



OWNER/OPERATOR'S MANUAL

VENTRAC

3000





Orrville, OH
www.ventrac.com

TO THE OWNER

Congratulations on the purchase of a new VENTRAC 3000! The purpose of this manual is to assist you in its safe and effective operation and maintenance.

With proper usage and care, the machine will provide many years of service. Please read and understand this manual entirely before using the machine. Keep this manual on file for future reference.

Please fill in the following information for future reference:

Date of Purchase: Month _____ Day _____ Year _____

Serial Number: _____

Dealer: _____

Dealer Address: _____

Dealer Phone Number: _____

Dealer FAX Number: _____

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

TABLE OF CONTENTS

INTRODUCTION	Section A
Description	A-1
Specifications	A-2
SAFETY	Section B
Before Operating	B-1
On Slopes	B-2
Operator Personal Safety, General Safety	B-3
Seat Belt & Roll Cage	B-4
OPERATION	Section C
Profile, Control Selector	C-1
Front Controls	C-2
Side Controls	C-3
Fenders, Battery	C-4
Seat, Owner's Manual	C-5
Front Hitch & PTO Drive	C-6
PTO Driven Attachments	C-6
Attaching Attachments	C-7
Mower Attachments	C-7
Detachment	C-8
PTO Engagement	C-8
Lights	C-9
Starting Procedure	C-9
Operating on Slopes	C-10
MAINTENANCE & SERVICE	Section D
Engine	D-1
General Instructions	D-1
Fuel In-line Filter	D-2
Transaxles, Hydraulic Oil	D-2
Hydraulic Oil, Battery	D-3
Brake Adjustment	D-4
Neutral Adjustment	D-4
Towing, Free-wheeling	D-5

TABLE OF CONTENTS (CONT.)

MAINTENANCE & SERVICE (cont.)

Drive Belts.....	D-6
Belt Replacement	D-7
PTO Drive Belt	D-8
PTO Belt Replacement	D-9

SERVICE SCHEDULE

Section E

Service Schedule	E-1
Daily	E-1
Visual	E-1
Oil & Filter Change	E-1
Transaxle Oil & Filters	E-1
Storage	E-1

ELECTRICAL DIAGRAM

Section F

WARRANTY

Description

- * The Ventrac Series 3000 is a unique *all-wheel-drive* vehicle that distributes its power to four equal-sized flotation tires for excellent control, traction, stability, maneuvering and braking.
- * An innovative, tandem drive train on the new VENTRAC 3000 creates a quiet, efficient and powerful all-wheel-drive performance. Hillsides, ditches, slopes and wet or snowy surfaces become fair game for this machine that makes all 4 tires push, steer and pull! Tandem hydrostatic pumps blend their power into a unified speed, direction, brake and stop action.
- * A tight, 45 degree articulated chassis plus 12 degrees of oscillation makes the VENTRAC 3000 easy-on-turf, sharp-on-corners and a gripper-on-tough terrain. Its centered articulation, four wide flotation turf tires and vehicle balance guarantees a gentle, near effortless movement on the most sensitive turf and in the sharpest turn.
- * The VENTRAC 3000s power steering tightens its turning radius to 28 inches to maneuver in and around tight places and then “unwinds” for the straight-away with optimum speed and ease. A small pull on the hydraulic lever will bring the front mounted attachment off the ground for repositioning or for transport. An auxiliary option offers a second lever for hydraulic control on an attachment such as tilting or angling.
- * A rugged uni-body frame system, a fast-hitch design and a high torque weight transfer mechanism create a variety of attachment possibilities for the VENTRAC 3000. The PTO drive train operates effectively through the entire hitch stroke of 30 degrees. A rear tow hitch is also a standard feature.
- * Up-front visibility for the mid-mounted operator gives the best attachment view and the best operator ride. Power steering, power lift and a powerful rear mounted engine create operational ease, exceptional maneuverability and engine weight, heat, exhaust and noise ideally located behind the operator.
- * The hydrostatic directional control lever is conveniently located on the right side of the operator. Forward and reverse travel is easily accomplished by moving this lever in the desired direction of travel. The farther the lever is moved, the greater the speed. An optional foot control adds versatility for operator preference. The hydraulic hitch lift control is located just next to the directional control.
- * The open left fender area enhances getting on and off the VENTRAC 3000. Extend the right foot into place like getting into a car or truck, then simply sit on the seat and lift the left foot to the platform. To dismount, reverse the process.
- * Numerous attachments can be used on the VENTRAC 3000. Those needing only hitch and hydraulic connections can be shared from its larger counter part, the VENTRAC 4000.

SECTION A INTRODUCTION

Engine:	Kawasaki, Gasoline, Model FH641V, 21 hp, 2 cylinder, vertical shaft, air-cooled	
Displacement:	675 cc	
Drive:	2 HTC Hydrostatic transaxles	
Tires:	Multi trac C/S 18 x 10.50-10 NHS	
Electrical:	Battery – 450 Cold Cranking Amps 12 volt Alternator – 13 amps	
Instrument Panel:	Tachometer/Hour Meter, Lights & PTO Switch (with indicator light), Ignition Switch, Manual Choke, Throttle	
Dimension:	Wheelbase:	36 inches
	Width:	38 inches
	Width with optional tires:	40 inches
	Overall height (seat):	49 inches
	Length:	73 inches
Ground Speed:	At 3250 engine rpms	5 mph*
	With optional multi trac tires	5.7 mph
Weight:		710 pounds

OPTIONS:

Control:	Left Foot pedal kit
Hydraulic:	Auxiliary control package
Tires:	Turf Trac RIS 18 x 9.50 x 8 NHS
Roll cage with seat belt:	39.36106

* Speeds vary according to tire size, type and inflation

Revised 10-29-02



This symbol identifies potential health and safety hazards. It marks safety precautions!!

Before Operating:



Read and understand this manual before operating the Ventrac 3000 machine. Study the operating section and take time to get familiar with all controls and their functions.

Always use proper safety precautions. Observe all safety decals.

Only experienced and mature personnel should operate equipment. No minors!



Inexperienced operators should be trained by experienced or qualified instructors.

Check engine fluid levels before starting.

Check brake/park function before operating and adjust or service as needed.



Inspect machine before operating. Be sure shields and guards are in good condition and securely in place. Be sure hardware is tight. Repair or replace parts that are missing, badly worn or damaged. Check that wheel nuts are tight several times during the first 100 hours of operation and after any wheel change.

Never Allow Riders:



Allow only the operator on the machine. Riders have no designated or secure place to sit. Riders also obstruct the operator's view.

Use Caution Around Children:



Never assume that children will remain where you saw them last...they are attracted to motion and noise; stay alert to their presence and movement.

Before you reverse the machine, look behind you. Always look in the direction of travel.

When approached by others, stop the PTO and engage the park brake.

Safe Transport:



When driving on public roads, use a Slow Moving Vehicle sign. Flashing lights may be advisable or required. Check and abide by local traffic laws.

Use extra caution when crossing roadways or operating near traffic.

Operate only during daylight or with good artificial light.

SECTION B SAFETY



This symbol identifies potential health and safety hazards. It marks safety precautions!!

Use Extra Care:



Stay alert for holes, hidden objects, and uneven terrain or drop-offs.

Use extra care when you come to shrubs, trees, or other objects that may impair your vision.

Clear objects from work area that might be thrown or interfere with safe operation of machine and attachment.



