



MASTER MFG

25 GALLON
ATV SPRAYER



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INTRODUCTION

Your Country Way ATV 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 to 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.

WARNING

Do not allow anyone to operate or maintain this equipment who has not fully read and comprehended this manual. Failure to follow the recommended procedures may result in personal injury or death or equipment damage.

Information in this manual is designed to help owners and operators to obtain the best results and safe operation from their investment. The life of any machine depends largely on the care it is given and we suggest that the manual should be read and understood and referred to frequently. If for any reason you do not understand the instructions and safety requirements, please contact your authorized dealer. The intent of this manual is to provide guidelines to cover general use and to assist in avoiding accidents and injuries.

There may be times when circumstances occur that are not covered in the manual. At those times it is best to use common sense and contact your authorized dealer or our factory.

The requirements of safety cannot be emphasized enough in this publication. We urge you to make safety your top priority when using and maintaining the equipment. We strongly advise that anyone allowed to operate this equipment be thoroughly trained and tested, to prove they understand the fundamentals of safe operation.

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.

Warranty covers replacement parts ONLY. Please have your original sales receipt or other proof of purchase date when requesting any warranty parts. 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.

Warranty is void if the use of chemicals that are corrosive or harmful to the internals of the pump are used. It is the user's responsibility to make sure the chemical used is compatible with Viton, Santoprene and Polypropylene. If the chemical is not found to be compatible the warranty is void. Approved liquids include non-flammable liquids, pesticides, water for plants and dust control, ice control chemicals, and water-based non-flammable sealants or stains for outdoor wood surfaces. Please contact Customer Service at 320-340-6464 if you have questions regarding the liquids you would like to use.

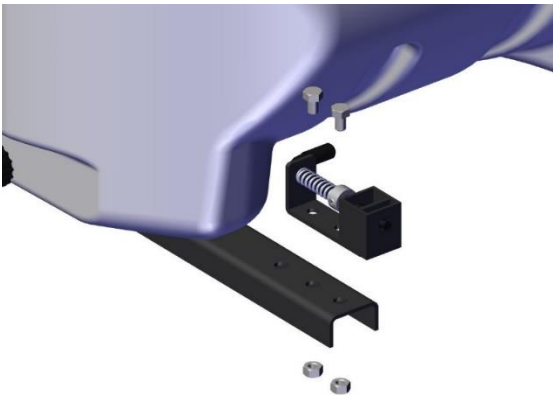
ASSEMBLY

Tools Required: Philips Head Screwdriver, Pliers and Socket Wrench.

Most of the assembly has been completed during the manufacturing process. Only a few short steps are required to complete your sprayer. Open the shipping carton and remove the contents. Follow the steps below to assemble your ATV sprayer:



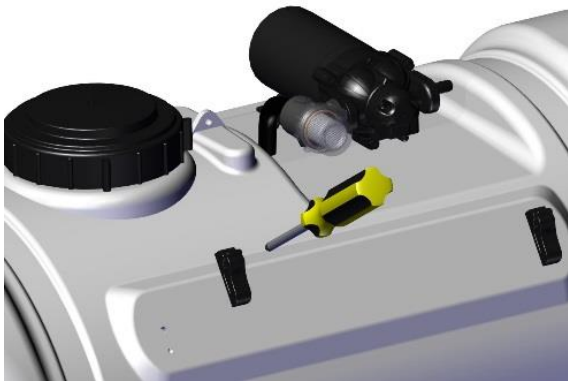
Step 1) Flip Sprayer Tank over to access the holes on the bottom. Position ATV mounts over Sprayer Tank holes. Attach ATV Mounts to Sprayer Tank with $\frac{1}{2}$ " Bolts and Washers using socket wrench. Do not over tighten.



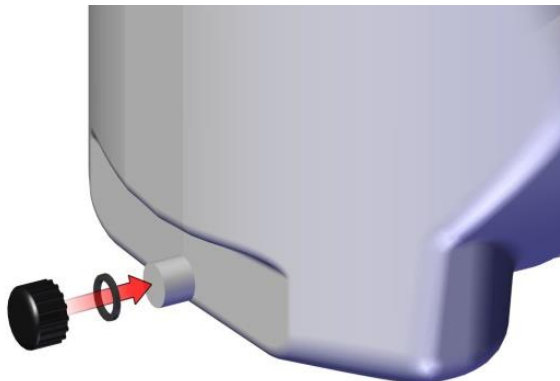
Step 2) Set Sprayer Tank upright. Position Spring Bracket Mounts on the last two holes of the ATV Mounts. Attach Spring Brackets with $\frac{3}{4}$ " Bolts and Flange Nuts. Tighten with Socket Wrench. Note: Make sure spring handles are facing towards the Sprayer Tank.



