Operator's Manual & Parts Drawings

ES220

Spreader

Europe CE

VENTRAC.COM

Original Operator's Manual

Revised 02/06/20
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A downloadable parts manual is also available.

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.

Date of Purchase: _____

Dealer: _____

Dealer Address: _____

_____

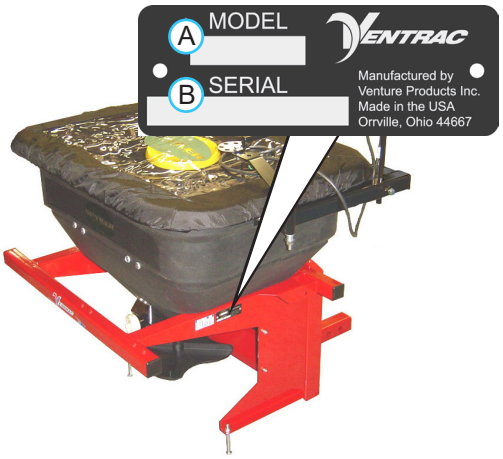
Dealer Phone Number: _____

Dealer Fax Number: _____

Model # (A): _____

Serial # (B): _____

Affix Part/Serial Number label here.



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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.

Listed below are just some of the items that can provide you *versatility* as you use your spreader. Please visit our website, or contact your authorized Ventrac dealer for a complete list of items available for your new ES220 spreader.

Accessories	Item Description	Part Number
	Mulch Spinner Basket (for pellet mulch)	07.20102
	2-N-1 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 of salt or 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” 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 2-N-1 receiver 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. Refer to the power unit operator’s manual for the proper 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, maintain, and service your machine. It is divided into sections for convenient reference of the appropriate section.

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. Understanding the operator’s manual will help you, as well as others, avoid personal injury and/or damage to the equipment. Keep this manual with the machine at all times. The manual should remain with the machine even if it is sold. 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.

Using Your Manual

Throughout this manual, you will encounter special messages and symbols that identify potential safety concerns to help you as well as others avoid personal injury or damage to the equipment.

SYMBOL DEFINITIONS

ATTENTION

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. Safety should always be the #1 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.

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 sitting on the power unit seat facing forward.

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.

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.

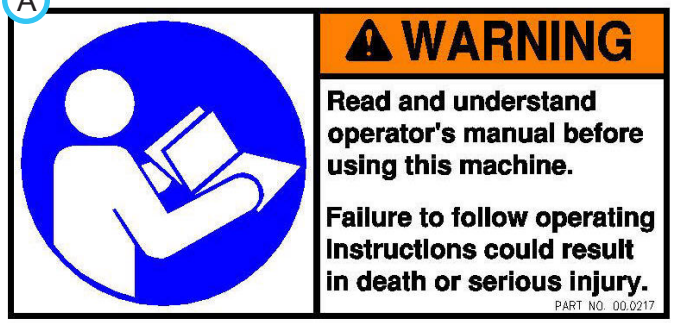
Safety Decals

The following safety decals must be maintained on your ES220 spreader.

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.

A



Decal	Description	Part Number	Quantity
A	Warning, Read Owner's Manual	00.0217	1

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 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 controls.
- Know how to stop the power unit and all attachments quickly in the event of an emergency.

Personal Protective Equipment Requirements

It is the responsibility of the owner to be sure that the operators use the proper personal protective equipment while operating the machine. Required personal protective equipment includes, but is not limited to, the following list.

- Wear a certified ear protection device to prevent loss of hearing.
- Prevent eye injury by wearing safety glasses while operating the machine.
- Closed toe shoes must be worn at all times.
- Long pants must be worn at all times.
- When operating in dusty conditions, it is recommended that a dust mask be worn.

Operation Safety

- Inspect machine before operation. Repair or replace any damaged, worn, or missing parts. Be sure guards and shields are in proper working condition and are secured in place. Make all necessary adjustments before operating machine.
- Some pictures in this manual may show shields or covers opened or removed in order to clearly illustrate any 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 safety devices or operate with shields or covers removed.
- Before each use, verify that all controls function properly and inspect all safety devices. Do not operate if controls or safety devices are not in proper working condition.
- Check parking brake function before operating. Repair or adjust parking brake if necessary.
- Observe and follow all safety decals.
- All 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 upright position.
- 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 attachment before operating. Stop 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 all necessary repairs before operating 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 all necessary repairs before operating machine again.

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

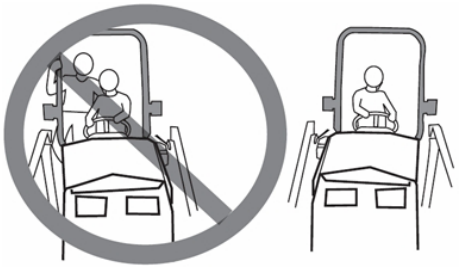
Operation Safety (continued)

- 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 machine unattended while it is running.
- Always park the machine on level ground.
- Always shut off engine when connecting attachment drive belt to the power unit.
- Never leave the operator's station without lowering the attachment to the ground, setting 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 equipment unattended without lowering the attachment to the ground, setting 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. Material may ricochet back towards the operator.
- Use extra caution when approaching blind corners, shrubs, trees, or other objects that may obscure 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 engine at excessive speed 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.

Preventing Accidents

- Clear working area of objects that might be hit or thrown from machine.
- Keep people and pets out of 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 machine if you are not in good physical and mental health, if you will be distracted by personal devices, or are under the influence of any substance which might impair decision, dexterity, or judgment.
- Children are attracted to machine activity. Be aware of children and do not allow them in the working area. Turn off the machine if a child enters the work area.

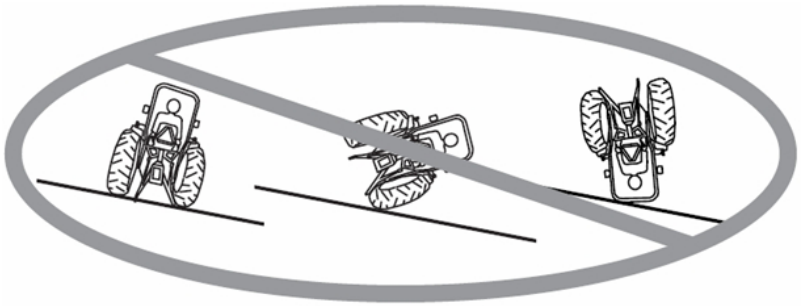


Keep Riders Off

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

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

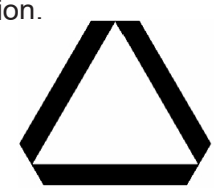
Operating On Slopes



- 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 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 surface and loose ground will reduce the degree of safety. Do not drive where 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.
- Transport machine with attachment lowered or close to the ground to improve stability.
- While operating on slopes, drive in an up and down direction when possible. If turning is necessary while driving across slopes, reduce speed and turn slowly in the downhill direction.
- Assure a sufficient supply of fuel for continuous operation. A minimum of one-half tank of fuel is recommended.

Roadway Safety

- Operate with safety lights when operating on or near roadways.
- Obey all state and local laws concerning operation on 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.
- If there is doubt of safety conditions, discontinue machine operation until a time when operation can be performed safely.
- When operating near or on roadways, have a Slow Moving Vehicle Emblem clearly displayed.



Truck Or Trailer Transport

- Use care when loading or unloading machine into a truck or trailer.
- Use full width ramps for loading 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, cable, or ropes. Both front and rear straps should be directed down and outward from the machine.
- Shut off fuel supply to power unit during transport on truck or trailer.
- If equipped, turn the battery disconnect switch to the Off position to shut off electrical power.

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

Maintenance

- 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.
- 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 parking brake, shut off engine, and remove the ignition key. Make sure all moving parts have come to a complete stop before cleaning, inspection, 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 all 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 excessive 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.
- 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 speed 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 hands, feet, and clothing away from all power-driven parts.
- Dispose of all fluids in accordance with local laws.

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 machine while smoking or at a location near flames or sparks.
- Always refuel the machine outdoors.
- Do not store machine or fuel container indoors where fumes or fuel can reach an open flame, spark, or pilot light.
- Only store fuel in an approved container. Keep out of reach of children.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- Remove 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 fuel cap or add fuel with the engine running. Allow engine to cool before refueling.
- Never remove fuel cap while on a slope. Only remove when parked on a level surface.
- Replace all fuel tank and container caps securely.

