



Operator's Manual

ES220

Spreader





500 Venture Drive
Orrville, OH 44667
www.ventrac.com

To the Owner Contact Information and Product Identification

If you need to contact an authorized Ventrac dealer for information on servicing your product, always provide the product model and serial numbers.

Please fill in the following information for future reference. See the picture(s) below to find the location of the identification numbers. Record them in the spaces provided.

Dealer _____ Date of Purchase: _____

Dealer Address: _____

Dealer Phone Number: _____ Dealer Fax Number: _____

With your mobile device, you can scan the QR code on the serial number plate to access manuals, warranty, and other product information.



Model # _____

Serial # _____

Venture Products Inc. reserves the right to make changes in design or specifications without obligation to make like changes on previously manufactured products.

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INTRODUCTION



Venture Products Inc. is pleased to provide you with your new Ventrac ES220 spreader! We hope that Ventrac equipment will provide you with a ONE Tractor Solution.

Please visit our website, or contact your authorized Ventrac dealer for a complete list of items available for your new ES220 spreader.

	Item Description	Part Number
Accessories	Mulch Spinner Basket (for pellet mulch)	70.20102
	2N1 Front Hitch	70.2001

Product Description

The Ventrac ES220 spreader is designed to spread seed, fertilizer, and Penn mulch. The ES220 is not intended for spreading salt or other deicing materials.

The spreader is equipped with a control box featuring an electronic speed control and on/off switch. The power unit must be equipped with a 12 volt front or rear (4-pin socket) kit.

The spreader is equipped with a 2 inch receiver hitch and is capable of mounting to either the front* or rear of a Ventrac 4000 series or 3000 series^ power unit.

*Mounting on the front of a power unit requires the use of a 2N1 front hitch.

^Cannot be mounted to the rear of an LT3000 power unit.

The power unit must be equipped with a 12 volt front kit when mounting on the front of the power unit or a 12 volt rear kit when mounting on the rear of the power unit. Contact your authorized Ventrac dealer for the correct 12 volt front or rear kit for your power unit.

Why Do I Need an Operator's Manual?

This manual has been created to help you gain the important knowledge of what is needed to safely operate and maintain your machine, and to avoid injury and product damage. It is divided into chapters for convenient reference of the appropriate information.

You must read and understand the operator's manual for each piece of Ventrac equipment you own. Reading the operator's manual will help you become familiar with each specific piece of equipment. If this manual becomes damaged or unreadable, it should be replaced immediately. Contact your local Ventrac dealer for a replacement.

When using a Ventrac attachment, be sure to read and follow the safety and operating instructions of both the power unit and the attachment being used to ensure the safest operation possible.

The information in this manual provides the operator with the safest procedures to operate the machine while getting the maximum use out of the unit. Failure to follow the safety precautions listed in this manual may result in personal injury and/or damage to the equipment.

INTRODUCTION

Using Your Manual

This manual identifies potential hazards and safety concerns to help you, as well as others, avoid personal injury and/or damage to the equipment.

Safety should always be the first priority when working on or operating equipment. Accidents are more likely to occur when proper operating procedures are not followed or inexperienced operators are involved.

SYMBOL DEFINITIONS



This symbol identifies potential health and safety hazards. It marks safety precautions. Your safety and the safety of others is involved.

There are three signal words that describe the level of safety concern: Danger, Warning, and Caution.

SIGNAL WORD DEFINITIONS

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme cases.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury and/or property damage. It may also be used to alert against unsafe practices.

This manual also uses two words to highlight information. **ATTENTION** calls attention to special mechanical information to prevent equipment damage and/or best practices for equipment service and care.

NOTE emphasizes general information that is worthy of special attention.

Note: Right-Hand and Left-Hand orientations may be referred to at different places throughout this manual. Right-Hand and Left-Hand is determined as if facing forward from the operator station.

Manual Glossary

- Power Unit** A Ventrac tractor or other Ventrac engine powered device that may be operated by itself or with an attachment or accessory.
- Attachment** A piece of Ventrac equipment that requires a Power Unit for operation.
- Accessory** A device that attaches to a Power Unit or Attachment to extend its capabilities.
- Machine** Describes any "Attachment" or "Accessory" that is used in conjunction with a power unit.

SAFETY



General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



Training Required

- The owner of this machine is solely responsible for properly training the operators.
- The owner/operator is solely responsible for the operation of this machine and for the prevention of accidents or injuries occurring to him/herself, other people, or property.
- Do not allow operation or service by children or untrained personnel. Local regulations may restrict the age of the operator.
- Before operating this machine, read the operator's manual and understand its contents.
- If the operator of the machine cannot understand this manual, then it is the responsibility of this machine's owner to fully explain the material within this manual to the operator.
- Learn and understand the use of all the controls.
- Know how to stop the power unit and the attachments quickly in the event of an emergency.

Requirements for Personal Protective Equipment (PPE)

- The owner is responsible for ensuring that all the operators use the proper PPE while operating the machine. Whenever you use the machine, use the following PPE:
- Certified eye protection and hearing protection.
- Closed toe, slip resistant footwear.
- Long pants or trousers.
- A dust mask for dusty conditions.
- Additional PPE may be required. Refer to the product safety procedures for any additional requirements.