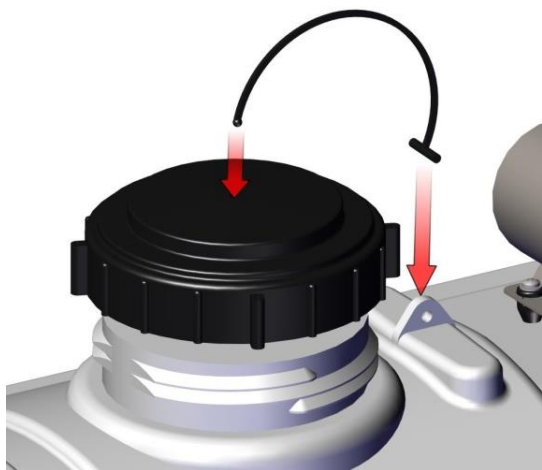
Step 3) Pull back handles on Spring Bracket Mounts and slide in the Boom Upright Brackets. Adjust depending on the height of broadcast spray boom before application.



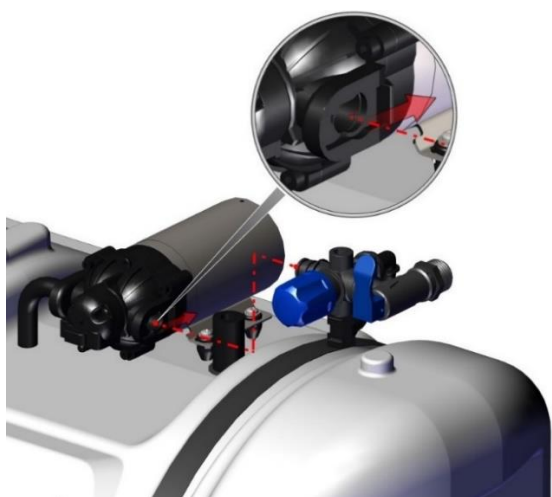
Step 4) Locate screw holes on front of Sprayer Tank. With Screws, install Gun Clips to the front of Sprayer Tank. Be sure open end is facing top of the sprayer.



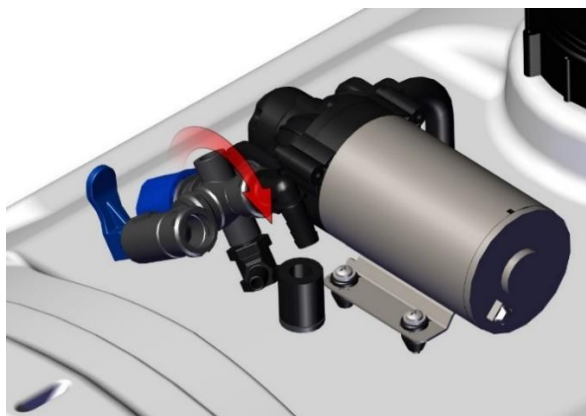
Step 5) Seat Drain Cap Gasket into Drain Cap. Attach Drain Cap Tether to Top of Drain Cap. Place other end of Drain Cap Tether over Drain Port. Thread Drain Cap onto Drain Port.



Step 6) Un-thread Tank Lid from Sprayer Tank. Insert Tank Lid Tether from bottom of Tank Lid, “T” end first. Pull Tank Lid Tether through top Tank Lid, so ball end remains inside the Tank Lid. Thread Tank Lid back on Sprayer Tank. Thread “T” end of Tether through hole next to Tank opening.



Step 7) Slide the Locking Clip on the Pump into the ‘open’ position. Insert the Regulator Assembly (PN 34-140118) into the Pump Outlet, making sure it is fully seated. Slide the Locking Clip into the ‘locked’ position to secure.



