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MASTER
MANUFACTURING

25 GALLON
SMART SPRAY
ATV SPRAYER



SAP-K1-025D-MM
Revision 1 Aug. 2014

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 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.

ASSEMBLY

The ATV frame kit is designed to fit many applications. It has been specifically designed to attach easily to other Master Manufacturing products. The following instructions are intended for the ATV frame kit to be attached to a Master Manufacturing 15 or 25 gallon spot sprayer. Please refer to the figures in this manual for reference to the following assembly instructions.

Sprayer Tank Mounting

- 1.) Locate the two tank bottom mounts (PN31-100288).
- 2.) Position the two brackets under the tank as shown in the figure. Attach the brackets to the tank with four 5/16" washers and 5/16"-18 x 1/2" bolts (PN 33-100115 & 33-100114). Tighten bolts securely (Do Not over tighten).
- 3.) Attach Spring Brackets (PN 34-140092) to bottom mounts (PN 31-100288) with four 3/8-16 x 3/4" bolts (PN 33-100135) and 3/8" serrated nuts (PN 33-100131).
- 4.) Position tank with bottom brackets onto ATV rack. Ensure Spring Brackets hang over the back end of the ATV rack and will provide enough room to fasten a boom. Fasten the tank securely to the ATV rack with (2) ratchet straps (PN 33-100164). **Warning: Tank must be securely fastened to ATV to ensure proper handling. Failure to fasten tank to ATV may lead to injury.**

Spray Boom Assembly

- 1.) Attach the two upright spray boom brackets (PN 31-100160) to your, ATV Spring Brackets or other application using the four 5/16-18 x 1 bolts (PN 33-100116) and 5/16 nuts (PN 33-100113).
- 2.) Attach the spray boom (PN 34-140118) to the upright spray boom brackets using two 5/16-18 x 1 bolts (PN 33-100116) and 5/16 nuts (PN 33-100113).
- 3.) Thread on the boom hose to the manifold valve installed previously and tighten securely.
- 4.) Optimum boom height is approximately 14" above the area to be sprayed. Use the location holes in the upright spray boom brackets as adjustments to obtain the optimum spray height.

Spray Wand

- 1.) Attach sprayer wand hose (33-103153-180) to sprayer manifold with hose clamp (SHC-F).

Wiring Harness

- 1.) Attach the new wiring harness with inline switch to the sprayer pump by pushing the two terminal connectors together.

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

Using the boom nozzles

- 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.
 5. Boom height and spray pattern
- Refer to the chemical label to determine the chemical mixture.
- See the tip chart to determine the pressure, speed and rate of spray to be used for your application.
- Check the spray pattern with water only. Usually you can see the coverage better on a solid concrete surface, such as a driveway.
- Raise or lower the nozzles so that you will have a good coverage pattern. If you can see dry spots on the concrete surface you will need to raise the nozzles. Too much solution in the pattern areas means you need to lower the nozzles. Generally the proper height will be from 13 inches to 18 inches from the ground.

Operation and calibration

The nozzles on the boom will spray an 80” wide swath. The nozzle height is approximately 14” 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 bypass valve lever 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. Before spraying chemicals, fill the tank half full of plain water to allow familiarization with the sprayer and to prevent waste of expensive chemicals. After all calibrations have been completed, add water and chemicals 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, and hoses.

