



Gateway Applicator

STINGER EQUIPMENT GATEWAY APPLICATOR

SPREADER SPRAYER

OWNER'S MANUAL OPERATOR'S MANUAL

Product Number:

Starting Serial Number: 60000-

US Patent – Patent(s) Pending



Danger - If incorrectly used, this machine can cause serious injury. Those who use and maintain this machine should be trained in its proper use, warned of its dangers, and should read the entire manual before attempting to set-up, operate, or service the machine.



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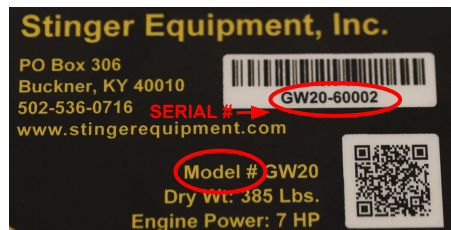
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Product Records

Important: Record the information from the serial/model number sticker of your Stinger Gateway Applicator. It will be necessary to furnish your Model # and Serial # when ordering parts OR simply scan the QR code located on your machine.

Model Design: Gateway Applicator Serial #: _____

Model #: _____ Engine Serial #: _____

Purchase location: _____ Date Purchased: _____

Registered Trademarks and Patents

US Patents - All Patents Pending
 KOHLER® Command Pro® are trademarks of KOHLER CO.

Specifications

Dimensions:

Width 35" Inches (0.89 Meter)
 Height 43" Inches (1.09 Meter)
 Length 56" Inches (1.42 Meter)

Weight

Empty..... 385 Pounds (174.6 Kg)
 Spreader Full, Sprayer Tank Empty 535 Pounds (242.7 Kg)
 Spreader Empty, Sprayer Tank Full 572 Pounds (259.5 Kg)
 Spreader Full, Sprayer Tank Full 722 Pounds (327.5 Kg)

Operator Controls

One Touch Control Operation
 Steering and Drive..... Forward/Reverse Speed Control, Engine Throttle
 Spreader..... Spreader Gate Open/Close/Wide/Narrow/Right/Left, Impeller Speed
 Sprayer Full Width (Wide) On/Off, Trim Width (Narrow) On/Off, PSI

Production Rates

Spreading and/or Spraying..... 4,000 Sq. Ft./Minute - 240,000 Sq. Ft./Hour
 Spreader Hopper Capacity Approx 2.4 Cubic Feet - 150 Pounds

Minimum/Maximum Spread Width

Wide Spread 16' to 24' Feet (5.49 to 6.7 Meter)
 Trim Spread 4' to 10' Feet (1.2 to 3 Meter)
 Sprayer Tank Capacity 22 US Gallons - 183.6 Pounds of Liquid

Minimum/Maximum Spray Width

Wide Spray 8' to 10' Feet (2.44 to 2.74 Meter) 9' Effective
 Trim Spray 3' to 5' Feet (0.91 to 1.22 Meter)
 Momentary Spot Spray

Engine Kohler CH270 - 7HP - 208cc (with 18 amp charging and electric start)

Fuel Tank Capacity 1.1 Gallons (4.0 liters) / 3.5 hours of continuous run-time

Hydraulic System Capacity Up to 2 qts synthetic 15W-50 or until site glass is ½ full

Drive System Variable Speed with Brake and Freewheel Control

Tires Front/Steering - 13 x 6.50-6..... Rear/Driving - 18 x 6.50-8

Maximum Transport or Operating Ground Speed 5.5 MPH (8.85 Km/h)

Turning Radius 42" (3.5 ft radius) 7 Foot Circle (Center Line)

Maximum Slope Angle of Operation 15° is recommended (may vary depending on terrain and operator's skill/comfort level)

100% Stainless tube frame with powder coat finish

GENERAL SAFETY PRACTICES

Safety on the job should always be a top priority. Training and experience are important factors in the safe operation of equipment. Please consider the following information and realize that safe operation is a matter of using common sense as it relates to the machine, its maintenance, the operator, the training, and the operating conditions. These are general safety instructions that apply to most turf maintenance equipment.

This list includes many, but not all, general safety instructions as they relate to turf equipment. Common sense must always be used to determine the safest way to operate a machine under specific conditions

TRAINING:

- Always read the manual and/or view the training video if available before operating a machine for the first time.
- Always read the warning decals before operating a machine for the first time.
- Always check the location and use of each control before operating a machine for the first time.
- Practice operating the machine in a safe area with no obstructions until becoming familiar with the controls. If you have questions, ask your supervisor or call the factory.



CLOTHING:

- Clothes should be snug fit. Loose fitting clothing is hazardous because it may get caught in the mechanism during service or operation.
- Remove jewelry before operation. Again, jewelry may get caught in the mechanism.
- Wear shoes that will protect your feet. Steel toed safety shoes should be considered for many situations.
- Hard Hat: The use of a hard hat should be considered when using equipment on a golf course. The danger of being hit by a golf ball should be a major concern as well as protection while operating under trees.
- Respirators: When operating in dusty, windy conditions, wear a respirator. This is also an important consideration if operating equipment while spreading or spraying chemicals and fertilizers.

- Eye Protection: Safety glasses and/or face shields should be considered when operating, as well as working near high-speed rotary equipment. Watch for rotary mowers, edgers, brush and string trimmers. Rotary mowers can throw debris at speed up to 200 MPH.



- Hearing: If the noise level of the equipment is too loud, consider the use of ear protection. Do not use stereo headsets during operation. This is a distraction that may lead to an accident. Headsets/earbuds also make it difficult to hear other people and equipment while operating in the work area.
- Gloves: Use gloves when handling sharp or hazardous objects, chemicals, and fertilizers.

THE OPERATOR:

- The operator should never use a machine while under the influence of alcohol or drugs. The operator should be aware of the hazards of working in the sun and should take proper precautions to avoid heat stress and dehydration. Use sunscreen products when necessary.
- The operator should never attempt to ride a machine that is not designed for that purpose. Do not allow others to ride a machine that is not designed for passengers.
- Care should always be taken when mounting and dismounting a riding machine. Prevent injuries and falls by making sure the operator does not slip. Unless it is an emergency, do not jump off a machine. Injury may result when an operator's foot slips trying to jump from a machine.
- Keep hands and feet away from the spreader impeller, hopper mixing devices, and drive components. Shut off the engine and remove key, ignition wire, and spark plug when servicing the spreader impeller, hopper mixing devices, and drive components.
- Do not operate any equipment at unsafe speeds. Speeds should be reduced when turning or operating on slopes. The operator must use common sense to determine a safe



speed based on the equipment, the load, the slope, the surface, and other conditions that may affect safe operation.

- The operator must be aware of the conditions around the area. Be careful to observe other people and machines. Beware of slippery conditions. Wet turf can be encountered on slopes, when turning or stopping, or at higher speeds.
- If required to lift, an operator should ask for help if the object is too heavy. The operator should lift with his or her legs instead of the back. Care should be taken to avoid twisting the back while lifting a heavy load.
- Never allow children to operate the machine.

THE MACHINE:

- Do not modify the machine in any manner. Always check the machine to make sure it is in good working order.
- Do not place hands or feet near moving or rotating parts. Inspect to ensure that all guards are in place. Do not operate a machine without all guards in place. Be aware of thrown objects from the impeller.
- Perform an inspection of the unit before each use. Ensure all fasteners are secure, the tires are properly inflated, and engine oil level is correct.
- Check to ensure that all controls are in good operating condition. Make sure the brakes are operating properly.
- Do not overload machinery. The components are designed for certain weights and capacities. Overloading the machine will cause unsafe conditions.
- Shut off the engine and remove the key and spark plug before servicing the machine. Check machines on a level area. Machines on a slope may roll when the engine is off.
- Refer unfamiliar repairs and adjustments to mechanics that have been trained to do them properly.
- Replace decals that have become damaged or illegible.
- All safety equipment, shields, and covers must remain in place and free of any defects. Do not use this equipment if any guards or safety decals are not in place..



