

CROPCARE

Equipment Built For You

40 GALLON LIQUID APPLICATOR

WITH REMOTE PRESSURE CONTROL

Model BA40E-S

Owner's Manual



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A Paul B Zimmerman Inc. Company

PaulB LLC thanks you for choosing to purchase one of our liquid applicator models. We appreciate your business and want to personally fill all of your sprayer needs. We also desire to provide you with the technical support and needed parts that will allow you to continue operation without disruption. See the Contact Us section on page 17.

Table of Contents

Before You Begin.....	1
Safety Precautions.....	2
General Guidelines.....	2
Before Operation.....	2
During Operation.....	3
Pump Safety Precautions.....	3
Mounting the Applicator.....	4
Applicator Unit.....	4
Control Box.....	4
Pressure Gauge.....	5
Wiring Harness.....	5
Applicator Spray Nozzles.....	5
Calibrating the Applicator.....	6
Calibration Chart.....	8
Operating Instructions.....	8
Before Operation.....	8
Setting The Bypass Valve.....	9
During Operation.....	9
Following Operation.....	9
Maintenance Instructions.....	10
Routine Maintenance.....	10
Winterizing Your Applicator.....	10
Troubleshooting.....	11
Warranty.....	12
Applicator Breakdown.....	13
Parts List.....	14
Pump Breakdown.....	15
Accessories.....	16
Contact Us.....	17

Before You Begin

- ◆ **Please read and understand this manual and its instructions and warnings completely before operating the liquid applicator.**
- ◆ **Be aware of all safety guidelines, warnings, and cautions including those of any piece of equipment the liquid applicator may be mounted upon or used with accordingly.**
- ◆ **Read and understand the inoculant or chemical manufacturer's labels, warnings, and instructions.**

! Safety Precautions !

General Guidelines

Every year many unnecessary accidents occur due to improper equipment handling and a disregard for safety precautions. You, the operator, can avoid accidents by observing the precautions in this section.

- ◆ **NEVER MOUNT, FILL, OR SERVICE THE LIQUID APPLICATOR WHEN THE EQUIPMENT IS RUNNING.**

Always turn the equipment off, the tractor off, and unhook the piece of equipment before mounting, filling, or servicing.



Figure 1: Chemical Warning Decal(# DEMENT3980)

- ◆ The operator should be a responsible adult. **Do not allow persons to operate this liquid applicator until they have displayed a thorough understanding of applicator safety precautions and operational use!**

- ◆ Never attempt to operate this applicator when under the influence of alcohol or drugs.
- ◆ A chemical warning decal and an owner's manual warning decal are located on the applicator's tank. Be aware of their location. See Figure 1 and Figure 2. Always replace any warning decals that aren't legible or are missing.



Figure 2: Owner's Manual Decal(# DE39)

- ◆ If there is any portion of this manual that you do not fully understand, please contact PaulBSM.

Before Operation

- ◆ Carefully study and understand this owner's manual.
- ◆ **Read and follow the inoculant or chemical manufacturer's labels, warnings, and instructions!** A material safety data sheet (MSDS) should be provided by the chemical manufacturer.
- ◆ 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 instructions.**
- ◆ **DO NOT** mount the pressure gauge on the tractor or in a location where a leaking pressure gauge could endanger someone.

- ◆ Ensure that the polarity of the control box is correct. The wires to the plugs are color-coded to help you ensure you are connecting the correct plugs. Hooking the control box up incorrectly could cause the control box to not run correctly or at all.
- ◆ Never exceed the load rating of the piece of equipment that the liquid applicator is mounted on. The 40 gallon liquid applicator weighs around 380 lbs. with a full tank.
- ◆ Have all operators practice operating the applicator until all persons are completely capable of safe operation.
- ◆ **Give the applicator a visual inspection** for any worn parts, leaking hoses, or other visible problems, and make the necessary repairs. See the maintenance section (page 9).

During Operation

- ◆ **NEVER MOUNT, FILL, OR SERVICE THE LIQUID APPLICATOR WHEN THE EQUIPMENT IS RUNNING.** Always turn the equipment off, the tractor off, and unhook the piece of equipment before mounting, filling, or servicing.
- ◆ **Always be aware of bystanders, particularly children!**
- ◆ **No passengers** are allowed on the mounting equipment or the applicator at anytime.
- ◆ Never leave running equipment, including the liquid applicator, unattended!
- ◆ Remember that accidents can even happen to seasoned operators. Always take your time and follow all safety instructions.
- ◆ When you are finished using the applicator, always remember to rinse the tank and flush the pump of all harmful chemical residue. Store the applicator in an area protected from the elements. Do not permit children to play on or around the applicator.

