

*Operator's Manual  
& Parts Drawings*

# KR502

*Terra Rake*

*Europe C€ - Serial Number KR502-AC1128 --*





500 Venture Drive  
Orrville Oh 44667  
www.ventrac.com

View all manuals



Visit [ventrac.com/manuals](http://ventrac.com/manuals) for the latest version of this operator's manual.

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: \_\_\_\_\_

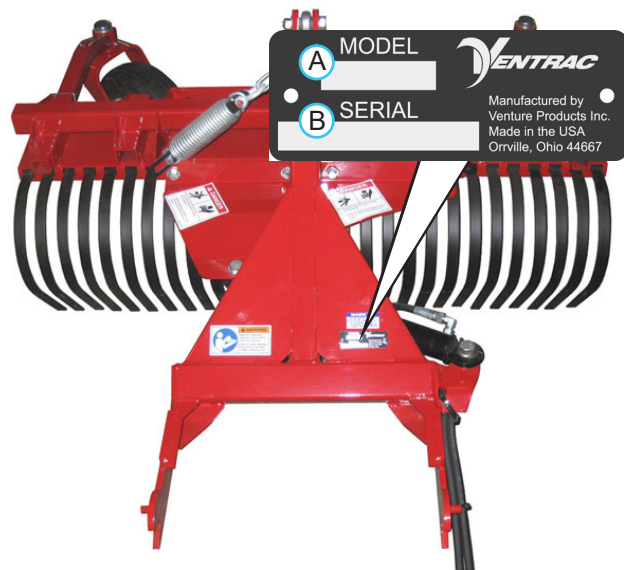
Dealer Phone Number: \_\_\_\_\_

Dealer Fax Number: \_\_\_\_\_

Model # (A): \_\_\_\_\_

Serial # (B): \_\_\_\_\_

Affix Part/Serial Number label here.



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

---

<b>INTRODUCTION</b>	<b>PAGE 5</b>
Product Description.....	5
Why Do I Need an Operator’s Manual? .....	5
Using Your Manual .....	6
Manual Glossary .....	6
<b>SAFETY</b>	<b>PAGE 7</b>
Safety Decals .....	7
General Safety Procedures.....	9
Training Required.....	9
Requirements for Personal Protective Equipment (PPE).....	9
Operation Safety .....	9
Preventing Accidents.....	10
Keep Riders Off.....	10
Operating On Slopes.....	11
Roadway Safety .....	11
Truck Or Trailer Transport .....	11
Maintenance.....	12
Fuel Safety .....	12
Hydraulic Safety .....	13
<b>OPERATIONAL CONTROLS</b>	<b>PAGE 15</b>
Height Adjustment Link .....	15
Terra Rake Angle.....	15
Hydraulic Height Adjustment Cylinder.....	15
<b>GENERAL OPERATION</b>	<b>PAGE 16</b>
Daily Inspection.....	16
Attaching .....	16
Detaching .....	16
Operating Procedure.....	16
Transport of Terra Rake .....	17
Setting Tine Depth.....	17
Gauge Wheel Positions.....	17
Rear Mount (3 Point Hitch) Procedures .....	17
Rear Mount (3 Point Hitch) Gauge Wheel Setup .....	18
<b>SERVICE</b>	<b>PAGE 19</b>
Cleaning and General Maintenance.....	19
Rake Tine Replacement.....	19
Tire Pressure.....	19
Lubrication Locations .....	19
Storage.....	19
Maintenance Schedule.....	20
Maintenance Checklist.....	20

# TABLE OF CONTENTS

---

<b>SPECIFICATIONS</b>	<b>PAGE 21</b>
Dimensions .....	21
Features .....	21
EC Declaration of Conformity.....	21
<b>PARTS</b>	<b>PAGE 22</b>
Main Frame & Gauge Wheels.....	22
Hitch Frame, Height Adjuster, & Hydraulics .....	24
70.8034 Rake Extension Kit.....	26
70.8035 Hydraulic Height Adjust Cylinder Kit.....	28
70.8216 Hydraulic Height Adjust Kit.....	30
<b>WARRANTY</b>	<b>PAGE 32</b>

# INTRODUCTION



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

Listed below are just some of the items that can provide you *versatility* as you use your KR502. Please visit our web site, or contact your authorized Ventrac dealer for a complete list of items available for your new terra rake.

Accessories	Item Description	Part Number
	Terra Rake Extension Kit (20" overall)	70.8034
	KR Hydraulic Height Adjust Kit w/Directional Valve*	70.8035
	KR Hydraulic Height Adjust Kit**	70.8216
	Flat Free Tire/Wheel Assembly (requires 2 per rake)	53.0148

\*Power unit must be equipped with a front 12 volt switch & plug kit.

\*\*Power unit must be equipped with a dual front hydraulic auxiliary kit.

## Product Description

The Ventrac KR502 terra rake is designed to level or spread soil, sand, gravel, and other similar loose material. It can also 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 terra rake while facing the direction of travel. The terra rake can also be mounted to the rear 3-point hitch with a Ventrac 3-N-1 adapter.

The terra rake can be hydraulically angled up to 28 degrees right or left.

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

## Why Do I Need an Operator's Manual?

This manual has been created to help you gain the important knowledge of what is needed to safely operate, maintain, and service your machine. It is divided into sections for convenient reference of the appropriate section.

You must read and understand the operator's manual for each piece of Ventrac equipment you own. Reading the operator's manual will help you become familiar with each specific piece of equipment. Understanding the operator's manual will help you, as well as others, avoid personal injury and/or damage to the equipment. Keep this manual with the machine at all times. The manual should remain with the machine even if it is sold. If this manual becomes damaged or unreadable, it should be replaced immediately. Contact your local Ventrac dealer for a replacement.

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

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

# INTRODUCTION

---

## Using Your Manual

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

### SYMBOL DEFINITIONS



#### **ATTENTION**

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

There are three signal words that describe the level of safety concern: Danger, Warning, and Caution. Safety should always be the #1 priority when working on or operating equipment. Accidents are more likely to occur when proper operating procedures are not followed or inexperienced operators are involved.

Note: Right-Hand and Left-Hand orientations may be referred to at different places throughout this manual. Right-Hand and Left-Hand is determined as if sitting on the power unit seat facing forward.

### SIGNAL WORD DEFINITIONS

#### **DANGER**

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

#### **WARNING**

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

#### **CAUTION**

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

## Manual Glossary

**Power Unit** A Ventrac tractor or other Ventrac engine powered device that may be operated by itself or with an attachment or accessory.

