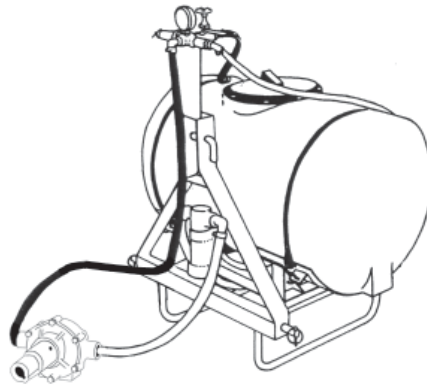




HANDGUN & BOOM SPRAYERS

Operation / Service / Parts
Manual For



**3-Point Sprayer Models:
FM-3P55-SXS, FM-3P110
& FM-3P200**

October 2004

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1 INTRODUCTION

Congratulations on your choice of Handgun & Boom Sprayers. This equipment has been designed and manufactured to meet the needs of a discriminating buyer for their spraying needs.

These sprayers are designed for ease of operation at affordable quality prices.

Safe, efficient and trouble free operation of your Sprayer requires that you and anyone else who will be operating or maintaining the machine, read and understand the Safety, Operation, and Maintenance information contained within the Operator's Manual.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your dealer, or us if you need assistance, information or additional copies of the manuals.

1. **POWER SOURCE:** 3 Point PTO

2. **PUMP:** Roller

3. **TANK:** All sprayers have a polyethylene tank.

4. **STRAINERS:** The sprayer is equipped with one strainer.

Model No: _____

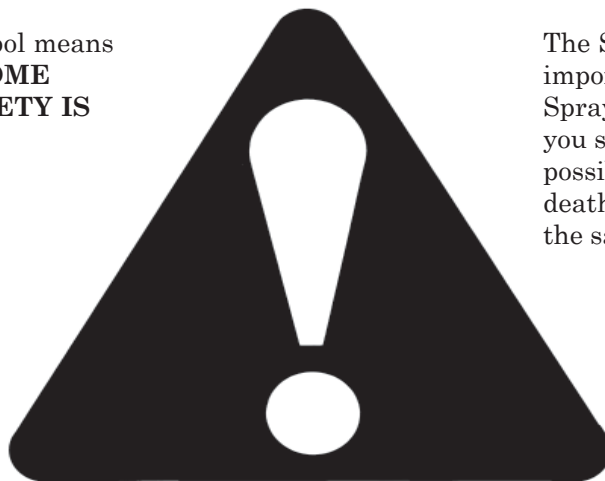
Serial No: _____

Date of Purchase: _____

2 SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



The Safety Alert symbol identifies important safety messages on the Sprayer and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer.

2.1 TRAINING & PREPARATION

Before operating this Sprayer, read and understand this manual completely. Become familiar with it for your own safety. To fail to do so may cause serious injury. **DO NOT** allow anyone to operate this Sprayer who has not read this manual.



NEVER use your Sprayer for any other purposes than its intended use. Any other use may cause an injury.

NEVER allow children to operate your Sprayer, nor adults lacking proper instructions. Keep them away from your work area. Your Sprayer is not a toy. Only the operator is to be near your Sprayer during use. Keep all others, including pets a minimum of 10 feet away from your work zone.

NEVER operate your Sprayer when under the influence of alcohol, drugs or medication. A clear mind is essential for safety.

NEVER allow a person who is tired or otherwise not alert to use your Sprayer.



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 may result in personal injury and/or property damage and will void the product warranty.

2.2 SAFETY WEAR

NEVER wear loose clothing or jewelry that can be caught by moving parts of your Sprayer and pull you into it. Keep clothing away from all moving parts of your Sprayer. Wear proper head gear to keep hair away from moving parts.

ALWAYS wear safety shoes.

ALWAYS wear safety glasses. Chemicals or other herbicides can irritate the eyes



If you wear gloves, be sure they are tight fitting without loose cuffs or draw strings.

Have a first aid kit available should the need arise and learn how to use it.



ALWAYS wear protective hearing devices as needed.



PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!

Tractors with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss. **NOTE:** Hearing loss from loud noise (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.

2.3 OPERATING SAFETY

YOU are responsible for the **SAFE** operation and maintenance of your Sprayer. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the Sprayer be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the Sprayer.

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

Do not operate pump above recommended R.P.M.

Do not pump at pressure higher than the maximum recommended for the pump.

Operate pump between 45° and 145° liquid temperatures.

Make certain that the power source conforms to the requirements of your equipment.

Provide adequate protection in guarding around the moving parts, such as the shaft and pulleys.

Disconnect power before servicing.

Release all pressure within the system before servicing any component.

Drain all liquids from the system before servicing.

Secure the discharge lines before starting the pump. An unsecured discharge line may whip, causing personal injury and/or property damage.

Check hoses for weak or worn condition before each use. Make certain that all connections are tight and secure.

Periodically inspect the pump and the system components. Perform routine maintenance as required.

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!)**

Do Not use these pumps for pumping water or other liquids for human or animal consumption.

- Sprayer owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter per OSHA (Occupational Safety and Health Administration) regulation 1928.57.
- The most important safety feature on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.
- **Think SAFETY! Work SAFELY!**

2.4 OPERATING PROCEDURE

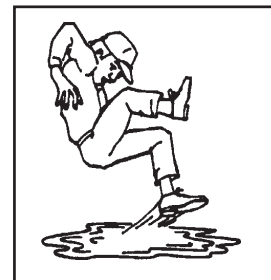
- ◆ Sprayer should be operated only by qualified persons.
- ◆ **ALWAYS** fill sprayer slowly to avoid spillage.
- ◆ When starting sprayer, maintain a safe distance from moving parts. Keep hands, feet and clothing away from all moving parts.
- ◆ **NEVER** run P.T.O. at speeds in excess of 540 RPM.
- ◆ **DO NOT** make adjustments when sprayer is running, unless specifically recommended.
- ◆ Be sure all tips are in good condition and nozzle caps are tight.
- ◆ Know how to stop the unit and disengage the controls.
- ◆ After seeing that your pump is primed, turn your sprayer on. Be sure all tips are functioning.
- ◆ Make sure the lid on your tank is secured.
- ◆ Check to be sure your controls are functioning properly. (If electric controls are used, reference the manufacturers manual provided for installation, operating and troubleshooting if problems arise.)
- ◆ Be sure that the pump is secured to power source (i.e. PTO shaft of tractor) as recommended by the pump manufacturer.
- ◆ **ALWAYS** follow directions of the chemical manufacturer when mixing or handling all chemicals.
- ◆ Be sure your pump is capable of pumping your chemicals. For example, cast iron roller pumps are not recommended for pumping acid base or abrasive chemicals as the pump will be ruined within a few short hours of use.
- ◆ **NEVER** leave your Sprayer unattended. Shut off the engine if you are leaving your Sprayer even for a short period of time.
- ◆ **DON'T** run the engine in an enclosed area. Exhaust gases contain carbon monoxide. This odorless gas can be deadly when inhaled.

2.5 REPAIR & MAINTENANCE SAFETY

Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

Follow good shop practices.

- Keep service area clean and dry.
- Be sure electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.



Make sure there is plenty of ventilation. Never operate engines in a closed building. The exhaust fumes may cause asphyxiation.

A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



DON'T operate your Sprayer in poor mechanical condition or when in need of repair.

PERIODICALLY check that all nuts, bolts, fittings, clamps, hoses, and screws are tightened and properly installed.

DON'T alter your Sprayer in any manner. Such alterations may cause your Sprayer to be unsafe.