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

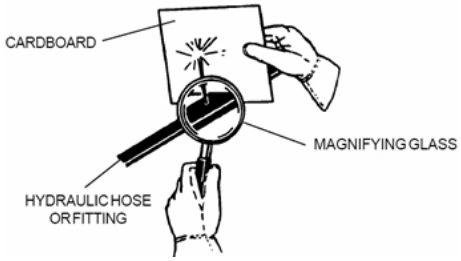
Fuel Safety (continued)

- Do not overfill fuel tank. Only fill to bottom of fuel neck, do not fill fuel neck full. Overfilling of 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 fuel vapors have dissipated.
- If the fuel tank must be drained, it should be drained outdoors into an approved container.
- Dispose of all fluids in accordance with local laws.
- Check all 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.

Hydraulic Safety

- Make sure all 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 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.



- Hydraulic system may contain stored energy. Before performing maintenance or repairs on the hydraulic system, remove attachments, engage parking brake, disengage weight transfer system (if equipped), shut off engine, and remove 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.
- Dispose of all fluids in accordance with local laws.

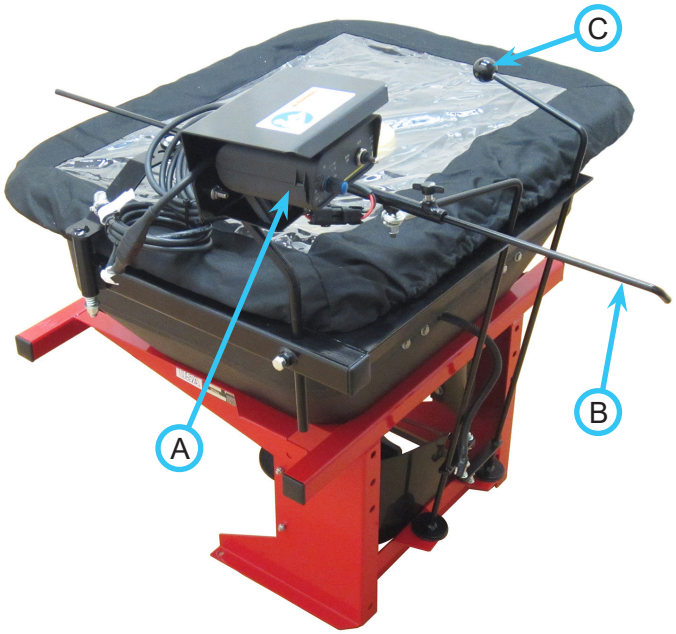
ES220 Safety Procedures

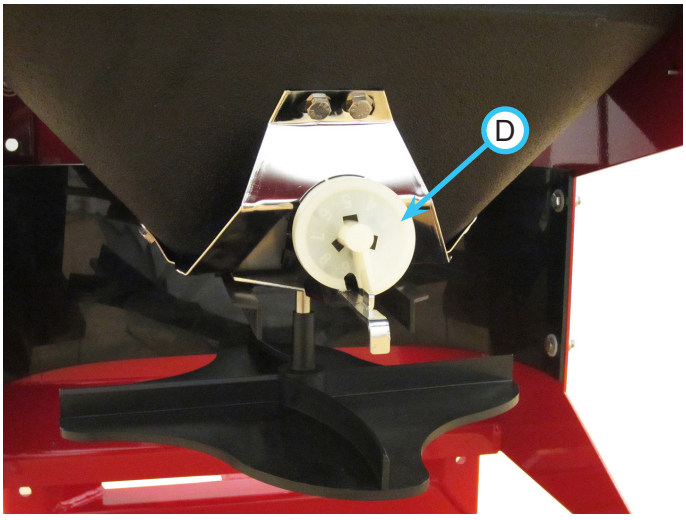
- Spreader must be locked to the power unit before operating power unit and spreader.
- Never exceed the rated weight capacity of the spreader.
- Always use weights or an attachment on the front or rear of the power unit to counter-balance the weight of the spreader.
- Do not operate power unit with ES220 spreader on slopes greater than 10 degrees. Operation on slopes greater than 10 degrees may result in loss of steering and/or traction.
- Maintain a 50 foot (15.2 meter) 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.
- Before working with the spreader, secure all loose-fitting clothing and unrestrained hair.
- Refer to material packaging or Material Safety Data Sheet (MSDS) for precautionary measures and Personal Protective Equipment required when handling and spreading the product.
- Always wear safety glasses with side shields when servicing spreader.
- Do not splice any other device into the wire harness.

OPERATIONAL CONTROLS

Operational Control Locations

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





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

Electronic Spreader Control (A)

The electronic spreader control is equipped with a switch that controls power to the motor and a dial 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.

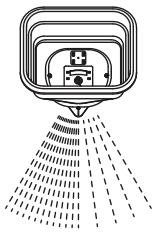
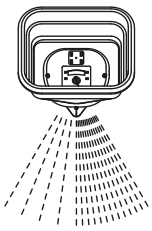
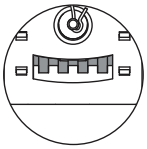
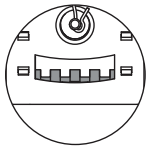
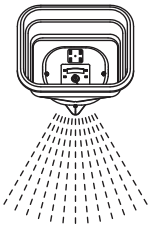
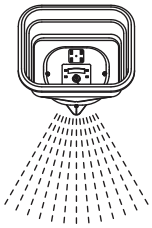
The motor and spinner speed is adjusted by rotating the speed control dial. Position 0 is the slowest setting and provides a narrow spread pattern. Position 10 is the fastest setting and will provide the widest spreading pattern. The spinner speed can be adjusted at any time to control the spread width.

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.

Accuway Spread Pattern Control (C)

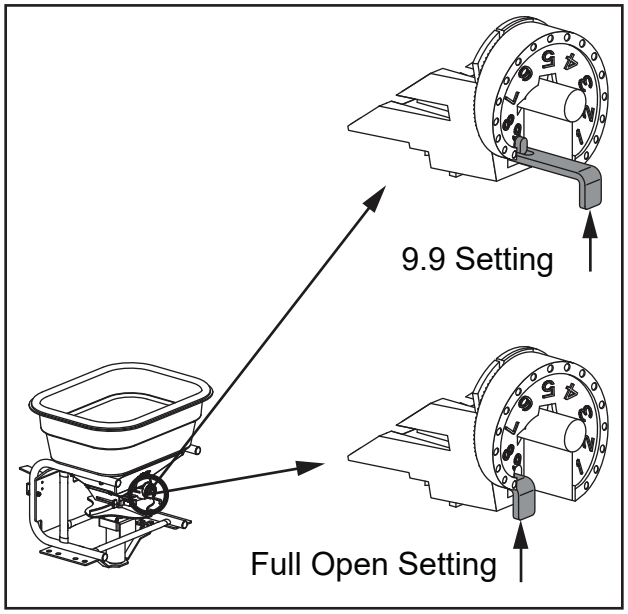
Different materials and spread conditions can cause the center of the spread pattern to shift to the left or right of the spreader. The Accuway spread pattern control is used to bring the center of the spread pattern back in line with the center of the spreader.

Travel		
Spread Pattern	Heavy to Left	Heavy to 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 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.

Daily Inspection

⚠ WARNING

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

1. Park 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 spreader. Look for loose or missing hardware, damaged components, or signs of wear.
3. Be sure all electrical connections are tight and clean.
4. Make sure all moving parts operate freely.
5. Refer to the power unit operator's manual. Check the power unit's engine oil, hydraulic oil, cooling system, tire pressure, and fuel level. Add fluid or service as required.
6. Test the power unit's operator safety interlock system*.

Attaching To Rear Of Power Unit (Receiver Hitch)

1. Slide the spreader hitch tube into the hitch receiver and fasten with a 5/8" 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 fasten 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.

Attaching To Rear Of Power Unit (Rear Weight Bar Hitch)

On a 4000 series power unit that is not equipped with a receiver hitch, a weight bar hitch is required. Refer to the parts drawing at the back of this manual for part number of weight bar hitch, leveling shims, and hardware needed for this hitch. Replace the standard spreader hitch with the weight bar hitch.

