Operator's Manual & Parts Drawings

Gandy Seeder

Model 405VP

Get Attached... Get it DONE!!!

VENTRAC® MOUNT SYSTEM

Revised 07/14/2011
09.10001

328 East Water St.
PO Box 148
Orrville Oh 44667
www.ventrac.com

To the Owner
Contact Information and Product Identification

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

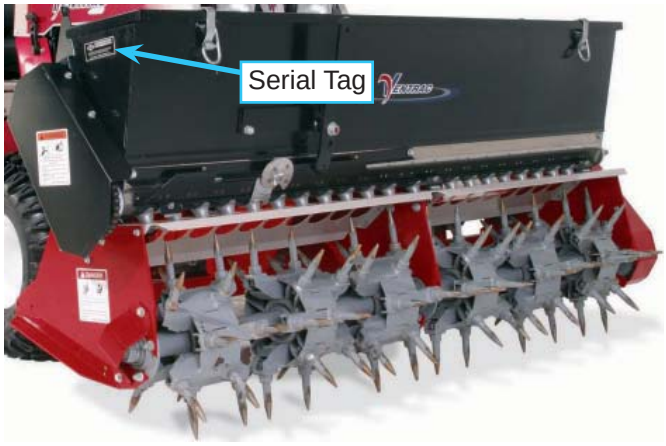
Please fill in the following information for future reference. See the picture(s) below to find the location of the identification numbers. Record them in the spaces provided.

Date of Purchase: _____
Dealer: _____
Dealer Address: _____
_____
Dealer Phone Number: _____
Dealer Fax Number: _____

Model # (A): _____

Serial # (B): _____

Affix Part/Serial Number label here.



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

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INTRODUCTION

Venture Products Inc. is pleased to provide you with your new Ventrac 405VP seeder! We hope that Ventrac equipment will open up a *world of opportunities* for you.

Product Description

The 405VP seeder mounts to the frame of the EA600 AERA-vator and is designed for the sole purpose of seed application. The metering mechanism is precision tooled to assure you of uniform application from each hopper opening. Each of the mechanism's features is designed for long life and accuracy. The stainless steel hopper bottom and slide are micro-precision mated for uniform application at any setting. The diamond shaped openings allow no particle hang up from very small to large settings.

Why Do I Need an Operator's Manual?

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

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

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

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

INTRODUCTION

Using Your Manual

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

SYMBOL DEFINITIONS

ATTENTION

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

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

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

SIGNAL WORD DEFINITIONS

⚠ DANGER

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

⚠ WARNING

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

⚠ CAUTION

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

Manual Glossary

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

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

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

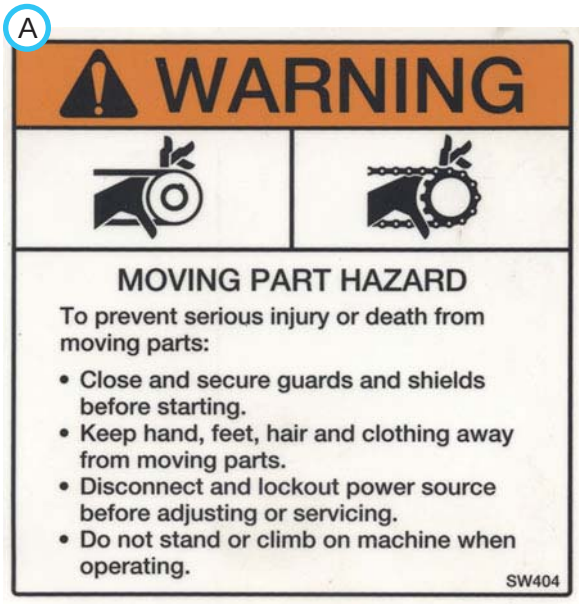
Machine Describes any “Attachment” or “Accessory” that is used in conjunction with a power unit.

Safety Decals

The following safety decals must be maintained on your Ventrac 405VP seeder.

Keep all safety decals legible. Remove all grease, dirt, and debris from safety decals and instructional labels. If any decals are faded, illegible, or missing, contact your dealer promptly for replacements.

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



Decal	Description	Part Number	Quantity
A	Warning - Moving Part Hazard	00.0101	1

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

Training Required

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

Personal Protective Equipment Requirements

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

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

Operating Safely

- Inspect machine before operation. Repair or replace any damaged, worn, or missing parts. Be sure guards and shields are in proper working condition and are secured in place. Make all necessary adjustments before operating machine.
- Alterations or modifications to this machine can reduce safety and could cause damage to the machine. Do not alter safety devices or operate with shields or covers removed.
- Before each use, verify that all controls function properly and inspect all safety devices. Do not operate if controls or safety devices are not in proper working condition.
- Check parking brake function before operating. Repair or adjust parking brake if necessary.
- Observe and follow all safety decals.
- All controls are to be operated from the operator's seat only.
- Always wear a seat belt if the machine has a roll cage/bar installed.
- Ensure the attachment or accessory is locked or fastened securely to the power unit before operating.
- Ensure that all bystanders are clear of the power unit and attachment before operating. Stop machine if someone enters your work area.
- Always be alert to what is happening around you, but do not lose focus on the task you are performing. Always look in the direction the machine is moving.
- Look behind and down before backing up to be sure of a clear path.
- If you hit an object, stop and inspect the machine. Make all necessary repairs before operating machine again.
- Stop operation immediately at any sign of equipment failure. An unusual noise can be a warning of equipment failure or a sign that maintenance is required. Make all necessary repairs before operating machine again.
- If equipped with a high/low range feature, never shift between high and low range while on a slope. Always move the machine to level ground and place the selector lever in park before shifting range.

