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MASTER  
MANUFACTURING

40 GALLON FOLDING LAWN SPRAYER



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Note: Do not return product to the distributor/dealer for warranty work. Call Master Manufacturing at (800) 864-1649 for any warranty work or replacement parts.

## **INTRODUCTION**

Your Master Manufacturing New Direction Lawn Sprayer has been manufactured to provide years of dependable and efficient use. Proper operation and maintenance will ensure long satisfactory service. 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 too fully understand how to operate and maintain your equipment. Keep your manual in a safe, convenient place for future reference. Always mention the model and part number in any correspondence.

## **ASSEMBLY**

The 40 gallon sprayer come partially assembled. Please read the following directions fully before beginning the assembly process. Refer to assembly drawing figures below for reference.

### **Frame & Axel Assembly**

- 1.) Remove components from carton. Components are under tank in carton. Bolt kit is inside Tank.
- 2.) Place skid frame upside down on flat surface. (PN 32-100027)
- 3.) Locate trailer axle (PN 32-100028) and attach to skid frame using 5/16-18 x 1.75" Bolts (PN 33-100119) and 5/16 Serrated Flange Nut (PN 33-100113) to the top holes of the axle.
- 4.) Locate the 2 tires (PN TWA15x600-6) and slide onto trailer axle (PN 32-100028), then slide cotter pins into axle holes and bend to lock.
- 5.) Locate the trailer tongue (PN 32-100026) and slide into trailer frame(PN 32-100027)
- 6.) Attach tongue to trailer using 3/8-16 x 3.25" bolt. (PN 33-200128) and 3/8" Lock Nut(PN 33-100136) Bolt should go through bottom hole on frame and middle hole on tongue.
- 7.) Lock tongue into position on frame using lock pin(PN 33-100191). See Figure 3 for the locking pin in the towing position and Figure 4 for the locking pin in the storage position.
- 8.) Attach adjustable hitch (PN32-100066) to tongue(PN32-100026) using 3/8-16 x 1" Bolts(PN33-100124) and 3/8" Nuts(PN33-100125) The Hitch can be raised or lowered to adjust the height as needed for attachment to hitch.
- 9.) Locate control post(PN 32-100029) and attach to frame(PN 32-100027) using 5/16-18 x 1" Bolts(PN33-100116) and 5/16" washers (PN33-100115) and 5/16" serrated flange nut(PN 33-100113)

### **Spray Boom Attachment**

- 1.) Locate the boom brackets(PN 32-100034) and attach to frame(PN 32-100027) using 5/16-18 x 3/4" Bolts(PN 33-100120) and 5/16 Serrated Flange Nuts(PN 33-100113) The boom brackets should be bolted to the frame using the inside set of holes on the frame.
- 2.) Locate the Left Boom (PN32-100032) and attach to the Center Boom(PN32-100030) using 5/16-18x1" Bolts. One bolt should go in through the center hole. Depending on your need the Lock Pin with Chain(PN 33-100192) can go in 2 places. If you are using the boom for spraying attach the Lock Pin with Chain in the slot as show in figure 1. If you are not using the boom and placing it in storage, attach the Lock Pin with Chain through the hole to lock it into the folded position as shown in figure 2. Attach the cotter pin on the chain to the boom so it will not fall off and be lost.
- 3.) Repeat step 2 using the Right Boom.
- 4.) Locate the Boom Assembly(PN 34-120089) and attach to Boom Brackets( PN 32-100034) using 5/16-18 x 1.75" Bolts(PN 33-100119). The boom should be attached to the set of holes that will allow for optimum spraying height for the nozzles. The nozzles should be about 13" off the ground you are spraying.
- 5.) Attach the Springs (PN 33-100117) to the Center Boom by sliding the end of the spring through the hole on the pins, as visible in Figure 1 & 2.

- 6.) Attach Boom hose(is laying free in carton) to hose barb on bottom of manifold. Lock on with SHC-F hose clamps.
- 7.) Attach nozzle cap(PN G-T00100001) with nozzle tip(PN G-8259054) to nozzle body and lock in place by turning the nozzle cap.

