

# OWNER/OPERATOR'S MANUAL & PARTS LIST

# STUMP GRINDER

LC150









328 East Water St. **PO Box 148** 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 picture below to find the location of the identification number. Record them in the spaces provided below.

Date of Purchase: Month	Day	Year	
Dealer:			
Dealer Address:			
Dealer Phone Number:			
Dealer FAX Number:			
Model # (A):	Control of the Contro	amelity or harmone any guide, subtry for the guide of the guide, subtry for time or material latents.	
Serial # (B):		WAS TIMES OF THE PROPERTY OF T	
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.

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#### INTRODUCTION

# **Product Description** LC150 Stump Grinder

The Ventrac LC150 stump grinder is designed to operate with the Ventrac Series 3000 power unit. It is a great tool for removing stumps up to 10-12 inches (25.4-30.5 cm) in diameter as well as remove above ground roots which may damage mowing equipment. It is equipped with a multi-function arm that is controlled by the auxiliary lever of the power unit hydraulics. This arm can be used to achieve a common grinding depth of a stump that is repeatable by using the depth indicator gauge. It also can be used as a blade to level the area where the stump was ground out. The arm serves as a stand when the stump cutter is removed from the power unit, holding the hitch arms at the correct height for easy hookup.

#### 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.

#### **Ventrac LC150 Specifications**

Overall Height
Overall Length
Overall Width
Weight
Rotor Tip Speed (at 3200 engine rpms) 2,475 ft/min (754.5 m/min)
Rotor RPM (at 3200 engine rpms)
Grinding Depth (below ground) 6 inches (15.25 cm)
Cutter Wheel Diameter
Cutter Teeth (Carbide Tipped)

Venture Products, Inc. reserves the right to change these specifications without notice.

#### 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

#### **A** 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.

#### **A** 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.

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

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

Describes any "Attachment" or "Accessory" that is used in conjunction with a

power unit.

#### **Safety Decals**

The following safety decals must be maintained on your LC150 Stump Grinder.

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.







В С

Α







D E F

Decal	Page & Location	Description	Part Number
Α	E-7, #17	Danger - Shield Missing	00.0062
В	E-7, #10	Warning - Moving Parts	00.0216
С	E-7, #19	Warning - Read Owner's Manual	00.0217
D	E-7, #16 (2)	Warning - Pinch Point	00.0218
E	E-7, #11	Warning - Do Not Reach	00.0219
F	E-7, #20	General Safety	00.0220



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



#### **Training Required**

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

#### **Personal Protective Equipment Requirements**

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



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

#### **Operating Safely**

- 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.
- 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 seat only.
- Always wear a seat belt if the machine has a roll cage/bar installed.
- 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 place the selector lever in park before shifting range.





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



#### **Operating Safely (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 seat 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.
- 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, and excessive grease.

#### **Preventing Accidents**

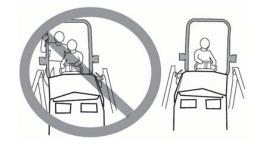


- Clear working area of objects that might be hit or thrown from machine.
- Keep people and pets out of mowing area.
- Know the work area well before operation. Do not operate where traction or stability is questionable.
- Reduce speed when you are operating over rough ground.
- Equipment can cause serious injury and/or death when improperly used. Before
  operating, know and understand the operation and safety of the power unit and
  the attachment being used.
- Do not operate machine if you are not in good physical and mental health, if you will be distracted by personal devices, or are under the influence of any substance which might impair decision, dexterity, or judgment.
- Children are attracted to machine activity. Be aware of children and do not allow them in the working area. Turn off the machine if a child enters the work area.

#### **Keep Riders Off**

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







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



#### **Operating On Slopes**

- Slopes can cause loss-of-control and tip-over accidents, which can result in severe injury or death. Be familiar with the emergency parking brake, along with the power unit controls and their functions.
- If power unit is equipped with a fold down roll bar, it must be locked in the upright position when operating on any slope.
- Use low range when operating on slopes greater than 15 degrees.



