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MASTER
MANUFACTURING

14' BOOM KIT



Part Number SSBK-14FB | Rev 3 February 2017

Note: Do not return product to the distributor/dealer for warranty work.
Call Master Manufacturing at 320-340-6464 for any warranty work or replacement parts.

INTRODUCTION

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. 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. Always mention the model and part number in any correspondence.

ASSEMBLY

The Fourteen Foot Boom 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 attachment of the Fourteen Foot Boom to a Master Manufacturing spot sprayer, lawn trailer, 3-point sprayer or ATV kit.

MANIFOLD REPLACEMENT



Figure 1
Remove Spray Gun Hose from Pump.



Figure 2
Use a flat blade screwdriver to push the Locking Clip back and release the Fitting.



Figure 3
Remove Spray Gun Fitting from pump. Remove Fitting from Hose and discard.



Figure 4
Locate Regulator Valve Assembly.

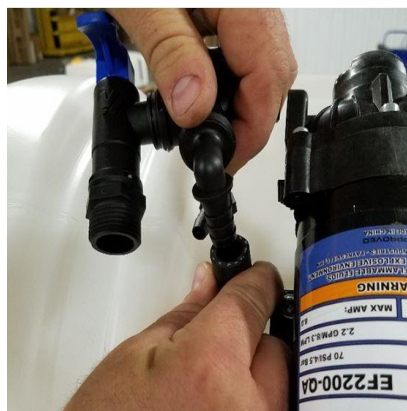


Figure 5
Insert Return Fitting into Return Line coming from tank.



Figure 6
Use Pliers to tighten F-size Clamp as shown to secure Return Line.



Figure 7
Insert Regulator Valve Assembly into Pump Outlet making sure it is fully seated.

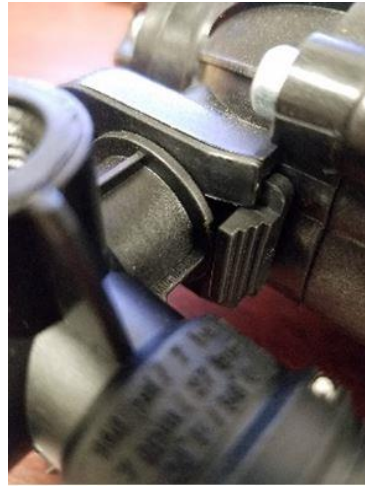


Figure 8
Slide the Locking Clip into the locked position as shown.

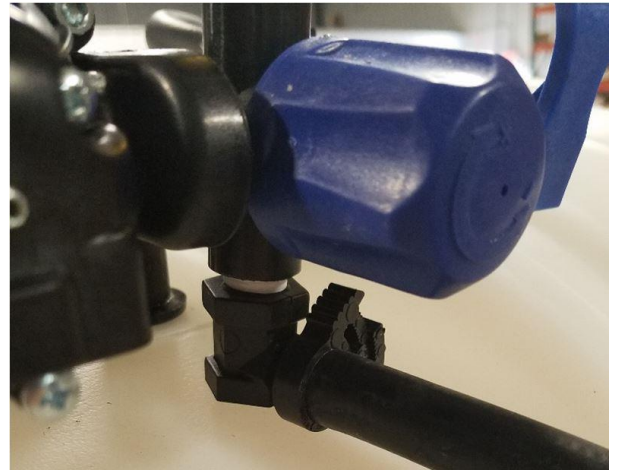


Figure 9
Attach Spray Gun Hose to Outlet Port on Regulator as shown. Secure Hose with F-Size Clamp and tighten with pliers.

BOOM ASSEMBLY



Figure 10
Extend the Fourteen Foot Boom on a flat surface and remove the loose bolts on the ends of the Center Boom Section.

