



Operator's Manual

KR502

Landscape Rake

Serial Number KR502-AC1128--





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

To the Owner Contact Information and Product Identification

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

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

Dealer _____ Date of Purchase: _____

Dealer Address: _____

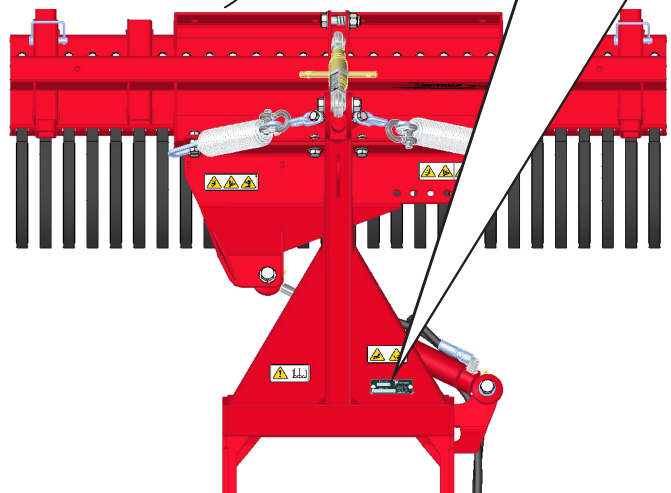
Dealer Phone Number: _____ Dealer Fax Number: _____

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



Model # _____

Serial # _____



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

TABLE OF CONTENTS

INTRODUCTION	PAGE 4
Product Description	4
Why Do I Need an Operator’s Manual?	4
Using Your Manual	5
Manual Glossary	5
SAFETY	PAGE 6
General Safety Procedures	6
Training Required	6
Requirements for Personal Protective Equipment (PPE)	6
Operation Safety.	6
Keep Riders Off	8
Operating On Slopes	8
Truck Or Trailer Transport	9
Maintenance	9
Fuel Safety	10
Hydraulic Safety	11
KR502 Safety Procedures	12
Safety Decals	13
OPERATIONAL CONTROLS	PAGE 14
Height Adjustment Link.	14
Landscape Rake Angle	14
Hydraulic Height Adjustment Cylinder	14
GENERAL OPERATION	PAGE 15
Daily Inspection	15
Attaching	15
Detaching.	15
Operating Procedure	15
Transport of the Attachment.	16
Setting the Tine Depth	16
Gauge Wheel Positions	16
Rear Mount (3 Point Hitch) Procedures	16
Rear Mount (3 Point Hitch) Gauge Wheel Setup	17
SERVICE	PAGE 18
Cleaning and General Maintenance.	18
Rake Tine Replacement.	18
Tire Pressure	18
Lubrication Locations	18
Storage	19
Maintenance Schedule	20
Maintenance Checklist	20
SPECIFICATIONS	PAGE 21
Dimensions.	21
Features.	21

INTRODUCTION



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

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

	Item Description	Part Number
Accessories	Landscape Rake Extension Kit (20 inch overall)	70.8034
	Flat Free Tire/Wheel Assembly (requires 2 per rake)	53.0214
	KR Hydraulic Height Adjust Kit w/Directional Valve*	70.8035
	KR Hydraulic Height Adjust Kit**	70.8216

*The power unit must be equipped with a front 12 volt switch and plug kit.

**The power unit must be equipped with a dual front hydraulic auxiliary kit.

Product Description

The Ventrac KR502 landscape rake is designed to level or spread soil, sand, gravel, and other similar loose material. It can be used to remove rocks or unwanted debris in preparation for seeding a new lawn.

The KR502 is a front mounted attachment, which allows the operator to keep material from being driven over and compacted. It also allows the operator to view the operation of the landscape rake while facing the direction of travel. The landscape rake can also be mounted to the rear 3-point hitch with a Ventrac 3-N-1 adapter.

The landscape rake can be angled up to 28 degrees to the left or the right.

If a wider surface is needed, optional 25.4 cm (10 inch) extensions are available, giving the operator an additional 50.8 cm (20 inches) of width.

Why Do I Need an Operator's Manual?

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

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

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

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

INTRODUCTION

Using Your Manual

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

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

SYMBOL DEFINITIONS



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

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

SIGNAL WORD DEFINITIONS

DANGER

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

WARNING

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

CAUTION

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

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

NOTE emphasizes general information that is worthy of special attention.