1. Remove the weights from the power unit's rear weight bar.
2. Mount the spreader to the power unit by placing the hitch over the power unit's weight bar.
3. If the spreader does not sit level, install height adjustment shims on the hitch frame (refer to parts drawing) with the flange between the hitch frame and the weight bar until the spreader is sitting in a level position.
4. Install the 1/2" bolt and washer down through the weight bar hitch and the hole in the power unit's hitch tongue.
5. Thread a 1/2" nut onto the bolt and hand tighten. Tighten a full turn with a wrench, then install a second 1/2" nut and lock the two nuts together.
6. 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 fasten to the spreader's control arm frame.
7. Adjust the height of the electronic control box to the desired position and retighten the locking bolt.
8. 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.

Attaching To Front Of 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" 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 fasten 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

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 power unit is moving. Close the rate gate while 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.

⚠ WARNING

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

⚠ WARNING

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.

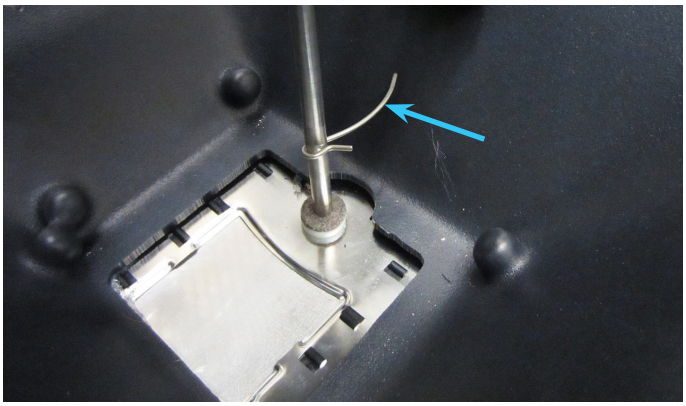
Follow all usage instructions for the product being spread.

Published dial settings on a product are approximate values only. They are generally calculated using a walk behind spreader with an approximate speed of 3 mph (4.8 km/h) and varying spread widths. Dial settings are 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 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. Make sure the rate gate is completely closed.
4. Determine if the rotary agitator is needed. If it is not needed, remove from the spreader shaft.
5. Add weights or an attachment to the front (or rear) of the power unit to provide counter-balance for the weight of the spreader and material.
6. Add the product to the spreader hopper. Do not exceed the maximum weight capacity of 220 pounds (100 kg).
7. Replace the hopper cover.

Spreader Operation

⚠ CAUTION

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

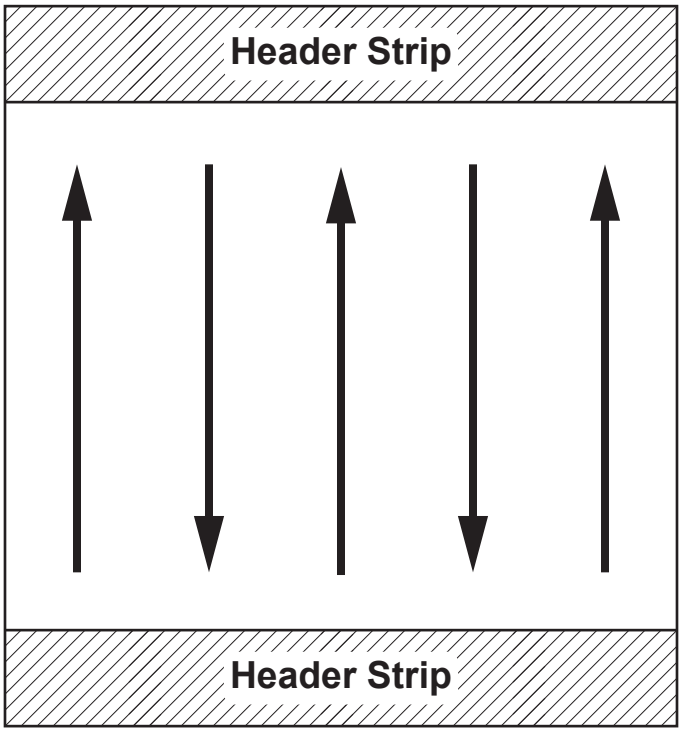
⚠ WARNING

Do not operate power unit with ES220 spreader on slopes greater than 10 degrees. Operation on slopes greater than 10 degrees may result in loss of steering and/or traction.

⚠ WARNING

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.

Spread header strips 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 (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.

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 2-1/2 mph (4 km/h).

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.

Dial Settings & Spreading Chart

NOTE: Dial Settings Are Approximate Only !			Dial Settings Full Rate Once Over	Dial Settings Half Rate Twice Over
Product	Particle Size	Lbs. per 1000 sq. ft.		
Fine Pellets		1	3.6	3.1
		2	4.0	3.5
		3	4.2	3.7
Mixed Fine Pellets		2	3.7	3.2
		4	4.7	4.1
		6	5.2	4.5
Small Pellets		2	3	2.2
		4	4.2	3.7
		6	4.5	4
Nitrogen Pellets Medium Size		1	3.5	3
		2	4.2	3.7
		3	4.7	4
Medium Pellets And Granuals		2	3.5	3
		4	4.2	3.8
		6	5.2	4.5
Large Heavy Pellets		2	3.8	3.3
		4	4.9	4.1
		6	5.9	4.9

GRASS SEED SPREADING CHART					
Product	Bag Weight	Sq. Ft. Coverage	Dial Setting Full Rate	Dial Setting Half Rate	Spread Width
Blue Grass or Red Top	.5 lbs.	1,000	1.25		4
	1 lbs.	1,000	2.0		4
	2 lbs.	1,000	2.5		4
Park, Merion, Delta, or Kentucky Bluegrass	.5 lbs.	1,000	2.5		4
	1 lbs.	1,000	3.0		4
	2 lbs.	1,000	3.5		4
Hulled Bermuda	2 lbs.	1,000	2.75	2.25	6
	3 lbs.	1,000	3.0	2.5	6
	4 lbs.	1,000	3.25	2.75	6
Mixtures Including Coarse Seeds	2 lbs.	1,000	6.0		6
	4 lbs.	1,000	7.0		6
	6 lbs.	1,000	7.0		6
Rye Grasses or Tall Fescue	2 lbs.	1,000	6.0		6
	4 lbs.	1,000	7.0		6
	6 lbs.	1,000	7.75		6
Dichondra	4 oz.	1,000	1.9		8
	8 oz.	1,000	2.1		8
	12 oz.	1,000	2.5		8
Pensacola Bahia	4 lbs.	1,000	4.5	3.75	7
	5 lbs.	1,000	4.75	4.0	7
	6 lbs.	1,000	5.0	4.25	7

⚠ WARNING

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

⚠ WARNING

Do not splice any other devices into the wiring harness. Harness modifications may void warranty.

⚠ CAUTION

Do not attempt to service the electronic spreader control or the spreader motor. Attempting to service or disassemble the electronic control or 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 product buildup.

Cleaning method #1:
Wipe all spreader surfaces with an oily cloth. Make sure any product buildup is removed. Clean and lubricate the gate slide and the Accuway diffuser slide.

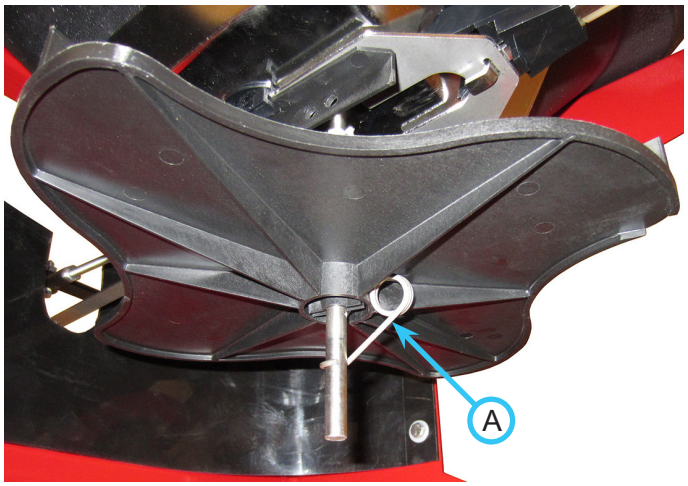
Cleaning method #2:
Wash the spreader thoroughly and allow to dry completely. Lubricate the gate slide and the Accuway diffuser slide.

