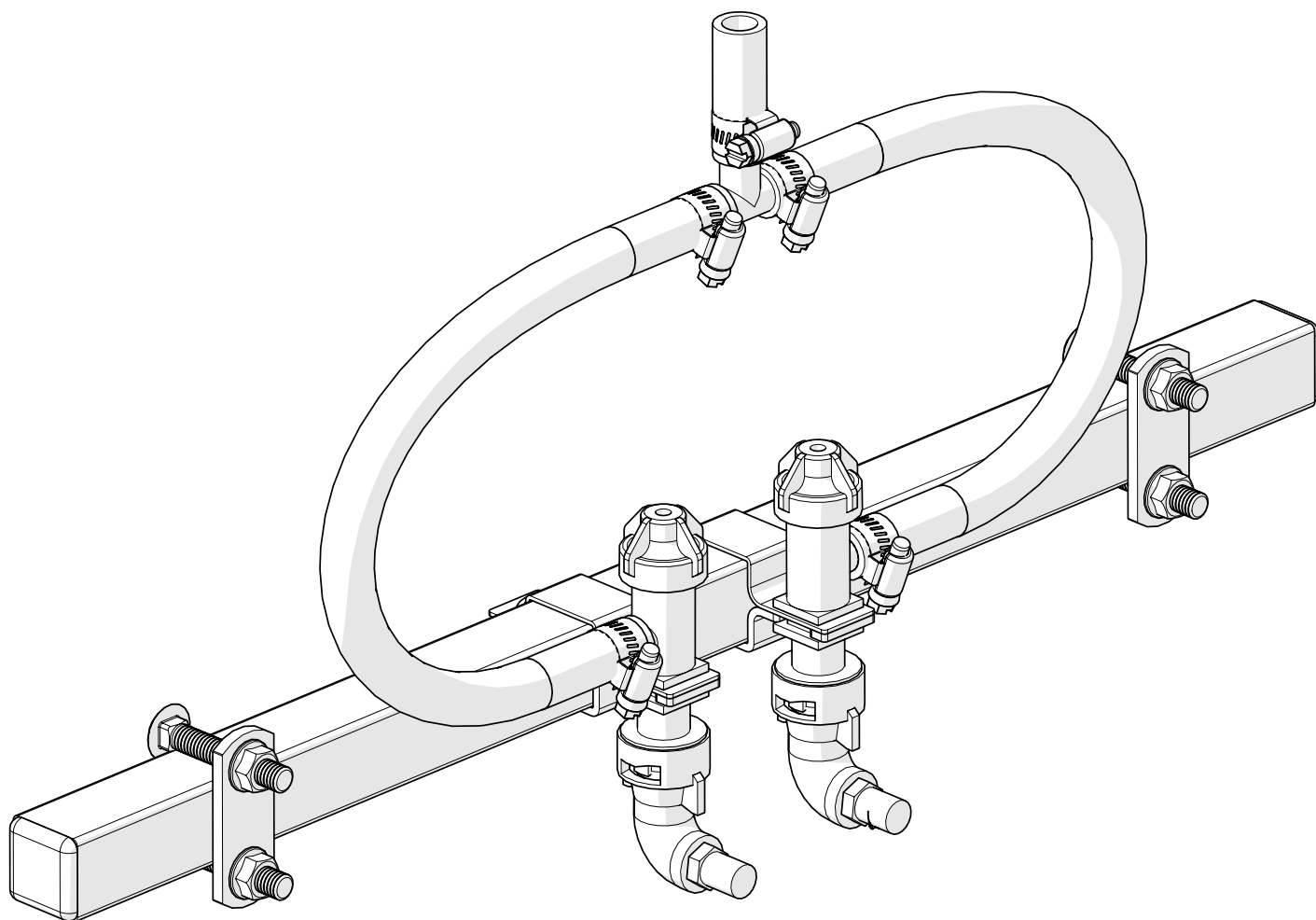




# Owner's Manual

## 20' Boomless Spray Kit Model ATV-BL20



Manufactured by PBZ LLC  
A Paul B Zimmerman Inc. Company  
[www.CropCareEquipment.com](http://www.CropCareEquipment.com)