Stop machine and inspect if you hit an object.

Avoid adverse conditions which limit performance and stability of equipment and could result in injury or death.

Stay **away from** drop-offs.



DO NOT drive where machine could slide or upset.

Wet grass increases risk of sliding on banks and slopes.

DO NOT try to stabilize the tractor by putting your foot on the ground.

When pulling loads or using heavy equipment, use only the hitch points provided. Limit loads to those you can safely control.



Slopes:

Roll cage with seat belt is recommended for driving on slopes.

Be careful when you change direction on a slope. Drive slowly.

Make allowances in speed selection for hills, slopes, and rough terrain. If the operator is uncomfortable or there is uncertainty of the machine's stability, the operator should slow down or cease operation.



When parking, stop the machine on a level surface whenever possible; block tractor tires if it must be parked in a location which is not level. **ALWAYS use park brake.**

Be sure to have plenty of fuel in tank to avoid unplanned stoppage.



NEVER TURN ENGINE OFF ON A HILL OR SLOPE WITHOUT FIRST MAKING SURE THE PARKING BRAKE WILL HOLD THE TRACTOR IN PLACE. Before leaving the seat, always set the control selector in "park brake" position.



Always Use Common Sense!



This symbol identifies potential health and safety hazards. It marks safety precautions!!

Operator Personal Safety:



Be careful around moving parts. Wear close fitting clothes and use appropriate safety equipment.

Wear earplugs or other protective device when needed. Do not use substances or devices that must be hand held: e.g. cigarettes, cell phone, etc.

DO NOT operate machine if you are under the influence of alcohol or drugs or if you are not feeling well.

Engine muffler may be hot; DO NOT touch!!



Operate all controls from operator's seat.

Always use seat belt in conjunction with a roll cage or cab.

Use caution when handling the battery. Explosive battery gases and acid can cause injury or blindness. Flush eyes immediately with water and seek medical attention. Keep sparks, flames and cigarettes away from battery and fuel tank area.



Before leaving machine seat, stop PTO and set parking brake. Shut off engine if machine is left unattended and remove ignition key.

Wait for engine and all moving parts to stop before leaving operator's seat.

Before adjusting, cleaning, or lubricating this machine, set the parking brake, shut down the engine and remove the ignition key. **NEVER** attempt to work on machine or attachments with engine running.

General Safety:



A safety switch requires the 3-position control selector to be in the park position to start the engine.

Always maintain adequate engine speed to prevent stalling during operation of the machine.

Always LOOK before reversing direction.

Never leave seat without placing control lever in park position. If machine is to be left unattended, shut off engine and remove key.



Shut off PTO when equipment is not in use.

Be alert for any sign or noise of equipment failure and take all precautions to immediately control the situation; stop and park the machine and make appropriate repairs before resuming operation.

DO NOT make sharp turns at high speeds! Turning reduces vehicle stability.



DO NOT tow!

Sudden starts or stops can up-end the tractor. **Always use caution** when starting and stopping.

Always Use Common Sense!

SECTION B SAFETY



This symbol identifies potential health and safety hazards. It marks safety precautions!!

Seat Belt & Roll Cage:



Seat belt and roll cage are recommended for all situations where roll over is possible. This includes but is not limited to: operation on slopes, climbing or descending banks, operating without attachments for counter weight and stability.

NOTE: Machine stability is reduced in turning mode.

NOTE: Mounted attachments generally increase machine's stability.



Seat belt must always be used if machine is equipped with a roll bar.

Machine towing:



Towing is not recommended but in some cases the machine may need to be pushed a short distance. Park brake is functional in freewheeling mode. See page [D-5](#) for "freewheeling mode".

SECTION C OPERATION

The VENTRAC 3000 is a unique all-wheel drive, machine that offers many advantages and some variables over conventional tractors and vehicles. The benefits and differences make it VERY important for the operator to read and understand this operator's manual in order to facilitate safe, enjoyable and effective operation of the VENTRAC 3000!

The first sight of the VENTRAC 3000 reveals its low profile, four (4) identical drive tires and the articulated frame. Less obvious is the easy-to-use fast hitch and PTO drive that accommodates use of other attachments.

The open left fender area enhances getting on and off the VENTRAC 3000 (**Figure 1**). Extend the right foot into place like getting into a car or pick-up, then simply sit on the seat and lift the left foot into place. To dismount, reverse the process.

Always put the Control Selector (**Figure 2**) DOWN in PARK BRAKE position before leaving the seat. This assures the neutral locking of the directional control and the park brake engagement.

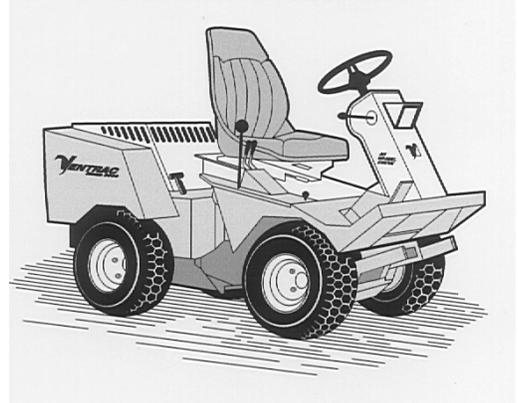


Figure 1



Figure 2

SECTION C OPERATION

FRONT CONTROLS

Many of the controls are located directly in front of the operator on the dash and steering column. (Figures 3, 4 & 5). Decals reveal their position, function and motion.



Figure 3



Figure 4



Figure 5

The right side of the dash has IMPORTANT operational and safety instructions for the three-(3) position **Control Selector** (Figure 6).

1. **DOWN** – activates the park and emergency brake. ALWAYS return lever to this position when the tractor is not in use. The lever must be in this position to START the engine.

2. **LEVEL** – causes the directional control lever beside the operator to have a **spring-assist-to-neutral** action. This position makes neutral easy to find and maintain. If the tractor creeps when in neutral, see “Neutral Adjustment” section.

3. **UP** – puts the directional control lever beside the operator into an “Easy Shift” mode. This position is recommended only for open area operation where travel speed and direction is relatively constant and control is very easy to maintain. “Easy Shift” reduces operator arm fatigue when machine is operated for an extended length of time.

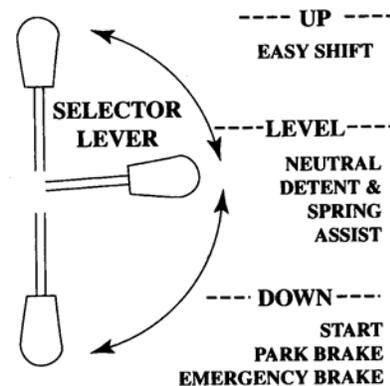


Figure 6

SIDE CONTROLS

Right side directional and front hitch lift control (**Figure 7**) is standard on all VENTRAC 3000s. The primary lever with the large round knob is the directional control (sometimes called the Forward/Reverse lever, or F/R).



