



Operator's Manual

NA 130

Drop Spreader





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A downloadable parts manual is also available.

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 drop spreader! We hope that Ventrac equipment will provide you with a ONE Tractor Solution.

Product Description

The Ventrac NA130 drop spreader is designed to spread an array of deicing materials with precision flow control. With a narrow frame and a 29" (73.7 cm) drop pattern, the drop spreader is ideal for spreading material on sidewalks and other narrow walkways.

The drop spreader is equipped with a unique compression roller system to evenly distribute material. Five motor speeds allow for quick flow adjustments.

Stainless steel construction prevents premature failure due to rust and corrosion. An innovative agitation system prevents material bridging and eliminates the need for a traditional, noisy vibration motor.

NOTE: the NA130 drop spreader is not compatible with serial numbers AA01001 - AA01040 of the NB200 brine system.

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 SSV 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.
- Appropriate cold weather clothing.
- 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.
- 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.

SAFETY



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



- 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.
- 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.
- 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.

Keep Riders Off

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

SAFETY



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.
- Do not operate on slopes greater than 10 degrees.
- Do not stop or start suddenly when operating on slopes.
- 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.
- 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.

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 any doubt of safety conditions, discontinue the machine operation until a time when the operation can be performed safely.

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.
- 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, adjust-

SAFETY



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



ing, 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.
- 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



NA130 Safety Procedures



- Do not operate the spreader in temperatures below -20° F (-29° C) or above 50° F (10° C).
- Never attempt to remove the spreader from the power unit while there is material in the hopper.
- Before attempting to clear an obstruction or empty the hopper by hand, unplug the spreader motor from the power supply to prevent accidental startup.
- Always make sure personnel are clear of areas of danger when using equipment.
- Never use with foreign debris in the spreader. The spreader is designed only for use with deicing materials.
- Before working with the spreader, secure all loose fitting clothing and unrestrained hair.
- Always wear safety glasses with side shields when servicing the spreader.
- Do not splice any other device into the wire harness.
- The NA130 spreader is not designed for use with aftermarket vibrators/agitation systems.

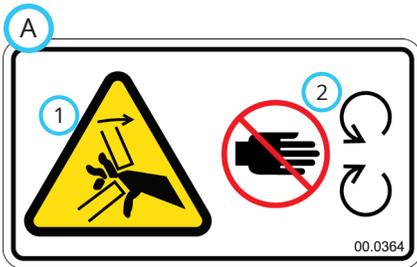
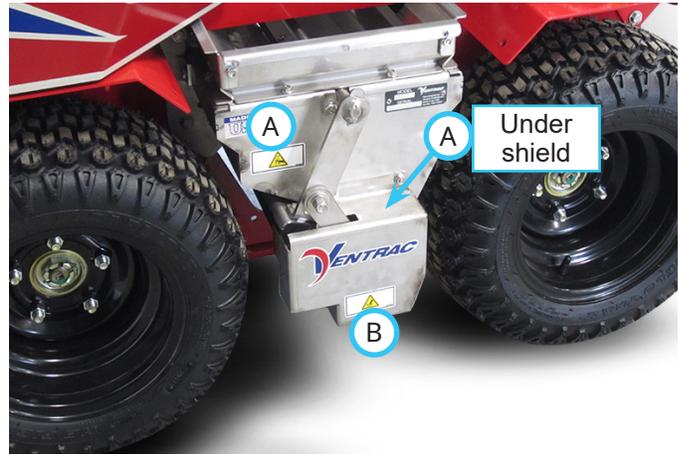
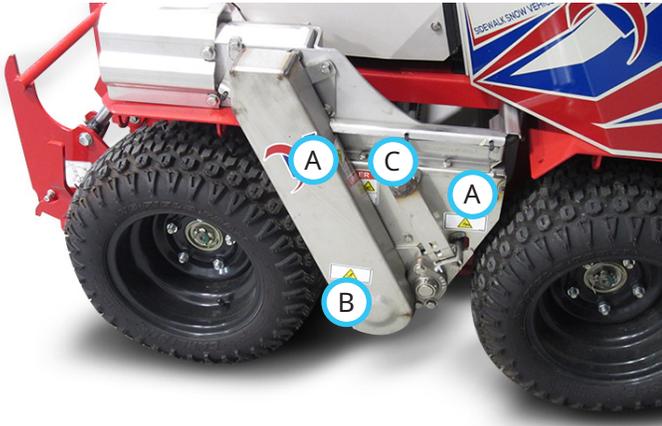
SAFETY

Safety Decals

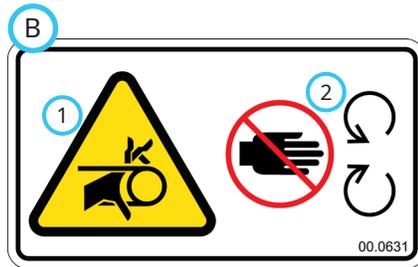
The following safety decals must be maintained on your attachment.