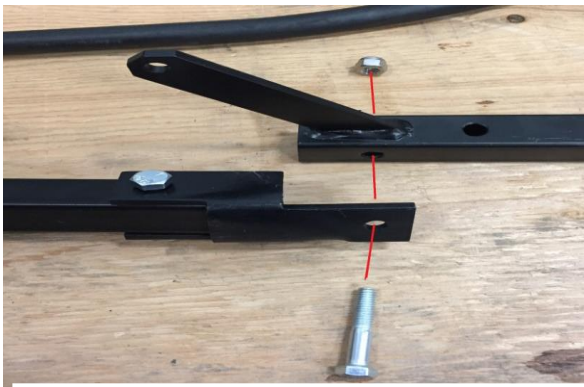


Figure 11
Position the Hinge over the holes in the Center Boom Section and place bolts through holes.



Figure 12
Tighten the bolt securely but ensure that the hinge moves freely in both directions.



Figures 13 & 14

Locate Springs (33-100117) and attach one to each Eye Bolt (33-33-100118) and Center Boom Section.

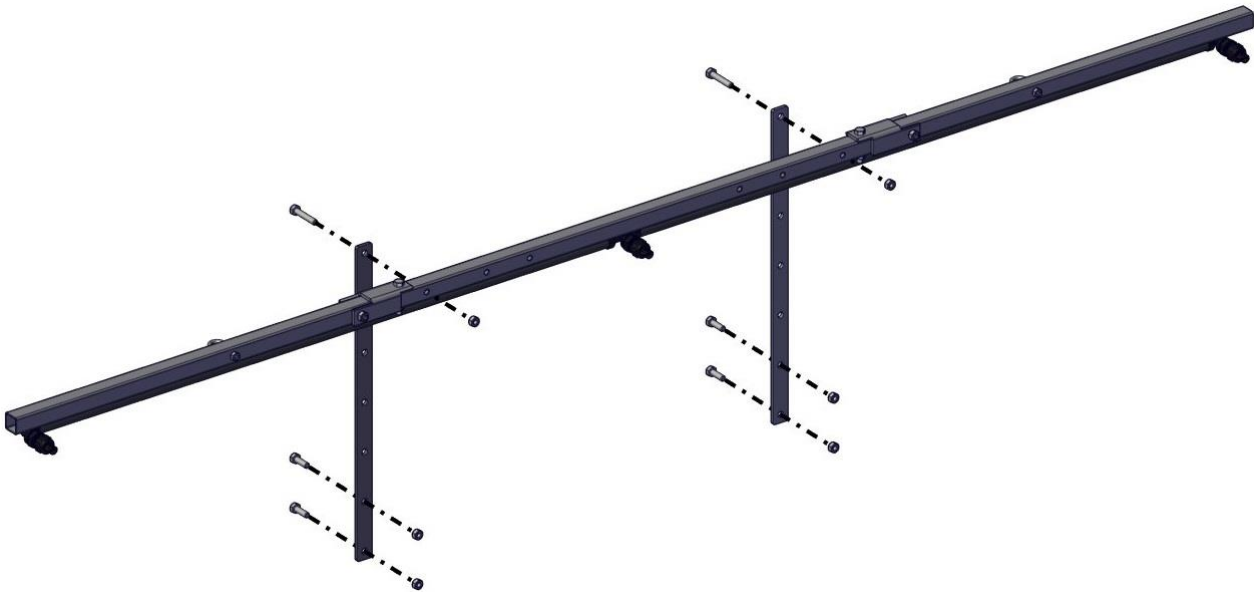


Figure 15

Attach the two Upright Spray Boom Brackets (31-100160) to your lawn trailer, ATV angle brackets, or other application using the four 5/16-18 x 1" bolts (33-100116) and 5/16-18 nuts (33-100113). Attach the Spray Boom (34-140090) to the Upright Spray Boom Brackets using two 5/16-18 x 1.75" bolts and 5/16-18 nuts. Refer to the Operation and Calibration section for optimum Spray Boom height.



Figure 16

Attach the Boom to the Boom Valve. Make sure the W406V rubber washer is in the end of the Boom Cap (34-140052) before attaching.



Figure 17

Screw Boom Cap (34-140052) onto Boom Valve as shown.