Figure 7

I.) Once in the seat and the park brake released, the lever can be moved. Forward movement from the neutral position will cause the tractor to move forward. The farther the lever is moved, the faster the machine will travel. Returning toward the neutral position will slow the machine and in neutral it will stop. Note that the directional lever operates the same for reverse and works equally well for starting and **STOPPING!** This **shift-on-the-go** feature with engine power and brake power to all four tires makes the VENTRAC 3000 an amazing performer. Yet extreme caution is critical to avoid unexpected and difficult situations that could cause serious injury or damage to operator or equipment. (See safety section)

II.) Next to the directional control is the hydraulic control lever for the front hitch (**Figure 8**). Pulling the lever back raises the hitch. Moving it forward lowers the hitch. Continuing forward puts the front hitch in the **FLOAT** position. **Always use the float position for mowing and other tasks where flotation of the attachments is desired or necessary.**

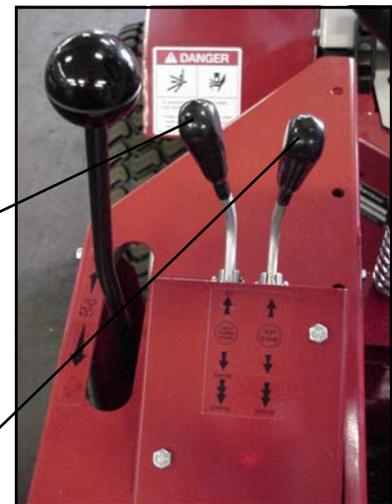


Figure 8

Next to the hitch control lever is an optional lever (**Figure 8**) that controls the auxiliary hydraulic circuit. This lever activates attachments with functions that have hydraulic hoses to the front quick couplers.

SECTION C OPERATION

FENDERS

The right front fender has a small covered toolbox. It also houses the optional auxiliary quick couplers (**Figure 9**).

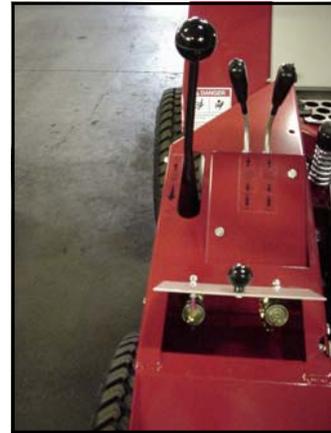


Figure 9

The left rear fender houses the 4 gallon fuel tank. **Always note the type of fuel: Unleaded gasoline or Diesel.** If decal is missing or unreadable, contact your dealer or the factory for a replacement decal. Determine fuel type before filling. **Never over fill!** Stop before fuel spills over the fill tube.

A long slot in the left fender visible from the operator's seat serves as a fuel gauge (**Figure 10**). Always keep sufficient fuel in the tank to prevent an unexpected engine shut-off. When operating on slopes, fuel level should be kept above the 1/4 mark.



Figure 10

BATTERY

The battery is located under the right rear fender (**Figure 11**). Tilting the engine cover gives full access to the battery. **Before using jumper cables or connecting a battery charger, always check polarity.** The RED cover means POSITIVE. The BLACK cover means NEGATIVE. The negative wire should always be connected to the frame!



Figure 11

SEAT

Each VENTRAC 3000 has an adjustable seat — fore and aft. Each operator should adjust the seat for the greatest control and comfort. **(Figure 12).** **Note:** Seat plate mounting hole options are available for additional variables in seat positioning. The seat can be tilted forward during nonuse for inspection and servicing access. To tilt the seat forward, press down on the back of the seat with one hand and push down the front of the seat locking bracket with the other. A prop bracket is attached to the seat plate to prop the seat in the tilted position. The seat and seat plate can be removed by disconnecting the two seat switch wires, removing the cotter pin on the right, tilting the seat to the steering wheel, and moving it slightly to the left. **(Figure 13)**



Figure 12

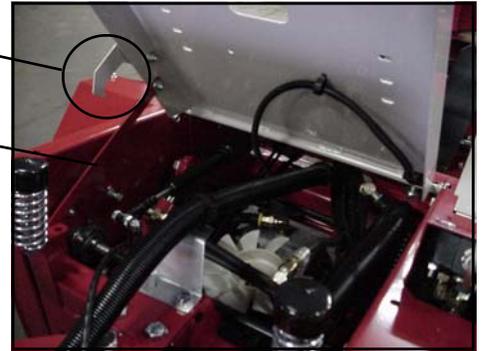


Figure 13

OWNER'S MANUAL

Owner's manual is located in tube under the right rear fender directly behind the battery. Release hood latches, tilt hood and remove top tube cover to access manual **(Figure 14).**



Figure 14

SECTION C OPERATION

FRONT HITCH & PTO DRIVE

The two rail, EASY-TACH, front hitch (**Figure 15**) creates a stable and secure mounting of attachments to the VENTRAC 3000! Just align the two rails to the two corresponding receiver arms on the attachment. Lower the tractor hitch for the initial contact with the attachment arm tabs. Lift the machine hitch to an in-line relationship and complete the engagement. The EASY-TACH spring loaded LOCKS secure the attachments. Always confirm that the lock action has been completed.

Note: Engagement of attachment can be assisted by opening the spring loaded “locks” by moving the EASY-TACH lever (**Figure 16**) to the left side of the hitch. Moving the lever to the right can assist the closing action of the locks when necessary.

PTO DRIVEN ATTACHMENTS

After the EASY-TACH lever has been “locked,” with engine stopped, put the PTO belt on the lower groove of the PTO idler pulley (**Figure 16**) and engage the tension lever on the attachment (**Figure 17**).



Figure 15



Figure 16

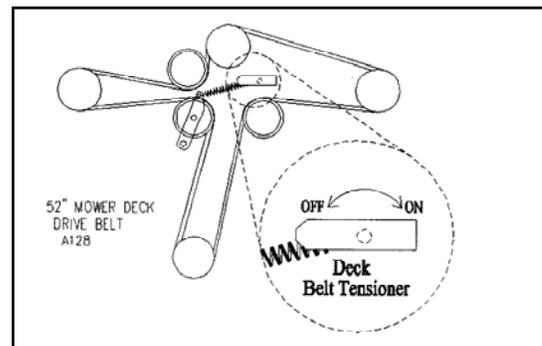


Figure 17

ATTACHING ATTACHMENTS

Most front mounted attachments can be positioned so that it is convenient to drive into the hitch harness with nearly correct alignment (**Figure 19**). Some adjustment is usually required to complete the hitch engagement.

When completely engaged, move the “Easy Tach” lever to “lock” position (**Figure 20**). If lever will not move into “lock” position, check the attachment for complete engagement.

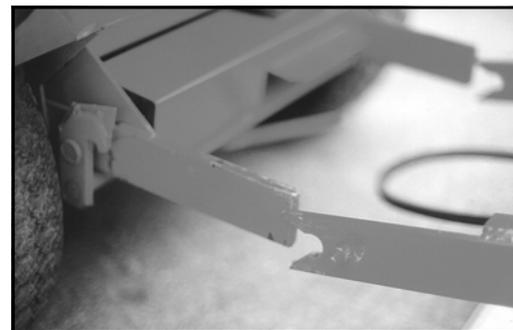


Figure 19

MOWER ATTACHMENTS

Mower attachments have a floating hitch. If mower cutting height is set near the highest position, the machine can be driven to the hitch arm. Then raise the hitch until the mating arms are parallel.