PERFORM all recommended maintenance procedures before you use your Sprayer.

REPLACE all damaged or worn parts such as hydraulic hoses and fittings immediately.

DISCONNECT power before servicing.

RELEASE all pressure within the system before servicing.

DRAIN all liquids from the system before servicing.

All replacement parts must meet manufacturer's specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.

2.6 SAFETY DECALS



ALWAYS REPLACE
MISSING OR
DAMAGED DECALS



3 OPERATING INSTRUCTIONS

Be sure you are familiar with and confident of your knowledge on how to operate your sprayer. Read and familiarize yourself with all procedures and safety instructions included in this manual and the manual provided with your tractor.

3.1 PRE-OPERATION CHECKLIST



STEP 1: Be sure all tips are in good condition and nozzle caps are tight.



STEP 2: After seeing that your pump is primed, turn your sprayer on. Make sure all tips are functioning properly.



STEP 3: Make sure the lid on your tank is secured.



STEP 4: Check to be sure your controls are functioning properly. (If electric controls are used, reference the manufacturers manual provided for installation, operating and troubleshooting if problems arise.)



STEP 5: Be sure that the pump is secured to power source (i.e. PTO shaft of tractor) as recommended by the pump manufacturer.



STEP 6: Always follow directions of the chemical manufacturer when mixing or handling all chemicals.



STEP 7: Be sure your pump is capable of pumping your chemicals. For example, cast iron roller pumps are not recommended for pumping acid base or abrasive chemicals as the pump will be ruined within a few short hours of use.

3.2 OPERATING



BEFORE YOU PUT CHEMICAL INTO YOUR SPRAYER TANK

1. Be sure you are familiar with and confident of your knowledge on how to operate your sprayer. Ask your dealer if in doubt.
 2. Re-check all bolts, screws, fittings, clamps, hoses, etc. to be certain they are tight and properly installed.
 3. **DO NOT** remove any safety shields from pumps or any other safety equipment. Be sure it is installed according to manufacturer's recommendations.
 4. Handle all chemicals with extreme caution, wear protective clothing, and mix your chemicals only as recommended by your chemical dealer.
 5. Check to see that the tank, tank fittings and gaskets are compatible with the chemicals to be used.
 6. Check to be certain that the chemicals to be used are compatible with the pump. Check on the chemical compatibility with not only the overall composition, i.e. cast iron, but the kind of seals that should be used. Is it a corrosive or abrasive chemical? Some chemicals can give off toxic vapors when they come in contact with the material it is not compatible with, which will not only ruin your pump, but could cause personal injury.
 7. **USE CAUTION** and common sense for your own safety! Take time to read all literature, warnings, cautions, and operation manuals provided!
- **Think SAFETY! Work SAFELY!**

3.3 OPERATION - PTO MODELS

1. Connect sprayer to tractor 3-point hitch.
2. Connect the pump to the tractor PTO shaft. Be sure to hook safety chains so pump does not rotate.
3. Check strainer screen to make sure it is clean.
4. Check strainer shut-off valve, making sure the handle is in the open position.
5. Refer to calibration page to calibrate the sprayer. Set regulator pressure as required. **Important** - The pressure regulator adjusting knob must be unscrewed (turned to left) as far out as possible before operating sprayer. Then gradually screw in (turn to right) to desired pressure.
6. Open agitator ball valve and engage tractor PTO. Run for a couple of minutes to make sure the jet agitator has mixed the chemicals thoroughly. Last, turn the control valve handles to the position required. Either right hand, left hand or both sides spraying.
7. Remember, it is always best to make a practice run with water to be sure you have the correct rates and coverage.

USE CAUTION and common sense for your own safety!

Take time to read all literature, warnings, cautions, and operation manuals provided!

4 CALIBRATION

Proper calibration is probably the most important part of spraying. Properly calibrated sprayers will save you money and time.

4.1 TRACTOR SPEEDS

EXAMPLE:

You want to spray *20* gallons per acre. The *AN3* nozzle is standard on the booms. Go to the direct read application chart. The pressure gauge should be set at *30 P.S.I.* and your tractor speed should be slightly less than *4 miles per hour*.

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

4.2 APPLICATION RATES (10 & 14 Foot Flood Boom Only)

NOZZLES ON 40" CENTERS

SIZE	LIQUID PRESSURE (P.S.I.)	CAPACITY GAL. / MIN.	APPLICATION RATE: GALLONS PER ACRE AT MILES PER HOUR					
			4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	15 MPH
AN2 Red	10	0.2	7.4	5.9	4.95	3.7	3.0	2.0
	15	0.24	8.9	7.1	5.9	4.45	3.5	2.37
	20	0.28	10.4	8.3	6.9	5.2	4.15	2.77
	30	0.35	13.0	10.4	8.6	6.5	5.2	3.46
	40	0.4	14.8	11.8	9.9	7.4	5.9	3.96
AN2.5 Brown	10	0.25	9.3	7.4	6.2	4.6	3.7	2.5
	15	0.3	11.1	8.9	7.4	5.5	4.4	3.0
	20	0.36	13.3	10.7	8.9	6.7	5.3	3.5
	30	0.44	16.3	13.0	10.9	8.1	6.5	4.3
	40	0.5	18.5	14.8	12.4	9.3	7.4	5.0
AN3 Grey (Standard Both Booms)	10	.305	11.3	9.0	7.5	5.6	4.5	3.0
	15	.373	13.8	11.0	9.2	6.9	5.5	3.7
	20	.43	15.9	12.7	10.6	8.0	6.4	4.2
	30	.53	19.6	15.7	13.1	9.8	7.8	5.2
	40	.61	22.6	18.1	15.0	11.3	9.0	6.0

4.3 APPLICATION RATES FOR 15, 21, & 28 FOOT ROW CROP BOOMS

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

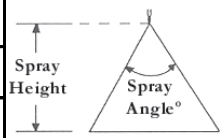
$$\text{GPA} = \frac{5940 \times \text{GPM (Per Nozzle)}}{\text{MPH} \times \text{W}}$$

- 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 sprayign or boomless spraying
- Row spacing in inches divided by the number of nozzles per row for directed spraying

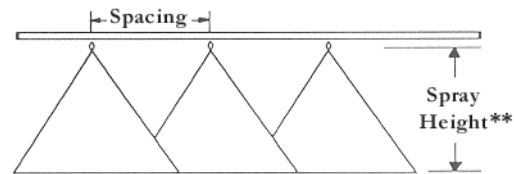
If the nozzle spacing on your boom is different than those tabulated, multiply the tabulated GPA coverages by one of the following factors:

Tables Are Based on 20" Nozzle Spacing									
Other Spacing	8"	10"	12"	14"	16"	18"	22"	24"	30"
Conversion Factor	25	2	1.67	1.43	1.25	1.11	0.91	0.83	0.66

SUGGESTED MINIMUM SPRAY HEIGHTS

Spray Angle	Spray Height	
	20" Spacing	
80°	17" to 19"	

*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.

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

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 (Standard All 3 Booms)	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

5 GENERAL MAINTENANCE

Carefully follow all instructions as stated in this operator's manual. This includes safety, 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 high R.P.M. machine, thus, daily attention is required.