Operation Safety

- Secure long hair and loose clothing. Do not wear jewelry.
- Inspect the machine before operation. Repair or replace any damaged, worn, or missing parts. Be sure the guards and shields are in proper working condition and are secured in place. Make any necessary adjustments before operating the machine.
- Some pictures in this manual may show shields or covers opened or removed in order to clearly illustrate the instructions. Under no circumstance should the machine be operated without these devices in place.
- Alterations or modifications to this machine can reduce safety and could cause damage to the machine. Do not alter the safety devices or operate with the shields or covers removed.
- Before each use, verify that all the controls function properly and inspect all the safety devices. Do not operate if the controls or safety devices are not in proper working condition.
- Check the parking brake function before operating. Repair or adjust the parking brake if necessary.
- Observe and follow all of the safety decals.
- All the controls are to be operated from the operator's station only.
- Always wear a seat belt if the machine has a roll cage/bar installed and in the upright position.

SAFETY



General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Ensure the attachment or accessory is locked or fastened securely to the power unit before operating.
- Ensure that all bystanders are clear of the power unit and the attachment before operating. Stop the machine if someone enters your work area.
- Always be alert to what is happening around you, but do not lose focus on the task you are performing. Always look in the direction the machine is moving.
- Look behind and down before backing up to be sure of a clear path.
- If you hit an object, stop and inspect the machine. Make any necessary repairs before operating the machine again.
- Stop operation immediately at any sign of equipment failure. An unusual noise can be a warning of equipment failure or a sign that maintenance is required. Make any necessary repairs before operating the machine again.
- If equipped with a high/low range feature, never shift between high and low range while on a slope. Always move the machine to level ground and engage the parking brake before shifting range.
- Do not leave the machine unattended while it is running.
- Always park the machine on level ground.
- Always shut off the engine when connecting the attachment drive belt to the power unit.
- Never leave the operator's station without lowering the attachment to the ground, engaging the parking brake, shutting off the engine, and removing the ignition key. Make sure all moving parts have come to a complete stop before dismounting.
- Never leave the machine unattended without lowering the attachment to the ground, engaging the parking brake, shutting off the engine, and removing the ignition key.
- Only operate in well-lit conditions.
- Do not operate when there is a risk of lightning.
- Never direct the discharge of any attachment in the direction of people, buildings, animals, vehicles, or other objects of value.
- Never discharge material against a wall or obstruction. The material may ricochet back toward the operator.
- Use extra caution when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.
- Do not run the engine in a building without adequate ventilation.
- Do not touch the engine or the muffler while the engine is running or immediately after stopping the engine. These areas may be hot enough to cause a burn.
- Do not change the engine governor settings or over-speed the engine. Operating the engine at excessive speeds may increase the hazard of personal injury.
- To reduce the hazard of fire, keep the battery compartment, engine, and muffler areas free of grass, leaves, excessive grease, and other flammable materials.
- Clear the working area of objects that might be hit or thrown from the machine.

SAFETY



General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Keep people and pets out of the working area.
- Know the work area well before operation. Do not operate where traction or stability is questionable.
- Reduce speed when you are operating over rough ground.
- Equipment can cause serious injury and/or death when improperly used. Before operating, know and understand the operation and safety of the power unit and the attachment being used.
- Do not operate the machine if you are not in good physical and mental health, if you will be distracted by personal devices, or if you are under the influence of any substance which might impair your decisions, dexterity, or judgment.
- Children are attracted to machine activity. Be aware of children and do not allow them in the work area. Turn off the machine if a child enters the work area.
- Power units, attachments, and accessories are not designed or intended for travel on public roadways. Never operate or travel on public roads or highways.
- Operate with safety lights when operating near roadways.
- Slow down and be careful of traffic when operating near or crossing roadways. Stop before crossing roads or sidewalks. Use care when approaching areas or objects that may obscure vision.

Keep Riders Off

- Only allow the operator on the power unit. Keep riders off.
- Never allow riders on any attachment or accessory.

Operating On Slopes

- Slopes can cause loss-of-control and tip-over accidents, which can result in severe injury or death. Be familiar with the emergency parking brake, along with the power unit controls and their functions.
- If the power unit is equipped with a fold down roll bar, it must be locked in the upright position when operating on any slope.
- Use low range (if equipped) when operating on slopes greater than 15 degrees.
- Do not stop or start suddenly when operating on slopes.
- Never shift between high and low range while on a slope. Always move the power unit to level ground and engage the parking brake before shifting range or placing the power unit in neutral.
- Variables such as wet surfaces and loose ground will reduce the degree of safety. Do not drive where the machine could lose traction or tip over.
- Keep alert for hidden hazards in the terrain.
- Stay away from drop-offs, ditches, and embankments.
- Sharp turns should be avoided when operating on slopes.
- Pulling loads on hills decreases safety. It is the responsibility of the owner/operator to determine loads that can safely be controlled on slopes.

SAFETY



General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Transport the machine with the attachment lowered or close to the ground to improve stability.
- While operating on slopes, drive in an up and down direction whenever possible. If turning is necessary while driving across slopes, reduce your speed and turn slowly in the downhill direction.
- Ensure a sufficient supply of fuel for continuous operation. A minimum of one-half tank of fuel is recommended.

Truck Or Trailer Transport

- Use care when loading or unloading the machine into a truck or trailer.
- Use full width ramps for loading the machine into a truck or trailer.
- The parking brake is not sufficient to lock the machine during transport. Always secure the power unit and/or attachment to the transporting vehicle securely using straps, chains, cables, or ropes. Both the front and rear straps should be directed down and outward from the machine.
- Shut off the fuel supply to the power unit during transport on a truck or trailer.
- If equipped, turn the battery disconnect switch to the Off position to shut off electrical power.