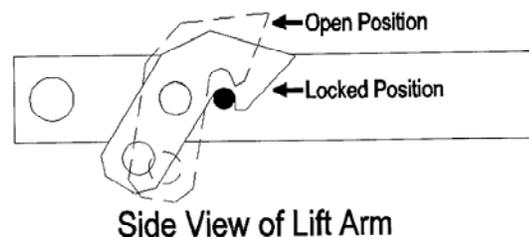
1. Shut off the engine and engage the park brake.
2. Walk to the front of the mower and push it into the machine as far as the hitch will allow. Make sure both sides are completely engaged and locked. (**Figure 21**).
3. Install the mower PTO belt on the drive pulley between the hitch arms (**Figure 20**).



Figure 20

Note:

1. Attachment change is made easier and safer by always using level clean surfaces.
2. Heavy duty, close tolerance latch hooks (**Figure 21**) make complete engagement of attachment hitch necessary on both sides before “Easy Tach” lock can close.



Side View of Lift Arm

Figure 21

SECTION C OPERATION

DETACHMENT

Attachments are detached by reverse sequence of the attaching steps.

Note: EASY-TACH lever between the hitch arms must be moved to the left side of the machine to release the attachment. (**Figure 23**)

Note for mower hook up— If mower arms are too low for the initial engagement, lift the mower cutting height to a high position. This will position the hitch arms high enough for drive-in contact.

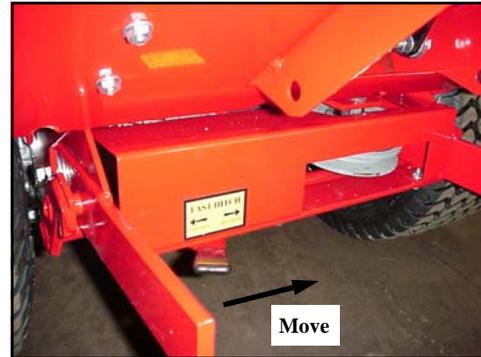


Figure 23

PTO ENGAGEMENT

When engaging power to front attachments, it is necessary for the operator to be seated in the seat. Increase the engine speed to at least 2500 RPM's. (See RPM indicator on the dash). Check that all is clear before engaging the PTO switch (**Figure 24**). When the PTO switch is engaged, an operation light will come on. When the engine is cold, stalling is possible at the moment of engagement. Increase the engine RPM's and/or increase the warm-up time and try again. The VENTRAC 3000 is equipped with a heavy-duty electric clutch causing potential engine stalls by the abrupt and forceful transfer of power. An integral brake system stops the PTO within 7 seconds when the switch is moved to OFF or the seat switch is deactivated.



Figure 24

LIGHTS

(Figures 25 & 26)

Head and taillights improve safety and operational visibility. Their use is highly recommended especially at dawn or dusk and at night. The headlight can be adjusted to the operator's preference by loosening the mounting bolt directly under the light fixture. The fixture can be moved so that the light beam moves up or down, right or left. Once in the desired position, retighten the mounting bolt.



Figures 25 & 26

STARTING PROCEDURE

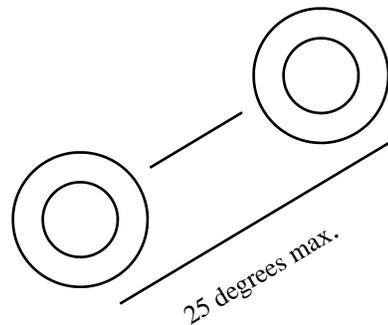
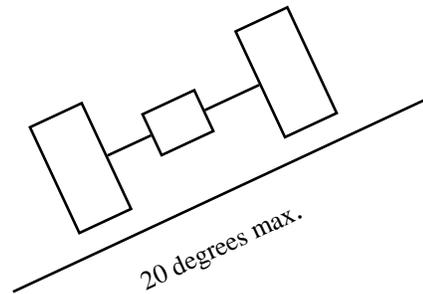
1. Check engine oil, water, and fuel levels.
2. Read and understand operational and safety instructions.
3. Make sure the right side, three (3) position control selector is in start position (DOWN).
4. Move throttle forward about 1/4 stroke. (Engines vary)
5. For gasoline models, pull the choke out. For diesel models, turn the key counter-clockwise and hold until the glow light goes off.
6. Turn the key clockwise until the engine starts. If the engine fails to start in 15 seconds, stop. Check if there is fuel in the tank. Make several more attempts to start. If the engine does not start, contact a mechanic or the dealer.
7. Once the engine is started, let it warm up. Always check to see if the steering system is responsive before attempting to drive. In cold weather conditions, extend the warm-up period.
8. For the PTO to operate, the operator has to be sitting on the seat.

SECTION C OPERATION

OPERATING ON SLOPES

Operation on slopes decreases machine stability and increases the possibility for unexpected difficulties. Only experienced VENTRAC 3000 operators should operate the machine on slopes and extra caution should be applied that include: (See drawings at right.)

- 1.— avoiding uneven, loose or wet terrain.
- 2.— staying clear of drop-offs, holes, ditches, rocks, or objects that could cause a sudden and/or unexpected force on the machine.
- 3.—using sufficient engine rpms to prevent engine stall.
- 4.—using sufficient fuel in tank to assure continuous operation.
- 5.—making slow and cautious starts, stops, and turns.
- 6.—limiting maximum operation to 20/25 degrees respectively.
- 7.—ceasing operation if machine instability is suspected or evident, or if the operator is uncomfortable or unsure of continuing safely.
- 8.—using an attachment as much as possible. Mounted attachments increase the overall length and can add stability to the machine.
- 9.—reducing the degrees of turns and/or turning down hill as much as possible.
- 10.—using roll cage and seat belt
- 11.—**Do not operate carelessly!**



Turning reduces vehicle stability!



Keep engine oil level near full mark when operating on slopes.

**The ultimate responsibility for safe operation on slopes is the responsibility of the operator!
IF IN DOUBT...DON'T!!**

SERVICE & MAINTENANCE

ENGINE

See engine manufacturer's OWNERS MANUAL in your VENTRAC 3000 manual pocket for details on engine care.

GENERAL INSTRUCTIONS

Daily:

- Check oil level daily
- Check/clean air intake screen

8 Hours:

- initial oil change

25 Hours:

- Clean air intake foam element

100 Hours:

- Change oil and oil filter
- Clean air cleaner paper element

300 Hours:

- Replace air cleaner paper element

Service intervals indicated are to be used as a guide. Service should be performed more frequently in severe operating conditions.

For engine problems, see "Trouble Shooting" guide in engine manual.

SECTION D SERVICE & MAINTENANCE

FUEL LINE FILTER

IN-LINE FILTER

All VENTRAC 3000's have an in-line fuel filter (**Figure 1**) located next to the fuel tank.

Always use clean, fresh fuel. Keep the fill area clean and the fuel cap in place except for filling. If or when any of the above conditions are not met or the engine lacks power, especially under load, the fuel filter should be checked. If the in-line filter needs to be replaced, be sure to install the new one with the flow arrow pointing toward the engine.

TRANSAXLES

HYDRAULIC OIL

Rear transaxle is prefilled. Oil level should allow for expansion from heat without over-flowing through the vented cap on top of case. This oil level will remain constant unless leakage occurs. Oil level when cold to be 1-1/2" (4 cm) from top of the transaxle housing. **Note:** side plug can be used to fill and determine "full" on rear transaxle.

Front transaxle has an oil tank, vented cap, and dipstick (**Figure 2**). Never fill oil above high level on dipstick. Heat expansion could cause unwanted over flow.