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

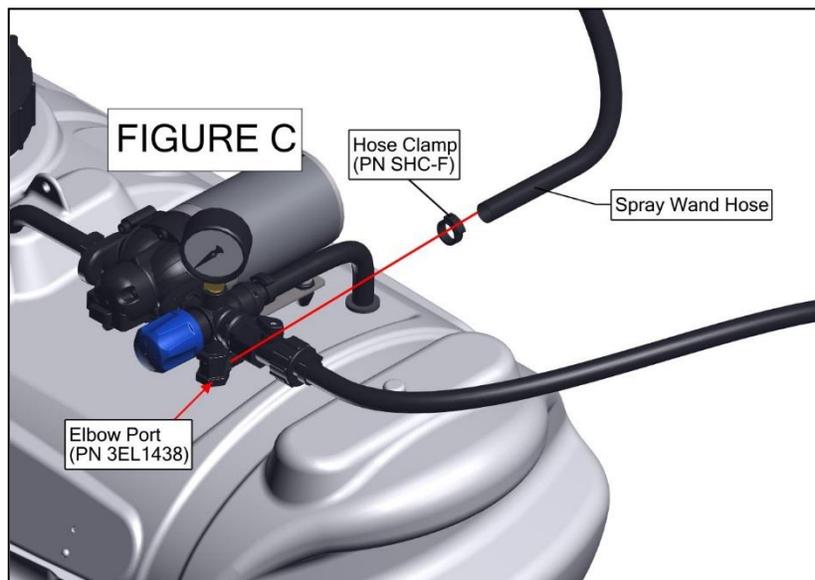
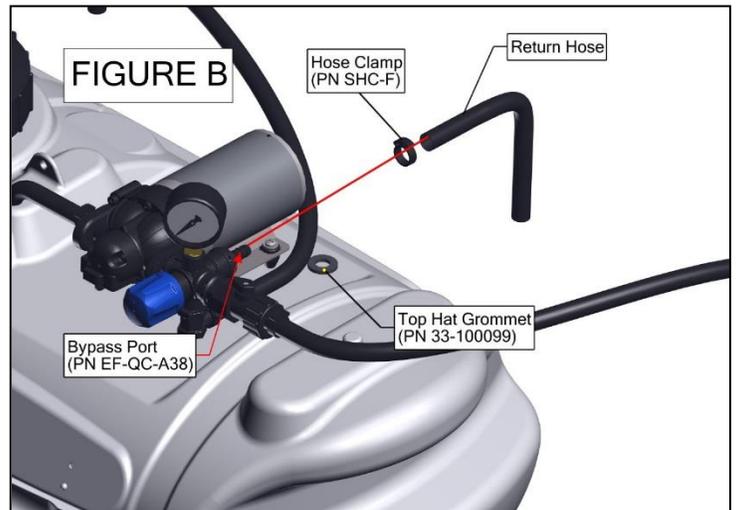
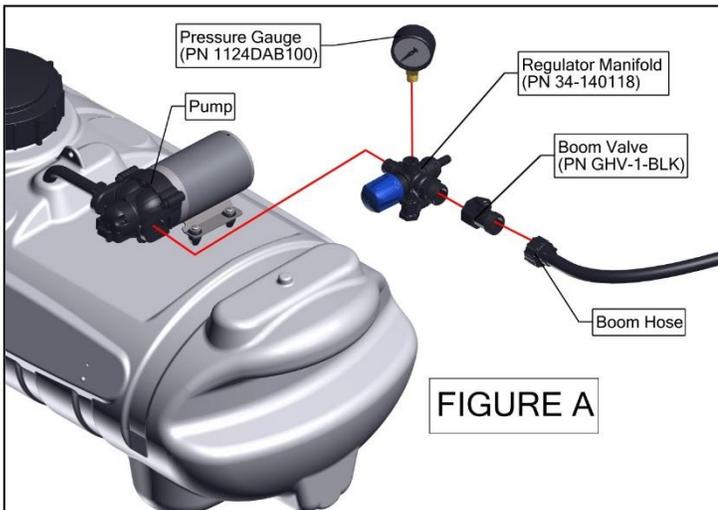
Products sold shall be warranted from defects in workmanship and material when used within the service and scope for which they were designed for a period of one year from date of purchase. Warranty covers replacement parts ONLY. Contact Master Manufacturing for warranty parts at (800) 864-1649. Do not return product to your distributor/dealer. 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.

Smart Sprayer Series					
15 Gallon Sprayer			25 Gallon Sprayer		
2.5 MPH	Set PSI to:	22	2.5 MPH	Set PSI to:	15
3 MPH		30	3 MPH		22
3.5 MPH		42	3.5 MPH		30
4 MPH		55	4 MPH		40

Pump Assembly

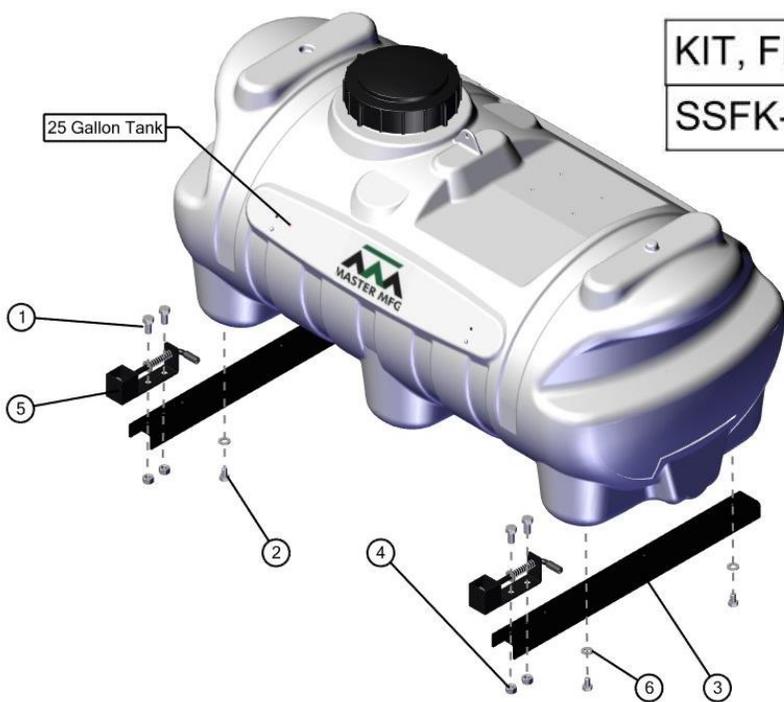
Your pump comes attached to the tank with the Inlet hose already attached. You will need to attach the Regulator Manifold to the pump following the steps below and the diagrams included.

