



90.800.400
40 Gallon
Trailer Lawn Sprayer



Operations & Parts Manual

Purchase Date	Dealer

The purpose of this manual is to assist you in the assembly, operation and maintenance of your sprayer or Accessories. Please read through this manual completely to fully understand how to operate and maintain your equipment. This product has been manufactured to provide years of dependable service; proper operation and maintenance will ensure its dependability. Keep your manual in a safe, convenient place for future reference.

ASSEMBLY

The 40 gallon (US gallons) sprayers come partially assembled. Please read the following directions fully before beginning the assembly process. Refer to assembly drawing figures 1-6 for reference.

FRAME & AXLE ASSEMBLY

- 1.) Remove components from carton.
- 2.) Place skid frame and tank on a flat surface.
- 3.) Position Control Post (PN 32-100051) on either end of the skid frame and fasten with two 5/16-18 x 1" cap screws (PN 33-100116) and two 5/16-18" nuts (PN 33-100113), see Figure 2.
- 4.) The Adjustable Tongue (PM 32-100067) can be attached to either end of the skid frame. Attach tongue using three 5/16-18 x 1" cap screws (PN 33-100116) and three 5/16-18" serrated nuts (PN 33-100113). Tighten securely, see Figure 3.
- 5.) Attach Adjustable Hitch (PN 32-100066) to Tongue (PN 32-100067) with two 3/8-16x1" bolts and two 3/8-16" nuts (PN 33-100066) to Tongue (PN 32-100067) with two 3/8-16x1" bolts and two 3/8-16" nuts (PN 33-100125). The Adjustable Hitch can be raised and lowered to adjust tongue to desired height, See Figure 3.
- 6.) Raise back end of sprayer and place on blocks to allow easier access to axle location. Ensure sprayer is firmly supported. Locate axle (PN 32-100062) underneath skid frame aligning holes in axle with holes in frame. The axle must be located with the holes in skid frame **farthest** from the tongue attached in step 2. Fasten axle to skid frame with four 5/16-18 x 1" cap screws (PN 33-100116), four 5/16" washers (PN 33-100115) and four 5/16-18" serrated nuts (PN 33-100113). Tighten securely, see figure 3.
- 7.) Slide two wheels (PN TWA-15x600-6) over axle shaft and secure with cotter pin (PN 33-100127) by bending, see figure 3.
- 8.) Attach Boom Mount (PN 32-100063) to back end of skid frame using four 5/16-18 x 1" cap screws (PN 33-100116) and four 5/16-18" nuts (PN 33-100113), see figure 3.

SPRAY BOOM ATTACHMENT

- 1.) Extend the ten foot boom on a flat surface and remove the two loose bolts located on the end of the center boom section. Position the hinge over the holes in the center boom section and place bolts through holes. Tighten the bolt securely but ensure the hinge moves freely in both directions, see figure 4.
- 2.) Attach two Extension Springs (PN 33-100117) to center boom spring mount and eye bolt located on boom, see figure 4.
- 3.) Attach the two upright Spray Boom Brackets (PN 31-100160) to the boom mount using the four 5/16-18 x 1" bolts (PN 33-100116) and four 5/16 nuts (PN 33-100113), see figure 6.
- 4.) Attach the ten foot Spray Boom (PN 34-140059) to the upright spray boom brackets using two 5/16-18 x 1" bolts (PN 33-100116) and two 5/16 nuts (PN 33-100113), see figure 6.
- 5.) Attach boom hose to the manifold valve located on the pump and tighten securely.
- 6.) Remove nozzle nuts from boom and insert deflector spray nozzle facing down. Re-assemble nozzle nuts. Ensure nozzle spacing is set to 40 inches. Re-adjust if necessary.
- 7.) Optimum boom height is 14 to 15 inches above area to be sprayed. Use the location holes in the upright spray boom brackets as adjustments to obtain the optimum spray height.

WIRING HARNESS

- 1.) Attach the wiring harness with in-line switch to the sprayer pump by pushing the two terminal connectors together.
- 2.) Refer to vehicle manual to locate battery and attach wiring harness leads to battery. Ensure Red lead attaches to Positive (+) side of battery and Black lead connects to Negative (-) side of battery.

SPRAY GUN & GAUGE

- 1.) Attach spray gun to manifold by pushing over 3/8" hose barb and fasten with hose clamp (PN SHC-F), see figure 1.
- 2.) Apply thread sealant to gauge threads and screw gauge into manifold.

