hose 10 x 19 x 680
67	1	1600057	Hose 13 x 24 x 2500

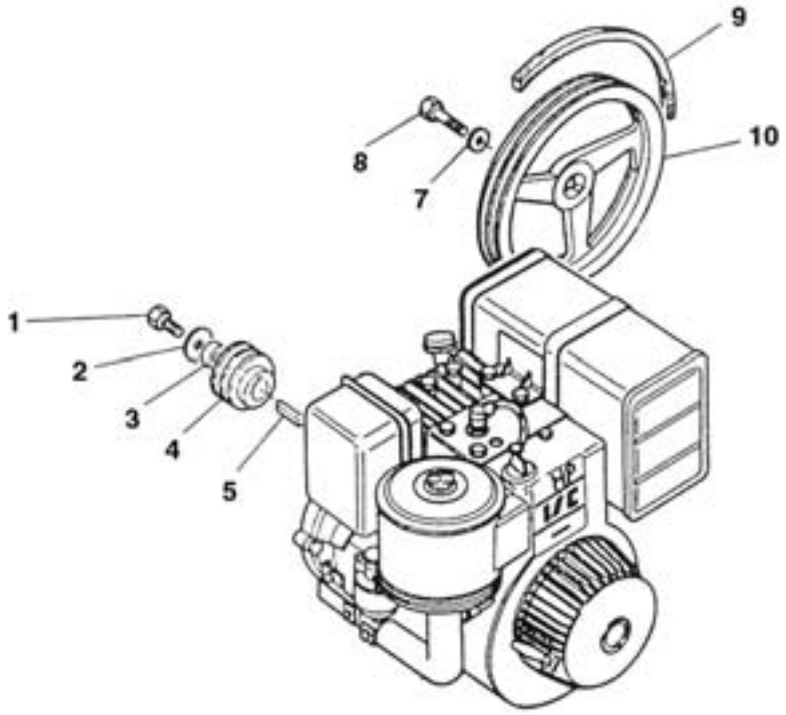
ROLLER ASSEMBLY



ROLLER ASSEMBLY

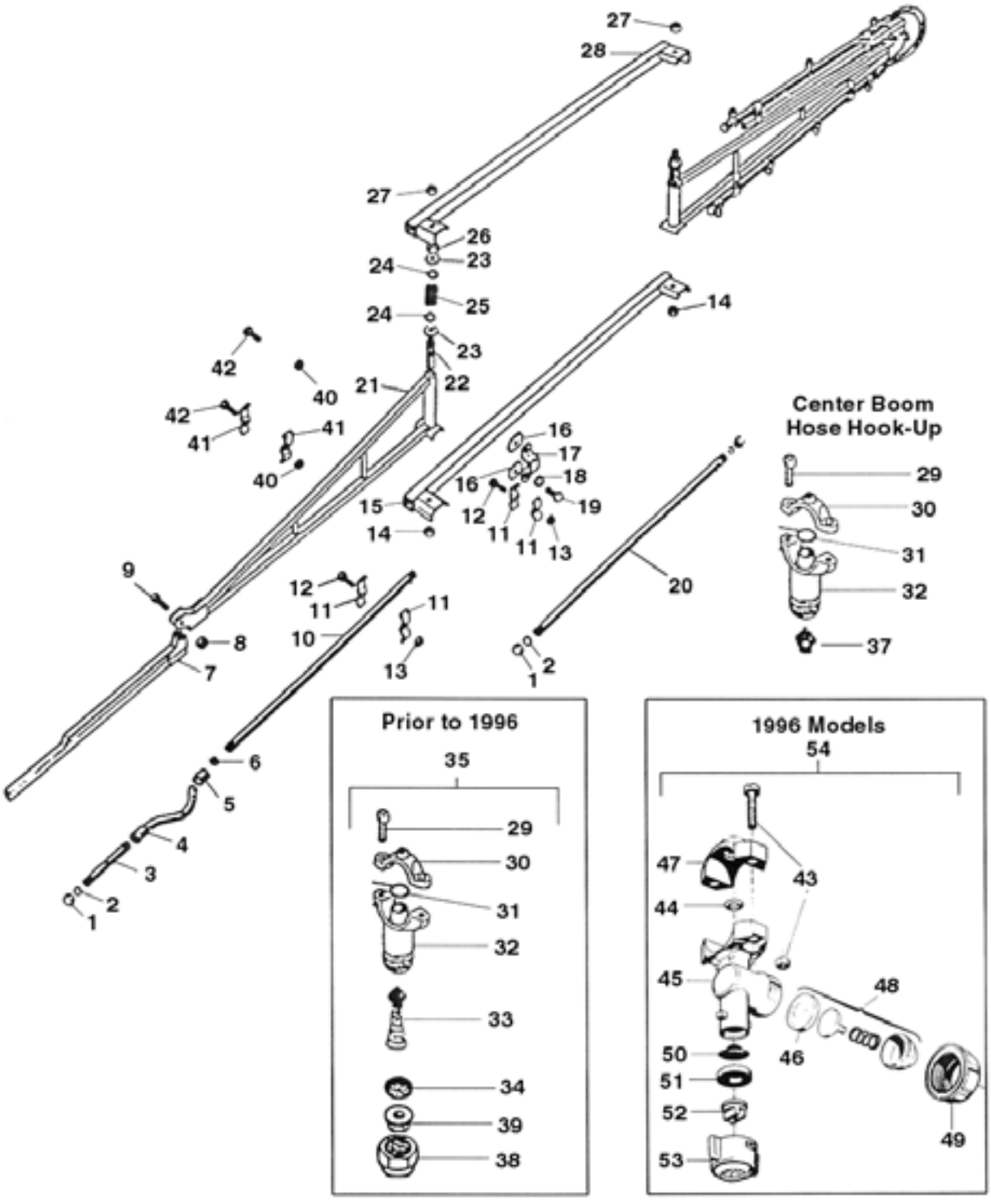
REF#	QTY.	PART NO.	DESCRIPTION
1	1	0100505	Support
2	1	1800180	Nut M8
3	1	1800293	Grub Screw M8 x 25
4	1	0100117	Roller
5	2	6001-2RS	Bearing
6	2	1200001	Circlip E12
7	1	0100213	Idler Bracket
8	1	2300001	Pulley, Agitator
9	1	2300002	Pulley, Pump
10	1	2200018	Belt A22
11	1	0100031	Flange
12	1	1800291	Grub Screw M8 x 15
13	1	1700002	Gasket
14	1	1800300	Grease Zerk M6
15	1	0100029	Nut
16	1	0100030	Nut
17	1	1700003	Gasket
18	3	1800129	Lock Washer
19	1	1700004	O-Ring 45 x 3.6
20	1	0100040	Ball Joint
21	4	1700005	Gasket
22	3	1800063	Bolt M10 x 20
23	1	1700001	Gasket
24	1	0100031	Flange
25	6	1800010	Bolt M6 x 15
26	3	0100041	Clamp
27	3	0100135	Paddle
28	1	0100221	Agitator Shaft
29	1	2500005	Spring
30	1	0100431	Flange
31	1	0100043	Fork
32	16	1800182	Nut SS M6
33	2	1200005	Circlip E16
34	1	0100044	Flange
35	1	1700008	Gasket
36	1	0100039	Plate
37	4	1700005	O-Ring 9 x 2
38	4	1800113	Washer SS D.6