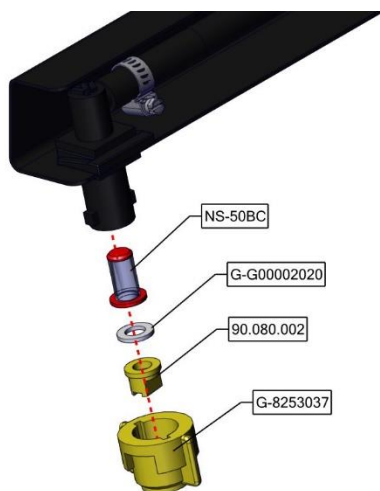
Step 8) Insert Return Barb into Return Hose in tank. Secure with Snapper Hose Clip (SHC-H) and tighten with pliers to prevent leaking.



Step 9) Wrap a small amount of Teflon tape around the threads of the Pressure Gauge. Thread Pressure Gauge into the top of the Pressure Regulator Assembly. Take care not to cross-thread the Pressure Gauge. Note: Pressure Gauge should be facing forward with Regulator Assembly knob.

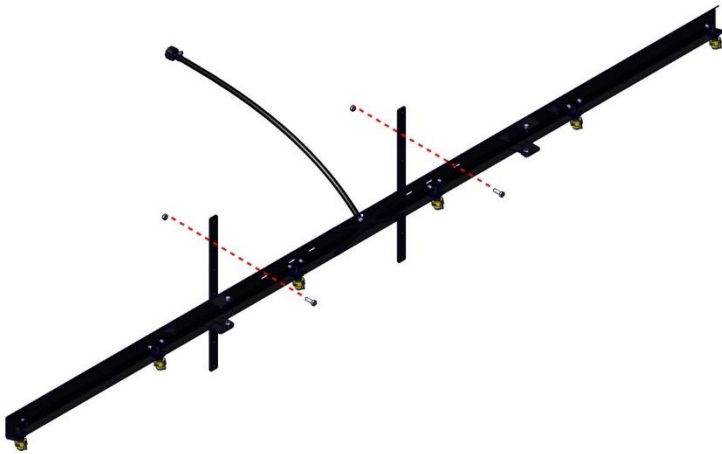


Step 10) Slip the ½" Hose Clamp over the end of the Spray Gun Hose. Push Spray Gun Hose onto the bottom hose barb of the Pressure Regulator Assembly. Tighten the Hose Clamp with Pliers.



Step 11) Place Fan Tip into Fan Nozzle Cap. Insert Gasket into Fan Nozzle Cap. Then Place Nozzle Strainer into Nozzle Assembly Port. Press Fan Nozzle Cap onto Nozzle Assembly Port. Twist to Lock.

Repeat this step for the other remaining Nozzle Assembly Ports.

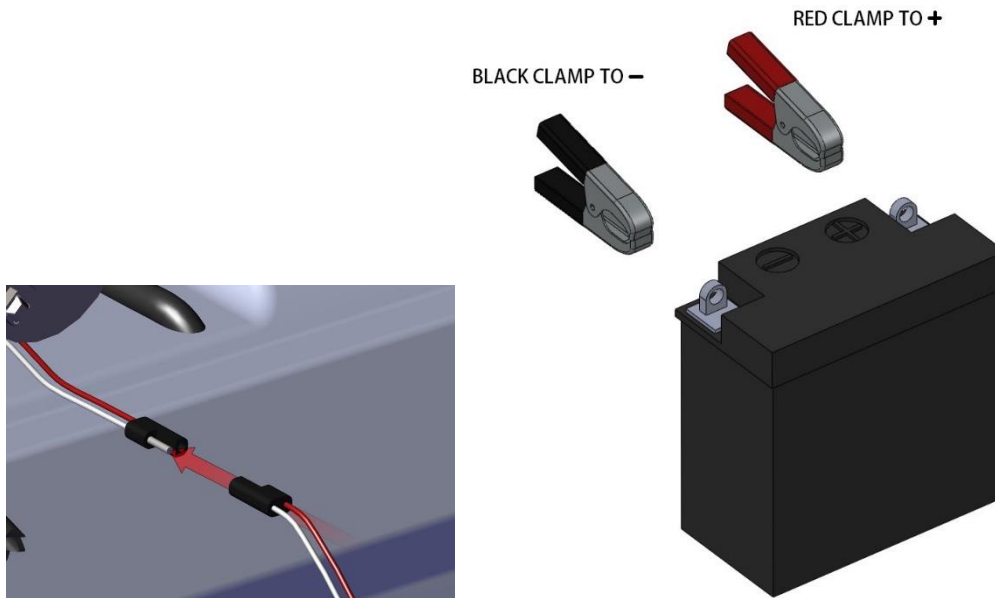


Step 12) Place 1" Bolts through Boom Assembly and into the Boom Upright Brackets. Secure with Flange Nuts and tighten with a Socket Wrench.