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.

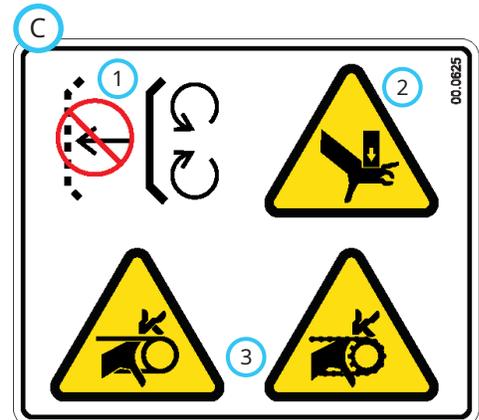
When new components are installed, be sure that current safety decals are affixed to the replacement components.



1. Pinching or crushing hazard.
2. Stay away from moving parts.



1. Fingers or hand entanglement.
2. Stay away from moving parts.



1. Shield missing - do not operate.
2. Pinching/crushing hazard.
3. Fingers or hand entanglement hazard.

Decal	Description	Part Number	Quantity
A	Warning, Pinch Point	00.0364	4
B	Finger/Hand Entanglement	00.0631	2
C	Shield Missing	00.0625	1

SETUP

Setup Instructions for the Power Unit and Drop Spreader

Installation Time (estimated)

3.0 hours

⚠ WARNING

Engage the parking brake, shut off the power unit engine, and remove the ignition key prior to setup of the power unit and drop spreader.

Always disconnect the negative battery cable from the battery when working with electrical components. Always work in a manner that does not put safety at risk!

⚠ WARNING

Eye protection must be worn during installation. Hearing protection must be worn when using air or power tools.

ATTENTION

To prevent thread galling, lubricate the bolt threads with a lithium complex NLGI #2 grease and use hand tools to tighten stainless steel fasteners. Do not use air or electric power tools as this increases the potential of thread galling.

Unless specified otherwise, use the bolt torque specifications listed below for all fasteners used during the setup and installation of the drop spreader.

Bolt Torque Specifications (Lubricated)

Bolt Size	Torque (English)	Torque (Metric)
1/4-20	67 in-lbs	8 Nm
5/16-18	117 in-lbs	13 Nm
3/8-16	18 ft-lbs	24 Nm

1. Park the power unit on a level surface.
2. Engage the parking brake, shut off the engine, and remove the ignition key.
3. Press the button on the battery disconnect switch.

⚠ WARNING

Contact with hot engine components can cause severe burns.

Allow the engine and muffler to cool completely before proceeding with setup.

4. Allow the engine and muffler to cool completely.

NT2100 Dash Prep

1. Remove the front access panel from the engine covers.

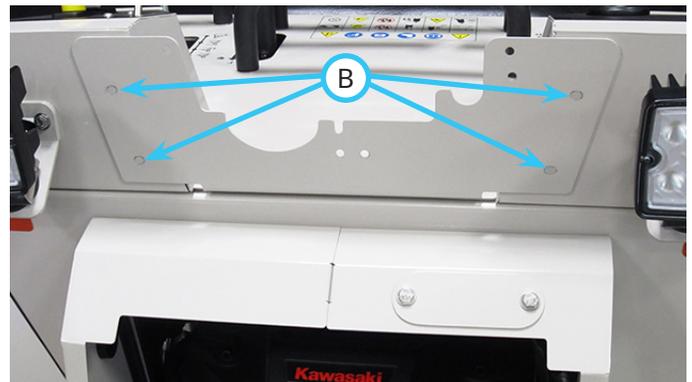
ATTENTION

The brine system (serial # 01041-) and the drop spreader use the same front dash mount, front cover, and cushioned clamp on the left tower frame. If equipped with a brine system, install the motor controller bracket onto the existing dash mount. The front cover must be removed to route the harness and install the harness grommet.

2. Remove the two bolts (A) between the upper dash panels.



3. Power units with serial numbers 01001 - 01230 will require mounting holes to be drilled in the outer dash panels. For power units outside of this range, skip to step 8.
4. Install the front dash mount between the upper dash panels on the power unit using the bolts removed in step 2.
5. Use the front dash mount to mark the hole locations (B) in the upper dash panels.



6. Remove the front dash mount from the power unit and drill the holes in the upper dash panels using a 9/32 inch (7 mm) drill bit.
7. Remove any metal shavings and use tan touch up paint on the drilled holes.