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

Manual Glossary

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

SAFETY



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



Training Required

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

Requirements for Personal Protective Equipment (PPE)

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

Operation Safety

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

SAFETY



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



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

SAFETY



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



- 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.
- Power units, attachments, and accessories are not designed or intended for travel on public roadways. Never operate or travel on public roads or highways.
- Operate with safety lights when operating near roadways.
- Slow down and be careful of traffic when operating near or crossing roadways. Stop before crossing roads or sidewalks. Use care when approaching areas or objects that may obscure vision.

Keep Riders Off

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

Operating On Slopes

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

SAFETY



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



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

Truck Or Trailer Transport

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

Maintenance

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

SAFETY



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



- 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



KR502 Safety Procedures



- Ensure there are no objects between the landscape rake and the power unit. When the rake is angled, objects may be crushed between the rake and the power unit.
- The rake tines should comb not dig. Severe contact with the ground, debris, rocks, etc. can cause the rake tines to bend or brake.
- Bending a rake tine may cause it to break. Do NOT attempt to straighten a bent rake tine.
- The attachment hydraulic system may contain stored energy. Before performing maintenance or repairs on the hydraulic system, the attachment's auxiliary hydraulic hoses must be disconnected from the power unit. Lower the attachment to the ground, shut off power unit engine, move the secondary SDLA lever left and right to relieve auxiliary hydraulic pressure, and disconnect the auxiliary hydraulic quick couplers.

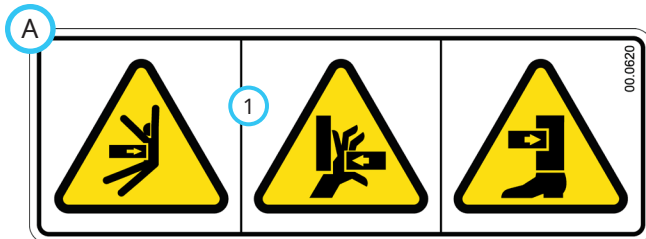
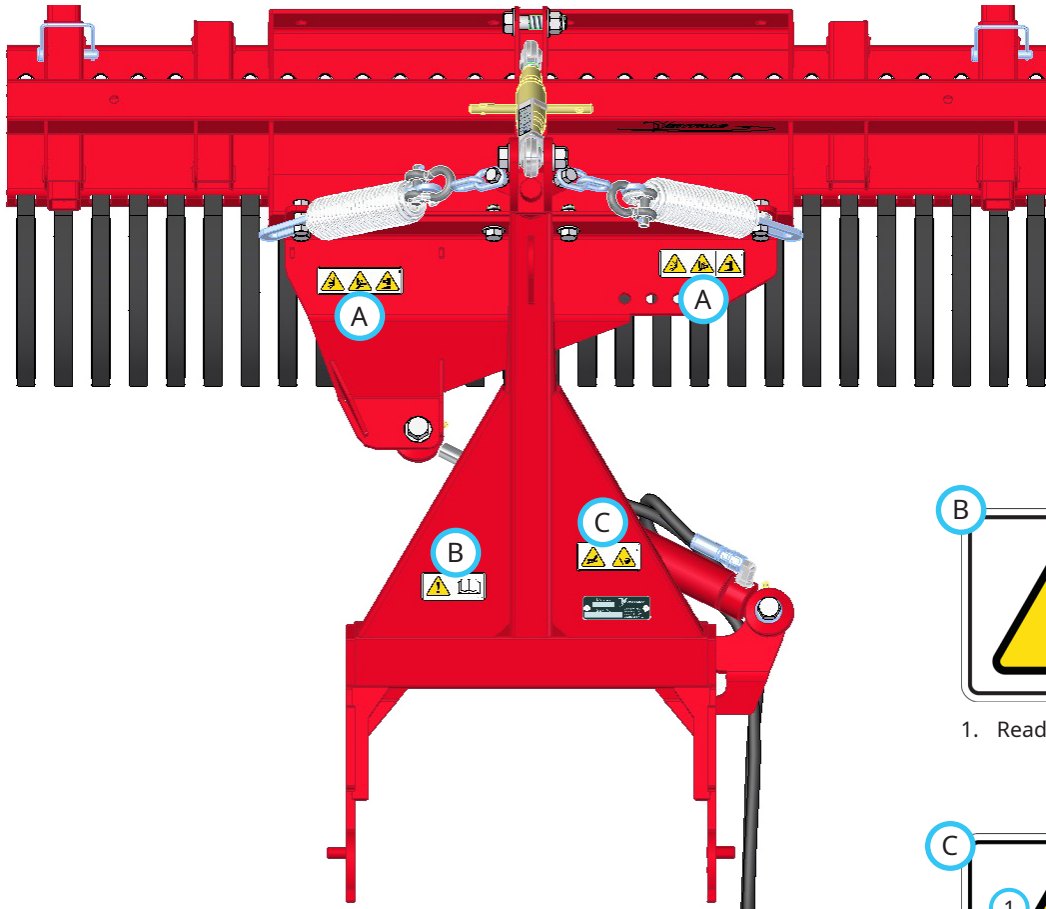
SAFETY