Step 13) Locate Boom Hose and make sure there is a Washer in the end of Boom Cap. Thread the Boom Hose to the Shut-Off Valve. Note: Use a knife to cut zip tie from Boom Assembly to free the Boom Hose.

WIRING HARNESS



IMPORTANT

Before spraying chemicals, fill the tank half full of plain water to allow familiarization with the sprayer and to prevent waste of expensive chemicals.

OPERATION

!! IMPORTANT !! – It's important to test the sprayer with plain water after assembly and any extended period of storage. This will allow you to check for leaks without wasting expensive chemical or damaging an area that you're trying to spray.

Attach the sprayer to the vehicle, then fill the tank approximately ½ full with water and connect the wiring harness to a 12VDC source.

Ensure the boom valve is in the closed position, then turn the wiring harness switch to the ON position. The pump should run for a short period of time until the pump is primed then automatically turn off. **KEEP THE SWITCH ON TO PERFORM THE FOLLOWING TESTS.** Check for any leaks and make repairs if necessary. Using the spray wand, ensure the nozzle is pointed down and away from yourself or others, then cycle the trigger on the spray gun a few times until water sprays out from the nozzle consistently. Release the trigger and confirm the pump comes up to pressure and stops. Locate the spray boom valve and turn the valve to the open position. Confirm the booms spray pattern is facing down and even from side to side. Adjust nozzle position as necessary. Turn off the spray boom valve. Once again, the pump should come up to pressure and shut off. Check the entire system for leaks and make any necessary adjustments. Turn the power switch to the off position.

Your sprayer is equipped with an inline switch located in the wiring harness. This switch is used to operate the pump on or off.

There is also a secondary switch located in the pump. This switch is designed to turn the pump off when it reaches 40 psi. This switch is calibrated at the factory and should not be tampered with.

Fill the tank with the desired amount of water based on the amount of solution needed. Measure out the chemical required for the amount of fresh water in the tank as specified by the chemical label. Slowly pour the chemical into the tank while mixing. Use the spray gun to spray back into the tank to help the mixing process and purge mixed solution through the pump and spray wand hose.

Using the handgun

- Ensure the power switch is in the on position.
- Begin spraying by pointing the spray nozzle toward the ground and squeezing the handle lever. The pump will turn on automatically.
- The spray pattern exiting the nozzle can be adjusted from a straight stream to a cone pattern by rotating the nozzle.

Using the spray boom

- Ensure the power switch is in the off position.
- Pull the sprayer to the location you would like to spray and turn the boom valve to the on position.
- Begin using the sprayer at the desired MPH (See calibration section) and turn the power switch to the on position. The pump will start to run and the boom will begin spraying.
- Use the power switch to cycle the pump between spraying and stopping.
- **When spraying in rows it is common practice to overlap your spray pattern by 50% to ensure consistent chemical delivery.**

CALIBRATION

Fan Spray Nozzles: The Fan Spray Nozzles on the boom will spray an 120” swath. The nozzle height should be approximaetly 15” above the object being sprayed.

GALLONS PER ACRE, 20” SPACING

Nozzle	PSI	GPM	4 MPH	5 MPH	6 MPH	7 MPH	8 MPH	9 MPH	10 MPH
90.080.002 Yellow	30	0.17	12.6	10.1	8.4	7.2	6.3	5.6	5.0
	40	0.20	14.9	11.9	9.9	8.5	7.4	6.6	5.9
	50	0.22	16.3	13.1	10.9	9.3	8.2	7.3	6.5
	60	0.24	17.8	14.3	11.9	10.2	8.9	7.9	7.1
	75	0.27	20.0	16.1	13.4	11.5	10.0	8.9	8.0

Once you know how much you are going to spray, determine (from the top chart) the spraying pressure(PSI) and the spraying speed (MPH)

When selecting pressure from the top chart, it is a good idea to try for the 30 PSI range as this allows and 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 cehmical label carefully.

