



SC Applicator Cleaning Procedure

Maintaining the cleanliness of your SC Applicator is crucial to ensure its long-lasting performance. Properly cleaning the unit at the end of each treating season will help prevent premature component failure when the machine is stored for an extended period. This chapter will guide you through the necessary steps to effectively clean your SC Applicator, ensuring its optimal functioning and durability.

The SC Pro consists of three distinct parts that require cleaning: the atomizer, SMX conveyor, and the liquid stands/plumbing. Each of these sections plays a vital role in the applicator's operation. It is essential to follow the step-by-step instructions provided below to clean each component thoroughly, maintaining the overall performance and efficiency of your SC Applicator.

****Before proceeding, it is important to follow proper containment and Personal Protective Equipment (PPE) use when handling any seed treatment that may have harmful effects. Refer to the product's Material Safety Data Sheet (MSDS) for more details on proper containment and PPE requirements. Ensuring your safety and adhering to these guidelines is paramount during the cleaning process. ****

Liquid Stand

The liquid stand consists of a liquid tank or keg couplers (if drawing directly from a keg), peristaltic pump, flow meter or loss-in-weight scale, calibration tube, plumbing lines, and multiple ball valves. Each liquid stand and set of components will need to be flushed and cleaned by following these steps.

- 1) Remove all leftover treatment / product from the poly tank.
 - a. To remove this product from the tank, disconnect any of the liquid lines on the liquid stand in a convenient spot (often this could be the line going from the ball valve on the right side of the pump stand to the bottom of the calibration tube), and place the disconnected line in a containment. Turn the pump on in forward to pump all the product out of the tank into the containment.
 - b. Refer to either the AutoTreat or BasicTreat operators manual for more instructions on how to operate the pump.
- 2) Add water and Simple Green to the tank (refer to Simple Green container for Simple Green to water dilution ratio) and agitate the water and simple green together by running the tank agitator for 30-60 minutes.
 - a. If using a high speed forward/reverse high speed agitation mixer assembly, run this cycle 5-6 times.
- 3) Set the calibrate / treater ball valve on the right side of the pump stand to **CALIBRATE** and turn the 3-way ball-valve under the calibration tube to **RECIRCULATE**. Turn the pump on to recirculate the Simple Green and water through all the lines on the pump stand. Allow the pump to run in recirculate for 5-10 minutes.



4) Once finished recirculating the Simple Green and water solution, turn the 3-way ball valve under the calibration tube to **CALIBRATE** and fill the calibration tube all the way to the top.



5) Once the calibration tube is full, turn the pump off and drain the calibration tube by setting the 3-way ball valve under the calibration tube to **DRAIN**.



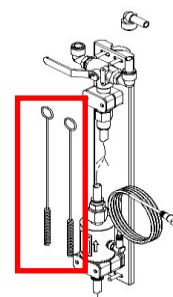
6) Repeat the process of filling and draining the calibration tube, steps 4-5, a few times.

7) With the pump off, disassemble the calibration tube by removing the wing nuts or nylock nuts on top of the tube, and slide the top calibration tube housing up and off of the threaded rods. The calibration tube can then be lifted out of the lower housing. The calibration tube, upper and lower housings, and seals should be cleaned with Simple Green or mild detergent and water.



8) Reassemble the calibration tube, being careful not to overtighten the wing nuts or nylock nuts on the top of the calibration tube assembly. Additionally, ensure that the seals on the bottom and top of the calibration tube housings are seated in place.

9) Detach the tubing going into the bottom end of the flow meter, dip the bristle end of the provided flow meter brush in a bucket containing Simple Green and water solution, and clean the flow meter by sliding the provided flow meter brush through the flow meter several times.



10) Do not drain the Simple Green and water from the poly tank. This will be used for the next step, which is flushing the lines to the atomizer.

11) Repeat for each liquid stand that is part of the system.

