



OPERATIONS & PARTS MANUAL

FOR MODELS:

- BE-RMES40
- BE-RMES60

PURCHASE DATE	MODEL NO.	SERIAL NUMBER
DEALER		

ASSEMBLY

Sprayer assembly has been completed by at the factory except for the roller pump that must be supplied by the customer. This unit is designed to work with a 4 or 6 roller pump that will be attached directly to the tractor PTO. Depending on pump choice the spray nozzles may need to be changed to deliver optimum spray coverage. Please refer to the “Boom Operation” section for more information.

Two nylon hose fittings and hose clamps have been provided to join to the pump. Use a good quality thread sealant on each fitting to prevent leaks. After the fittings have been inserted to the pump, push on the two pump hoses to the fittings and secure with clamps provided.

OPERATION

Check the inside of the tank for any foreign objects or material that could cause damage to the pump.

Fill the tank with clean water. IT is always better to have the tank at least half full of water before adding the chemical to avoid possible damage to the sprayer components by an undiluted chemical concentrate.

Before initially running the sprayer, loosen the tee handle of the relief valve. This adjustment should be checked while spraying because a pressure increase will be noted when the sprayer is shut off and the output of the pump is by-passed back to the tank through the relief valve.

Limit the pressure to 150 PSI. If, when adjusting the relief valve for more pressure, no increase in pressure occurs, it is an indication that the maximum output of the pump is being used. When the sprayer is shut off the pump will have to overcome the excessive tightness of the relief valve in order to by-pass back to the tank. This will cause pump strain and possible damage and should be avoided.

Choose an operating pressure that provides a spray pattern suitable for the particular operation. Follow the chemical manufacturer’s recommendations for mixing and rates or application carefully. Judge the area sprayed with tank full of spray material carefully to avoid over or under application rates.

Do not use your sprayer for pumping petroleum products, strong acids, paint or other thick materials with heavy viscosity.

GENERAL SPRAYER MAINTENANCE

Most spray materials are highly corrosive. The most important aspect of a 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, hose and spray gun. A neutralizing agent such a solution of Nutr-Sol, detergent or household ammonia as recommended by the chemical manufacturer can assist in removal of persistent chemical.

Avoid getting chemical on the engine and other external parts of the unit in order to preserve the finish. Remove external spray material deposits when cleaning and flushing unit. A coat of wax applied to the exterior will protect the paint and make clean up easier. When the unit is thoroughly cleaned, remove the tank filter bowl and drain the water form the tank, spray gun, pump boom and spray gun hose.

TROUBLESHOOTING

In the event of inefficient operation or malfunction, check the following:

1. Clean the line strainer after each use or more often, if necessary. A plugged strainer will restrict the flow of liquid to the pump and cause it to perform poorly. Always use clean water and keep the strainer screen in place. Sandy or gritty liquids will damage the components of the pump.
2. Check the hoses for any kinks or leaks. Be sure that the suction hose is not collapsed or plugged.
3. Nozzle tips should be removed and cleaned with a toothpick or similar object. Avoid nails, wires, etc. that could damage the top opening. The nozzle screens of the boom accessory should also be removed and cleaned periodically. Inspect and replace worn tips to insure satisfactory spraying performance.

STORAGE

This sprayer should always be cleaned and drained before storage. If the unit will be subjected to freezing temperatures, it is imperative that the whole sprayer; pump, hoses, spray gun, gauge, etc., be completely drained and dry. Any water left in the system could cause extensive damage when it freezes.

Follow the recommendations of the pump instructions for preventing internal pump corrosion and protection against the rotor and rollers gumming and sticking during storage.

BOOM OPERATION

The spray nozzles used in the boom are marked with the capacity in gallon per minute of water at a pressure of 40 PSI. A 3 tip has a capacity of 0.3 GPM at 40 PSI. A 5 has a capacity of 0.5 GPM at 40 PSI. etc.

The spray width coverage of the nozzle will vary according to the pressure, and nozzle height. The wide angle flat spray pattern increases as the pressure is increased.

