



7200 OPERATOR'S MANUAL





Orrville, OH
www.ventrac.com

PRODUCT IDENTIFICATION

If you need to contact an Authorized Ventrac Dealer for information on servicing your product, always provide the Product Model and Serial numbers.

Please fill in the following information for future reference. See the pictures below to find the location of the identifications numbers. Record them in the spaces provided.

Date of Purchase: Month _____ Day _____ Year _____

Model Number (A): _____

Serial Number (B): _____

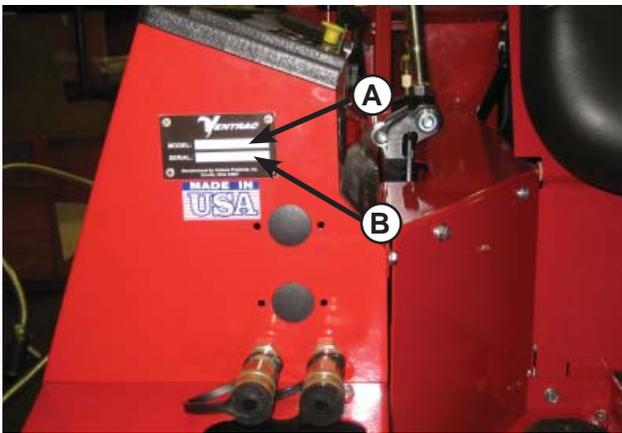
Engine Serial Number (C): _____

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.



Venture Products Inc. is pleased to provide you with this new Power Unit! We hope that this tool will open up a *world of opportunities* for you.

Listed below are just some of the items that can provide you *versatility* as you use your RT7200. Please visit our website, or contact your authorized Ventrac dealer for a complete list of items available for your new machine.

ACCESSORIES	ITEM DESCRIPTION	ORDER PART #
	Seat Arm Rest	47.0231-1
	Spreader	39.55500
	12 Volt Accessory Kit	70.7001
	All Trail drive tires	53.0126
	Two-N-One Front Hitch	70.2001

ATTACHMENTS	ITEM DESCRIPTION	ORDER PART #
	Aerator with Open Spoon Tine	39.55490
	Aerator with Coring Tine	39.55494
	AeraVator (seeder kit available)	39.55460
	Blade - 72"	39.55255
	Blade - 60"	39.55250
	Blade - 48"	39.55258
	Power Blower	39.55440
	Power Broom	39.55400
	Edger	39.55330
	Excavator - 30"	39.55236
	Excavator - 48"	39.55230
	Finish Mower - 60"	39.55105
	Finish Mower - 72"	39.55106
	Finish Mower - 72" (6-1/2" offset)	39.55107
	Generator - 15,000 Watt	39.55315
	Slip Scoop - 30"	39.55216
	Slip Scoop - 48"	39.55210
	Snow Blower	39.55425
	Terra Rake - 52"	39.55431
	Terra Rake - 70"	39.55432
Tough Cut Mower - 68"	39.55104	
Trencher	39.55455	
Turbine Blower	39.55340	
V-Blade	39.55270	

Visit WWW.VENTRAC.COM for more information about this machines Accessories and Attachments.

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INTRODUCTION

Why do I need an Operator's manual?

This manual has been created in sections to help you gain the important knowledge of what is needed to safely operate, maintain, and service this machine.

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.

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. 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 tractor seat facing forward.



SIGNAL WORD DEFINITIONS

ATTENTION

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

⚠ WARNING

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

⚠ 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.

⚠ 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.

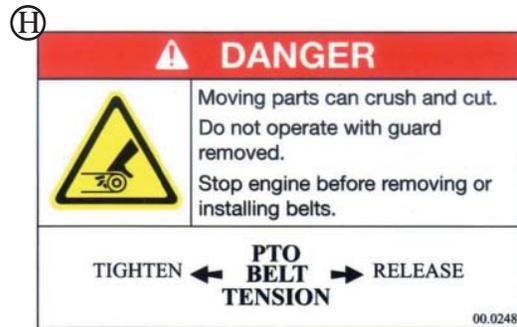
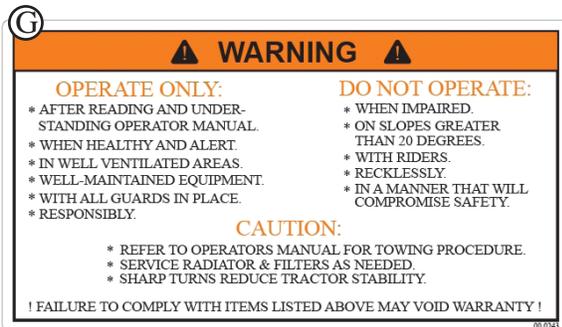
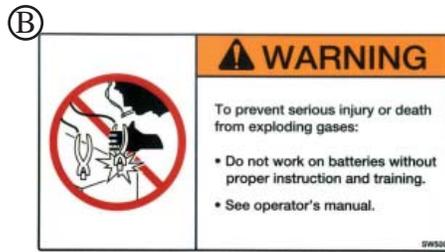
SAFETY

The following safety decals must be maintained on your Ventrac power unit. If any decals are faded or missing, contact your dealer promptly for replacements. (See following page for reference letters and re-order numbers)



Note: Ref B located inside of shield and to the right of the battery.
Ref C located in engine compartment on Radiator Shroud.
Ref D located on inner crossmember of Rear Hood Screen.

SAFETY



Decal	Description	Part Number	Quantity
A	Danger, Explosion Hazard	00.0121	1
B	Warning - Battery Gases	00.0124	1
C	Warning - Moving Parts	00.0216	1
D	Warning - Read Owners Manual	00.0217	2
E	Warning - Pinching Points	00.0218	1
F	Warning - Safety Alteration	00.0220	1
G	Warning - General Safety	00.0243	1
H	Danger - Moving Parts/PTO Belt	00.0248	1

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

CALIFORNIA PROPOSITION 65 Diesel Exhaust Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects or other reproductive harm.

CALIFORNIA PROPOSITION 65 Battery Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling!

SAFETY



General Safety Procedures for Ventrac Tractors, 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 themselves, 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 this machine and all attachments quickly in the event of an emergency.



Preparing Operator for Use



- It is the responsibility of the owner to be sure that the operators use the proper personal protective equipment while operating the machine.
- Wear a certified ear protection device to prevent loss of hearing.
- Prevent eye injury by wearing safety glasses while operating the machine.

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.
- 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.
- Always wear a seat belt and operate with the roll bar in the up-right position.
- Check brake function before operating. Repair or adjust brakes if necessary.
- Stop machine if someone enters your work area.
- If you hit an object, stop and inspect the machine. Make all necessary repairs before operating machine again.
- Do not leave machine unattended while it is running.
- Only operate when lighting is sufficient for safe visibility.
- Alteration or modifications to this machine can reduce safety and could cause damage to machine. Alteration or modifications may void warranty.

SAFETY



General Safety Procedures for Ventrac Tractors, Attachments, & Accessories



Preventing Accidents

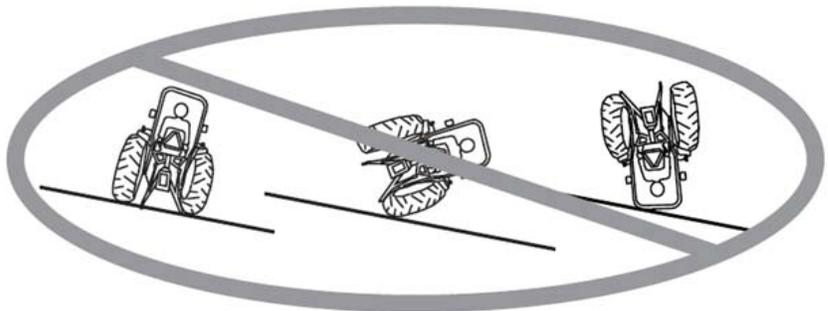


- Clear mowing area of objects that might be hit or thrown from mower.
 - Keep people and pets out of mowing area.
 - Know the work area well before operation. Do not operate where traction or stability is questionable.
 - Reduce speed when you are operating over rough ground.
 - Equipment can cause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



Operating On Slopes

- Slopes can cause loss-of-control and tip-over accidents, which can result in severe injury or death.
- 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.
- Slow down before making sharp turns or 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.
- If machine stops when driving up slopes, disengage the PTO and back machine down slowly.



SAFETY



General Safety Procedures for Ventrac Tractors, Attachments, & Accessories

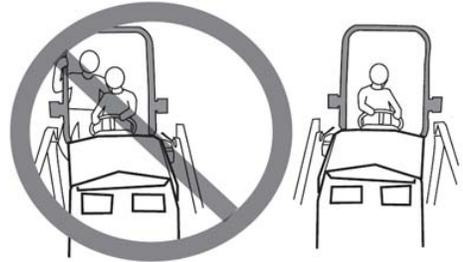


Keep Riders Off

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

Roadway Safety

- Operate with safety lights when operating on or near roadways.
- Obey all state and local laws concerning operation of tractors 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.