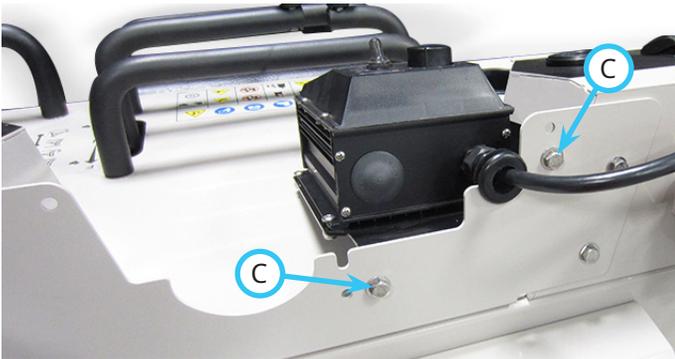
SETUP

8. Install the front dash mount between the upper dash panels on the power unit using the bolts removed in step 2 on top of the dash and four 1/4 x 3/4 inch bolts, flat washers, and flange nuts to fasten the mount to the upper dash panels. Tighten all six bolts.



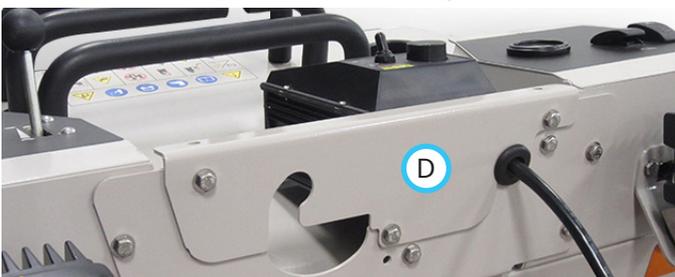
Controller and Spreader Installation (All models)

9. Install the controller and mount onto the dash mount plate using two 1/4 x 3/4 inch bolts (C), flat washers, and flange nuts. Insert the grommet on the power cord into the notch in the front dash mount.



NOTE: if installing a brine system on the power unit, refer to the brine system setup and install the brine valve assembly onto the front dash mount before proceeding with this installation.

10. Install the front cover (D) onto the front dash mount, making sure the grommet is seated in the notches of both the front dash mount and the front cover. Fasten the front cover using three 1/4 x 3/4 inch bolts, flat washers, and flange nuts.



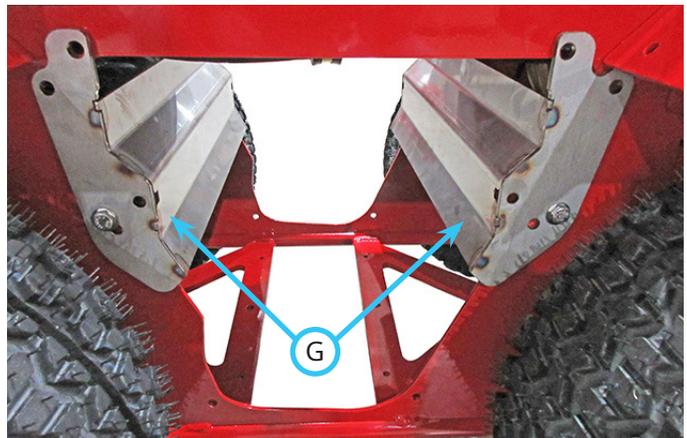
11. Remove the center fender platforms (E) from both the left and right sides of the power unit.



12. Remove the frame side covers (F) from both the left and right sides of the power unit.

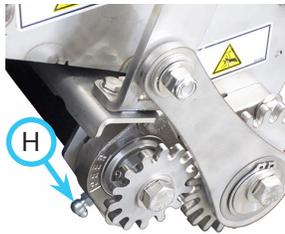


13. Install the bin mount brackets (G) in the front and rear of the opening in the power unit frame. NOTE: the front bin mount has wider side flanges than the rear bin mount. Fasten with one 5/16 x 3/4 inch bolt, flat washer, and flange nut in the lower mounting hole on both sides of each bracket (four bolts total). Tighten only until finger tight.