39	8	1800012	Bolt SS M6 x 25
40	2	1800180	Nut M8
41	1	0100217	Stretcher

ENGINE DRIVE BELT ASSEMBLY



REF#	QTY.	PART NO.	DESCRIPTION
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
7	1	1800129	Washer Lock 10
8	1	1800050	Bolt Allen M10
9	1	2200022	Belt A49
10	1	0200094	Pulley 310 x 3A

SPRAYER BOOM ASSEMBLY



SPRAYER BOOM ASSEMBLY

REF#	QTY.	PART NO.	DESCRIPTION
1	4	0100097	Blind Plug 1/2
2	4	1700021	Gasket 19
3	2	2000011	SS Tube 20/500
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	SS Tube 20/500 G14B
10	2	2000002	SS Tube 20/500 G20B
10	2	2000011	SS Tube 20/500 G28B
10A	2	2000018-PVC	Plastic Tube G14B
10A	2	2000002-PVC	Plastic Tube G20B
10A	2	2000011-PVC	Plastic 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	SS Tube 20/500 G14B & G28B
20	1	2000003	SS Tube 20/500 G20B
20A	1	2000012-PVC	Plastic Tube G14B & G28B
20A	1	2000003-PVC	Plastic 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
29	18-34	1800002	Bolt M5 x 16
30	9-17	0800004	Nozzle Buckle
31	9-17	1700020	O-Ring 10
32	9-17	0800062	Nozzle Body
33	9-17	1400036	Anti-drip
34	9-17	1400037	Filter