ENGINES:

- Prevent accidental starting by removing the spark plug wire and key when servicing the engine or the equipment.
- Do not strike the flywheel with a hammer or any hard object. This may cause the flywheel to shatter in operation. Use the correct tools to service the machine.
- If manually starting, pull the starter cord slowly until resistance is felt. Then pull the cord rapidly to avoid kickback and to prevent hand or arm injury.
- Do not run the engine in an enclosed area. The exhaust gasses contain carbon monoxide, an odorless and deadly poison. Do not store, spill, or use gasoline near an open flame, nor near an appliance like a stove, furnace, or water heater that uses a pilot light or can create a spark.
- Do not refuel indoors or in an unventilated area. Check the fuel level. Do not overfill. Do not add fuel while the machine is hot because spilled fuel may cause a fire. Use fresh gasoline. Stale fuel can gum the carburetor and can cause leakage. Check the fuel lines and fittings frequently for cracks and leaks. Replace if necessary.
- Do not remove the fuel tank cap or fill the fuel tank while the engine is hot or running. Allow the engine to cool before refueling.
- Do not operate the engine if gasoline is spilled or when the smell of gasoline is present or other explosive conditions exist. Move the equipment away from the spill and avoid any ignition until the gasoline has evaporated.
- Do not transport the engine with fuel in the tank. It is safe practice to turn the fuel off during any transporting of the machine.
- Do not start the engine with the air cleaner and/or the air cleaner cover removed.
- Do not choke the carburetor to stop the engine. Whenever possible, gradually reduce the engine speed before stopping.
- Do not tamper with the governor springs, links, or other parts to increase the engine speed. Run the engine at the speed set by the equipment manufacturer.



- Do not check for a spark with the spark plug removed. Use an approved tester. Do not crank the engine with the spark plug removed. If the engine is flooded, place the throttle in fast and crank until the engine starts.
- Keep the cylinder fins and the governor parts free of dirt, grass, and other debris which can affect engine speed.





- Do not operate the machine without a muffler. Inspect the muffler periodically and replace it if it is leaking or worn. If necessary, replace it with the correct muffler. Do not touch a hot muffler, cylinder, or fin. It may cause burns.
- Do not operate the engine with an accumulation of grass, leaves, or other combustible material in the muffler area.



Recognizing Safety Warning Signs and Symbols

- Warning signs and symbols are used for your safety. Look for all safety warning labels and symbols on the machine and labels of the chemicals used during operation. Know what they are and understand what potential dangers they are warning you of for your safety and optimization of the machine.



	This symbol is used to alert the operator of safety hazards. It is used in conjunction with the words "DANGER", "WARNING", and "CAUTION".
	Identifies immediate hazards which will result in serious injury or death.
	Identifies potential hazards which could result in serious injury or death.
	Identifies hazardous situations which may result in minor injury and/or could result in damage or destruction of equipment.

PROTECT YOURSELF!

Read, Understand and Follow the Chemical Manufacturer's Warning Labels and Instructions. Read and Follow the Material Safety Data Sheet (MSDS) For All Chemicals Being Used. Wear the Appropriate Personal Protective Equipment (PPE) To Protect Yourself In Accordance With the MSDS Sheet and the Chemical Manufacturers Labels, Handling Instructions and Application Instructions.



Be aware of the hazards of the chemicals that are being used and applied. Always wear personal safety equipment to protect from all hazards. Refer to the chemical manufactures safety warnings for the products being applied, mixed, transported, or stored. Chemicals can be poisonous, cause burns, and even serious illness and death. Protect yourself from contact, inhalation, exposure and/or overexposure.

THE STINGER GATEWAY APPLICATOR DOES NOT PROTECT THE OPERATOR OR BYSTANDERS FROM THE HAZARDS OF EXPOSURE OR OVEREXPOSURE TO CHEMICALS.

THE STINGER GATEWAY APPLICATOR DOES NOT PROTECT THE OPERATOR OR BYSTANDERS FROM THE HAZARDS OF CHEMICALS BEING USED DURING APPLICATION OR AFTER APPLICATION.

THE STINGER GATEWAY APPLICATOR DOES NOT PROTECT THE OPERATOR OR BYSTANDERS FROM THE HAZARDS OF CHEMICALS DURING THE MIXING, STORAGE, OPERATION, OR TRANSPORTATION OF THE MACHINE

WELCOME TO THE SMARTEST & EASIEST RIDE-ON SPREADER SPRAYER YOU WILL EVER OWN

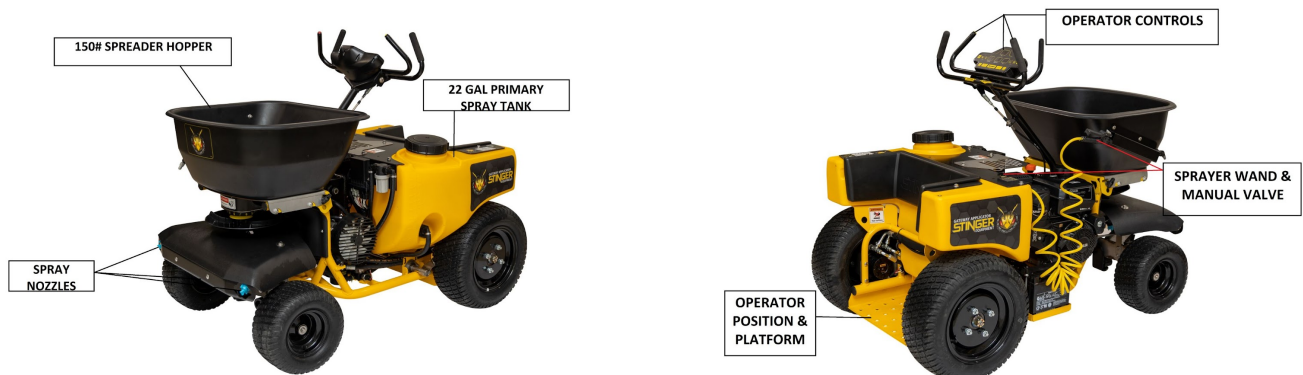
Thank you for purchasing this Stinger Equipment, Inc. product. This manual will describe the machine, give correct operating procedures, and help you learn and understand correct operation. Operation of this machine without training can result in injury to the operator or damage to the machine.

Intended Machine Use

The Stinger Gateway Applicator is a self-powered ride-on spreader/sprayer. The Gateway Applicator is intended to be used for the application of properly prepared turf care liquid spray products and turf care granular products. The Gateway Applicator is **NOT** intended to be used for any purpose other than the application of properly prepared turf care products to the turf. Operation is intended to be at properly prepared worksites only.

The Stinger Gateway Applicator is an easy to operate, comfortable, high production lawn applicator for dry and spray products. The lawn applicator is capable of spreading fertilizer or spraying at the rate of 4,000 square feet per minute (371 square meters per minute). The Gateway Applicator is designed to spread product in the same even pattern no matter the speed or direction moving - all done automatically once calibrated. The Gateway Applicator is a 4 wheel machine using a caster and handlebar steering system. The front wheels are the steering wheels and the rear wheels are the drive wheels. The operator's position is

standing on a large operator platform on the rear of the machine. The forward and reverse speeds are controlled by using a simple directional hand control bar allowing the operator total control of the speeds from 0 to 5.5 MPH (0 to 8.85 Km/h). Braking is provided by a dynamic braking system within the hydrostatic transmission and a one-touch electronic operated parking brake. Releasing the speed control will stop the machine. The machine is designed so that it will stop movement **AND** product application if the operator dismounts and releases the speed control.



OPERATION

Before Operating the Stinger Gateway Applicator and Before Starting the Engine,



1. Read the Operator's Manual.
2. Check the oil level in the engine and hydraulic tank.
3. Check air pressure in the front and rear tires. Inflate to PSI shown on the tire.
3. Fill the machine with fresh approved gasoline.
4. Inspect the machine for any loose nuts, bolts or hardware, or anything that does not look normal.
5. Check all guards and covers to make sure they are secure.
6. Become familiar with the controls. Stand on the operator's platform and test operate all the driving controls.
7. Do not start the engine - you are not ready yet.