USING THE TEN FOOT BOOM

Four things must be considered before spraying with the boom:

- How much chemical must be mixed in the tank?
 - Rate of spray (gallons per acre to be sprayed).
 - What pressure (PSI) will be used.
 - Speed traveled (MPH) while spraying.
- Refer to the chemical label to determine the chemical mixture.
 - See the tip chart to determine the pressure to be used. The chart will also show the speed used when spraying.
 - Open the valve lever to the boom nozzles.
 - Check the spray pattern. Usually you can see the coverage better on solid concrete surface, such as a driveway.
 - Raise or lower the boom to achieve a good coverage pattern. If you can see dry spots on the concrete surface you will need to raise the boom. Too much solution in the pattern areas means you need to lower the boom. Generally the proper height will be from 13 inches to 18 inches from the area to be sprayed.

OPERATION

The nozzles on the boom will spray approximately a 120" wide pattern. The nozzle height should be set approximately 15" above the object being sprayed.

Once you know how much you are going to spray then determine (from the tip chart) the spraying pressure (PSI) and the spraying speed (MPH). The pressure can be set by running the sprayer with the boom nozzles "ON" and then by adjusting the garden hose valve lever (valve with hose returning to tank) until the gauge reads the desired pressure. Notice that the pressure will go up when the garden hose valve is slowly closed.

When selecting pressure from the tip chart, it is a good idea to try for the 20 or 30 PSI range as this allows an excellent nozzle pattern. At 20 PSI the pattern begins to break up and at 40 PSI you may notice some drift. Conditions of weather and terrain must be considered when setting the sprayer. Do not spray on windy days. Protective clothing must be worn in some cases. Be sure to read the chemical label carefully.

After all calibrations have been completed, add water and chemical to the tank. Always follow chemical manufacturer's instructions for mixing.

Most spray materials are highly corrosive. The most important aspect of long dependable service from the sprayer is a thorough cleaning immediately following each use. In addition, the residue of one type of chemical could cause an undesirable effect when a different chemical is used for a different purpose.

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 persistent chemical. When the system is thoroughly cleaned, drain the tank, suction line, pump, hoses, etc.

The following steps should be followed for the maintenance and storage of your sprayer:

- Wash and flush out the sprayer after completion of each phase of your program. Flush out sprayer when changing chemicals if there is a possibility of the chemicals being incompatible. Use of a detergent is advisable if the chemical manufacturer does not make specific cleaning recommendations. Flush system completely, including nozzles. Never use metal objects to open clogged nozzles.
- Clean sprayer thoroughly before storing at the end of the spraying season. Permanent type anti-freeze added to the final rinse will leave a rust inhibiting film in parts of the sprayer.

WARRANTY PARTS SERVICE

Products sold shall be warranted from defects in workmanship and material when used within the service and scope for which they were designed for a period of one year from the date of purchase.

GALLONS PER ACRE (40" SPACING) (US GALLONS)

PART NO.	PSI	FLOW (GPM)	4 MPH	5 MPH	6 MPH	7 MPH	8 MPH	9 MPH	10 MPH
DF2.0	15	0.24	8.9	7.1	5.9	5.1	4.5	4.0	3.6
Red Colored	20	0.28	10.4	8.3	6.9	5.9	5.2	4.6	4.2
Nozzle	30	0.35	13.0	10.4	8.7	7.4	6.5	5.8	5.2
	40	0.4	14.9	11.9	9.9	8.5	7.4	6.6	5.9
	60	0.49	18.2	14.6	12.1	10.4	9.1	8.1	7.3
PART NO.	PSI	FLOW (GPM)	4 MPH	5 MPH	6 MPH	7 MPH	8 MPH	9 MPH	10 MPH
DF2.5	15	0.31	11.5	9.2	7.7	6.6	5.8	5.1	4.6
Brown Colored	20	0.35	13.0	1.4	8.7	7.4	6.5	5.8	5.2
Nozzle	30	0.43	16.0	12.8	10.6	9.1	8.0	7.1	6.4
	40	0.5	18.6	14.9	12.4	10.6	9.3	8.3	7.4
	60	0.61	22.6	18.1	15.1	12.9	11.3	10.1	9.1
PART NO.	PSI	FLOW (GPM)	4 MPH	5 MPH	6 MPH	7 MPH	8 MPH	9 MPH	10 MPH
DF3.0	15	0.37	13.7	11.0	9.2	7.8	6.9	6.1	5.5
Grey Colored	20	0.42	15.6	12.5	10.4	8.9	7.8	6.9	6.2
Nozzle	30	0.52	19.3	15.4	12.9	11.0	9.7	8.6	7.7
	40	0.6	22.3	17.8	14.9	12.7	11.1	9.9	8.9
	60	0.73	27.1	21.7	18.1	15.5	13.6	12.0	10.8

Note: All GPA Calculations above are per nozzle.