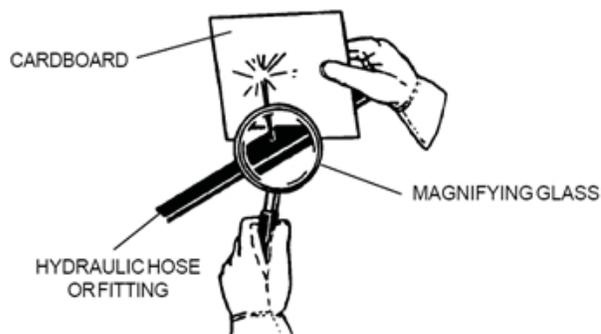
Safety While Fueling



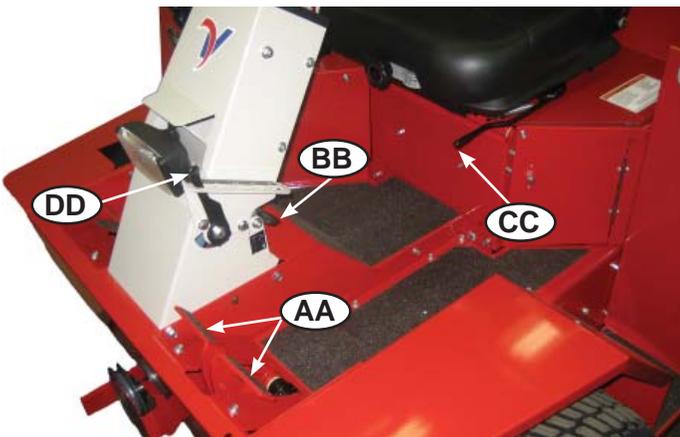
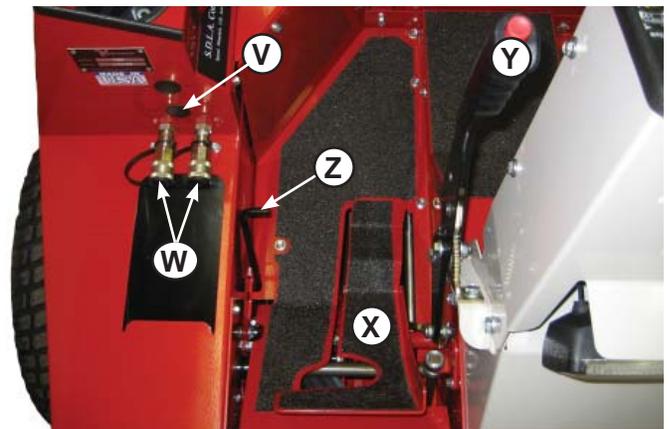
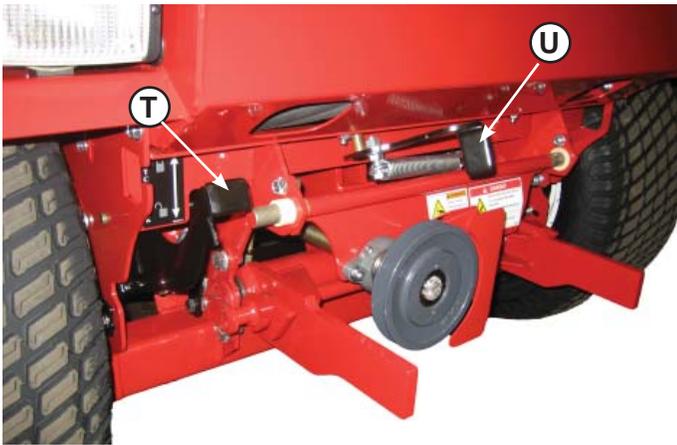
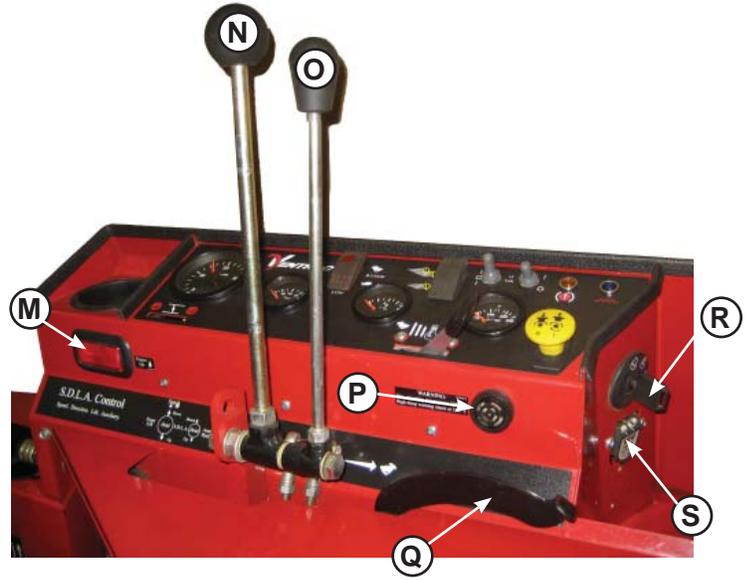
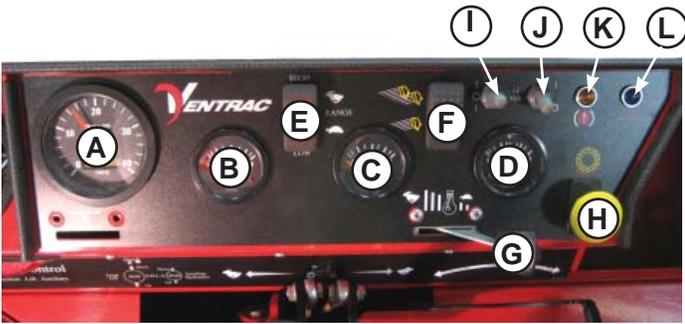
- Do not refuel machine while smoking or at a location near flames and sparks.
- Never refuel while engine is running.
- Only refuel when engine is cool.
- Do not store or refuel machine in a building where fumes or fuel can reach an open flame or a spark.

Hydraulic Safety

- Before operation, visually check for hydraulic leaks. Repair all leaks immediately before proceeding.
- Hydraulic leaks can occur under high pressure. Hydraulic leaks require special care and attention.
- Do not use your hands to locate suspected high pressure leaks. High pressure can penetrate the skin causing serious injury. Use a piece of cardboard and a magnifying glass to locate leaks.



OPERATIONAL CONTROLS



OPERATIONAL CONTROLS

OPERATIONAL CONTROL LOCATIONS

The images on the previous page match with reference letters as shown below to help identify the locations of operational controls for this machine.

- A - Tachometer/Hour meter**
- B - Volt Gauge**
- C - Fuel Gauge**
- D - Engine Coolant Temperature Gauge**
- E - High/Low Range Selector**
- F - Light Switch**
- G - Throttle**
- H - PTO Switch**
- I - 12 Volt Switch (Momentary On/Off/On) ***
- J - 12 Volt Switch (On/Off) ***
- K - Water in Fuel Warning Light**
- L - Glow Plug Indicator Light**
- M - Engine Oil Pressure Warning Light**
- N - Primary S.D.L.A. Control**
- O - Secondary S.D.L.A. Control**
- P - Engine Coolant High Temperature Alarm**
- Q - Selector Lever**
- R - Ignition Key Switch**
- S - 12 Volt Power Outlet ***
- T - Attachment Lock Lever**
- U - PTO Belt Tensioner**
- V - 12 Volt 4-pin socket ***
- W - Auxiliary Hydraulic Quick Couplers**
- X - Foot Pedal Control**
- Y - Parking & Emergency Brake**
- Z - Attachment Lock Lever**
- AA - Right & Left Brake Pedals**
- BB - Steering Tilt Adjustment Lever**
- CC - Seat Slide Adjustment Lever**
- DD - Weight Transfer Control Lever**

* Optional Equipment with 12 Volt Kit

TACHOMETER & HOUR METER (A)

When the engine is running, the engine RPM and engine run time in hours is displayed.

VOLT GAUGE (B)

Displays the voltage level of the charging system.

FUEL GAUGE (C)

Displays the current level of fuel in the tank.

ENGINE COOLANT TEMPERATURE GAUGE (D)

Displays the temperature of the engine cooling system.

HIGH/LOW RANGE SELECTOR (E)

Depress the front of the switch for high range. Depress the rear part of the switch for low range. Machine must come to a complete stop before switching ranges.

LIGHT SWITCH (F)

Depressing the front of the switch to the middle position will turn on the center headlight, the tail-lights and the backlighting on the dash gauge(s). Depressing the front of the switch again will turn on the additional front two headlights. Pushing the rear part of the switch down will turn the lights off. Lights only work when the key is in the run or start position.

THROTTLE (G)

Moving the lever forward increases the engine Revolutions Per Minute (RPM). Moving it back slows the engine to an idle.

POWER TAKE OFF (PTO) SWITCH (H)

Pulling up on the knob engages the electric clutch to provide power to the front attachment. Pushing down on the knob will turn the clutch off and apply the clutch brake to stop the attachment. Note: The engine will shut off automatically if the operator leaves the seat. To restart the engine, the PTO switch must be returned to the off position.

OPERATIONAL CONTROLS

12 VOLT SWITCHES (I & J)

Switches turn Off and On the 12 volt accessories used by some attachments.