**Attachment** A piece of Ventrac equipment that requires a Power Unit for operation.

**Accessory** A device that attaches to a Power Unit or Attachment to extend its capabilities.

**Machine** Describes any "Attachment" or "Accessory" that is used in conjunction with a power unit.

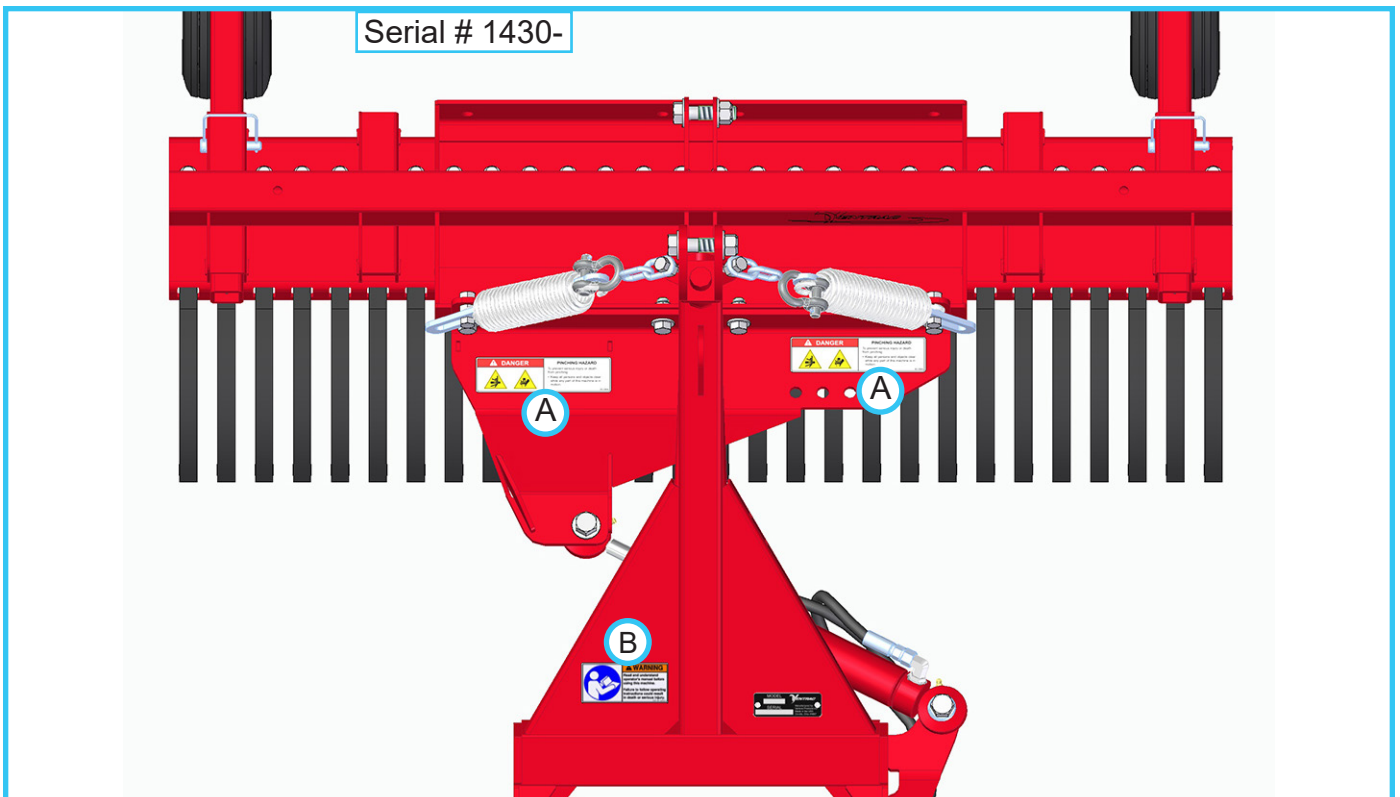
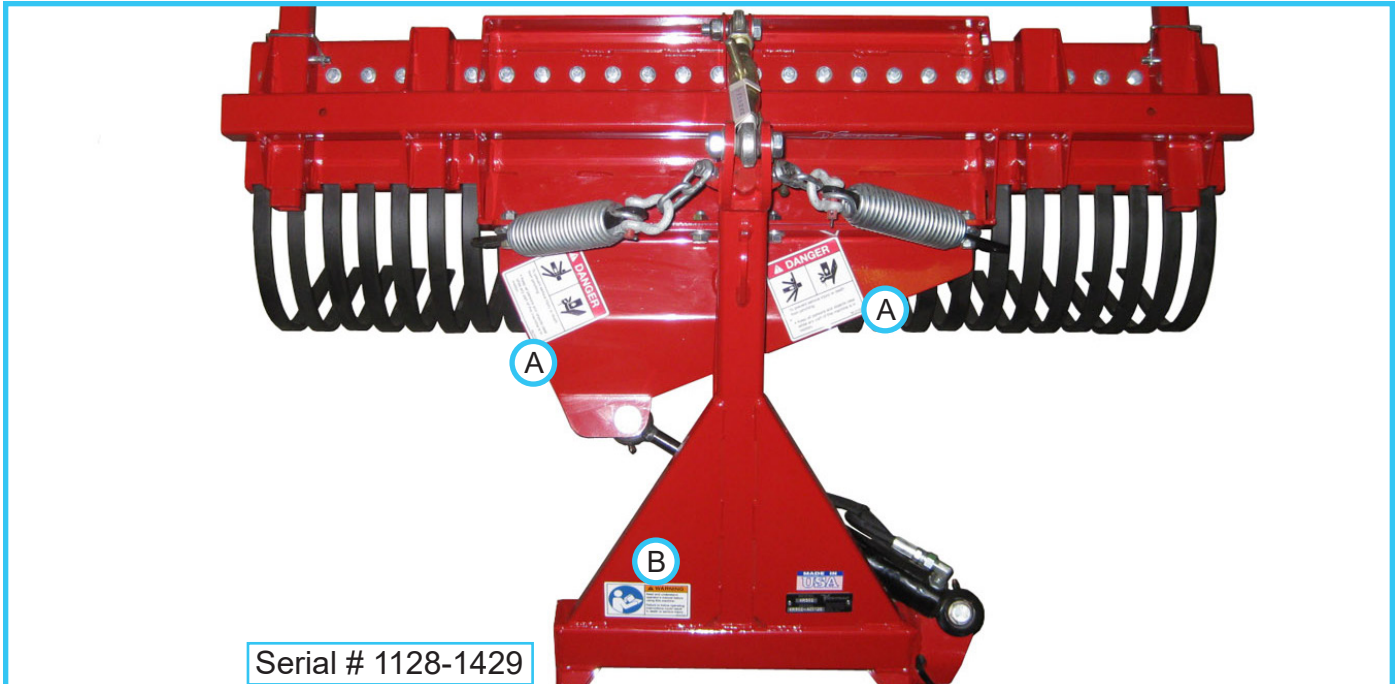
# SAFETY

## Safety Decals

The following safety decals must be maintained on your terra rake.

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.



# SAFETY

**A** Serial # 1128-1429

⚠ DANGER






**To prevent serious injury or death from pinching:**

- **Keep all persons and objects clear while any part of this machine is in motion.**

00.0102

**A** Serial # 1430-

⚠ DANGER

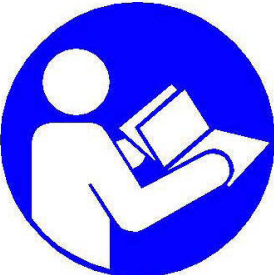
**PINCHING HAZARD**

To prevent serious injury or death from pinching:

- **Keep all persons and objects clear while any part of this machine is in motion.**

00.0594

**B**



⚠ WARNING

**Read and understand operator's manual before using this machine.**

**Failure to follow operating instructions could result in death or serious injury.**

PART NO. 00.0217

Decal	Description	Part Number	Quantity
A	Danger, Pinching Hazard (Serial # 1128-1429)	00.0102	2
A	Danger, Pinching Hazard (Serial # 1430-)	00.0594	2
C	Warning, Read Owner's Manual	00.0217	1



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



### Requirements for Personal Protective Equipment (PPE)

The owner is responsible for ensuring that all 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.
- A dust mask for dusty conditions.

### Operation Safety

- Inspect machine before operation. Repair or replace any damaged, worn, or missing parts. Be sure guards and shields are in proper working condition and are secured in place. Make all necessary adjustments before operating machine.
- Some pictures in this manual may show shields or covers opened or removed in order to clearly illustrate any instructions. Under no circumstance should the machine be operated without these devices in place.
- Alterations or modifications to this machine can reduce safety and could cause damage to the machine. Do not alter safety devices or operate with shields or covers removed.
- Before each use, verify that all controls function properly and inspect all safety devices. Do not operate if controls or safety devices are not in proper working condition.
- Check parking brake function before operating. Repair or adjust parking brake if necessary.
- Observe and follow all safety decals.
- All controls are to be operated from the operator's station only.
- Always wear a seat belt if the machine has a roll cage/bar installed and in upright position.
- Ensure the attachment or accessory is locked or fastened securely to the power unit before operating.
- Ensure that all bystanders are clear of the power unit and attachment before operating. Stop machine if someone enters your work area.
- Always be alert to what is happening around you, but do not lose focus on the task you are performing. Always look in the direction the machine is moving.
- Look behind and down before backing up to be sure of a clear path.
- If you hit an object, stop and inspect the machine. Make all necessary repairs before operating machine again.
- Stop operation immediately at any sign of equipment failure. An unusual noise can be a warning of equipment failure or a sign that maintenance is required. Make all necessary repairs before operating machine again.
- 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.

# SAFETY



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



### Operation Safety (continued)

- Do not leave machine unattended while it is running.
- Always park the machine on level ground.
- Always shut off engine when connecting attachment drive belt to the power unit.
- Never leave the operator's station without lowering the attachment to the ground, setting the parking brake, shutting off the engine, and removing the ignition key. Make sure all moving parts have come to a complete stop before dismounting.
- Never leave equipment unattended without lowering the attachment to the ground, setting the parking brake, shutting off the engine, and removing the ignition key.
- Only operate in well-lit conditions.
- Do not operate when there is a risk of lightning.
- Never direct the discharge of any attachment in the direction of people, buildings, animals, vehicles, or other objects of value.
- Never discharge material against a wall or obstruction. Material may ricochet back towards the operator.
- Use extra caution when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- Do not run the engine in a building without adequate ventilation.
- Do not touch the engine or the muffler while the engine is running or immediately after stopping the engine. These areas may be hot enough to cause a burn.
- Do not change the engine governor settings or over-speed the engine. Operating engine at excessive speed may increase the hazard of personal injury.
- To reduce the hazard of fire, keep the battery compartment, engine, and muffler areas free of grass, leaves, excessive grease, and other flammable materials.
- Secure long hair and loose clothing. Do not wear jewelry.