WARNING

Ensure all trailer bolts are securely tightened and tires are properly inflated before each use.
Failure to do so may lead to injury.

Trailer total weight with filled tank must not exceed maximum towable weight limit set by
manufacturer of pulling vehicle. Refer to vehicle manufacturers specifications.
Failure to follow manufacturers specifications may lead to injury or breakdown.

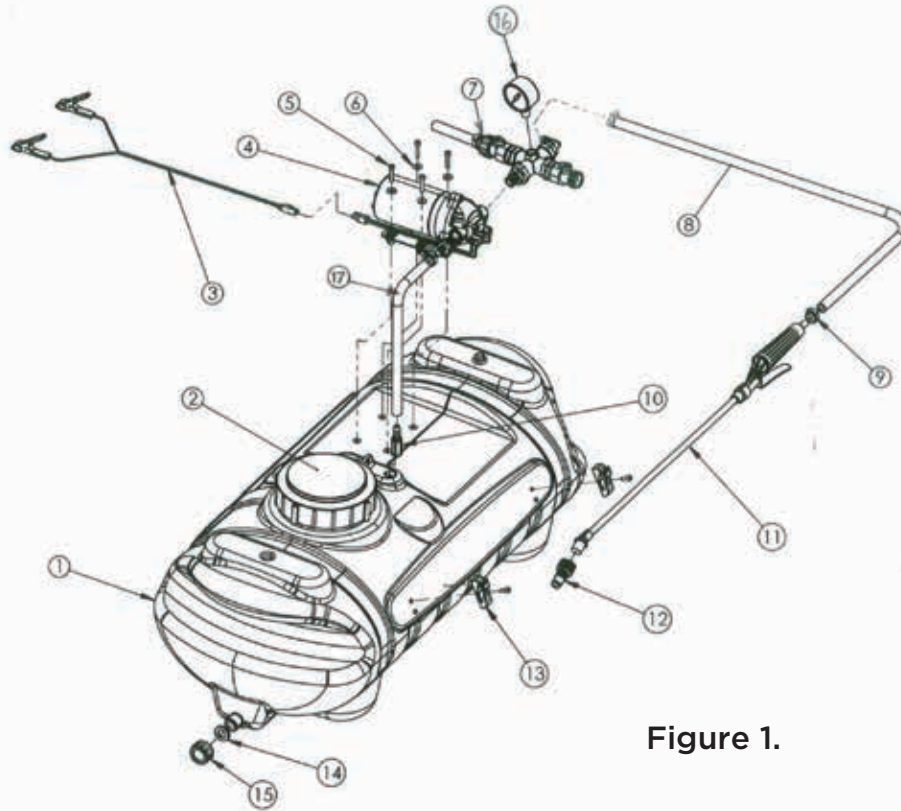


Figure 1.

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	33-103245	Tank, 40 gallon (US)	1	9	SHC-F	Clamp, Hose	3
2	33-103221	Lid, Tank	1	10	33-103121	Strainer, Inlet	1
3	33-103233	Harness, Wire, SS, Switched	1	11	SG-4507F	Spray Gun (with filter)	1
4	33-103232	Pump, Shurflo, 1.8 GPM	1		SG-2218-18	Gun, Deluxe	
	33-103205	Pump, Delavan, 3.0 GPM	1	12	SG-45ASSY-18	Nozzle Assembly	1
	33-103209	Pump, Delavan, 2.0 GPM	1	13	GC-100-Kit	Gun Clip (Pair)	1
5	33-103127	Screw, Machine, 10-24 x 1"	4	14	W406-V	Washer, Garden Hose	1
6	33-103131	Washer #10	4	15	33-103218	Cap, Garden Hose	1
7	34-140068	Manifold	2	16	1124DAB100	Gauge, 2", 0-160 PSI	1
8	3204-1407	Hose, Rubber, 3/8"	15 ft	17	3204-1407	Hose, Rubber, 3/8 x 28" Inlet to Pump	28"