WATER IN FUEL WARNING LIGHT (K)

Signifies that the fuel filter has collected an excessive amount of water and needs serviced. (See the engine operators manual)

GLOW PLUG INDICATOR LIGHT (L)

Indicates activation of glow plugs for preheating the engine. The glow plugs activate when the key is turned to the on position. When the glow plug light turns off, the engine is ready to start.

ENGINE OIL PRESSURE WARNING LIGHT (M)

Signifies low or no engine oil pressure.

S.D.L.A. LEVER (N & O)

(Speed, Direction, Lift, and Auxiliary Control Levers)
The S.D.L.A. is the primary control for the tractor and consists of two parts: The primary lever (N) controls the Speed, Direction of machine & Lift of the machine hitch arms. The secondary lever (O) controls the Auxiliary hydraulic circuit of the machine.
S – Speed: The amount of forward or backward movement of this lever controls the ground speed of the machine.

D - Direction: The forward or backward movement of the lever controls the direction of the machine.

L – Lift: The lift function of the lever has four positions: Up, Hold, Down, and Float Lock. “Hold” is the default position; this holds the lift arms from moving up or down. Pulling the lever to the left raises the hitch arms. Pushing the lever to the right lowers the hitch arms. Float position is attained by pushing the lever to the right until the float detent locks the lever in place.

A - Auxiliary: The left or right movement of the secondary lever controls the functions of attachments that require the auxiliary hydraulic circuit.

ENGINE COOLANT HIGH TEMP ALARM (P)

Alarm sounds when the engine coolant temperature exceeds 240°. Refer to troubleshooting section for possible symptoms.

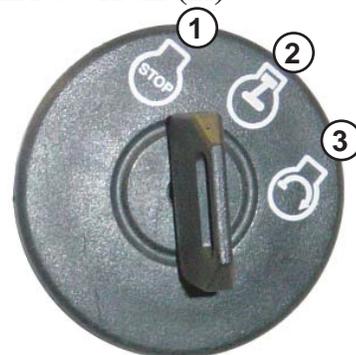
SELECTOR LEVER (Q)



1 - S.D.L.A. control lever has a “spring assist to neutral” action. When removing your hand from the S.D.L.A. control lever it will automatically return to neutral. This position makes neutral easy to find and maintain. It is recommended that this position be used when learning the operation of the Ventrac, loading & unloading, attaching and removing attachments and whenever the operator is working in tight areas or unsure of the machines response to the task being performed.

2 - S.D.L.A. control lever is in an “easy shift mode”. This position is recommended for operating the tractor in open areas where travel speed and direction are relatively constant and control is easily maintained. Easy shift mode reduces operator arm fatigue when using the tractor for prolonged periods of time. Note: Stopping in this position requires the operator to return the S.D.L.A. control lever or foot pedal to the neutral position.

IGNITION KEY SWITCH (R)



1. Off or Stop Position - All switched 12 volt power is off.
2. On or Run Position - Engine run position.
3. Start - When key is turned to the start position, starter will engage.

OPERATIONAL CONTROLS

12 VOLT POWER OUTLET (S)

Optional accessory for the 7200; the outlet provides 12 volts of electrical power for a variety of products such as cell phones, radios, spot lights, air compressors, and more.

ATTACHMENT LOCK LEVERS (T & Z)

The attachment lock lever engages the hitch lock for attaching or detaching Ventrac attachments. Note: The levers move together; only one lever needs to be used to attach or detach.

PTO BELT TENSIONER (U)

Moving the lever to the right tightens the tension of the attachment drive belt. Moving the lever to the left releases the tension of the attachment drive belt.

12 VOLT 4-PIN SOCKET (V)

Socket that is controlled by the 12 Volt switches. Socket provides electrical power to attachments such as the HB580 Broom actuator, EA600 Seeder option, KV550 V-Blade and more.

AUXILIARY HYDRAULIC QUICK COUPLERS (W)

The two couplers are a part of the auxiliary hydraulic circuit and are used with an attachment which requires hydraulics (e.g. to angle a dozer blade or rotate the discharge on the snow blower).

FOOT PEDAL (X)

The foot pedal works in conjunction with the S.D.L.A. control and can be used to control direction and speed when the operator's hand is removed from the S.D.L.A. control.

PARKING & EMERGENCY BRAKE (Y)



1. Park & Emergency position: The lever must be in this position for starting the machine, and when leaving the seat with the engine running. Foot pedal control and the S.D.L.A. control lever are also locked while in this position.
2. Drive Position: In this position machine foot pedal controls and S.D.L.A. controls are unlocked and machine may be driven.

RIGHT & LEFT BRAKE PEDALS (AA)

Depressing the left brake will activate the brake for the left side of the machine. Depressing the right brake will activate the brake for the right side of the machine. Depressing both pedals simultaneously will activate both brakes.

STEERING TILT ADJUSTMENT LEVER (BB)

To change the position of the steering column, push the lever down. While holding the lever down, move the steering column to the desired position and release lever.

SEAT SLIDE ADJUSTMENT LEVER (CC)

Move lever outward to release lock. Slide the seat to desired location and release lever.

WEIGHT TRANSFER CONTROL LEVER (DD)

The Weight transfer system transfers weight from the attachment to the front wheels of the tractor. The operator can select different transfer rates by selecting one of the five positions. Note: the front hitch must be fully raised to adjust the lever.

GENERAL MACHINE OPERATION

STARTING THE ENGINE

The 7200 is equipped with a safety circuit for your protection. The following procedure is to be followed to start the machine:

1. The safety circuit requires the Parking Brake to be in the Park position, the S.D.L.A. lever to be in the neutral position, and the PTO switch to be turned off.
2. Move the throttle forward approximately $\frac{1}{4}$ of its travel.
3. Turn key clockwise to the on or run position. The 7200's engine uses glow plugs to preheat the combustion chamber. The blue glow plug indicator light will come on indicating the glow plugs are preheating. When the glow plug indicator light goes out, the engine is ready to start and must be started within a few seconds or glow plug preheating cycle may need repeated. No preheat is required when the engine is at operating temperature.
4. Turn the key to the Start position and hold to engage starter. Release key when engine starts. Note: If engine fails to start, refer to troubleshooting section.
5. The engine and hydraulic oil must be warmed to operating temperature before operating. Allow the unit to run at approximately 1800 rpm until the hydraulic filter is warm to touch. The hydraulic filter is located underneath the rear hood.

⚠ CAUTION

Allow time for the hydraulic oil to circulate before the machine is operated. Severe damage could result to the hydraulic system if adequate warm up isn't allowed. Warm up time is increased in colder weather.

FORWARD AND REVERSE

Verify that the intended path is safe and free from obstacles. When safe to move, begin by releasing the parking brake.

Machine movement is controlled by moving the

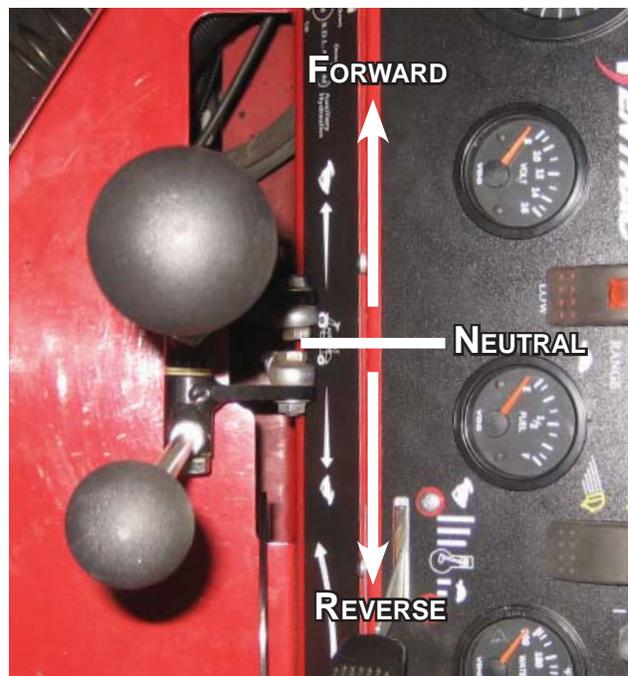
S.D.L.A. control or footpedal in the desired direction of travel. Push the S.D.L.A. lever forward to move machine in the forward direction. Pull the S.D.L.A. backward to make the machine move in the reverse direction. The footpedal can also be pushed forward or backwards to make the machine move in the corresponding direction. Changing the amount the S.D.L.A. control or foot pedal is moved instantly changes the ground speed of the machine. Moving it one half of the stroke will result in approximately one half of the maximum ground speed. Moving it to the end of the stroke will result in maximum ground speed.

STOPPING THE MACHINE

To slow or stop the machine, move the S.D.L.A. lever in the opposite direction that you are traveling. Return the S.D.L.A. lever to the neutral position to make a complete stop. The foot pedal brake can also be used to bring the machine to a stop. If in the case of an emergency and the tractor cannot be stopped with the S.D.L.A. lever; pull the Emergency Brake to the park position to stop the machine.

⚠ CAUTION

If the Emergency Brake is pulled in the case of an emergency, tractor will come to an abrupt stop.