Fuse Replacement (Electronic Spreader Control)

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

Removing 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 Spinner Blade or Mulch Basket

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

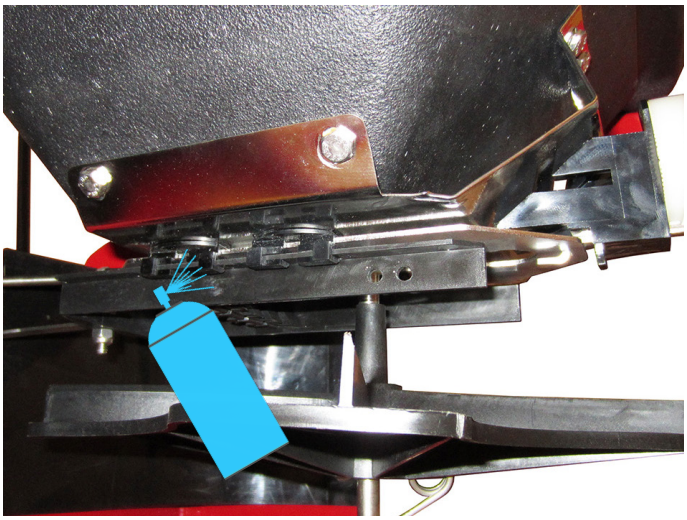
⚠ Attention

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.

Lubrication Locations

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



Storage

Preparing the Spreader for Storage

1. Clean the spreader.
2. Inspect for loose or missing hardware, damaged components, or signs of wear.
3. Inspect safety decals. Replace any safety decals that are faded, illegible, or missing.
4. Check painted components for damage to the paint. Use touch up paint to cover any damage that exposes bare metal.
5. Lubricate the gate slide and the Accuway diffuser slide.

Removing the Spreader from Storage

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

SPECIFICATIONS

Dimensions

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

*The spreading pattern and width is subject to many different variables, such as spreader mounting height, wind conditions, material type, etc.

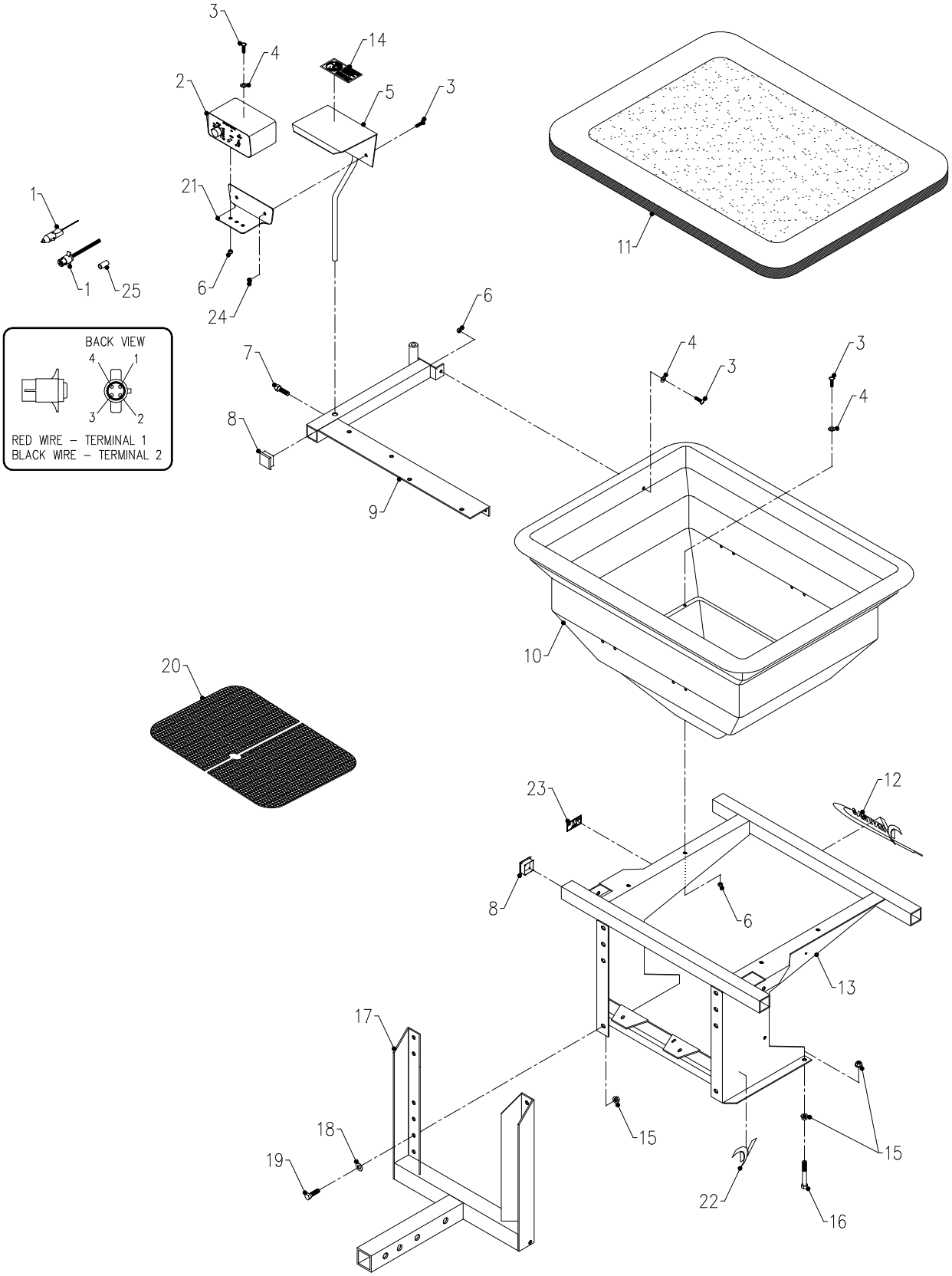
Features

2 inch receiver hitch
Ability to mount on either front or rear of power unit
Electronic spreader control with on/off switch and speed control
Polymer hopper
Hopper cover
Stainless steel hopper components (bottom plate, gate, etc.)
Remote gate and diffuser control

EC Declaration of Conformity
Ventrac ES220

Manufacturer	Venture Products, Inc. 500 Venture Drive Orrville, OH 44667 USA
Authorized Representative (also authorized to compile the technical file)	Lars Persson LAPAB MASKIN AB Box 46, S-734 22 Hallstahammar Flädervägen 5, 734 38 Hallstahammar SWEDEN
Technical File Keeper	Ryan Steiner Venture Products, Inc. 500 Venture Drive Orrville, OH 44667 USA
Description	Rear attached spreading device
Model Name	Ventrac ES220 Spreader
Model Number	39.55500
Serial Number	ES220-Axxxxx
This Product Conforms to Directives	2006/42/EC
Ryan Steiner Director of Engineering	23-July-2015 Orrville, OH USA