Stinger Gateway Applicator Operator Driving Controls

⚠WARNING

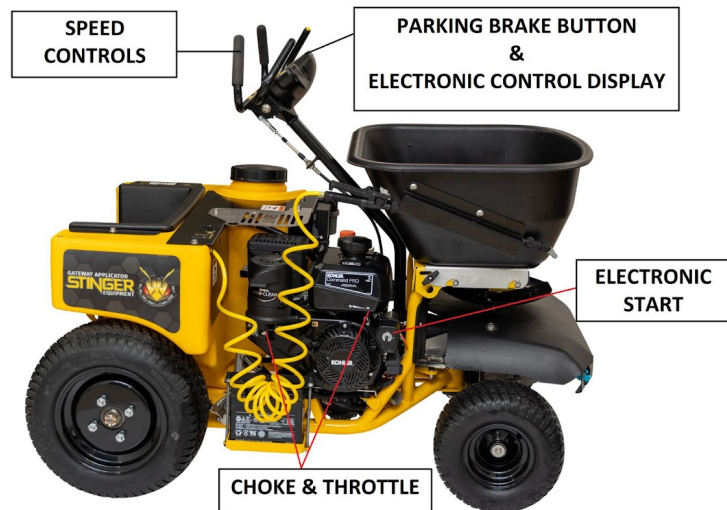
Warning: Operating the Stinger Gateway Applicator without training and practice can cause damage to the machine, the lawn, and injure the operator.

Before driving the applicator become familiar with the operator controls.

- A. LOCATION AND USE OF PARKING BRAKE BUTTON
- B. ENGINE THROTTLE CONTROL
- C. LOCATION AND USE OF CHOKE AND FUEL LINE
- D. FORWARD/REVERSE SPEED CONTROL
- E. OPTIONAL ELECTRIC START
- F. ELECTRONIC CONTROL DISPLAY

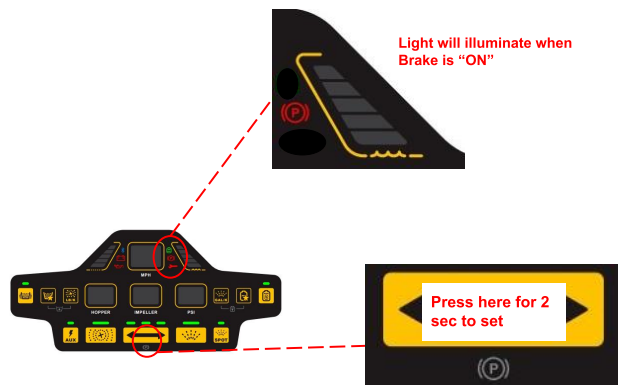
Take time to become familiar with all the controls before you attempt to operate this machine.

Become comfortable with the reach and movement of the speed controls, the electronic applicator buttons, the steering and the locations of the engine throttle, and parking brake.

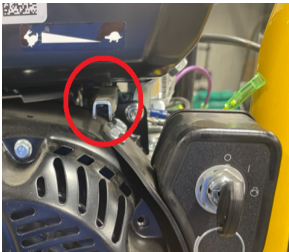


It may take several hours of practice before one has the skill level required to properly apply a lawn. Operation of the Stinger Gateway Applicator before one has developed the proper skill level and training can cause damage to the machine, operator, or the lawn.

DRIVING CONTROLS



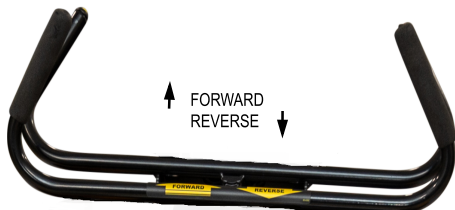
1. Parking Brake: Locate the Parking Brake. Test and watch the movement of the brake cleat in the ON (red illuminated) and OFF positions by observing the cleat engage/disengage the rear tire when the Parking Brake Button (located in the middle of the R/L arrow button) is depressed for 2 seconds. The brake should always be set in the ON (red illuminated) position when the operator is not present on the machine. If the operator accidentally forgets to manually disengage the parking brake, the brake will automatically disengage. **Note: Consistent failure to manually disengage the parking brake may result in quicker wear of the rear tires than what is normally expected.**



2. Engine Throttle: Locate the Engine Throttle Control. Test the movement of the lever. Note the range of movement from Slow to Fast. The throttle should be set at "Fast" during operation to maintain a constant and even ground speed and then slid back to "Slow" when stopped before turning the machine off.



3. Choke & Fuel Line: To turn the choke on: slide lever to the left. To turn the choke off: make sure it is slid all of the way to the right. Locate the Fuel Line: make sure the lever is slid all of the way to the right before attempting to start the engine. **Note: It is BEST practice to turn the fuel line off for transport!**



4. Forward/Reverse Traction Control: Locate and test the movement of the Traction Control. Make sure your hands can reach as needed for full movement of the control (either right or left hand control). The control operates by **SLOWLY** squeezing the bar forward for forward movement, **SLOWLY** pull back for reverse movement, or **SLOWLY** releasing to stop movement. **Note: ALWAYS keep hands on the front reference bar while operating the machine!**

5. Steering Handle Bar: Test the movement of the steering mechanism fully to the right and to the left as the front wheels move in response.

After you are comfortable with the location and movement of the operator controls, you are now ready to start the engine.



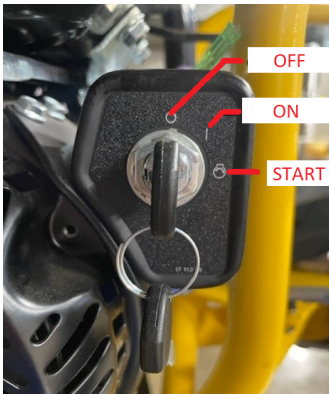
STARTING THE ENGINE

Before starting the engine, check that the fuel tank shut-off valve (located on the right side of the machine by the starting rope) is open.

1. Make sure Forward/Reverse Traction Controls are in the neutral (resting) position.

2. Move the throttle control lever to the choke (start) position ONLY when cold.

3. Operator must be off the machine before starting.



4. Start the engine by using the key (ignition switch). If the electric start battery charge is low, the engine can still be started by pulling the starting rope (key must be in the ON position). Allow the engine to run on choke for a very short time and then move the throttle lever to the slow run position. Allow the machine to run for a few minutes to warm up.

DRIVING THE MACHINE

To begin your driving lesson you will need a large smooth paved level area like a parking lot.



Forward and Reverse Operation

1. Stand on the operator's platform before touching anything.

2. Place both hands on the reference bar.

3. Release the Parking Brake by depressing the parking brake button for 2 seconds.

4. Once again, place both hands on the front reference bar and hook the traction bar with both thumbs, move the traction control bar *slowly towards the reference bar* by slowly squeezing thumbs towards palms. The machine should move ahead slowly and evenly. The more force applied to the traction control bar will increase the forward speed. **Note: ALWAYS keep both hands touching the front reference bar while in motion on the machine.**

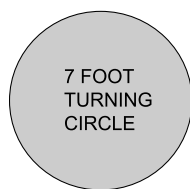
5. The machine has a hydrostatic braking system. If the operator releases the traction control, the machine will slow down and quickly come to a full stop in just a few feet of travel. Try this many times to get used to the braking action.

- Go ahead and slowly release the traction control lever. The control will return to the neutral position and the machine will come to a gradual stop. **Note: the machine will stop quickly if you quickly release pressure.**
- **ALWAYS SET PARKING BRAKE EVEN ON LEVEL GROUND.** The machine will creep if the brake is not set.
- You may speed up as you become more accustomed to the start and stop characteristics of the machine. Continue this for several minutes gradually increasing speed and becoming used to the stopping motion.

6. To reverse the machine, simply pull the traction lever slowly toward the operator's body with palms while maintaining contact with the front reference bar with fingers to continue to steer the machine. The machine will slowly start moving in reverse. Try this a few times to get used to the movement and control.

Steering the Machine

Now you are ready to try steering and driving the machine in the parking lot. The Stinger Gateway Applicator steers much like an ATV or bicycle. Turn toward the right to go to the right and turn toward the left to go to the left. Drive the machine in all modes; fast, slow, turns, figure 8's and reverse backing. One thing you must get accustomed to is the steering and the stopping of the machine. Do this until you are comfortable with maneuvering the machine before we move on to the other controls.



- Drive the Stinger Gateway Applicator ahead slowly 10 feet and make a 180° degree turn using the steering wheel. Continue doing this several times gradually increasing the speed. Do not try to make a full 180° degree turn at full speed until you are well accustomed to the machine.
- Continue with other driving maneuvers such as figure "8's", circles, 90° degree turns and many 180° degree turns. The machine is designed to do a full 180° degree turn in 7 feet, to match the effective operation width of the spread and spray. The operator must practice this turn until they have mastered it for spreader/sprayer efficiency. Turns at higher speeds may require the operator to lean into the turn.