- 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(PNGHV-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 3EL1428) FIGURE C
- 9.) Attach Hose Clamp to Hose. Make sure that the clamp is on the Elbow Port

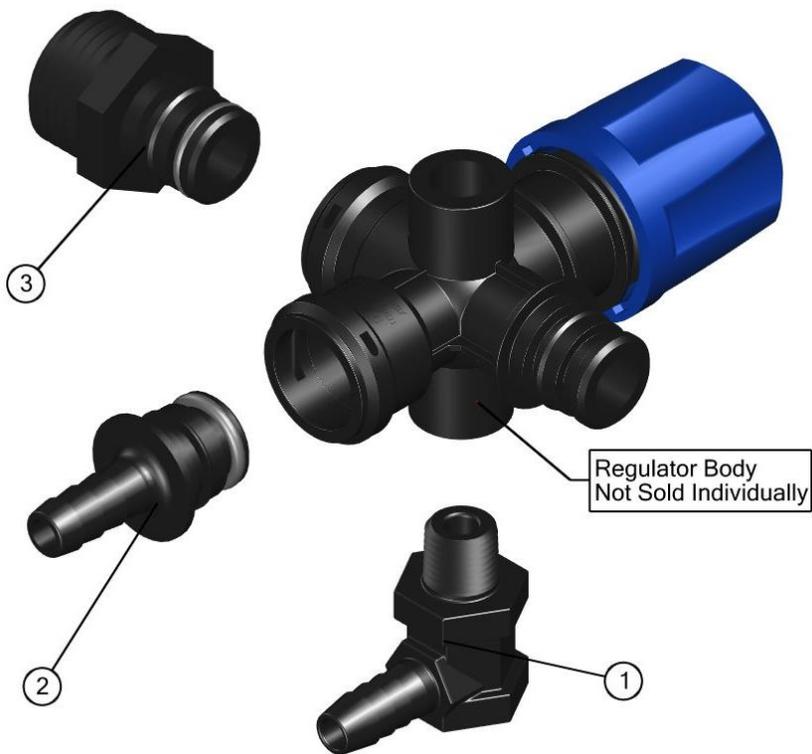


KIT, FRAME, ATV BOOM MOUNTING

SSFK-ATV-QA-25



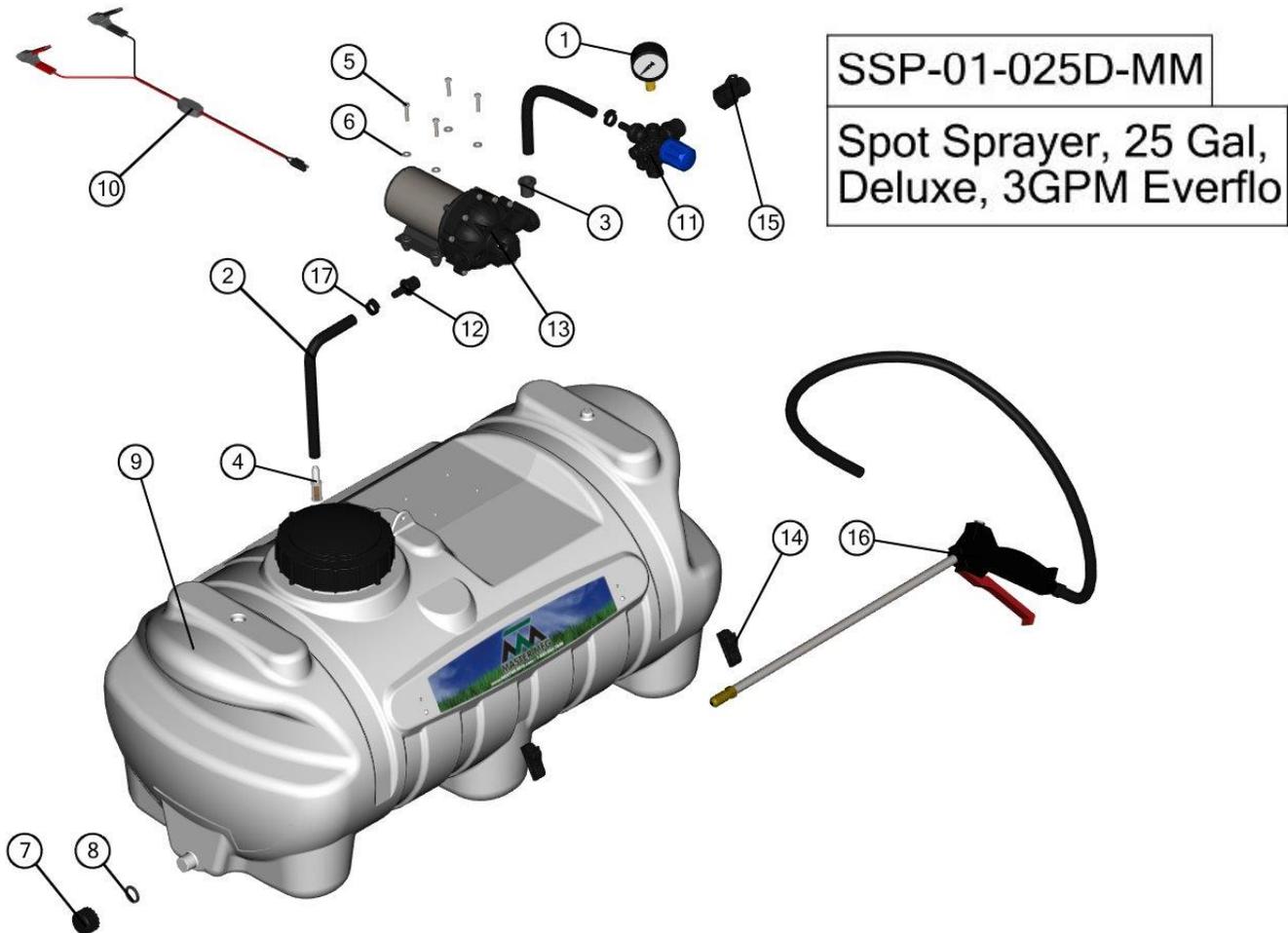
BOM ID	Name	Description (config)	Qty
1	33-100135	Bolt, 3/8-16 x 3/4"	4
2	33-100114	Bolt, 5/16-18 x 1/2"	4
3	31-100288	MNT, ATV, SPOT SPRAYER	2
4	33-100131	Nut 3/8, Serrated Flange	4
5	34-140092	Spring Bracket Assm, QA	2
6	33-100115	Washer, 5/16", Zinc Plated	4



34-140118

Regulator, Assy, Sprayer

BOM ID	Name	Description	Qty
1	3EL1438	Elbow: 1/4"MPT x 3/8"HB Poly	1
2	EF-QC-A38	Fitting, 3/8"HB x QC	1
3	EF-QC-E34	Fitting, 3/4"Garden Hose x QC	1