ILLUSTRATED DRAWING
Main Frame, Hopper, & Electronic Control



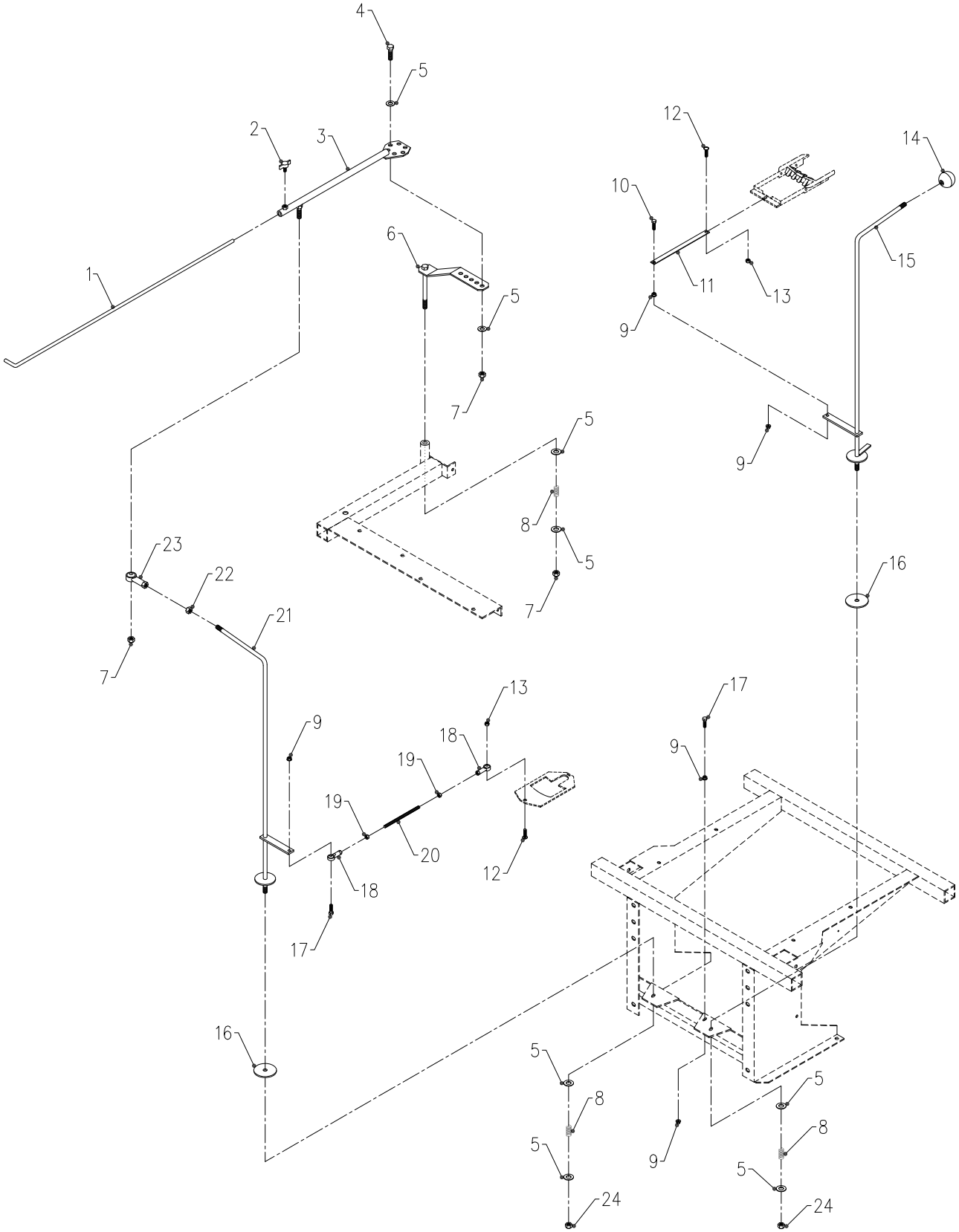
Use only original Ventrac replacement parts.

PARTS

Main Frame, Hopper, & Electronic Control

REF.	PART NO.	DESCRIPTION	QTY.
1	30.0222	PLUG, MALE 12V POWER OUTLET (Serial # 1001-1288)	1
1	30.0218	PLUG, TRAILER 4-PIN MALE (Serial # 1289-)	1
2	07.20128	CONTROL, MOTOR VARIABLE SPEED	1
3	99.K0095	MACHINE SCREW, 1/4 X 3/4 SS	12
4	05.0099	WASHER, NYLON 1/4	10
5	64.1089	BOX, ELECTRIC CONTROL	1
6	99.A04N-3	LOCKNUT, NYLON 1/4-20 USS SS	10
7	90.0608	BOLT, 3/8-16 USS X 1	1
8	05.0100	PLUG, SQUARE 1-3/8 OD RIBBED	5
9	62.0996	FRAME, CONTROL ARMS TOP MT	1
10	07.20106	HOPPER, PLASTIC	1
11	07.20103	COVER, HOPPER PLASTIC ES220	1
12	00.0212	DECAL, VENTRAC ORBITAL	1
13	62.0995	FRAME, MAIN	1
14	00.0217	DECAL, WARNING READ OWNERS MAN	1
15	99.SF06	NUT, SRF 3/8-16 USS	8
16	90.0628	BOLT, 3/8-16 USS X 3 1/2	2
17	62.0999	FRAME, MAIN HITCH	1
18	95.06	WASHER, FLAT 3/8 SAE	4
19	90.0606	BOLT, 3/8-16 USS X 3/4	4
20	07.20127	SCREEN, 2 PIECE	1
21	64.1307	BRACKET, SPEED CONTROL MT	1
22	00.0192	DECAL, V-DECAL DIE CUT BLUE	1
23	00.0100	DECAL, MADE IN USA	1
24	99.SF04-3	NUT, SRF 1/4-20 USS STAINLESS	2
25	27.T06-2-1IN	TUBE, PVC CLEAR 3/8 OD X ¼ ID X 1”	1

ILLUSTRATED DRAWING
Gate & Diffuser Control Handles & Linkage

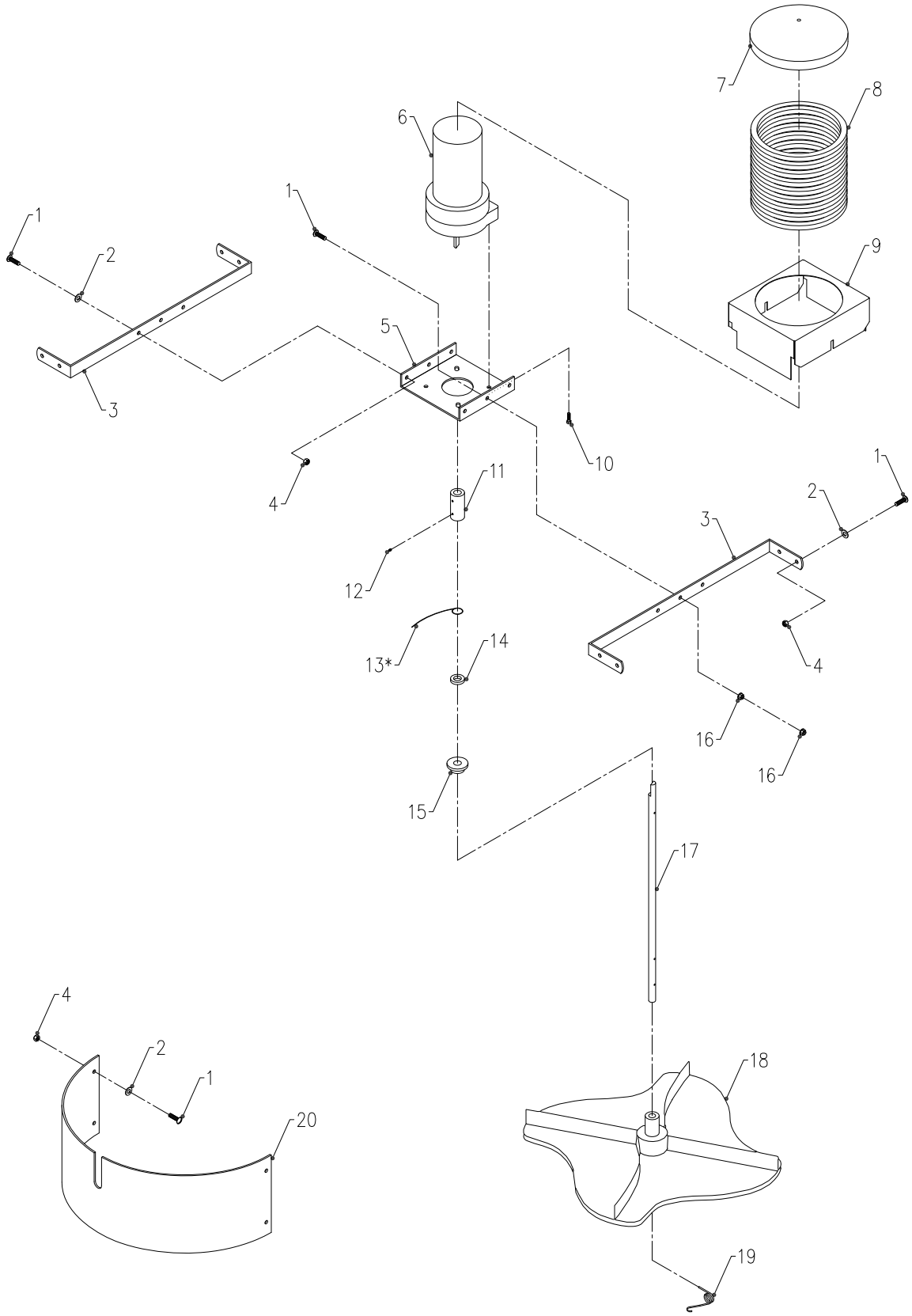


Use only original Ventrac replacement parts.