SPRAYER BOOM ASSEMBLY

REF#	QTY.	PART NO.	DESCRIPTION
35	9-17	0800076	Complete Nozzle Assembly
36	9-17	1700022	Gasket 10
37	1	1300022	Nipple MF 1/2 - 3/8
38	9-17	0800071	Ring Nut
39	9-17	0800072	80 Boom Nozzle (Brass)
40	6	1800179	Nut M6
41	2	0100112	Support
42	6	1800014	Bolt M6 x 20
43	18-34	400100	Bolt & Nut
44	9-17	400020.030	O-Ring D.6 x 2.5
45	9-17	402225.010	Nozzle Body
46	9-17	00226010	Diaphragm, Anti-Drip
47	9-17	400020.020	Nozzle Clamp
48	9-17	00226011	Anti-Drip Assembly
49	9-17	00226002	Nut 3/4" GAS
50	9-17	02311000	Filter
51	9-17	02309010	Gasket
52	9-17	30-04F80RE	Jet 80^{o} (Red)
52A	9-17	30-03F110UB	Jet 110^{o} (Blue)
53	9-17	402900	Cap, Quick Coupling
54	9-17	402225	Complete Nozzle Assembly (96)

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

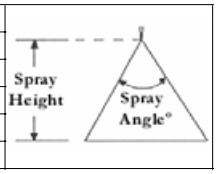
If the nozzle spacing on your boom is different than those tabulated, multiply the tabulated GPA coverages by one of the following factors.

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

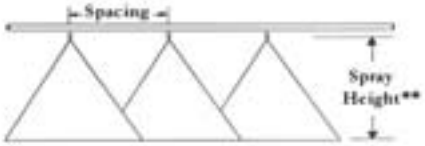
Where Tables Are Based on 40" Nozzle Spacing									
Other Spacing	28"	30"	32"	34"	36"	38"	42"	44"	48"
Conversion Factor	1.4	1.3	1.3	1.2	1.1	1.1	1	0.9	0.8

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"