Additional oil may be required when new attachments are connected to the auxiliary circuit (optional). The attachment components are shipped without oil. Additional oil is needed only after the initial hook up.

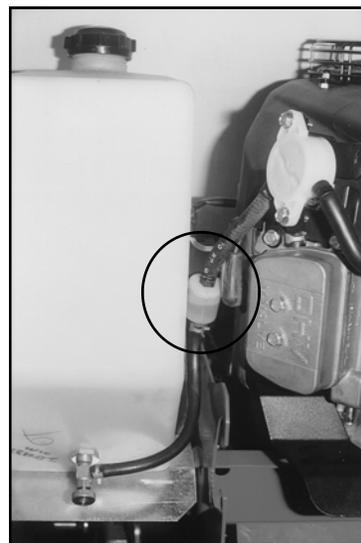


Figure 1

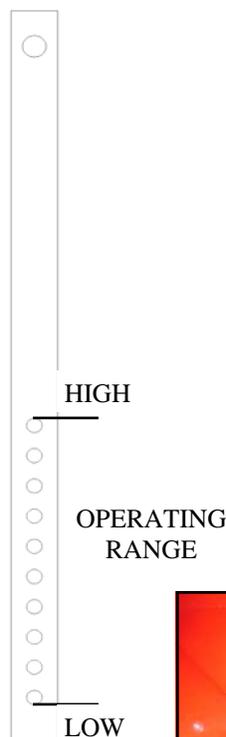


Figure 2

REQUIRED OIL SPECIFICATION
AMSOIL Synthetic Hydraulic Transmission Oil TYPE ATH SAE 30

SECTION D SERVICE & MAINTENANCE

Hydrostatic Oil (Cont.)

Note: Activate attachment hydraulics full stroke in both directions several times to purge the system of air before replenishing oil in front transaxle reservoir.

Hydraulic filter located behind the front right fender (**Figure 3**) does not need to be changed unless serious or unusual contamination occurs to the system. Contact dealer for further direction.

Note: Generally the hydrostatic oil level remains constant except when:

- 1) New attachments are added that use the auxiliary oil circuit. (front transaxle only)
- 2) There is an oil leak.

NOTE: Replacement of hydrostatic oil is not recommended except in the event of contamination.



Figure 3

Transaxle capacity:
Approximately 1 gallon

BATTERY

Battery group—22 NF

When it is necessary to remove and/or replace the battery, remove both cables. Then remove the front or rear hold-down bracket (**Figure 4**). To install the new battery, reverse the above instructions. Be sure the new battery has the same dimensions, top terminals, and is installed with the terminals on the side toward the engine.



Figure 4

SECTION D SERVICE & MAINTENANCE

BRAKE ADJUSTMENT

A disk brake is activated when the control selector on the right side of the steering column is moved down into park position.

To adjust brake tension, use a 7/16 wrench on the linkage at the brake on the left side of the front transaxle (**Figure 5**). If the adjustment is too tight, the control selector will be difficult to move to park position. Brake adjustment should rarely be needed because transaxles are automatically locked into neutral when brake is engaged.

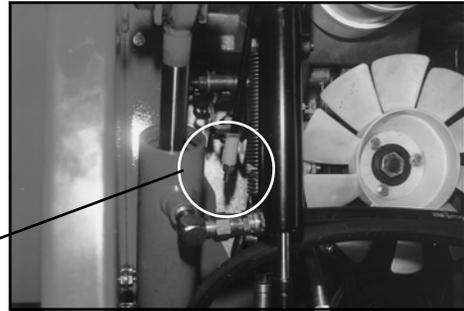


Figure 5

NEUTRAL ADJUSTMENT

The machine should always come to a complete stop when the **Control Selector** is in the “**park brake**” position (down) or in the “**spring assist to neutral**” position (level) when the Directional Control lever is released (**Figure 6**). If the machine consistently wants to creep while in neutral, an adjustment must be made.

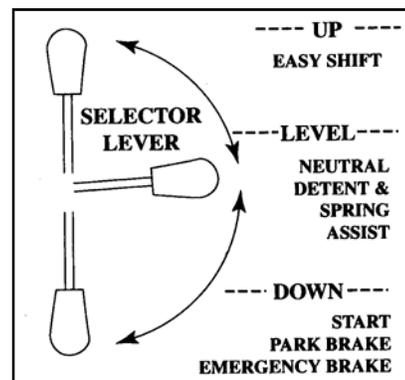


Figure 6

Each transaxle has its own “neutral locator.” The factory setting generally will not require adjustment. The most likely adjustment needed is in the cable connecting the two transaxle control mechanisms. Simply lengthen or shorten one end of the cable where it’s mounted to the frame bracket (**Figure 7 & 8**). The connecting cable should allow each transaxle mechanism to settle into its own neutral position. Secure cable ends when that position is attained.

Note: Engine needs to be running to make the neutral adjustment. Jacking one tire up on each transaxle will prevent accidental movement and possible injury. If uncertain or in doubt about this procedure, contact your servicing dealer.

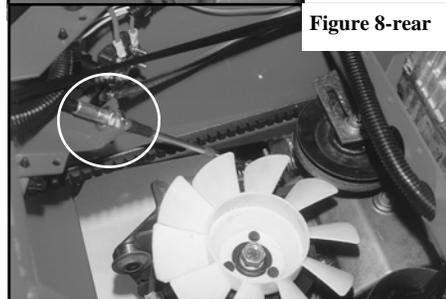
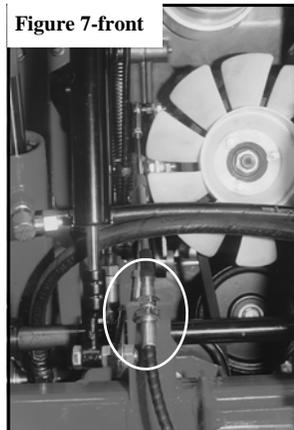
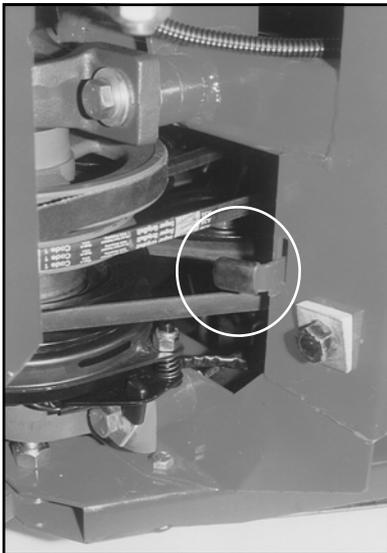


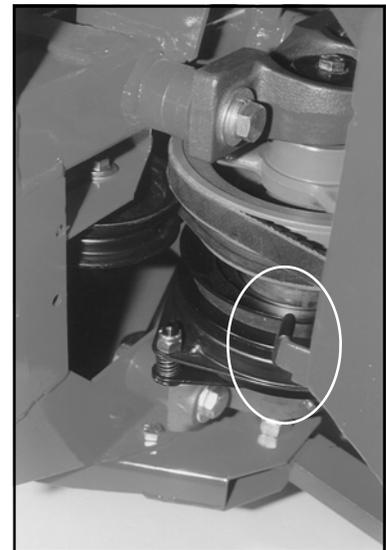
Figure 8-rear

TOWING/FREE-WHEELING

Each transaxle is equipped with leverage to release hydrostatic pumps for slow, level, short distance towing. Both are located in the center pivot area of the tractor. See **(Figure 9 and 10)**. Each handle needs to be pulled out a short distance and must be secured in notch. Always release **BOTH** handles when towing is complete! Failure to release one or both handles creates a potential free-wheeling hazard. Park brake is still operative in free-wheeling mode but must be released in order to tow.