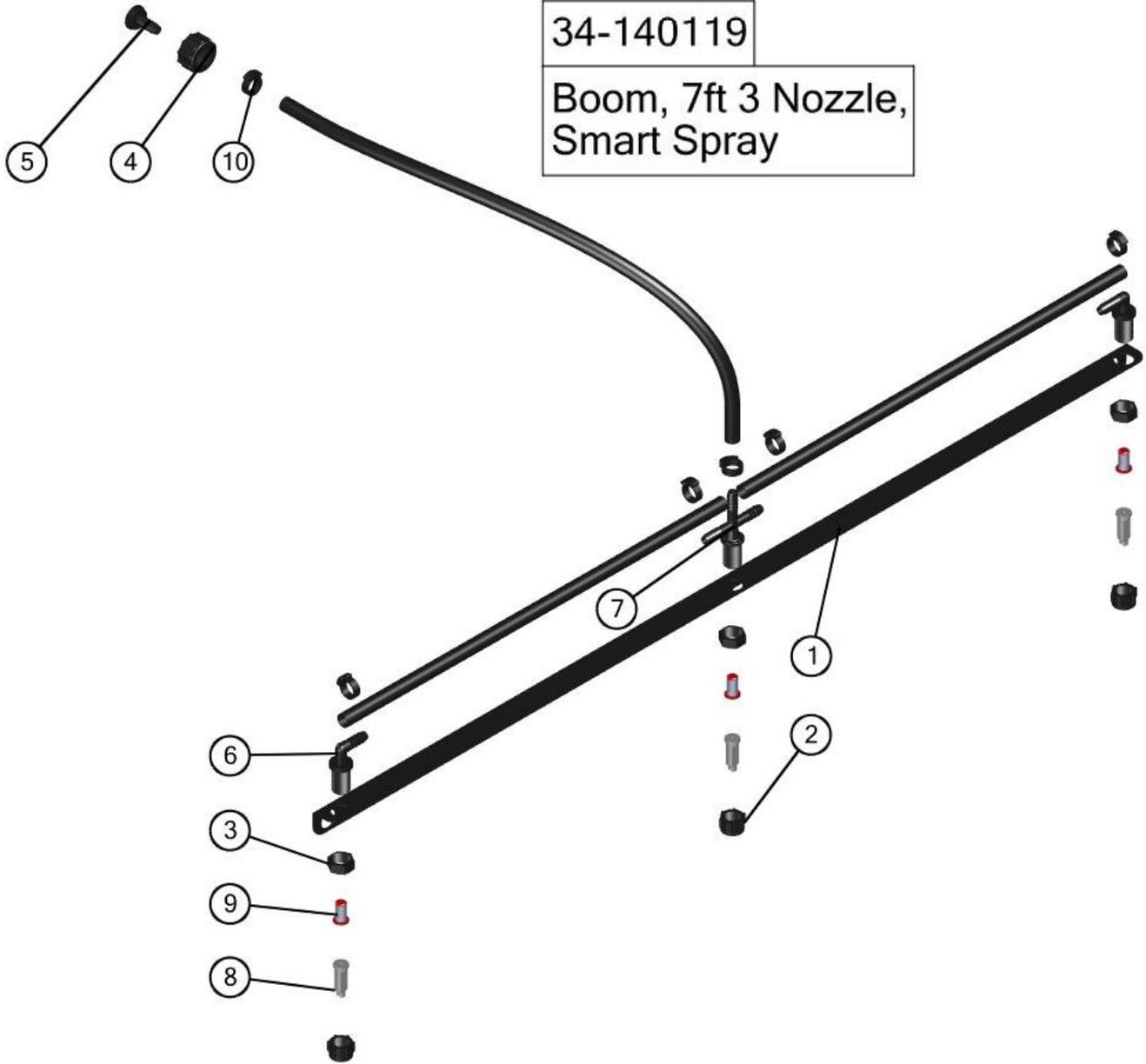
SSP-01-025D-MM

Spot Sprayer, 25 Gal,
Deluxe, 3GPM Everflo

BOM ID	Name	Description	Qty
1	1124DAB100	Gauge, 2"ABS 1/4"LM, 100PSI	1
2	33-103622	Hose, 1/2"ID x 13/16"OD, EPDM Braided	1
3	33-100099	Top Hat Grommet	1
4	33-103122	Strainer, Inlet, 1/2" HB, SS	1
5	33-103127	Screw, Machine, 10-24 x 1"	4
6	33-103131	Washer, #10, Zinc	4
7	33-103218	Outlet Cap, 3/4" Black	1
8	33-103220	Gasket, 3/4" SuperSeal	1
9	33-103230	Tank, 25 Gallon	1
10	33-103233	HARNESS, WIRE, SS.	1
11	34-140118	Regulator, Assy, Sprayer	1
12	EF-QC-A38	Fitting, QC X 3/8"HB, Black Straight	1
13	EF3000-QA	Pump, 12V, 3GPM Everflo, Quick Attach Ports	1
14	GC-100-KIT	CLIP, GUN (PAIR)	1
15	GHV-1-BLK	Valve, 3/4" FGHT x 3/4" MGHT	1
16	SG-2218-38-RUB15	Spray Gun Assy. 3/8" 15'	1
17	SHC-F	SNAPPER HOSE CLIP	4

34-140119

Boom, 7ft 3 Nozzle,
Smart Spray



BOM ID	Name	Description	Qty
1	31-100120	BOOM, 7 FOOT	1
2	38027	Nozzle Nut, 11/16"FPS, Poly	3
3	3B12	Nozzle Nut: 11/16" Poly	3
4	3B34	Swivel Nut: Knurled 3/4"FGHT	1
5	3C38	Flat Seat Hose Barb: 3/8"HB	1
6	3NTL38-C	Elbow: NxTHd-11/16"MPS x 3/8"HB	2
7	3T38C-C	CROSS:NZTHD:11/16	1
8	AIXR6.0	Nozzle, Air Induction, #6, Grey	3
9	NS-50	Nozzle Strainer, 50M Red	3
10	SHC-F	SNAPPER HOSE CLIP	6