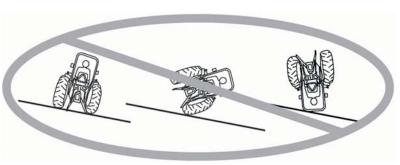
- Never shift between high and low range while on a slope. Always move the power unit to level ground and place the selector lever in park before shifting range.
- Variables such as wet surface and loose ground will reduce the degree of safety. Do not drive where
  machine could lose traction or tip over.
- Keep alert for hidden hazards in the terrain.
- Stay away from drop-offs, ditches, and embankments.
- Sharp turns should be avoided when operating on slopes.
- Pulling loads on hills decreases safety. It is the responsibility of the owner/operator to determine loads that can safely be controlled on slopes.
- Transport machine with attachment lowered or close to the ground to improve stability.
- While operating on slopes, drive in an up and down direction when possible. If turning is necessary while driving across slopes, reduce speed and turn slowly in the downhill direction.
- Assure a sufficient supply of fuel for continuous operation. A minimum of one-half tank of fuel is recommended.

#### **Roadway Safety**

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

#### **Truck Or Trailer Transport**

- Use care when loading or unloading machine into a truck or trailer.
- The parking brake is not sufficient to lock the machine during transport. Always secure the power unit and/or attachment to the transporting vehicle.
- Shut off fuel supply to power unit during transport on truck or trailer.



#### **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 disconnect the negative battery cable from the battery when working with electrical components.
- 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 sitting in the operator's seat.
- 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 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.
- Springs may contain stored energy. Use caution when disengaging or removing springs.
- An obstruction or blockage in a drive system or moving/rotating parts may cause a buildup of stored energy. When the obstruction or blockage is removed, the drive system or moving/rotating parts may move suddenly. Do not attempt to remove an obstruction or blockage with your hands. Keep hands, feet, and clothing away from all power-driven parts.
- · Dispose of all fluids in accordance with local laws.

#### **Fuel Safety**



- 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 remove gas cap or add fuel with the engine running. Allow engine to cool before refueling.
- Replace all fuel tank and container caps securely.
- Do not overfill fuel tank. Maximum level is 1" below the neck of the fuel tank.
- If fuel is spilled, do not attempt to start the engine. Move the power unit away from the fuel spill and avoid creating any source of ignition until fuel vapors have dissipated.
- If the fuel tank must be drained, it should be drained outdoors into an approved container.
- Dispose of all fluids in accordance with local laws.
- Check all fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- The fuel system is equipped with a shut-off valve. Shut off the fuel when transporting the machine to and from the job, when parking the machine indoors, or when servicing the fuel system.

#### **SAFETY**



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

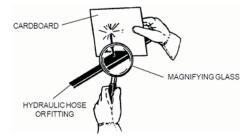


#### **Hydraulic Safety**

- 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. If hydraulic fluid is injected into skin, seek immediate medical attention.



- 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 secondary S.D.L.A. lever left and right before disconnecting the auxiliary hydraulic quick couplers.
- Dispose of all fluids in accordance with local laws.

#### **SAFETY**



#### **LC150 Safety Procedures**



- Set up power unit and stump grinder so that particles are directed away from buildings or other objects
  of value.
- During the grinding process, objects can be propelled from the stump grinder causing injury or damage to people, animals, buildings, vehicles, or other objects of value. Block access to the area prior to grinding stumps. Use plywood or equivalent shielding to protect nearby building or objects. If access to the area cannot be prevented, use plywood or equivalent shielding to protect pedestrian areas.
- Stop grinding immediately if the cutter head strikes a rock or other solid object. Damage to the cutting teeth or the cutter head may occur.
- Do not operate with any of the cutting teeth missing. This causes the cutter head to become unbalanced and may cause damage to the stump grinder.