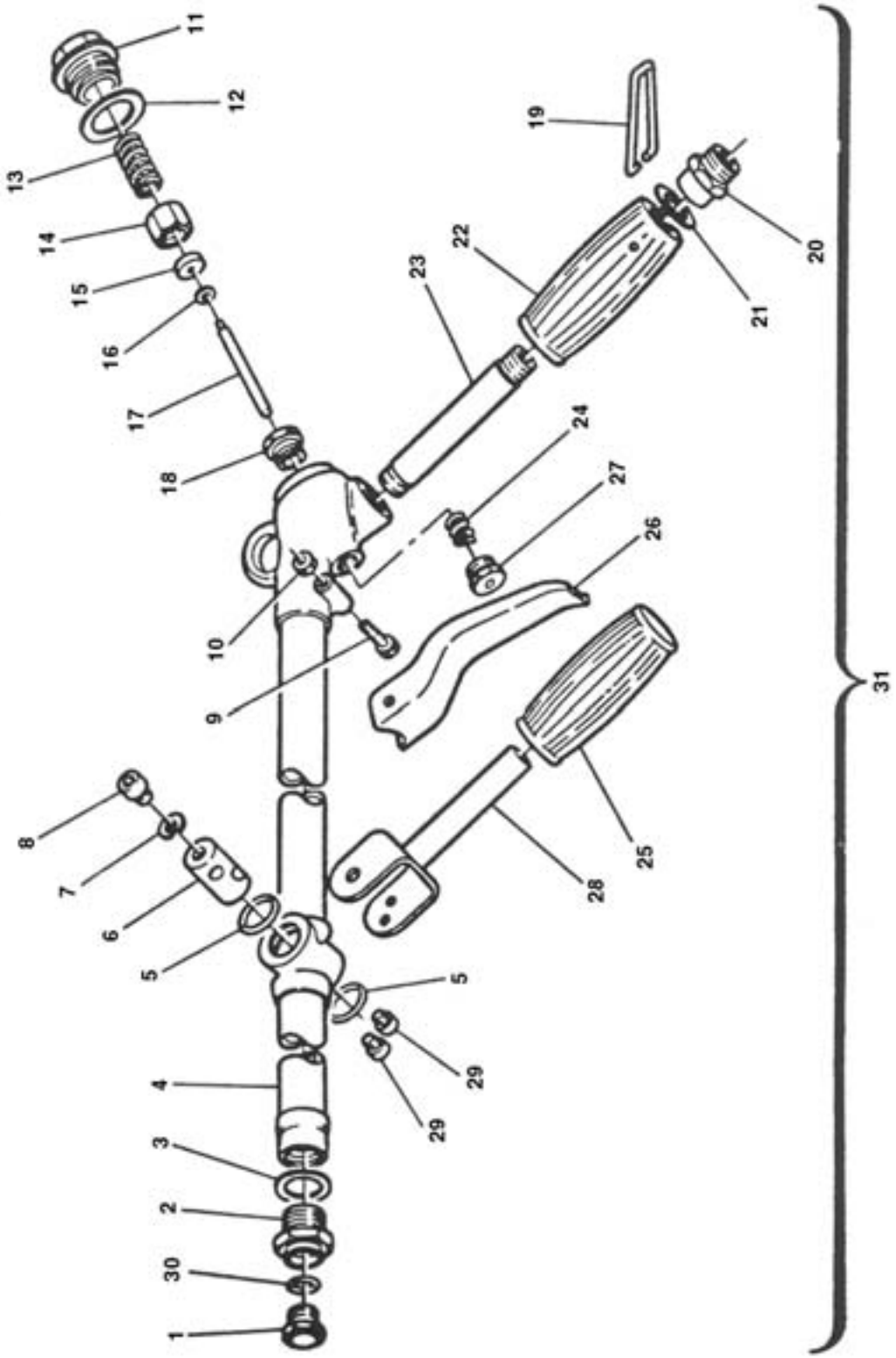
°Spray angles apply to flat spray tips spraying at rated pressure of 40 P.S.I. Lower pressures will result in reduced spray angles, except for the XR TeeJet.