### Preventing Accidents

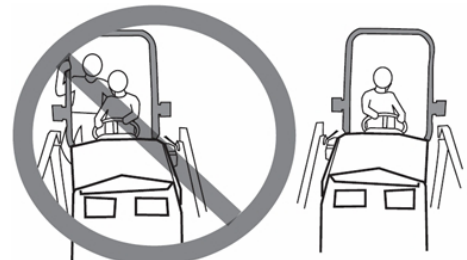


- Clear working area of objects that might be hit or thrown from machine.
- Keep people and pets out of working area.
- Know the work area well before operation. Do not operate where traction or stability is questionable.
- Reduce speed when you are operating over rough ground.
- Equipment can cause serious injury and/or death when improperly used. Before operating, know and understand the operation and safety of the power unit and the attachment being used.

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

### Keep Riders Off

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



# SAFETY

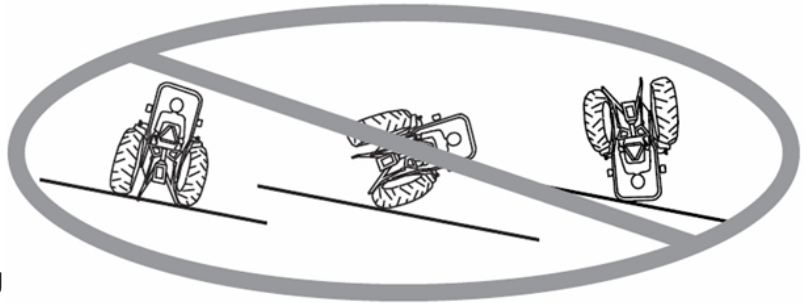


## General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



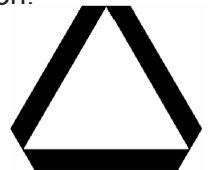
### Operating On Slopes

- 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.
- If power unit is equipped with a fold down roll bar, it must be locked in the upright position when operating on any slope.
- Use low range (if equipped) when operating on slopes greater than 15 degrees.
- Do not stop or start suddenly when operating on slopes.
- Never shift between high and low range while on a slope. Always move the power unit to level ground and engage the parking brake before shifting range or placing the power unit in neutral.
- Variables such as wet surface and loose ground will reduce the degree of safety. Do not drive where machine could lose traction or tip over.
- Keep alert for hidden hazards in the terrain.
- Stay away from drop-offs, ditches, and embankments.
- Sharp turns should be avoided when operating on slopes.
- Pulling loads on hills decreases safety. It is the responsibility of the owner/operator to determine loads that can safely be controlled on slopes.
- Transport machine with attachment lowered or close to the ground to improve stability.
- While operating on slopes, drive in an up and down direction when possible. If turning is necessary while driving across slopes, reduce speed and turn slowly in the downhill direction.
- Ensure a sufficient supply of fuel for continuous operation. A minimum of one-half tank of fuel is recommended.



### Roadway Safety

- Operate with safety lights when operating on or near roadways.
- Obey all state and local laws concerning operation on roadways.
- Slow down and be careful of traffic when operating near or crossing roadways. Stop before crossing roads or sidewalks. Use care when approaching areas or objects that may obscure vision.
- If there is doubt of safety conditions, discontinue machine operation until a time when operation can be performed safely.
- When operating near or on roadways, have a Slow Moving Vehicle Emblem clearly displayed.



### Truck Or Trailer Transport

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

# SAFETY



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



### Maintenance

- Keep all safety decals legible. Remove all grease, dirt, and debris from safety decals and instructional labels.
- If any decals are faded, illegible, or missing, contact your dealer promptly for replacements.
- When new components are installed, be sure that current safety decals are affixed to the replacement components.
- If any component requires replacement, use only original Ventrac replacement parts.
- Always turn the battery disconnect to the Off position or disconnect the battery before performing any repairs. Disconnect the negative terminal first and the positive terminal last. Reconnect the positive terminal first and the negative terminal last.
- Keep all bolts, nuts, screws, and other fasteners properly tightened.
- Always lower the attachment to the ground, engage parking brake, shut off engine, and remove the ignition key. Make sure all moving parts have come to a complete stop before cleaning, inspection, adjusting or repairing.
- If the power unit, attachment, or accessory requires repairs or adjustments not instructed in the operator's manual, the power unit, attachment, or accessory must be taken to an authorized Ventrac dealer for service.
- Never perform maintenance on the power unit and/or attachment if someone is in the operator's station.
- Always use protective glasses when handling the battery.
- Check all fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- To reduce the hazard of fire, keep the battery compartment, engine, and muffler areas free of grass, leaves, and excessive grease.
- Do not touch the engine, the muffler, or other exhaust components while the engine is running or immediately after stopping the engine. These areas may be hot enough to cause a burn.
- Allow the engine to cool before storing and do not store near an open flame.
- Do not change the engine governor settings or over-speed the engine. Operating engine at excessive speed may increase the hazard of personal injury.
- Springs may contain stored energy. Use caution when disengaging or removing springs and/or spring loaded components.
- An obstruction or blockage in a drive system or moving/rotating parts may cause a buildup of stored energy. When the obstruction or blockage is removed, the drive system or moving/rotating parts may move suddenly. Do not attempt to remove an obstruction or blockage with your hands. Keep hands, feet, and clothing away from all power-driven parts.

### Fuel Safety



- To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.
- Do not refuel machine while smoking or at a location near flames or sparks.
- Always refuel the machine outdoors.
- Do not store machine or fuel container indoors where fumes or fuel can reach an open flame, spark, or pilot light.
- Only store fuel in an approved container. Keep out of reach of children.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- Remove machine from the truck or trailer and refuel it on the ground. If this is not possible, refuel the machine using a portable container, rather than from a fuel dispenser nozzle.
- Never remove fuel cap or add fuel with the engine running. Allow engine to cool before refueling.
- Never remove fuel cap while on a slope. Only remove when parked on a level surface.
- Replace all fuel tank and container caps securely.
- Do not overfill fuel tank. Only fill to bottom of fuel neck, do not fill fuel neck full. Overfilling of fuel tank could

# SAFETY



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



### Fuel Safety (continued)

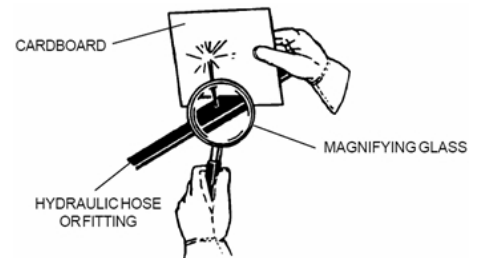
- result in engine flooding, fuel leakage from the tank, and/or damage to the emissions control system.
- If fuel is spilled, do not attempt to start the engine. Move the power unit away from the fuel spill and avoid creating any source of ignition until fuel vapors have dissipated.
- If the fuel tank must be drained, it should be drained outdoors into an approved container.
- Check all fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- The fuel system is equipped with a shut-off valve. Shut off the fuel when transporting the machine to and from the job, when parking the machine indoors, or when servicing the fuel system.

### Hydraulic Safety

- Make sure all hydraulic connections are tight and all hydraulic hoses and tubes are in good condition. Repair any leaks and replace any damaged or deteriorated hoses or tubes before starting the machine.
- Hydraulic leaks can occur under high pressure. Hydraulic leaks require special care and attention.
- Use a piece of cardboard and a magnifying glass to locate suspected hydraulic leaks.



- Keep body and hands away from pinhole leaks or nozzles that eject high pressure hydraulic fluid. Hydraulic fluid escaping under high pressure can penetrate the skin causing serious injury, leading to severe complications and/or secondary infections if left untreated. If hydraulic fluid is injected into the skin, seek immediate medical attention no matter how minor the injury appears.



- Hydraulic system may contain stored energy. Before performing maintenance or repairs on the hydraulic system, remove attachments, engage parking brake, disengage weight transfer system (if equipped), shut off engine, and remove ignition key. To relieve pressure on the auxiliary hydraulic system, shut off the power unit engine and move the hydraulic control lever left and right before disconnecting the auxiliary hydraulic quick couplers.

# SAFETY

---



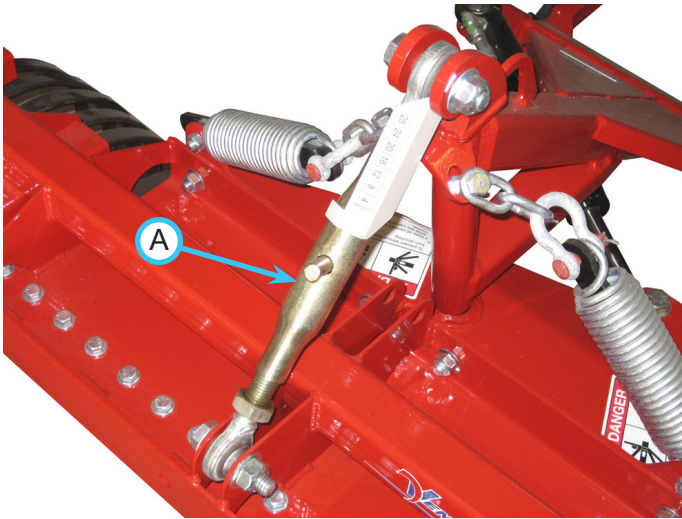
## KR502 Safety Procedures



- The rake tines should comb not dig. Severe contact with the ground, debris, rocks, etc. can cause the rake tines to bend or break.
- Bending a tine may cause it to break. Do NOT attempt to straighten a bent rake tine.
- 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.