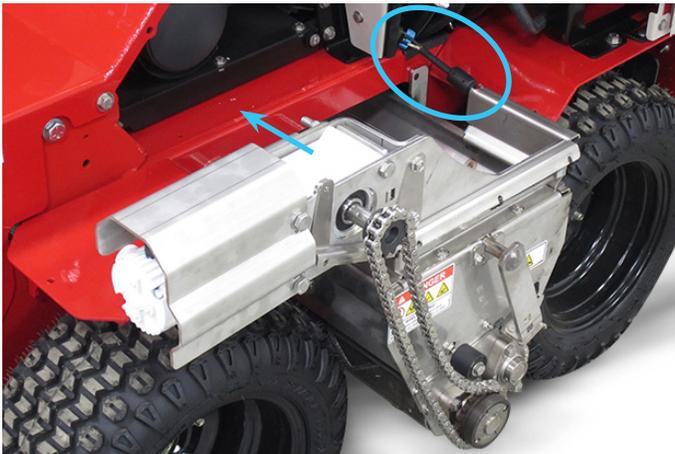


SETUP

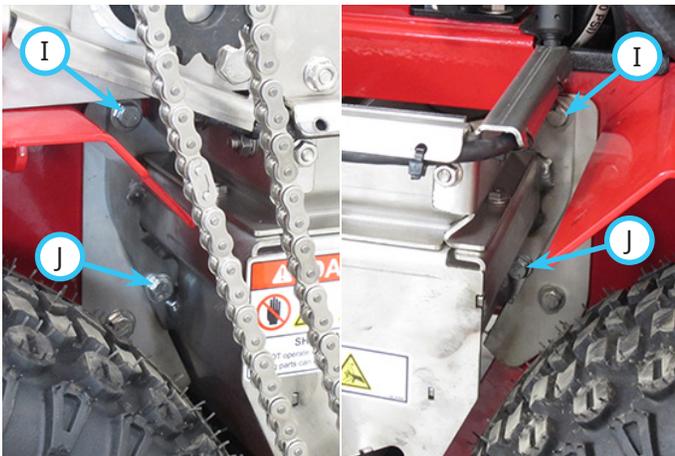
14. On 2100 power units with serial numbers 01001 - 01324, remove the 90 degree grease fitting (H - if equipped) from the right rear bearing before installing the spreader into the power unit.



15. Remove the left engine cover from the power unit.
16. Slide the spreader into the opening from the left side of the power unit. Make sure the wire harness from the motor is seated in the slot in the bin extension and routed into the left side of the power unit frame.

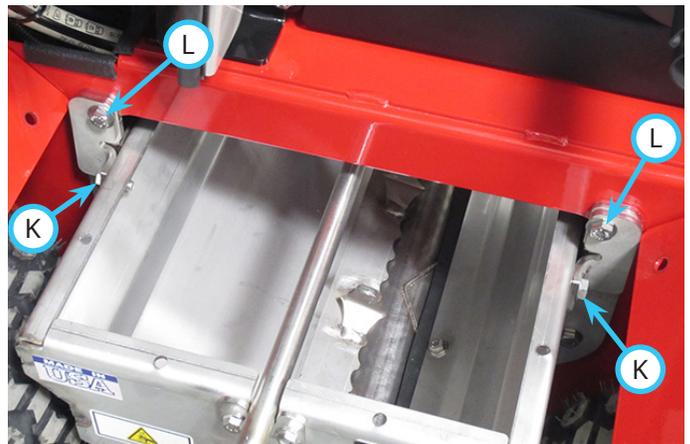


17. Install a 5/16 x 1 inch bolt (I) and flat washer through the upper hole in the left side of each spreader frame bin mount, the bin mount bracket, and the power unit frame. Secure with flange nuts but do not tighten.



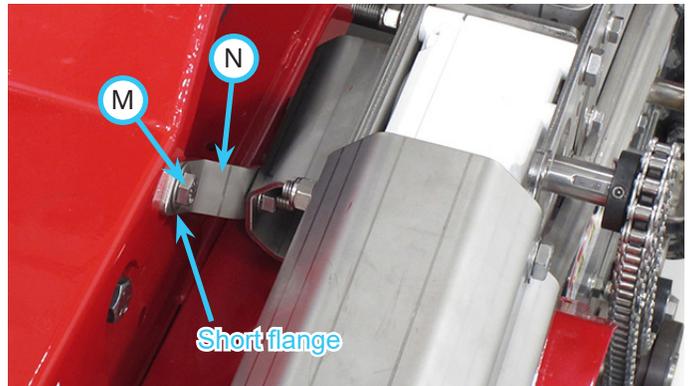
18. Install a 5/16 x 3/4 inch bolt (J) and flat washer through the lower hole in each spreader frame bin mount and the bin mount bracket. Secure with flange nuts but do not tighten.

19. Install the right front and right rear bin mount angle brackets using a 5/16 x 3/4 inch bolt (K), flat washer, and flange nut to fasten the bracket to the front or rear of the bin frame. Do not tighten.



20. Insert a 5/16 x 1 inch bolt (L) and flat washer through each angle bracket, the bin mount bracket, and the power unit frame and secure with flange nuts. Do not tighten.