**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 (50Mesh)	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

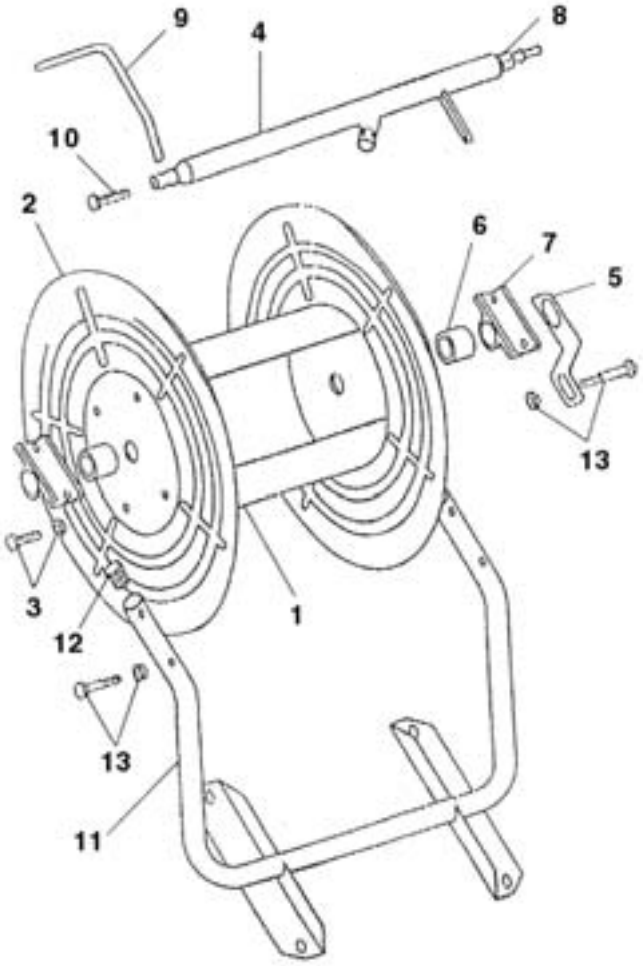
GHT TOMMY GUN ASSEMBLY



GHT TOMMY GUN ASSEMBLY

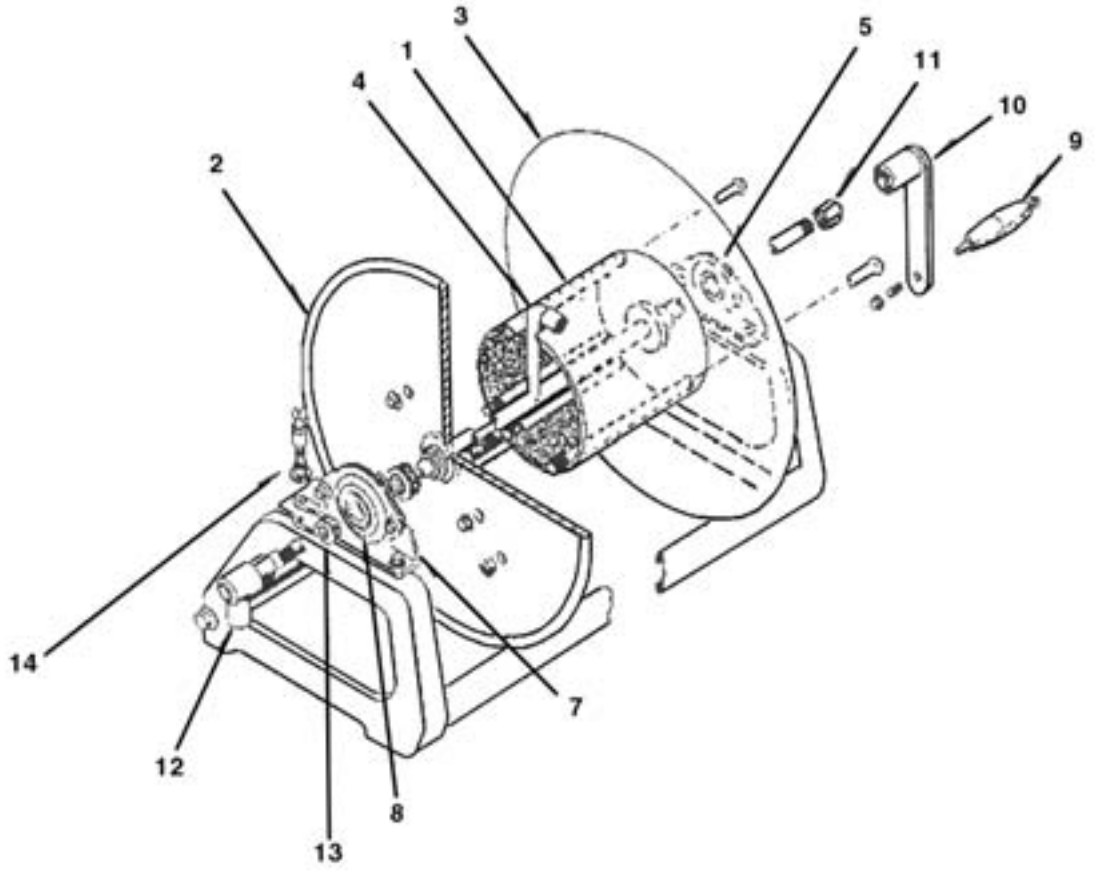
REF#	QTY.	PART NO.	DESCRIPTION
1	1	0800080	Nozzle 1.5
1	1	0800081	Nozzle 1.8
1	1	0800082	Nozzle 2.0
1	1	0800083	Nozzle 2.8
1	1	0800084	Nozzle 3.0
1	1	0800085	Nozzle 3.5
2	1	0800086	Jet Support
3	1	0800087	Gasket
4	1	0800088	Body
5	2	0800089	Gasket
6	1	0800090	Bushing
7	1	0800091	Washer
8	1	0800092	Bolt
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