# OPERATIONAL CONTROLS

## Height Adjustment Link



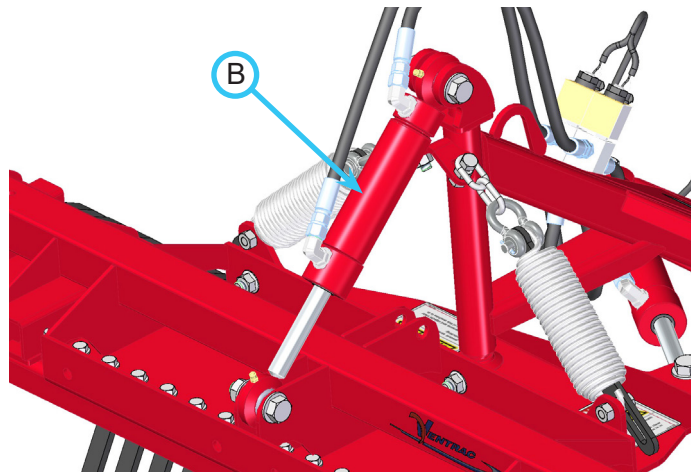
Turning the height adjustment link (A) will raise or lower the tines on the terra rake.

## Terra Rake Angle (Secondary SDLA Lever\*)

The secondary SDLA lever\* on the power unit controls the angle of the terra rake. The terra rake can be angled up to 28 degrees to the left or the right.

NOTE: when using the terra rake on the rear of the power unit, the terra rake angle is controlled using the rear auxiliary hydraulic handle.

## Hydraulic Height Adjustment Cylinder



The optional adjustment cylinder (B) replaces the tine depth adjustment link on the terra 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. Refer to your power units operator's manual for the correct kit for your power unit.

Kit # 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 terra rake.

Kit # 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 terra rake.

When using the terra rake on the rear of the power unit, the optional height adjustment cylinder is controlled using the rear auxiliary hydraulic handles. NOTE: Kit # 70.8035 requires an optional rear 12 volt switch and plug to control the 12 volt directional valves. Refer to your power units operator's manual for the correct kit for your power unit.

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

1. Park the power unit and terra rake on a level surface, with the engine shut off and all fluids cold.
2. Perform a visual inspection of the power unit and terra rake. Look for loose or missing hardware, damaged components, bent rake tines, or signs of wear. Inspect hydraulic hoses, hydraulic fittings, and fuel lines to ensure tight, leak free connections.
3. Refer to the power unit operator's manual. Check the power unit's engine oil, hydraulic oil, cooling system, tire pressure, and fuel level. Add fluid or service system as required.
4. Refer to the power unit operator's manual. Test the power unit's operator safety interlock system.

## Attaching

1. Drive the power unit slowly forward into the hitch arms of the terra rake. Align the lift arms of the power unit with the terra rake hitch arms by raising or lowering the front hitch and complete the engagement.
2. Once completely engaged, close the front hitch locking lever.\*
3. Engage the parking brake\* and shut off the engine.
4. Wipe hose ends clean, and connect to the power unit's hydraulic quick couplers. If equipped, connect the hoses and quick couplers so the red indicators are paired together and the yellow indicators are paired together.
5. Connect the electric plug (if equipped).

## Detaching

1. Park the power unit on a level surface and set the parking brake.\*
2. Lower the terra rake to the ground.
3. Shut off 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. Do not allow hose ends to lay in the dirt.

5. Disconnect the electric plug (if equipped).
6. Disengage the front hitch locking lever.\*
7. Restart the power unit and slowly back away from the terra rake. A side to side movement of the steering wheel may aid disengagement.

## Operating Procedure

Before operation, perform 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 terra 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. The lever will stay in this position until intentionally removed.

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 terra rake. Move the secondary SDLA lever to the left or right to angle the terra rake.

### **⚠ WARNING**

When rake is angled to the left or right, pinch points are created. Make sure there are no people or objects present between the rake frame and the power unit.

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, 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 Terra Rake

Transport the terra rake with the power unit front hitch and terra rake raised to reduce wear of the machine and to prevent the rake tines from catching on high spots in the ground, rocks, or other obstacles. Travel slowly when transporting over undulating or rough surfaces to maintain control of power unit and to reduce the shock to the machine.

## Setting Tine Depth

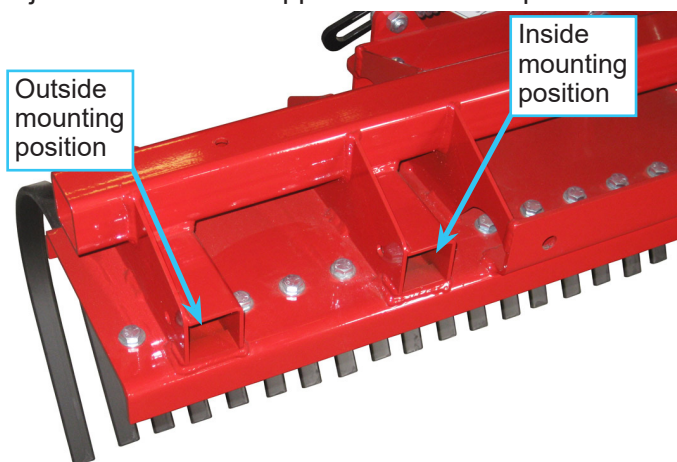
The tine depth is adjusted by turning the adjustment link. Lengthening the adjustment link will raise the tines and shortening the adjustment link will lower the tines. If equipped with a height adjustment cylinder, select the height adjustment function with the power unit's switch and move the secondary 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 1/4" to 1" 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

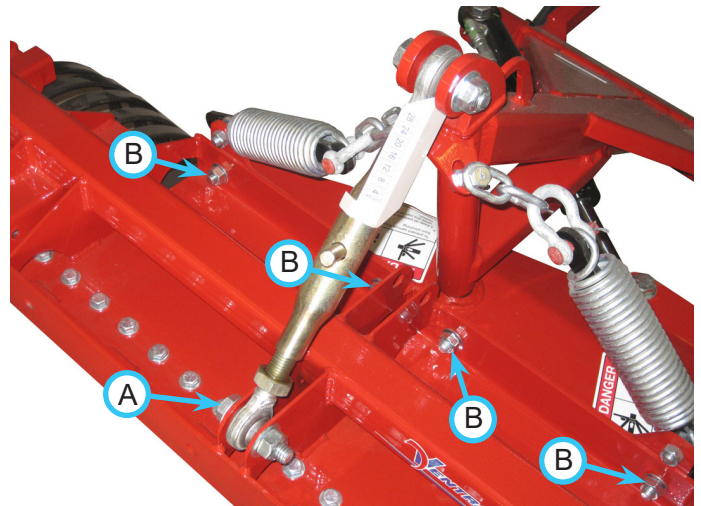
The terra rake has gauge wheels that can be adjusted for different applications or user preference.



Mounting the gauge wheels in the outside mounting positions creates a wider footprint which will help obtain a more level surface. When the rake is fully angled in this position, 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 positions 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.

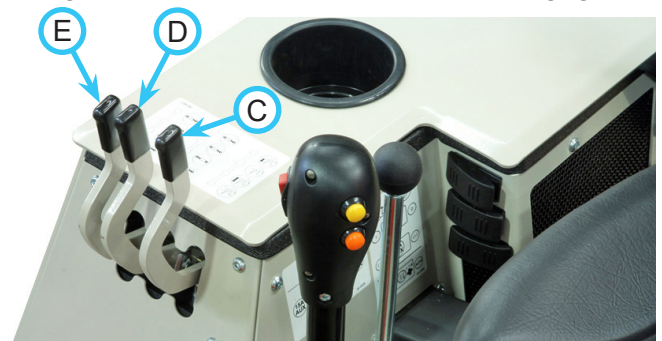
## Rear Mount (3 Point Hitch) Procedures

The hitch frame on the terra 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 terra 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 terra rake frame angle cylinder to the desired set of hydraulic quick couplers.

If the terra 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.

If the terra rake is equipped with optional hydraulic height adjustment kit # 70.8035, plug the wire

# GENERAL OPERATION

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 terra 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.