1. Check all bolts for tightness
2. Check sprayer for leaks
3. Check hose connections

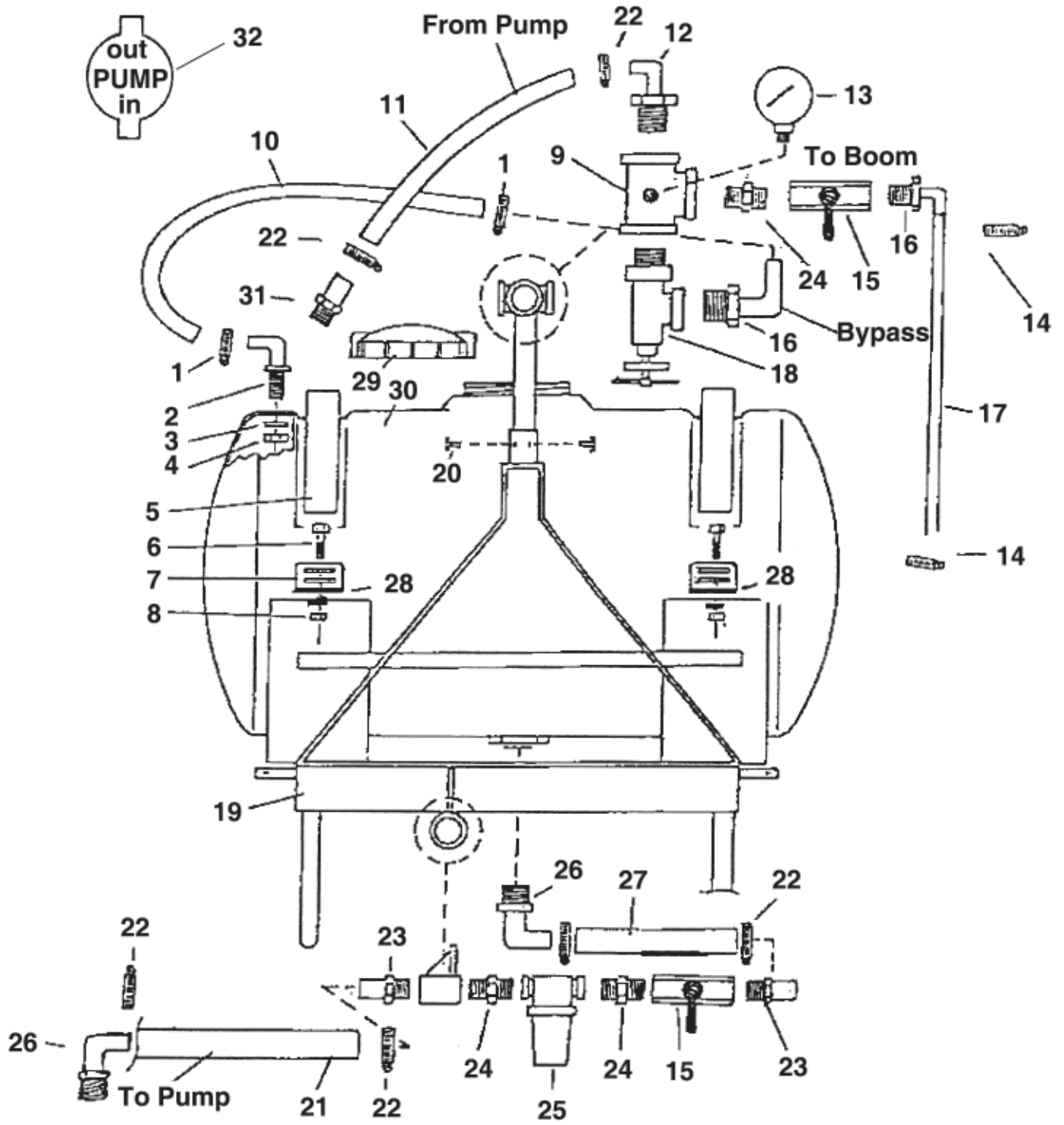
6 CLEANING & STORAGE

The most effective cleaning method is to pump several rinses of clean water through the tank, pump, hoses, boom, spray gun, etc. A neutralizing agent such as a solution of Nutra-Sol, a detergent or household ammonia as recommended by the chemical manufacturer can assist in removal of a persistent chemical. When the system is thoroughly cleaned, drain the tank, suction line, pump, hoses, etc.

- Wash and flush out sprayer after completion of each phase of your spraying program.
- Flush out sprayer when changing chemicals, if there is a possibility of incompatibility.
- 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.
- Check sprayer over for needed repairs before time to spray again.
- 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.
 1. Store the unit in an area away from human activity
 2. Do not permit children to play on or around the stored machine.
 3. Store the unit in a dry, level area. Support the frame with planks if required.