Pump Safety Precautions

- ◆ Never pump flammable, explosive, petroleum-based, or any other non-compatible products such as gasoline, fuel oil, kerosene, etc. Such practices will void the manufacturer's warranty.
- ◆ **DO NOT** allow the pump to get wet or to be exposed to the elements. Allowing the pump to get wet or to be exposed to the elements voids the manufacturer's warranty.
- ◆ **Note: The pump may be run dry for limited periods without resulting in damage.**
- ◆ Never attempt to adjust the pressure of the pump. Any unapproved pump adjustment will void the manufacturer's warranty.
- ◆ Always disconnect the power to the pump when working on the pump. Failure to do this could result in electrical shock.

Mounting the Applicator

This liquid applicator is designed to be mounted on a baler, forage harvester, bagger, blower, or any other applicable piece of equipment. Mounting the liquid applicator correctly and securely will ensure consistent and safe operation.

Applicator Unit

1. Mount the liquid applicator on the given equipment in a location that can withstand the weight of the applicator with a full tank. The 40 gallon liquid applicator weighs around 380 lbs. with a full tank.
2. The chosen mounting location should also be easily accessible for filling the applicator's tank.
3. The location of the liquid applicator should not cause the liquid applicator to interfere with the operation of the given piece of equipment it is mounted on.
4. The applicator's tank is mounted on a steel powder-coated frame, which contains four pre-drilled holes. For optimal stability, mount the liquid applicator with bolts using the pre-drilled holes in the sprayer frame. See Figure 3 on page 4.

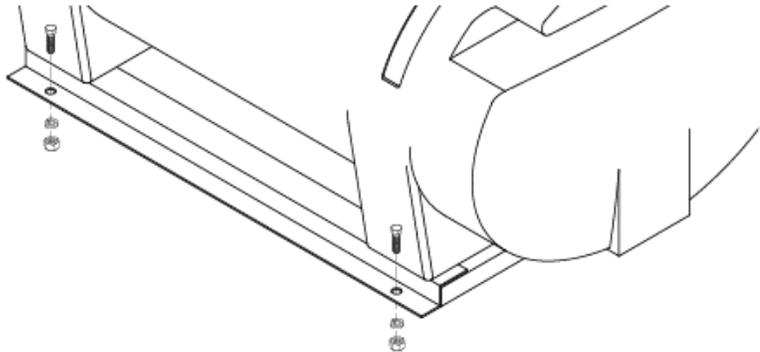


Figure 3: Applicator unit mounting

Note: If you are permanently mounting the sprayer in an outdoors location that isn't protected from the elements, it is important that you cover the pump to protect it.

Control Box

1. The control box must be assembled according to the included assembly and mounting instructions.
2. The control box should be mounted in a location that allows for convenient operation of the controls. In most cases the control box is mounted on the tractor where it can be easily accessed. Mount the control box frame in the desired location using the included bolts.

Pressure Gauge

1. The pressure gauge should be mounted in a location where it can be easily seen by the operator. The gauge **should not** be mounted in a location where a leaking gauge could endanger someone.
2. The recommended method of mounting is to mount the gauge to a piece of metal tubing on your piece of equipment. The gauge assembly has two pre-drilled holes that can be used with 1/4" bolts for optimal stability. See Figure 4 on page 5.
3. With the gauge mounted, you need to connect the 1/4" poly tubing to the Trueseal adapter on the applicator by inserting the tube into the adapter's inlet until it is firmly attached. Proceed to route the tubing to the Trueseal adapter on the gauge mount and connect it.

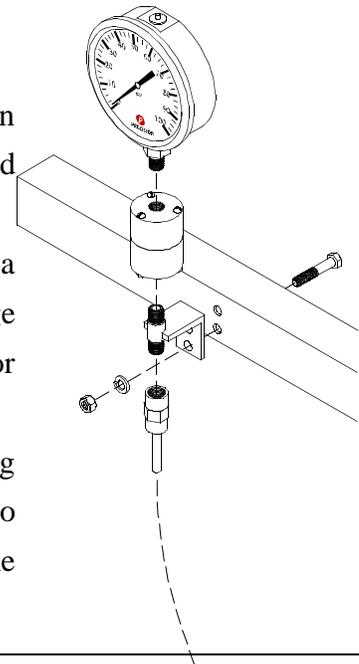


Figure 4: Pressure Gauge Mounting

Wiring Harness

1. The wiring harness (blue & orange) coming from the pump should be routed from the applicator to the control box.
2. Connect the pump wiring harness (blue & orange) to the correct plug (blue & orange) on the control box. The control box's wiring harnesses are color-coded for convenience.
3. The remaining control box plug needs to be connected to the power wiring harness (black & red). Route the power wiring harness to the tractor's battery or to an adequate power source with at least 10 amp capabilities.
4. Connect the red wire to a positive power source either at the tractor's battery terminal or at a power access point with at least 10 amp capability. The black wire needs to be connected to the negative terminal of the battery or to a good ground source.