### **Wiring Harness**

- 1.) Attach the wiring harness with inline 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.) Apply thread sealant to gauge threads and screw gauge into Cross(PN GCR1214-BN)

## **OPERATION**

### **Using the 10' boom**

- Four things must be considered before spraying with the boom.
  1. How much chemical must be mixed in the tank?
  2. Rate of spray (gallons per acre to be sprayed.)
  3. What pressure (P.S.I) will be used.
  4. Speed traveled (M.P.H.) 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 10 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.

### **CLEANING & STORAGE**

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 a 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.

1. Wash and flush out 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.
2. 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 date of purchase. Contact your distributor/dealer for replacements parts or warranty work. Please have your original sales receipt or other proof of purchase date when requesting any warranty work. To ensure the correct parts are acquired always provide the model number of your sprayer/attachment and the part number and description obtained from the illustrated parts breakdown in this manual.

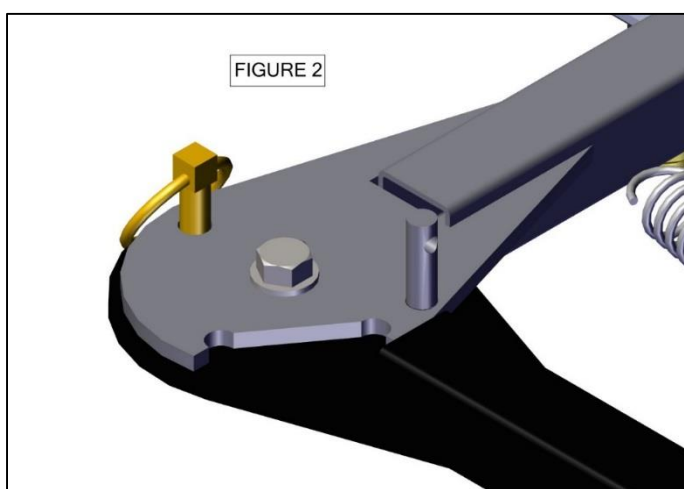
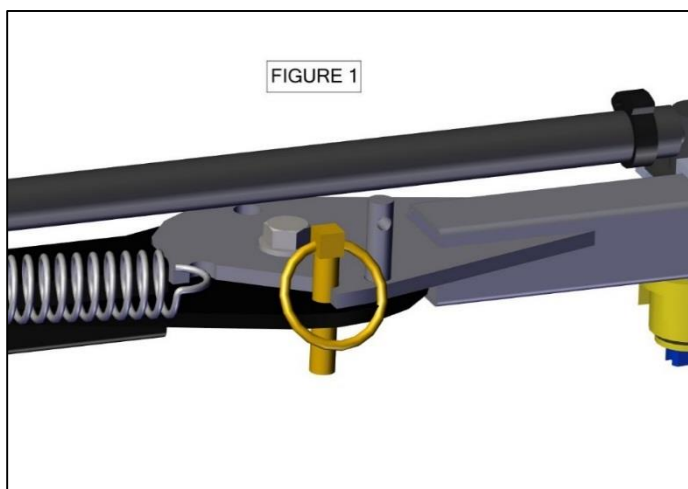
### Gallons per Acre, 40" spacing

Nozzle part #	PSI	Flow GPM	4 mph	5 mph	6 mph	7 mph	8 mph	9 mph	10 mph
DF2.0 Red colored nozzle	15	0.24	8.9	7.1	5.9	5.1	4.5	4.0	3.6
	20	0.28	10.4	8.3	6.9	5.9	5.2	4.6	4.2
	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
DF2.5 Brown colored nozzle	15	0.31	11.5	9.2	7.7	6.6	5.8	5.1	4.6
	20	0.35	13.0	10.4	8.7	7.4	6.5	5.8	5.2
	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
DF3.0 Gray colored nozzle	15	0.37	13.7	11.0	9.2	7.8	6.9	6.1	5.5
	20	0.42	15.6	12.5	10.4	8.9	7.8	6.9	6.2
	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.