Figure 18

Screw the Pressure Gauge into Valve Port on top of Regulator. Make sure the Pressure Gauge is well seated, being careful not to over tighten.

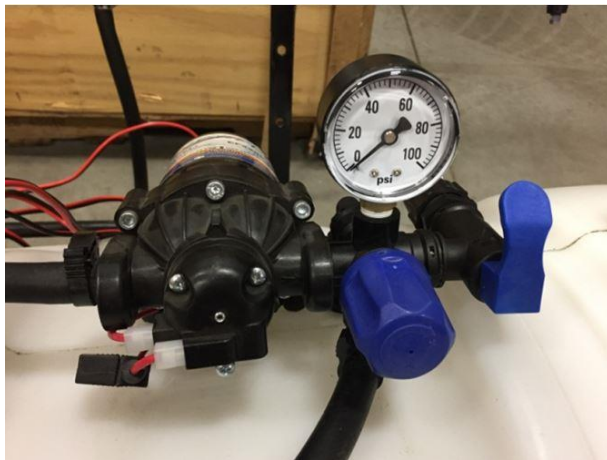


Figure 19

Make sure the Gauge will be facing you while operating.



Figure 20

Attach the new Wiring Harness with Inline Switch to the Sprayer Pump by pushing the two terminal connectors together.

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 Maintenance

The nozzles on the boom will spray a 120" wide swath. The nozzle height is 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 return hose 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.

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

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.									

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.

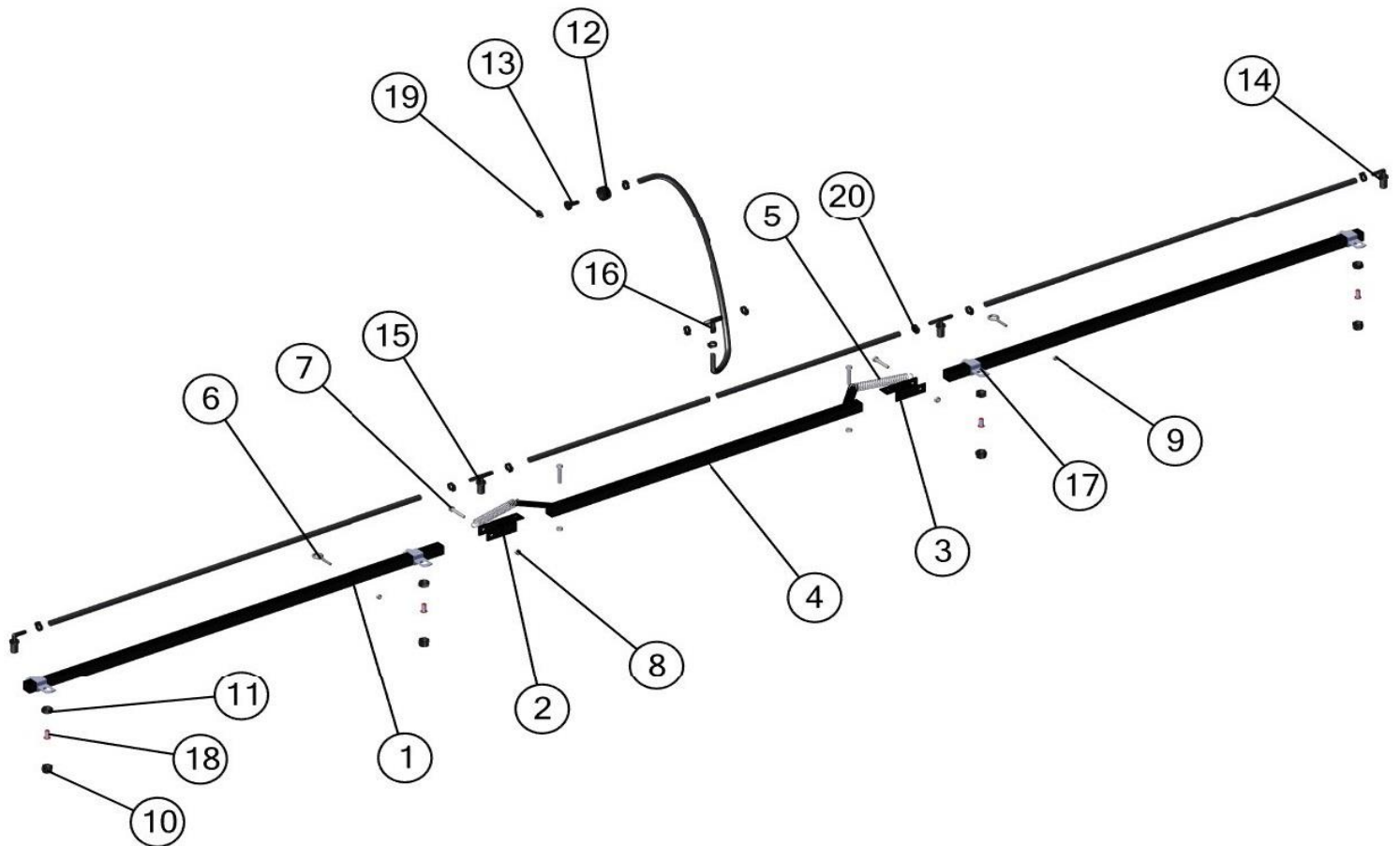
1. Wash and flush out sprayer after completion of each phase of your program. Flush out sprayer when changing chemicals if there is a possibility of the chemicals being incompatible. Use of a detergent is advisable if the chemical manufacturer does not make specific cleaning recommendations. Flush system 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. Warranty covers replacement parts ONLY. Contact Master Manufacturing for warranty parts at 320-340-6464. 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.