Maintenance

- Keep the safety decals legible. Remove all grease, dirt, and debris from the safety decals and instructional labels.
- If any decals are faded, illegible, or missing, contact your dealer promptly for replacements.
- When new components are installed, be sure that the current safety decals are affixed to the replacement components.
- If any component requires replacement, use only original Ventrac replacement parts.
- Always turn the battery disconnect to the Off position or disconnect the battery before performing any repairs. Disconnect the negative terminal first and the positive terminal last. Reconnect the positive terminal first and the negative terminal last.
- Keep all bolts, nuts, screws, and other fasteners properly tightened.
- Always lower the attachment to the ground, engage the parking brake, shut off the engine, and remove the ignition key. Make sure all moving parts have come to a complete stop before cleaning, inspecting, adjusting, or repairing.
- If the power unit, attachment, or accessory requires repairs or adjustments not instructed in the operator's manual, the power unit, attachment, or accessory must be taken to an authorized Ventrac dealer for service.
- Never perform maintenance on the power unit and/or attachment if someone is in the operator's station.
- Always use protective glasses when handling the battery.
- Check the fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- To reduce the hazard of fire, keep the battery compartment, engine, and muffler areas free of grass, leaves, and excess grease.
- Do not touch the engine, the muffler, or other exhaust components while the engine is running or immediately after stopping the engine. These areas may be hot enough to cause a burn.

SAFETY



General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Allow the engine to cool before storing and do not store near an open flame.
- Do not change the engine governor settings or over-speed the engine. Operating engine at excessive speeds may increase the hazard of personal injury.
- Springs may contain stored energy. Use caution when disengaging or removing springs and/or spring loaded components.
- An obstruction or blockage in a drive system or moving/rotating parts may cause a buildup of stored energy. When the obstruction or blockage is removed, the drive system or moving/rotating parts may move suddenly. Do not attempt to remove an obstruction or blockage with your hands. Keep your hands, feet, and clothing away from all power-driven parts.

Fuel Safety

- To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.
- Do not refuel the machine while smoking or at a location near flames or sparks.
- Always refuel the machine outdoors.
- Do not store the machine or fuel container indoors where the fumes or fuel can reach an open flame, spark, or pilot light.
- Only store fuel in an approved container. Keep out of the reach of children.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place the containers on the ground away from your vehicle before filling.
- Remove the machine from the truck or trailer and refuel it on the ground. If this is not possible, refuel the machine using a portable container, rather than from a fuel dispenser nozzle.
- Never remove the fuel cap or add fuel with the engine running. Allow the engine to cool before refueling.
- Never remove the fuel cap while on a slope. Only remove the fuel cap when parked on a level surface.
- Replace the fuel tank cap and the container cap securely.
- Do not overfill the fuel tank. Only fill to the bottom of the fuel neck, do not fill the fuel neck full. Overfilling of the fuel tank could result in engine flooding, fuel leakage from the tank, and/or damage to the emissions control system.
- If fuel is spilled, do not attempt to start the engine. Move the power unit away from the fuel spill and avoid creating any source of ignition until the fuel vapors have dissipated.
- If the fuel tank must be drained, it should be drained outdoors into an approved container.
- Check the fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- The fuel system is equipped with a shut-off valve. Shut off the fuel when transporting the machine to and from the job, when parking the machine indoors, or when servicing the fuel system.

SAFETY



General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



Hydraulic Safety

- Make sure the hydraulic connections are tight and all hydraulic hoses and tubes are in good condition. Repair any leaks and replace any damaged or deteriorated hoses or tubes before starting the machine.
- Hydraulic leaks can occur under high pressure. Hydraulic leaks require special care and attention.
- Use a piece of cardboard and a magnifying glass to locate suspected hydraulic leaks.
- Keep your body and hands away from pinhole leaks or nozzles that eject high pressure hydraulic fluid. Hydraulic fluid escaping under high pressure can penetrate the skin causing serious injury, leading to severe complications and/or secondary infections if left untreated. If hydraulic fluid is injected into the skin, seek immediate medical attention no matter how minor the injury appears.
- The hydraulic system may contain stored energy. Before performing maintenance or repairs on the hydraulic system, remove any attachments, engage the parking brake, disengage the weight transfer system (if equipped), shut off the engine, and remove the ignition key. To relieve pressure on the auxiliary hydraulic system, shut off the power unit engine and move the hydraulic control lever left and right before disconnecting the auxiliary hydraulic quick couplers.

SAFETY



ES220 Safety Procedures



- Spreader must be securely locked to the power unit before operating the power unit and spreader.
- Never exceed the rated weight capacity of the spreader.
- Always use weights or an attachment on the front or rear of the power unit to counterbalance the weight of the spreader.
- Do not operate a power unit with the ES220 spreader on slopes greater than 10 degrees. Operation on slopes greater than 10 degrees may result in loss of steering and/or traction.
- Before attempting to clear a jam or obstruction from the spreader or performing any other work on the spreader, turn off the spreader controller and unplug the spreader from the 4-pin socket on the power unit.
- Maintain a 15.2 meter (50 foot) distance from all bystanders when operating the spreader.
- Never attempt to remove the spreader from the power unit while there is material in the spreader hopper.
- Never leave product in the spreader hopper for long periods of time.
- Refer to material packaging or Material Safety Data Sheet (MSDS) for precautionary measures and Personal Protective Equipment required when handling and spreading the product.
- Do not splice any other device into the wire harness.