HR100N-HR100TN HOSE REEL



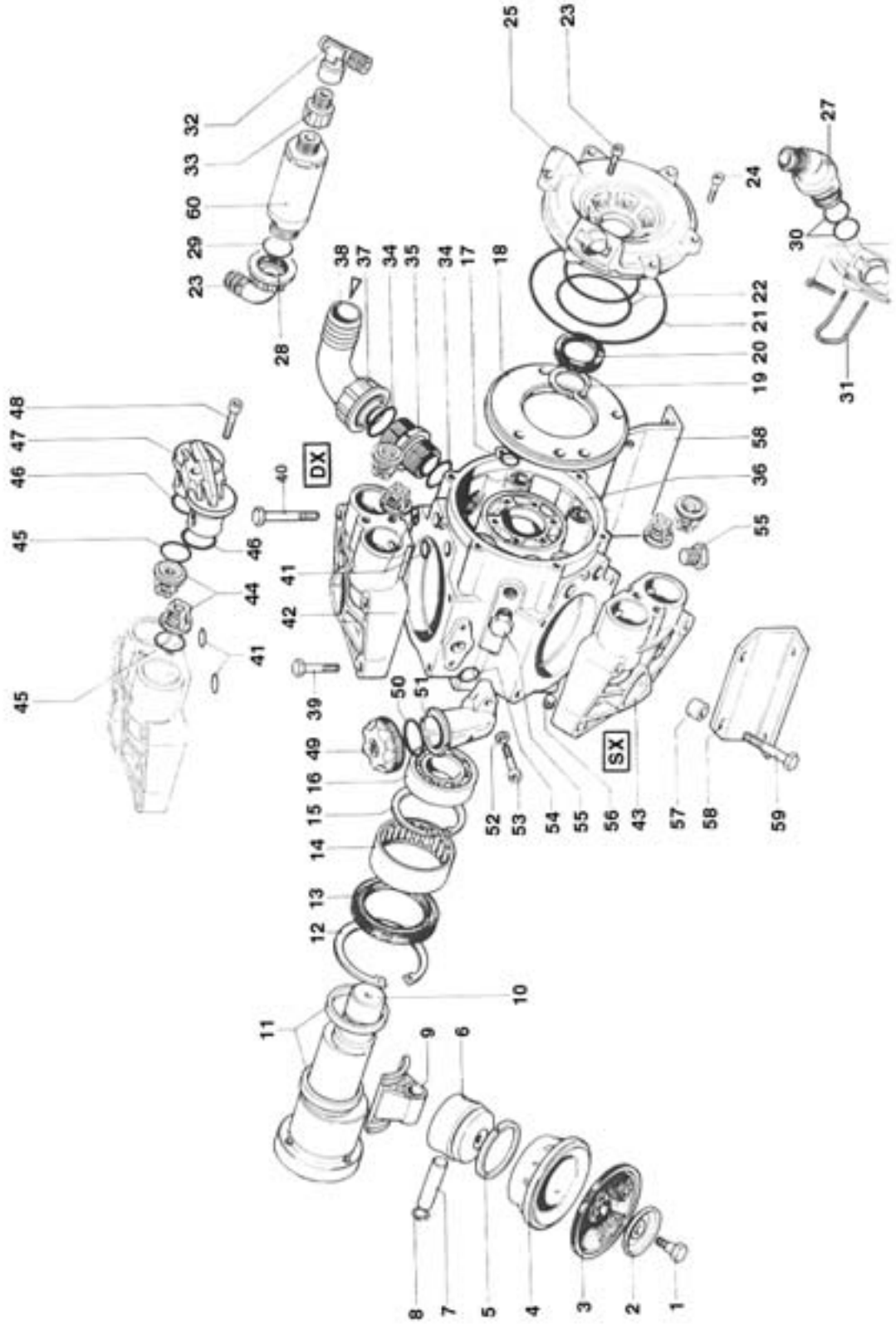
REF#	QTY.	PART NO.	DESCRIPTION
1	1	191-06	Reel, Center Only
2	2	191-05	Side Plates Reel
3	8	191-10	Bolt & Nut M6 x 16
4	1	191-02	Steel Liquid Tube
5	2	191-16	Steel Support Connector
6	2	191-12	Spacer Bushing
7	2	191-14	Plastic Support Bracket
8	1	191-01	Brass connector Swivel 3/8"
9	1	191-03	Complete Handle
10	1	191-04	Bolt Handle
11	1	191-07	Frame
12	2	191-08	Plastic Plug
13	4	191-09	Bolt & Nut M6 x 408