**Form: ATV-BL20OM**  
*Revision A Rev. Date 01/17*



# Table Of Contents

Before You Begin.....	3	Maintenance Instructions .....	7
Safety Precautions.....	4	Routine Maintenance.....	7
Before Operation .....	4	Winterizing your Sprayer .....	8
During Operation .....	4	Breakdowns & Parts Lists .....	9
Following Operation .....	4	ATV-BL20 Breakdown.....	9
Assembly Instructions .....	5	ATV-BL20 Parts List.....	9
Calibrating the Sprayer.....	6	CropCare® Limited Warranty.....	10
Calculating the Speed.....	6	Ordering Parts .....	10
Determining Nozzle Size/Using Calibration Chart .....	6		

## Before You Begin



Please read and understand this manual and its instructions and warnings completely before operating.

- Be aware of all safety guidelines, warnings, and cautions including those of the tractor manufacturer.
- Read and understand the chemical manufacturer's labels, warnings, and instructions.
- Know and fulfill all state pesticide applicator license requirements.
- Familiarize yourself and other operators with the sprayer's components and how all parts are operated.

# Safety Precautions



## Before Operation

- Be aware of the location of all the safety and warning decals. Always replace any decals that are illegible or are missing.
- Carefully study and understand this owner's manual.
- Give the boom a visual inspection for any worn parts, loose bolts, or other visible problems, and make any necessary repairs. See the maintenance section.
- All maintenance should be performed with the sprayer unhooked from the tractor and clean of any harmful chemicals.
- Make sure the area is clear of any people or obstructions before using the sprayer.



## During Operation

- To avoid injury from chemical hazards, wear the proper protective clothing. Each chemical manufacturer's clothing requirements are listed under the "Personal Protective Equipment (PPE) section in the chemical's instructions
- Always be aware of bystanders, particularly children! Always look before moving the sprayer or engaging the pump. Bystanders should never be allowed near the sprayer during operation.
- Be aware of dangerous terrain such as holes, slopes, drop-offs, banks, rocks, and hidden hazards. Operate the tractor and sprayer up and down slopes, not across.
- Remember that accidents can even happen to seasoned operators. Always take your time and follow all safety instructions.