Gate & Diffuser Control Handles & Linkage

REF.	PART NO.	DESCRIPTION	QTY.
1	42.0465	ROD, CR 5/16 X 38L	1
2	47.0228	THUMB SCREW, 5/16-18 X 5/8	1
3	62.0997	TUBE, CONTROL LEVER MOUNT	1
4	90.0608	BOLT, 3/8-16 USS X 1	1
5	95.06	WASHER, FLAT 3/8 SAE	8
6	42.0464	ARM, CONTROL HANDLE PIVOT	1
7	99.A06N	LOCKNUT, NYLON 3/8-16	3
8	41.0039	SPRING, COMP. 9/16 OD X 5/8	3
9	99.SF04	NUT, SRF 1/4-20 USS	5
10	90.0410	BOLT, 1/4-20 USS X 1 1/4	1
11	42.0463	LINK, SS SPREAD CONTROL	1
12	99.K0095	MACHINE SCREW, 1/4 X 3/4 SS	2
13	99.A04N-3	LOCKNUT, NYLON 1/4-20 USS SS	2
14	47.0227	KNOB, BALL 1-3/8 DIA 3/8-24	1
15	40.0315	ARM, FLOW GATE ON/OFF	1
16	05.0098	WASHER, 1/2ID X 2-1/4OD 1/8THK	2
17	90.0408	BOLT, 1/4-20 USS X 1	2
18	43.004P	ROD END, 1/4 SPHERICAL PLASTIC	2
19	93.04	NUT, 1/4-28 SAE	2
20	99.J0440NFSS	THREADED ROD, 1/4 SAE X 5” SS	1
21	40.0316	ARM, SPREAD CONTROL	1
22	93.06	NUT, 3/8-24 SAE	1
23	43.006	ROD END, 3/8 SPHERICAL	1
24	99.A06NFN	LOCKNUT, NYLON 3/8-24 SAE ZP	2

ILLUSTRATED DRAWING
Motor & Spinner



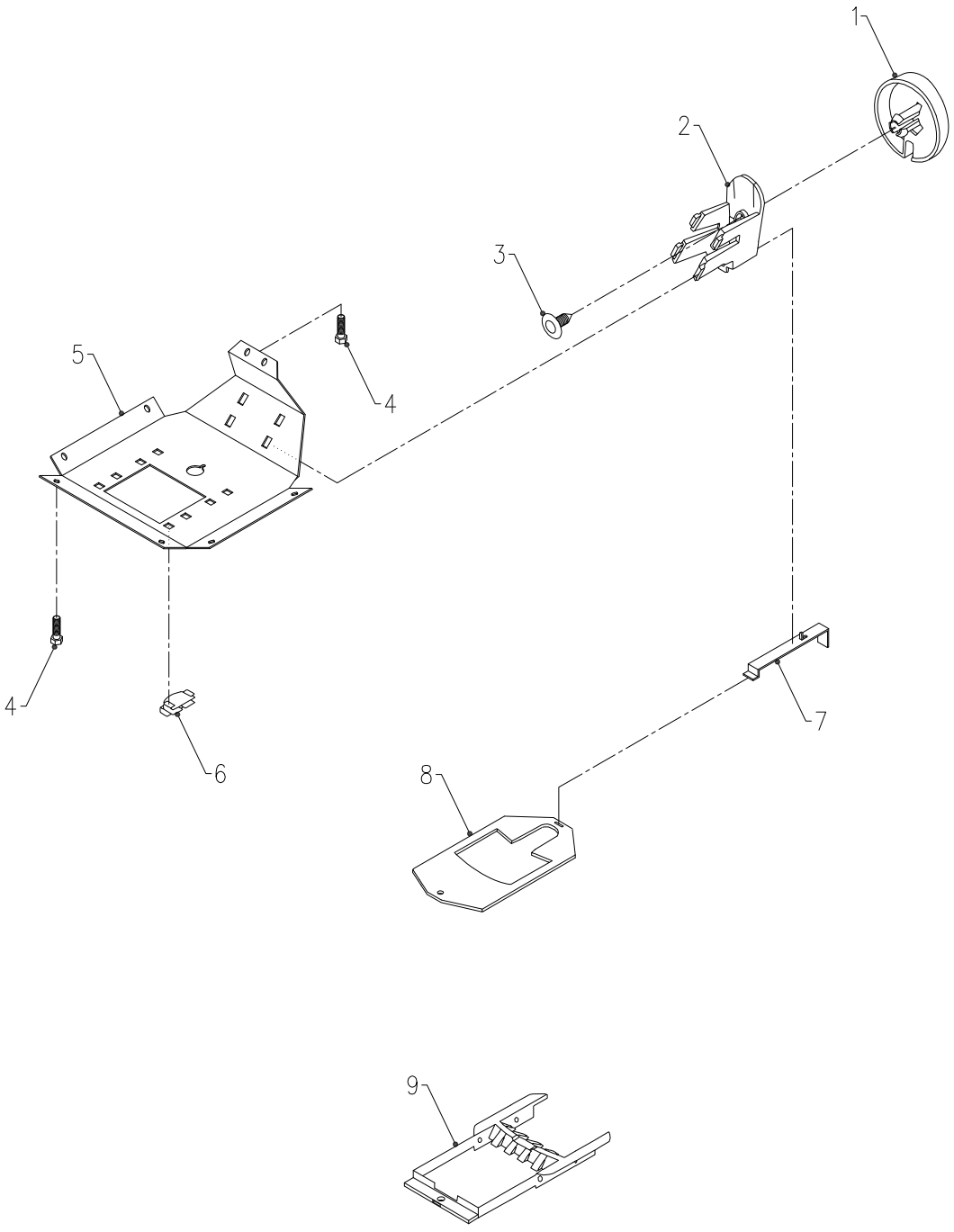
Use only original Ventrac replacement parts.

PARTS

Motor & Spinner

REF.	PART NO.	DESCRIPTION	QTY.
1	99.K0095	MACHINE SCREW, 1/4 X 3/4 SS	18
2	05.0099	WASHER, NYLON 1/4	16
3	07.20109	BRACKET, MOTOR MOUNT	2
4	99.A04N-3	LOCKNUT, NYLON 1/4-20 USS SS	16
5	07.20110	PLATE, MOTOR MOUNT BASE	1
6	07.20105	MOTOR, ELECTRIC GEAR ES220	1
7	47.0229	CAP, VINYL YELLOW FLANGE COVER	1
8	47.0230	TUBE, 6” DRAIN TILE X 6-3/4	1
9	60.0877	COVER, MOTOR BASE	1
10	90.0404-3	BOLT, 1/4-20 USS X 1/2 SS	4
11	07.20107	COUPLING, SPINNER SHAFT	1
11	07.20123	KEY, HEX (Not Shown)	1
12	85.SS24	SET SCREW, 1/4-20 X 3/8 SS	2
13	07.20119	WIRE, AGITATOR (For Seed & Pellet Mulch)	1
14	07.20124	WASHER, FELT	1
15	07.20112	BEARING, HOPPER BOTTOM	1
16	99.SF04-3	NUT, SRF 1/4-20 USS STAINLESS	4
17	07.20108	SHAFT, SPINNER	1
18	07.20120	SPINNER, GREY PLASTIC	1
19	07.20122	CLIP, SPINNER	1
20	07.20125	SHIELD, DEFLECTOR	1