**Figure 9—Right side
Front frame**



**Figure 10—Left side
Rear frame**

SECTION D SERVICE & MAINTENANCE

DRIVE BELTS

The VENTRAC 3000 has three drive belts: one PRIMARY drive belt, one REAR transaxle belt and one FRONT transaxle belt.

The PRIMARY DRIVE BELT (**Figure LTB-A**) connects the engine pulley to the center drive shaft pulley in the pivot area of the articulated frame. It is the top belt in the drive system. It has two vee belt idlers. One fixed idler just below the right front corner of the engine and other spring-loaded idler on the opposite side.

The REAR TRANSAXLE BELT (**Figure LTB-B**) is the lower belt. It connects the lower engine pulley to the rear transaxle pulley with the plastic-cooling fan. It has one vee belt idler located just below the primary drive belt spring loaded idler.

The spring-loaded idlers have a unique torsion spring tension system. The spring is mounted on the axis of the leverage and has two extended prongs. The prongs can be engaged individually making the tensioning process manageable by hand. This leverage for the two rear drive belts is located on the same axis (**Figure 11**).

The FRONT TRANSAXLE BELT (**Figure LTB-C**) is located on the front chassis frame. It is on the same plain as the rear transaxle belt. It goes from the center drive shaft pulley to the front transaxle pulley with the plastic-cooling fan. This belt has a fixed flat belt idler located just below the crossover frame in the center pivot area of the chassis. **Figure 12**).

All idlers should maintain proper alignment with the belts. Mounting points should always position the idlers in the same horizontal plain as the drive and driven pulleys. Any angular positioning will compromise the life of the belt. Due to the vibration nature of spring loaded idlers the bolts securing them should be check periodically to assure tightness.

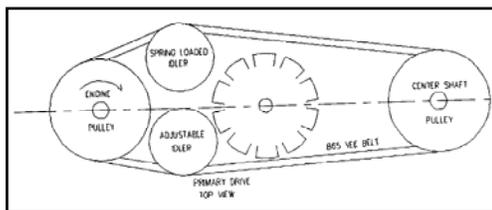


Figure LTB-A

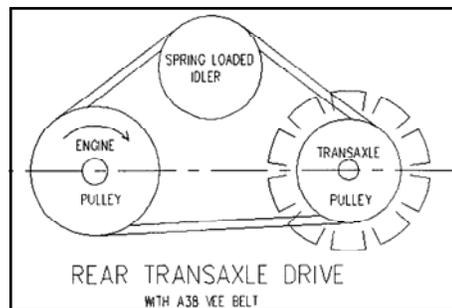


Figure LTB-B

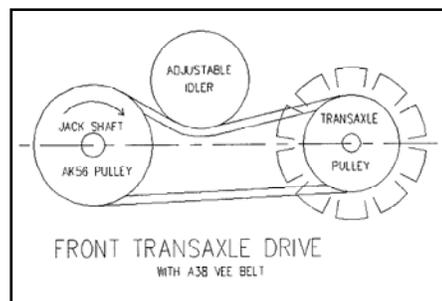


Figure LTB-C

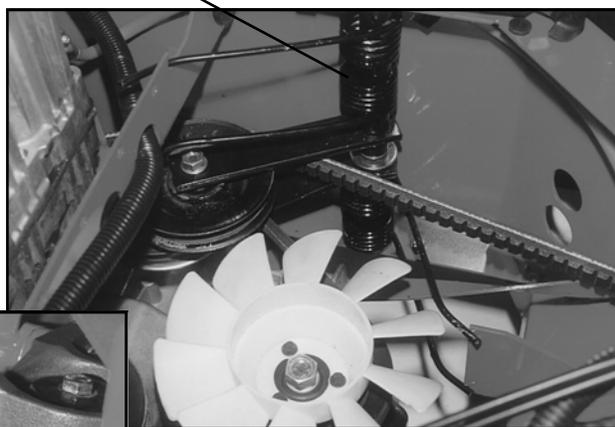


Figure 11

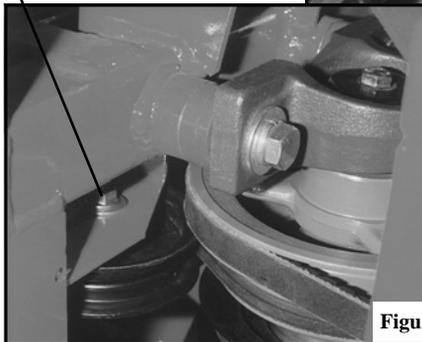


Figure 12

SECTION D SERVICE & MAINTENANCE

BELT REPLACEMENT

Remove cover plate over the rear chassis to access fan and belt area (**Figure 13**) and center pulley cover on rear frame. Release both spring prongs on each of the two- (2) spring loaded idlers. The two springs are on the inside of the rear frame on the left side. Remove belts from idler engagement. Also disconnect shift cable from the transaxle lever.

1) Rear Transaxle Belt

To replace the rear transaxle belt, access it from the rear – under the engine. Dislodge it from the engine pulley (**Figure 14**). Push or pull it up between the transaxle and the engine. Remove it from around the cooling fan pulley. Replace the new belt by reversing these steps and tension the idler.

2) Primary Drive Belt

To change the Primary Drive Belt access it from the rear – under the engine. First remove the rear transaxle belt from the engine pulley and let it lay down on the transaxle case out of the way. Dislodge the primary belt from the engine pulley and move it up between the engine and the transaxle.

Second remove the two ½” bolts and the two spacers from the top center shaft pillow block bearing (**Figure 15**). This makes clearance for belts to be removed or installed over the center shaft assembly. Do not remove bearing from shaft.

Third dislodge the front part of the belt from the center shaft pulley and move it up through the pillow block spacer clearance. Install the new belt with these same steps in reverse order and tension the idler.

3) Front transaxle Belt

First remove the two ½” bolts and the two spacers from the top center shaft pillow block bearing (**Figure 15**). This makes clearance for belts to be removed or installed over the center shaft assembly. Do not remove bearing from shaft.

Remove the adjustable flat belt idler on the front transaxle belt located just below the crossover frame section (**Figure 16**).