### Warnings

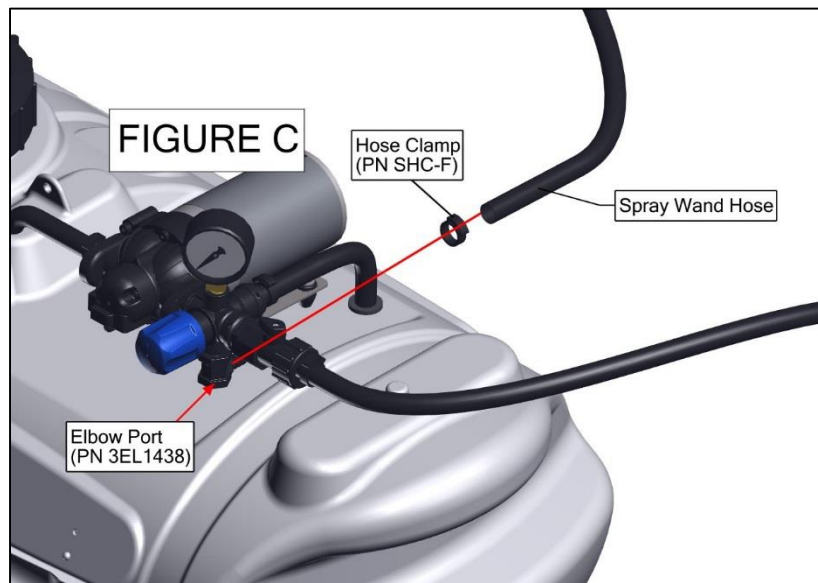
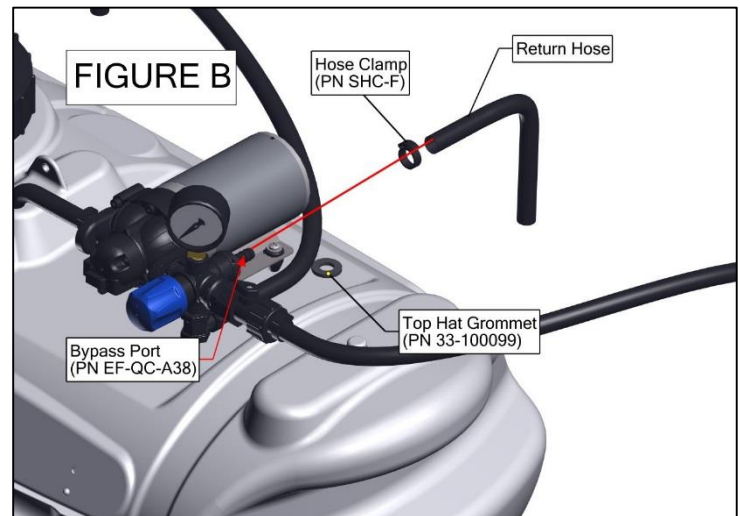
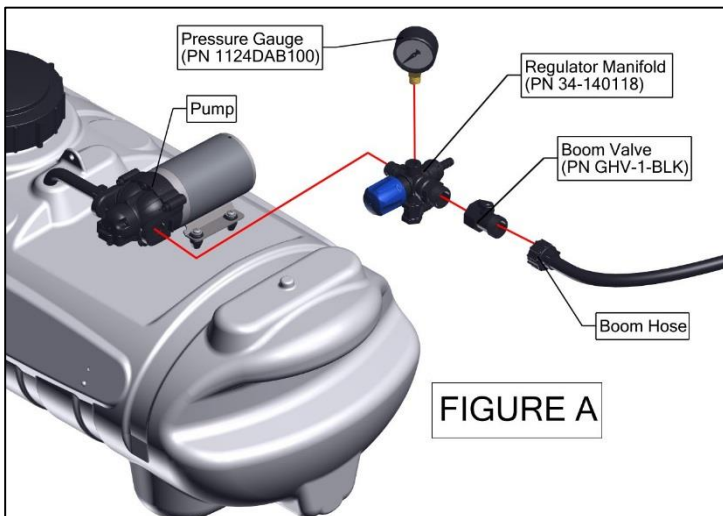
- △ **Ensure all trailer bolts are securely tightened and tires are properly inflated before each use. Failure to do so may lead to injury.**
- △ **Trailer total weight with filled tank must not exceed maximum towable weight limit set by manufacture of pulling vehicle. Refer to vehicle manufactures specifications. Failure to follow manufactures specifications may lead to injury or breakdown.**