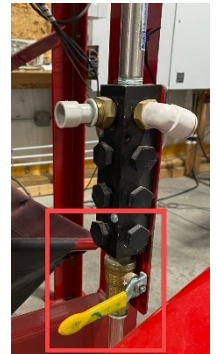
Plumbing to Atomizer

The liquid lines from each liquid stand should be flushed to remove any remaining treatment or product, as well as the atomizer components. Follow these steps to flush / clean the lines and components at the atomizer.

- 1) Place the drain hose on the bottom of the liquid manifold at the atomizer into a containment bucket and then open the ball valve on the bottom of the liquid manifold. This will allow any product that is in the manifold to drain out the bottom of the manifold.



- 2) Set the 3-way ball valve under the calibration tube to **RECIRCULATE** and set the calibrate / treat ball valve on the right side of the pump stand to **TREATER** and turn one of the pumps on at slow speed (10-20%). Ensure that the liquid manifold drain line stays placed in the containment bucket while the pump is running. Once the line has been thoroughly flushed with the Simple Green and water, turn the pump off.
 - a. Repeat step 2 for each liquid stand.
- 3) Close the drain ball valve under the liquid manifold.



- 4) Turn the atomizer disconnect switch off on the atomizer to prevent accidental engagement of the atomizer disk. Follow proper Lock Out Tag Out (LOTO) procedures to ensure that the atomizer does not accidentally get engaged.



- 5) Drop down the atomizer and slide the atomizer back on the tray (see next section for more details on removing the atomizer slide out). Place a 5-gallon bucket under the atomizer disk so that any product that flows over the atomizer disk will flow completely into the 5-gallon bucket.

- 6) Set the 3-way ball valve under the calibration tube to **RECIRCULATE** and set the calibrate / treat ball valve on the right side of the pump stand to **TREAT** and turn on all the pump stands at the same time at a slow speed of 10-20%. As the liquid flows through the liquid manifold this will flush the static mixer as well as the plumbing inside of the atomizer section with the Simple Green and water.
 - a. Run the pumps until you are satisfied that all the treatment / product has been flushed. Ensure that the 5-gallon containment bucket does not overflow. If needed, stop the pumps, empty the 5-gallon bucket into a proper containment and then continue the process.
 - b. Ensure that liquid is flowing freely out of all four ports on the liquid distribution plate (see pg. 27 of the SC Pro Applicator Owner / Operator's Manual for more details on this liquid distribution section).
- 7) Any remaining Simple Green and water can be drained from the poly tank and disposed of by discharging into proper containment.
- 8) If the system is stored in an unheated environment when not in use, RV Antifreeze, or freeze rated windshield washer fluid should be pumped through the system to avoid freezing.

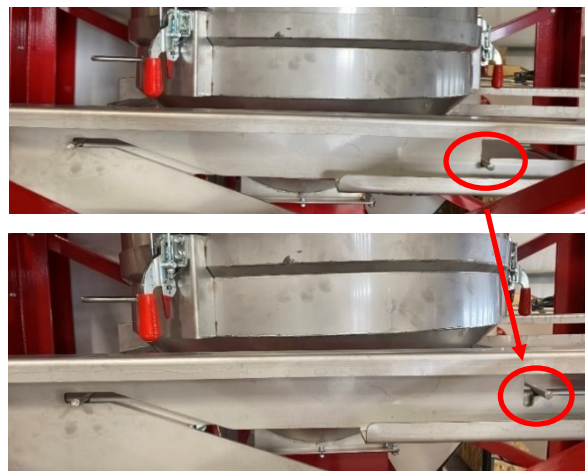


Atomizer

The atomizer chute can be dropped down and slid out for easy access to cleaning both the atomizing area, as well as the atomizer chute. **To avoid damage to the electric atomizer motor, a power washer should not be used to clean the atomizer section (section that does not slide back on the rails).** The following steps can be taken to access and clean the atomizer section. A Simple Green to water mixture (refer to Simple Green container for Simple Green to water dilution ratio) can be used as a cleaning solution. Be sure to follow proper PPE and containment steps to dispose of any treatment or chemical buildup.