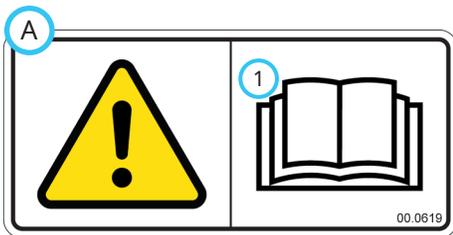
SAFETY

Safety Decals

The following safety decals must be maintained on your attachment.

Keep all safety decals legible. Remove all grease, dirt, and debris from safety decals and instructional labels. If any decals are faded, illegible, or missing, contact your dealer promptly for replacements.

When new components are installed, be sure that current safety decals are affixed to the replacement components.



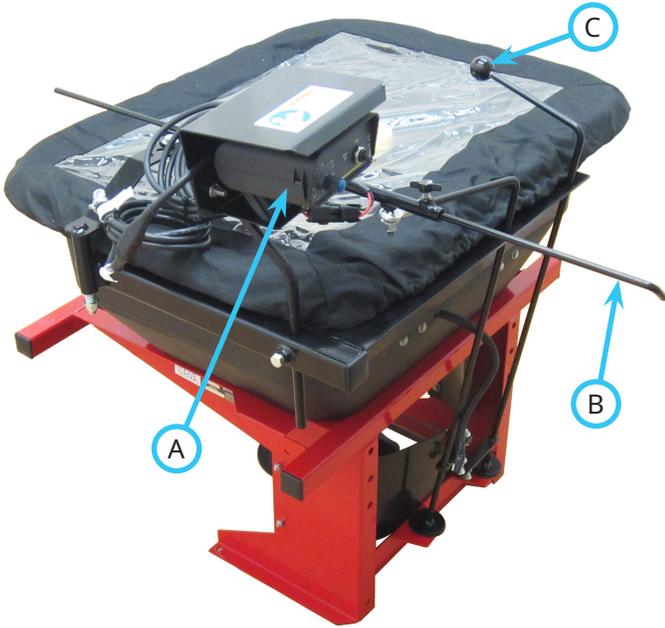
1. Warning - Read the operator's manual.

Decal	Description	Part Number	Quantity
A	Read Operator's Manual	00.0619	1

OPERATIONAL CONTROLS

Operational Control Locations

Use the following images to identify the locations of the operational controls. The letter next to each control can be referenced to the list that follows these images.



Electronic Spreader Control (A)

The electronic spreader control is equipped with a toggle switch (1) that controls power to the motor and a dial (2) for adjusting the speed of the motor and spinner.

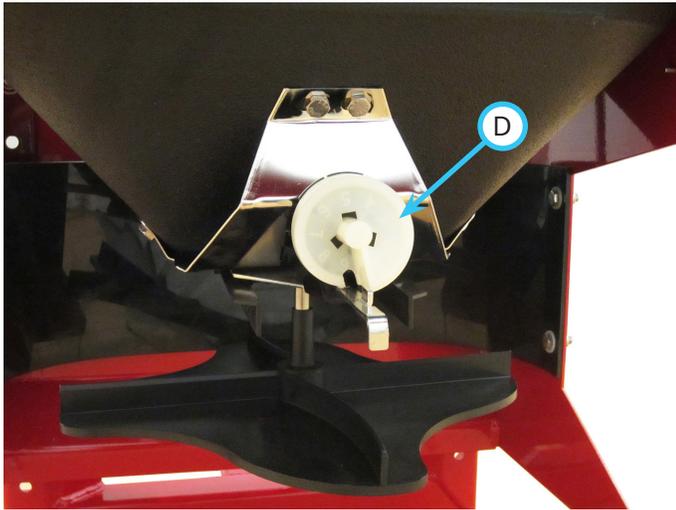


Power is sent to the motor by moving the switch to either MAN ON or AUT ON. Moving the switch to the MAN ON position disregards the speed control dial and sends full power to the motor. Moving the switch to AUT ON allows the motor speed to be controlled by the speed control dial setting.

The motor and spinner speed is adjusted by rotating the speed control dial. Position 0 is the slowest setting and provides a narrow spread pattern. Position 10 is the fastest setting and will provide the widest spreading pattern. The spinner speed can be adjusted at any time to control the spread width.

Gate Control Lever (B)

The gate control lever opens and closes the rate gate to start and stop the flow of material. Pushing the lever toward the spreader opens the gate and pulling the lever away from the spreader closes the gate.