## **Pump Assembly**

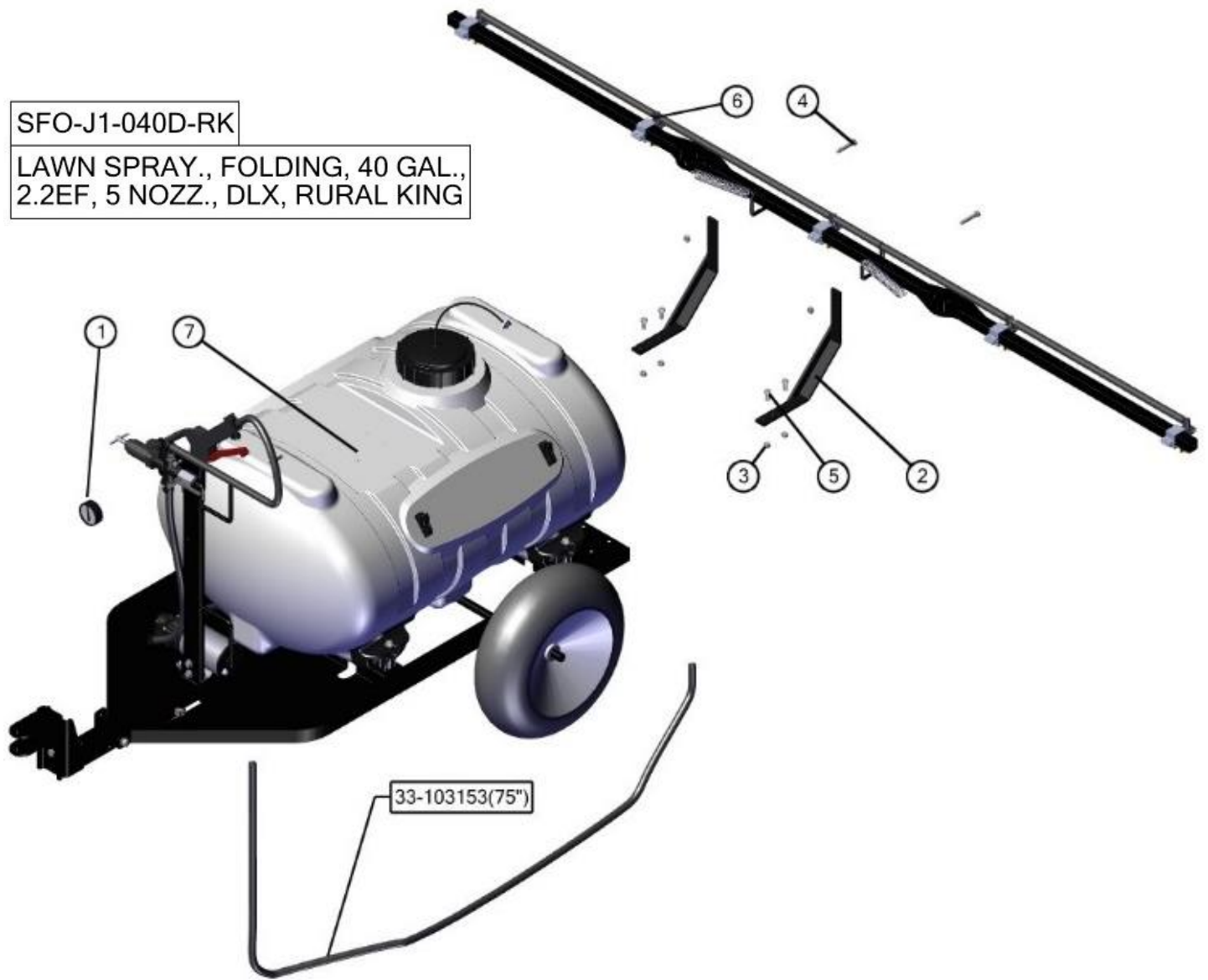
Your pump comes attached to the tank with the Inlet hose already attached. You will need to attach the Regulator Manifold to the pump following the steps below and the diagrams included.