Applicator Spray Nozzles

With the liquid applicator securely mounted, you now need to properly mount the spray nozzle(s) in the desired location. Mounting technique may vary with the piece of equipment being used.

1. Determine the optimal location for applying the liquid inoculant or other chemicals. Ensure that this location will provide complete coverage and safe operation.
2. Attach the vinyl spray hose to the discharge barb with an included hose clamp. Route the vinyl hose to the desired application location on the piece of equipment. Ensure that the hose will not interfere with the operation of the equipment.

3. Connect the vinyl hose to the nozzle body(s) with an included hose clamp. The spray nozzles, nozzle body caps, and tip strainers are all installed into the nozzle body. See Figure 5 on page 6 for a breakdown of the complete nozzle body.
4. The recommended technique for mounting the nozzle body(s) is on a piece of round or square tubing with a boom clamp. Your applicator kit includes two 1/2" round boom clamps. See the Accessories section on page 16 for ordering different size round or square boom clamps. See Figure 5 on page 6 for a diagram of how the spray nozzle bodies are mounted on tubing.

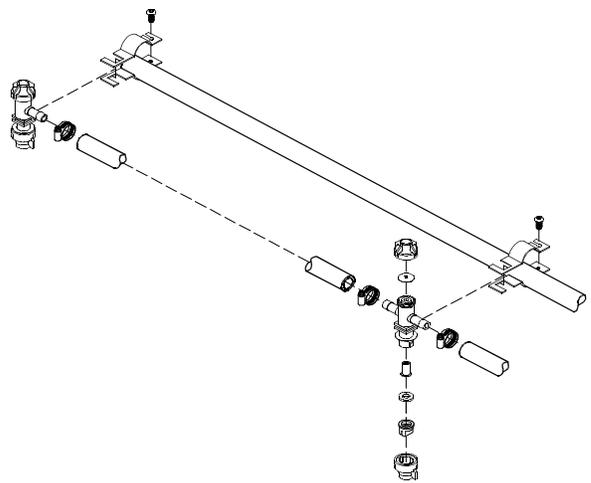


Figure 5: Nozzle Body Mounting

Note: If the desired mounting location lacks tubing for mounting, it may be possible to install a piece of tubing on your equipment for optimal mounting.

5. Depending on the size of the application area on the piece of equipment, you will need to use one or two spray nozzles. Begin by installing the nozzle body elbow and test to see if the spray pattern covers the entire application area. If two spray nozzle bodies are needed for complete coverage, install the nozzle body tee first and the nozzle body elbow secondly. See Figure 5 on page 6.

Note: If possible, it is recommended to use one large spray nozzle instead of two very small spray nozzles. Small spray nozzles are more likely to be hindered by spray drift.

Calibrating the Applicator

To ensure accurate and complete coverage, the liquid applicator must be calibrated to determine the correct spray nozzle size and pressure setting. The calibration process is simplified when broken up into the following three steps:

1. Determine the gallon per ton(gpt) recommendation of the inoculant/chemical manufacturer.
2. Determine the minute per ton(mpt) rating of the crop through the given piece of equipment.
3. Use the calibration formula to determine the necessary nozzle and pressure setting.

1. Determine the gallon per ton recommendation.

The inoculant/chemical manufacturer should provide instructions that detail how many gallons per ton(gpt) should be applied for various crops. This amount will likely vary depending on what crop you are applying the inoculant or chemical to.

<p><u>Definition of Terms:</u></p> <ul style="list-style-type: none">• gpt: gallons per ton• mpt: minutes per ton• gpm: gallons per minute• psi: pounds per square inch• Calibration Formula: $gpm = gpt / mpt$
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2. Determine the minute per ton(mpt) rating of the crop through your piece of equipment.

You now need to calculate the minute per ton(mpt) rating or simply the number of minutes it takes for one ton of crop to be processed by the piece of equipment you are using the liquid applicator on.

Example: Your baler can bale a 2.5 ton load in 25 minutes. The minute per ton rating would be 10 minutes per ton($25 \text{ min} / 2.5 \text{ ton} = 10 \text{ mpt}$)

3. Use the calibration formula to determine the optimal spray nozzle and pressure setting.

1. Determine the necessary gallons per minute(gpm) per nozzle. The calibration formula is $\text{gallons per minute(gpm)} = \text{gallon per ton(gpt)} / \text{minute per ton}$. Use the gallons per ton(gpt) and the minutes per ton(mpt) found in steps 1-2 to determine the gallons per minute using the formula.