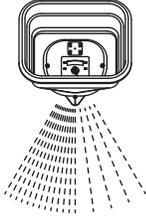
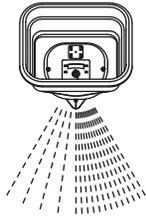
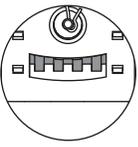
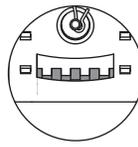
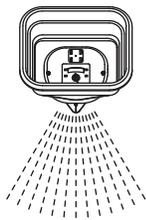
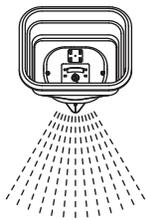


- A. Electronic Spreader Control
- B. Gate Control Lever
- C. Accuway Spread Pattern Control
- D. Rate Dial

OPERATIONAL CONTROLS

Accuway Spread Pattern Control (C)

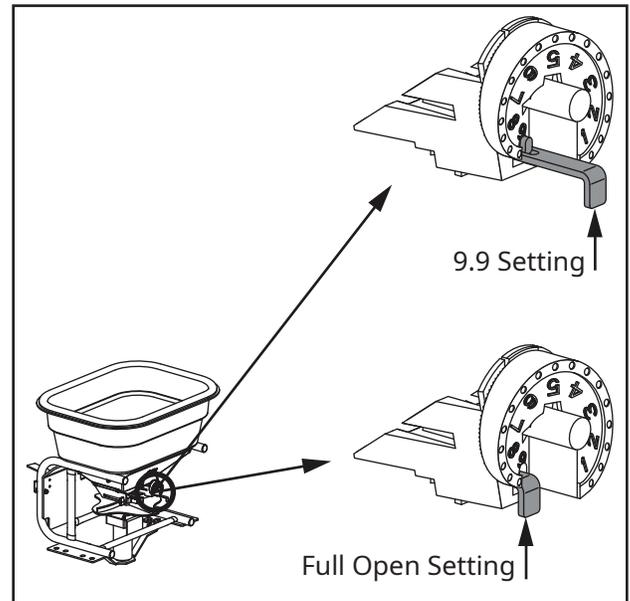
Different materials and spread conditions can cause the center of the spread pattern to shift to the left or right of the spreader. The Accuway spread pattern control is used to bring the center of the spread pattern back in line with the center of the spreader.

 Travel		
Spread Pattern	Heavy to the Left	Heavy to the Right
Set Accuway to:		
New Spread Pattern		

Moving the Accuway plate shifts the material on the spinner. Adjustment is very sensitive and should be done in small increments until the spread pattern is centered.

Rate Dial (D)

The rate dial is used to control the gate opening and regulate the amount of material that is dispensed. The rate dial has nine numbers with ten stops between each number for accurate control and resetting of the spread rate. The higher the number, the heavier the application of material. The dial is set by turning to the desired setting. When released, the dial will lock into the set position.



The rate dial has a slot in it at the 9.9 position that will allow the metal guide for the rate gate to slide through. This allows the gate to open fully for spreading mulch and other high volume products.

GENERAL OPERATION

Daily Inspection

WARNING

Always engage the parking brake, shut off the power unit engine, remove the ignition key, and ensure that all moving parts have come to a complete stop before inspecting the components, or attempting any repair or adjustment.

1. Park the machine on a level surface, with the engine shut off and all fluids cold.
2. Perform a visual inspection of both the power unit and the attachment. Look for loose or missing hardware, damaged components, or signs of wear.
3. Ensure the electrical connections are tight and clean.
4. Ensure the moving parts operate freely.

Attaching to the Rear of the Power Unit

1. Slide the spreader hitch tube into the hitch receiver and fasten with a 5/8 inch hitch pin. Use the hole in the spreader hitch tube that positions the spreader closest to the power unit without any contact between them.
2. Connect the 4-pin plug from the spreader controller to the 4-pin socket on the power unit. The first time the spreader is installed, coil up any excess cord and secure it to the spreader's control arm frame.
3. Adjust the height of the electronic control box to the desired position and retighten the locking bolt.
4. Loosen the thumb screw on the gate control lever and adjust the rod extension until the operator can reach it from the power unit's seat. Retighten the thumb screw.
- 5.

Attaching to the Front of the Power Unit

1. Attach a 2-N-1 front receiver hitch to the power unit's hitch and secure the hitch latch.
2. Slide the spreader hitch tube into the hitch receiver of the 2-N-1 hitch and fasten with a 5/8 inch hitch pin. Use the hole in the spreader hitch tube that positions the spreader closest to the power unit without any contact between them.
3. Connect the 4-pin plug from the spreader controller to the 4-pin socket on the power unit. The first time the spreader is installed, coil up any excess cord and secure it to the spreader's control arm frame.
4. Adjust the height of the electronic control box to the desired position and retighten the locking bolt.
5. Loosen the thumb screw on the gate control lever and adjust the rod extension until the operator can reach it from the power unit's seat. Retighten the thumb screw.

Operating Tips

WARNING

Refer to the material packaging or Material Safety Data Sheet (MSDS) for precautionary measures and Personal Protective Equipment required when handling and spreading the product.

ATTENTION

If spreading products containing herbicides, use extreme caution to prevent contact with ornamental plants and flowers that could be damaged or killed by careless spreading or wind drift.

If spreading pellet mulch (such as PennMulch®), dry sand, or other high volume or large particle materials, replace the spinner blade with a mulch spinner basket for optimal spread patterns.

When spreading, travel at a consistent speed. Do not open the rate gate until the spreader is turned on and the power unit is moving. Close the rate gate while the spreader is still at operating speed.

The spread thins or feathers at the outer edges, eliminating sharp edge of spread lines and streaks. This allows spreading passes to slightly overlap, preventing gaps in coverage. Extra coverage can be given under trees and in other heavy feeding areas without showing edge of spread lines.