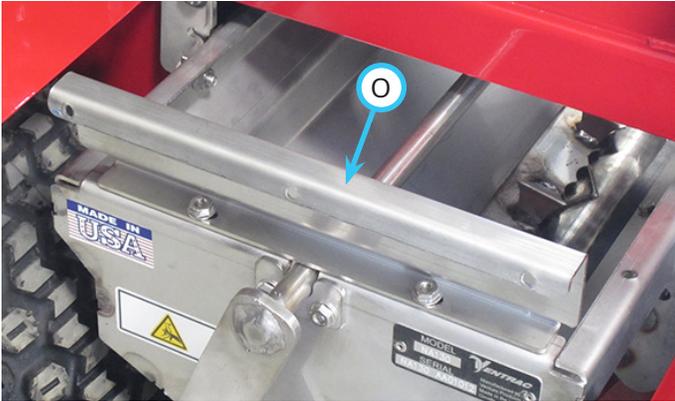
21. Remove the left rear mounting bolt (M) from the accessory mount shield frame on the power unit.
22. Install the offset support bracket (N) onto the accessory mount shield frame using a 3/8 x 1 inch bolt, flat washer, and flange nut. Do not tighten. Fasten the support bracket to the motor shield using a 3/8 x 3/4 inch bolt, flat washer, and flange nut. Do not tighten.
NOTE: make sure the shorter flange of the support bracket is installed at the accessory mount and the longer flange is installed to the motor shield.



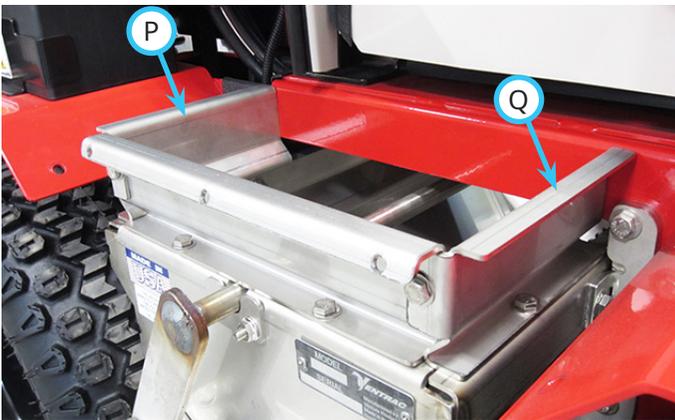
23. Tighten the six mounting bolts for the spreader bin frame and bin mount brackets on the left side of the spreader.

SETUP

24. Tighten the six mounting bolts for the bin mount angle brackets and bin mount brackets on the right side of the spreader.
25. Tighten the two mounting bolts for the offset support bracket.
26. Install the left engine cover onto the power unit.
27. Install the right end bin extension (O) using two 1/4 x 1/2 inch bolts and flat washers inserted up through the bin flange and the bin extension. Secure with flange nuts. Do not tighten.

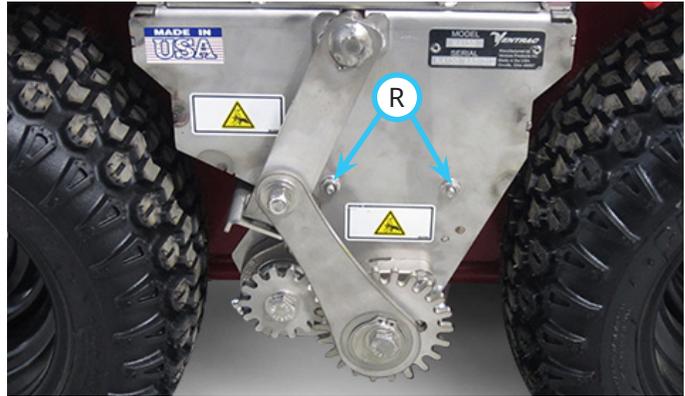


28. Position the rear bin extension (P) with the end flange on the outside of the right end bin extension. Fasten with two 1/4 x 1/2 inch bolts, flat washers, and flange nuts. Do not tighten.



29. Position the front bin extension (Q) with the end flange on the outside of the right end bin extension. Fasten with two 1/4 x 1/2 inch bolts, flat washers, and flange nuts. Do not tighten.
30. Position the bin extensions in line with bin panels and tighten all six mounting bolts.
31. If the 90 degree grease fitting for the right rear bearing was removed during installation, reinstall the grease fitting with the end pointing down.

32. Remove two nuts (R) from the right side of the bin end panel.



33. Install the rotor gear guard (S) onto the bin end using the original hardware for the two upper mounting locations and a 1/4 x 1/2 inch bolt, flat washer, and flange nut for the bottom flange location. NOTE: when reinstalling the two upper bolts, make sure the rotor cap bracket is reinstalled on the inside of the bin.



34. Remove the two upper mounting bolts (T) for the motor cord shield.



SETUP

35. Install the chain guard (U) using the original hardware for the two upper mounting locations and a 5/16 x 3/4 inch bolt, flat washer, and flange nut for the bottom flange location.