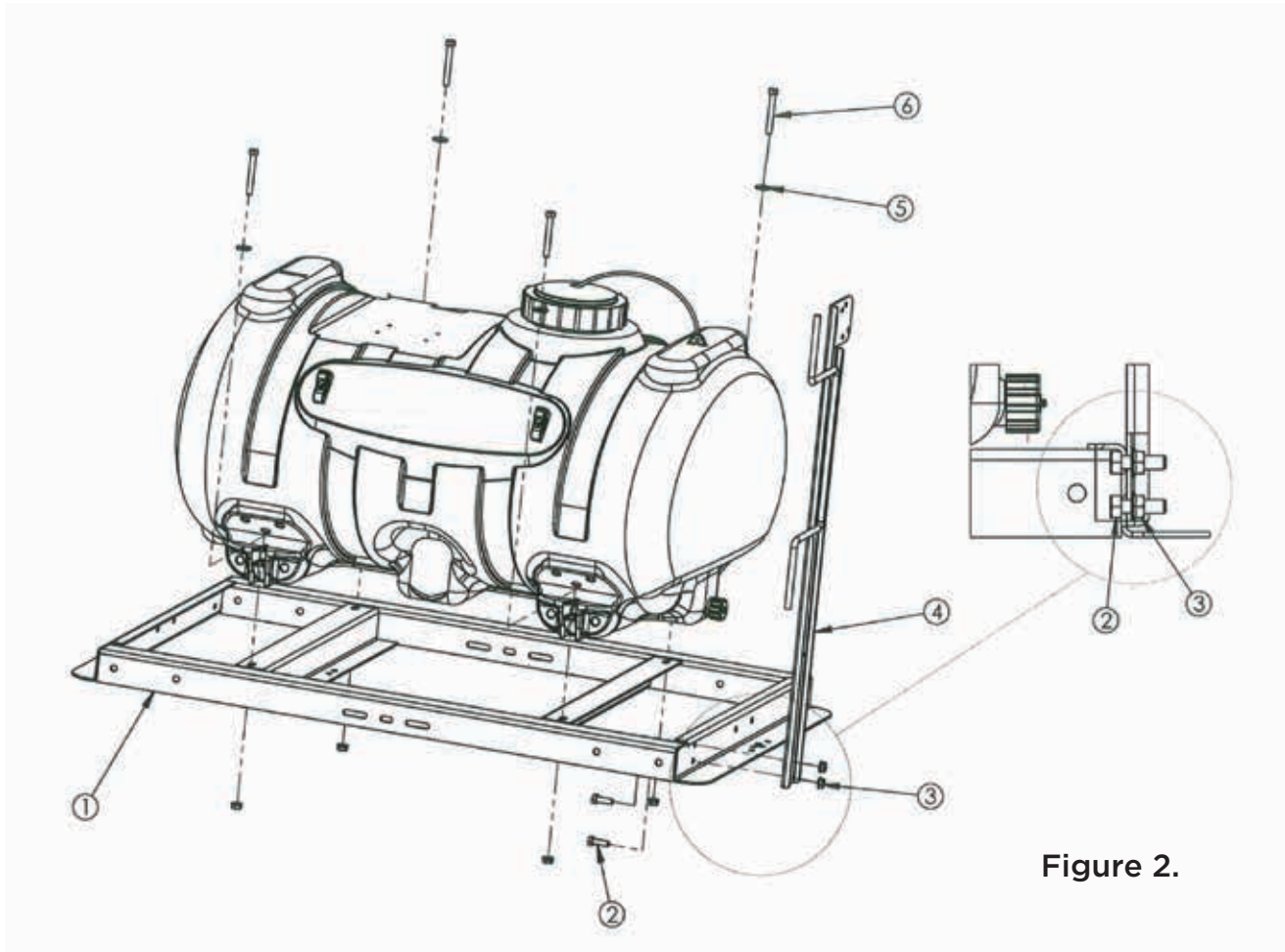


Figure 2.

REF NO.	PART NO.	DESCRIPTION	QTY
1	32-100060	Frame, Skid	1
2	33-100116	Screw, Cap, 5/16-18 x 1"	2
3	33-100113	Nut, 5/16-18 x 1", Serrated	6
4	32-100051	Control Post	1
5	33-100115	Washer, 5/16"	8
6	33-100122	Screw, Cap, 5/16-18 x 3"	4