7 PARTS BREAKDOWN

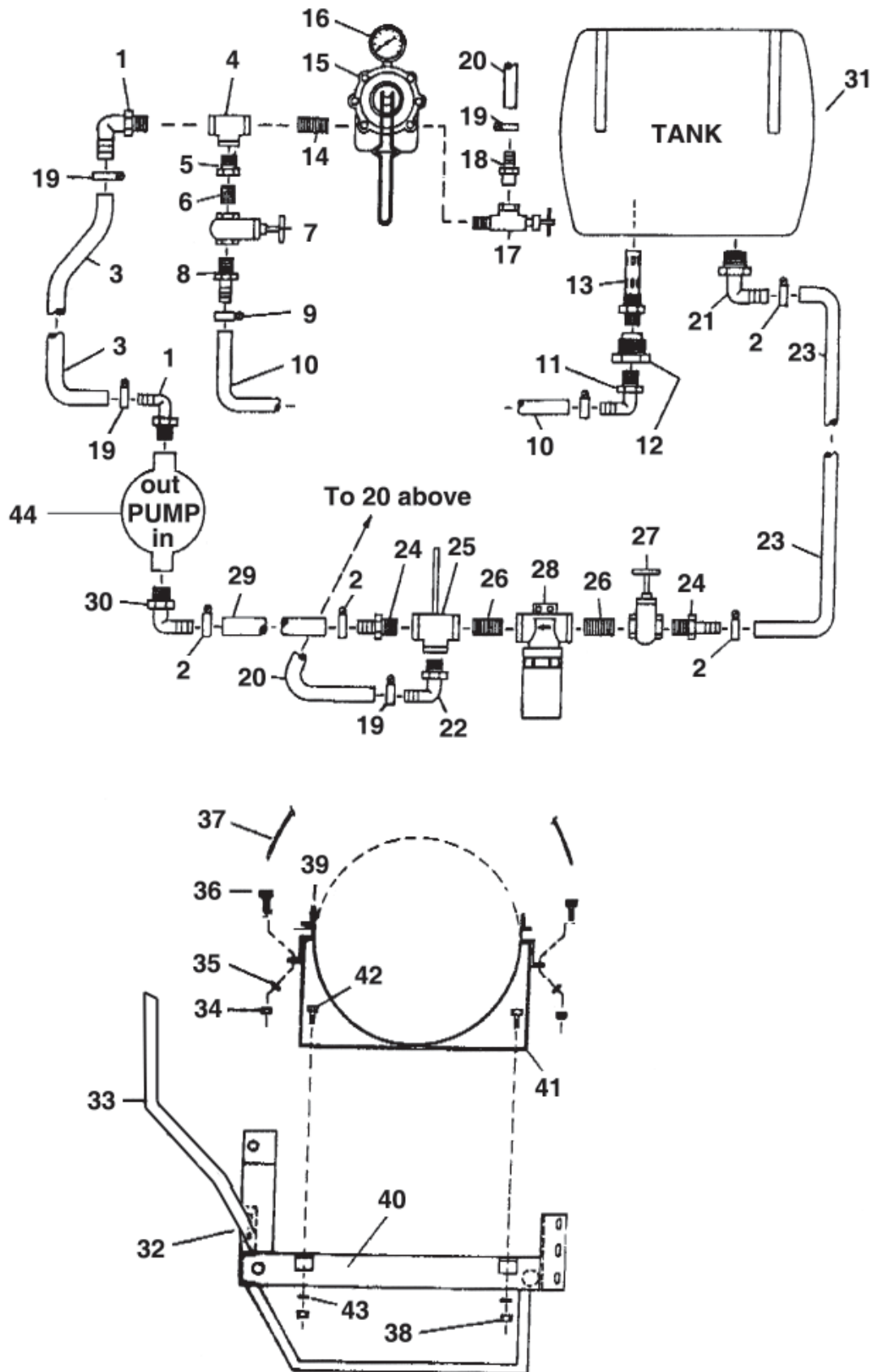
7.1 FM-3P55-SXS SPRAYER ASSEMBLY



7.1 FM-3P55-SXS SPRAYER ASSEMBLY

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	SCG	Hose Clamp
2	1	5056023	Elbow 1/2"
3	1	GHWASHER	Vinyl Washer
4	1	5006102	Nut, Nylon
5	2	099-36-270	Nylon Strap
6	4	5034004	Bolt, HHCS
7	4	098-40-421	Strap Bracket
8	4	5006040	5/16" Nut
9	1	115-01-120	Tee PT55
10	1	1/2"-1ID-28	Hose, 1/2" 2 Spiral 28"
11	1	5/8"-1ID-60	Hose, 5/8" 2 Spiral 60" Rubber
12	1	5010037	Ny Hose Elbow 3/4 MPT x 5/8"
13	1	GA200	Gauge, Dry, 1/4 NPT #200
14	2	SSC6	1/2" Hose Clamp, Steel
15	2	BV34	Ball Valve 3/4"
16	1	5300106	Ny Hose Elbow 3/4 MPT x 1/2"
17	1	1/2-1ID-66	1/2' Hose 1-Brd 66"
18	1	2066-05-58	Pressure Relief Valve
19	1	115-01-101	Frame, 55 Gallon 3-pt.
20	4	5/16"-18X1/2	Bolt HHCS
21	1	3/4-1ID-52	Hose 3/4 2 Spiral 52"
22	6	SSC12	Hose Clamp
23	2	7575MN	Ny Hose Barb 3/4 MPT x 3/4
24	2	NN34	Ny Nipple 3/4 MPT x 3/4 MPT
25	1	122-3/4-PP50	Line Strainer
26	2	K-3434	Ny Hose Elbow 3/4 MPT x 3/4
27	1	3/4-1ID-12	Hose 3/4 2 Spiral 12" Rubber
28	4	5016026	Lockwasher 5/16"
29	1	5340134	Tank Lid
30	1	TOP-55	Tank, Ace, 55 Gallon Poly
31	1	7563MN	Ny Hose Barb 3/4 MPT x 5/8" Barb
32	1	4101C	Pump (Standard Cast Iron)
32	1	4101XL	Pump (Optional Silver Cast)

7.2 FM-3P110 & FM-3P200 SPRAYER ASSEMBLY

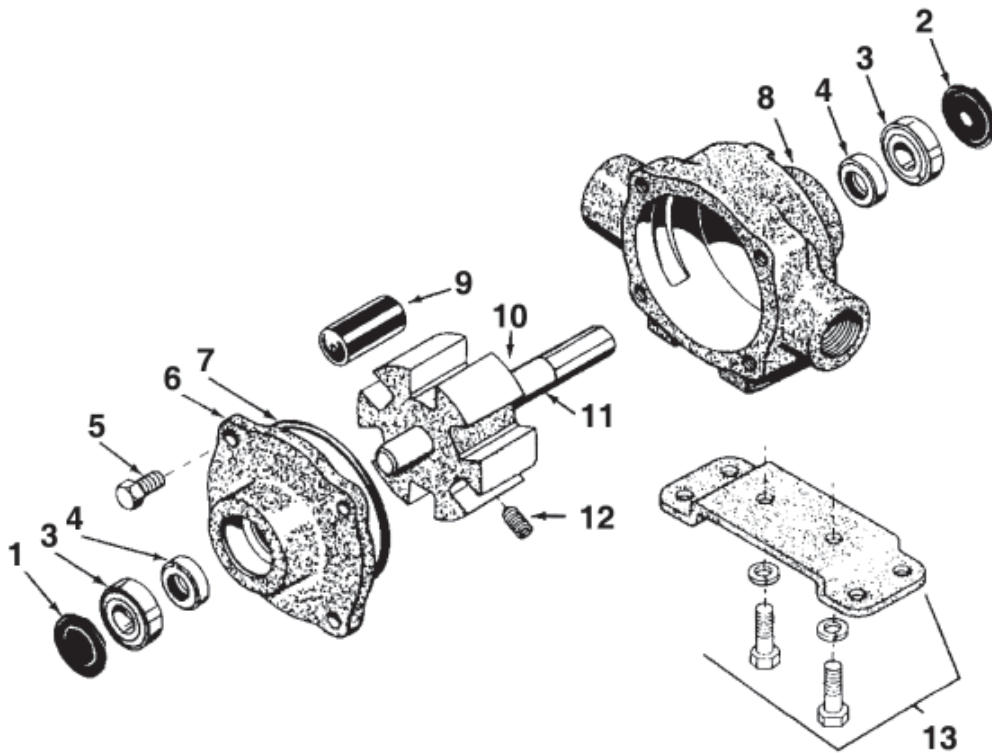


7.2 FM-3P110 & FM-3P200 SPRAYER ASSEMBLY

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	K-3434	3/4" x 3/4" Nylon Hose Barb
2	4	KO-20SS	Hose Clamp
3	1	3/4-1ID	3/4" 2 Spiral Rubber Hose 5'
4	1	NT34	3/4" Tee
5	1	NRB-3412	3/4" x 1/2" Bushing
6	1	SN12C	1/2" Steel Nipple
7	1	CV-1/2	1/2" Gate Valve
8	4	5350109	1/2" x 1/2" Nylon Hose Barb
9	2	SSC6	1/2" Hose Clamp
10	1	EVA-1/2"	1/2" Plastic Hose 54"
11	1	5300106	3/4" IPT x 1/2" Nylon Hose Barb
12	1	5350222	3/4" Withdrawal Fitting
13	1	3371-19	Nylon Jet Agitator
14	1	NN34	3/4" Nipple
15	1	17-I	Manual Control Valve
16	1	GA200	Gauge 200 PSI
17	1	2066-05-58	Pressure Relief Valve
18	1	7563MN	3/4" x 5/8" Nylon Hose Barb
19	4	SSC12	Hose Clamp
20	1	5/8"-1ID	5/8" Hose 42"
21	1	K-12510	1 1/4" x 1" Nylon Hose Barb
22	1	5010037	3/4" x 5/8" Nylon Hose Barb
23	1	1"-1ID	1" 2 Spiral Rubber Hose 2'
24	2	100100MN	1" x 1" Hose Barb
25	1	LSH1134	1" x 1" x 3/4" Line Strainer Holder
26	2	NN1	1" Nipple
27	1	CV-1	1" Gate Valve
28	1	1-MNS-40	1" Nylon Line Strainer
29	1	1"-1ID	1" 2 Spiral Rubber Hose 5'
30	1	K-3410	3/4" x 1" Nylon Hose Barb
31	1	TOP-110	Tank, 100 Gallon
31	1	TOP-200-32	Tank, 200 Gallon
32	2	O/L	Bolt 5/16" x 1/2"
33	1	3PTMANI-PST	Manifold Post
34	4	5006040	5/16" Nut
35	4	5016026	5/16" Lockwasher
36	4	5034004	5/16" x 1 3/4" Bolt
37	2	TS30-32	Tank Strap 65"
38	4	5006011	1/2" Nut
39	4	098-40-421	Strap Brackets
40	1	<i>Contact Dealer</i>	A-frame 3-Pt. Frame
41	1	BOCWS110	Bolt on Cradle
42	4	O/L	Bolt 1/2" x 1 1/2"
43	4	5016028	1/2" Lockwasher
44	1	6500C	Pump (Standard Cast Iron)
44	1	6500XL	Pump (Optional Silver Cast)