Safety Decals

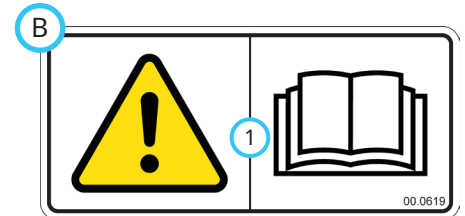
The following safety decals must be maintained on your attachment.

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.

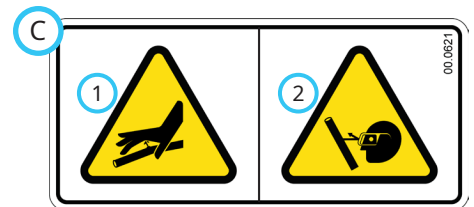
When new components are installed, be sure that current safety decals are affixed to the replacement components.



1. Pinching or crushing hazard.



1. Read the operator's manual.



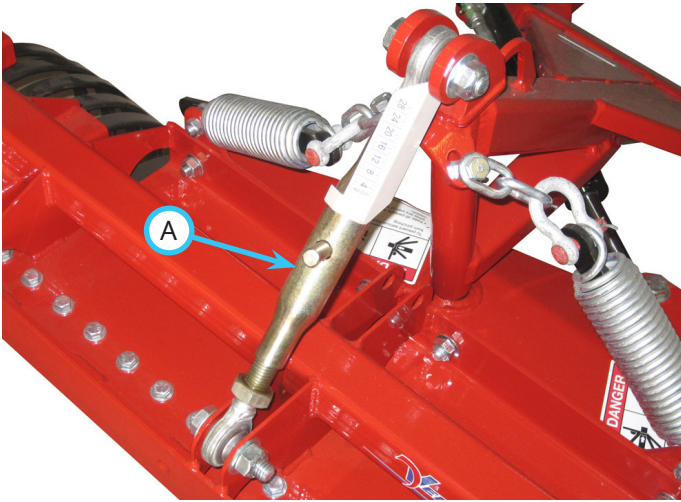
High pressure fluid hazard.

1. Keep body and hands away from suspected hydraulic leaks.
2. Wear eye protection when inspecting the hydraulic system for leaks.

Decal	Description	Part Number	Quantity
A	Pinching or Crushing Hazard	00.0620	2
B	Read Operator's Manual	00.0619	1
C	High Pressure Fluid Hazard	00.0621	1

OPERATIONAL CONTROLS

Height Adjustment Link

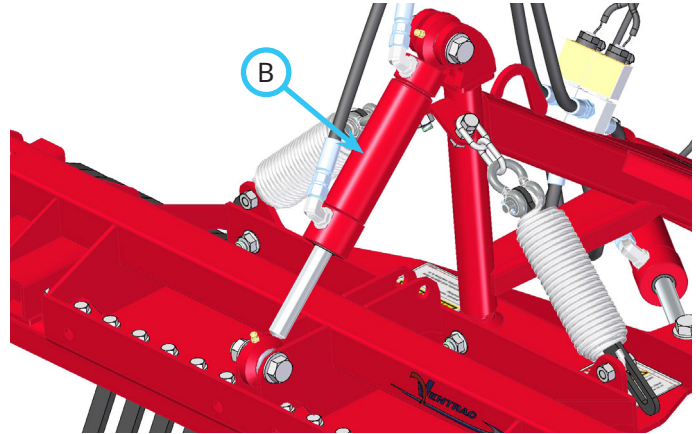


Turning the height adjustment link (A) will raise or lower the tines on the landscape rake.