Example: Assume the gpt recommendation is .25 gallons or inoculant per ton of silage and your blower processes a ton of silage every 2 minutes. Using the formula, you would find that you need a flow rate of .125 gpm ($.25 \text{ gpt} / 2 \text{ mpt}$) per nozzle.

<p>Note: If you are using two spray nozzles, you will need to divide the gallons per minute calculation by two. Example: If you have two nozzles and you calculated your gpm to be .20, you will actually need .10 gpm per spray nozzle.</p>
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2. Using the gallons per minute calculation, use the calibration chart on page 8 to determine correct spray nozzle size and pressure setting.

Example: Suppose you calculated your necessary gallons per minute to be .20, you should to use the yellow XR11002VP spray nozzle and set the pump's pressure at 40 psi using the pressure knob on the control box.

<p>Note: Due to normal wear, Teejet® recommends that you replace your sprayer nozzles after every spraying season. Nozzle replacement will ensure accurate spraying performance.</p>

Calibration Chart

Nozzle Size	Gallons per Minute(gpm) of One Nozzle at Given PSI Rating					
	15	20	30	40	50	60
TP650033SS	n/a	n/a	.29	.03	.04	.04
TP650050SS	n/a	n/a	.04	.05	.06	.06
XR8001VS*	.06	.07	.09	.10	.11	.12
XR110015VP*	.09	.11	.13	.15	.17	.18
XR11002VP*	.12	.14	.17	.20	.22	.24
XR11003VP*	.18	.21	.26	.30	.34	.37
XR11004VP	.24	.28	.35	.40	.45	.49
XR11005VP	.31	.35	.43	.50	.56	.61
XR11006VP	.37	.42	.52	.60	.67	.73
XR11008VP	.49	.57	.69	.80	.89	.98
XR11010SS	.61	.71	.87	1.00	1.12	1.22

*Denotes the spray nozzles included in the applicator kit. Additional nozzles are available, see the Contact Us section on page 17 for ordering information.

Operating Instructions

Before operating your liquid applicator, it is important that you read this entire manual and know all safety precautions. Always take your time and be alert when operating your applicator. This will allow you to safely operate the unit without accident or interruption.

Before Operation:

1. Before operation it is important to give the applicator unit a thorough inspection, covering the hoses, wiring harness, and other applicator components. Ensure that the suction strainer and the tank are rinsed out.
2. Calibrate the liquid applicator for the given conditions following the directions listed in the Calibrating section on page 6. Install the correct spray nozzle(s) on the applicator.
3. Before using any inoculant or chemical ensure that it isn't a petroleum-based product or a non-compatible chemical for the pump. Using petroleum-based products or non-compatible chemicals voids the manufacturer's warranty. If you are unsure of the acceptableness of a chemical or substance, contact PaulBSM.
4. Connect the correct plugs on the control box and connect the power wiring harness to an approved 12 volt power source as described in the Mounting Section on page 4.

Setting The Bypass Valve:

The bypass valve is a small gray inline valve that can be set to bypass some liquid back into the tank. This is important if the spray nozzles are smaller than XR11002. If the valve is not set properly, you will not get the full range of pressure adjustment with the control box. After the valve is set, it should not need to be changed unless another size spray nozzle is installed. To set the bypass valve correctly, use the following procedure.

1. Put several gallons of water in the tank and prepare the applicator to spray with the nozzles chosen when the applicator was calibrated.
2. Open the bypass valve completely. The handle should be parallel to the valve.
3. Start the pump and then turn the control box knob to the highest setting. The pump should be running full speed.
4. Slowly close the bypass valve until the pressure on the gauge reaches 55-60 p.s.i.. If the the pump starts to cycle, open the bypass valve slightly to lower the pressure.

During Operation

1. Fill the applicator tank with the correct amount of water and inoculant as instructed by the manufacturer of the inoculant being used.
2. Turn on the pump using the on-off switch on the control box and set the pressure by turning the pressure knob on the control box. The pressure should be set to the optimal rate found when you calibrated the liquid applicator. The current pressure rate can be seen on the pressure gauge
3. When you are finished using the applicator, turn the control switch to off. If the applicator's tank becomes empty, remember to turn the control switch to off.