8 BREAKDOWN

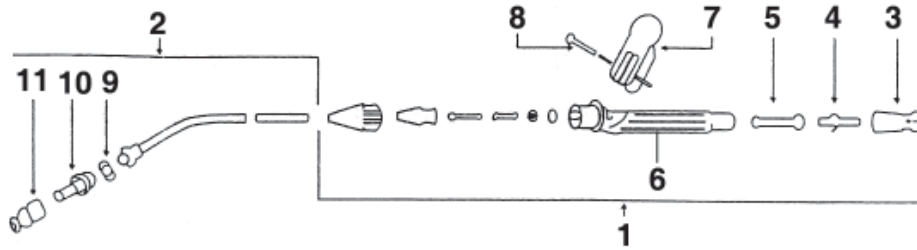
8.1 6500C & 6500XL PUMP ASSEMBLY



<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	2300-0021	Cover, Rear
2	1	2300-0023	Cover, Rear
3	2	2000-0010	Bearing
4	2	2107-0002	Seal, Viton (Standard)
4	2	2102-0001	Seal, Buna-N (Optional)
4	2	2103-0001	Seal, Leather (Optional)
5	4	2210-0004	Bolt
6	1	0200-6600C	Cover (Cast Iron)
6	1	0200-6600X	Cover (Silver Cast)
7	1	1720-0008	O-Ring
8	1	0100-6600C	Body (Cast Iron)
8	1	0100-6600X	Body (Silver Cast)
9	6	1005-0004	Roller (Standard)
9	6	1002-0004	Poly Roller (Optional)
9	6	1055-0004	Teflon Roller (Optional)
9	6	1052-0004	Buna-N Roller (Optional)
10	1	0300-6600C	Rotor w/Shaft (Cast Iron)
10	1	0300-6600X	Rotor w/Shaft (Silver Cast)
11	1	0500-6600	Shaft Only
12	1	2230-0003	Set Screw (Cast Iron)
12	1	2230-0007	Set Screw (Silver Cast)
13	1	3420-0023	Base Kit

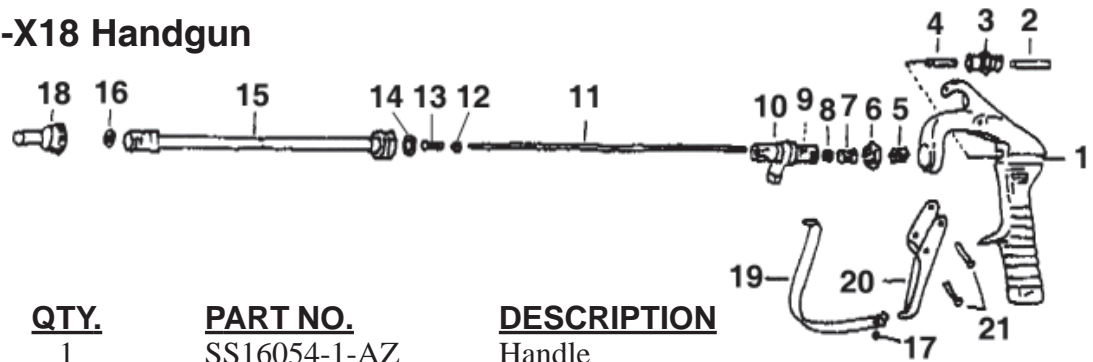
8.2 HANDGUN ASSEMBLY

275-190 Handgun



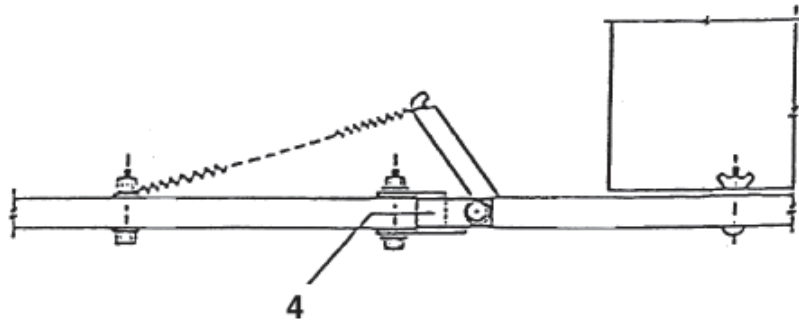
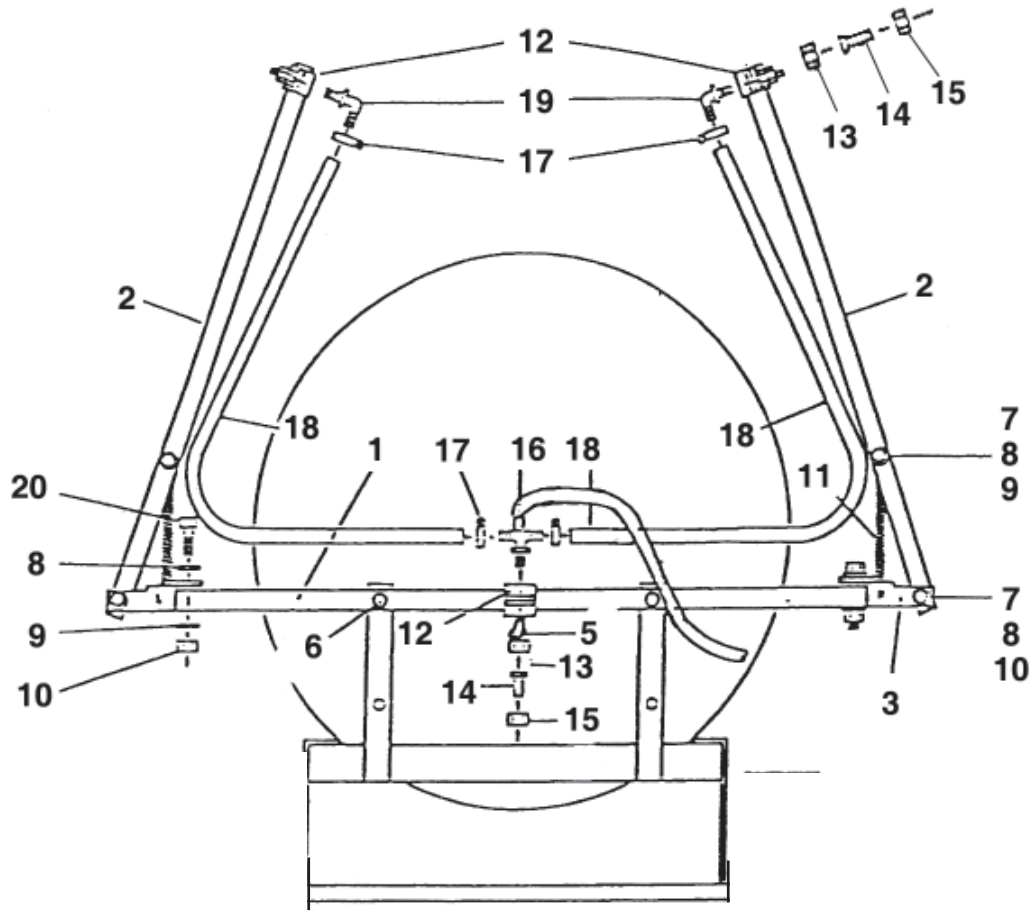
<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	S2-16-53	Handle Assembly
2	1	S2-13-15	Pipe Assembly
3	1	S2-15-32	Connector
4	1	S2-15-42	Hose Barb
5	1	S2-15-51	Filter
6	1	S2-15-62	Handle Only
7	1	S2-15-12	Trigger
8	1	S2-14-81	Pin
9	1	S2-12-31	Gasket
10	1	S2-12-13	Body
11	1	S2-12-23	Cap