34-140090

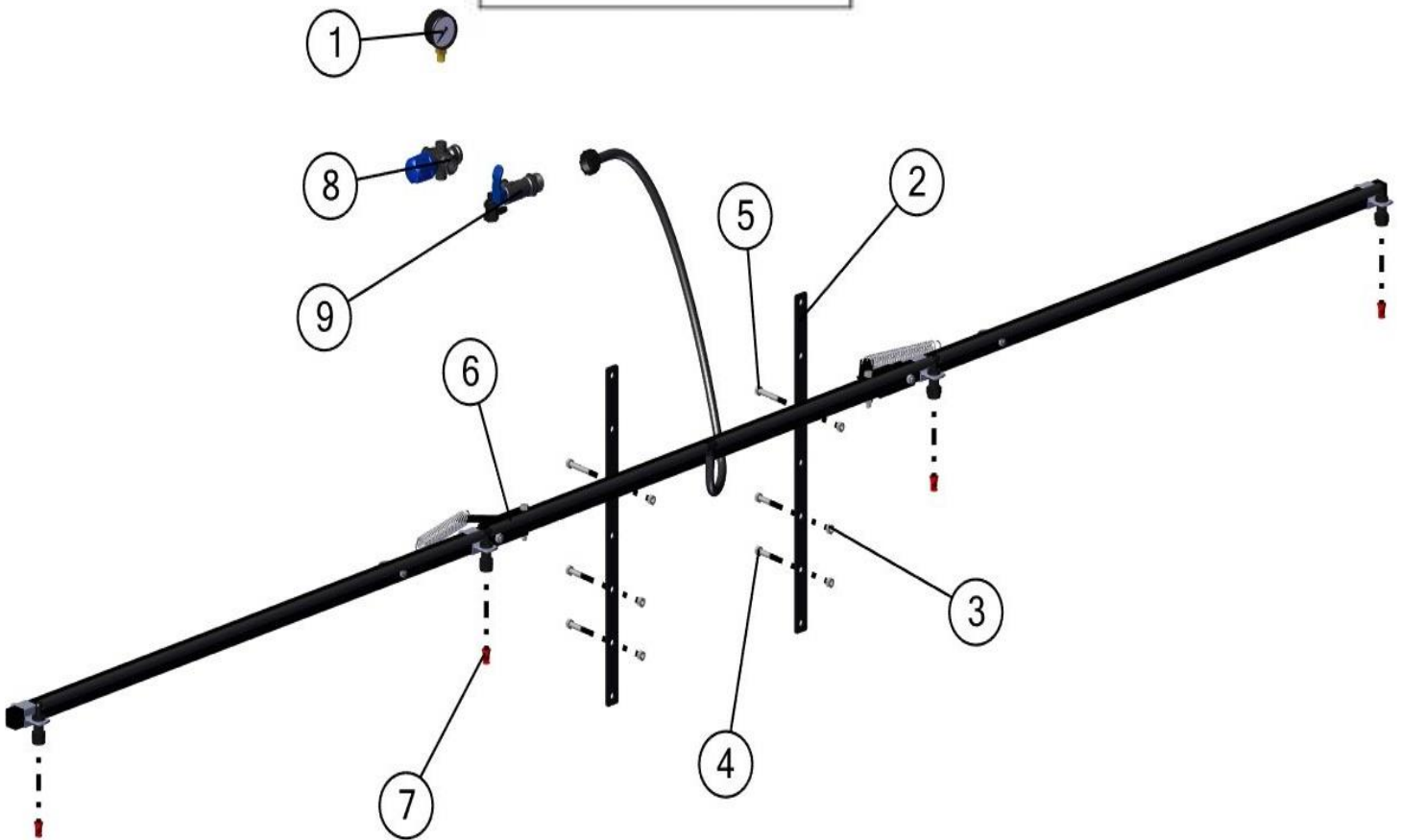
Assy, 14' Folding Boom



BOM ID	Name	Description	Qty	BOM ID	Name	Description	Qty
1	31-100265	L & R Boom, 14'	2	12	3B34	Swivel Nut: Knurled 3/4" FGHT	1
2	31-100137-L	Left Breakaway Boom	1	13	3C38	Flat Seat Hose Barb: 3/8" HB	1
3	31-100137-R	Right Breakaway Boom	1	14	3NTL38-C	Elbow: NxTHd-11/16"MPS x 3/8"HB	2
4	32-100021	Assy, 10' Folding Boom	1	15	3NTT38-C	Tee: NzTHd-11/16"MPS x 3/8"HB	2
5	33-100117	Spring, EXT, .75 OD x 6.5" LN	2	16	3T1238	Tee: NzTHd-1/2"HB x 3/8"HB	1
6	33-100118	Eye Bolt, 1/4"X1-1/2"X2-1/2"	2	17	BCS-100	Boom Clamp, 1", Square	4
7	33-100119	Bolt, 5/16-18 x 1.75"	4	18	NS-50	Nozzle Strainer, 50M Red	4
8	33-100120	Nut, Lock, 5/16-18	4	19	W406V	Washer: 1" OD x 3/4" ID	1
9	33-103149	1/4-20 SF Nut	2	20	SHC-F	Snapper Hose Clamps, BLK	10
10	38027	Nozzle Nut, 11/16" FPS, Poly	4				
11	3B12	Nozzle Nut: 11/16" Poly	4				

SSBK-14FB

Boom, Kit, 14'



BOM ID	Name	Description	Qty
1	1124DAB100	Gauge, 2" ABS 1/4"LM 100PSI	1
2	31-100160	Bracket, Upright, Spray Booms	2
3	33-100113	Nut, 5/16-18, Serrated Flange	6
4	33-100116	Bolt, 5/16-18 x 1"	4
5	33-100119	Bolt, 5/16-18 x 1.75"	2
6	34-140059	Assy, 10' Folding Boom	1
7	DF2.0	Nozzle, Deflect Top, 2.5	4
8	34-140118	Regulator, Assy, Sprayer	1
9	34-140141	VALVE, ON/OFF, MALE QA X FEMALE QA PORTS	1

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-EL12	Fitting, 1/2" HB 90 Elbow	1