Now that you are familiar with driving the Stinger Gateway Applicator, you are ready to try all the same turns and maneuvers you learned in the parking lot out on the lawn. Now you are ready to move up into the lawn and practice turns, trimming, and getting close around obstacles.

Climbing Curbs

You should always use curb cuts or driveways whenever possible. But, in the case they are not available you should know how to climb a curb with the machine.

- Do not try to go over curbs with a hopper loaded at maximum capacity
- It is recommended that the hopper be loaded at 50% or less to climb a curb
- Always approach the curb at 90 degrees whether climbing or descending
- Maneuvering diagonally over curbs could cause the machine to bottom out

Recommended curb transitions:

1. Approach the curb at a 90° degree angle (perpendicular to the curb).

2. Stop the machine a few inches from the curb and slowly advance the machine until the front wheels come in contact with the curb.

3. Gently advance the machine while shifting your weight backward **AND AT THE SAME TIME** pulling back on the steering controls. This helps bounce the front wheels up and onto the curb.

4. Slowly advance the machine until the rear tires come in contact with the curb.



CURB

5. Stop the machine and dismount while keeping your hands firmly on the steering controls.

6. The machine's rear wheels should slowly climb onto the curb as you gently advance the machine forward.

7. Stop the machine once again and remount as soon as the machine is firmly on top of the curb.

8. The same technique is used for descending a curb while omitting the need to shift your body weight backwards while pulling back on the handles.



It is recommended that the Stinger Gateway Applicator not be operated on any incline or slope exceeding 15° degrees. Operation on inclines greater than 15° degrees can result in injury and/or damage to the machine. Operation on inclines exceeding the 15° degrees limit can cause spillage of materials and damage to the lawn.

Operation on Slopes, Inclines, or Hills

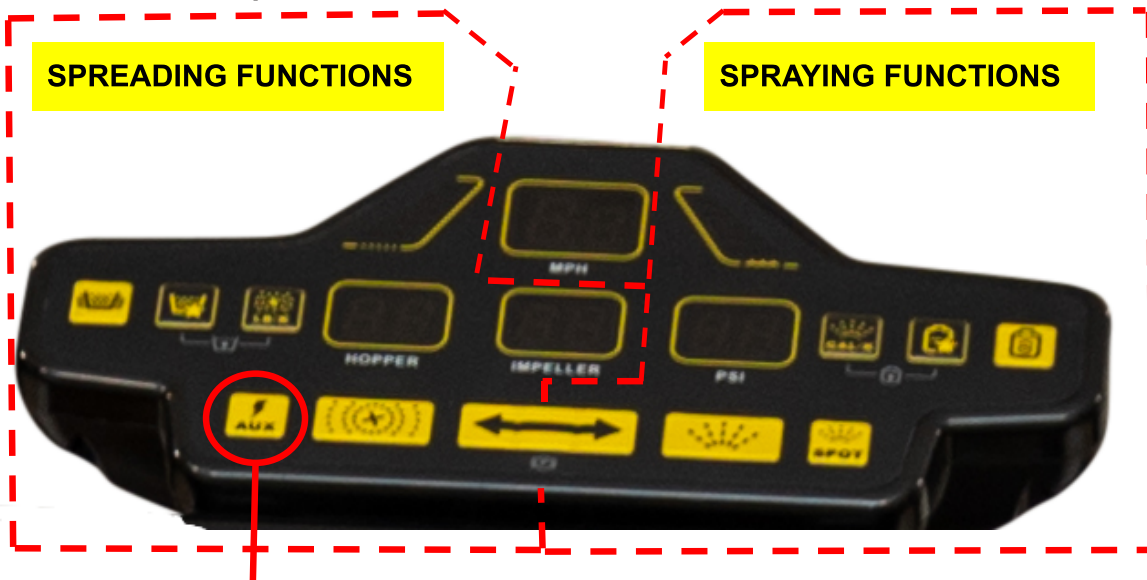
For safety reasons, the best way to drive up or down a slope is at a 45° degree angle to the slope. This will keep you from being directly above or under the mass of the machine. The Stinger Gateway Applicator is recommended to go on slopes of 15° degrees or less. Slopes of more than 15° degrees could cause injury to the operator or damage to the machine. Rollovers can occur, using the machine to traverse along a slope of more than 15° degrees is not

recommended. You should always use walking applicators on slopes more than 15° degrees.

- Do not turn the machine while on a slope or incline.
- If one must operate across a slope, angle the machine 45° degrees to the direction of the incline no matter if you are going up or down the slope
- Do not operate the machine across the face of a slope or at 90° degree angles to the slope.



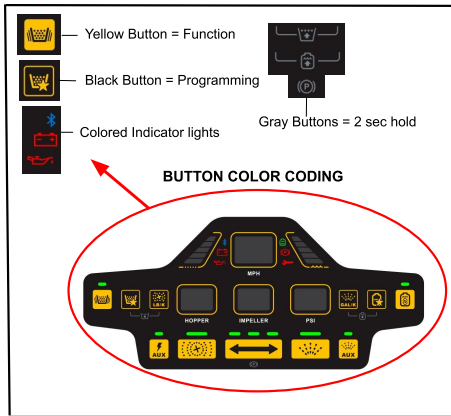
The Control Panel Operation - The “BRAINS” of the machine



Auxiliary Power for optional accessories

BASIC DISPLAY OPERATION/FUNCTION

- 1. Colored lights = indicator lights
- 2. Yellow Buttons = function
- 3. Black Buttons = programming
- 4. Gray Buttons = 2 second hold



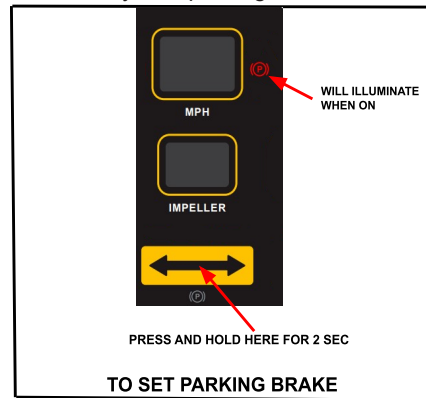
5. When the Stinger Gateway Applicator is first started, green lights on the display will flash. Simply press both yellow & red thumb trigger buttons (located on the front reference handles) down at the same time or press any two function buttons at the same time on the display to turn controls on. Green lights should now be steadily illuminated.

Note: when the GREEN LIGHTS are flashing, this will indicate that particular function is armed and when the machine moves, the function selected will apply product as long as the machine is in motion OR until one of the thumb trigger buttons OR function button is depressed again to stop application. *IF THE MACHINE IS NOT MOVING - NO PRODUCT IS APPLIED*



6. All applicator buttons are a single push to turn on and off with the exception of the gray 2 sec buttons.

IT IS PHYSICALLY IMPOSSIBLE TO APPLY PRODUCT IF MACHINE IS NOT IN MOTION

7. To manually turn parking brake on/off:

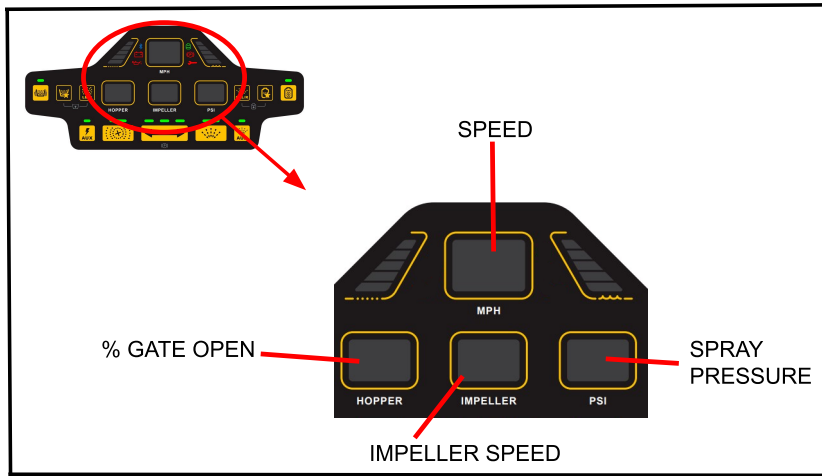


Press and hold the middle of the Direction Control button just above the parking brake symbol until the red parking brake indicator is illuminated or turned off.