### **CAUTION**

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



## Attention

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

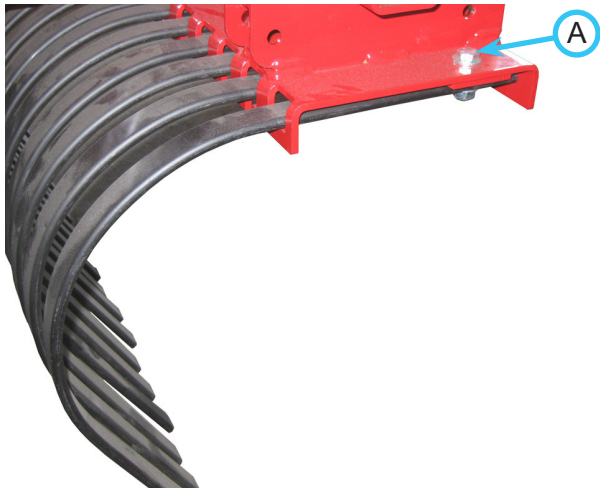
### Cleaning and General Maintenance

For best results, and to maintain the finish of the KR502, clean or wash the terra rake to remove dirt, gravel, grass, or other debris.

### Rake Tine Replacement

The terra 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 terra rake on a smooth, level surface and lower the rake to the ground.
2. Set 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.



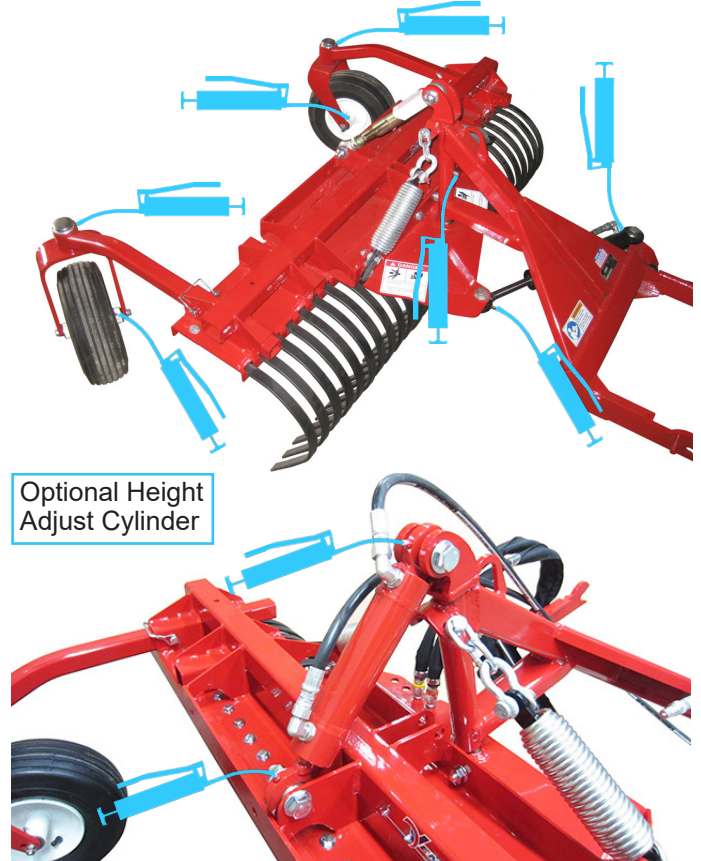
5. Slide the tine out of the rake frame.
6. Insert the new rake tine into the frame and fasten with the original hardware. Torque to 31 ft-lbs (42 Nm).

### Tire Pressure

Tire pressure should be maintained at 18-20 psi.

### Lubrication Locations

Lubrication is required at the following locations using a lithium complex NLGI #2 grease. Refer to the maintenance schedule for service intervals.



### Storage

#### Preparing the Terra Rake for Storage

1. Clean the terra rake.
2. Inspect for loose or missing hardware, damaged components, or signs of wear. Repair or replace and damaged or worn components.
3. Apply grease to all grease points.
4. Wipe off all excess grease.

#### Removing the Terra Rake from Storage

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

# SERVICE

## Maintenance Schedule

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 1000 Hours	Yearly	
																										Grease & Lubrication: See Lubrication Section
Caster Wheel Pivot	2	1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wheel Axle Bearing	2	^	**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cylinder Ends	2	^	**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rake Pivot Tube	1	^	**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Optional Height Adjust Cylinder	2	^	**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inspection																										
Inspect for Loose, Missing, or Worn Components.			✓																							
Inspect for Bent Rake Tines			✓																							
Check Tire Pressure			✓																							
Check Safety Decals			✓																							
** Operation in severe conditions may require more frequent service intervals.																										
^ Grease Until Fresh Grease is visible																										

## Maintenance Checklist

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 1000 Hours	Yearly	
																										Grease & Lubrication: See Lubrication Section
Caster Wheel Pivot	2	1																								
Wheel Axle Bearing	2	^	**																							
Cylinder Ends	2	^	**																							
Rake Pivot Tube	1	^	**																							
Optional Height Adjust Cylinder	2	^	**																							
Inspection																										
Inspect for Loose, Missing, or Worn Components.																										
Inspect for Bent Rake Tines																										
Check Tire Pressure																										
Check Safety Decals																										
** Operation in severe conditions may require more frequent service intervals.																										
^ Grease Until Fresh Grease is visible																										

# SPECIFICATIONS

---

## Dimensions


Overall Height . . . . .	32 inches (81.3 cm)
Overall Length . . . . .	59 inches (149.9 cm)
Overall Width . . . . .	49 inches (124.5 cm)
Overall Width with Rake Extensions. . . . .	69 inches (175.3 cm)
Weight . . . . .	250 pounds (113.4 kg)
Angle (Left & Right) . . . . .	.28 degrees
Tine Adjustment Range . . . . .	6 inches (15.2 cm)
Digging Depth . . . . .	3 inches (7.6 cm) out of ground / 3 inches (7.6 cm) deep

## Features

- Hydraulic power angle left or right.
- Adjustable front gauge wheels.