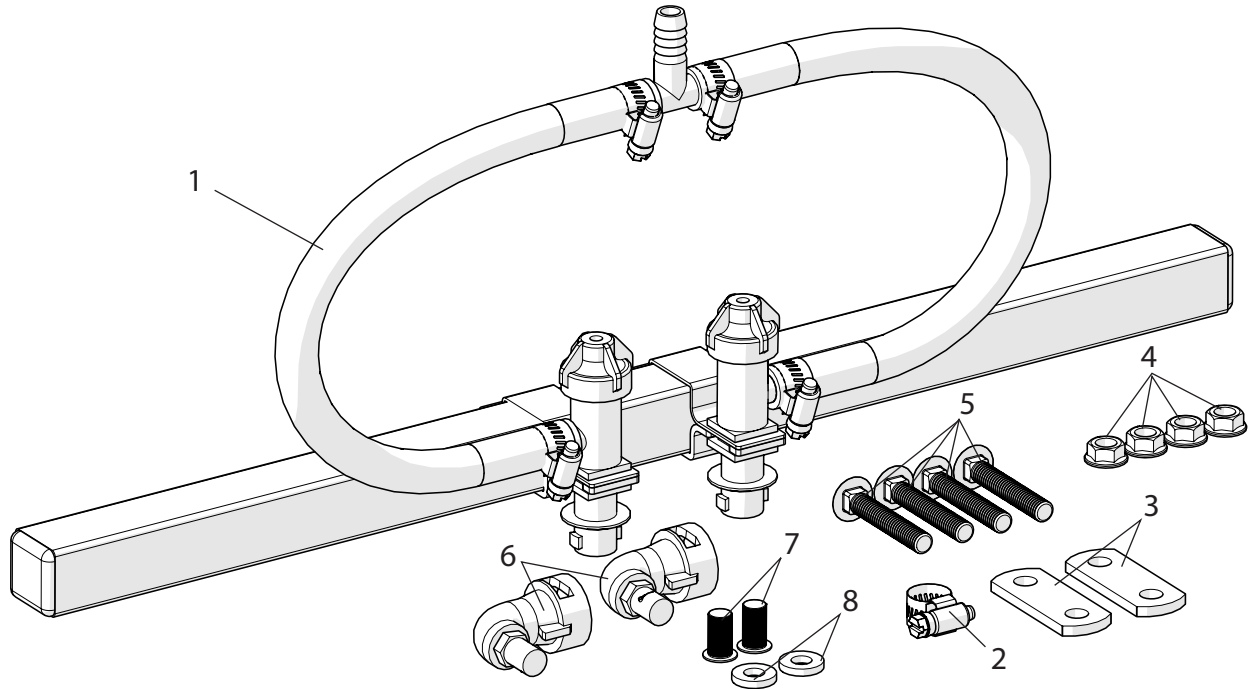


## Following Operation

- Completely rinse the entire system and all of its components of all chemical residue after every use.
- Dispose of rinsate in accordance with chemical application guidelines.

# Assembly Instructions

The model ATV-BL20 boom comes partially assembled and requires some assembly. Follow the step-by-step instructions to ensure proper assembly. Before assembling, ensure that you have all of the necessary components and parts.



Ref #	Qty.	Part Number	Description
1	1	-----	ATV-BL20 assembly
2	1	6806052	Hose Clamp, 3/8" - 7/8" SS
3	2	BF1210	Boom mounting clip, 12' boom, black
4	4	FN38	Nut, Flange 3/8-16
5	4	CB38*214G5	Bolt, Carriage 3/8-16 x 2-1/4" Gr 5
6	2	QJ4676-90-25-NYR	Adapter, Quickjet 90° 1/4" FPT
7	2	8079PP50	Strainer, Tip 50 Mesh Red Poly Body SS Screen
8	2	CP19438EPR	Gasket, for TeeJet caps, EPDM

## Assembly Instructions

1. Mount the boom tube to the sprayer using the boom mounting clips, four 3/8-16 x 2 1/4" carriage bolts, and 3/8-16 flange nuts as shown in Figure 1.
2. Connect the 1/2" tee to the boom supply line with a hose clamp as shown in Figure 1.
3. Use the parts list above to reference parts in Figure 1

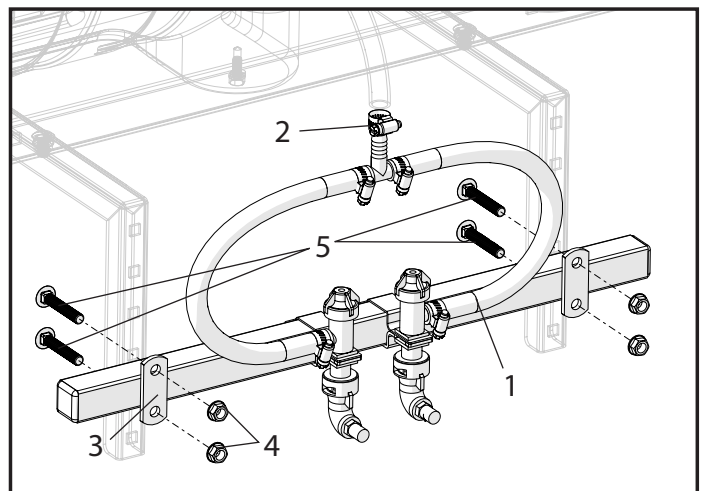


Figure 1

# Calibrating the Sprayer

Note: All calibration needs to be done with water only!

When spraying with the boom, the sprayer must be calibrated to ensure proper spray coverage. Before calibrating the sprayer, it is important to familiarize yourself with the operating instructions. The calibration process is simplified when broken down into the following steps:

1. Calculate the speed of the sprayer or equipment.
2. Determine the nozzle size and consult the calibration chart for the desired or instructed Gallons per Acre (GPA).