36. Plug the 2 position male connector on the motor power cord into the female connector on the spreader wire harness.
37. Locate the 2 position female connector with a red wire (labelled A-121) and a black wire (A-112) in the left upper frame area of the power unit and plug into the connector on the spreader harness.
38. Use zip ties to secure the wire harness away from the engine and any sharp edges.
39. Install the 10 amp fuse into the fuse panel. Refer to the label on the fuse panel cover or on the inside of the right door to determine the correct fuse position.
40. **2100:** Remove the cover plate (V) from the top of the engine cover and install the rubber grommet into the cutout.



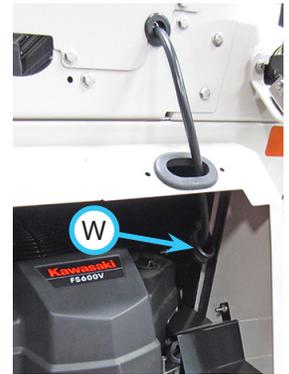
41. **2100:** Route the controller power cord through the grommet in the engine cover.

42. Route the controller power cord down past the engine and into the left tower frame. Connect the power cord to the 5 position connector on the spreader wire harness.

43. **2100:** Place the 3/4 inch cushioned clamp (W) over the power cord and install onto the left side of the main tower frame using the original hardware. Rotate the clamp to hold the cord in proper alignment and tighten.

44. **2100:** Install the front access panel onto the engine covers and secure with the rubber handles.

Installation is complete.



OPERATIONAL CONTROLS

Motor Controller

The motor controller is equipped with a toggle switch (A) that turns the motor on and off and a dial switch (B) that selects the motor speed.



Rotate the dial to select the desired speed setting. Position #1 is the minimum speed setting and position #5 is the maximum speed setting.

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. Check to ensure nothing is jammed in the hopper and no foreign materials are present.

Spreader Loading

CAUTION

Do not overload the spreader or power unit. Use the chart below to calculate the weight of materials. Weights of materials are an average for dry materials.

Material	Weight per Cubic Foot
Rock Salt	75-85 pounds (34-38.5 kg)
Sand/Salt Mix	95-120 pounds (43-54.5 kg)
Maximum Spreader Capacity	
Volume	Weight
1.3 ft ³ (.037 m ³)	100 pounds (45.4 kg)

1. Park the power unit on a level surface and turn off the spreader controller.
2. Engage the parking brake and shut off the power unit's engine.
3. Pour or shovel the proper amount of ice melt material into the spreader hopper.

Spreader Operation

WARNING

Always turn off the spreader controller before filling the hopper with material.

WARNING

Before working on the spreader for any reason, turn off the spreader controller and unplug the spreader motor from the power supply.

Before operation, perform the daily inspection.

Turn the dial on the motor controller to the desired speed setting. Move the machine into position and push the toggle switch on the motor controller forward to the On position. Drive forward following the sidewalk or other treatment area. When the end of the treatment area is reached, stop the machine and move the toggle switch on the motor controller to the Off position.

The spreader speed can be changed at any time by rotating the dial to the desired speed setting.

ATTENTION

The speed of the power unit, the type of material used, the moisture content of the material, and the desired application rate will determine the necessary controller speed.

ATTENTION

Never leave materials in the hopper for long periods of time, as ice melt products are hygroscopic and will attract atmospheric moisture and harden.

When spreading is complete, empty the spreader hopper to prevent the ice melt material from hardening or forming clumps inside the hopper.

GENERAL OPERATION

Application Rates

Use of excessive amounts of ice melt products increases the cost of treatment and could harm vegetation due to run off of materials. For these reasons, it is best to use the minimum amount of material necessary to achieve the desired results.

Rate Chart pounds/minute (kg/minute)		
Material	Minimum Rate	Maximum Rate
Rock Salt (Bagged)	2.3 pounds/minute (1 kg/ minute)	14.4 pounds/minute (6.5 kg/ minute)

Rate Calculation

A = pounds per minute

S = speed (mph)

R = pounds per 1,000 square feet

Formula to calculate pounds per 1,000 square feet from measure pounds per minute is:

$$R = 4.55 \times \frac{A}{S}$$

Formula to calculate pounds per minute from desired pounds per 1,000 square feet is:

$$A = \frac{R \times S}{4.55}$$

Motor Controller Current Limit Function

The motor controller is equipped with a current limit function that prevents damage to the motor. Excessive motor load can be caused by material jams in the hopper or binding of components. If the current limit is activated, the controller will turn the motor off and the indicator light (A) will turn on.



The controller can be reset by turning the toggle switch off and then back on.

If the current limit function activates again after being reset, the cause of the problem will need to be located and fixed.

WARNING

Before working on the spreader for any reason, turn off the spreader controller and unplug the spreader motor from the power supply.

Park the power unit, engage the parking brake, and remove the key from the ignition switch. Turn the controller off and unplug the spreader motor before working on the spreader.

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.

Before working on the spreader for any reason, turn off the spreader controller and unplug the spreader motor from the power supply.