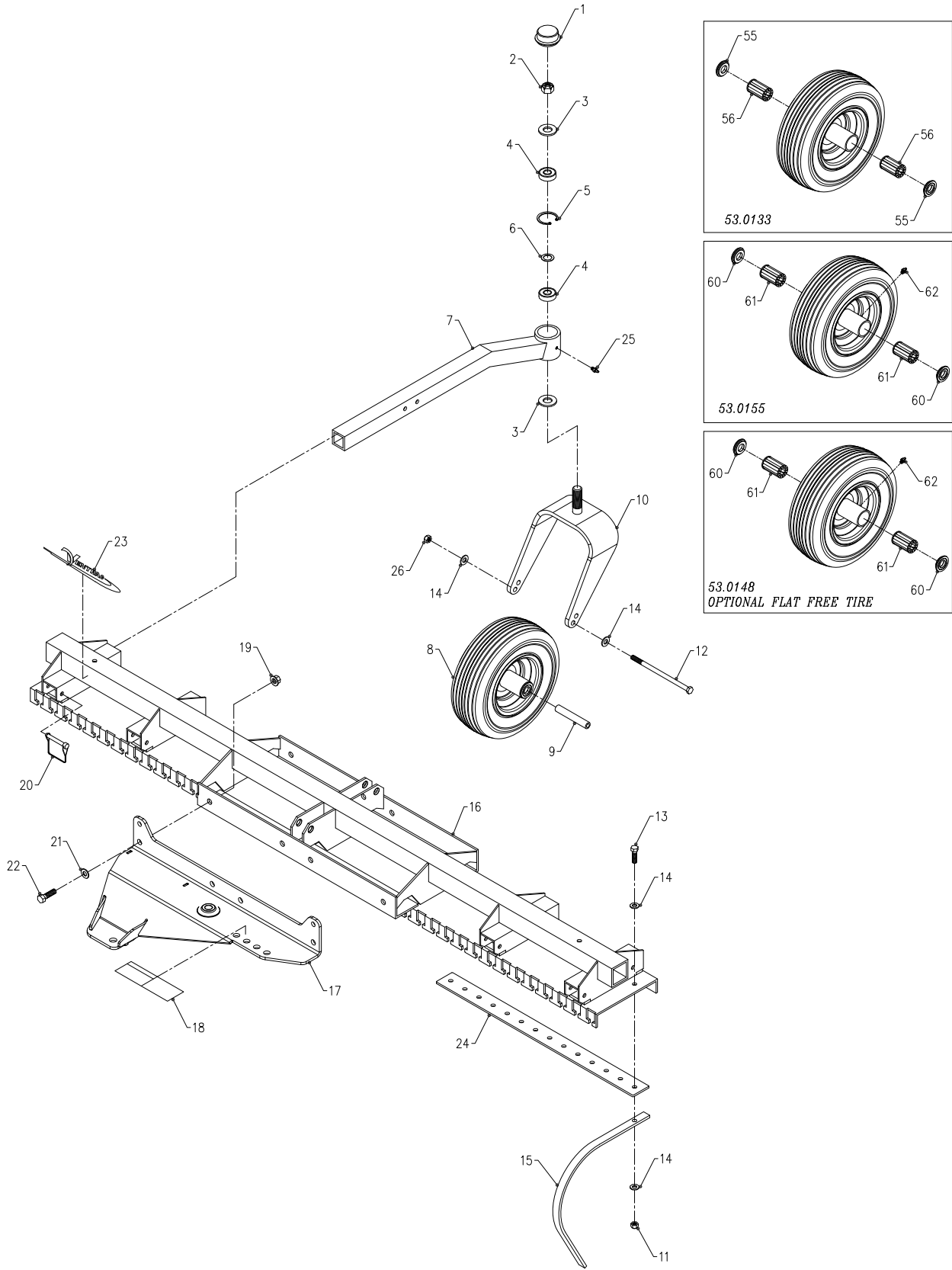
## EC Declaration of Conformity

### Ventrac KR502

Manufacturer	Venture Products, Inc. 500 Venture Drive Orrville, OH 44667 USA
Authorized Representative (also authorized to compile the technical file)	Lars Persson LAPAB MASKIN AB Box 46, S-734 22 Hallstahammar Flädervägen 5, 734 38 Hallstahammar SWEDEN
Technical File Keeper	Ryan Steiner Venture Products, Inc. 500 Venture Drive Orrville, OH 44667 USA
Description	Terra rake attachment
Model Name	Ventrac KR502 Terra Rake
Model Number	39.55431
Serial Number	KR502-Axxxxx
This Product Conforms to Directives	2006/42/EC
Ryan Steiner Director of Engineering 	23-July-2015 Orrville, Ohio USA

# PARTS

## ILLUSTRATED DRAWING Main Frame & Gauge Wheels



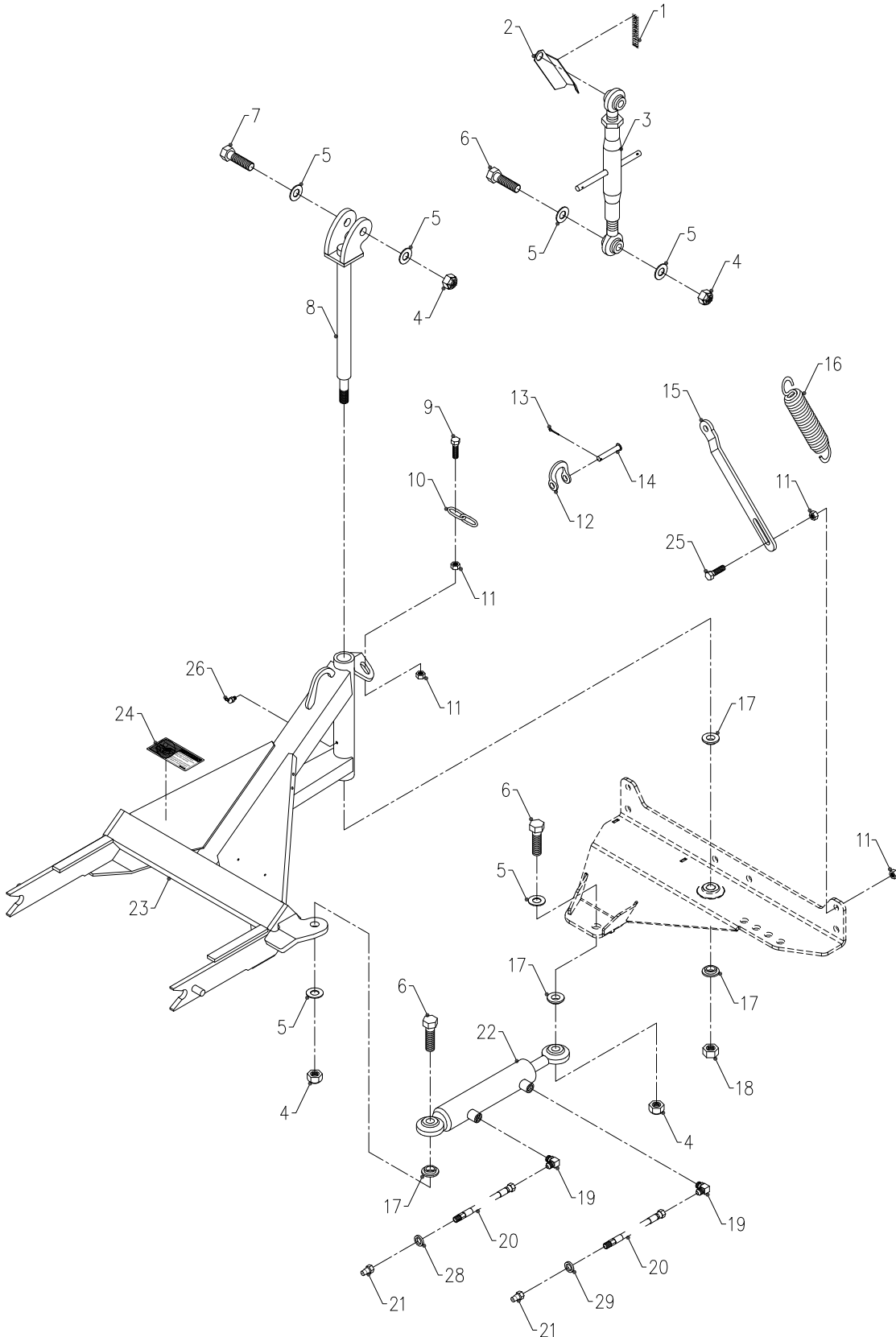
# PARTS

## Main Frame & Gauge Wheels

REF.	PART NO.	DESCRIPTION	QTY.
1	53.0080	DUST CAP, BEARING MOWER CASTER	2
2	99.A12NF	LOCKNUT, STOVER 3/4-16 SAE	2
3	99.B0057-2	WASHER, MACH3/4 X1-1/4 10GA ZP	4
4	55.0023	BEARING, BALL .75 ID X 1.78 OD	4
5	04.0013	SNAP RING, INT .062 X 1.75	2
6	99.B0052	SHIM, STEEL 3/4 X 1 X .062	2
7	62.1006	ARM, FRONT CASTER MOUNT	2
8	53.0133	WHEEL, ASM 13 X 5 X 6 CASTER (Serial # 1128-1207)	2
8	53.0155	WHEEL, ASM 13 X 5 X 6 CASTER (Serial # 1208-)	2
8	53.0148	WHEEL, ASM 13X5X6 RIB FLATFREE (Optional)	2
9	50.0050	TUBE, RD 7/16 X 3/4 X 6-1/8L A.	2
10	50.0183	YOKE, CASTER 13", HIGH/LOW	2
11	99.A06	LOCKNUT, STOVER 3/8-16 USS	28
12	90.0660	BOLT, 3/8-16 USS X 7-1/2	2
13	90.0610	BOLT, 3/8-16 USS X 1 1/4	28
14	95.06	WASHER, FLAT 3/8 SAE	56
15	79.0043	TINE, RAKE	28
16	62.1009	FRAME, MAIN	1
17	64.1106	PLATE, HITCH TO MAIN FRAME (Serial # 1128-1429)	1
17	KR-6001	FRAME, LOWER PIVOT (Serial # 1430-)	1
18	00.0102	DECAL, DANGER-PINCHING HAZARD (Serial # 1128-1429)	2
18	00.0594	DECAL, DANGER PINCHING HAZARD (Serial # 1430-)	2
19	99.SF08	NUT, SRF 1/2-13 USS	4
20	03.0003	PIN, SAFETY SNAP 3/8 X 2 1/2	2
21	95.08	WASHER, FLAT 1/2 SAE	4
22	90.0810	BOLT, 1/2-13 USS X 1 1/4	4
23	00.0212	DECAL, VENTRAC ORBITAL	2
24	64.1197	SPACER, TINE 24-3/8"	2
25	29.GF0001	GREASE FTG, 1/4 SAE ST	2
26	99.A06C	LOCKNUT, CENTER 3/8-16	2
55	55.0066	BEARING, RETAINER 3/4"	2
56	55.0065	BEARING, 3/4 ROLLER 2-1/4" LG	2
60	55.0072	BEARING, RETAINER 3/4"	2
61	55.0088	BEARING, ROLLER REPLACEMENT	2
62	29.GF0001	GREASE FTG, 1/4 SAE ST	1