ILLUSTRATED DRAWING
Rate Dial, Gate, & Diffuser



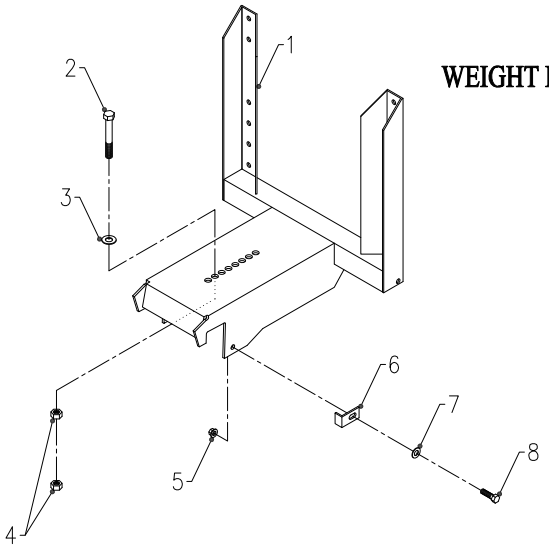
Rate Dial, Gate, & Diffuser

REF.	PART NO.	DESCRIPTION	QTY.
1	07.20117	DIAL	1
2	07.20118	MOUNT, DIAL	1
3	07.20121	CLIP, PINE TREE	1
4	90.0404-3	BOLT, 1/4-20 USS X 1/2 SS	8
5	07.20111	PLATE, HOPPER BOTTOM	1
6	07.20113	GUIDE, RATE GATE & DIFFUSER	4
7	07.20116	LINKAGE, RATE GATE	1
8	07.20114	GATE, RATE	1
9	07.20115	ASSEMBLY, DIFFUSER	1

ILLUSTRATED DRAWING

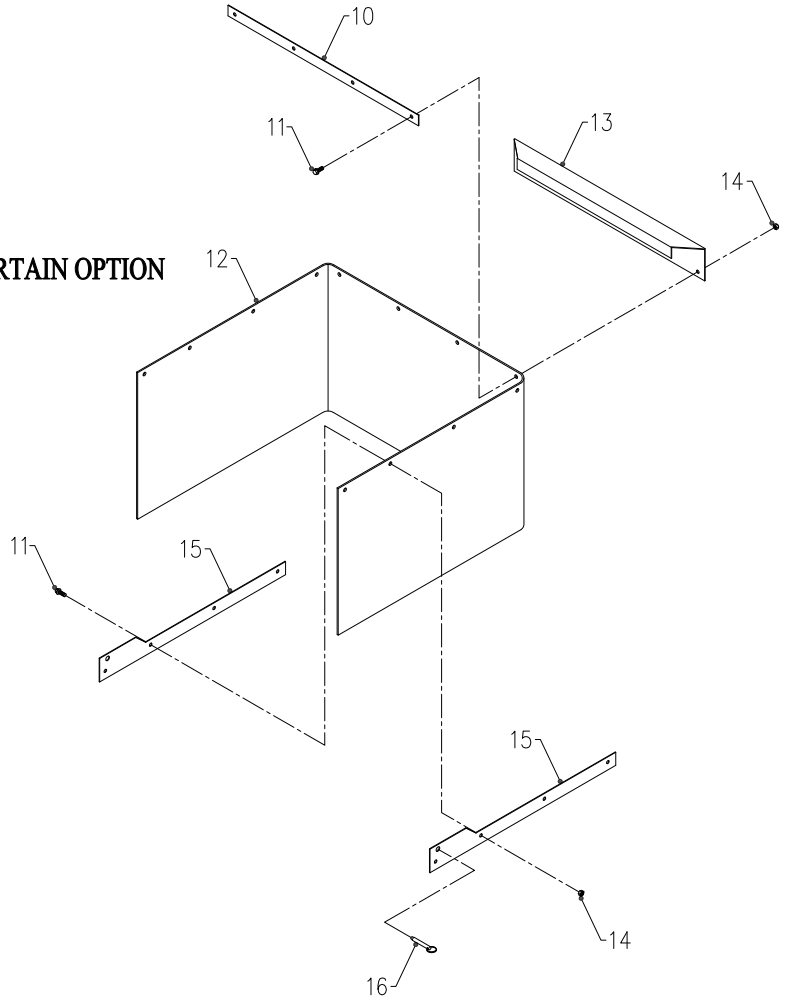
Optional Weight Bar Hitch, Curtain Kit, Mulch Basket Spinner