After all calibrations have been completed, add water and chemical to the tank. Always follow chemical manufacturer’s instrautions for mixing. 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 cehmical label carefully.

CLEANING & STORAGE

DANGER

Spray materials can be highly toxic. Make sure to read and follow all warning labels.

NOTICE

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.

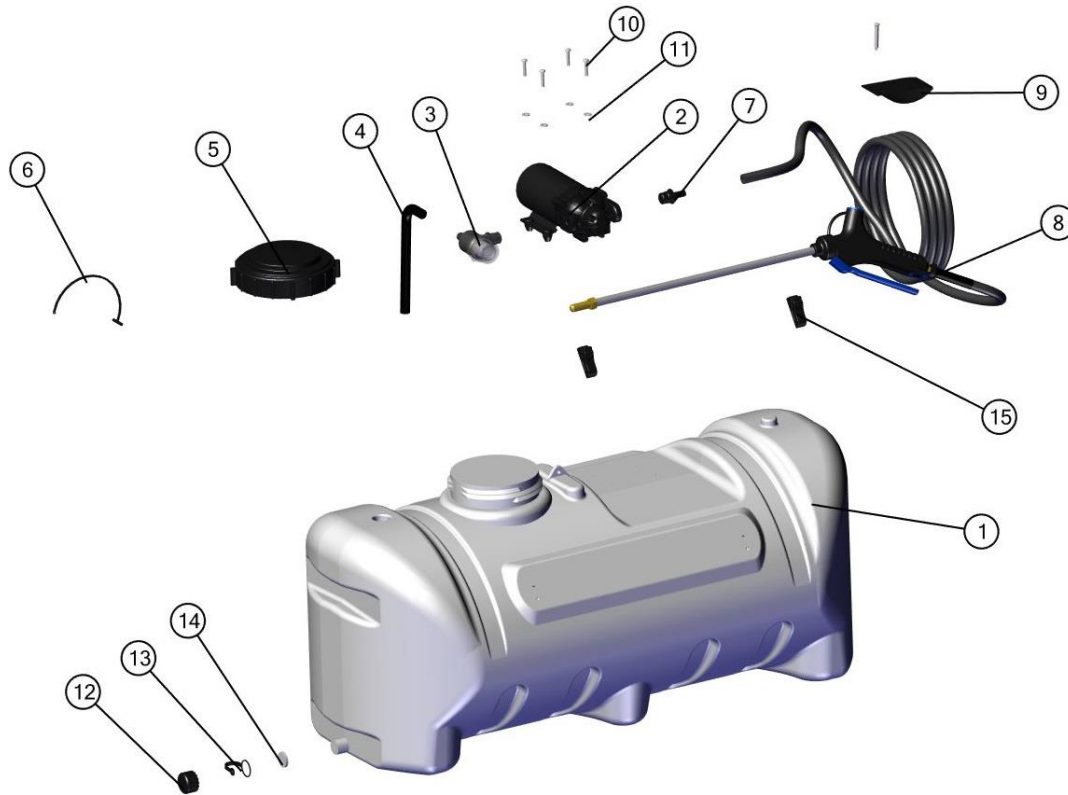
The following steps should be followed for the maintenance and storage of your sprayer.

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.