Following Operation:

1. Thoroughly rinsing the applicator of any chemical residue is an important activity. It is recommended to fill the tank with fresh water and engage the pump until the system is entirely free of chemical residue. It is important not to rinse the applicator in an area where humans, animals, or sensitive plants could come in contact with chemical residue.
2. Store the applicator in a location where it will be away from human or animal activity. Do not allow children to play on or near the applicator.

Maintenance Instructions

Routine Maintenance

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

1. It is recommended to perform a visual and physical inspection for any worn parts, damaged hoses, or other visible problems. Make all necessary repairs before operation. See the Contact Us section on page 17 for parts ordering instructions.
2. **After each use it is important to rinse the pump** and all components by running water through the system. Fill the tank with a sufficient amount of fresh water and engage the pump. Rinsing the pump with fresh water will greatly improve the life of the pump!
3. Do not allow the pump or the control box to get wet or to be exposed to the elements. Contact with liquids could cause damage to both the pump and the control box and voids the manufacturer's warranty.
4. The suction strainer should be taken out and rinsed regularly.
5. Always follow all pump safety precautions and warnings (page 3). Following these guidelines will help to ensure many years of smooth and trouble-free pumping.

Winterizing Your Applicator

To avoid damage from freezing and corrosion, it is important to winterize your applicator before temperatures grow too cold. Failure to winterize your applicator will void the manufacturer's warranty.

1. Verify that the tank is empty and rinsed out. Dump a ½ gallon of RV nontoxic antifreeze into the tank. **It is not recommended to use standard Antifreeze. Standard antifreeze can be harmful to humans, animals, crops, and the environment.**
2. Engage the pump for several minutes. Ensure that the antifreeze has been pumped through the entire system.
3. Store the applicator in a dry location away from the elements.
4. Before operation in the spring it is recommended to flush the applicator with fresh water to cleanse it of the antifreeze and any other buildup. It would also be beneficial to do a thorough inspection of all the applicator's components before operation.

Trouble Shooting

During the many years you will use your liquid applicator, it is possible that you will encounter minor problems that can be easily fixed. If you are unable to fix the problem, please contact our trained sprayer technicians for technical advice or to have one of our technicians repair your liquid applicator. See the Contact Us section on page 17 for ordering parts and contact information.

<i>Problems/Symptoms</i>	<i>Possible Causes</i>	<i>Solutions</i>
Low Rate of Flow	Suction strainer is partially clogged	Remove the suction strainer and rinse.
	Tip strainer is partially clogged	Rinse or replace the tip strainer (ref# 45)
	Pump valves are damaged/bad	Replace the valves(ref# 4) or See PaulB SM for repairs.
	Low voltage	Use a power source with at least 10 amps and 12 volts.
Pump Doesn't Prime	Suction line is clogged	Inspect the suction line for debris.
	Suction strainer is clogged	Remove the suction strainer and rinse.
	Pump damaged from chemicals that weren't rinsed out properly	See PaulB SM for service and pump repairs.
Pump Doesn't Run	Wiring harness fuse is blown	Replace the fuse on wiring harness (ref# 19).
	Incorrect voltage	Ensure you are using a 10 amp, 12 volt power source.
	Pump pressure switch is malfunctioning	Replace the pressure switch(ref# 1) or see PaulB SM for repair.
No Spray Flow	Spray nozzle(s) clogged	Remove the spray nozzle(s) and rinse it out.
	Suction strainer is clogged	Remove the suction strainer and rinse.
	Tip strainer is clogged	Rinse or replace the tip strainer(ref# 47)
Control Box Doesn't Work	Polarity is incorrect	Hook the correct plugs together.
	Inadequate power source.	Use a power source with sufficient voltage.
	Fuse is blown	Change the fuse (ref# 19)
	Control box is damaged/faulty	Replace control box(ref # 20) or see PaulB SM for service.
Pressure Gauge Doesn't Work	Tubing leading to gauge damaged	Replace the tubing(ref # 31) before operation.
	Gauge is damaged/faulty	Replace the gauge(ref# 38) or see PaulB SM for repairs

PaulB LLC Limited Warranty

40 Gallon Liquid Applicator

Model: BA40E-S

Warranty Coverage

PaulBSM. hereby provides a **Limited One (1) Year Warranty** on 40 gallon liquid applicators, model BA40E-S, manufactured by PaulBSM from the date of original purchase. Liquid applicators built by PaulBSM are warrantied against any manufacturer's defects that may occur to any of the applicator's components in the 12 months following the original date of purchase. This warranty covers the purchaser of this liquid applicator and any other owners who own it during the one year warranty period. To retain the warranty, the liquid applicator must be operated and maintained as ascribed by its owner's manual.