## 1. Calculating the Speed

It is important to determine what speed you will be traveling at while spraying. While some tractors may have speedometers, it is still recommended that speed always be calculated for accuracy purposes. To determine the speed follow these four steps:

1. Measure a 200 foot or 300 foot distance on a field or a surface similar to where you will be spraying.
2. Drive the equipment and sprayer (half-full is optimal) across the measured distance at a constant rate of speed. There should be no changes in speed while you are measuring the time. This should be a comfortable speed for spraying.
3. Have someone measure the amount of time (in seconds) it takes to travel the measured distance.
4. Your speed can be calculated by entering your data into the equation  $\text{Speed (mph)} = (\text{Distance (ft)} \times 60) \div (\text{Time (seconds)} \times 88)$ . You can also refer to the speed chart (Figure 5) to the right.

Note: It is helpful for future references to record the exact RPM and gear used to find your speed.

Speed in MPH	Time required (seconds) to travel a distance of:	
	200 feet	300 feet
1.0	136	205
1.5	91	136
2.0	68	102
2.5	55	82
3.0	45	68
3.5	39	58
4.0	34	51
4.5	30	45
5.0	27	41
5.5	25	37
6.0	23	34
6.5	21	31
7.0	19	29

Figure 5

## 2. Determining Nozzle Size

The spray nozzles on your sprayer are color-coded to match up with the calibration chart. After you have determined your nozzle size, you need to look at the calibration chart. Using your calculated speed, nozzle size, and desired gallons per acre (GPA), find the pressure (psi) necessary to achieve your GPA. It is important to note that lower pressure settings will result in less spray drift.

Example: Assume you have found your calculated speed to be 6 MPH, your spray height is set at 24", and you want to spray at 7 GPA. Upon looking at the chart, you find that you should set the sprayer's pressure at about 23 psi in order to apply 7 GPA.

# Calibrating the Sprayer

## 3. Calibration Chart

Tip Size	PSI	GPM of 2 nozzles	Spray Width (Feet)		Spray Height 24"				Spray Height 36"			
			24" Height	36" Height	Gallons Per Acre for two nozzles (GPA)				Gallons Per Acre for two nozzles (GPA)			
					4 MPH	6 MPH	8 MPH	10 MPH	4 MPH	6 MPH	8 MPH	10 MPH
1/4XP10-VP	20	1.42	17.0	20.0	10.3	6.9	5.2	4.1	8.8	5.9	4.4	3.5
	30	1.74	20.0	22.0	10.8	7.2	5.4	4.3	9.8	6.5	4.9	3.9
	40	2.00	22.0	25.0	11.3	7.5	5.6	4.5	9.9	6.6	5.0	4.0
	50	2.24	25.0	27.0	11.1	7.4	5.5	4.4	10.3	6.8	5.1	4.1
	60	2.44	26.0	29.0	11.6	7.7	5.8	4.6	10.4	6.9	5.2	4.2

Please note: Flow rates are calculated using water.

# Maintenance Instructions

## Routine Maintenance

It is very important to perform routine maintenance on your sprayer boom before and after each use. Good maintenance practices will help to guard against any breakdowns or accidents.

Note: Always wear the proper Personal Protective Equipment (PPE) when performing maintenance on your sprayer.

1. It is recommended to perform a visual and physical inspection for any worn parts, loose bolts, damaged hoses, or other visible problems. Make all necessary repairs before spraying. To order parts or receive technical help, please contact the original retailer.
2. After each use it is important to rinse the boom and all components by running water through the entire system.
3. Tip strainers should be taken out and rinsed on a regular basis. Tip strainers are the small screens located behind each spray nozzle on the boom (Figure 6).

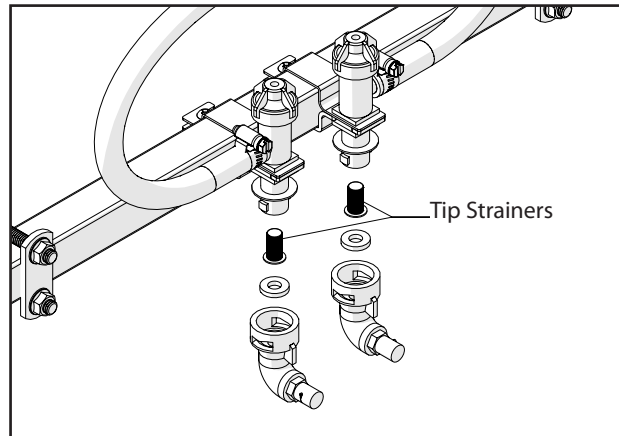


Figure 6

# Maintenance Instructions

## Winterizing your Sprayer

It is essential that you winterize your sprayer to avoid damage and to allow for optimal performance. The winterization process should be undertaken before freezing conditions and/or after each season of use. Failure to winterize your sprayer will void the manufacturer's warranty.