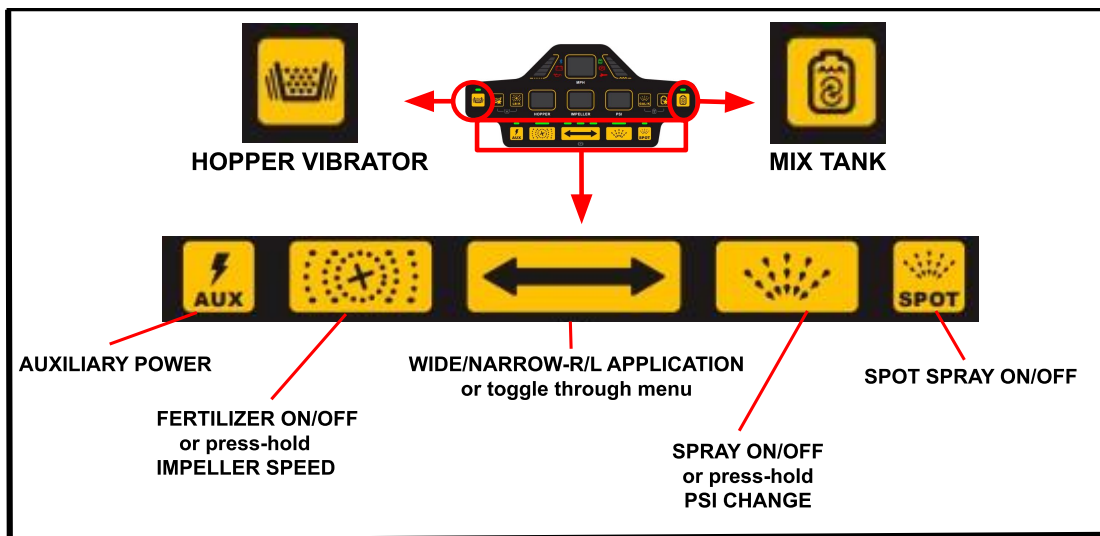
8. To toggle through the fertilizer/spray menus or change the fertilizer or spray amounts:
 - A. Press and hold for 2 seconds the individual buttons and depress the right/left arrows to select the menu item.
 - B. To change impeller speed you must hold the  yellow spreader button down for 2 seconds and depress the right/left arrows.
 - C. To change the spray pressure you must hold the  yellow spray button down for 2 seconds and depress the right/left arrows.
9. After pressing the fertilize and/or spray ON/OFF buttons and green display lights are steadily illuminated AND when you are ready to start spreading or spraying, simply press the yellow or red thumb trigger button on the handle to begin the application of material. As soon as the machine is put into motion, the wheel sensors pick up that motion and the product begins to be automatically applied. **AS SOON AS THE MACHINE STOPS AND NO MOTION IS SENSED, THE MACHINE WILL AUTOMATICALLY STOP APPLYING PRODUCT!**
10. To manually stop material application:
 - a. Press either the red or yellow thumb trigger button on the handle or the individual spreader/sprayer ON/OFF button on the display
11. Automatic stop material distribution:
 - a. Automatic cessation of product application occurs when the machine stops its momentum.


- b. Product distribution will resume immediately when the machine's momentum begins once again if no trigger button or display button has been depressed simply by the wheel speed sensor picking up motion.

Display Areas

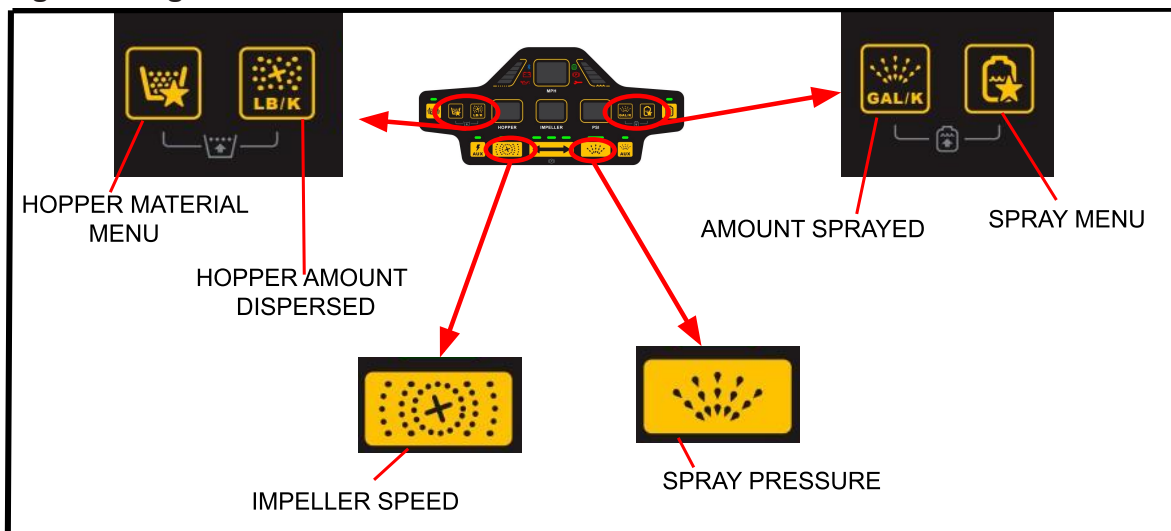


Function Buttons





1. Press the desired function button, the green indicator light above the button should illuminate when active.
2. Remember to press the yellow or red thumb trigger button to start spreading or spraying after all of the above has been initiated. The green light should begin to flash indicating that function is now armed and will begin to apply product once the machine begins to move.
3. The machine must be in motion for the wheel speed sensor to relay a signal to the hopper gate or spray tank in order to release material.
4. Press the center  of the Directional Control button to change between:
 - a. Narrow or wide applications (green indicator lights will illuminate above button)
 - b. Press the right arrow to ONLY spread right
 - c. Press the left arrow to ONLY spread left.
5. To stop:
 - a. Cease momentum of the machine OR
 - b. Press thumb trigger button OR
 - c. Press the Fertilizer/Spray ON/OFF buttons

Programming Buttons



HOW TO USE:

- A. Press once to see what it is set at. Then press and hold black menu button 2 seconds until

display  or  stops flashing and illuminates a steady green. Then toggle

through menu choices by pressing the yellow R/L arrow buttons  until the desired menu item is selected.

- B. Same process can be used to change the hopper or spray amounts.
- C. To change the impeller speed:

- a. Press once to see what it is set at. Then press and hold the yellow impeller speed button



- b. Speed display will start flashing green
 c. After 2 sec, the impeller display will stop flashing and have a number constantly illuminated.



- d. Push the right arrow to increase the speed and push the left arrow to decrease the speed.

D. To change the spray pressure:

- a. Press once to see what it is set at. Then press and hold the yellow spray button



- b. Pressure display will start flashing green
 c. After 2 sec, the pressure display will stop flashing and have a number constantly illuminated.



- d. Push the right arrow to increase the pressure and push the left arrow to decrease the pressure to your desired amount.



***IMPORTANT** - once you are ready to spread and/or spray, put the machine in motion and press either the yellow or red trigger buttons to begin application of the product. If spreading & spraying:

- **RIGHT/RED** = to start/stop application
- **LEFT/YELLOW** = momentary spray if primed

The Spreader

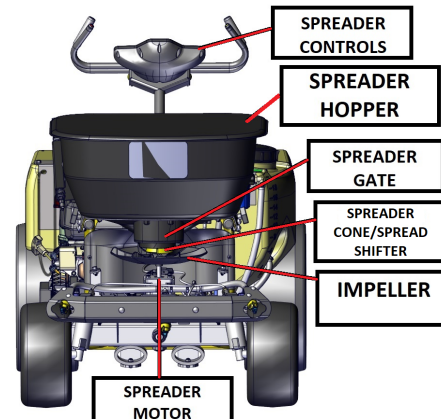
The spreader has several components you should be familiar with before operating the machine. The Stinger Gateway Applicator is engineered to make spreading very simple with a push of a button once the machine is calibrated. Material is not applied unless the machine is in motion.

1. HOPPER - The spreader hopper is approximately 2.4 cubic feet and will hold 150 pounds of material.
2. SPREADER GATE - The spreader gate opens allowing the material from the hopper to fall onto the impeller for spreading. The gate is operated from the control panel and will only open when the machine is in motion and will automatically close when the machine stops its forward/backward momentum.