Landscape Rake Angle

The secondary SDLA lever* on the power unit controls the angle of the landscape rake. The landscape rake can be angled up to 28 degrees to the left or the right. NOTE: when using the landscape rake on the rear of the power unit, the landscape rake angle is controlled using the rear auxiliary hydraulic handle.

Hydraulic Height Adjustment Cylinder



The optional height adjustment cylinder (B) replaces the tine depth adjustment link on the landscape rake. NOTE: the power unit must be equipped with a front 12 volt switch and plug kit or a dual front hydraulic auxiliary kit in order to operate the adjustment cylinder. Visit the Ventrac website, or contact your authorized Ventrac dealer for the correct kit for your power unit.

Kit number 70.8035 includes 12 volt directional valves and couples with a 12 volt switch* on the power unit to allow the operator to control the tine depth using the secondary SDLA lever on the power unit. The 12 volt on/off switch on the power unit couples with the directional valves to select the function of the secondary SDLA lever. A flip of the switch allows the secondary SDLA lever to control either the rake angle or the tine depth of the landscape rake.

Kit number 70.8216 couples directly to an extra set of hydraulic quick couplers on a power unit equipped with a dual front hydraulic auxiliary kit. Press and hold the switch on the secondary SDLA lever while moving the lever to the left or right to adjust the tine depth of the landscape rake.

When using the landscape rake on the rear of the power unit, the optional height adjustment handle is controlled using the rear auxiliary hydraulic handles. NOTE: kit number 70.8035 requires an optional rear 12 volt switch and plug to control the 12 volt directional valves. The wire harness routing for the 12 volt directional valves may need to be modified when using on the rear of the power unit.

*Refer to power unit operator's manual for operation of power unit controls.

GENERAL OPERATION

Daily Inspection

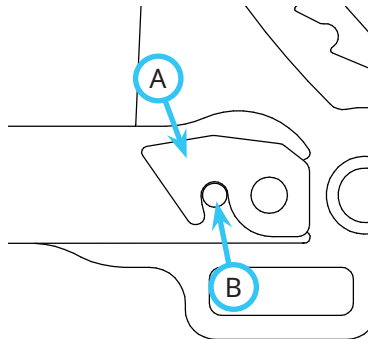
⚠ WARNING

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, bent rake tines, or signs of wear.
3. Inspect the hydraulic hoses and the hydraulic fittings to ensure tight, leak free connections.
4. Check the tire pressure.
5. Inspect the mower blades and the mower blade mounting bolts. The blades should be sharp and securely fastened. Service as required.

Attaching

1. Drive the power unit slowly forward into the hitch arms of the attachment. Align the lift arms of the power unit with the attachment hitch arms by raising or lowering the front hitch and complete the engagement.
2. Once completely engaged, move the front hitch latch lever* to the locked position. The latch (A) must lock over the attachment's hitch arm pin (B).
3. Engage the parking brake* and shut off the engine.
4. Wipe the hose ends clean and connect to the power unit's hydraulic quick couplers. If equipped, connect the hoses and the quick couplers so the colored indicators are paired together (red to red, etc.).
5. Connect the electric plug (if equipped) to the power unit.



Detaching

1. Park the power unit on a level surface and engage the parking brake.*
2. Lower the attachment to the ground.
3. Shut off the power unit engine.
4. Disconnect the hydraulic quick couplers from the power unit and store the hose ends in the holes in the pivot frame.
5. Disconnect the electric plug (if equipped) from the power unit.
6. Disengage the front hitch locking lever.*
7. Restart the power unit and slowly back away from the attachment. A side to side movement of the steering wheel may aid in disengagement.

Operating Procedure

Before operation, perform the daily inspection, set the rake tines to the desired depth, and turn off the power unit's weight transfer.

Move the machine into position, angle the rake if desired, and lower the landscape rake to the ground. Place the power unit's primary SDLA lever in the float position by pushing it to the right until the detent engages.