The amount of material applied by the nozzle is changed by variations in spraying speed, different capacity nozzles, different nozzle spray width and spraying pressures. Other factors such as a heavier or lighter (specific gravity) spraying solution, a change in the chemical-water concentration ratio, worn tip, a worn pump, wheel slippage, a pressure drop from the gauge to the boom, and a pressure gauge variation or malfunction can also cause variations in the rate of application. Uneven coverage can result from a clogged nozzle and a straining screen.

The spraying pressure is usually more in relation to the type of application and the type of tip used than to the rate of application. Since nozzle flow rate is almost proportional to the square root of pressure, it would take four times the amount of range from 10 to 40 PSI. The rate of application can be changed somewhat by changing pressure but a considerable change is achieved by using a different capacity nozzle or (if possible) by changing the spraying ground speed.

Dividing the spraying width of the boom in feet into 1000 determines the travel distance required to cover 1000 sq. feet. For example, an 80" spray width will cover 1000 sq. feet in 150 feet of travel. Periodic calibration checks at the spraying speed and pressure assure correct application rates. The number of gallons required to refill the tank after spraying (starting with a full tank) over a test distance is the application rate for the area of the test distance.

Multiplying the application rate for the 1000 sq. feet by 43.56 will determine the application rate per acres or dividing the rate per acre by 43.56 will determine the rate per 1000 sq. feet. IF unknown, spraying speed can be determined by measuring the distance traveled in one minute. Every 88 feet. of travel is equal to 1 MPH of speed. For instance, a distance of 308 feet in one minute divided by 88 equals 3.5 MPH.

A calibration check can also be made with the unit standing still and the boom spraying at the operation RPM and pressure. Catching the output of the one nozzle for the time it would take to travel the test distance and multiplying by the number of nozzles on the boom will yield the application rate. Water weighs 8.34 lbs per gallon. Spraying solutions heavier than water will cause a reduction in nozzle output, while solutions lighter than water will increase the nozzle output.

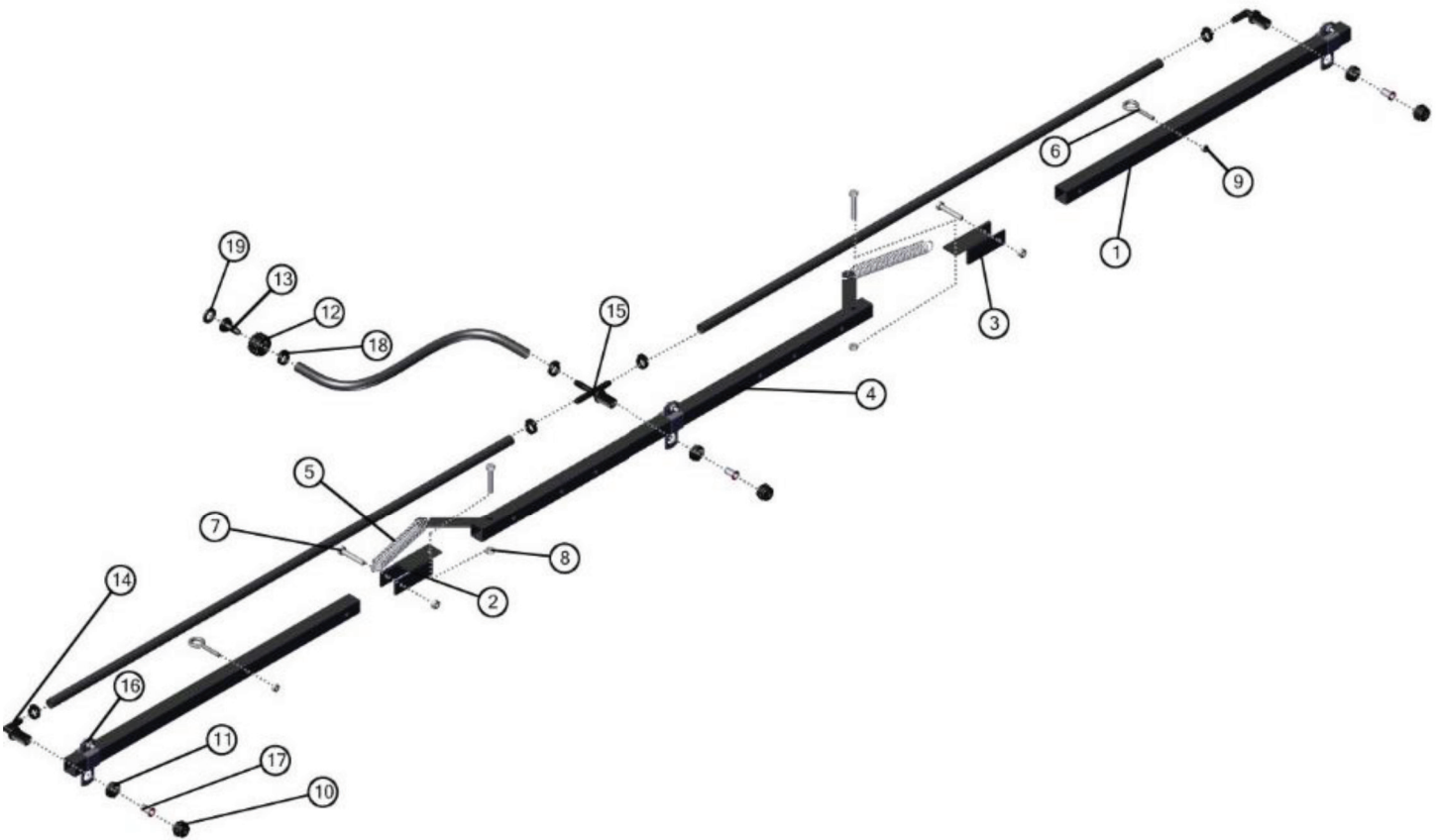
GALLONS PER ACRE (40" SPACING) (US GALLONS)