- 1.) Move the Outlet Port Clip on the pump into the Open position.
- 2.) Obtain the Regulator Manifold(PN 34-140118) and slide into the Outlet Port of the pump so that the Blue Knob is facing the front of the pump as seen in FIGURE A
- 3.) Obtain the Boom Valve(PN GHV-1-BLK) and thread onto the Garden Hose Fitting on the Regulator Manifold(PN EF-QC-E34)
- 4.) Obtain the Boom Hose and thread onto the Boom Valve you just attached to the Regulator Manifold
- 5.) Obtain the Pressure Gauge (1124DAB100) and thread into the Top Port on the Regulator manifold.
- 6.) Attach Return Line Hose to Bypass Port (PN EF-QC-A38) and push other end through Top Hat Grommet (PN 33-100099) in Tank. FIGURE B
- 7.) Attach Hose Clamp to Hose. Make sure that the clamp is on the Bypass Port
- 8.) Attach Spray Wand Hose to Elbow Port on bottom of the Regulator Manifold(PN 3EL1438) FIGURE C
- 9.) Attach Hose Clamp to Hose. Make sure that the clamp is on the Elbow Port



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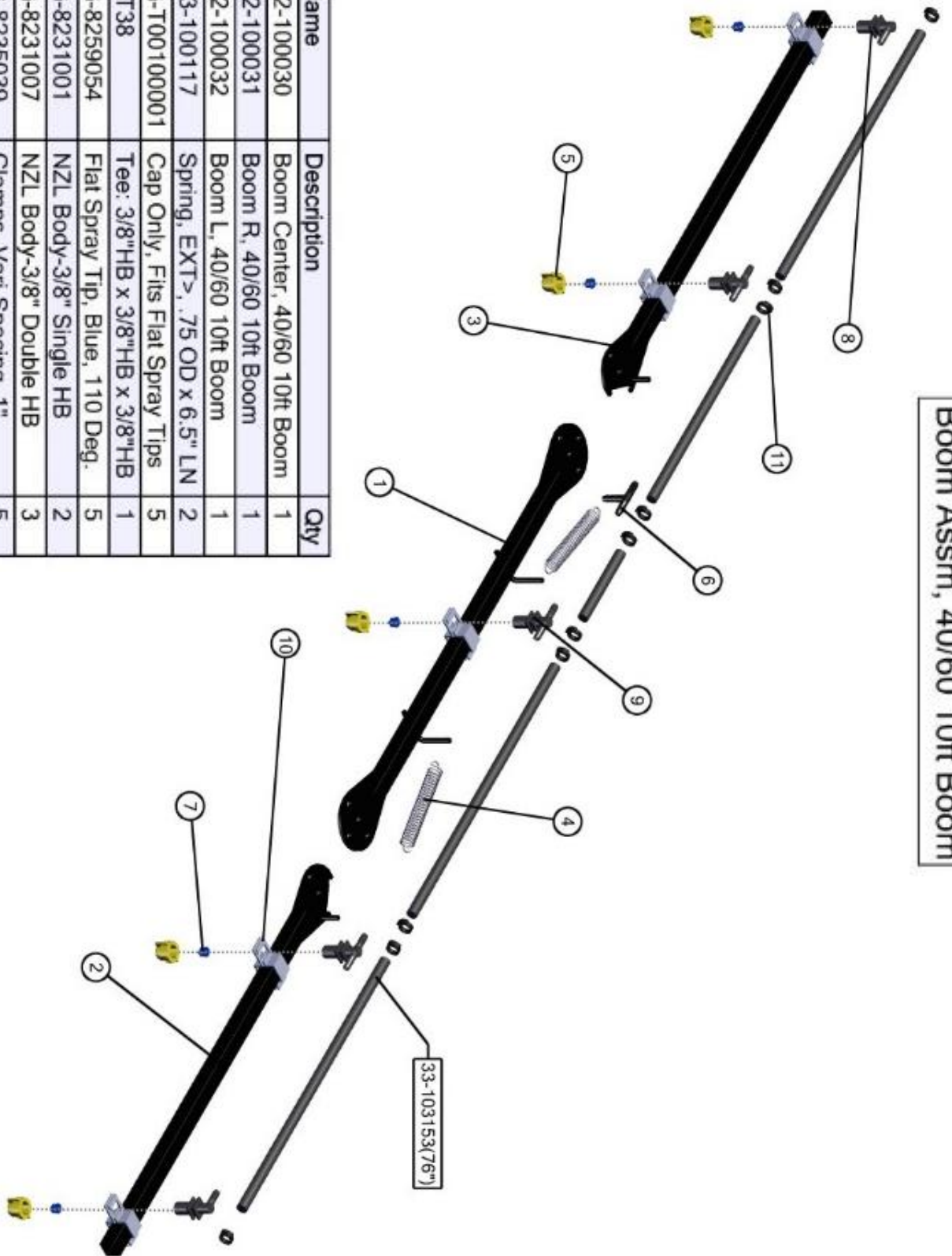
LAWN SPRAY., FOLDING, 40 GAL.,  
2.2EF, 5 NOZZ., DLX, RURAL KING