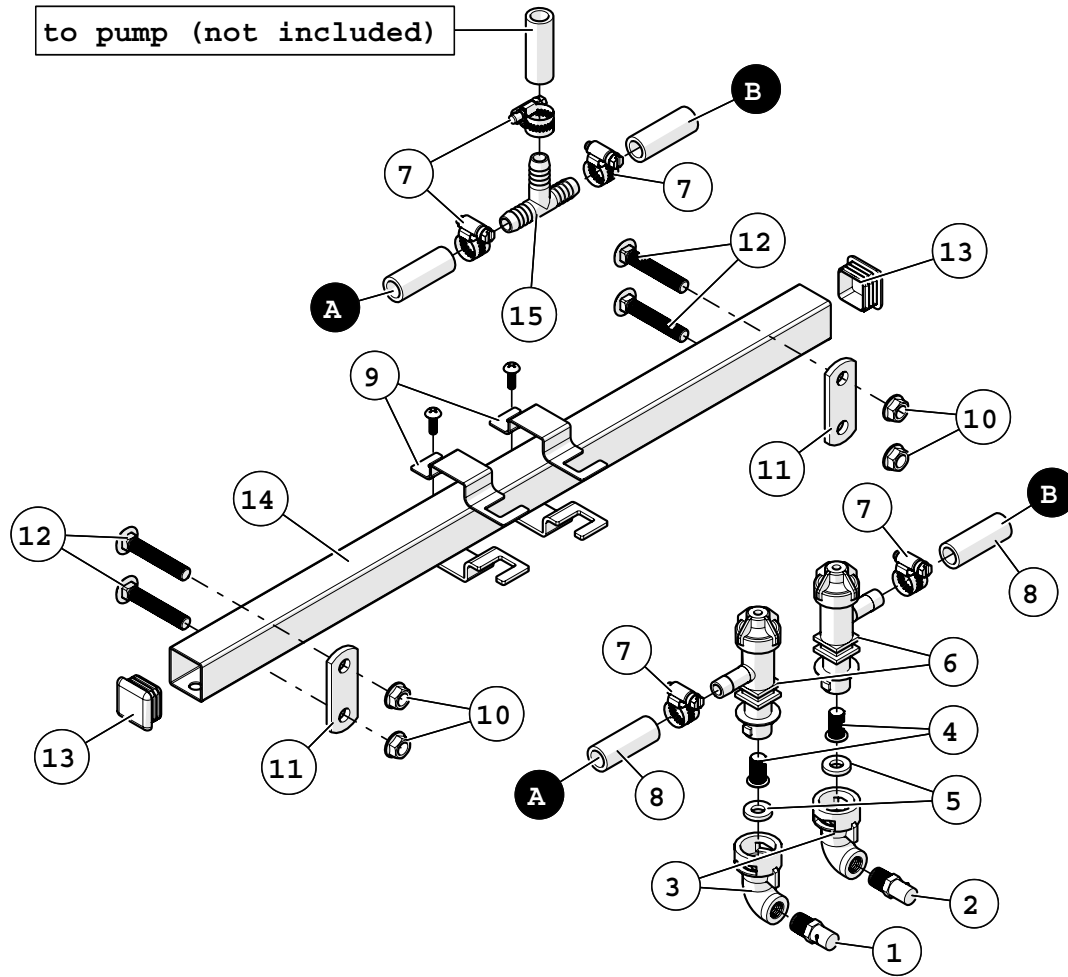
1. Verify that the tank is empty and rinsed out. Pour 2 gallons of RV nontoxic antifreeze into the tank. It is not recommended to use engine antifreeze. Engine antifreeze can be harmful to humans, animals, crops, and the environment.
2. Engage the pump and pump the antifreeze through the entire system. Ensure that the antifreeze has been pumped through the entire system.
3. Store the sprayer in a safe, dry location away from the elements and human and animal activity.
4. Before spraying in the spring, it is recommended to flush the sprayer with fresh water to cleanse it of the antifreeze and any other buildup.
5. Do a thorough inspection of all sprayer components before spraying.