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.

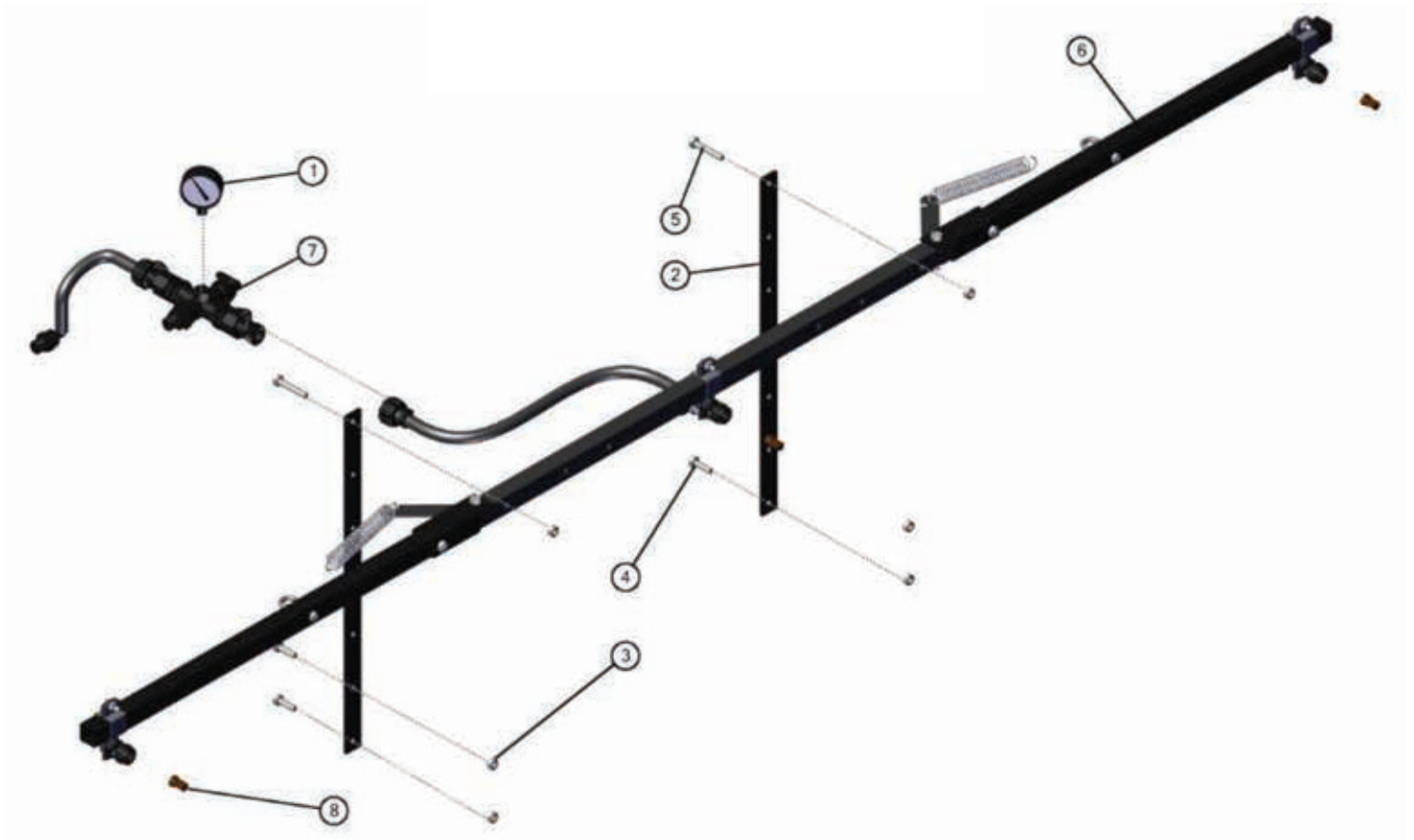
EXPLODED VIEW & PARTS LIST

34-140059 - 10 FOOT FOLDING BOOM ASSEMBLY`



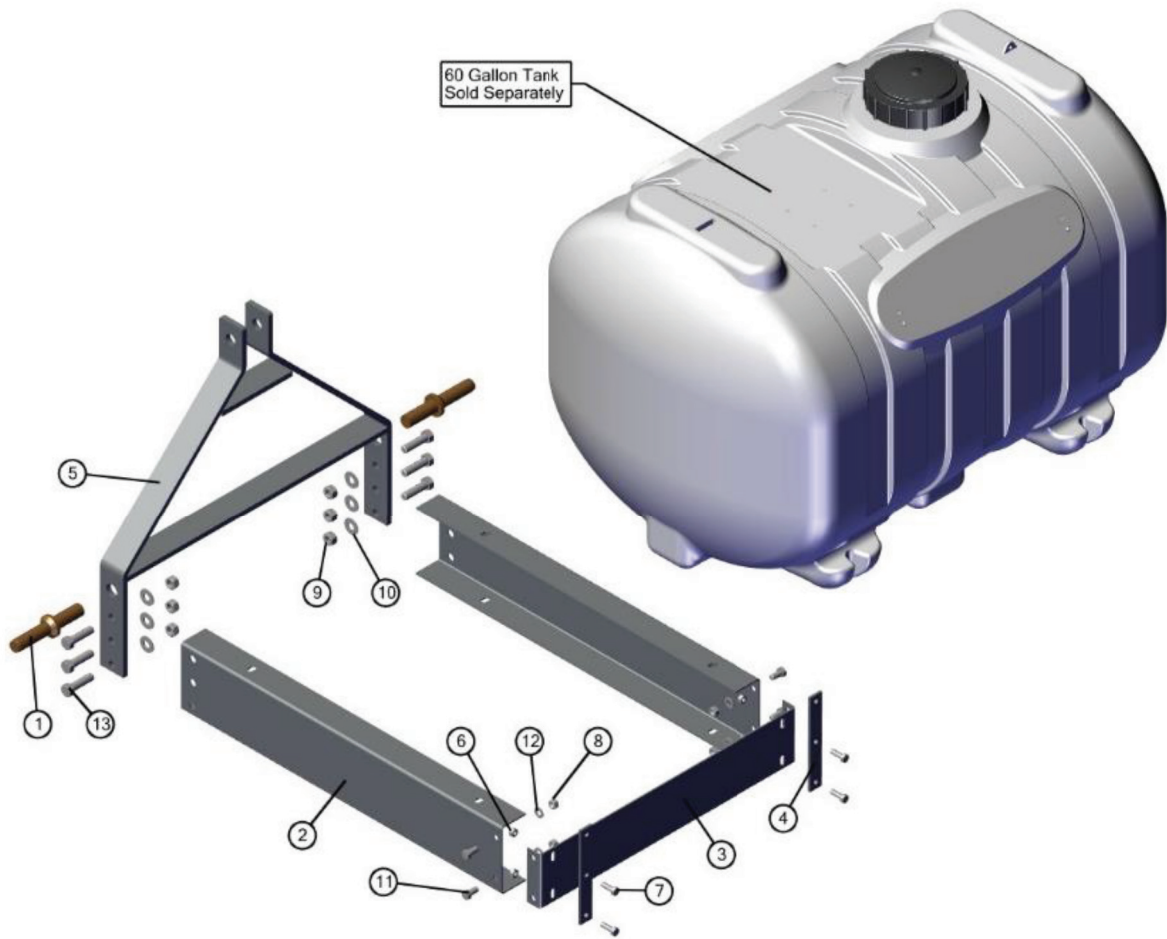
REF	PART NO	DESCRIPTION	QTY
1	31-100136	L & R Boom	2
2	31-100137-L	Left Breakaway Boom	1
3	31-100137-R	Right Breakaway Boom	1
4	32-100021	Center Boom Weldment	1
5	33-100117	Spring, Ext>, 75 OD x 6.5" LN	2
6	33-100118	Eye Bolt - 1/4" x 1-1/2" x 2-1/2"	2
7	33-100119	Bolt - 5/16"-18 x 1.75"	4
8	33-100120	Lock Nut - 5/16-18	4
9	33-103149	1/4-20 SF Nut	2
10	38027	Nozzle Nut - 11/16" FPS, Poly	3
11	3B12	Nozzle Nut - 11/16", Poly	3
12	3B34	Swivel Nut - Knurled 3/4"FGHT	1
13	3C38	Flat Seat Hose Barb - 3/8"HB	1
14	3NTL38-C	Elbow - NxTHd-11/16"MPS x /8"HB	2
15	3T38C-C	Cross - NZTHD - 11/16	1
16	BCS-100	Boom Clamp - 1" Square	3
17	NS-50	Nozzle Strainer, 50M Red	3
18	SHC-F	Snapper Hose Clip	6
19	W406V	Washer - 1" OD x 3/4" ID	1