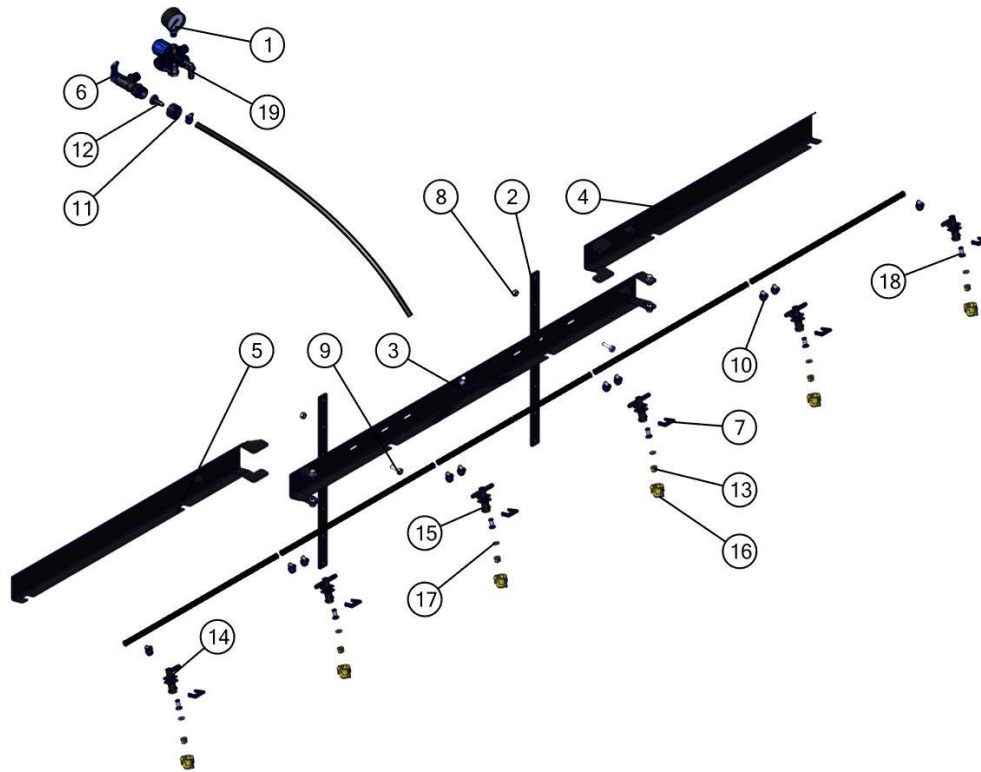
TROUBLESHOOTING

<u>Pump Will Not Turn On</u>	Check For Loose Wiring
	Make Sure Switch Is Turned On
	Check The Fuse
	Check For Defective Pressure Switch
	Tap On Motor To Ensure Brushes Not Stuck
<u>Low Pressure/Low Flow</u>	Check If Inlet Hose/Filter To Pump Is Clogged
	Check For Proper Battery Voltage To Pump
	Flush Pump w/ Garden Hose Up To Strainer
<u>Pump Cycles</u>	Adjust Spray Wand Tip To See If There Is Back Pressure From Too Fine of a Mist
	Boom Nozzle/Filter Clogged
	Check If Filter In Handle Is Clogged
<u>Fuse Is Blown</u>	Excess Voltage
	Damaged or Defective Wiring Harness
	Defective Pump Motor
	Pump Continually Cycles On/Off Creating Too Much Amp Draw
<u>Pump Leaks</u>	Check For Loose Fasteners & Tighten
	Check Pump Seals Degraded. Replace If Needed
	Leak In Diaphragm. Replace Diaphragm Assembly
<u>Poor Spray Distribution</u>	Check Suction Strainer & Clean If Necessary
	Clogged Intake Tube. Clean If Needed
	Worn Spray Gun Nozzle. Replace Spray Gun
<u>Pump Cycles While Spraying</u>	Check For Leak In System. Tighten Clamps, Fittings or Replace Spray Gun
	Pressure Switch Might Be Faulty. Replace
	Check Voltage To Determine If Low
	Air Might Be Trapped In System, Purge Air