GENERAL MACHINE OPERATION

ATTACHING

1. Drive the tractor slowly forward into the hitch arms on the attachment. Align the lift arms of the tractor with the attachment hitch arms by raising or lowering the front hitch to complete the engagement.
2. Once properly aligned, engage the attachment hitch locking lever.
3. Engage the parking brake and shut off the engine.
4. Place the attachment belt over the open groove of the PTO drive pulley on the tractor. Ensure the belt is properly seated in each pulley.*
5. Engage the machine's PTO belt tensioner.*
6. Clean the quick couplers and connect to the auxiliary hydraulics.*

*Applies only if attachment is equipped.

DETACHING

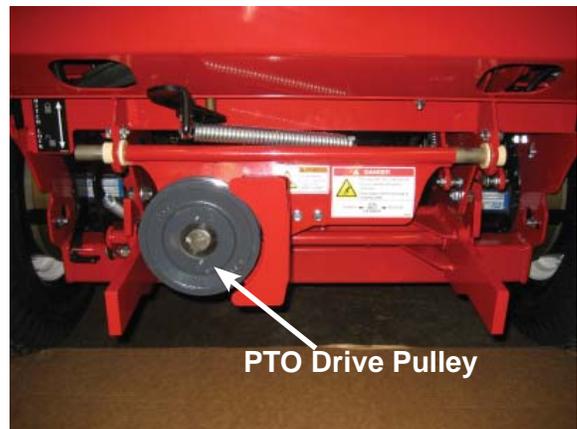
1. Park the machine on a level surface and engage the parking brake.
2. Fully raise attachment and set weight transfer to the off position.
3. Lower the attachment to the ground.
4. Shut off engine.
5. Disengage the PTO spring tension lever.*
6. Remove the attachment belt from the PTO drive pulley of the tractor.*
7. Move the S.D.L.A. lever left and right to release pressure from the auxiliary hydraulic circuit and disconnect the hydraulic quick couplers from the tractor.*
8. Disengage the attachment locking lever.
9. Restart tractor and slowly back away from the attachment.

*Applies only if attachment is equipped.

FRONT HITCH

The front hitch is used to secure attachment to machine, and to raise and lower the attachment. The front hitch is controlled by the primary S.D.L.A. lever. Pull the lever toward the operator's seat to raise the attachment, push the S.D.L.A. lever away from the driver seat to lower the attachment. The primary S.D.L.A. is equipped with a 'float' position. Push the S.D.L.A. lever to the far right position until the float detent catches and stays in place to operate in float.

PTO DRIVE BELT & PULLEY



If the attachment requires a drive belt, then release the tension from the tractor drive PTO and install belt around the drive pulley at the location shown in the figure above. When belt is in place around the drive pulley, move the machine's PTO belt tensioner to the right to tighten the belt.

Engage the PTO by pulling up on the PTO switch on the control panel. Note: PTO will engage only if the operator is present on the seat.

12 VOLT AUXILIARY OUTLETS (OPTIONAL EQUIPMENT)

Certain attachments require 12 volt auxiliary power. Plug the attachment's 12 volt power cord into the 12 volt socket located in front of the main control panel. Two switches are used to control the actions of the 12 volt kit. A momentary on/off/on is used for controlling movement that is only used for a brief time. The on/off switch is used to activate equipment or select different functions.

GENERAL MACHINE OPERATION

FRONT AUXILIARY COUPLERS

CAUTION

EQUIPMENT DAMAGE!

Dirt and other debris in hydraulic system can cause damage to the machine. Wipe clean the mating parts of the couplers before coupling. Use protective rubber plugs over tractor couplers when not in use.

If attachment requires auxiliary hydraulics, couple the attachment hoses with the front auxiliary couplers. This is done by sliding the collar of the coupler rearward and inserting the end of the attachment hose into the coupler and releasing the collar. If the collar will not snap forward on its own, pull it forward manually.

The couplers that the hoses are attached to will affect which way the secondary S.D.L.A. lever is pushed to control the action of the attachment. If the hoses are connected and the action is not the desired motion, then switch the hoses that the couplers are attached to. Auxiliary valves are controlled by moving the secondary S.D.L.A. lever left or right.

NOTE: Pressure build up in the attachment hose and on the machine couplers may occur causing difficult installation of hoses. If hoses do not easily connect, try one or both of the following steps: 1) To release the pressure from machines coupler, turn off engine and move the secondary lever of the S.D.L.A. right and left to release pressure in machine hydraulics circuit. 2) To release pressure in the attachment hose, loosen one of the hose ends, tighten when pressure is released.

WEIGHT TRANSFER

The weight transfer system allows the operator to select the amount of weight transferred from the front mounted attachment to the front drive wheels of the machine. Transferring weight from the attachment to the tractor improves traction and hillside stability, aids in lifting, reduces steering effort, and lessens the attachment resistance when in contact with the ground. Note: The weight transfer system is only active while the primary S.D.L.A. is in the float position.



0 – Off. This position does not transfer any weight from the attachment to the tractor.

1 – Low. Transfers more weight than position 0, but less than position 2.

2 – Mid-Low. Transfers more weight than position 1, but less than position 3.

3 – Mid-High. Transfers more weight than position 2, but less than position 4.

4 – High. Transfers maximum weight allowed by the weight transfer system.

Selecting the different positions can only be done when the front hitch is raised to its maximum height. Selecting the proper amount of weight to transfer depends on attachments, ground conditions and operator preference. A lightweight attachment (e.g. KA160 Power Blower) will not go down with full weight transfer on. With full weight transfer on and mowing in the float position, the mower may not come down quickly enough when traveling through uneven terrain. Weight transfer must be reduced or speed must be lowered.

OPERATING ATTACHMENTS

Refer to the attachment's manual for the proper operation and use of the particular attachment that is being operated.

GENERAL MACHINE OPERATION

OPERATING ON SLOPES

⚠ WARNING

AVOID PERSONAL INJURY!

Operation on slopes decreases machine stability and increases the potential for unexpected difficulties. Only experienced operators should operate the machine on slopes and extra caution should be exercised.

- Avoid uneven, loose, or wet terrain.
- Stay clear of drop-offs, holes, ditches, rocks, or objects that could cause a sudden and/or unexpected force on the machine.
- Make slow and cautious starts, stops, and turns.
- Do not exceed the maximum degree of operation.
- Turn downhill when possible and/or reduce the degree of turns.
- Failure to follow items listed or to use common sense while operating on slopes can result in injury or death. Always operate on slopes with caution.

Maintain sufficient fuel in tank to ensure continuous operation.

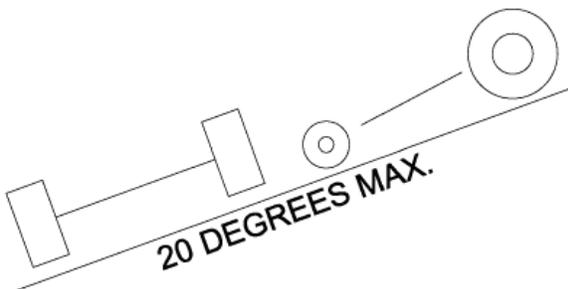
Cease operation if machine stability is questionable, or if the operator is uncomfortable or unsure of continuing safely.

Attachments can affect the stability of the machine. Each attachment will affect the machine differently.

Increase the amount of weight being transferred to the tractor from the attachment while operating on slopes. See Weight Transfer section.

Always operate carefully and in a manner that does not compromise safety.

Always wear seat belt!



TOWING OR PUSHING THE TRACTOR

ATTENTION: Avoid damage to your machine! Before towing, read and understand the information below. Damage may occur to unit if proper towing procedure isn't followed.

If towing the unit is necessary, unit can be towed at a maximum speed of 5 mph (8 kph), and the machine can be towed up to a maximum distance of a 1/2 mile (.80 Kilometers). Towing the machine at higher speeds or further distance than specified can cause damage to the drive system. It is recommended that the machine be pulled forwards while towing to allow better control over the direction the unit moves.

Note: Parking brake must be disengaged while towing.

DRIVING CONTROL

Be aware before operation that this machine handles differently than many other commercial tractors. Many operators are used to the driving control of a machine that would be steered by either articulation of the frame, or turning of the front wheels. For maximum maneuverability; this machine's rear wheels turn in the direction that the steering wheel is turned. In the interest of safety, operate this machine at reduced speeds until the operator is comfortable with the operation of the machine before increasing speeds.

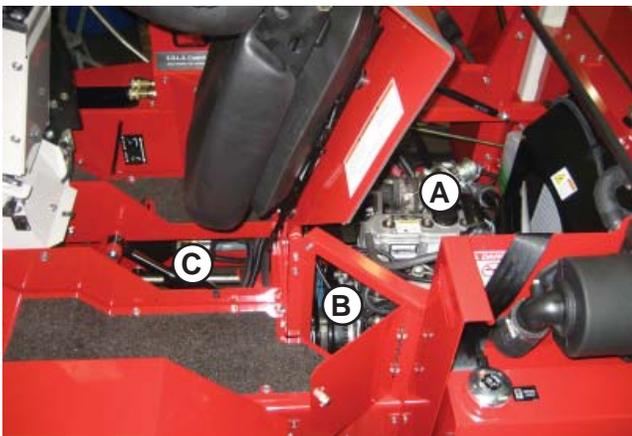
SERVICE

PROPER SERVICE & MAINTENANCE

Proper and timely service of this machine is critical to keeping the machine in proper working condition. Follow the Maintenance schedule at the end of the service section. For convenience, a quick reference service maintenance chart has been placed on the machine at the location shown in figure below.