Published dial settings on a product are approximate values only. They are generally calculated using a walk behind spreader with an approximate speed of 4.8 km/h (3 mph) and varying spread widths. Dial settings are af-

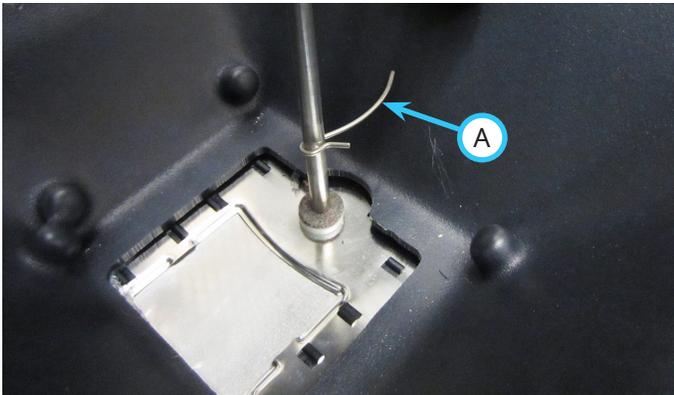
GENERAL OPERATION

affected by the individual spreader, ground speed, spreading width, weather conditions, and the condition of the material (damp, dry, over-pulverized).

It is best to calibrate the spreader prior to using a product. After determining the proper dial setting for a product, record the setting for future reference. It may need to be adjusted slightly based on usage conditions. In damp or humid conditions, better results may be obtained by reducing the spreading rate by one-half and spreading the area two times in cross directions.

Rotary Agitator

A rotary agitator (A) is included for use with seed and pellet mulch. Remove the rotary agitator from the spreader shaft when spreading free-flowing, lump-free materials.



Use a pliers to grab the hook on the rotary agitator and pull the agitator back through the shaft to remove.

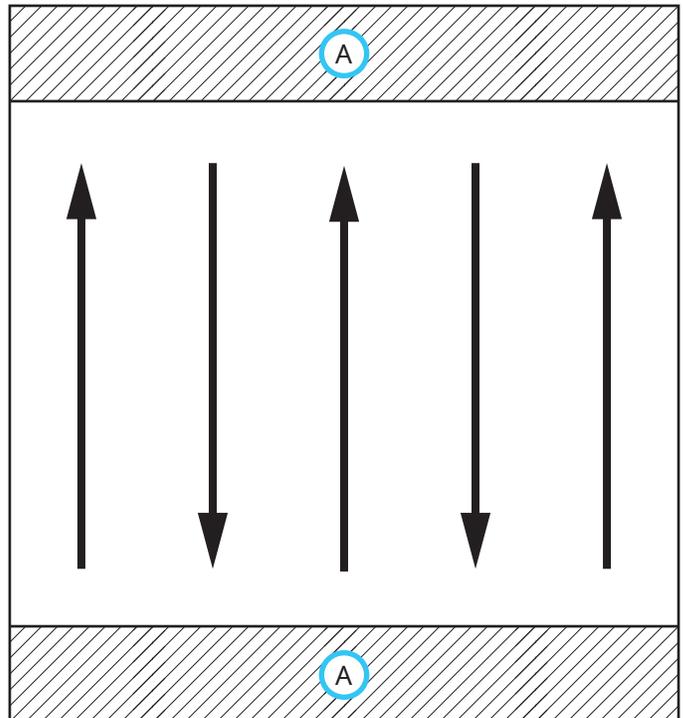
To reinstall, insert the agitator through the hole in the shaft and push until the hook snaps in place on the shaft. Note the position (sweep) of the agitator and orient correctly when reinstalling.

Filling the Spreader Hopper

1. Park the power unit and spreader on a walkway or driveway or place a tarp or plastic underneath the spreader to catch any material that spills when adding to the hopper.
2. Remove the hopper cover.
3. Ensure the rate gate is completely closed.
4. Determine if the rotary agitator is needed and install it or remove it from the spreader shaft.
5. Add weights or an attachment to the front (or rear) of the power unit to provide counterbalance for the weight of the spreader and material.
6. Add the material to the spreader hopper. Do not exceed the maximum weight capacity of 100 kg (220 pounds).
7. Replace the hopper cover.

Spreader Operation

Spread header strips (A) at the ends of the spreading area to provide an area to turn around and realign the spreader for each pass.



Make the first pass at one-half of the spread width. Make each additional pass at the full spread width.

1. Set the speed control dial on the electronic spreader control to the desired spreading width.
2. Move the Accuway spread pattern control to the off position (handle is rotated toward the electronic spreader control).
3. Calibrate the spreader for the product being used

GENERAL OPERATION

(if necessary).

4. Move the power unit and spreader into position for a spreading pass.
5. Turn on the electronic spreader control and begin forward motion.
6. At the edge of the spreading area (or edge of header strip), open the rate gate to begin dispensing material.
7. On the first pass, check to see if the spread pattern is centered with the spreader. If the spread pattern is not centered, adjust the Accuway spread pattern control by slowly rotating the handle away from the electronic control until the spread pattern is centered with the spreader. NOTE: if the Accuway spread pattern control is moved too quickly, it may impede or shut off the flow of material from the hopper.
8. At the end of the spreading area (or edge of header strip), close the rate gate while still at operating speed.
9. When spreading is finished, close the rate gate and turn off the electronic spreader control.
10. Empty any remaining material from the hopper and clean the spreader.

ATTENTION

Do not leave material in the hopper for long periods of time. Remove any leftover material and return to the original container for storage.

Mulch Setting Operation

Rotate the rate dial until the slot at the 9.9 position lines up with the metal guide. The rate gate will now slide to the maximum open position.