Note: Do not, under any circumstances, run any petroleum based substance (such as diesel fuel) through the boom. This will cause damage to sprayer components and will void the manufacturer's warranty.



# Breakdowns & Parts Lists

## ATV-BL20 Breakdown & Parts List



Ref #	Qty	Part Number	Description
1	1	1/4XP10L-VP	XP BoomJet nozzle, left, poly
2	1	1/4XP10R-VP	XP BoomJet nozzle, right, poly
3	2	QJ4676-90-1/4-NYR	Quickjet adapter, 90 deg, 1/4" fpt
4	2	8079PP50	stainless nozzle screen, 50 mesh, red
5	2	CP19438EPR	seat washer, rubber
6	2	22251-311-500NYB	elbow body, 1/2"
7	5	6806052	hose clamp SS 3/8"-7/8"
8	2	1208	EPDM rubber hose, 1/2" (12" length)
9	2	QJ1118Q114	nozzle body clamp, 1 1/4" square
10	4	FN38	flange nut, 3/8-16
11	2	BF1210	Boom mounting clip
12	4	CB38*214G5	Carriage bolt, 3/8-16 x 2 1/4" grade 5
13	2	CC5520	poly cap, 1 1/4" square
14	1	T546	Boom tube, 1 1/4" square x 24"
15	1	T12	poly hose barb tee, 1/2"

# CropCare<sup>®</sup> Limited Warranty

## 20' Boomless Spray Kit: ATV-BL20

### Warranty Coverage

CropCare<sup>®</sup> hereby provides a Limited One (1) Year Warranty on Boomless Spray Kits, manufactured by CropCare<sup>®</sup>. Boomless Spray Kits manufactured by CropCare<sup>®</sup> are warrantied against any manufacturer's defects in any of the Boomless Spray Kit components in the 12 months following the original date of purchase.

Defective components will be repaired or replaced at the discretion of the manufacturer. It is the responsibility of the purchaser to return warranted components to the manufacturer. This warranty is limited to the repair or replacement of Boomless Spray Kit components only. CropCare<sup>®</sup> is not to be held liable for incidental or consequential damages of any kind. This warranty covers the purchaser of this Boomless Spray Kit and any other owners who own it during the one (1) year warranty period.

To retain the warranty, the Boomless Spray Kit must be operated and maintained as ascribed by its owner's manual. For warranty service, please have a copy of the purchase invoice available.

### Warranty Is Void if:

1. The Boomless Spray Kit has been subjected to, in the opinion of CropCare<sup>®</sup>, negligent handling, misuse, an accident or if the instructions in the owner's manual were not completely followed.
2. The Boomless Spray Kit's components have been altered in any manner or repairs have taken place with unapproved parts.
3. The Boomless Spray Kit and its components were subject to freezing or freezing conditions. The boom must have been winterized as per the maintenance instructions to retain the warranty.
4. A non-compatible chemical was used and/or if the Boomless Spray Kit operator failed to rinse all chemical residue out of the Boomless Spray Kit's components after use.
5. A petroleum-based, oil-based, or flammable product was used and caused damage to the pump, tank, hoses, or any other component.

### Getting Service

All CropCare<sup>®</sup> Sprayer Boom warranty claims must be made through the original retailer. All warranty claims must be submitted with an invoice or a proof of purchase that denotes the purchase date and place of purchase. If you have any questions or comments concerning this warranty, please contact the original retailer

### Ordering Parts

Please contact the original retailer to order replacement parts for your product.

Notes:

# ***CROPCARE***

Manufactured by PBZ LLC  
A Paul B Zimmerman Inc. Company  
[www.CropCareEquipment.com](http://www.CropCareEquipment.com)