Work in the forward direction so the tines can collect the debris and help separate it from the soil. Operating the rake at an angle will allow the tines to comb through the loose soil while rolling the debris into a windrow at the trailing edge of the landscape rake. Move the secondary SDLA lever to the left or right to angle the landscape rake.

NOTE: the greater the angle of the rake, the more loose material it will move into the windrow along with the debris.

NOTE: if the tines are set too deep when leveling and raking debris, the amount of soil being removed will increase. Reducing the depth of the tines will help to separate the debris from the soil so only the debris is removed from the work area.

Multiple passes may be required to remove the desired amount of debris.

If grass or other debris becomes lodged in the rake tines, the rake performance will be reduced. Clean the rake tines as needed.

Raise the rake tines off the ground when backing up.

*Refer to power unit operator's manual for operation of power unit controls.

GENERAL OPERATION

Transport of the Attachment

Transport the attachment with the power unit front hitch and attachment fully raised to reduce wear of the equipment. Travel slowly when transporting over undulating and rough surfaces to maintain control of the power unit and to reduce the shock to the power unit and the attachment.

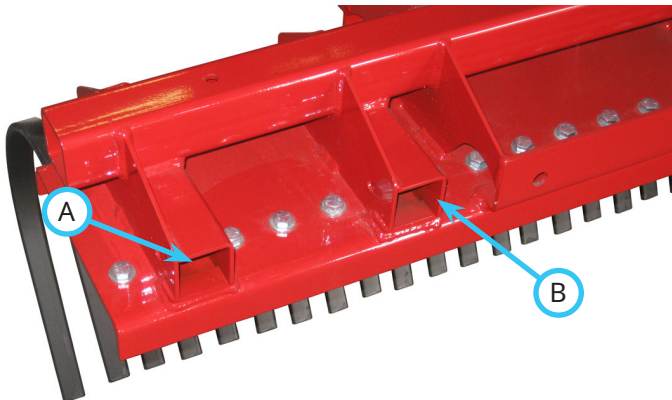
Setting the Tine Depth

The tine depth is adjusted by turning the adjustment link. Lengthening the adjustment link will raise the rake tines and shortening the adjustment link will lower the rake tines. If equipped with a height adjustment cylinder, select the height adjustment function with the power unit's switch and move the secondary SDLA lever to the left or right until the desired depth is reached.

For leveling and separating debris, set the rake tines to comb through the soil at 6 - 25 mm (1/4 - 1 inch) deep. For spreading or leveling large amounts of loose material, setting the rake tines deeper will allow the rake to move more material with each pass.

Gauge Wheel Positions

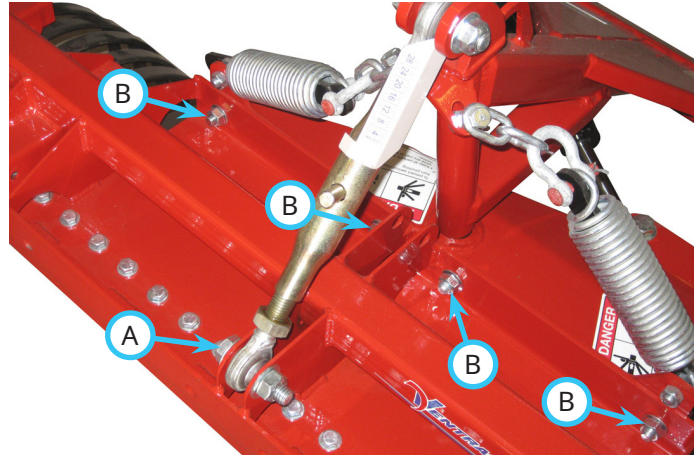
The landscape rake has gauge wheels that can be adjusted for different applications or user preference. Mounting the gauge wheels in the outside mounting positions (A) creates a wider footprint which will help to create a more level surface. When the rake is fully angled, the wheels are outside the raking path of the tines and can hinder performance when windrowing debris. In this case, the wheels should be moved to the inside mounting positions.



Mounting the gauge wheels in the inside mounting position (B) creates a narrower footprint which ensures the wheels are not in the way when windrowing and makes maneuverability much easier. In this position, the ends of the rake may dig in excessively hard when moving along a mound or ridge.