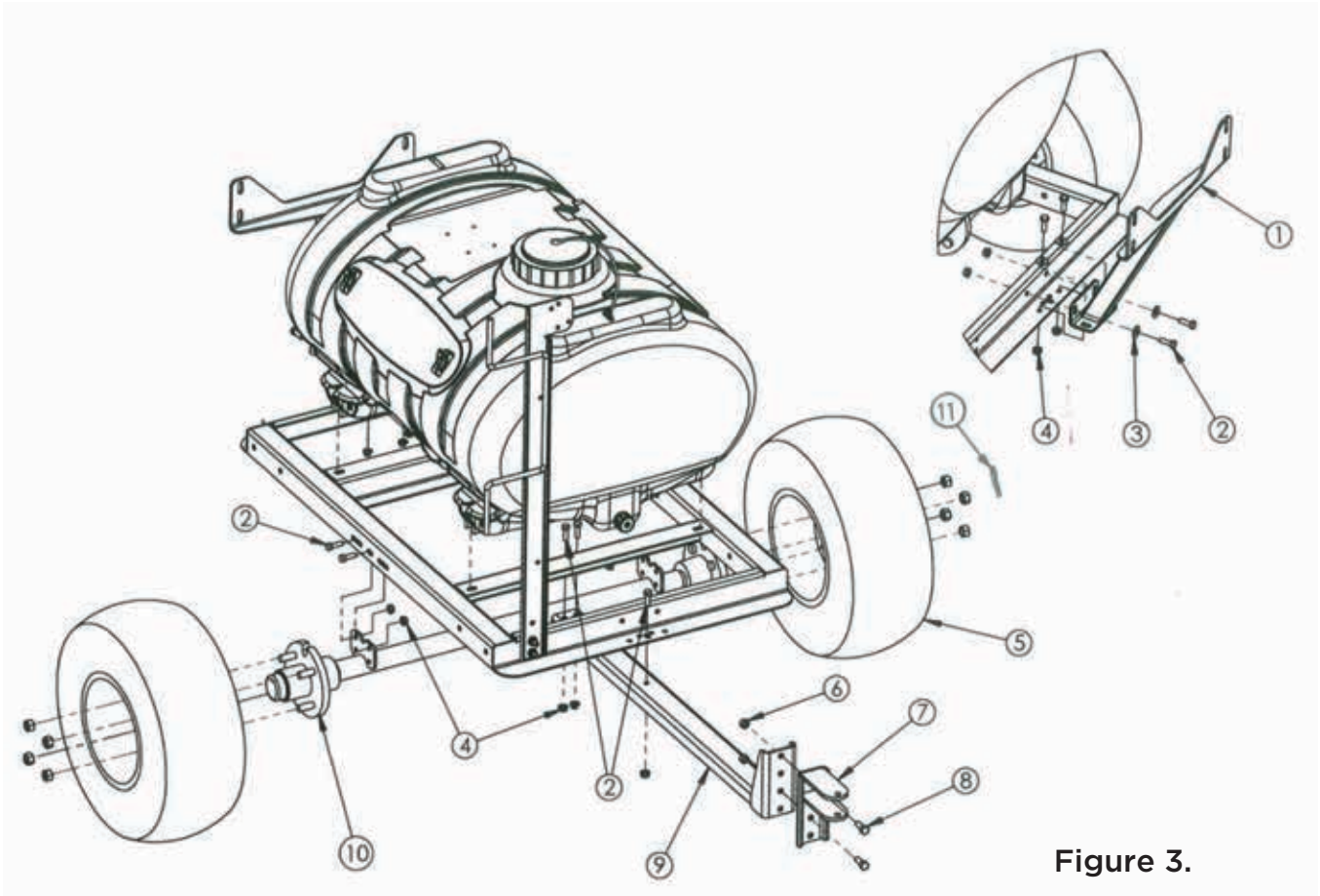


Figure 3.

REF NO.	PART NO.	DESCRIPTION	QTY
1	32-100063	Mount, Boom	1
2	33-100116	Screw, Cap, 5/16-18 x 1"	11
3	33-100115	Washer, 5/16"	4
4	32-100113	Nut, 5/16-18", Serrated	11
5	TWA-15x600-6	Tire & Wheel Assembly	2
6	33-100125	Nut, 3/8-16"	2
7	32-100066	Hitch, Adjustable	1
8	33-100124	Cap Screw, 3/8-16 x 1"	2
9	32-100067	Tongue, Hitch	1
10	32-100062	Axle	1
11	33-100127	Cotter Pin	2