⚠ WARNING

When servicing is necessary, perform it in a protected area. Do not use power tools in rain or snow because of danger of electrical shock or injury.

Perform service in a well lighted area.

Keep the service area clean to help prevent accidents.

⚠ CAUTION

Do not splice other devices into the wire harness. The controller is an electronic unit and is not serviceable. Any attempt to service the controller may void the warranty.

There are no serviceable parts in the motor/ transmission assembly.

ATTENTION

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

ATTENTION

To prevent thread galling, hand tools and a thread lubricant are recommended when tightening stainless steel fasteners. Do not use air or electric power tools as this increases the risk of thread galling.

Cleaning and General Maintenance

The spreader is constructed of stainless steel panels, along with the majority of components and hardware, to prevent corrosion from salt. Dirt and salt deposits can affect the performance of the spreader.

For best results and performance, remove any ice or snow accumulations from the spreader and clean or wash the spreader to prevent accumulations of dirt, sand, and salt.

ATTENTION

To maintain the finish of the power unit and attachment, thoroughly wash the equipment after each use to remove any corrosive agents (e.g., salt). Failure to clean the equipment may result in corrosion of (including but not limited to) steel, aluminum, and electrical components. Equipment that will experience repeated exposure to corrosive agents should be pretreated with a corrosion preventative.

ATTENTION

When pressure washing the motor area, stay at least 92 cm (36 inches) away from the motor.

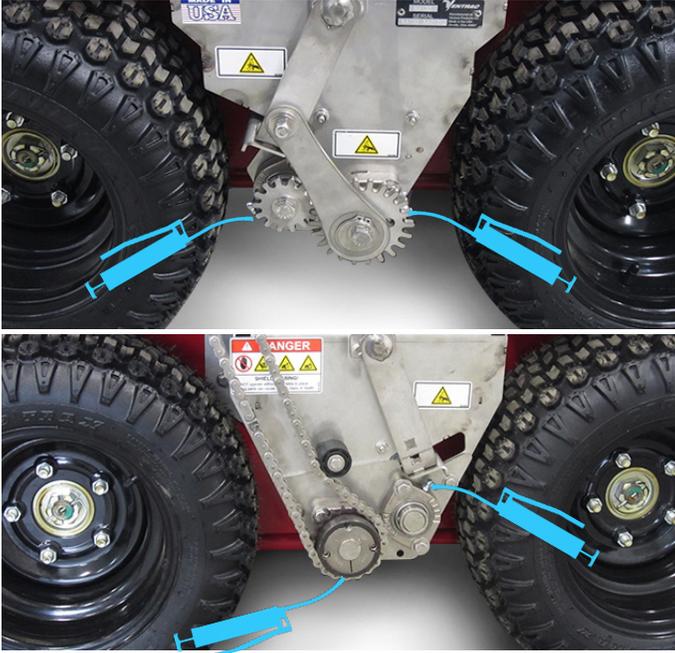
SERVICE

Lubrication Locations

Lubrication is required at the following locations (serial # 01001 - 01960) using a lithium complex NLGI #1 grease or a lithium complex NLGI #2 grease rated for -40° C (-40° F).

Wipe the grease fittings clean before applying grease to the grease fittings.

Refer to the maintenance schedule for service intervals and the amount of grease.



Drive Chain Lubrication

Apply chain oil to the drive chain and wipe up all drips and spills. Refer to the maintenance schedule for service intervals.

Chain Tension Inspection

1. Unplug the spreader from the power supply.
2. Remove the chain cover from the spreader.
3. Apply pressure to the inner strand of chain, half-way between the motor sprocket and the chain tension roller. Proper chain deflection should be between 6 - 12 mm (1/4 - 1/2 inch).



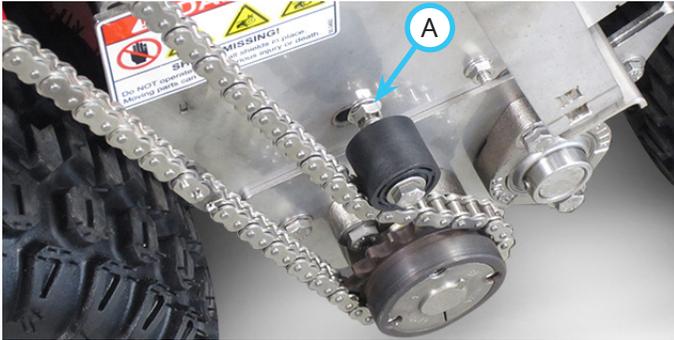
NOTE: measure the distance (A) between the two chain strands with and without pressure applied to determine the amount of chain deflection.

4. If the chain tension needs adjusted, proceed to the following section of chain tension adjustment. If chain tension is correct, reinstall the chain cover and reconnect the spreader to the power supply.