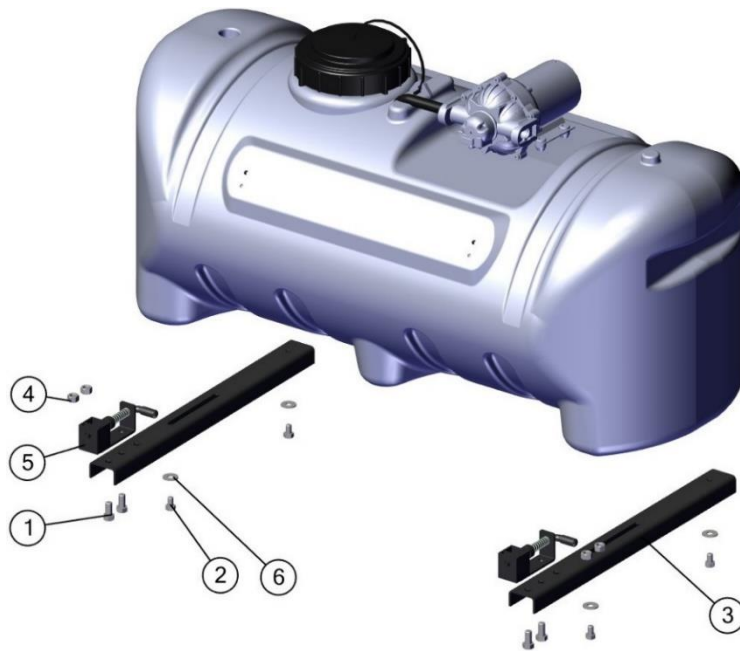
PARTS BREAKDOWN



BOM ID	Part No	Description	Qty
1	33-103230	Tank, 25 Gal, Sprayer	1
1.1	33-103231	Tank, 15 Gal, Sprayer	1
2	EF1000	Pump, 1GPM, Everflo	1
2.1	EF2200-QA	Pump, 2.2GPM, Everflo	1
2.3	EF3000-QA	Pump, 3GPM, Everflo	1
2.31	EF3-5000-QA	Pump, 12V, 3GPM Everflo	1
2.4	33-103229	Pump, 1GPM, Shurflo	1
2.5	33-103232	Pump, 1.8GPM, Shurflo	1
2.6	33-103242	Pump, 3GPM, Shurflo	1
2.7	33-103208	Pump, 1GPM, Delavan	1
2.8	33-103209	Pump, 2GPM, Delavan	1
2.9	33-103205	Pump, 3GPM, Delavan	1
3	34-140164	Strainer, Pump, QC Inlet, 40 Mesh	1
4	3204-1407-18	Gates 3/8" Rubber Hose 18"	1
5	33-103221	Lid, Tank, 5"W .25" Hole	1
6	33-103222	Lanyard, Lid Short Black	1
7	EF-QC-A38	Fitting, QA x 3/8" HB, Black, Straight	1
8	SG-2218-38-RUB15	Spray Gun Assy, 3/8" 15'	1
8.1	SG-4507F-38-RUB15	Spray Gun Assy, 3/8" 15'	1
9	RTS2.0-14.125	Strap, Rip Tie, Nylon, 2" Width	1
10	33-103127	Screw, Machine, 10-24 x 1	4
11	33-103131	Washer, #10, Zinc	4
12	33-103218	Outlet Cap, 3/4" Black	1
13	33-103219	Tether, Drain Short Black	1
14	33-103220	Gasket, 3/4" SuperSeal	1
15	GC-100-KIT	Clip, Gun (Pair)	1



BOM ID	Name	Description	Qty
1	1124DAB100	GAUGE, 2" ABS 1/4" LM 100PSI	1
2	31-100160	BRACKET, UPRIGHT, SPRAY BOOMS	2
3	32-200050	Boom 10', 6Nzl, Center Sec, R20	1
4	32-200051	Boom 10', 6Nzl, Right Sec, R20	1
5	32-200052	Boom 10', 6Nzl, Left Sec, R20	1
6	34-140161	VALVE, ON/OFF, MALE QA X FEMALE QA PORTS	1
7	31-400010	CLIP, BOOM	3
8	33-100113	NUT, 5/16-18,SERRATED FLANGE	2
9	33-100116	BOLT, 5/16-18 X 1'	2
10	350-004	HOSE CLAMP-5/16" BAND, 1/4" HOSE	12
11	3B34	SWIVEL NUT:KNURLED 3/4' FGHT	1
12	3C38	FLAT SEAT HOSE BARB:3/8' HB	1
13	90.080.002	Nozzle, Fan, 80 Deg., #6 (Grey)	6
14	31-400008	NZL BODY, 3/8" HB "L", QA	2
15	31-400009	NZL BODY, 3/8" HB "T", QA	1
16	G-T00100001	CAP ONLY, FITS FLAT SPRAY TIPS	6
17	G-G00002020	GASKET FOR CAPS, EPDM	6
18	NS-50BC	NOZZLE STRAINER, 50M, RED	6
19	34-140158	REGULATOR, ASSY, SPRAYER, MINUS OUTLET	1



BOM ID	Name	Description	Qty
1	33-100135	Bolt, 3/8-16 x 3/4"	4
2	33-100114	Bolt, 5/16-18 x 1/2"	4
3	31-100288	Mnt, ATV, Spot Sprayer	2
4	33-100131	Nut, 3/8-16, Serrated Flange	4
5	34-140093	Spring Bracket Assm, QA	2
6	33-100115	Washer, 5/16", Zinc Plated	4