GATE CAN OPEN ONE OF THREE WAYS:

- RIGHT ONLY
- LEFT ONLY
- BOTH

NO DEFLECTORS NEEDED



3. SPREADER CONE/SPREAD SHIFTER - The spreader cone is an inverted cone that shifts the spread pattern right or left. Use this to adjust for prill size. Turning dial toward 7 adjusts product to spread toward the left and turning toward 1 adjusts product to spread toward the right.
4. IMPELLER - The Stinger Gateway Applicator has a unique curved impeller that allows the material to be arced off of the impeller for better distribution and precise control.
5. SPREADER MOTOR - The spreader motor is turned on/off by the touch of a button on the control panel.
 - a. Variable Speed (0-600 rpm) controlled automatically.
6. SPREADER CONTROLS - (see control panel operation section)

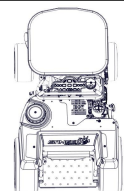
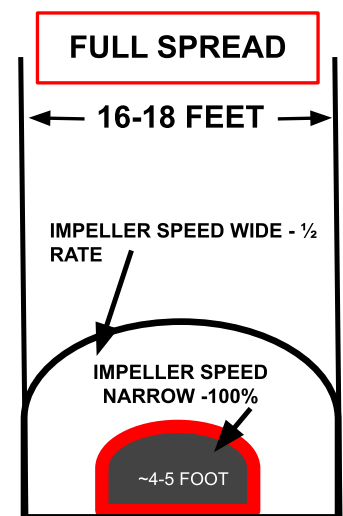
OPERATION FOR TRIMMING

To increase accuracy and to get clean trimming:

- Spread in the narrow application setting (4'-5' wide). There is a more defined line of application.
- Narrow is normally set to apply at full rate.
- Recommended to always use the narrow application setting to spread fertilizer to go through a narrow area.

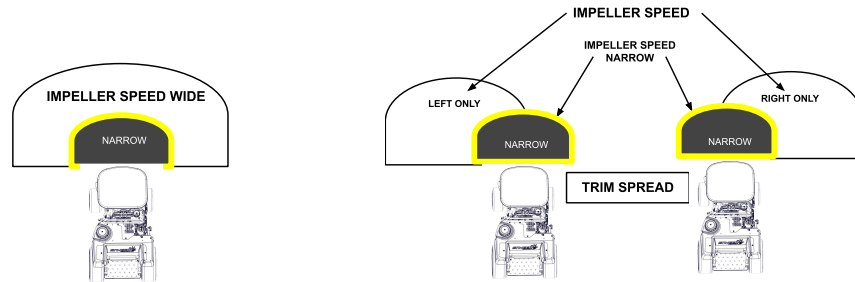
Note: When trimming, drive the machine with the right front tire approximately 6 inches away from the area you are trimming (i.e. sidewalks, curbs, flower beds, etc.). Also, when you make your first full spread pass, make sure you are driving with your outside tire in the center of your trim pass and throwing fertilizer towards the center of your area in order to get 100% coverage at ½ rate.

Application rate DOES NOT vary based on temperature. Once calibrated there is NO need to adjust rate.



You can always manually adjust the rate to reduce the amount of material being dispensed and change the impeller speed (see above instructions in the programming button section):

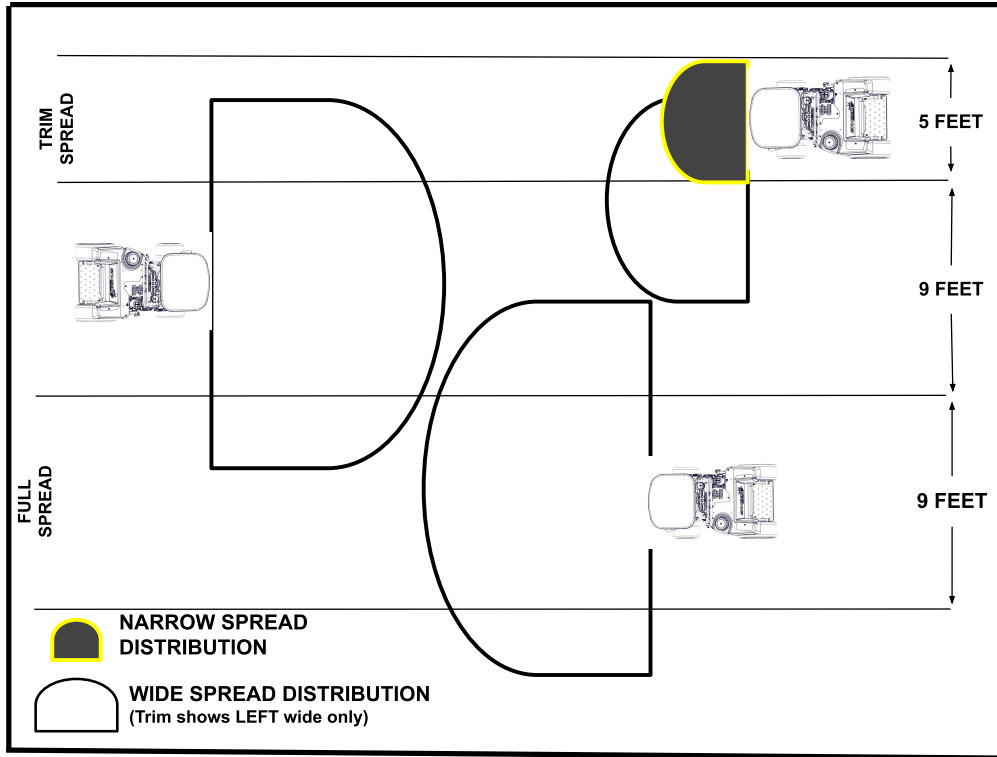
- a. The faster the impeller speed, the farther the product will be dispersed.
- b. Automatic adjustments are made for impeller speed in wide mode vs narrow mode.



SPREADING OPERATION ON THE LAWN

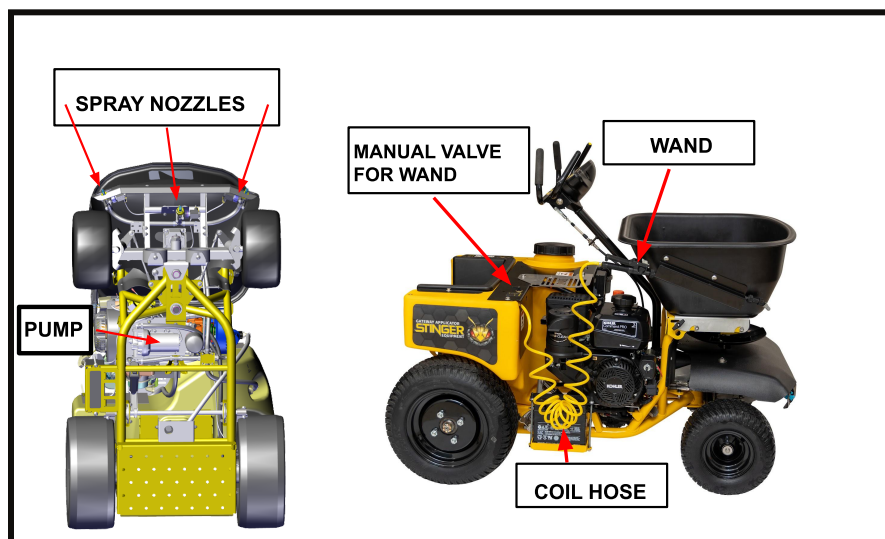
All lawns are different. Most accidents happen when operators are not familiar with either the machine or the terrain on which they will be using the machine.