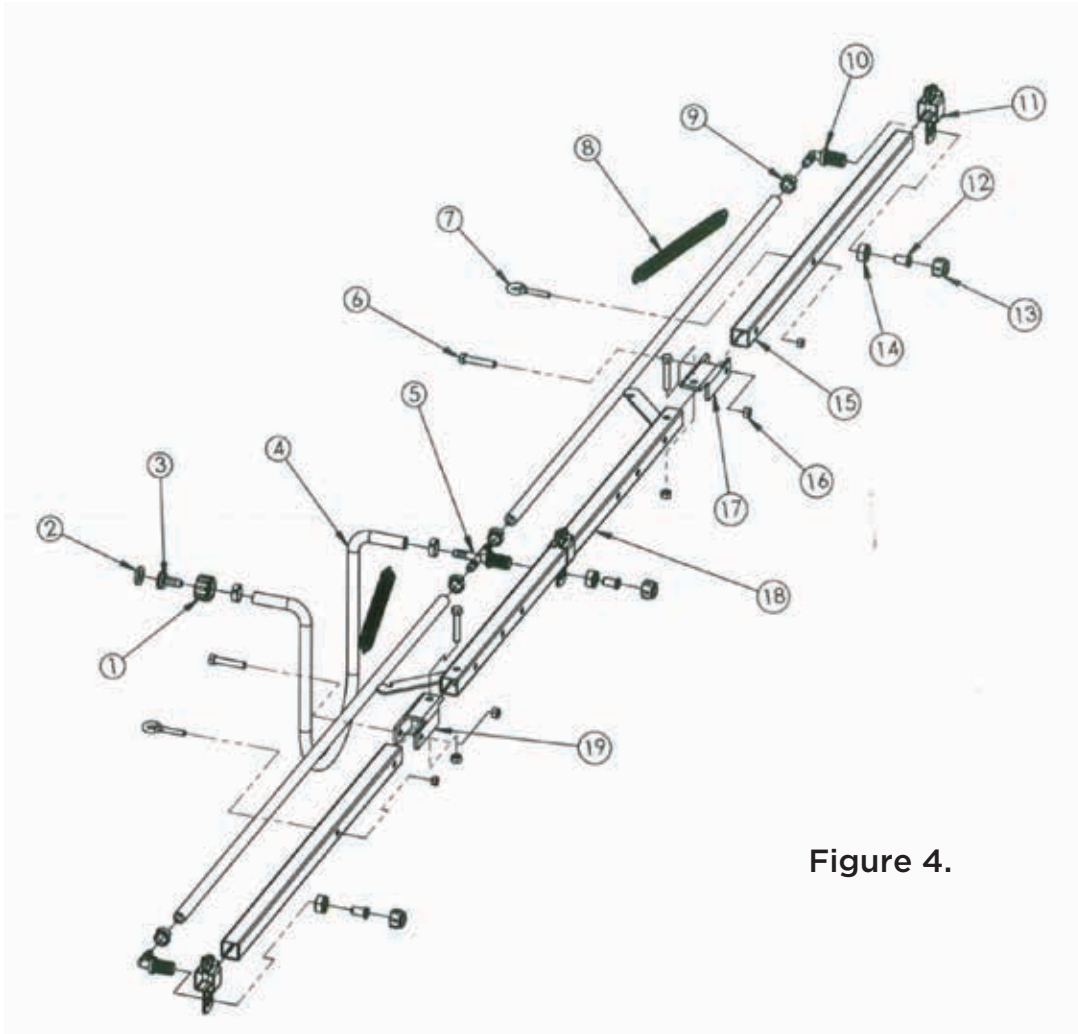


Figure 4.

REF NO.	PART NO.	DESCRIPTION	QTY
1	B34	Swivel Garden Hose Nut	1
2	W406V	Garden Hose Washer	1
3	C38	Flat Seat 3/8" Hose Barb	1
4	3204-1407	3/8 x 40" Rubber Hose	3
5	T38C-C	3/8" Cross Nozzle Body	1
6	33-100119	Bolt 5/16-18 x 1.75"	4
7	33-100118	Eye Bolt, 1/4 x 1.5"	2
8	33-100117	Spring Extension	2
9	SHC-F	Snapper Hose Clamp	6
10	NTL38-C	3/8" EL Nozzle Body	2

REF NO.	PART NO.	DESCRIPTION	QTY
11	BCS-100	Boom Clamp 1" sq.	3
12	NS-50	Nozzle Strainer, 50 Mesh	3
13	8027	Nozzle Nut	3
14	B12	Nozzle Body Nut	3
15	31-100136	Left & Right 10ft Boom Wing	2
16	33-100120	Lock Nut 5/16-18"	4
17	31-100137-R	Hinge, Right	1
18	32-100021	Boom Center Section	1
19	31-100137-L	Hinge, Left	1