Throughout the service section, different access points are referred to. Below is a list of access shields and doors that may need removed or opened during service.



A - Primary Engine Access

B - Side Panel Engine Access Door

C - Center Floor Board



D - Rear Hood Screen

E - Side Panel Electric Shield

SERVICE - LUBRICATION

Lubrication is required at the following locations. For service intervals, see maintenance chart. When greasing pivot points and bearings, use only one pump of grease.

Grease



Spray Lube



Rear Wheel Pivots



Front Lift Cylinder



Front Hitch & Front PTO Drive Bearing



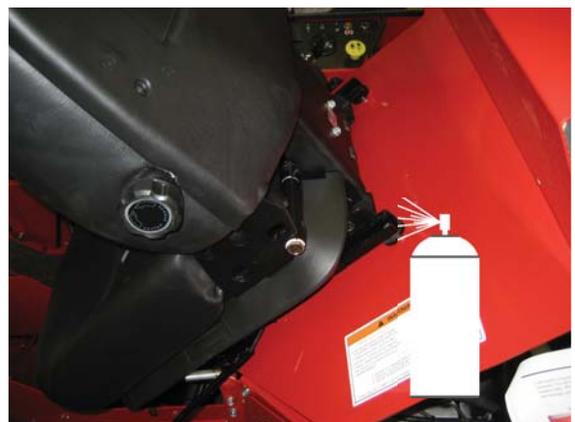
Rear Axle Pivots



Rear PTO Drive Bearing



Seat Rails



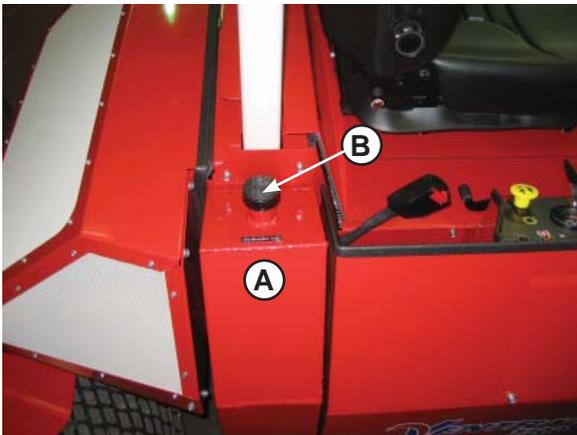
SERVICE - HYDRAULICS

CHECKING HYDRAULIC OIL LEVEL

1. Park machine on a level surface.
2. Shut off engine and engage the park brake.
3. Remove ignition key from switch and allow engine time to cool.
4. Locate the hydraulic tank as shown (A).
5. Remove dipstick (B) and inspect to see that the level of hydraulic oil is between the low and full marks.
6. If hydraulic oil level is below the lowest mark, add HydroTorq XL synthetic hydraulic oil until level is centered between the low and full marks of the dipstick.

CHANGING HYDRAULIC OIL AND FILTER

Hydraulic oil and filter should be changed at intervals of 2000 hours. Hydraulic oil and filter to be changed by a authorized Ventrac dealer only.



SERVICE - ENGINE

CHECKING ENGINE RPM

Check engine RPM's when engine is warmed up and not under load.

Observe Tachometer:

- Slow idle (No Load) - 1500 +/-50
- Fast idle (No Load) - 3600 +/-50

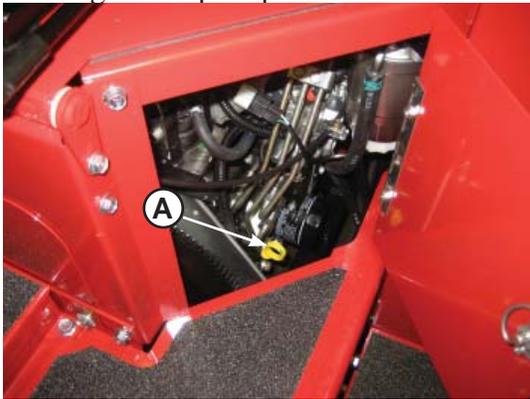
If engine RPM is incorrect, contact your local Ventrac Dealer.

CHECKING ENGINE OIL LEVEL

ATTENTION: Avoid damage to your engine. Failure to check the oil level regularly could lead to serious damage to your engine if the engine is run with an incorrect oil level.

- Before operation check engine oil with the unit sitting on a level surface.
- Check oil level when the engine is cold and not running
- Keep oil level between the FULL and LOW marks.
- Shut off engine before adding oil.

1. Park machine on a level surface.
2. Shut off the engine and engage park brake.
3. Remove ignition key from switch.
4. Open side panel engine access door to the engine compartment.
5. Remove the dipstick (A) located at the rear left of the engine. Wipe dipstick with a clean cloth.



6. Install dipstick back into the engine and remove again.



7. Check oil level. Level should be between the Low (A) and Full (B) on the dipstick.
8. NOTE: if oil is low, add small amounts of oil to bring the oil level no higher than level (B) on the dipstick.
9. If oil level is above (B), drain to achieve proper level.
10. Install dipstick and close side access door to engine compartment.

CHANGING ENGINE OIL AND FILTER

CAUTION

ENVIRONMENTAL HAZARD!
Oil is hazardous to the environment. Dispose of oil in a proper container and at a proper recycle center.

1. Run engine for 5 minutes to warm up the oil.
2. Park machine on a level surface.
3. Shut off engine and engage park brake.
4. Remove ignition key from switch.
5. Open primary engine access and the side panel engine access door to access the oil and oil filter.
6. Place a drain pan under the oil drain located directly beneath the engine.
7. Remove drain cap from oil drain.

SERVICE - ENGINE

1. Remove oil filter (A) located at the back left side of the engine. Turn filter counterclockwise to remove.



2. Wipe the filter mounting surface clean with a clean cloth.
3. Apply a thin film of clean engine oil to gasket of oil filter.
4. Install new filter. NOTE: Turn filter clockwise until filter gasket makes contact with the mounting surface. Tighten 1/2 - 3/4 turn after gasket contact.
5. Install oil drain cap. DO NOT over-tighten.
6. Remove oil fill cap
7. Add oil to engine. (See Engine Operator's manual for proper oil and capacity)
8. Install oil fill cap.
9. Start engine and allow to run at slow idle for approximately 2 minutes.
10. Shut off engine.
11. Remove ignition key from switch.
12. Check oil after allowing engine to cool for approximately 2 minutes. (Refer to "Checking Engine Oil Level" for proper procedures on how to check the oil).

CLEANING AIR INTAKE SYSTEM

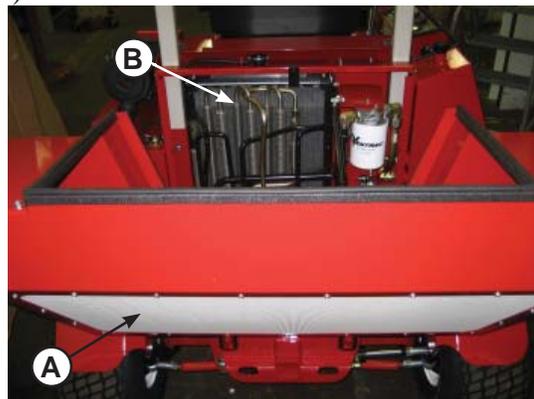
Adequate airflow is a key part of proper operation for this machine. Air intake primarily comes from the rear screened hood of the machine. Proper airflow can become restricted by debris such as grass, and leaves. If rear screened hood accumulates a significant amount of debris, follow the steps below to clean screen.

CAUTION

AVOID PERSONAL INJURY!
Wear personal eye protection when using compressed air or water for cleaning purposes.

ATTENTION: Avoid damage to your engine!
Air intake screens must be clean to prevent the engine from overheating and to allow adequate air flow.

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Allow engine to cool.
5. Open up rear hood screen to access the inside of the air intake screens.
6. Clean all debris from outer screens (A) around the hood with a brush, compressed air or water. NOTE: Be sure to blow or spray from the inside out.
7. Inspect and clean radiator screen if necessary (B).



SERVICE - ENGINE

SERVICING AIR FILTER ELEMENT

CAUTION

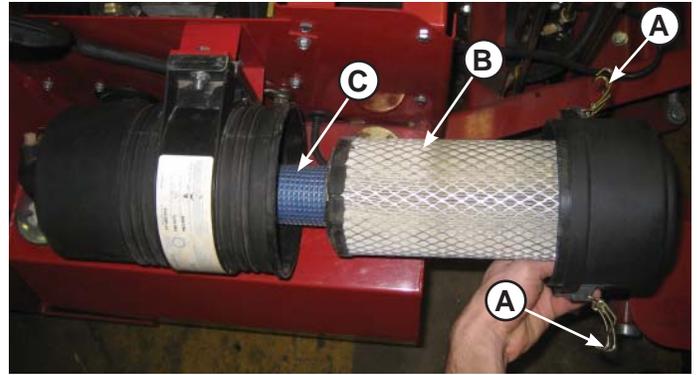
AVOID ENGINE DAMAGE!