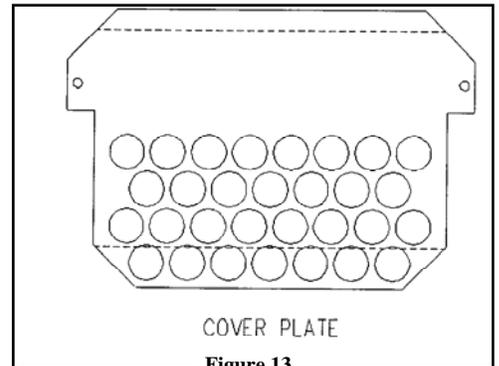


Figure 13



Figure 14

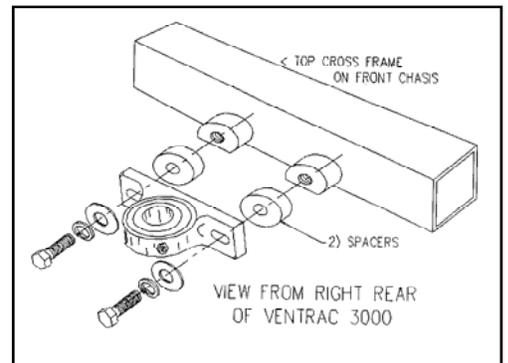


Figure 15

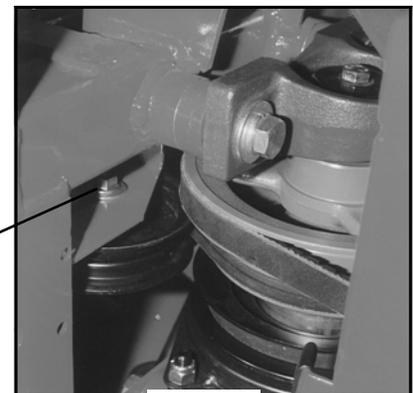


Figure 16

SECTION D SERVICE & MAINTENANCE

Move the primary drive belt off the center shaft pulley and let it lay in the open shaft area just above the pulley (**Figure 17**).

Take the belt off of the transaxle pulley and cooling fan. It may be necessary to rotate the fan to assist the belt removal. Fan can tolerate considerable deflection (**Figure 18**).

Pull the front transaxle belt into the center shaft area. Slip it through the loop of the primary drive belt and out over the top bearing assembly.

Reverse this procedure to install the new belt.

* * * * *

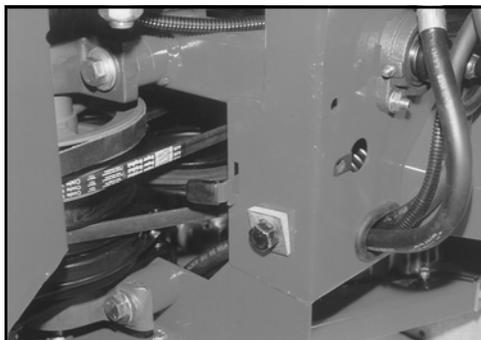


Figure 17



Figure 18

PTO DRIVE BELT

The PTO Drive Belt is the bottom belt on the center shaft pulley assembly. It is directed around the front transaxle to the double pulley located on the lift hitch (**Figure 19**). A torsion, double prong spring activates the PTO idler. It is accessed on the outside of the front frame down behind the right front tire (**Figure 20**).

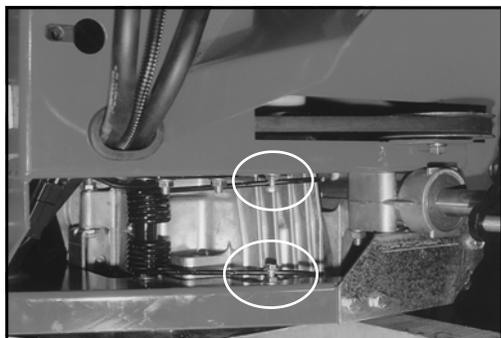


Figure 20



Figure 19

SECTION D SERVICE & MAINTENANCE

PTO BELT REPLACEMENT

Release the idler spring prongs on the lower, right side (outside) of the front frame (**Figure 21**).

Remove the two 1/2" bolts from the bottom center-shaft pillow-block bearing, the two spacers and the clutch torque arm (**Figure 22 & 23**). This gives clearance to remove or install belt over the lower end of the center-shaft assembly. Do not remove bearing from shaft.

Dislodge belt from the front pulleys and lower it over the clutch assembly and through the bearing mount spacer area.

Reverse procedure to install the new belt. Be sure to reinstall clutch torque arm (**Figure 22 & 23**).

Note: Remove seat assembly and any front mounted attachment for greater access. See seat section (page C-5).

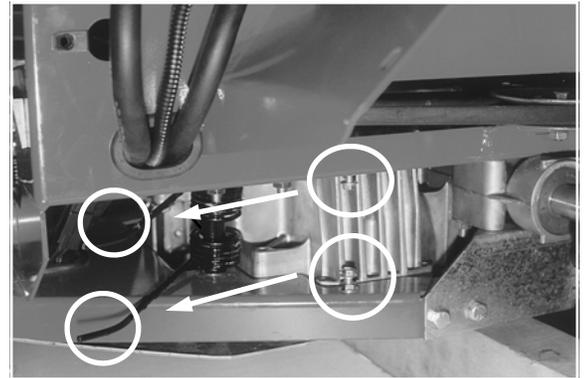


Figure 21

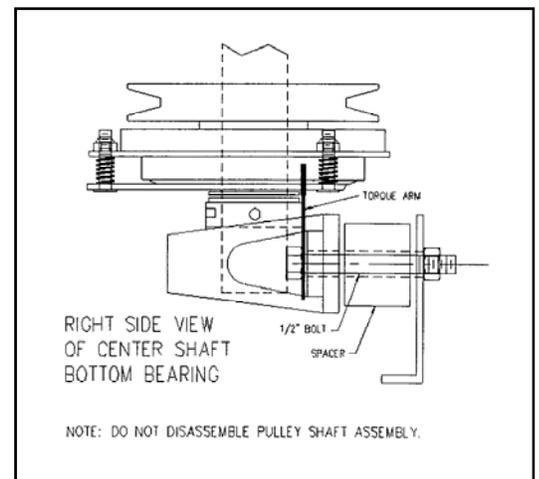


Figure 22

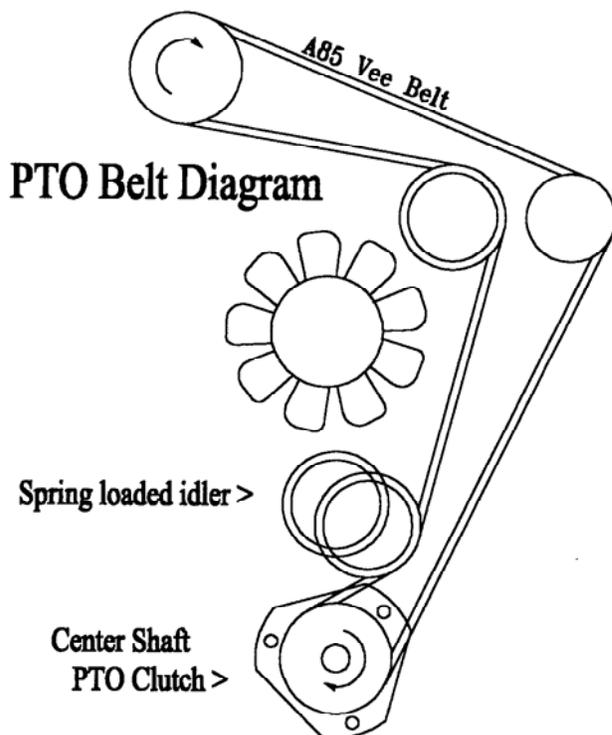


Figure 23

SECTION E

SERVICE SCHEDULE

Service Schedule

The operator's manual and decals should be read and understood before operating the machine or attachments. This manual should be reviewed periodically or when in doubt about any function, procedure, or safety factor on this equipment.

Daily

Check the oil and water levels (liquid cooled engines only) daily in the engine. Fuel level needs to be checked every couple hours. When working on slopes, keep a minimum of 1/4 tank of fuel. Flywheel or radiator screen and air intake filter should be checked frequently when working in a dirty environment. Clean or change as needed. Keep equipment clean. Accumulated debris can restrict performance, cause equipment failure and be a safety hazard.