#### **OPERATION**

#### **Daily Inspection**

- 1 Park machine on a level surface, with the engine shut off and all fluids cold.
- 2 Perform a visual inspection of both the power unit and the stump grinder. Look for loose or missing hardware, damaged components, or

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.

**A WARNING** 

signs of wear. Inspect hydraulic hoses, hydraulic fittings, and fuel lines to ensure tight, leak free connections. Inspect drive belts. Belts should be in good condition.

- 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 as required.
- 4 Inspect the cutting teeth for wear and service as required.
- 5 Test the power unit's operator safety interlock system\*.

#### **Attaching**

- 1. Drive the power unit slowly forward into the hitch arms on the stump grinder. Align the hitch arms to complete the engagement.
- 2. Once completely engaged, close the front hitch latch.\*
- 3. Set parking brake, stop engine, and remove the key.\*
- 4. Install the PTO drive belt onto the power unit. It is easier if the belt is first removed from the pulley on the gearbox and then installed onto the bottom groove of the double pulley on the power unit. Once the belt is installed on the power unit then install it back onto the bottom pulley of the gearbox. It is also helpful to have the tension idler rotated so it is centered in the belt. (See Figure 1)
- 5. Rotate the tension idler pulley over the belt to the left as viewed from the seat (See Figure 2). Hook the torsion spring inside the tab that is welded to the left hitch arm (See Figure 3). Do not hold the torsion spring at the end as this is the area that is held by the tab. Grasp the spring approximately 1-1/2" from the end to prevent pinching.
- 6. Wipe hose ends clean and connect to quick couplers. If equipped, connect the hoses and quick couplers so the red indicators are paired together and the yellow indicators are paired together.

#### **Detaching**

- 1. Park the power unit on a level surface and set the parking brake.\*
- 2. Lower the stump grinder to the ground.
- 3. Lower the multi function arm to the ground. (note detaching point on decal)
- 4. Shut off engine and remove key.\*
- 5. Disconnect hydraulic couplers.\*
- Slowly release idler torsion spring and move idler pulley in between belts. (See Figure 1) Remove belt from power unit drive pulley.
- 7. Disengage the hitch latch. (LT3000 Rotate the locking lever down and move the hitch lever to the right. See Figure 2.)
- 8. Restart the power unit and slowly back away from the stump grinder.
- \* See power unit Manual



Figure 1

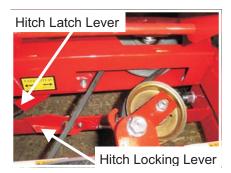


Figure 2



Figure 3

#### **OPERATION**

#### **A WARNING**

During the grinding process, objects can be propelled from the stump grinder causing injury or damage to people, animals, buildings, vehicles, or other objects of value. Block access to the area prior to grinding stumps. Use plywood or equivalent shielding to protect nearby building or objects. If access to the area cannot be prevented, use plywood or equivalent shielding to protect pedestrian areas.

#### **Operating Techniques and Tips**

If a common grinding depth is desired, grind the first stump to the desired depth, then lower the multi function arm until it contacts the ground with the cutter wheel touching the already ground stump. Note what line the depth indicator gauge is on, and then move to the next stump. The multi function arm can be left at the selected level from the first stump while grinding the second stump. When the second stump is ground down to the correct depth, the arm will prevent further cutting. The depth indicator decal is for reference only and does not indicate actual depth below ground level that the stump is being ground at.

After the stump has been removed, raise the stump cutter to its highest position and lower the multi function arm until it contacts the ground. This will allow you to push the debris back into the hole that remains from grinding the stump out.

#### **Grinding**

Before grinding, cut stump as low to the ground as possible with a chain saw. The maximum recommended height is 3" above ground level. Position the grinder above the closest edge of the stump and lower slowly until it begins to cut. Turn the steering wheel left and right to sweep the cutter head across the stump. After each pass, lower the grinder a little more and repeat the process.

After removing several inches on larger stumps, move forward and repeat the process as required. Also on large stumps, it is advisable to approach from several different angles.