23L-7676-X18 Handgun



<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	SS16054-1-AZ	Handle
2	1	SS16053-1-SS	Spring 125 PSI
2	1	SS16053-2-S	Spring 800 PSI
3	1	SS7480-IZP	Spring Screw
4	1	SS7491-ALEF	Stud, Spring
5	1	SS8591-IZF	Guide
6	1	SS7486-SS	Lock Nut
7	1	SS16071-SS	Screw, Packing
8	1	SS14255-1-BN	Cap
9	1	SS7892-IZP	Key
10	1	SS16074	Body, Inlet
11	1	7677-18-SS	Stem
12	1	SS7679-1-SS	Nut
13	1	SS7678	Stem End
14	1	SS4743-TEF	Gasket
15	1	SS13206-18	Extension
16	1	SS23437-PP	Seat
17	1	SS9697-INP	Screw
18	1	SS5500-PPB-X12	Nozzle
19	1	SS9539-INP	Guard
20	1	SS14252-INP	Trigger
21	2	SS8038-IZP	Rivet

8.3 FB10 10' FOLDING BOOM ASSEMBLY - (55 Gallon Sprayer Only)

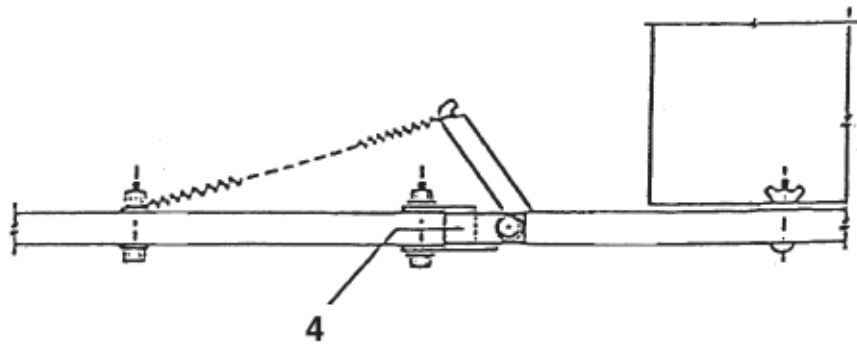
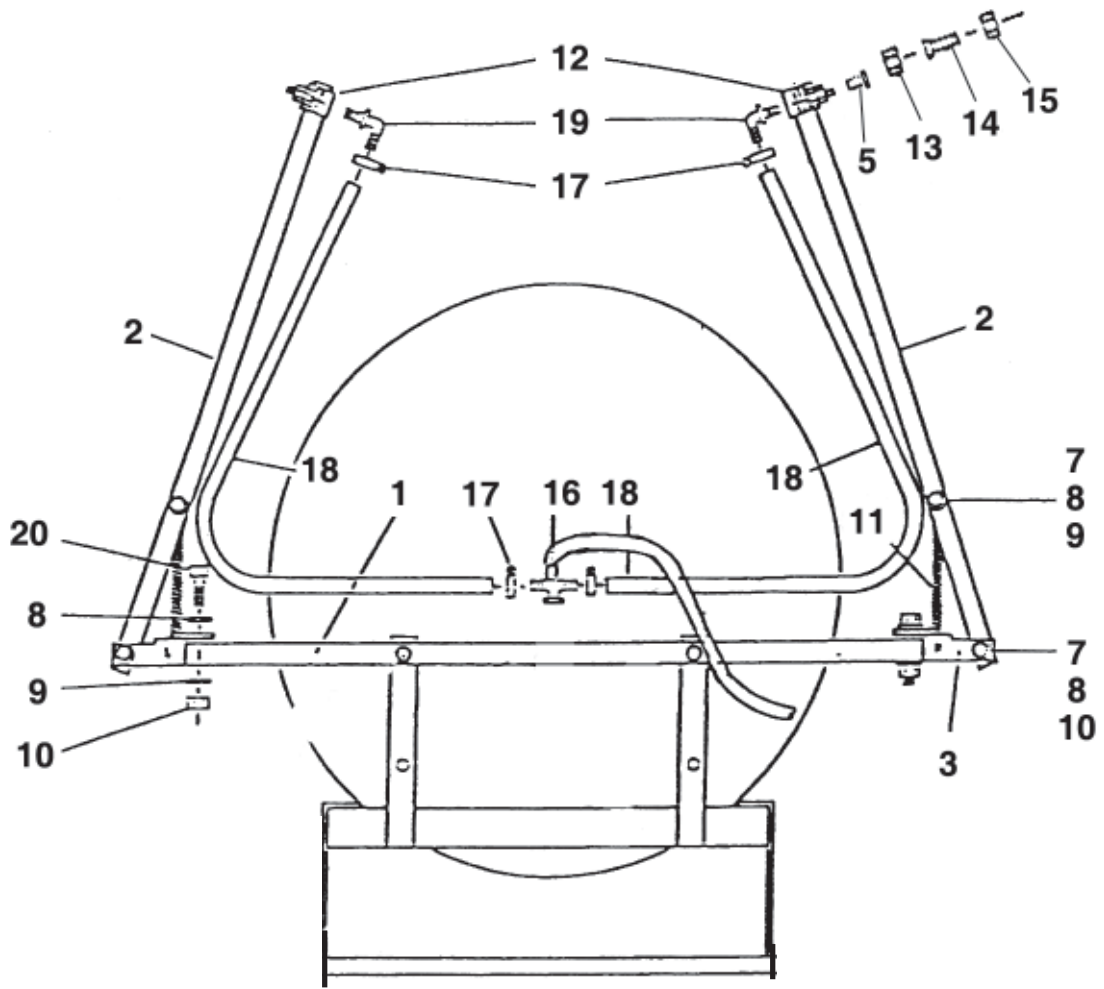


Top View
Left Hinge Det.