When removing the air filter element, an opening directly to the internal parts of the engine is created.

Be sure that nothing falls into the canister that could make its way into the engine. Have the new filter element ready to install immediately after the old element has been removed.

ATTENTION: Avoid damage to your engine! Improper service to the engine air filter can result in severe engine damage.

- **Inspect filter daily in extreme heat, dust, or other severe conditions.**
- **Never run engine without proper air filter installed.**
- **Never wash or clean paper filter element.**



Primary Air Filter Element

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Allow engine to cool
5. Release both spring latches (A) on the canister and unhook latches from the canister housing.
6. Remove the air canister cap.
7. Remove and discard the filter (B).
8. Install the new filter element.
9. Reinstall the air canister cap.

SERVICE - ENGINE

SERVICING FUEL FILTER

⚠ DANGER

AVOID PERSONAL INJURY!

Avoid personal injury and/or death from fumes, fire or explosion when working on fuel related parts:

- Shut off engine and allow to cool.
- Do not smoke anywhere near the machine.
- Keep machine away from flames or sparks.
- Work in a well ventilated area.
- Clean up spilled fuel immediately.

⚠ CAUTION

AVOID PERSONAL INJURY!

Wear proper Personal Protective Equipment to protect eyes and hands when working with the fuel system.

- Drain fuel into an approved nonmetallic container.
- Let machine cool before servicing.
- Disconnect negative battery cable before working on the fuel system.

WATER IN FUEL

This machine is equipped with a water/fuel separator. When the amber light on the dash comes on, it indicates the water/fuel separator has water in the filter.

When indicator light is activated, water needs drained from fuel filter. Consult the engine operator's manual for proper draining instructions.

CHANGING THE FUEL FILTER

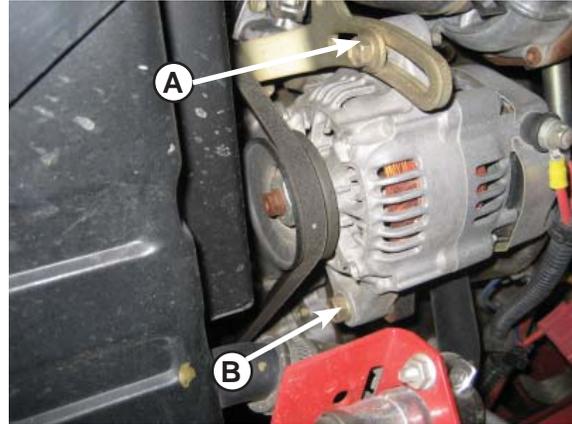
See the engine owner's manual for fuel filter changing instructions. The fuel filter is located at the left side of the engine.

CHECKING ALTERNATOR BELT

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Allow engine to cool.
5. Open primary engine access to access alternator.

6. Check belt for excessive wear, cracks or damage.
7. Check for proper tension. Apply 20 lbs. of pressure to the belt between the alternator and water pump. The belt should deflect 3/8" to 1/2". Adjust if too tight or too loose.

ADJUSTING ALTERNATOR BELT TENSION



1. Loosen adjustment bolt. (A)
2. Loosen bottom alternator mounting bolt. (B)
3. Apply forward pressure to the alternator housing.
4. Tighten adjustment bolt (A).
5. Tighten alternator mounting bolt (B).
6. Check for proper tension. Apply 20 lbs. of pressure to the belt between the alternator and water pump. The belt should deflect 3/8" to 1/2". Adjust if necessary.

⚠ CAUTION

AVOID PERSONAL INJURY!

Fingers or loose clothing can get caught in rotating parts. Stop engine, remove key and wait for all moving parts to stop rotating before working on machine.

SERVICE - ELECTRICAL

SERVICING BATTERY



⚠ CAUTION

AVOID PERSONAL INJURY!

Battery electrolyte contains sulfuric acid. It is poisonous and can cause serious burns.

- Wear eye protection and gloves.
- Keep skin protected.
- If electrolyte is swallowed, get medical attention immediately.
- If electrolyte is splashed in eyes, flush immediately with water for 15-30 minutes and seek medical attention.
- If electrolyte is splashed onto skin, flush immediately with water and get medical attention, if necessary.

The battery produces a flammable and explosive gas. The battery may explode.

- Do not smoke near battery.
- Wear eye protection and gloves.
- Do not allow direct metal contact across battery posts.
- Remove negative cable first when disconnecting.
- Install negative cable last when connecting.

REMOVING AND INSTALLING BATTERY

Removing:

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Remove side panel electric shield.
5. Disconnect negative battery cable (A).
6. Disconnect positive battery cable (B).
7. Loosen two fasteners (C) and remove the battery clamp.

8. Lift battery from battery compartment using rope handle over top of the battery.



Installing:

1. Place battery into the battery compartment.
2. Connect positive cable to positive battery terminal first, then connect the negative cable to the negative battery terminal.
3. Apply dielectric grease to terminals to prevent corrosion.
4. Slide terminal covers over battery connections.
5. Install battery clamp over battery and fasten. Do not over tighten.
6. Reinstall the side panel electric shield.

CLEANING BATTERY AND TERMINALS

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Disconnect and remove battery.
5. Wash battery with solution of four tablespoons of baking soda to one gallon of water. Be careful not to get the soda solution into the cell.
6. Rinse the battery with plain water and dry.
7. Clean terminals and battery cable with wire brush until bright.
8. Apply dielectric grease to terminals to prevent corrosion.

SERVICE - ELECTRICAL

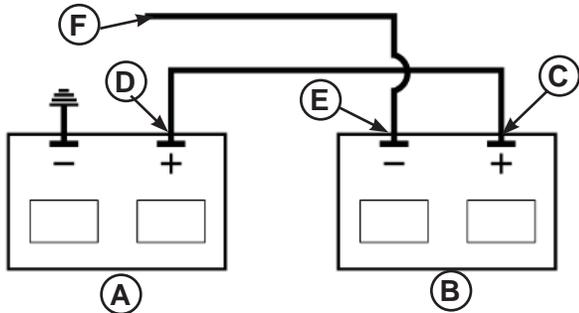
USING A BOOSTER BATTERY

⚠ CAUTION

AVOID PERSONAL INJURY!

The battery produces a flammable and explosive gas. The battery may explode.

- Do not smoke near battery.
- Wear eye protection and gloves.
- Do not jump start or charge a cold or frozen battery. Warm battery first.
- Do not connect the negative booster cable to the negative terminal of the discharged battery. Connect at a good ground location on the engine away from the discharged battery.



A - Disabled Machines Battery
B - Booster Battery

Note: If using a vehicle to boost the battery, boosting vehicle must be shut off.

1. Connect positive booster cable to booster battery positive post (C).
2. Connect the other end of the positive booster cable to the disabled battery's positive post (D).
3. Connect negative booster cable to booster battery negative post (E).
4. Connect the other end (F) of the negative booster cable to a metal part of the disabled machine's engine block away from battery.
5. Start the engine of the disabled machine and run machine for several minutes.
6. Carefully disconnect the booster cables in the reverse order: negative cable first and then the positive cable.

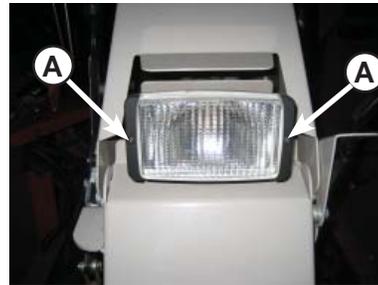
CHANGING THE HEADLIGHT BULB

⚠ CAUTION

AVOID PERSONAL INJURY!

The headlight bulb contains gases under pressure. The bulb may shatter if the glass is scratched or dropped. Wear eye protection and handle bulb with care.

1. Park machine on a level surface.
2. Shut off engine and remove key from ignition.
3. Remove the two screws clamping the headlight cover on (A) and remove cover.



4. Disconnect ground wire from the defective headlight (B).
5. Remove wire loom and shrink wrap from positive wire (C) and disconnect the positive wire.
6. Remove the defective headlight from the light assembly by pinching the wire spring fastener.
7. Install the new light bulb and secure with spring fastener (D).
8. Reconnect the positive and negative wires as removed.
9. Re-wrap the positive wire with heat shrink and wire loom.
10. Reinstall the head light cover.



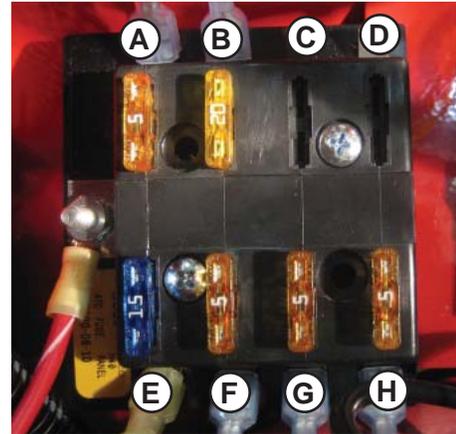
SERVICE - ELECTRICAL

CHANGING THE TAILLIGHTS

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Disconnect the plug from the back side of the taillight.
5. Push defective taillight assembly out of grommet and discard.
6. Insert the new taillight assembly into the grommet.
7. Plug in the taillight wire as shown in the figure below



CHANGING THE FUSES



REF	CIRCUIT	FUSE SIZE
A	Gauges, Tach, Signal Lights	5
B	All light related items	20
C	-	-
D	12 Volt Auxiliary*	15*
E	Start and PTO relays	15
F	PTO switch, Seat switch	5
G	Engine Relay, Alternator	5
H	Relay Control	5

* Optional Equipment

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Remove side panel electric shield.
5. Identify and pull defective fuse from socket.
6. Push new fuse into socket. Be certain to have proper size fuse or damage may occur to the machine.
7. Reinstall the side panel electric shield.