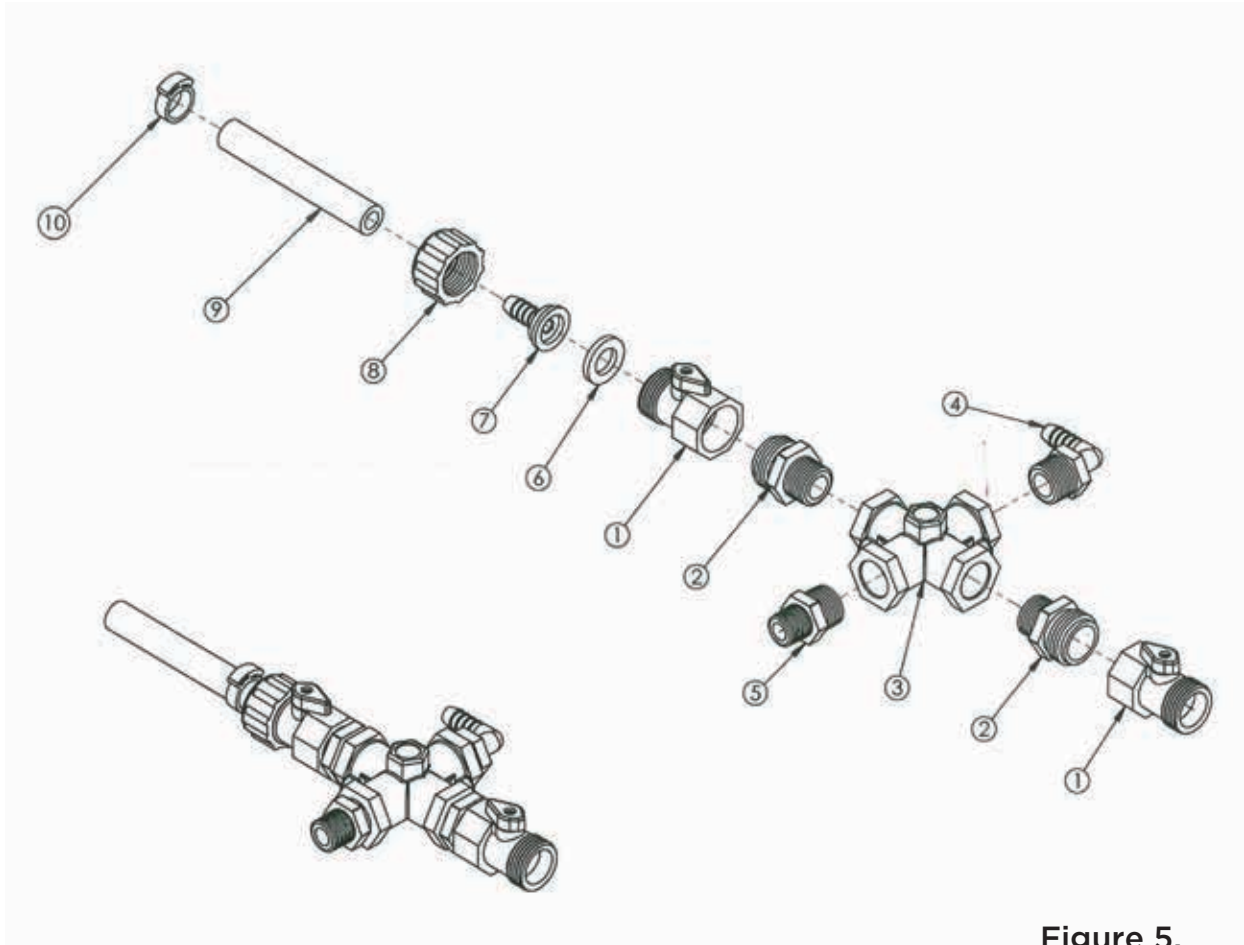


Figure 5.