HR300 HOSE REEL



REF#	QTY.	PART NO.	DESCRIPTION
1	1	99057112	Drum 6” Metal
2	1	99030516	Front Disc
3	1	99030516	Back Disc
4	1	99010610	Hub Assembly w/Riser (Specify Model)
5	1	99021200	Back Bearing, Complete
6	1	99021300	Back Bearing Insert Only (Not Shown)
7	1	99021200	Front Bearing, Complete
8	1	99021300	Front Bearing Insert Only
9	1	99140505	Plastic Handle for Crank w/Bolt & Nut
10	1	99140021	Series 1500 Hand Crank, Complete
11	1	99650013	1/2” Pipe Cap
12	1	99272588	Swivel Joint
13	1	99650001	Tension Spring
14	1	99850003	Tension Adjustment Assembly

AR503 PUMP ASSEMBLY



AR503 PUMP ASSEMBLY

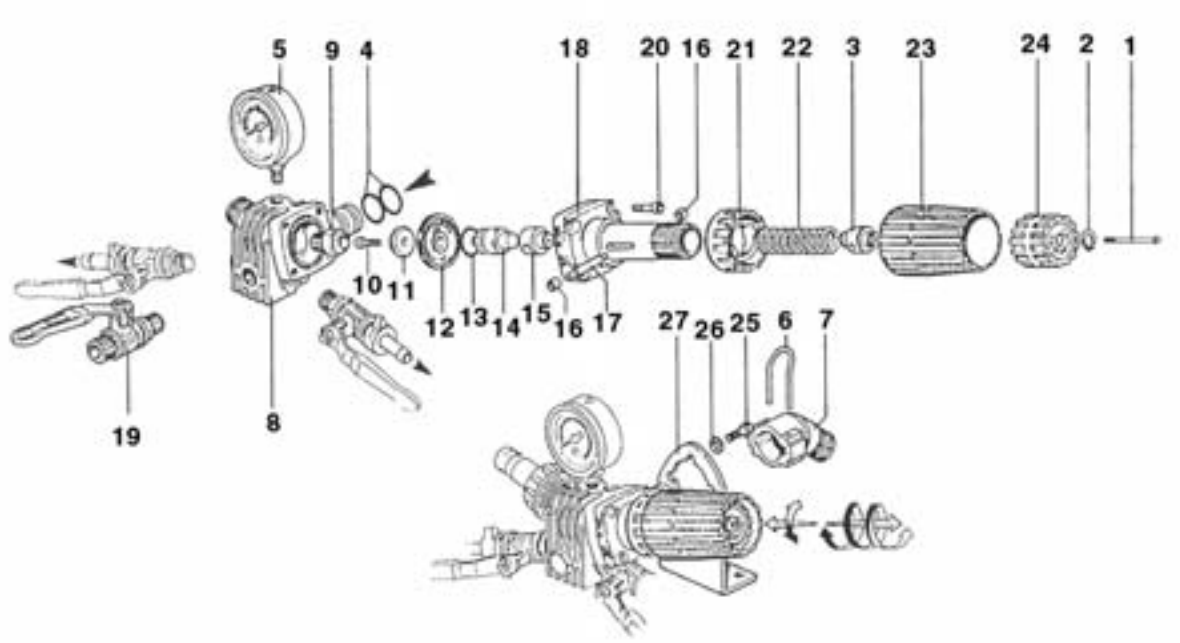
REF#	QTY.	PART NO.	DESCRIPTION
➡ 1	3	1040130	Bolt, Diaphragm
2	3	1040180	Washer, Diaphragm
◑➡ 3	1	1986	Diaphragm Kit
4	3	1300110	Cylinder
5	3	160230	Piston Ring
6	3	620120	Piston
7	3	380300	Piston Pin
8	6	380080	Circlip, Piston
9	3	1300140	Connecting Rod
10	1	1300170	Crankshaft
11	2	1300120	Lock Ring, Connecting Rod
12	1	1300240	Circlip I70
➡ 13	1	55x70x8	Oil Seal
14	1	HK5520	Bearing
15	1	1260790	Circlip E52
16	1	6205	Bearing
* ➡ 17	5	740290	O-Ring 14 x 1.78
18	1	1300020	Spacer, Cover Flange
19	1	1260770	Circlip E25
➡ 20	1	25x35x7	Oil Seal
* ➡ 21	1	1300270	O-Ring 126.67 x 2.62
* ➡ 22	2	640030	O-Ring 60 x 2.62
23	6	880280	Bolt, Allen Head M6 x 18
24	6	1040370	Bolt M6 x 22
25	1	1300030	Air Manifold
26	1	550460	Elbow D.18
27	1	1040760	Fitting
28	1	550450	Ring Nut
29	1	880830	O-Ring 15.54 x 2.62
30	2	390180	O-Ring 18.72 x 2.62
➡ 31	1	1040690	Lock Clip
32	1	881560	Elbow
33	1	881460	Reducer
* 34	2	390290	O-Ring 29 x 3
35	1	450120	Nipple
36	1	1300010	Pump Housing
➡ 37	1	580060	Nut, Plastic
38	1	580040	Elbow
39	4	200230	Bolt M10 x 45
40	4	640230	bolt M10 x 60
* ➡ 41	6	480440	O-Ring 17.13 x 2.62
42	2	1300101	Head Right Hand (DX)
43	1	1300102	Head Left Hand (SX)