SERVICE - RADIATOR

SERVICING COOLING SYSTEM

⚠ CAUTION

AVOID PERSONAL INJURY!

If the unit has been running, the radiator and radiator coolant will be hot and can burn skin! Built up pressure in the radiator can cause an explosive release of coolant if the radiator cap is removed:

- Shut off engine and allow to cool.
- Do not remove the cap unless the radiator and engine are cool enough to touch with bare hands.
- Slowly loosen cap to the first stop to release all the pressure before removing completely.
- Wear Personal Protective Gear to protect eyes and skin when opening radiator cap to protect against the pressure in the radiator.

⚠ CAUTION

AVOID PERSONAL INJURY!

Wear Personal Protective Equipment to protect eyes and hands when opening radiator cap to protect against the pressure in the radiator.

⚠ CAUTION

ENVIRONMENTAL HAZARD!

Antifreeze is hazardous to the environment. Dispose of antifreeze in a proper container and at a proper recycle center.

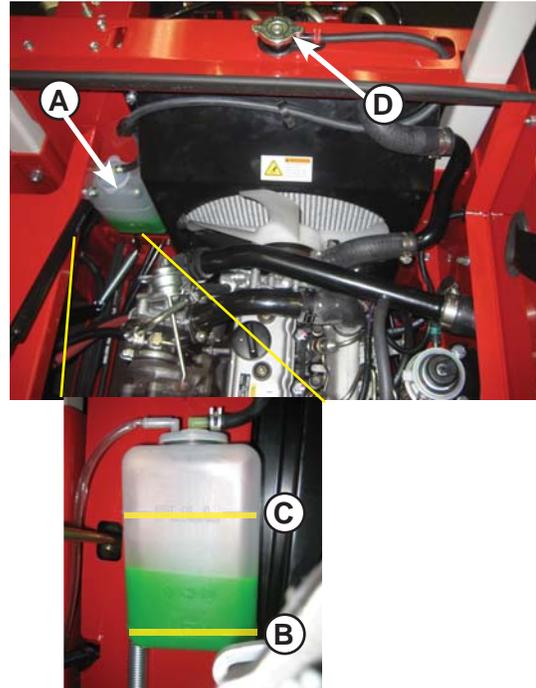
ATTENTION: Avoid damage to your engine! Using incorrect coolant mixture and/or type can cause engine damage. See the engine operator's manual for correct type.

- Do not operate engine without coolant.
- Do not use plain water.
- Do not pour coolant into radiator when engine is hot.
- To prevent engine overheating, do not exceed more than 50% antifreeze in cooling system.

CHECKING COOLANT LEVEL

1. Park machine on a level surface.

2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Allow engine to cool.
5. Open primary engine access to access the radiator and the radiator coolant recovery tank.



6. Check the level in the coolant recovery tank (A). NOTE: When cold, level should be between Low (B) and Full (C) marks on the tank.
7. Add coolant if low.
8. If coolant recovery tank is empty, slowly open the radiator cap (D) to the first stop to allow all pressure to release. Press down on the cap slightly and continue to turn counterclockwise and remove cap from radiator. Check that the coolant level is up to the bottom of the filler neck.
9. If coolant is low, add coolant.
10. Install radiator cap.
11. Inspect condition of radiator hoses and clamps. Replace as necessary.
12. Close engine cover.

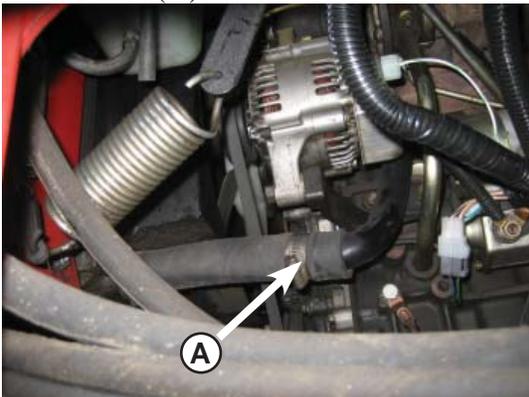
SERVICE - RADIATOR

CLEANING RADIATOR & SCREEN

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Open rear hood screen to access radiator screen. Remove radiator screen.
5. Remove debris from screen with a brush, compressed air, or water.
6. Remove dirt and debris from radiator using compressed air or water. Spray from the fan side of radiator only.
7. Check radiator fins for damage.
8. Reinstall radiator screen.
9. Close rear hood screen.

DRAINING COOLING SYSTEM

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Allow engine to cool.
5. Open primary engine access to access radiator.
6. Slowly open radiator cap to the first notch to allow pressure to release.
7. Drain radiator coolant into a pan by disconnecting radiator hose that runs to the engine, located beneath the alternator at the bottom right corner of the radiator (A).



8. Flush cooling system.

FLUSHING COOLING SYSTEM

1. Park machine on a level surface.
2. Shut off engine and engage park brake.
3. Remove ignition key from switch.
4. Drain system. Add one can of radiator flush, (can be purchased at any auto parts store) fill with clean water and following instructions on the can.
5. Install radiator cap.
6. Start engine and run until it reaches operating temperature. (160 - 180 degrees)
7. Shut off the engine.
8. Remove ignition key from switch.
9. Drain cooling system immediately before the rust and dirt settle.
10. Allow engine to cool.
11. Fill radiator with clean water and allow to flush out until the water comes out clear.
12. When water has drained from radiator reattach radiator drain hose to engine and fill the radiator with proper coolant. See the engine operator's manual for the correct type of coolant.

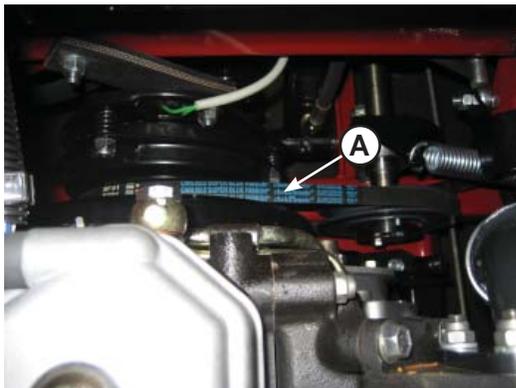
SERVICE - BELT

INSPECTION OF PTO BELT

Periodically checking the PTO belt (A) of this machine can prevent sudden failure by finding problems before they cause the belt to break. It is recommended to inspect the PTO belt every 50 hours of operation, or if a problem is suspected. There may be a PTO belt problem if there is a squealing or chattering sound, or the smell of a slipping belt.



1. Park machine on a level surface.
2. Shut off engine and engage the park brake.
3. Remove ignition key from switch and allow engine to cool.
4. Open primary engine access to access the drive belt (A).



5. Typical wear on the PTO belt may result in the following conditions as shown in the figure below. If any of these conditions occur, then the belt will require replacement. Refer to the PTO Replacement section for replacing belts.



Glazing



Cracks



Separation



Streaked Sidewalls

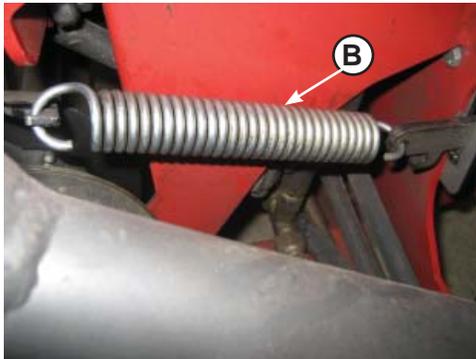


Tensile Break

SERVICE - BELT

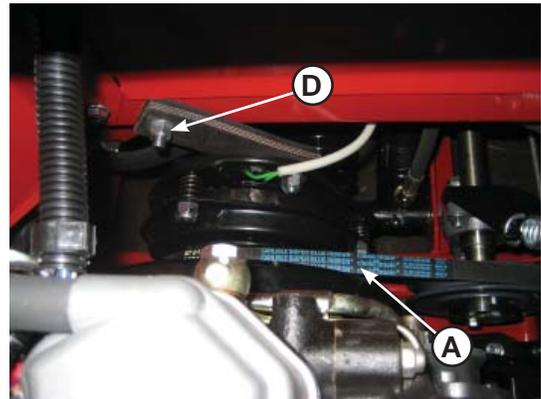
PTO BELT ADJUSTMENT

1. Park machine on a level surface.
2. Shut off engine and engage the park brake.
3. Remove ignition key from switch and allow engine to cool.
4. Open primary engine access to access the drive belt.
5. Check the distance between the coils of the PTO clutch belt spring (B). The coils should have a slight separation between them.
6. If there is not a gap between the coils then the belt requires additional tensioning. Pull outward on the belt tension adjustment handle (C) and place handle in notch setting that allows for the coils to have a slight separation.