# PARTS

## ILLUSTRATED DRAWING Hitch Frame, Height Adjuster, & Hydraulics





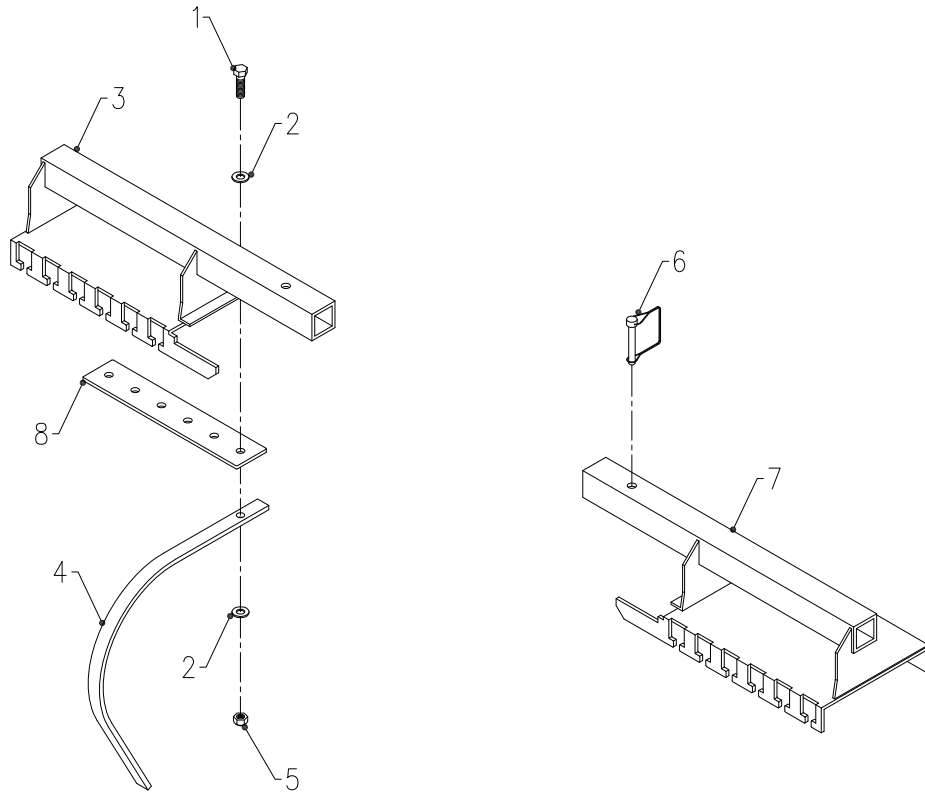
# PARTS

## Hitch Frame, Height Adjuster, & Hydraulics

REF.	PART NO.	DESCRIPTION	QTY.
1	00.0211	.DECAL, KR HEIGHT INDICATOR	1
2	64.1108	.PLATE, MANUAL ADJUST GAUGE	1
3	47.0222	.TOP LINK, CAT.#0, ADJUSTABLE	1
4	99.A10	.LOCKNUT, STOVER 5/8-11 USS	4
5	95.10	.WASHER, FLAT 5/8 SAE	6
6	90.1020	.BOLT, 5/8-11 USS X 2 1/2	3
7	90.1022	.BOLT, 5/8-11 USS X 2 3/4	1
8	64.1107	.PIN, ANGLE PIVOT	1
9	90.0712	.BOLT, 7/16-14 USS X 1 1/2	2
10	81.0148	.CHAIN, 1/4" X 2 LINKS	2
11	92.07	.NUT, 7/16-14 USS	8
12	43.CS06	.CLEVIS, SHACKLE 3/8 W/ PIN	2
13	02.CP0306	.COTTER PIN, 3/32 X 3/4	2
14	03.0714	.CLEVIS PIN, 7/16 X 1-3/4 ZP	2
15	42.0466	.LINK, SPRING GUIDE	2
16	41.0075	.SPRING, EXT 2" OD X 8-3/8" LG	2
17	64.1109	.BUSHING, DANUSER BALL	4
18	93.10	.NUT, 5/8-18 SAE	1
19	25.6801-06-06	.FITTING, 90 ME 3/8 X 3/8	2
20	20.0185	.HOSE, 1/4X48.00 SAE 100R17 AR	2
21	23.0104	.COUPLER, QUICK MALE 1/4	2
22	23.0129	.CYLINDER, 1-1/2" X 8" STEERING	1
23	62.1005	.FRAME, HITCH	1
24	00.0217	.DECAL, WARNING READ OWNERS MAN	1
25	90.0710	.BOLT, 7/16-14 USS X 1 1/4	2
26	29.GF0003	.GREASE FTG, 1/4 SAE 45	1
28	05.0117	.WASHER, .544ID X .817 X.14 YEL	1
29	05.0116	.WASHER, .544ID X .817 X.14 RED	1

# PARTS

## ILLUSTRATED DRAWING 70.8034 Rake Extension Kit



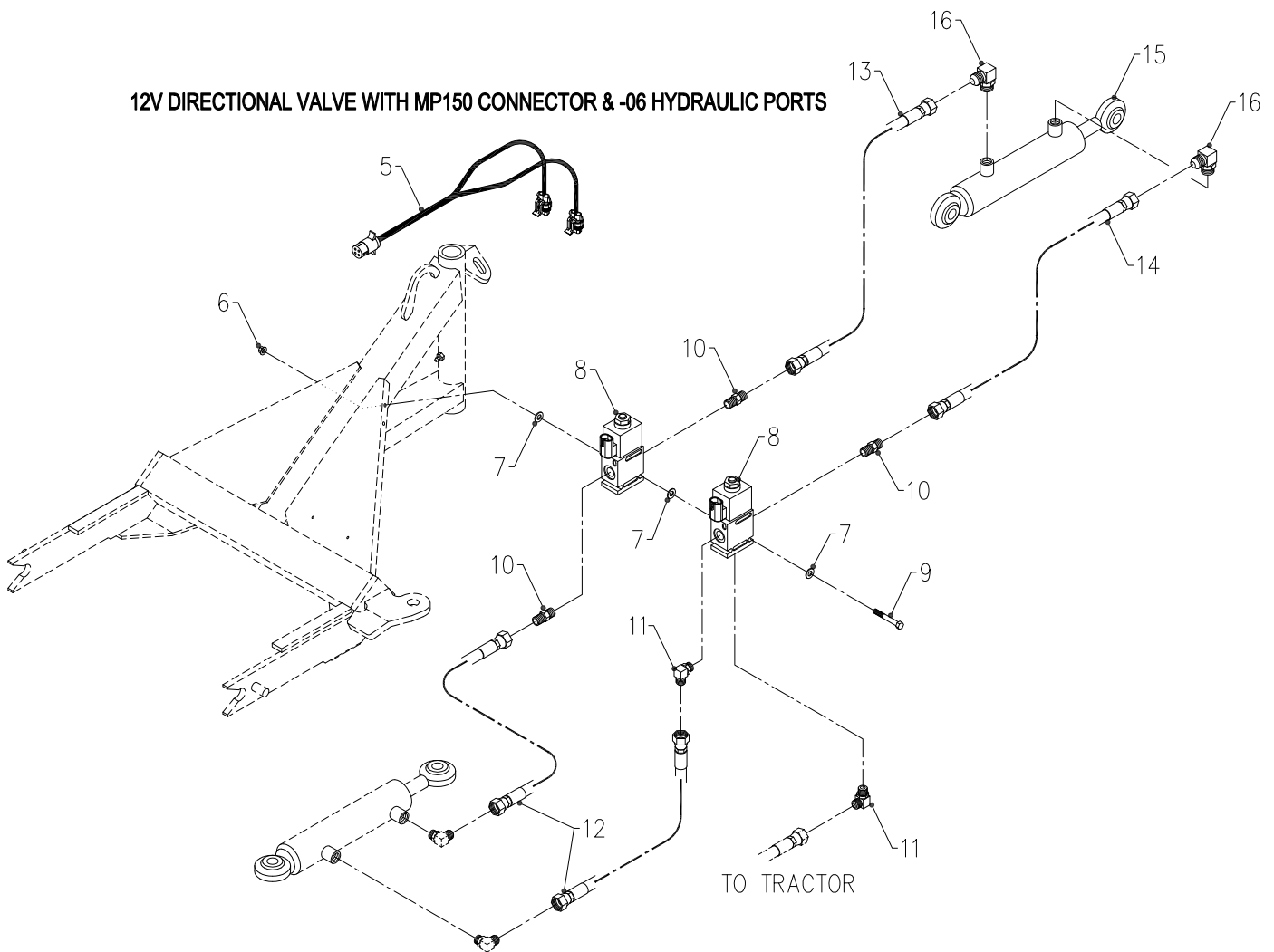
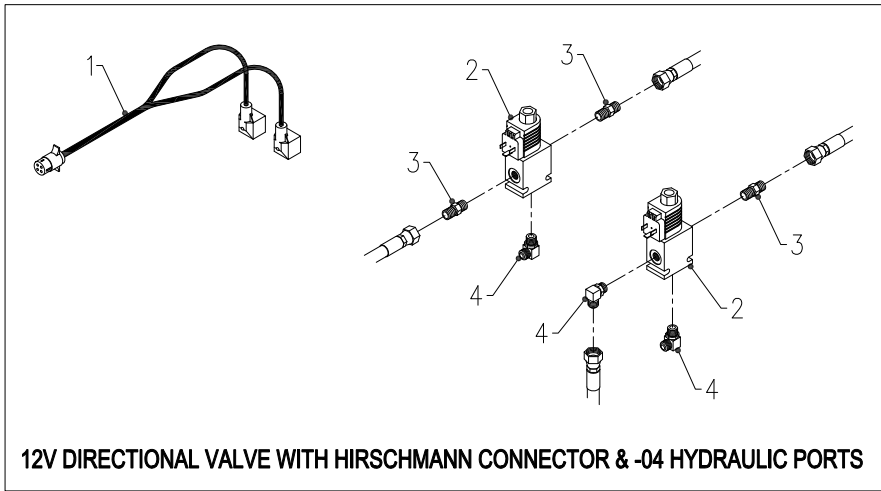
# PARTS