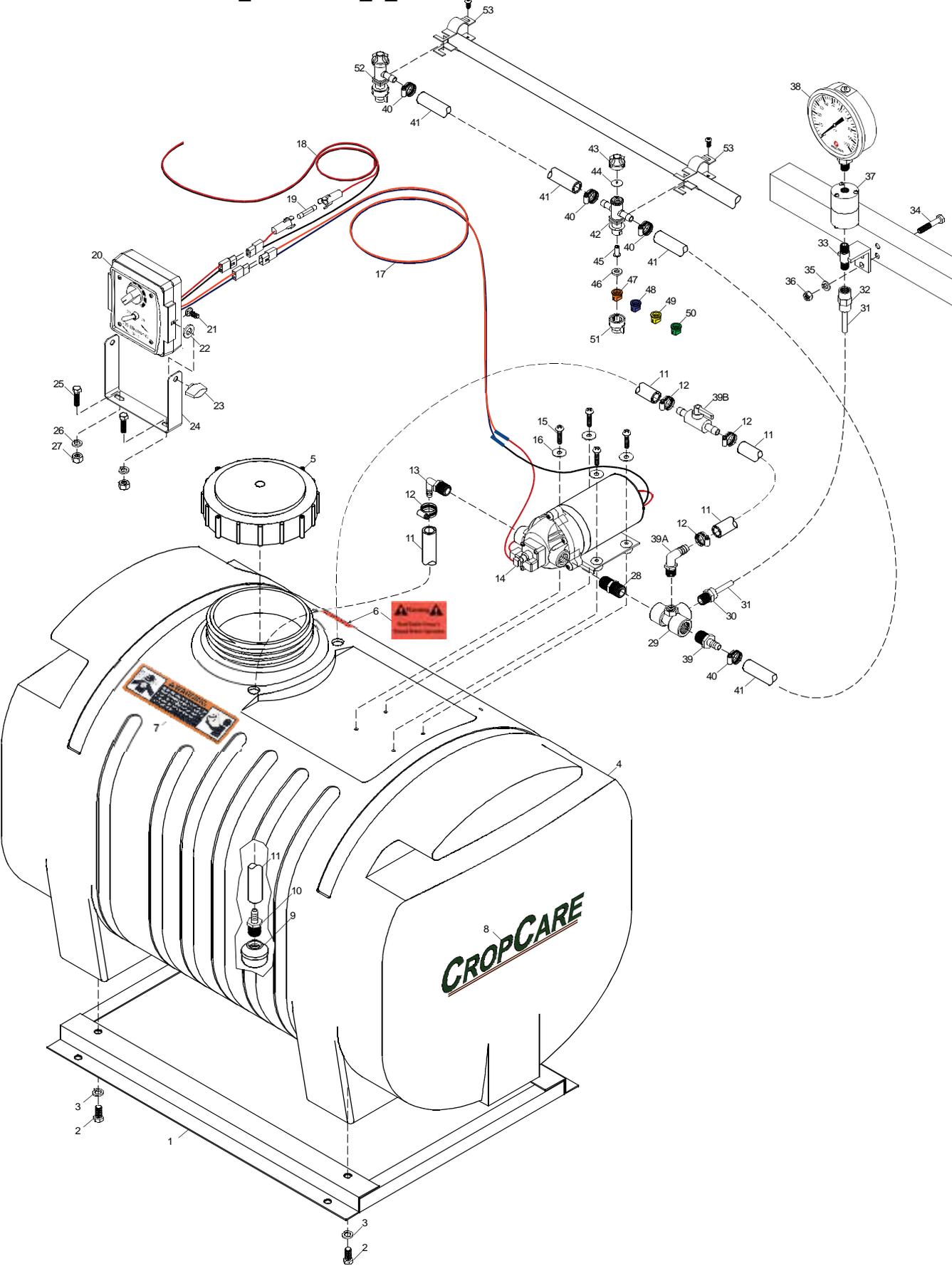
Warranty is void if:

1. The liquid applicator has been subjected to, in the opinion of PaulBSM, negligent handling, misuse, an accident or if the instructions in the owner's manual were not completely followed.
2. The liquid applicator's components have been altered in any manner or repairs have taken place with unapproved parts. Alterations include adjusting the pressure setting of the pump.
3. The liquid applicator and its components were subject to freezing or freezing conditions. The liquid applicator must have been winterized as per the maintenance instructions to retain this warranty.
4. The liquid applicator was powered by a power source other than a 10 amp, 12 volt DC power source.
5. A non-compatible(including petroleum-based and flammable liquids) chemical was used and/or if the applicator operator failed to rinse all chemical residue out of the applicator's components after use.
6. The control box and/or pump were allowed to get wet or were unprotected from the elements.