SSBK-10FB - 10 FOOT BOOM KIT BOXED ASSEMBLY



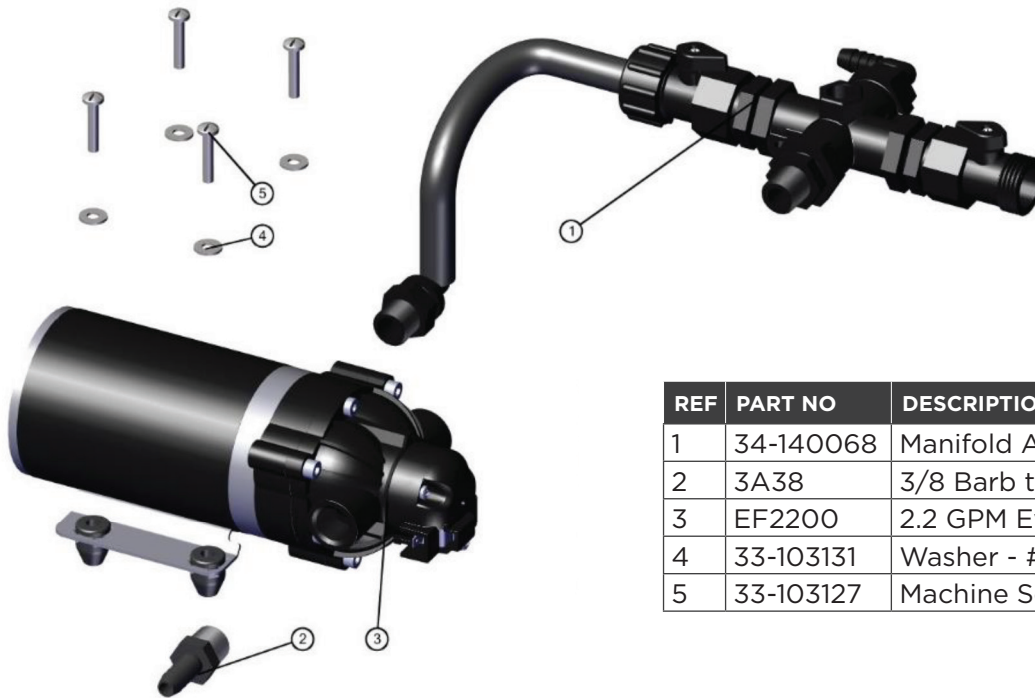
REF	PART NO	DESCRIPTION	QTY
1	1124DAB100	Gauge, 2" ABS 1/4"LM 100 PSI	1
2	31-100160	Bracket, Upright, Spray Booms	2
3	33-100113	Nut - 5/16-18, Serrated Flange	6
4	33-100116	Bolt - 5/16-18 x 1"	4
5	33-100119	Bolt - 5/16-18 x 1.75"	2
6	34-140059	10 Foot Folding Boom Assembly	1
7	34-140068	Manifold Assembly with Return	1
8	DF2.5	Nozzle, Deflect Top 2.5	3

3PT FRAME ASSEMBLY



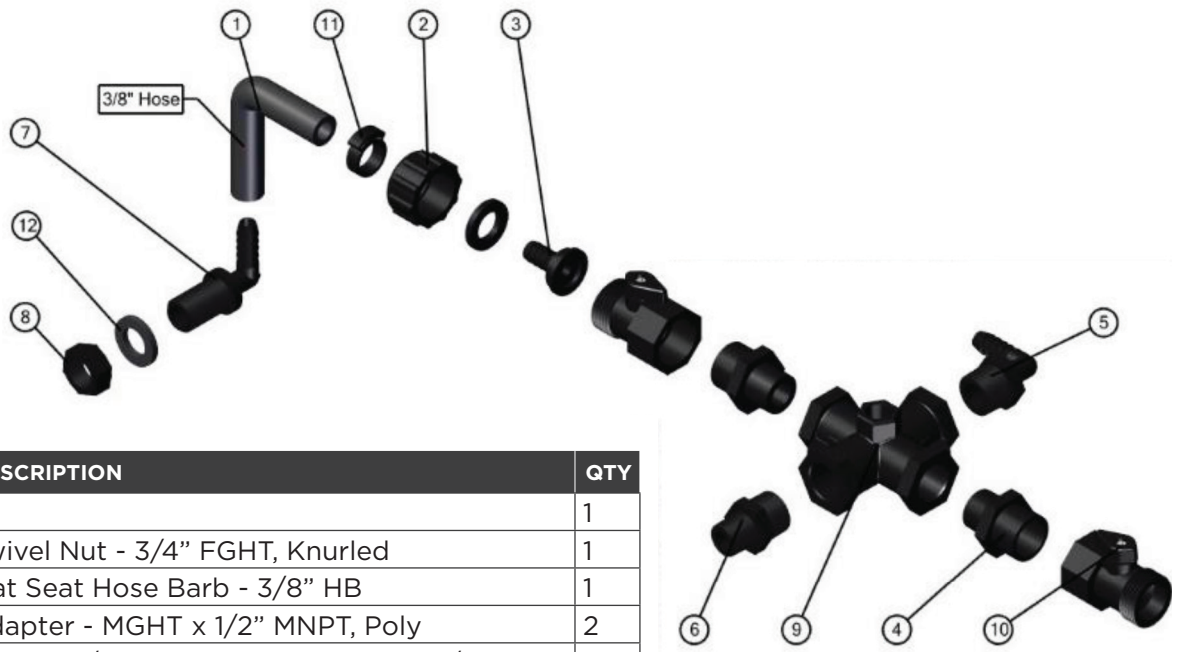
REF	PART NO	DESCRIPTION	QTY
1	152ip	Implement Pin	2
2	31-100181	Rail, 40/60 Econo 3PNT	2
3	31-100182	Boom Mount, 40/60, Econo 3PNT	1
4	31-100187	Boom Bracket, Econo 3PNT	2
5	32-100079	Frame, 3PNT Link, 40/60 Econo, 3PNT	1
6	33-100113	Nut - 5/16-18, Serrated Flange	4
7	33-100116	Bolt - 5/16-18 x 1"	4
8	33-100125	Nut - 3/8" - 16, N/C	4
9	33-100133	Nut - 1/2"-13	6
10	33-100134	Lock Washer - 1/2"	6
11	33-100135	Bolt - 3/8-16 x 3/4"	4
12	33-100139	Lock Washer, 3/8"	4
13	33-100177	Bolt, 1/2-13 x 1.25"	6