This setting was designed to spread PennMulch® at 70-75 pounds per thousand square feet at approximately 4 km/h (2-1/2 mph).

The mulch setting can be used to spread dry sand, dry organic top dresses, and other high volume, difficult to spread products.

When using the mulch setting on the rate dial, you can control the flow of material by adjusting the gate control lever as you are spreading. For sand and top dress materials where an accurate setting is not critical, watch the flow of material and adjust the gate opening until you feel comfortable with the amount of material being spread.

Using the optional mulch spinner basket will provide the best spread pattern for most high volume materials. The spread may be shifted slightly to the right when using the mulch spinner basket, but the material will be spread evenly across the effective spreading width without leaving heavy lines or light areas.

GENERAL OPERATION

Dial Settings

NOTE: Dial settings are approximate only.

Product	Particle Size	Pounds per 1,000 Sq. Ft.	grams per square meter	Dial Settings Full Rate Once Over 	Dial Settings Half Rate Twice Over 
Fine Pellets		1	4.9	3.6	3.1
		2	9.8	4.0	3.5
		3	14.6	4.2	3.7
Mixed Fine Pellets		2	9.8	3.7	3.2
		4	19.5	4.7	4.1
		6	29.3	5.2	4.5
Small Pellets		2	9.8	3	2.2
		4	19.5	4.2	3.7
		6	29.3	4.5	4
Nitrogen Pellets Medium Size		1	4.9	3.5	3
		2	9.8	4.2	3.7
		3	14.6	4.7	4
Medium Pellets and Granules		2	9.8	3.5	3
		4	19.5	4.2	3.8
		6	29.3	5.2	4.5
Large Heavy Pellets		2	9.8	3.8	3.3
		4	19.5	4.9	4.1
		6	29.3	5.9	4.9

GENERAL OPERATION

Grass Seed Spreading Chart

Product	Weight		Coverage		Dial Setting	Dial Setting	Spread Width
					Full Rate	Half Rate	
Blue Grass or Red Top	.5 lbs.	2.4 g	1,000 sq. ft.	1 sq. meter	1.25		4
	1 lbs.	4.9 g	1,000 sq. ft.	1 sq. meter	2.0		4
	2 lbs.	9.8 g	1,000 sq. ft.	1 sq. meter	2.5		4
Park, Merion, Delta, or Kentucky Bluegrass	.5 lbs.	2.4 g	1,000 sq. ft.	1 sq. meter	2.5		4
	1 lbs.	4.9 g	1,000 sq. ft.	1 sq. meter	3.0		4
	2 lbs.	9.8 g	1,000 sq. ft.	1 sq. meter	3.5		4
Hulled Bermuda	2 lbs.	9.8 g	1,000 sq. ft.	1 sq. meter	2.75	2.25	6
	3 lbs.	14.6 g	1,000 sq. ft.	1 sq. meter	3.0	2.5	6
	4 lbs.	19.5 g	1,000 sq. ft.	1 sq. meter	3.25	2.75	6
Mixtures Including Coarse Seeds	2 lbs.	9.8 g	1,000 sq. ft.	1 sq. meter	6.0		6
	4 lbs.	19.5 g	1,000 sq. ft.	1 sq. meter	7.0		6
	6 lbs.	29.3 g	1,000 sq. ft.	1 sq. meter	7.0		6
Rye Grasses or Tall Fescue	2 lbs.	9.8 g	1,000 sq. ft.	1 sq. meter	6.0		6
	4 lbs.	19.5 g	1,000 sq. ft.	1 sq. meter	7.0		6
	6 lbs.	29.3 g	1,000 sq. ft.	1 sq. meter	7.75		6
Dichondra	4 oz.	1.2 g	1,000 sq. ft.	1 sq. meter	1.9		8
	8 oz.	2.4 g	1,000 sq. ft.	1 sq. meter	2.1		8
	12 oz.	3.7 g	1,000 sq. ft.	1 sq. meter	2.5		8
Pensacola Bahia	4 lbs.	19.5 g	1,000 sq. ft.	1 sq. meter	4.5		7
	5 lbs.	24.4 g	1,000 sq. ft.	1 sq. meter	4.75		7
	6 lbs.	29.3 g	1,000 sq. ft.	1 sq. meter	5.0		7

SERVICE

⚠ WARNING

Always engage the parking brake, shut off the power unit engine, remove the ignition key, and ensure that all moving parts have come to a complete stop before inspecting the components, or attempting any repair or adjustment.

ATTENTION

Do not splice any other devices into the wiring harness. Harness modification may void the warranty. Do not attempt to service the electronic spreader control or the spreader motor. Attempting to service or disassemble the electronic control or the motor will void the warranty.

ATTENTION

If any component requires replacement, use only original Ventrac replacement parts.

Cleaning and General Maintenance

For best results, and to maintain the finish of the ES220 spreader, clean or wash the spreader after each use to remove dust and any product buildup from the hopper, gate assembly, and spinner blade. If necessary, use a brush to remove any material buildup.

Cleaning method #1:

Wipe all the spreader surfaces with an oily cloth. Make sure any material buildup is removed. Clean and lubricate the gate slide and the Accuway diffuser slide.

Cleaning method #2:

Wash the spreader thoroughly and allow it to dry completely. Lubricate the gate slide and the Accuway diffuser slide.