Visual

Many equipment conditions are visible before operation. For example, an oil leak, low tire inflation, obstructed flywheel screen, loose or missing hardware, shields or a broken belt. These should be repaired or replaced before operation!

Some equipment conditions are not evident until operation. For example, a failing bearing, broken electrical wire, faulty switch or loose part. These should be corrected as soon as evident. Operation should cease immediately if an unsafe condition is observed!

Operators should always be alert for potential problems. Personal safety and the safety of others as well as the performance of the equipment depend on the operator's care and repair of the machine and continuous caution and control of the same.

Engine Oil and Filter Change

Kawasaki — Initial change at 8 hours and every 100 hours thereafter.

Note: refer to engine manual for further details.

Transaxle Oil and Filters

Change oil and oil filter only if the system has been contaminated. Check oil levels every 100 hours. If there is an oil leak or new attachments have been used that require "priming", the front transaxle oil level should be checked at that time.

Storage

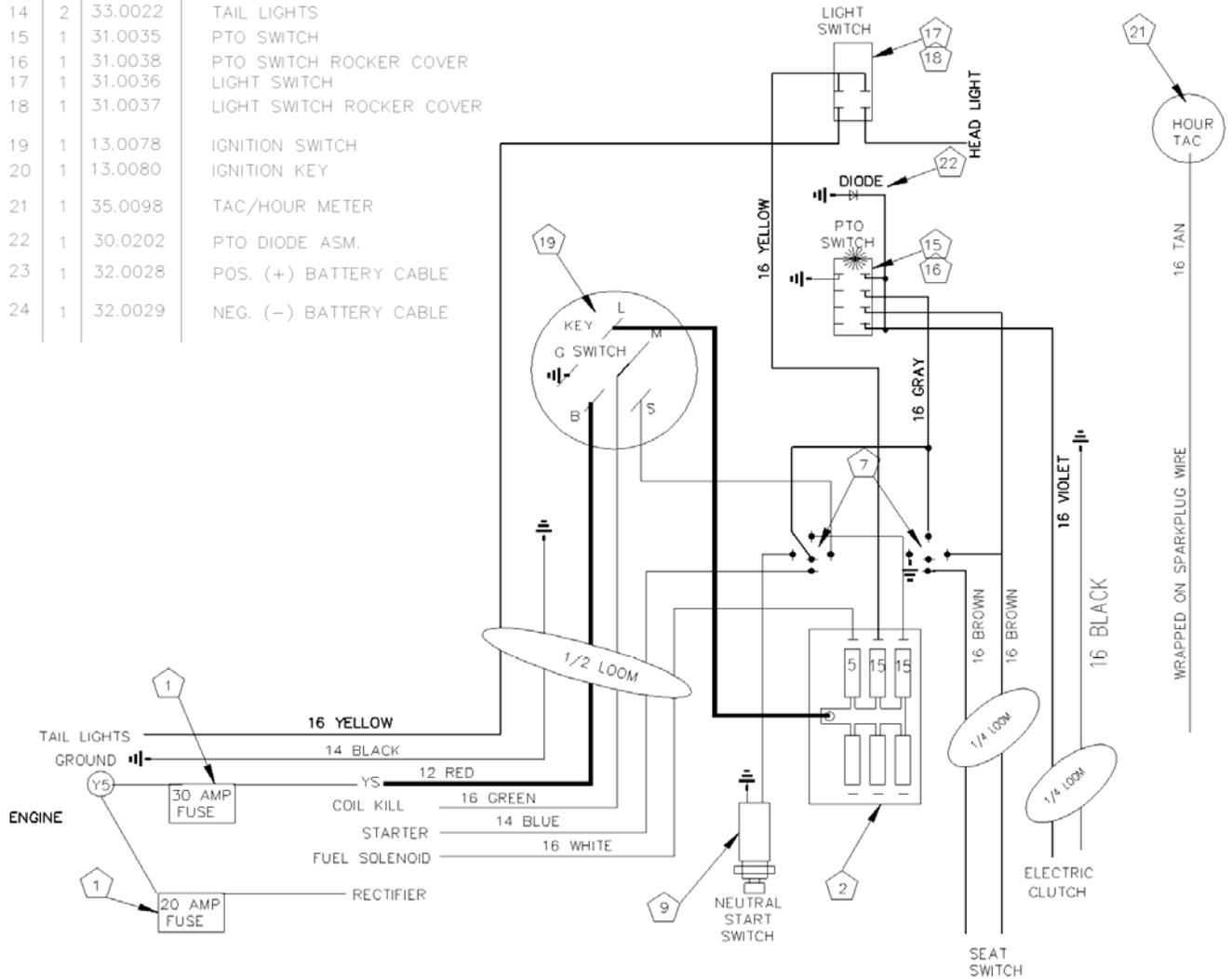
Drain fuel tank, check for proper tire inflation and remove battery.

SECTION F ELECTRICAL DIAGRAM

1	2	30.0186	INLINE FUSE HOLDER
2	1	30.0167	FUSE BLOCK (6 GANG)
3	1	30.0197	30 AMP FUSE
4	1	30.0203	20 AMP FUSE
5	2	30.0166	15 AMP FUSE
6	1	30.0187	5 AMP FUSE
7	2	35.0103	RELAY 50/20
8	2	30.0196	RELAY BASE
9	1	31.0040	NEUTRAL SAFETY SWITCH
10	1	33.0030	BATTERY
11	1	37.0048	PTO CLUTCH
12	1	33.0021	HEAD LIGHT
13	1	31.0033	SEAT SWITCH
14	2	33.0022	TAIL LIGHTS
15	1	31.0035	PTO SWITCH
16	1	31.0038	PTO SWITCH ROCKER COVER
17	1	31.0036	LIGHT SWITCH
18	1	31.0037	LIGHT SWITCH ROCKER COVER
19	1	13.0078	IGNITION SWITCH
20	1	13.0080	IGNITION KEY
21	1	35.0098	TAC/HOUR METER
22	1	30.0202	PTO DIODE ASM.
23	1	32.0028	POS. (+) BATTERY CABLE
24	1	32.0029	NEG. (-) BATTERY CABLE

ELECTRICAL DIAGRAM
19 HP KAWASAKI ENGINE
HBA1346-HBA1425

21 HP KAWASAKI ENGINE
 Beginning with Serial Number: JBA1426



Revised 10-29-02



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 1st 2005, *Ventrac* warranty on Tractors & Attachments (excluding the HG100/HG150 generator) for **Residential use only** is limited to **Three (3) years** from original purchase date. *Ventrac* Tractors & Attachments used **Commercially or for any income producing purpose** is limited to **Two (2) years** from original purchase date. *Ventrac* ET200 turbine blower (turbine only) is limited to **Two (2) years** from original purchase date. *Ventrac* HG100/HG150 generator is limited to **One (1) year** from original purchase date. *Ventrac* Tractors & Attachments used for **Rental** is limited to **180 days** 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 **(3) year Residential use** are to be transferred to a commercial user the warranty would change to the remainder of **(2) year Commercial use** 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



LIMITED WARRANTY – VENTRAC TURF EQUIPMENT

operation of, or use of the turf 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* 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 or 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.