Getting Service

All liquid applicator warranty claims must be made through PaulBSM. All warranty claims must be submitted with an invoice or a proof of purchase that denotes the purchase date and place. If you have any questions or comments concerning this warranty, please contact PaulBSM.

Liquid Applicator Breakdown



Applicator Unit Parts List

<i>Ref #</i>	<i>Qty.</i>	<i>Part Number</i>	<i>Description</i>
1	1	T233	25 gallon tank frame, powder-coated
2	4	H5C516*34	Hex cap screw, 5/16" x 3/4", grade 5
3	4	LW516	Lock washer, 5/16"
4	1	10957	25 gallon tank, lawn & garden, yellow (includes ref# 5)
5	1	60322*	Tank lid, poly, black
6	1	DE39	Owner's manual warning decal
7	1	DEMT3980	Chemical warning decal
8	1	DE46	Crop Care logo decal
9	1	10416D	Suction strainer, 3/8" fpt, 40 mesh
10	1	3A3838	Hose adapter, 3/8" mpt x 3/8" barb, poly
11	N/A	6106	Reinforced vinyl tubing, 3/8", 250 psi
12	4	62604	Hose clamp, 1/4" - 5/8", stainless steel
13	1	3EL3838	Hose adapter elbow, 3/8" barb x 3/8" mpt
14	1	8000-443-236	SHURflo® pump, 1.8 gpm, 12 volt
15	4	MR1024*1S	Machine screw, 10-24" x 1", stainless steel, round
16	4	FW14S	Flat washer, 1/4", stainless steel
17	1	10-30	Output wiring harness, ESC control, 30', orange-blue
18	1	10-8-IN	Input wiring harness w/ fuse, 8', black-red (includes ref# 19)
19	1	AGC-10*	Buss fuse, 10 amp
20	1	JDS-10	JDS electronic control, 10 amp (includes ref# 21-27)
21	2	CB14*34*	Carriage bolt, 1/4" x 3/4"
22	2	CP19438EPR*	Rubber washer
23	2	KB3085*	Knob, 1/4", black, poly
24	1	(13181*)*	Electronic control mounting bracket
25	2	H5C14*1*	Hex cap screw, 1/4" x 1", grade 5
26	2	LW14*	Lock washer, 1/4"
27	2	NC14*	Nut, coarse thread, 1/4"
28	1	8M38	Nipple, 3/8" mpt, poly, schedule 80
29	1	8TT38	Tee, 3/8" fpt, poly, schedule 80
30	1	A4MC6	Trueseal adapter, 3/8" mpt x 1/4" tube
31	15'	1925	Tubing, 1/4", poly
32	1	A4FC4	Trueseal adapter, 1/4" fpt x 1/4" tube
33	1	T533	Gauge mount nipple, 1/4" mpt
34	2	H5C14-length	Hex cap screw, 1/4" x length (sold separately)
35	2	LW14	Lock washer, 1/4" (sold separately)
36	2	NC14	Coarse nut, 1/4" (sold separately)
37	1	BAAF	Gauge isolator, 1/4" fpt
38	1	GG1004	Pressure gauge, 4" display, 1/4" mpt, 100 psi
39	1	3A3838	Hose adapter, 3/8" mpt x 3/8" barb, poly
39A	1	3EL1438	Hose adapter elbow, 1/4" mpt x 3/8" hose barb
39B	1	9432	3/8" poly valve

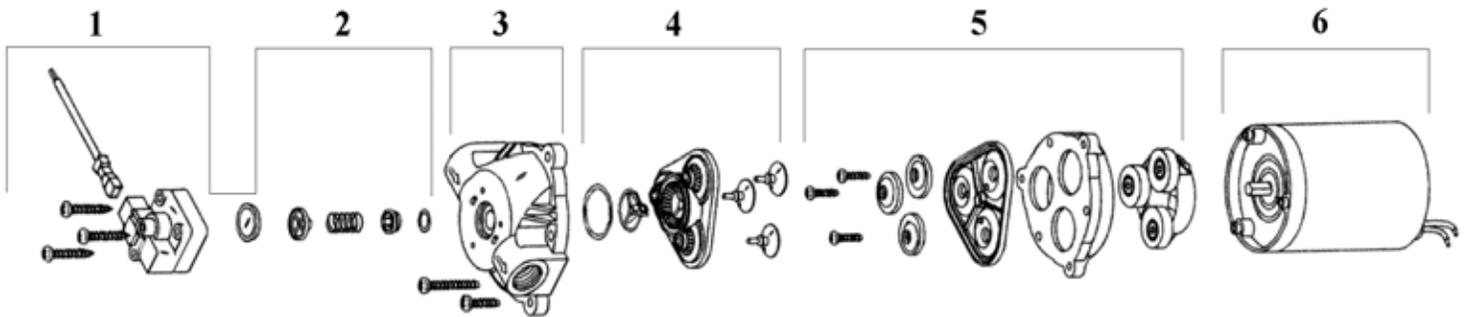
Application Kit Parts List: Part # BAKIT