BOM ID	Name	Description	Qty
1	1224DAB160	Gauge, 2"ABS 1/4"LM 100psi	1
2	32-100034	Bracket, Boom, 40/60 Trailer	2
3	33-100113	Nut, 5/16-18, Serrated Flange	6
4	33-100119	Bolt, 5/16-18 x 1.75"	2
5	33-200120	Bolt, Hex, 5/16-18 x 3/4"	4
6	34-140089	Boom Assm, 40/60 10ft Boom	1
7	34-140092	Frame Assm, 40/60 Trailer	1

34-140089

Boom Assm, 40/60 10ft Boom

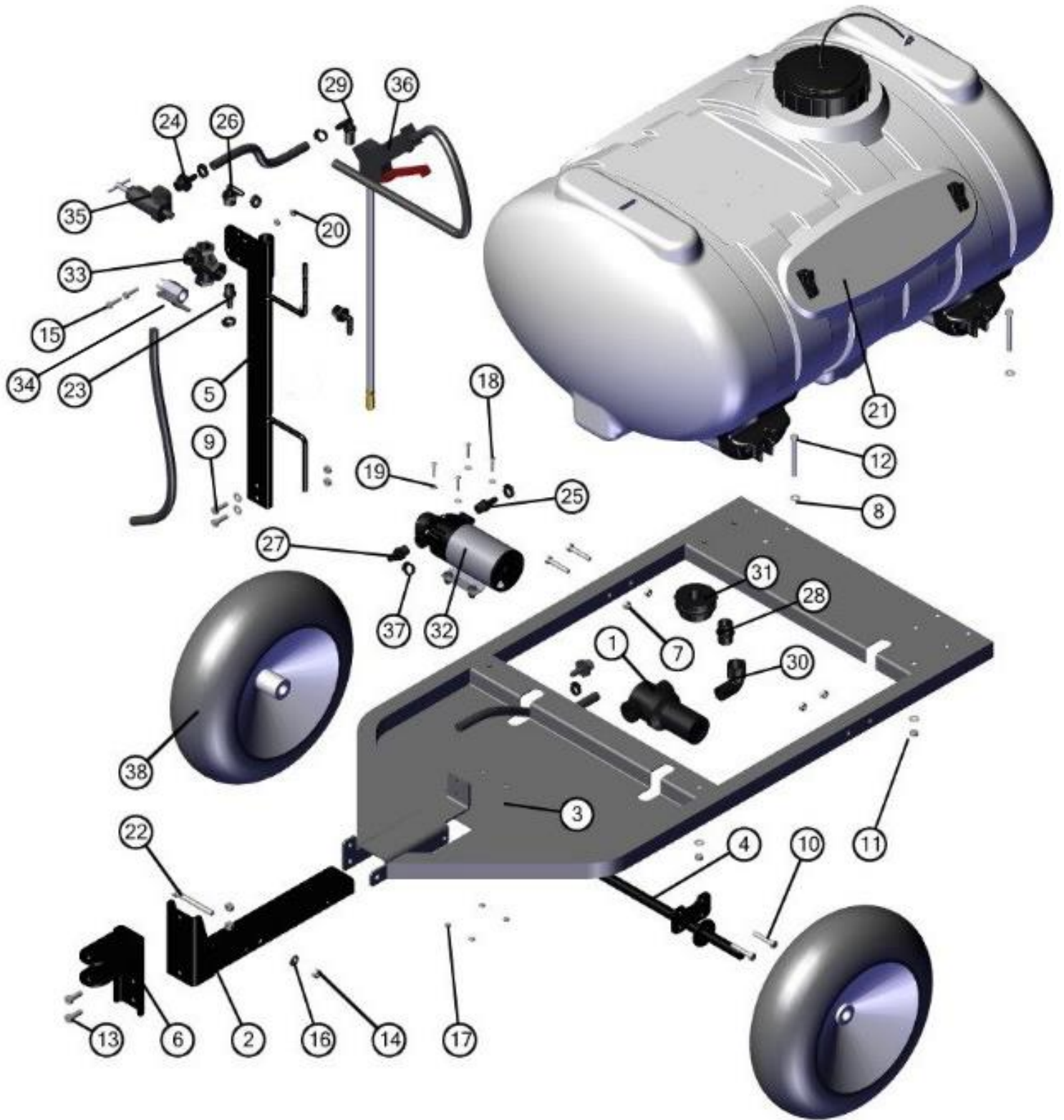


BOM ID	Name	Description	Qty
1	32-100030	Boom Center, 40/60 10ft Boom	1
2	32-100031	Boom R, 40/60 10ft Boom	1
3	32-100032	Boom L, 40/60 10ft Boom	1
4	33-100117	Spring, EXT>, .75 OD x 6.5" LN	2
5	G-T00100001	Cap Only, Fits Flat Spray Tips	5
6	3T38	Tee: 3/8"HB x 3/8"HB x 3/8"HB	1
7	G-8259054	Flat Spray Tip, Blue, 110 Deg.	5
8	G-8231001	NZL Body-3/8" Single HB	2
9	G-8231007	NZL Body-3/8" Double HB	3
10	G-8235039	Clamps, Vari-Spacing, 1"	5
11	SHC-F	SNAPPER HOSE CLIP	10



34-140092

Frame Assm, 40/60 Trailer



34-140092

Frame Assm, 40/60 Trailer

BOM ID	Name	Description	Qty