Follow this procedure until the stump is cut to desired depth below the ground surface.

If the grinder is lowered too much at one time it will not allow the power unit to be steered. Lift the grinder slightly to continue side-to-side grinding.

There are variables in stumps. Hardwoods cut much slower than softwoods. Partially decayed stumps may cut easy in some spots, but still have some hard spots or tough roots. Experience will help the process be more efficient.

#### **MAINTENANCE & SERVICE**

#### **A 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.

#### A

#### **Attention**

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

#### **Cleaning & General Maintenance**

• For best results, and to maintain the finish of the LC150, clean or wash the stump grinder after each use to remove wood shavings, dirt, and other debris.

#### Service Schedule

#### **Daily**

- · Check for loose bolts or hardware and tighten as required.
- Check cutting head for loose, dull, or bent cutters. Repair or replace as needed.

#### 50 hours

- · Grease the two bearings on cutter head shaft. Do not over grease, usually one pump is sufficient.
- Check gearbox oil level. To check remove the allen head plug at the front of the gearbox. Oil level should be at the bottom of the plug hole. If necessary, add 80-90 weight gear oil until it reaches this point.

#### **Maintenance**

#### **Gearbox Oil**

- Initial change at 50 hrs, then every 500 hrs or annually.
- Refill until gearbox is 1/2 full.

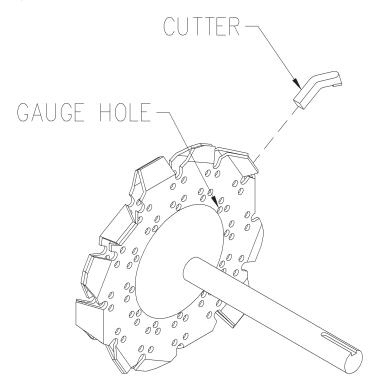
#### **Cutter Head**

• Tighten bolts to 35 ft lbs. (47.5 Nm) after 30 minutes of running time after initial start up.

#### **MAINTENANCE & SERVICE**

#### **Cutter Replacement**

- The cutter head is equipped with (4) right, (4) left, and (4) straight cutters. It is important to always replace the cutters in the original positions. It is recommended that the cutters are replaced one at a time to ensure they are installed in the correct positions.
- Loosen the (4) bolts that hold the cutter in the cutter head. The bolts do not need to be removed, only
  loosened. Using locking pliers or some other gripping device, pull the cutter out of the cutter head. On
  old cutters that are going to be discarded, it is permissible to use a steel hammer to tap the cutters out.
  However if the cutters are to be reused, it is not recommended due to the potential of damage to the
  carbide tip on the cutter. Use only a rubber mallet or soft faced hammer on cutters that are to be
  reused.
- Insert a 3/8" bolt or clevis pin in the provided gauge hole in the cutter head, which serves as a stop when positioning a new cutter into the proper depth. Slide the new cutter into the cutter head until it bottoms out on the bolt or pin in the gauge hole. If necessary, use a rubber mallet or soft faced hammer to tap the cutter in, or use a block of wood to protect the carbide tip and use a steel hammer. Once the cutter is installed, tighten the (4) clamping bolts to 35 ft-lb (47.5 Nm). Remove the bolt or pin that was used as a gauge.