1. Practice with the Stinger Gateway Applicator before you try to operate it on a lawn. Practice in all kinds of conditions until comfortable. Simulate close quarter operation (i.e. between a fence and AC unit) before you actually try it. Climb curbs, get used to operation on mild slopes and making turns. Be totally familiar with your machine before you ever try to apply products to a lawn. You will need practice before you become good at the controls and driving at the same time.
2. BEFORE YOU GO ON THE LAWN, Place the screen in the hopper, fill the hopper with the material you are going to spread.
3. BEFORE YOU APPLY ANYTHING, go on the property to be treated and drive slowly around the entire perimeter. Note or mark all obstacles, holes, rocks or anything that can be a hazard, harmed by the machine or cause damage to the machine.
4. Trim out the property to be treated. You will be going around the property counterclockwise doing a trim strip around the outer edge of the property. Keep your right side wheels about 6 inches inside any walks or drives you do not want product on. ***Recommended to trim in the narrow spreader setting.**
5. Stop after going around the entire edge of the property. With the settings in the same trim positions, you will want to make a counterclockwise pass around all objects on the property.
6. Stop. You will now make another pass around the property exactly 5 feet out from the last pass tire track. The spreader gate/control panel should now be in the widespread mode. When you have finished this pass you will have an approximate 12 foot band around the entire property to be used for turning. You are now ready to apply the lawn.
7. To apply, go straight across the lawn with the spreader gate opened to the desired setting. As your spread hits the 12 foot turning band on the side of the lawn, turn the impeller off by pressing the right thumb trigger button and make a 180° degree turn. The machine will come straight at ~9 feet from your last tire track. Turn on the spread by depressing the thumb trigger button while keeping the Gateway Applicator 9 feet from your last tire track all the way across the lawn. Continue this procedure until you are done with the lawn. ****NOTE: If the lawn has been mowed by a commercial lawn mower, simply follow the tracks made by the mower as reference guides****




The Sprayer



The sprayer has several components and controls you should be familiar with before operating the machine.




Note: It is recommended that when the pump is on the tank should have at least 1 gallon of water inside to keep the pump running cool. While the pump is designed to be able to withstand being operated dry, running the pump for extended periods with the tank empty could cause damage to the pump or lead to early failure.

1. **TANK PUMP** - The pump is located under the machine. Once the yellow spray button  is pushed to turn on the pump, the green indicator lights just above the button will be illuminated. The system will hold spray pressure automatically.


2. **PUMP PRESSURE CONTROL** - PSI (See Control Panel Operation). To change the spray pressure:


- A. Press and hold the yellow spray button 
- B. Pressure display will start flashing green 
- C. After 2 seconds, the pressure display will stop flashing and have a number constantly illuminated.

Push  the right arrow to increase the pressure and push the left arrow to decrease the pressure to your desired amount. **Note: PSI range is 30-50 psi. It is recommended that you set the spray pressure to 35-40 psi. The sprayer has a maximum rate of 0.5 gal/K.**

3. **TANK** - The Stinger Gateway Applicator has one main liquid tank (Additional accessory tanks can be added). The tank has a capacity of 22 gallons (83.28 liters). The product being sprayed is pumped from the tank and any bypass of product is returned to the tank. The by-pass flow back to the tank is the agitation in the tank to maintain product mix.

- To mix:
 - Have the tank 1/2-3/4 full of water. Allow enough room to add your product.

- Depress the  Tank Mix button which will turn the pump to HIGH. The tank is curved to allow for an optimal rolling action to mix/agitate the product throughout the tank.
- Measure the product and you can either pre-mix it or just **SLOWLY** dump the measured amount straight into the tank. Give the pump 30-60 sec to stir and mix the product.
- Top the tank off if needed with additional water and close with the tank cap securely twisted onto the tank.
- **Liquid and wettable (soluble) powders can be used in the Gateway Applicator. It is recommended that you test the product before adding to the tank.**

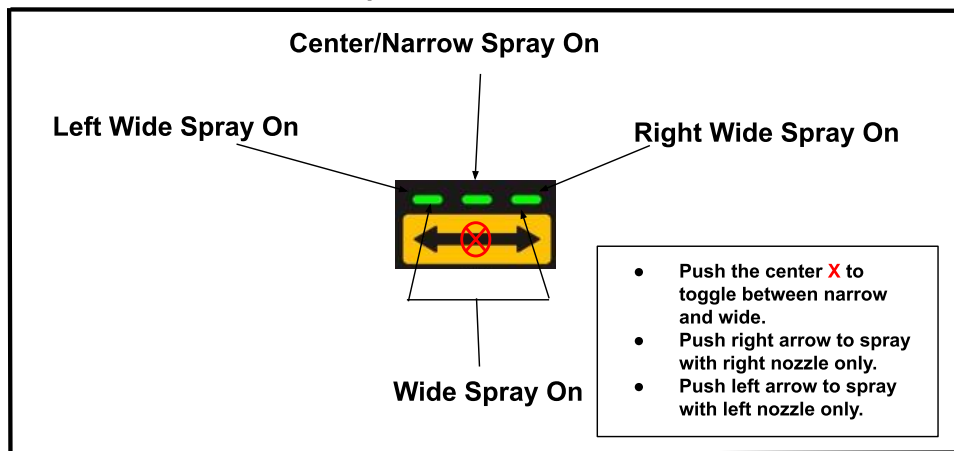
- You can turn the  Tank Mix button off when you are ready to apply and have the general momentum of the machine continue to keep the product mixed **OR** leave the pump on for optimal product agitation.



4. **SPRAY CONTROLS** - The right side of the control panel operates the spraying operations. (See *CONTROL PANEL OPERATION* section).

5. **SPRAY NOZZLES** - There are two wide nozzles (one on each side of the front bumper) and one center/narrow trim spray nozzle (another center nozzle can be added with an accessory tank). (See *CALIBRATION* section for instructions on calibrating)

- The wide spray nozzles are located under the front cover and to each side of the front bumper on the machine. These nozzles must be angled down towards the turf to provide the correct spray pattern.
- The center/narrow trim spray nozzle is located under the front bumper and placed in the center of the machine. The trim nozzle should also be angled down towards the ground. This nozzle produces a 3' to 4' foot wide "Effective Spray Pattern". This nozzle will spray 12 inches past each tire.
- Spray tips spray $\frac{1}{2}$ gal/1,000 max
- **Recommend Blue TTI tips**



6. **SPRAY WAND** - The hand spray wand allows the operator to spot spray products in small areas. When the manual valve on the upper right side of the tank is in the open position, the trigger on the wand allows the operator to control the wand's spray.

IT IS RECOMMENDED THAT WHEN TRIMMING CLOSE TO PLANTS, BUSHES, OR OTHER DELICATE VEGETATION THE SPRAY WAND IS THE OPTIMAL CHOICE OF APPLICATION

SPRAY OPERATION ON THE LAWN

All lawns are different. Most accidents happen when operators are not familiar with either the machine or the terrain on which they will be using the machine. Practice with the Gateway Applicator before you try to operate it on a lawn. Practice in all kinds of conditions for at least 30 minutes. Simulate close quarter operation (i.e. between a fence and AC unit) before you actually try it. Climb curbs, get used to operating on mild slopes and making turns. Be totally familiar with your machine before you ever try to spray product to a lawn. You will need practice before you become good at the controls and driving at the same time.

1. BEFORE YOU GO ON THE LAWN, fill the tanks with the product you are going to spray.
2. BEFORE YOU SPRAY ANYTHING, go on the property to be treated and drive slowly around the entire perimeter. Note or mark all obstacles, holes, rocks or anything that can be a hazard, harmed by the machine or cause damage to the machine.
3. First trim out the property to be treated. Use the narrow sprayer mode. You will be going around the property counterclockwise doing a trim strip around the outer edge of the property. Keep your right side tire about 12 inches away from any walks or drives you do not want product on. As you start moving ahead, push the right thumb trigger button to start to spray once