1	11263	STRNR, 3/4" EPDM, 40M, Poly	1
2	31-100172	BRACKET, HITCH, ADJUSTABLE	1
3	31-100198	Frame, 40/60 Trailer	1
4	32-100028	40/60 AXEL WELDMENT	1
5	32-100035	SPRAYER, CONTROL POST	1
6	32-100066	Hitch, ADJ, 40 & 60 Gal	1
21	33-103245	Tank, 40 Gallon	1
22	33-200128	Bolt, Hex, 3/8-16 x 3.25"	1
23	3A1238	3/8 BARB TO 3/8 MALE PIPE THEAD	1
24	3A3438	Straight: 3/4"MPT x 3/4"HB Poly	2
25	EF-QC-A38	Fitting, QA x 3/8"HB, Black Straight	1
26	3EL1238	Elbow: 1/2"MPT x 3/8"HB Poly	2
27	EF-QC-EL38	Fitting, Elbow, QA x 3/8"HB, Black	1
28	3M34	Nipple: 3/4" MPT x 3/4" MPT Poly	1
29	3NTL38-C	Elbow: NxTHd-11/16"MPS x 3/8"HB	1
30	3SE34	Straight Elbow: 3/4" MPT x 3/4" FPT	1
31	BHF34	Bulk Head Fitting	1
32	EF2200-QA	Pump, 2.2GPM Everflo, Quick Attach Ports	1
33	GCR1214-BN	CROSS, NYLON, 1/2" FNPT X 1/4" FNPT	2
34	MVL12FM	Valve, Ball, 1/2", FM, Lever	1
35	RV2064-01-58	Poly Valve w/Brass T-Handle	1
36	SG-2218-38-RUB15	Spray Gun Assy. 3/8" 15'	1
37	SHC-F	SNAPPER HOSE CLIP	8
38	TWA15X600-6	Tire Wheel Assm. 15x600-6-3/4	2