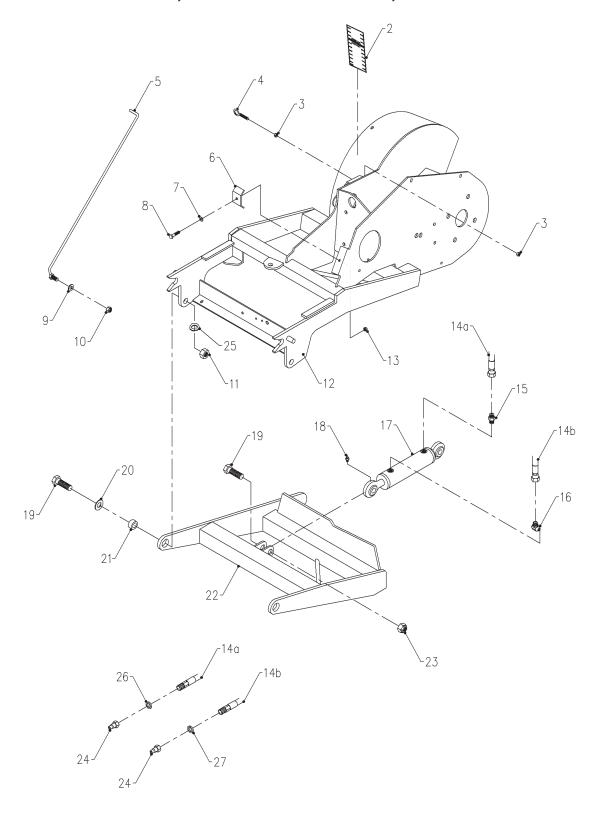


#### **A WARNING**

After replacing the cutter teeth, re-torque the cutter bolts to 35 ft-lb (47.5 Nm) after 30 minutes of cutting time.

# PARTS MANUAL

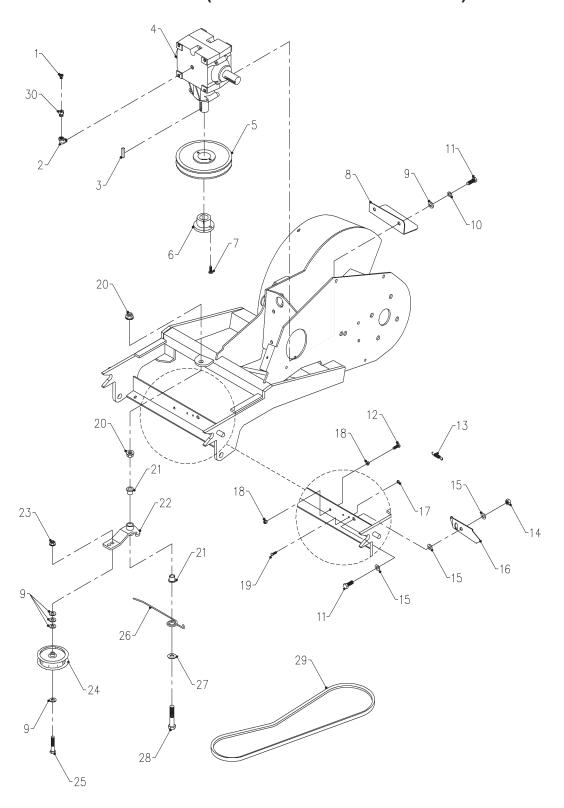
# ILLUSTRATED DRAWING MAIN FRAME, BLADE/STAND FRAME, & HYDRAULICS



### MAIN FRAME, BLADE/STAND FRAME, & HYDRAULICS

REF.	PART NO.	DESCRIPTION QTY.
3 4 5 6	92.04	1/4-20 x 1-1/2 Eye Bolt
9 10 11 12	95.06	1/4-20 x 1-1/4 Bolt       1         3/8 SAE Flat Washer       1         3/8-16 Lock Nut       1         5/8-11 Nut       2         Frame, Main LC150       1         1/4-20 Lock Nut       1
15 16 17 18	20.0185	Fitting, Male Connector - 3/8 x 3/8       1         Fitting, 45 deg ME - 3/8 x 3/8       1         Cylinder, 1-1/2" x 5"       1         Grease Fitting, 1/4-28 st       2
21 22 23 24	64.1132	
		Washer, .544ID x .817 x.14 Yel