Rear Mount (3 Point Hitch) Procedures

The hitch frame on the landscape rake can be reversed for use on a power unit that is equipped with a 3 point hitch and a 3n1 adapter. Remove the bolt (A) that fastens the height adjustment link to the tine frame and the four bolts (B) that fasten the hitch frame anchor to the tine frame.



Reassemble on the opposite side of the tine frame. Torque the four bolts to 75 ft-lbs (102 Nm).

The 3 point hitch control handle (C) raises and lowers the landscape rake. Place the 3 point hitch control handle in the float position during operation by pushing the handle down until the detent engages.



The left rear auxiliary hydraulic handle (D) controls the left set of rear quick couplers. The right rear auxiliary hydraulic handle (E) controls the right set of rear hydraulic quick couplers. Connect the hoses for the landscape rake frame angle cylinder to the desired set of hydraulic quick couplers.

If the landscape rake is equipped with optional hydraulic height adjustment kit # 70.8216, plug the hoses from the cylinder into the second set of hydraulic quick couplers. The rake tine depth is controlled with the auxiliary hydraulic handle.

GENERAL OPERATION

If the landscape rake is equipped with optional hydraulic height adjustment kit # 70.8035, plug the wire harness for the 12 volt directional valves into the 4 pin plug on the rear of the power unit. The rake tine depth is controlled with the same auxiliary control handle as the rake frame angle. A 12 volt on/off switch (F) on the power unit couples with the directional valves to select the function of the auxiliary control handle.



A flip of the switch allows the auxiliary control handle to control either the rake angle or the tine depth of the landscape rake.

Rear Mount (3 Point Hitch) Gauge Wheel Setup

The gauge wheels can be used either in front of or behind the rake tines. When using the gauge wheels behind the rake, they can be installed in either the inside or outside mounting positions. When using the gauge wheels in front of the rake, they must be installed in the outside mounting positions only.

ATTENTION

If the wheels are mounted in front of the tines, they must be in the outside mounting position to prevent the wheels from hitting the 3 point hitch arms when the rake is angled.

Set up for 3 point hitch



Wheels mounted in front of tines. Outside mounting position only.

Wheels mounted behind tines. Inside or outside mounting positions.

SERVICE

⚠ WARNING

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

ATTENTION

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

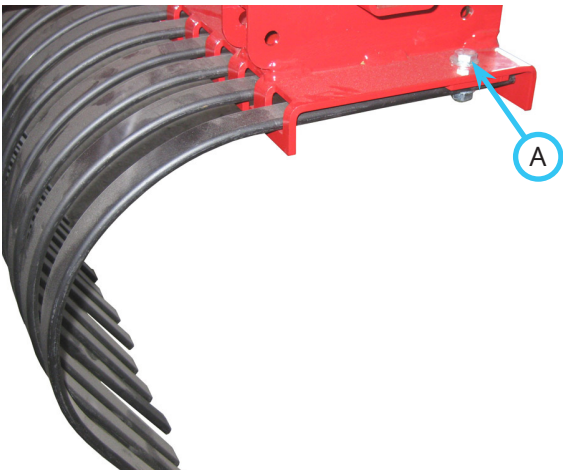
Cleaning and General Maintenance

For best results, and to maintain the finish of the landscape rake, clean or wash the landscape rake after each use to remove dirt, gravel, grass, and other debris.

Rake Tine Replacement

The landscape rake functions best when the rake tines are aligned well with each other. Replace any bent or broken tines.

1. Park the power unit and rake on a smooth, level surface and lower the rake to the ground.
2. Engage the parking brake, shut off the engine, and remove the ignition key.
3. Turn the height adjustment link to raise the rake tines off the ground.
4. Remove the bolt (A) that fastens the damaged tine to the rake frame.



5. Slide the tine out of the rake frame.
6. Insert the new rake tine into the frame and fasten with the original hardware. Torque to 42 Nm (31 ft-lbs).

Tire Pressure

Tire pressure should be maintained between 124-138 kPa (18-20 psi). Pressure variance between the left and right tires can cause uneven results.