SERVICE

Drive Chain Tension Adjustment

1. Loosen the locking flange nut (A) on the chain tension roller bolt.



2. Slide the bolt in the slot to increase or decrease chain tension.
3. Tighten the locking flange nut to secure the bolt in position.
4. Reconnect the spreader to the power supply and run the spreader for 20 to 30 seconds.
5. Unplug the spreader from the power supply and recheck the chain tension.
6. When chain tension is correct, reinstall the chain cover and reconnect the spreader to the power supply.

Storage

Preparing the Attachment for Storage

1. Clean and wash the spreader and power unit.
2. Allow the spreader to dry, then apply a rust preventative coating to the chain drive sprockets.
3. Inspect for loose or missing hardware, damaged components, or signs of wear.
4. Inspect safety decals. Replace any safety decals that are faded, illegible, or missing.
5. Apply grease to all grease points.
6. Apply chain oil to the drive chain.
7. Wipe off all excess grease and oil.
8. If removing the spreader from the power unit, remove the right bin extensions, the rotor gear guard, and the grease fitting (if equipped) from the right rear bearing (2100 serial # 01001-1324) prior to removing the spreader from the power unit.

Removing the Attachment from Storage

1. Clean the spreader to remove any accumulated dust or debris.
2. If the spreader was removed from the power unit for storage, reinstall the spreader following the setup instructions in this manual.
3. Inspect the spreader as instructed in the daily inspection section of this manual.
4. Test the spreader to ensure all components are working properly.

SERVICE

Maintenance Schedule

	# of locations	# of pumps	As Needed	Daily	At 50 hours	At 100 hours	At 150 hours	At 200 hours	At 250 hours	At 300 hours	At 350 hours	At 400 hours	At 450 hours	At 500 hours	At 550 hours	At 600 hours	At 650 hours	At 700 hours	At 750 hours	At 800 hours	At 850 hours	At 900 hours	At 950 hours	At 1,000 hours	Yearly
Grease and Lubrication: See Lubrication Section																									
Rotor Bearing (Serial # 01001 - 01960)	2	1			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Roller Seal Bearing (Serial # 01001 - 01960)	2	1			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oil Drive Chain					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inspection																									
Inspect for Loose, Missing, or Worn Components				✓																					
Inspect the Safety Decals				✓																					
Inspect the Drive Chain Tension					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Maintenance Checklist

	# of locations	# of pumps	As Needed	Daily	At 50 hours	At 100 hours	At 150 hours	At 200 hours	At 250 hours	At 300 hours	At 350 hours	At 400 hours	At 450 hours	At 500 hours	At 550 hours	At 600 hours	At 650 hours	At 700 hours	At 750 hours	At 800 hours	At 850 hours	At 900 hours	At 950 hours	At 1,000 hours	Yearly
Grease and Lubrication: See Lubrication Section																									
Rotor Bearing (Serial # 01001 - 01960)	2	1																							
Roller Seal Bearing (Serial # 01001 - 01960)	2	1																							
Oil Drive Chain																									
Inspection																									
Inspect for Loose, Missing, or Worn Components																									
Inspect the Safety Decals																									
Inspect the Drive Chain Tension																									

SPECIFICATIONS

Dimensions

Overall Height	50.8 cm (20 inches)
Overall Length	66 cm (26 inches)
Overall Width	88.9 cm (35 inches)
Weight	59 kg (130 pounds)
Drop Width	73.7 cm (29 inches)
Material Capacity (Volume)037 M ³ (1.3 ft ³)
Material Capacity (Weight)	45.4 kg (100 pounds)

Technical Information

System

Voltage	12 volt DC
Amperage	up to 10 amps
Temperature Range	-29° to 10° C (-20° to 50° F)

Motor

Type	Permanent Magnet
Lubrication	Sealed with Lifetime Grease

Features

- Stainless steel construction.
- Precision drop rate control for increased salt savings and consistent drop patterns.
- Compression roller system.
- Easy flow adjustments.
- Low maintenance design.
- 12 volt electric drive/transmission.
- Ability to spread coarse materials such as bulk salt and sand/salt mixtures, as well as free flowing materials such as pelletized material and calcium flakes.

Visit ventrac.com/manuals
for the latest version of this operator's manual.
A downloadable parts manual is also available.



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 the 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, the 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 the equipment, the service call drive time or any transportation expense incurred for the 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 the 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

WARRANTY



LIMITED WARRANTY - VENTRAC COMMERCIAL EQUIPMENT

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 the Ventrac equipment by a person or persons other than an authorized Ventrac service dealer or the installation of parts other than genuine Ventrac parts or Ventrac recommended parts.

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, or lubricants; (ii) loss, cost or expense relating to transportation or delivery of turf equipment from the location of the owner or the location where used by the 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 the 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 a 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.