34-140076 - 2.2GPM EVERFLO W/MANIFOLD ASSEMBLY



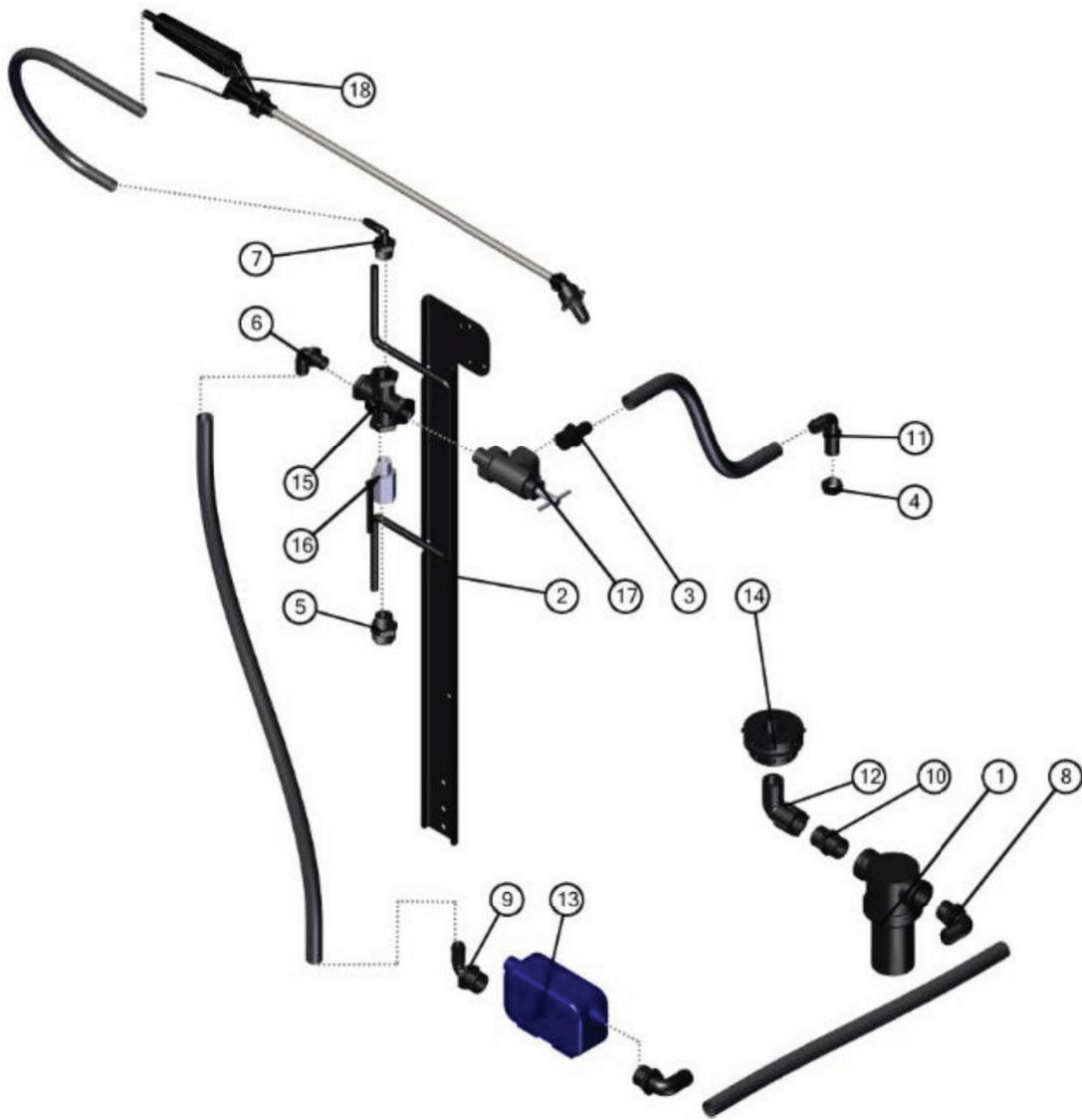
REF	PART NO	DESCRIPTION	QTY
1	34-140068	Manifold Assembly with Return	1
2	3A38	3/8 Barb to 3/8 Male Pipe Thread	1
3	EF2200	2.2 GPM Everflo Pump	1
4	33-103131	Washer - #10, Zinc	4
5	33-103127	Machine Screw - 10-24 x 1"	4