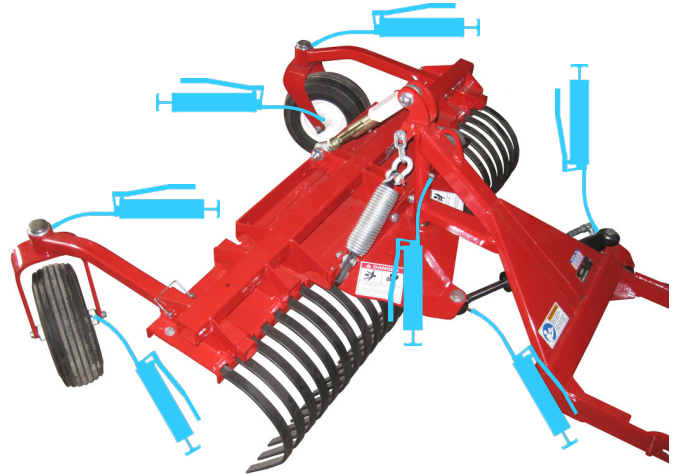
Lubrication Locations

Lubrication is required at the following locations using a lithium complex NLGI #2 grease.

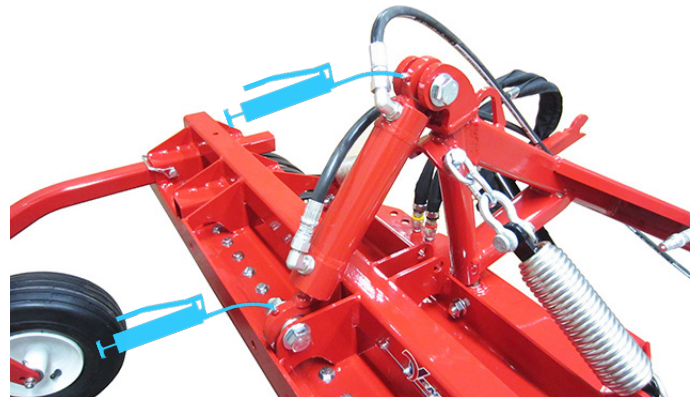
Wipe the grease fittings clean before applying grease to the grease fittings.

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

Grease the wheel axles, the wheel pivots, the center rake pivot tube, and the cylinder ends.



Grease the height adjust cylinder (if equipped).



SERVICE

Storage

Preparing the Attachment for Storage

1. Clean the landscape rake to remove accumulated dirt, gravel, grass, and other debris.
2. Inspect for loose or missing hardware, damaged components, or signs of wear. Repair or replace any damaged or worn components.
3. Inspect for bent or damaged rake tines and replace as needed.
4. Inspect the safety decals. Replace any decals that are faded, illegible, or missing.
5. Apply grease to all grease points and wipe off any excess grease.
6. Inspect the painted components for chips, scratches, or rust. Clean and touch up the surfaces as needed.

Removing the Attachment from Storage

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

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																									
Caster Wheel Pivot	2	1			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wheel Axle	2	^	**		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cylinder End	2	^	**		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rake Pivot Tube	1	^	**		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Optional Height Adjust Cylinder End	2	^	**		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inspection																									
Inspect for Loose, Missing, or Worn Components				✓																					
Inspect for Bent or Damaged Rake Tines				✓																					
Check the Tire Pressure				✓																					
Inspect the Safety Decals				✓																					
^Grease until fresh grease is visible.																									
**Operation in severe conditions may require more frequent service intervals.																									

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																									
Caster Wheel Pivot	2	1																							
Wheel Axle	2	^	**																						
Cylinder End	2	^	**																						
Rake Pivot Tube	1	^	**																						
Optional Height Adjust Cylinder End	2	^	**																						
Inspection																									
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Check the Tire Pressure																									
Inspect the Safety Decals																									
^Grease until fresh grease is visible.																									
**Operation in severe conditions may require more frequent service intervals.																									

SPECIFICATIONS

Dimensions

Overall Height	81.3 cm (32 inches)
Overall Length	149.9 cm (59 inches)
Overall Width	124.5 cm (49 inches)
Overall Width with Rake Extensions	175.3 cm (69 inches)
Weight	113.4 kg (250 pounds)
Angle (Left and Right)	28 degrees
Tine Adjustment Range	15.2 cm (6 inches)
Digging Depth	7.6 cm (3 inches) below surface

Features

- Hydraulic power angle.
- Adjustable front gauge wheels.
- Front hitch or rear 3-point hitch mounting setups.