8.3 FB10 10' FOLDING BOOM ASSEMBLY - (55 Gallon Sprayer Only)

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	217-03-002	Boom Center Section
2	2	217-03-003	Boom Outer Wing
3	1	217-03-004	Boom Hinge Bracket (Right)
4	1	217-03-005	Boom Hinge Bracket (Left)
5	3	5116019	Nozzle Strainer
6	2	5006038	Boom Wing Nut
7	6	5034004	H. H. Bolt
8	14	5/16"FWZP	Flat Washer
9	4	5016026	Lock Washer
10	6	5006035	H. H. Lock Nut
11	2	217-03-010	Breakaway Spring
12	3	111SQ-1	Nozzle Clamp Body
13	3	5006102	Nozzle Nylon Lock Nut
14	3	AN3	Flood Nozzle 3
15	3	5046052	Nozzle Cap
16	1	K50TS-NY	Cross w/Nozzle Body
17	4	SCG	Hose Clamp 1/2"
18	2	EVA1/2"	Plastic Hose 1/2" x 40"
19	2	5056023	Nozzle Body Elbow 1/2"
20	2	5034040	H. H. Bolt

8.4 FB14 14' FOLDING BOOM ASSEMBLY - (55 Gallon Sprayer Only)

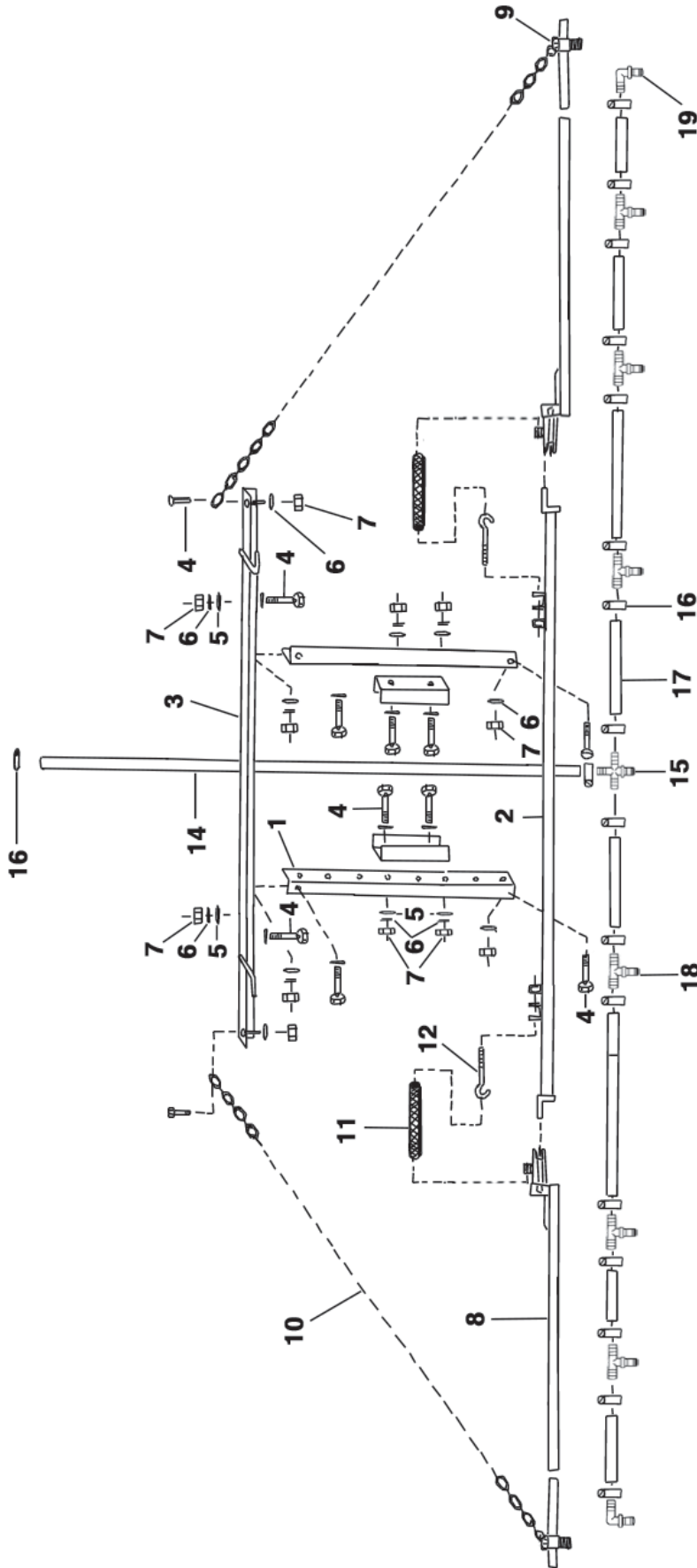


Top View
Left Hinge Det.

8.4 FB14 14' FOLDING BOOM ASSEMBLY - (55 Gallon Sprayer Only)

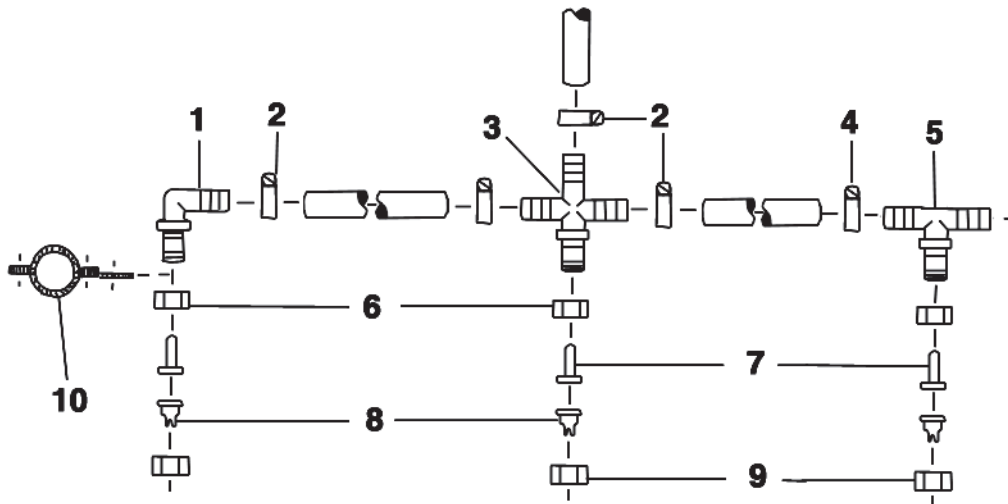
<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	217-03-006	Boom Center Section
2	2	217-03-003	Boom Outer Wing
3	1	217-03-004	Boom Hinge Bracket (Right)
4	1	217-03-005	Boom Hinge Bracket (Left)
5	4	5116019	Nozzle Strainer
7	6	5034004	H. H. Bolt
8	14	5/16"FWZP	Flat Washer
9	2	5016026	Lock Washer
10	6	5006035	H. H. Lock Nut
11	2	217-03-010	Breakaway Spring
12	4	111SQ-1	Nozzle Clamp Body
13	4	5006102	Nozzle Nylon Lock Nut
14	4	AN3	Flood Nozzle 3
15	4	5046052	Nozzle Cap
16	2	K50TS-NY	Tee, Threaded
17	9	SCG	Hose Clamp 1/2"
18	1	EVA1/2"	Plastic Hose 1/2" x 160"
19	2	5056023	Nozzle Body Elbow 1/2"
20	2	5034040	H. H. Bolt