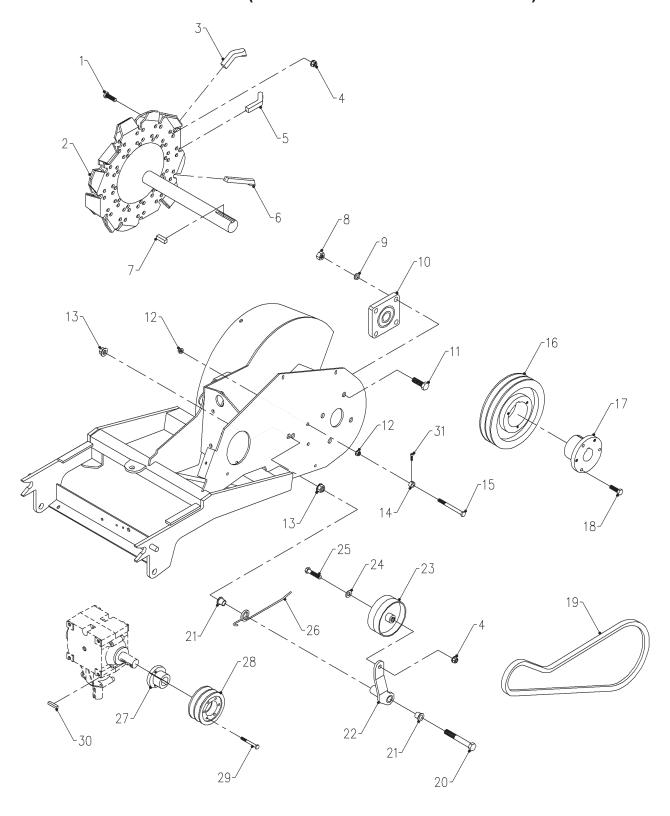
# ILLUSTRATED DRAWING BELT DRIVE (POWER UNIT TO GEARBOX)



### **BELT DRIVE (POWER UNIT TO GEARBOX)**

REF.	PART NO.	DESCRIPTION	QTY.
2 3 4 5	29.0090. 29.S9004G. 85.K0410. 87.0189. 83.BK67H.	Pipe, Street 90 Elbow 1/4 Galv	1 1 1
8 9 10 11	90.0406	Shield, Gearbox Input Pulley	1 8 4 5
14 15 16 17	. 41.0078	3/8-16 Lock Nut	1 3 1 1
20 21 22 23	99.K0062 99.SF08 85.B0027 40.0322 99.SF06	1/2-13 Flange Nut	2
26 27 28 29	90.0616. 41.0066. 94.08. 90.0822. 81.A050	Spring, Single Torsion LH	1 1 1

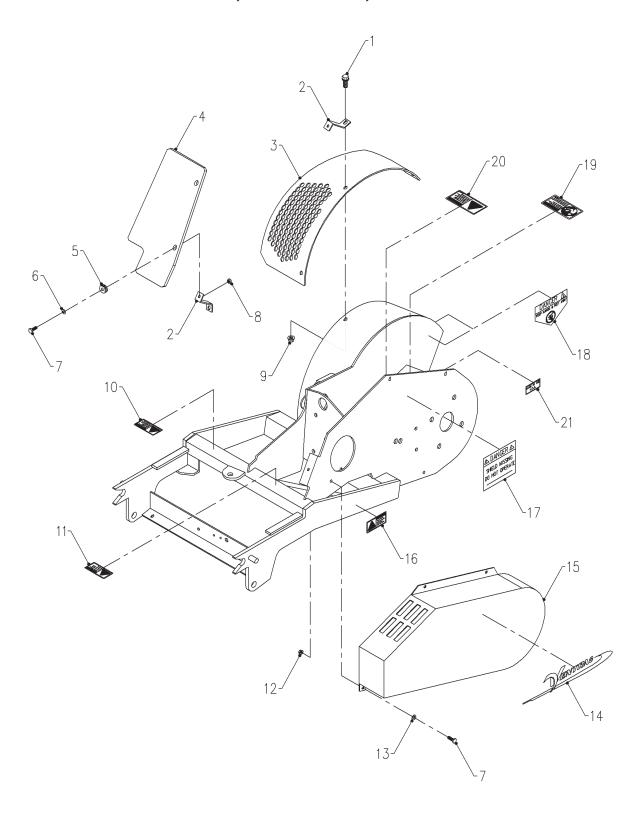
# ILLUSTRATED DRAWING BELT DRIVE (GEARBOX TO CUTTER/ROTOR)