AR503 PUMP ASSEMBLY

REF#	QTY.	PART NO.	DESCRIPTION
# ➡44	1	1987	Check Valve Kit
*# ➡45	6	620030	O-Ring 25.8 x 3.53
*# ➡46	6	540361	O-Ring 33.05 x 1.78
47	3	1300190	Cap Head
48	6	620610	Bolt Allen Head M8 x 30
49	1	550050	Oil Cap
* 50	1	550040	O-Ring 26.52 x 2.62
➡ 51	1	550030	Oil Sight Tube
52	2	550331	Washer D.6
53	2	850850	Bolt, Allen Head M6 x 30
* ➡54	1	180101	O-Ring 17.5 x 2
55	1	130171	Plug 3/8"
56	1	770070	Plug 10 x 10
57	2	1300280	Spacer
58	2	1300090	Mounting Bracket
59	4	1300360	Bolt M10 x 65
60	1	1433	Relief Valve

* KIT 1984 O-RING		➡ KIT 1985 PUMP KIT		❸ KIT 1986 DIAPHRAGM		# KIT 1987 VALVE	
CODE	QTY	CODE	QTY	CODE	QTY	CODE	QTY
740290	5	180101	1	620080	3	1049050	6
1300270	1	480440	6			640361	6
640030	2	540361	6			620030	6
390290	2	550030	1				
480440	6	580040	1				
620030	6	580060	1				
540361	6	620030	6				
550040	1	620080	3				
180101	1	640030	2				
		740290	5				
		1040130	3				
		1040690	1				
		1049050	1				
		1300190	3				
		1300220	1				
		1300230	1				
		1300270	1				
		390290	2				

CONTROL VALVE ASSEMBLY



REF#	QTY.	PART NO.	DESCRIPTION
1	1	1150650	Bolt M3 x 60
2	1	480550	Circlip E12
3	1	1150660	Spacer
*➡4	2	390180	O-Ring 18.72 x 2.62
5	1	550545	Pressure Gauge
➡ 6	1	1040690	Clip
7	1	1040770	Fitting, Pressure
8	1	1150500	Body
➡ 9	1	1150520	Valve Seat
10	1	680560	Bolt M6 x 16
➡11	1	1040640	Valve Seat
➡12	1	1040630	Diaphragm
*➡13	4	880830	O-Ring 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

CONTROL VALVE ASSEMBLY

REF#	QTY.	PART NO.	DESCRIPTION
19	2	30491	Ball Valve R.H.
19A	1	30492	Ball Valve L.H.
20	4	780330	Bolt, Allen Head M6 x 20
➨21	1	1150530	Control Nut
➨22	1	394760	Spring
➨23	1	1150550	Control Knob
➨24	1	1150570	Knob
25	2	180431	Bolt M8 x 16
26	2	390311	Washer
27	1	1150590	Bracket, Support

* KIT 1988 O-RING		➨ KIT 1989 PUMP KIT	
CODE	QTY	CODE	QTY
390180	2	390180	2
880830	4	394760	1
		880830	1
		1040630	1
		1040640	1
		1040690	1
		1150520	1
		1150530	1
		1150540	1
		1150550	1
		1150560	1
		1150570	1

LIMITED WARRANTY

GEARMORE INC.

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 warranties 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.