## 70.8034 Rake Extension Kit

REF.	PART NO.	DESCRIPTION	QTY.
1	90.0610	BOLT, 3/8-16 USS X 1 1/4	12
2	95.06	WASHER, FLAT 3/8 SAE	24
3	62.1008	FRAME, LEFT EXTENSION	1
4	79.0043	TINE, RAKE	12
5	99.A06	LOCKNUT, STOVER 3/8-16 USS	12
6	03.0003	PIN, SAFETY SNAP 3/8 X 2 1/2	2
7	62.1007	FRAME, RIGHT EXTENSION	1
8	64.1198	SPACER, TINE 10-1/2"	2

# PARTS

## ILLUSTRATED DRAWING 70.8035 Hydraulic Height Adjust Cylinder Kit



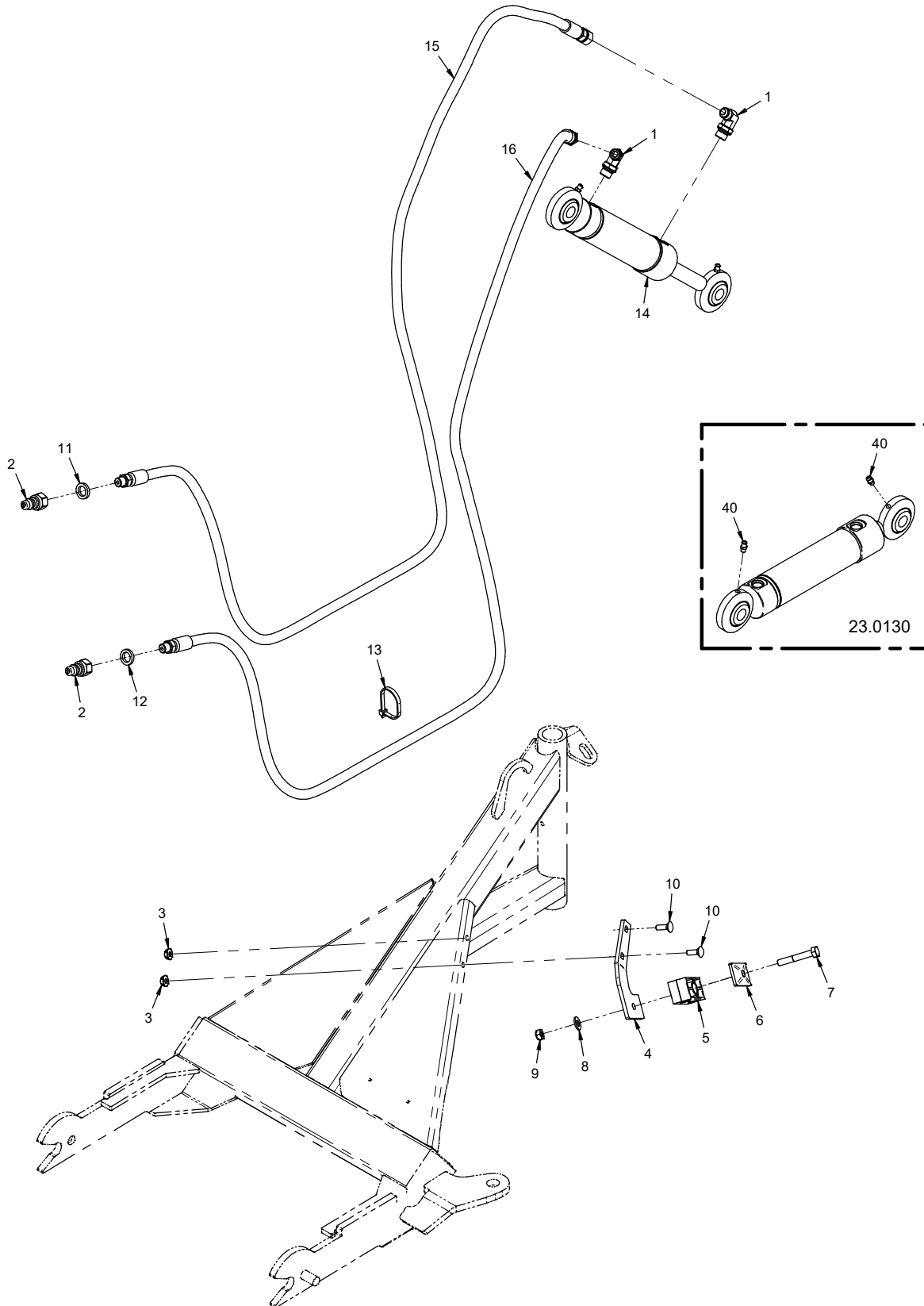
# PARTS

## 70.8035 Hydraulic Height Adjust Cylinder Kit

REF.	PART NO.	DESCRIPTION	QTY.
1	34.1400-1007	WIRE, 14 GA 2 WIRE X 43" KR	1
2	23.0136-1	VALVE, DIRECTIONAL CONTROL 12V	2
3	25.6400-06-04	FITTING, M CONN 3/8 X 1/4	3
4	25.6801-06-04	FITTING, 90 ME 3/8 X 1/4	3
5	32.0172	HARNESS, HEIGHT ADJUST CYL KIT	1
6	99.SF04	NUT, SRF 1/4-20 USS	2
7	95.04	WASHER, FLAT 1/4 SAE	6
8	23.0164	VALVE, DIRECTIONAL 12V	2
9	90.0426	BOLT, 1/4-20 USS X 3 1/4	2
10	25.6400-06-06	FITTING, M CONN 3/8 X 3/8	3
11	25.6801-06-06	FITTING, 90 ME 3/8 X 3/8	3
12	20.0150	HOSE, 1/4X11.50 SAE 100R17 AR	2
13	20.0211	HOSE, ASM C 1/4 X 20"-2750	1
14	20.0143	HOSE, 1/4X27.00 SAE 100R17 AR	1
15	23.0130	CYLINDER, 1-1/2" X 5"	1
16	25.6801-06-06	FITTING, 90 ME 3/8 X 3/8	2

# PARTS

## ILLUSTRATED DRAWING 70.8216 Hydraulic Height Adjust Kit



# PARTS

## 70.8216 Hydraulic Height Adjust Kit

REF.	PART NO.	DESCRIPTION	QTY.
1	25.6801-06-06	.FITTING, 90 ME 3/8 X 3/8	2
2	23.0104	.COUPLER, QUICK MALE 1/4	2
3	99.SF04	.NUT, SRF 1/4-20 USS	2
4	KR-1501	.MOUNT, HOSE CLAMP	1
5	44.0256	.CLAMP, HYD. HOSE 12.7MM ID 2 CAVITY (SET OF 2)	1
6	44.0229	.COVER PLATE, 2D GROUP (2 CAVITY)	1
7	90.0516	.BOLT, 5/16-18 USS X 2	1
8	95.05	.WASHER, FLAT 5/16 SAE	1
9	99.A05	.LOCKNUT, STOVER 5/16-18 USS	1
10	97.0406	.BOLT, CARRIAGE 1/4-20 X 3/4	2
11	05.0156	.WASHER, .544 ID X .817 X 14 NAT	1
12	05.0157	.WASHER, .544 ID X .817 X 14 BLK	1
13	30.0037	.TYTON TIE, #50 .18 X 8 BLACK	3
14	23.0130	.CYLINDER, 1-1/2" X 5"	2
15	20.0383	.HOSE, 1/4X74.00 SAE 100R17AR	1
16	20.0382	.HOSE, 1/4X69.50 SAE 100R17AR	1
40	29.GF0001	.GREASE FTG, 1/4 SAE ST	2

# WARRANTY



## LIMITED WARRANTY - VENTRAC COMMERCIAL EQUIPMENT

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

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

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

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

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

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

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



# WARRANTY

---



## LIMITED WARRANTY - VENTRAC COMMERCIAL EQUIPMENT

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

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

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

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

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

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

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