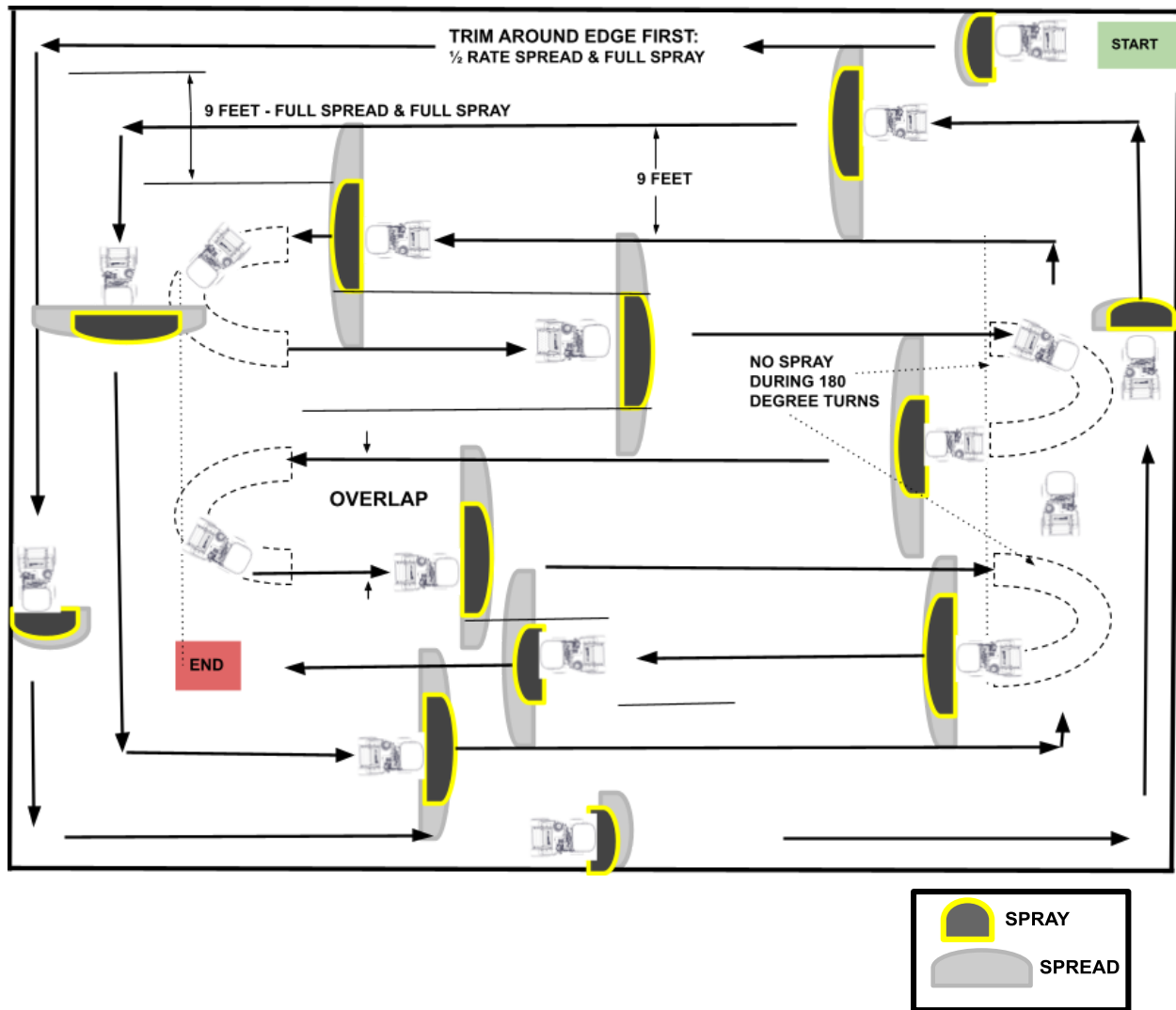
you have turned the spray pump on by pressing



(green light above should be flashing indicating it is armed). The trim/center spray nozzle will spray 3' to 4' feet wide. The spray will start 2" to 3" inches to the right of the right front tire.

4. Stop after trimming around the entire edge of the property. Using the same "Trim Spray", you will want to make a counterclockwise pass around all objects on the property.
5. Stop. You will now make another pass around the property exactly 5 feet out from the trim pass tire track. Use the "Wide Spray" control. When you have finished this pass you will have a 13 foot band around the entire property to be used for turning. You are now ready to spray the lawn.
6. To apply, go straight across the lawn using the full spray control. As your spray hits the 13 foot turning band on the side of the lawn, turn off the spray and make a 180° degree turn. The machine will come straight at 9 feet from your last tire track. Turn on the spray, keeping the Gateway Applicator 9 feet from your last tire track all the way across the lawn. Continue this procedure until you are done with the lawn.

TRADITIONAL ADVANCED APPLICATION METHOD



TRANSPORTING THE MACHINE

Whether you use trailers, carriers, or a pickup - loading and unloading the Stinger Gateway Applicator is very easy using the hydrostatic drive. Just approach the load area or ramps, get off the machine, and slowly walk it into or onto the transport device.

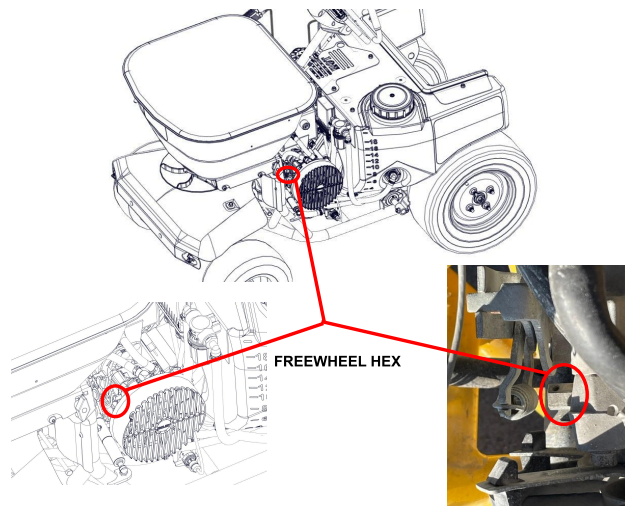
 DANGER

NEVER attempt to ride the machine while loading or unloading.

Unloading is just the opposite as loading. Walk slowly with the machine using the speed control to move the machine. Do not attempt to drive the machine down ramps, carriers, or trailers while riding the machine.

If you need to push the machine by hand, the hydrostatic pump has a freewheel hex nut you can turn a ¼ turn to bypass the hydro pump so the machine can be moved without starting the engine. (This nut has a hole through it)

WARNING - When the freewheel hex is turned, the machine can roll away on ramps and slopes if left unattended.



 **WARNING** 

ALWAYS SET THE PARKING BRAKE WHEN MACHINE IS NOT IN USE

TIE DOWNS

Always use the frame when you tie the machine for transport. Do not attach ties to the fertilizer hopper, tanks or other parts of the machine. Only use the frame for transport tie down. The Stinger Gateway Applicator has 6 designated tie down spots (2 on each side of the machine):

- 2 on the rear under the tank
- 2 on the upper front just under the hopper
- 2 on the front axle



Loading and Unloading using Ramps

1. Position the machine at the bottom of the ramps.
2. The operator should be off the machine standing behind the operator's platform.
3. Using the Speed Control Handle slowly advance the machine forward and up the ramps into the trailer, truck, or carrier. The operator will remain off the machine the entire time.
4. Unloading is the same process. The operator will remain off the machine slowly walking the machine down the ramps.

CALIBRATION

- Please download the Stinger App for further instructions and updates.
- ****For the most recent updates for calibration or other information, please go to:**
<https://www.stingerequipment.com/>

TROUBLESHOOTING TABLE

GENERAL PROBLEMS	POSSIBLE CAUSE
Ground speed slow	Engine RPM too low
	Overloaded
	Bent or misadjusted motion control
	Transaxle Problems
	Free wheel hex not turned appropriately
Steering problems	Damaged control rods
	Front wheel bearings
	Damaged or bent tie rods, worn tie rod ends
	Free wheel hex not turned appropriately
Excessive noise or vibration	Loose covers or guards
	Pump mounts loose or damaged
	Motor mounts loose or damaged

SPREADER PROBLEMS	POSSIBLE CAUSE
Impeller not rotating	Missing impeller shaft pins
	Impeller motor control button not pressed
Poor spread	Gate setting wrong or gate not opening
	Debris in gate/product bridging

	Engine RPM / ground speed
Spreading heavy towards left or right side	Wrong control button pressed
	Adjust pattern shifter

SPRAYER PROBLEMS	POSSIBLE CAUSE
No pressure or low pressure	Blocked filter
	Pump failure
	Hoses from tank to pump blocked or kinked
	Hoses from pump to regulator blocked or kinked
	Pressure failure or set wrong
Pressure but no spray	Blocked spray tips
	Blocked filter
	Damaged or kinked hoses to spray tips
Poor spray	Missing spray tips
	Blocked spray tips
	Pressure setting wrong
	Spray tip mounting angles wrong
System leaks	Damaged or loose hoses
	Pump failure, pump leaking at seals, replace pump
	Damaged or cracked fittings
	Damaged or loose o-rings on fittings
	Damaged tanks or tank fittings
Spray wand not working	Blocked spray wand tip
	Misadjusted spray wand tip
	Spray wand manual valve not opened