34-140068 - MANIFOLD ASSEMBLY WITH RETURN



REF	PART NO	DESCRIPTION	QTY
1	33-103153		1
2	3B34	Swivel Nut - 3/4" FGHT, Knurled	1
3	3C38	Flat Seat Hose Barb - 3/8" HB	1
4	3E3412	Adapter - MGHT x 1/2" MNPT, Poly	2
5	3EL1238	Elbow - 1/2-14 Male Pipe Thread to 3/8 Hose Barb	1
6	3M1238	Nipple - 1/2-14 Male NPT to 3/8-18 Male NPT	1
7	3NTL38-C	Elbow - NxTHd-11/16" MPS x 3/8" HB	1
8	B12	11/16 - 16 UN Nozzle Nut	1
9	GCR1214	Cross - 1/2" FNPT x 1/4" FNPT, Nylon	1
10	GHV-1-BLK	Valve - 3/4" FGHT x 3/4" MGHT	2
11	SGC-F	Snapper Hose Clamps, BLK	1
12	W406V	Washer 1" OD x 3/4" ID	2

34-140068 - MANIFOLD ASSEMBLY WITH RETURN



REF	PART NO	DESCRIPTION	QTY
1	11263	Strainer - 3/4" EPDM, 40M, Poly	1
2	32-100035	Sprayer Control Post	1
3	3A3412	Straight 3/4" MPT x 1/2" HB, Poly	1
4	3B12	Nozzle Nut - 11/16", Poly	1
5	3E3412	Adapter 3/4" MGHT x 1/2" MPT, Poly	1
6	3EL12	Elbow 1/2" MPT x 1/2" HB, Poly	1
7	3EL1238	Elbow 1/2" MPT x 3/8" HB, Poly	1
8	3EL34	Elbow 3/4" MPT x 3/4" HB, Poly	2
9	3EL3412	Elbow 3/4" MPT x 1/2" HB, Poly	1
10	3M34	Nipple 3/4" MPT x 3/4 MPT, Poly	1
11	3NTL12-C	Elbow NzThd-11/16 MPS x 1/2" HB	1
12	3SE34	Straight Elbow 3/4" MPT x 3/4" FPT	1
13	6600C	6 Roller Pump, Cast Iron	1
14	BHF34	Bulk Head Fitting	1
15	GCR1214-BN	Cross 1/2" FNPT x 1/4" FNPT, Nylon	1
16	MVL12FM	Ball Valve 1/2" FM, Lever	1
17	RV2066-05-58	Poly Valve w/Brass T-Handle	2
18	SG-4507F-38-RUB15-P	Spray Gun Assembly 3/8" x 15"	1



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