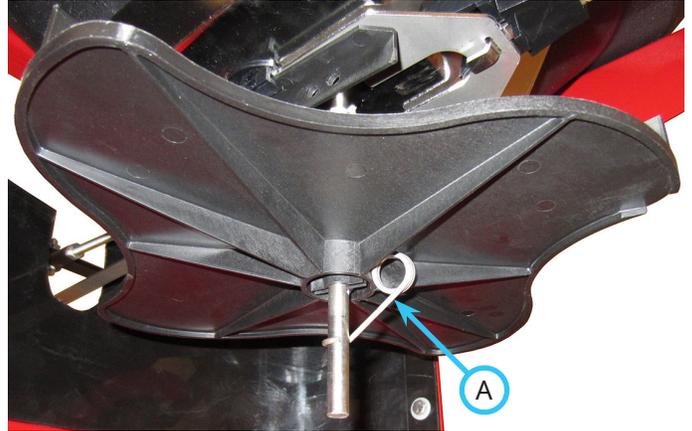
Fuse Replacement (Electronic Spreader Control)

1. Unplug the spreader from the power unit's 4-pin socket.
2. Remove the defective fuse (A) and insert a new fuse.



Removing the Spinner Blade or Mulch Basket

1. Unhook the spring pin (A) from the spinner shaft and pull the pin out of the collar on the spinner blade or mulch basket.



2. Slide the spinner blade or mulch basket down off the spinner shaft.

Installing the Spinner Blade or Mulch Basket

1. Slide the spinner blade or mulch basket onto the spinner shaft.

ATTENTION

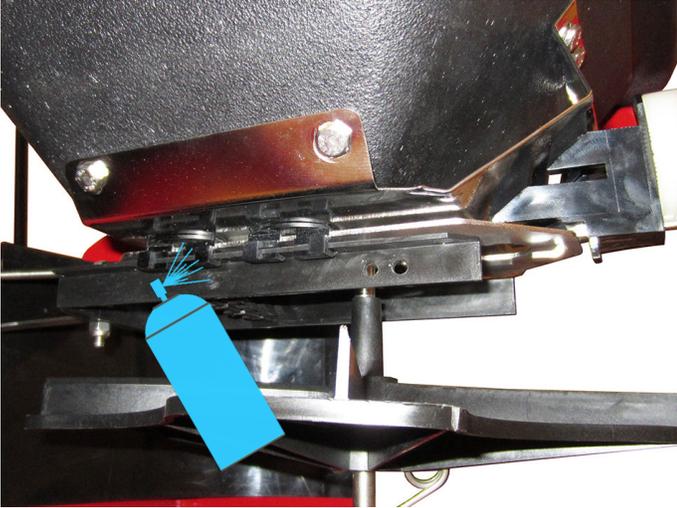
The spinner shaft has two mounting holes. When installing a spinner blade, the spring pin must be inserted through the upper hole. When installing a mulch basket, the spring pin must be inserted through the lower hole.

2. Line up the hole in the collar of the spinner blade or mulch basket with the correct hole in the spinner shaft.
3. Insert the spring pin into the hole and snap the hook end of the spring pin over the spinner shaft.

SERVICE

Lubrication Locations

Lubricate the gate slide and the Accuway diffuser slide with a light spray lubricant, such as WD-40. Avoid lubricants that contain PTFE or silicone.



Storage

Preparing the Attachment for Storage

1. Clean the spreader to remove accumulated dust and material buildup.
2. Inspect for loose or missing hardware, damaged components, or signs of wear. Repair or replace any damaged or worn components.
3. Inspect the safety decals. Replace any decals that are faded, illegible, or missing.
4. Lubricate the gate slide and the Accuway diffuser slide.
5. Inspect the painted components for chips, scratches, or rust. Clean and touch up the surfaces as needed.

Removing the Attachment from Storage

1. Clean the attachment to remove any accumulated dust or debris.
2. Inspect the attachment as instructed in the Daily Inspection section of this manual.
3. Test the attachment to ensure that all the components are working properly.

SPECIFICATIONS

Dimensions

Overall Height	112 cm (44 inches)
Overall Length	98 cm (38-1/2 inches)
Overall Width	86 cm (34 inches)
Weight	41 kg (90 pounds)
Hopper Capacity (Weight)	100 kg (220 pounds)
Spinner RPM	80 - 750 RPM
Spreading Width*	1.8 - 7.6 meters (6 - 25 feet)

*The spreading pattern and width are subject to many different variable, such as the spreader mounting height, the wind conditions, the type of material, etc.

Features

- 2 inch receiver hitch mount
- The ability to mount on either the front of the rear of the power unit.
- An electronic spreader control with an on/off switch and a speed control dial.
- A polymer hopper
- A hopper cover
- Stainless steel hopper components (bottom plate, gate, etc.)
- Remote gate and diffuser control

SPYKER WARRANTY

1 YEAR LIMITED WARRANTY

This is warranted to the original purchaser only. Spyker will replace parts with defects in materials and workmanship, for a period of one year from the date of purchase.

Spyker Spreaders will not be liable for any loss, damage or expense including, but not limited to, consequential or incidental damages, arising from the operation, condition or use of the item. The sole and exclusive remedy against Spyker Spreaders being the replacement of the defective parts. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This express warranty, which is applicable only to the original purchase, is in lieu of and excludes all other warranties, whether expressed or implied by operation of law or otherwise, including any warranty of merchantability or fitness for particular purpose.