Ref #	Qty.	Part Number	Description
40	4	62604	Hose clamp, 1/4"- 5/8", stainless steel
41	15'	6106	Reinforced vinyl tubing, 3/8", 250 psi
42	1	22252312375NYB	Nozzle body tee, 3/8" (includes ref# 43, 44)
43	1	2195010NYB*	Chemsaver end cap assembly
44	1	CP21953EPR*	EPDM rubber diaphragm
45	2	8079PP100	Tip strainer, 100 mesh, stainless steel, green
46	2	CP19438EPR	Seat washer, rubber
47	2	XR8001VS	Teejet [®] spray nozzle, stainless steel, 80 degrees, 1.0, orange
48	2	XR110015VP	Teejet [®] spray nozzle, polymer, 110 degrees, 1.5, blue
49	2	XR11002VP	Teejet [®] spray nozzle, polymer, 110 degrees, 2.0, yellow
50	2	XR11003VP	Teejet [®] spray nozzle, polymer, 110 degrees, 3.0, green
51	2	CP256076NY	Nozzle body cap, round, yellow
52	1	22251311375NYB	Nozzle body elbow, 3/8" (components same as tee)
53	2	QJ11112**	Boom clamp, 1/2", round

* Part is included in a complete assembly.

** Alternative boom clamps for mounting are available in the Accessories section on page 16.

SHURflo[®] Pump Breakdown Part # 8000-443-236



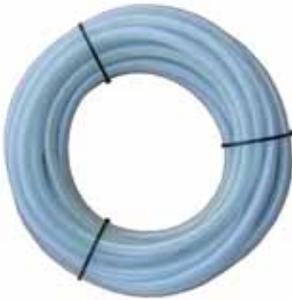
Ref #	Qty.	Part Number	Description
1	1	9437505	Switch kit, Viton, 60 psi
2	1	9437405	Check valve kit
3	1	9437900	Upper housing kit
4	1	9439006	Valve kit, EPDM
5	1	9438532	Diaphragm & drive kit, Santoprene
6	1	1111100	SHURflo [®] motor, 12 volt

Accessories

There are many beneficial accessories that can complement your liquid applicator and help you to optimize your operation. If you need parts or accessories that aren't listed in this owner's manual, please contact us and we will attempt to fill all of your needs. See the Contact Us section on page 17 for information on ordering and shipping.

3/8" Vinyl Reinforced Hose

Part Number: 6106



Additional hose comes in handy for reaching those hard to get to places. This durable hose can be cut to length and is available in additional sizes.

1", 1 1/4", 1 1/2" Square Boom Clamps

Part Number: QJ111SQ-size



Are you mounting your spray nozzle bodies on a square piece of tubing? Try our durable boom clamps which are available in various sizes.

1/2", 3/4", 1", 1 1/4" Round Boom Clamps

Part Number: QJ111-size



Durable boom clamps are an effective tool for mounting your spray nozzle bodies. These boom clamps are available in various sizes.

Teejet® Spray Nozzles

Part Numbers: See Calibration Chart



Whether you need additional spray nozzles or need to replace existing nozzles, Teejet® spray nozzles are a great choice. These accurate and high-performance nozzles are available in a multitude of sizes.

Contact Us

We desire to give you continuing service in the best manner possible. This includes listening to your comments, suggestions, and problems. We will do our best to answer all questions thoroughly and in a timely manner. We have trained sprayer technicians who are more than willing to listen to any questions or problems and help you to find a feasible solution.

Ordering Parts

We have a fully-stocked parts department that will be able to meet all of your parts needs. Our trained salespersons will ensure that all purchases are processed smoothly and shipped in a timely manner. Our hardware store also has a plumbing, electrical, automotive, paint, lawn & garden, and a power tool department. We are set up to ship our products via UPS and would be glad to work with you on the best shipping solution. If you desperately need a part, we are able ship UPS Next Day Air for many locations.

Note: When ordering parts, please provide our sales staff with the correct part number and description listed on the parts list. **To directly reach our parts department, please call (717) 738-7355 ext 2000.**

CROPCARETM

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Corporate Office (717) 738-7350

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