PTO BELT REPLACEMENT

1. Park machine on a level surface.
2. Shut off engine and engage the park brake.
3. Remove ignition key from switch and allow engine to cool.
4. Release all tension from the belt tension adjustment handle (C) by moving the handle all the way in.
5. Open primary engine access to access the drive belt (A).
6. Disconnect the clutch wire from harness, and disconnect the clutch strap at location shown (D).
7. Remove drive belt from idler pulley, then from around clutch.
8. Install the new belt following the removal steps in reverse order.



MAINTENANCE CHART

VENTRAC 7200 MAINTENANCE SCHEDULE

This sheet is a guide for recommended Service and Maintenance for the 7200

Maintenance Procedure	As Needed	After First 50 Hr	Daily	At 50 Hours	At 100 Hours	At 150 Hours	At 200 Hours	At 250 Hours	At 300 Hours	At 350 Hours	At 400 Hours	At 450 Hours	At 500 Hours	At 550 Hours	At 600 Hours	At 650 Hours	At 700 Hours	At 750 Hours	At 800 Hours	At 850 Hours	At 900 Hours	At 1000 Hours	Yearly	5 Years or 2000 Hrs.
	Grease & Lubrication: See Lubrication Section																							
Rear Wheel Pivot	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Front Lift Cylinder	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Front Hitch	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PTO Drive Bearing	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Rear Axle Pivots	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Seat Rails	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Engine:																								
Check Engine Oil Level		X																						
Change Engine Oil & Filter																								
Inspect Primary Air Filter		X																						
Replace Primary Air Filter	**			X							X											X		
Replace Safety Air Filter					X								X											
Replace Fuel Filter								X																
Service Cooling System																								
Clean Engine Compartment, Radiator, and Engine	**																						X	
Consult Engine Owner's Manual																								
Hydraulic System:																								
Change Hydraulic Oil & Filter																								X
Check Hydraulic Oil Level		X																						
Parking Brake:																								
Inspect Parking Brake Tension		X																						
Electrical:																								
Replace Light Bulbs	X																							X
Clean Battery Compartment	X																							
Miscellaneous:																								
Check For Loose or Missing Hardware			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Inspect Clutch Belt			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Check Wheel Lug Nuts				X										X										
Drain Fuel Tank	X																							X
Check Tire Pressure		X																						
*If heavy load, high temperature, or dusty condition service intervals are not specified, Ventrac recommends servicing more frequently at 1/2 of the standard service interval.																								
**Operation in severe conditions may require more frequent service intervals.																								

MAINTENANCE CHECKLIST

VENTRAC 7200 MAINTENANCE SCHEDULE

This sheet is a checklist for tracking Service and Maintenance for the 7200

Maintenance Procedure	Grease & Lubrication: See Lubrication Section																							
	As Needed	After First 50 Hr	Daily	At 50 Hours	At 100 Hours	At 150 Hours	At 200 Hours	At 250 Hours	At 300 Hours	At 350 Hours	At 400 Hours	At 450 Hours	At 500 Hours	At 550 Hours	At 600 Hours	At 700 Hours	At 800 Hours	At 850 Hours	At 900 Hours	At 1000 Hours	Yearly	5 Years or 2000 Hrs.		
Rear Wheel Pivot																								
Front Lift Cylinder																								
Front Hitch																								
PTO Drive Bearing																								
Rear Axle Pivots																								
Seat Rails																								
Engine:																								
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Change Engine Oil & Filter																								
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Replace Primary Air Filter																								
Replace Safety Air Filter																								
Replace Fuel Filter																								
Service Cooling System																								
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Clean Battery Compartment																								
Miscellaneous:																								
Check For Loose or Missing Hardware																								
Inspect Clutch Belt																								
Check Wheel Lug Nuts																								
Drain Fuel Tank																								
Check Tire Pressure																								

TROUBLESHOOTING

ENGINE

SYMPTOM:	POSSIBLE CAUSE:
Starter Will Not Engage	Parking brake is not in the park position. PTO switch is engaged. Neutral start switch is out of adjustment. Dead battery. Blown fuse in start circuit. Faulty relay in start circuit. Electrical problem in start circuit.
Engine Cranks, But Won't Start	Insufficient fuel level Cold weather - let glow plugs cycle a second time. Glow plugs not working. Plugged fuel filters. Obstruction in the fuel line. Poor engine compression. Fuel start solenoid not working. Faulty injector pump.
Engine Runs Rough	Plugged or partially plugged fuel filters. Plugged or partially plugged air filters. Fuel cap vent is plugged or dirty. Stale fuel, dirty fuel, insufficient fuel level. Dirty or faulty fuel injectors. Faulty injector pump.
Engine Is Low In Power	Plugged or partially plugged fuel filters (most common). Plugged or partially plugged air filters. Low cylinder compression. Dirty or faulty fuel injectors/pump.
Engine Overheats	Dirty radiator screen. Low coolant level. Debris in engine compartment. Defective radiator cap. Defective thermostat. Loose alternator belt.
Oil Light Comes On When Running	Low in oil. Faulty oil sender. Faulty oil pump.

TROUBLESHOOTING

ENGINE CONT.

SYMPTOM:	POSSIBLE CAUSE:
Engine Emits White Exhaust Smoke	Low engine temperature; Allow engine to warm up. Leaking head gasket. Water in combustion chamber.
Engine Emits Black Or Gray Exhaust Smoke	Plugged air intake system. Engine burning oil. Dirty or faulty injectors.
Excessive Fuel Consumption	Plugged air intake system. Dirty or faulty injectors.
Engine Uses Excessive Oil	Check for leaks. Incorrect engine oil. Plugged air intake filter. Worn rings or cylinder walls.

ELECTRICAL

SYMPTOM:	POSSIBLE CAUSE:
Battery Does Not Charge	Loose or corroded connections. Broken or loose wire in charge system. Defective battery. Loose alternator belt. Defective alternator. Defective voltage regulator.
Lights Do Not Activate	Blown fuse. Blown light bulb. Broken wire/connection. Faulty light switch.
Glow Plugs Do Not Activate	Blown fuse. Faulty relay. Faulty glow plugs. Electrical problem.
PTO Does Not Engage	Faulty seat switch. NOTE: Operator must be in seat. Faulty PTO switch. Clutch out of adjustment - (see 'PTO belt adjustment') Faulty clutch. Electrical problem.

TROUBLESHOOTING

HYDRAULIC

SYMPTOM:	POSSIBLE CAUSE:
Front Attachment Fails To Lift	Low hydraulic oil. Excessive load on hitch. Faulty hydraulic cylinder. Low hydraulic charge pressure.
Steering Is Difficult	Low hydraulic oil. Faulty hydraulic cylinder. Cold temperature. Allow tractor to warm up.
Excessive Noise In Hydraulic System	Low hydraulic oil. Cold temperature. Allow tractor to warm up.

MACHINE

SYMPTOM:	POSSIBLE CAUSE:
Machine Will Not Move With Engine Running.	Parking brake is in the park position. Brakes do not release. Low hydraulic oil. Pump control linkage is loose.

SPECIFICATIONS

ENGINE

Manufacture	B&S Vanguard
Model Number	DM950DT
Type	Turbo Diesel
Engine Gross HP	31
Rated Engine Speed	3600 RPM
Cylinders	3
Cooling System	Liquid Cooled
Oil Filtration	Spin-on Filter
Engine Orientation	Horizontal Shaft

ELECTRICAL

Battery	450 Cold Cranking Amps
Voltage	12 Volts
Alternator	40 Amp

POWERTRAIN

Type	Hydrostatic (Front Wheel Drive)
Fwd Speed (High)	15 mph
Fwd Speed (Low).	7 mph
Brakes	Dual Band Brake
Hydraulic Oil Filtration	25 Micron Filter

CONTROLS & INSTRUMENT PANEL

Steering	Power
PTO (Power Take Off)	Electric w/brake
Throttle Control	Cable
Directional Control	Speed, Direction, Lift, Auxiliary (S.D.L.A.)
Control Orientation	Hand & Foot
Gauges.	Tach, Volt, Fuel, Water Temp
Parking/Emergency Brake	Band Brake

OTHER FEATURES

Turning Radius.	14"
Drive Tires	Turf Master (24 X 12 - 12)
Optional Drive Tires	All Trail (24 x 12 - 12)
Rear Tires.	Turf Master (18 X 9-1/2 - 8)
Headlight (3).	Halogen (55 Watt)
Fuel Tank Capacity	12 Gallon
Attachment System	Minute Mount

SPECIFICATIONS

DIMENSIONS

Wheelbase	55"
Overall Length	81"
Overall Height	78"
Overall Width	54"
WeightApprx 1600#

OPTIONAL ACCESSORIES

12 Volt Accessory Option	70.7001
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Venture Products, Inc. reserves the right to change these specifications without notice.

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 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 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

WARRANTY



LIMITED WARRANTY - VENTRAC TURF EQUIPMENT

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 superceded 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.