REF NO.	PART NO.	DESCRIPTION	QTY
1	GHV-1-BLK	Valve, Garden Hose	2
2	E3412	Adapter, 1/2" MNPT x 3/4" Garden Hose Thread	2
3	GCR1214	Cross, 1/2" FMPT, 1/4" FNPT	1
4	EL1238	Elbow, 1/2" MNPT x 3/8" HB	1
5	M1238	Adapter, 1/2" MNPT x 3/8" MNPT	1
6	W406V	Garden Hose Washer	1
7	C38	Flat Seat 3/8" Hose Barb	1
8	B34	Swivel Garden Hose Nut	1
9	3204-1407	Gates 3/8" Rubber Hose	12"
10	SHC-F	Hose Clamp	1

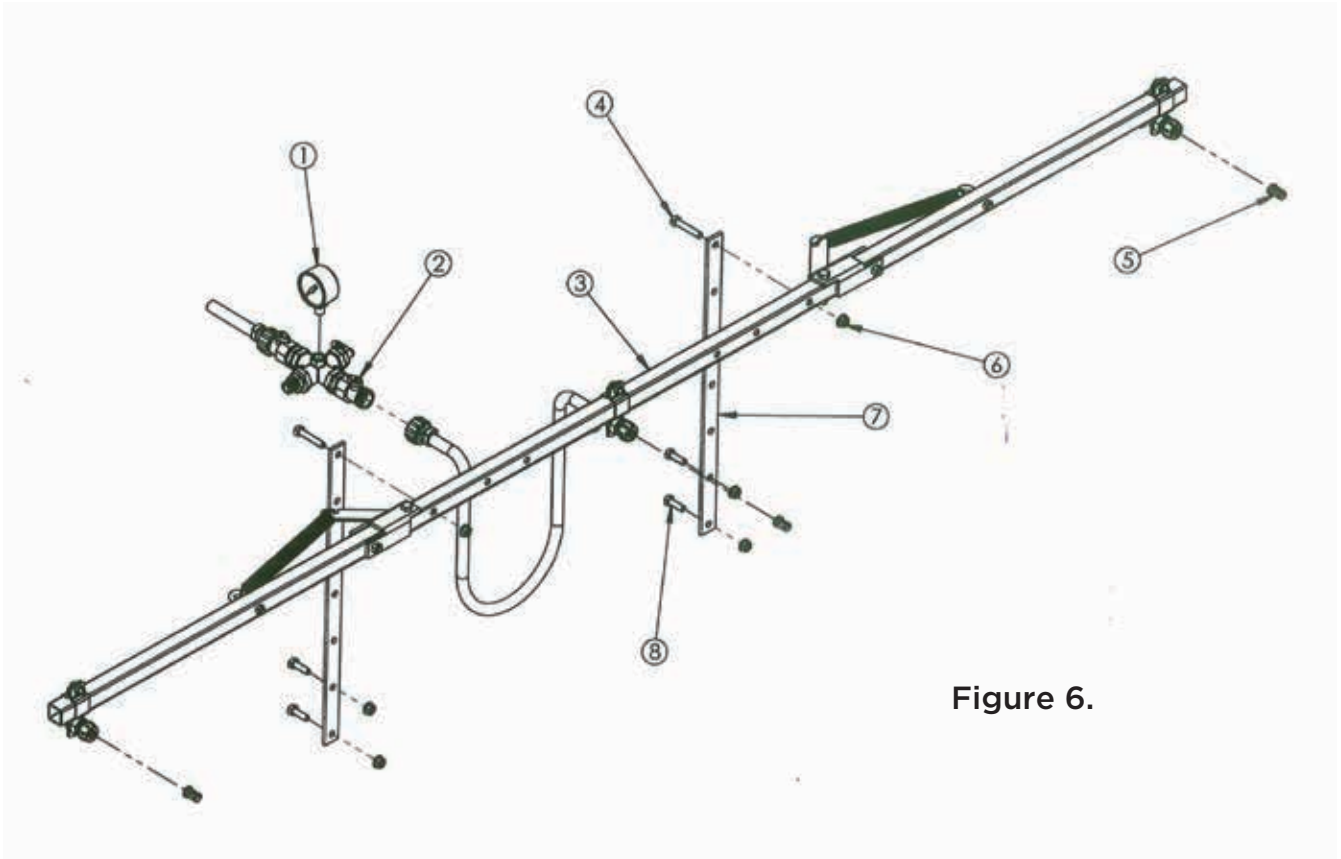


Figure 6.

REF NO.	PART NO.	DESCRIPTION	QTY
1	1124DAB100	Gauge, 100 PSI	1
2	34-140068	Assembly, Manifold	1
3	34-140059	Assembly, 10ft Folding Boom	1
4	33-100119	Bolt, 5/16-18 x 1.75"	2
5	DF2.5	Spray Nozzle, 2.5 (Brown)	3
6	33-100113	Nut 5/16", Serrated	6
7	31-100160	Bracket, Vertical Adjustment	2
8	33-100116	Bolt, 5/16-18 x 1"	4