8.5 FB-4R 15' ROW CROP BOOM - MAIN BODY



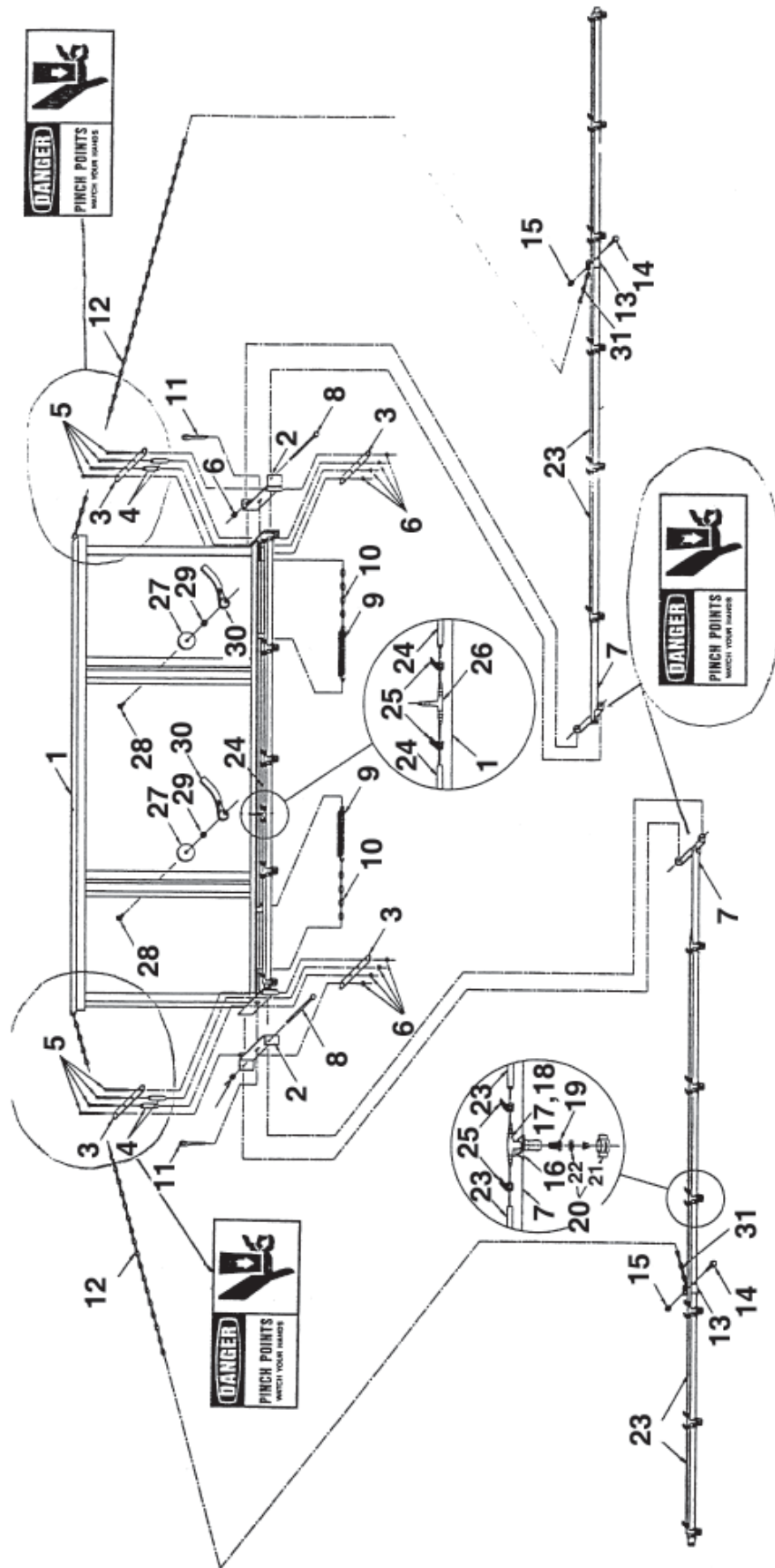
<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	FB4R-IA	Center Mounting Angle	10	2	3/0 Chain	Boom Chain 40"
2	1	FB4R-CBO	Center Boom Only	11	2	SFB	Spring For Boom
3	1	FB4R-TA	Top Angle	12	2	EFB	Eye Bolt For Boom
4	14	3/8"-16x1 1/4	Bolt	14	1	1/2-1	1/2" Rubber Hose 19 1/4"
5	16	3/8" FWZP	Flat Washer	15	1	K50TS-NY	1/2" Nozzle Cross
6	14	3/8" LW	Lock Washer	16	18	5380124	1/2" Hose Clamp
7	18	3/8"-16	Hex Nut	17	8	1/2-1	1/2" Rubber Hose 19 1/4"
8	2	FB4R-OBWO	Outer Boom Wing Only	18	6	K50T-NY	1/2" Nozzle Tee
9	2	CH-FB	Chain Holder For Boom	19	2	5056023	1/2" Nozzle Elbow

8.6 FB-4R 15' ROW CROP BOOM - NOZZLE ASSEMBLY



<u>REF #</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	5056023	1/2" Nozzle Elbow Nylon
2	5380124	12" Hose Clamp
3	K50TS-NY	1/2" Nozzle Cross Nylon
4	1/2-1	1/2" 2 Spiral Rubber Hose
5	K50T-NY	1/2" Nozzle Tee Nylon
6	5006102	Nylon Lock Nut
7	4193A-PP5-50	50 Mesh Strainer Screen, Check Valve
8	03-F80	Flat Fan Tip
9	5046052	Nylon Cap
10	PC3-3/4	3/4" Round Pipe Clamp

8.7 FB-6R 21' & FB-8R 28' BOOM ASSEMBLY



8.7 FB-6R 21' & FB-8R 28' BOOM ASSEMBLY

<u>REF #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	BR7926	Center Section
2	2	BR6825	Center Hinge
3	4	BR6827	Hinge Plate
4	4	BR6875	Hinge Tube
5	8	O/L	Bolt $\frac{3}{8}$ " x 4"
6	10	O/L	Lock Nut
7	2	BR7927	Outer Boom, 1" O.D. Tube x 120"
8	2	ZZHCS-38X7	Bolt $\frac{3}{8}$ " x 7"
9	2	BRM-6	Boom Hinge Spring
10	2	PL50101-13-3X6	Hinge Spring Chain, $\frac{3}{16}$ " Coil Chain x 6"
11	2	ZZM-5676	Cotter Pin, $\frac{5}{16}$ " x 1 $\frac{1}{2}$ "
12	2	SX-680457	Outer Boom Chain, 3/0 Twin Loop Chain x 84"
13	2	YO4576-A	Boom Chain Clamp
14	2	ZZHLS-38X1	Hex Flange Lock Screw, $\frac{3}{8}$ " x 1"
15	2	O/L	Lock Nut, $\frac{3}{8}$ "
16	17	SSQJ111-3/4	Vari-Spacing, Clamp ASB
17	4	SS18719-111-785-NYB	Quick TeeJet Single, $\frac{3}{4}$ " Nylon Body
18	13	SS18720-112-785-NYB	Quick TeeJet Double, $\frac{3}{4}$ " Nylon Body
19	17	SS8079-PP-50	TeeJet Strainer Assy.
20	17	SS25612-1-NYR	Quick TeeJet Cap & Gasket Set
21	As Req'd	ZZ25611-1-NY	Quick TeeJet Cap Only, Black
22	As Req'd	SS19843-NYR	Gasket Only
23	13	AM $\frac{3}{4}$ "X.125X19.5	Plastic Hose, $\frac{3}{4}$ " I.D. x 19 $\frac{1}{2}$ "
24	2	AM $\frac{3}{4}$ "X.125X9.5	Plastic Hose, $\frac{3}{4}$ " I.D. x 9 $\frac{1}{2}$ "
25	30	WT12H	$\frac{11}{16}$ " to 1 $\frac{1}{4}$ " Hose Clamp
26	1	PET34	Nylon Hose Barb Tee, $\frac{3}{4}$ "
27	2	BR6829	Boom Supporting Plate
28	2	ZZCS-12X112	Carriage Screw, $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "
29	2	ZZLW-12	Lock Washer, $\frac{1}{2}$ "
30	2	ZZHDN-12	Handle Nut, $\frac{1}{2}$ "

9 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.