To drop the atomizing chute down, follow the steps below.

- 1) Turn off the atomizer disconnect switch on the side of the atomizer frame. Follow proper LOTO procedures to ensure that the atomizer does not accidentally get engaged.
- 2) Lift tray up and out so that the front pegs of the tray are not resting in the travel / storage slot on the rails. This peg and slot are shown in the images on the right.



- 3) Unlatch the two rear clamps (SMX Conveyor side) and drop the back of the atomizer down on the tray.
- 4) Unlatch the front clamp and set the front of the atomizer section down onto the tray.
- 5) The tray and atomizer chute can now be slid back and completely removed.



- 6) Using a medium bristle brush, lightly scrub the atomizer disk to remove any treatment / product residue off the atomizer disk.
- 7) The outer wall of the atomizer can be scrubbed using a brush and cleaning solution (Simple Green/water, or mild detergent and water). If there is excessive buildup on the atomizer housing it may be necessary to use a metal putty knife to scrape the edges of the atomizer housing.
 - a. ****Do not pressure wash inside the atomizer section (section that does not slide back on the rails). Pressure washing this area will result in the atomizer motor seizing up and requiring replacement of the atomizer motor. ****
- 8) The removable atomizer section that slides out can be carried to a containment area and power washed.
- 9) Allow everything to dry, and then re-assemble the atomizer.
 - a. To return the tray, repeat these steps 1-4 in reverse.

SMX Conveyor

The SMX conveyor belt and flaps should be accessed and cleaned to prevent belt or rubber rot from the treatment or product. Before proceeding with cleaning the SMX conveyor ensure that proper PPE and containment of treatment/chemical is followed.

- 1) Remove all the mixing baffle doors from the conveyor. On each of these doors there are two mixing baffles that should be cleaned by lightly scraping or scrubbing with a medium bristle brush. While cleaning, inspect each of these baffles for damage / cracking. Contact KSi if any of these mixing baffles need replaced.
 - a. To remove these doors to access the mixing baffles, remove the 4 pins from each cover on top of the conveyor.
 - b. Each door is marked with a number decal that correlates to its location on the conveyor. When putting the doors back on the conveyor, ensure that each door matches the number decal that is on the conveyor.



- 2) Open the tail of the conveyor and use a shop vac to vacuum up any loose residue or seed particles at the bottom of the conveyor.



- 3) Place a large, water-tight containment container under the discharge of the conveyor (recommend using a forklift to hold this container directly under the discharge of the conveyor) and turn the conveyor on at full speed. Allow the conveyor to run for a few minutes at full speed while inspecting the tracking of the conveyor at the bottom (tail) end that is opened (see pg. 28 of the SC Pro Applicator Owner / Operator's Manual for more details on conveyor tracking).
- 4) Slow the conveyor down to 10% belt speed and power wash the inlet hopper of the conveyor to remove buildup residue from the canvas hopper and rubber flaps around the sides and bottom of the hopper. Power wash the belt from either this inlet hopper, or from the lowest open mixing baffle section. **Keep the power washer at a minimum of 8" away from the belt to keep from scalping the chevron cleats off the belt.**
 - a. Be sure to use proper PPE when power washing the conveyor.

- b. If possible, use hot water mixed with Simple Green or mild detergent when power washing the belt.
- 5) Once power washing is completed, increase the belt speed to 100% and let the conveyor run for a few minutes to clean any debris out of the conveyor.
- 6) Turn the conveyor off and remove any additional spouting or seed let down ladder from the discharge section of the conveyor. Use a metal putty knife to clean the inside of the discharge conveyor hood.
- 7) Once cleaned, the discharge spouting or seed ladder can be reassembled.