## **BELT DRIVE (GEARBOX TO CUTTER/ROTOR)**

REF.	PART NO.	DESCRIPTION	QTY.
1 2 3 4 5 6	80.0350	Rotor, Cutter LC150	1 4 49 4
8 9 10	96.08	1/2-13 Nut	8 8 2 8
14 15 16 17	99.SF08	Set Collar, 5/16	1 1 1
	81.B050	Belt, B50 (Serial # 1130-)	2 1 2 1
26 27 28 29	90.0614	Spring, Single Torsion LH	1 1 1 3
31	99.K0073	Bolt, SHCS 10-32 x 1/2	1

# ILLUSTRATED DRAWING ROTOR SHIELD, BELT COVER, & SAFETY DECALS



### ROTOR SHIELD, BELT COVER, & SAFETY DECALS

REF.	PART NO.	DESCRIPTION	QTY.
2 3 4 5	64.1133	3/8-16 x 3/4 Flange Bolt	. 2 . 1 . 1 . 2
8 9 10 11	99.A04	1/4-20 x 3/4 Bolt  1/4-20 Lock Nut.  3/8-16 Flange Nut  Decal, Warning - Moving Parts  Decal, Warning - Do Not Reach  1/4-20 Flange Nut	. 2 . 3 . 1 . 1
14 15 16 17 18 19	00.0189	1/4 SAE Flat Washer	. 1 . 2 . 1 . 2 1 1

#### WARRANTY



#### **LIMITED WARRANTY - VENTRAC TURF EQUIPMENT**

Venture Products, Inc. (shall be 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.

Effective September 1<sup>st</sup> 2005, Ventrac warranty on power units & attachments (excluding the HG100/HG150 generator) for <u>residential use only</u> is limited to <u>three (3) years</u> from original purchase date. Ventrac power units & attachments used <u>commercially or for any income-producing purpose</u> is limited to <u>two (2) years</u> from original purchase date. Ventrac ET200 turbine blower (turbine only) is limited to <u>two (2) years</u> from original purchase date. Ventrac HG100/HG150 generator is limited to <u>one (1) year</u> from original purchase date. Ventrac power units & attachments used for <u>rental</u> is limited to <u>180 days</u> from original purchase date. (NOTE: All accessories such as: 3-point hitch, foot pedal, dual wheel kit, etc. will be covered under the above warranty periods as they would apply 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. In the event that product/s originally registered as <u>(3) year residential use</u> are to be transferred to a commercial user, the warranty would change to the remainder of <u>(2) year commercial use</u> starting from the original purchase/registration date with the dealership and/or V.P.I.

If this warranty covers a consumer product as defined by the Magnusson-Moss warranty act, no warranties, express or implied, (including, but not limited to, the warranty of merchantability or fitness for a particular purpose) shall extend beyond the applicable time period stated in bold face type above.

If this warranty covers a product used commercially or for any income producing purpose, the foregoing warranties are in lieu of all other warranties and no representations, guarantees or warranties, express or implied, (including, but not limited to, a warranty of merchantability or fitness for a particular purpose), are made by V.P.I. in connection with the manufacture or sale of its products.

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.

The Ventrac turf equipment, including any defective parts, 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. 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 turf 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 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 turf equipment which is not in accordance with operating instructions as speci-

#### WARRANTY



#### **LIMITED WARRANTY - VENTRAC TURF EQUIPMENT**

fied 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 turf 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 turf 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 turf 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 turf equipment; or (i) damage or defects due to or arising out of repair of Ventrac turf 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.

The sole liability of V.P.I. with respect to this warranty shall be 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 turf 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 turf equipment sold in the United States and Canada.