WEIGHT BAR HITCH MOUNT

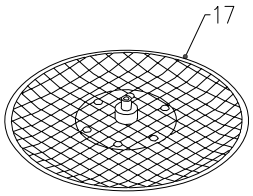


ELECTRICAL PLUG ADAPTER

CURTAIN OPTION



PELLET MULCH SPINNER BASKET

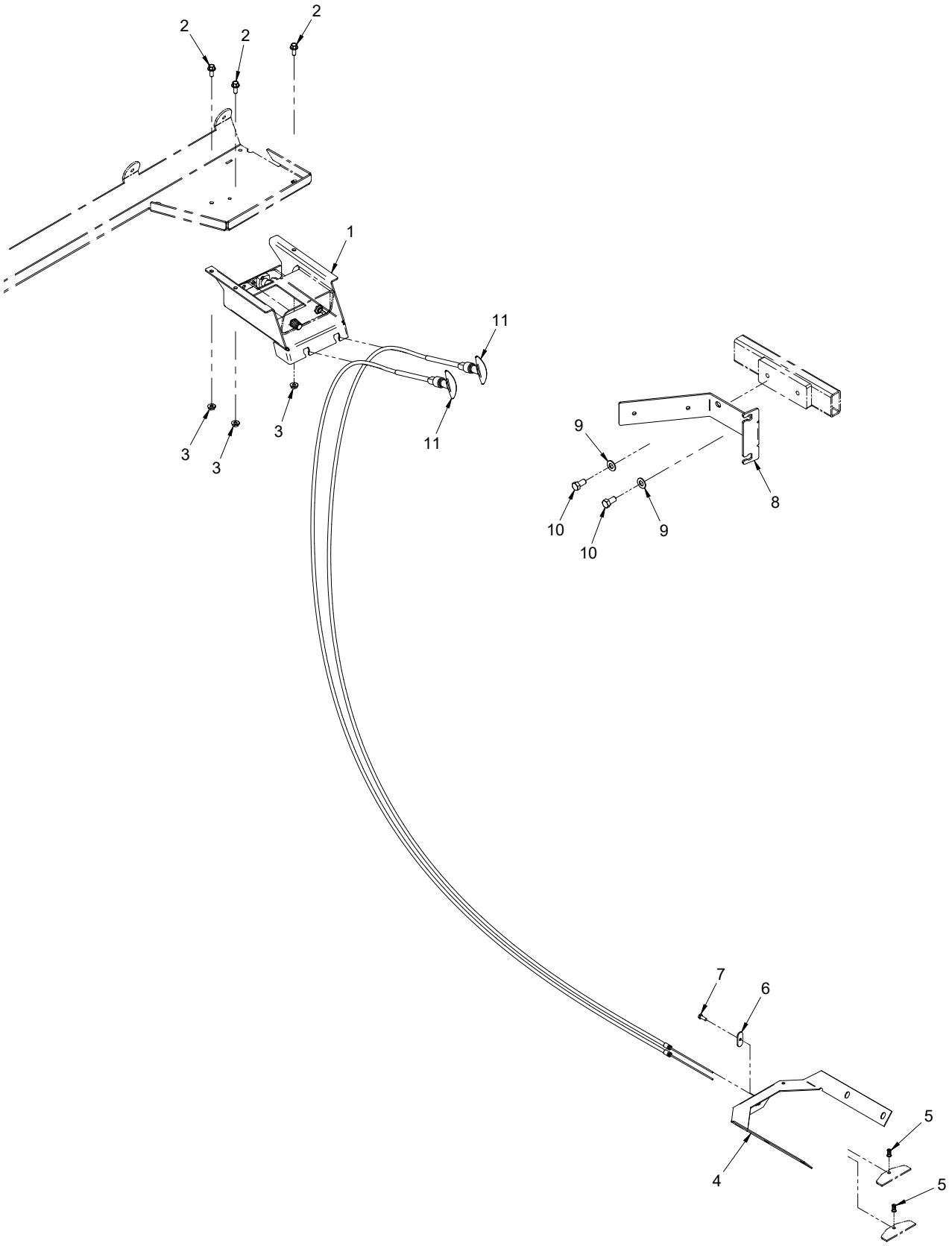


PARTS

Optional Weight Bar Hitch, Curtain Kit, Mulch Basket Spinner

REF.	PART NO.	DESCRIPTION	QTY.
1	62.0998	HITCH, WEIGHT BAR ES220	1
2	90.0824	BOLT, 1/2-13 USS X 3 (For Standard Hitch)	1
2	90.0848	BOLT, 1/2-13 USS X 6 (For 3-Point Hitch)	1
3	94.08	WASHER, FLAT 1/2 USS	1
4	92.08	NUT, 1/2-13 USS	2
5	99.SF06	NUT, SRF 3/8-16 USS	2
6	64.1093	SHIM, HEIGHT ADJUSTMENT	4
7	95.06	WASHER, FLAT 3/8 SAE	2
8	90.0608	BOLT, 3/8-16 USS X 1	2
9	34.1400-1010	ADAPTER, ELECTRIC 4 PIN TO 12V	1
10	64.1091	CLAMP, CURTAIN BACKER BAR	1
11	90.0406	BOLT, 1/4-20 USS X 3/4	12
12	44.0203	RUBBER, CONTAINMENT CURTAIN	1
13	64.1090	BRACKET, CURTAIN MOUNT	1
14	99.A04	LOCKNUT, STOVER 1/4-20 USS	12
15	64.1092	BRACKET, CURTAIN SIDE SUPPORT	4
16	03.0006	PIN, BALL 3/8 X 1”	2
17	07.20102	SPREADER, MULCH SPINNER BASKET	1

ILLUSTRATED DRAWING
70.8105 Cable Control Kit



Use only original Ventrac replacement parts.

70.8105 Cable Control Kit

REF.	PART NO.	DESCRIPTION	QTY.
1	64.1507	BRACKET, KW350 ES220 CABLE	1
2	99.SF0405-1	BOLT, SMF 1/4-20 X 5/8	3
3	99.SF04	NUT, SRF 1/4-20 USS	3
4	47.0296	BRACKET, CABLE MOUNT ES220	1
5	47.0295	FASTENER, CABLE ES220	2
6	45.0049	RETAINER, CABLE ES220	1
7	99.K0117	BOLT, 10-32 X 1/2 SS	1
8	64.1508	BRACKET, LW350 ES220 CABLE	1
9	95.06	WASHER, FLAT 3/8 SAE	2
10	90.0606	BOLT, 3/8-16 USS X 3/4	2
11	47.0294	CABLE, CONTROL 8 FT	2

WARRANTY

LIMITED WARRANTY - VENTRAC COMMERCIAL EQUIPMENT

Venture Products, Inc., (henceforth referred to as V.P.I.) warrants on the terms and conditions herein, that it will repair, replace, or adjust any part manufactured by Venture Products Inc., and found by Venture Products, Inc., to be defective in material and/or workmanship during the applicable warranty term.

All Ventrac commercial equipment purchased and registered on or after January 1, 2019 will carry a 2-year commercial warranty. The warranty period begins on the date of original customer purchase:

Ventrac Commercial Equipment	Warranty Term
2100 SSV & Attachments	2-year
3000 Series Tractors & Attachments	2-year
4000 Series Tractors & Attachments	2-year

All Ventrac add-on kits and accessories such as: 3-point hitch, 12V front & rear power outlets, foot pedal, dual wheel kit, etc., will be covered under the above warranty periods provided they are installed by an Authorized Ventrac Dealer. This warranty may be transferred and will carry the remainder of the warranty starting from the original purchase/registration date with the dealership and/or V.P.I.

The engine warranty is covered by its respective engine manufacturer. Please refer to the engine manufacturer's warranty statement that is included in the owner's manual.

For warranty consideration on Ventrac commercial equipment, including any defective part, must be returned to an Authorized Ventrac Dealer within the warranty period. The warranty shall extend to the cost to repair or replace (as determined by V.P.I.) the defective part. The expense of pickup and delivery of equipment, service call drive time or any transportation expense incurred for warranty repair is the sole responsibility of the owner and is not covered under warranty by Ventrac and/or V.P.I. Ventrac and V.P.I.'s responsibility in respect to claims is limited to making the required repairs or replacements, and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Ventrac equipment. Proof of purchase may be required by the dealer to substantiate any warranty claim. Only warranty work performed and submitted by an Authorized Ventrac Dealer may be eligible for warranty credit.

This warranty extends only to Ventrac commercial equipment operated under normal conditions and properly serviced and maintained. The warranty expressly does NOT cover: (a) any defects, damage or deterioration due to normal use, wear and tear, or exposure; (b) normal maintenance services, such as cleaning, lubrication, oil change; (c) replacement of service items, such as oil, lubricants, spark plugs, belts, rubber hoses, bearings or other items subject to normal service replacement; (d) damage or defects arising out of, or relating to abuse, misuse, neglect, alteration, negligence or accident; (e) repair or replacement arising from operation of, or use of the equipment which is not in accordance with operating instructions as specified in the operator's manual or other operational instructions provided by V.P.I.; (f) repair or replacement arising as a result of any operation from Ventrac equipment that has been altered or modified so as to, in the determination of V.P.I., adversely affect the operation, performance or durability of the equipment or that has altered, modified or affected the equipment so as to change the intended use of the product; (g) repair or replacement necessitated by the use of parts, accessories or supplies, including gasoline, oil or lubricants, incompatible with the equipment or other than as recommended in the operator's manual or other operational instructions provided by V.P.I.; (h) repairs or replacements resulting from parts or accessories which have adversely affected the operation, performance or durability of the equipment; or (i) damage or defects due to or arising out of repair of Ventrac equipment by person or persons other than an authorized Ventrac service dealer or the installation of parts other than genuine Ventrac parts or Ventrac recommended parts.

LIMITED WARRANTY - VENTRAC COMMERCIAL EQUIPMENT

The sole liability of V.P.I. with respect to this warranty shall be the repair and replacement as set forth herein. V.P.I. shall have no liability for any other cost, loss, or damage. In particular V.P.I shall have no liability or responsibility for: (i) expenses relating to gasoline, oil, lubricants; (ii) loss, cost or expense relating to transportation or delivery of turf equipment from the location of owner or location where used by owner to or from any Authorized Ventrac Dealer; (iii) travel time, overtime, after hours' time or other extraordinary repair charges or charge relating to repairs or replacements outside of normal business hours at the place of business of an Authorized Ventrac Dealer; (iv) rental of like or similar replacement equipment during the period of any warranty repair or replacement work; (v) any telephone or telegram charges; (vi) loss or damage to person or property other than that covered by the terms of this warranty; (vii) any claims for lost revenue, lost profit or additional cost or expense incurred as a result of a claim of breach of warranty; or (viii) attorney's fees.

The remedies of buyer set forth herein are exclusive and are in lieu of all other remedies. The liability of V.P.I., whether in contract, tort, under any warranty, or otherwise, shall not extend beyond its obligation as set forth herein. V.P.I. shall not be liable for cost of removal or installation nor shall V.P.I. be responsible for any direct, indirect, special or consequential damages of any nature. In no event shall V.P.I. be liable for any sum in excess of the price received for the goods for which liability is claimed.

There are no representations or warranties which have been authorized to the buyer of the Ventrac commercial equipment other than set forth in this warranty. Any and all statements or representations made by any seller of this equipment, including those set forth in any sales literature or made orally by any sales representative, are superseded by the terms of this warranty. Any affirmation of fact or promise made by V.P.I. or any of its representatives to the buyer which relates to the goods that are the subject to this warranty shall not be regarded as part of the basis of the bargain and shall not be deemed to create any express warranty that such goods shall conform to the affirmation or promise.

No employee, distributor, or representative is authorized to change the foregoing warranties in any way or grant any other warranty on behalf of V.P.I.

Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion on limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty applies to all Ventrac commercial equipment sold by Venture Products Inc.

1 YEAR LIMITED WARRANTY

This is warranted to the original purchaser only, other than used commercially, against defects in materials and workmanship, for a period of one year from the date of purchase.

*For Spyker Spreaders LLC, products employing metal gear systems, pinion and bevel, these metal gears, only, not inclusive of any other parts or materials, are warranted for the life of the spreader, not to be used for replacement or repair past original purchase.

Spyker Spreaders LLC 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 LLC 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.

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