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

Operating Safely (continued)

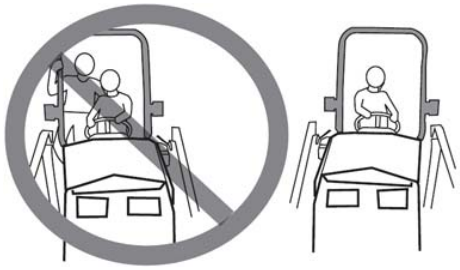
- Do not leave machine unattended while it is running.
- Always park the machine on level ground.
- Always shut off engine when connecting attachment drive belt to the power unit.
- Never leave the operator's seat without lowering the attachment to the ground, setting the parking brake, shutting off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

Preventing Accidents

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

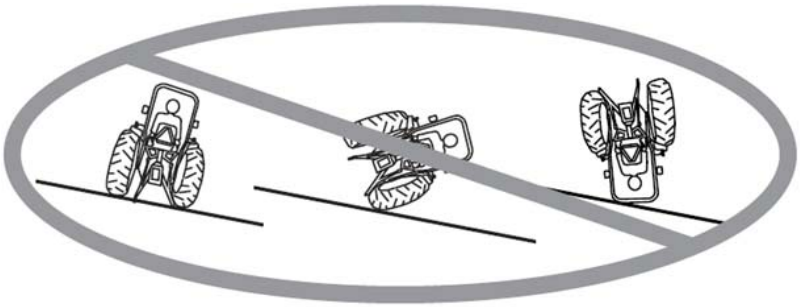
Keep Riders Off

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



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

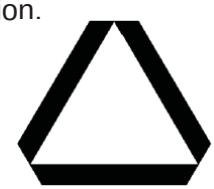
Operating On Slopes



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

Roadway Safety

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



Truck Or Trailer Transport

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

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

Maintenance

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

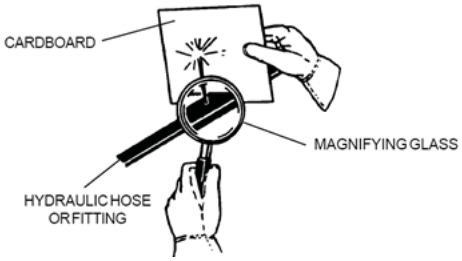
Fuel Safety

- Do not refuel machine while smoking or at a location near flames or sparks.
  - Always refuel the machine outdoors.
  - Do not store machine or fuel container indoors where fumes or fuel can reach an open flame, spark, or pilot light.
- Only store fuel in an approved container. Keep out of reach of children.
- Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling.
- Replace all fuel tank and container caps securely.
- Do not overfill fuel tank. Maximum level is 1" below the neck of the fuel tank.
- If fuel is spilled, do not attempt to start the engine. Move the power unit away from the fuel spill and avoid creating any source of ignition until fuel vapors have dissipated.
- If the fuel tank must be drained, it should be drained outdoors into an approved container.
- Dispose of all fluids in accordance with local laws.
- Check all fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- The fuel system is equipped with a shut-off valve. Shut off the fuel when transporting the machine to and from the job, when parking the machine indoors, or when servicing the fuel system.

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

Hydraulic Safety

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

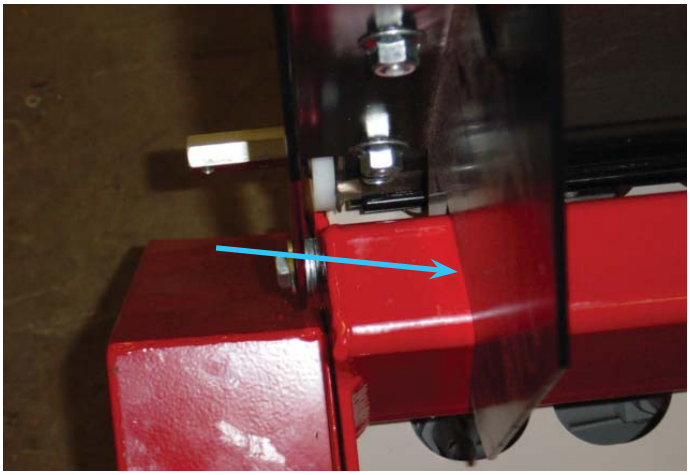


•Keep body and hands away from pinhole leaks or nozzles that eject high pressure hydraulic fluid. Hydraulic fluid escaping under high pressure can penetrate the skin causing serious injury. If hydraulic fluid is injected into skin, seek immediate medical attention.

- Hydraulic system may contain stored energy. Before performing maintenance or repairs on the hydraulic system, remove attachments, engage parking brake, disengage weight transfer system (if equipped), shut off engine, and remove ignition key. To relieve pressure on the auxiliary hydraulic system, shut off the power unit engine and move the secondary S.D.L.A. lever left and right before disconnecting the auxiliary hydraulic quick couplers.
- Dispose of all fluids in accordance with local laws.

Installation onto EA600 AERA-vator

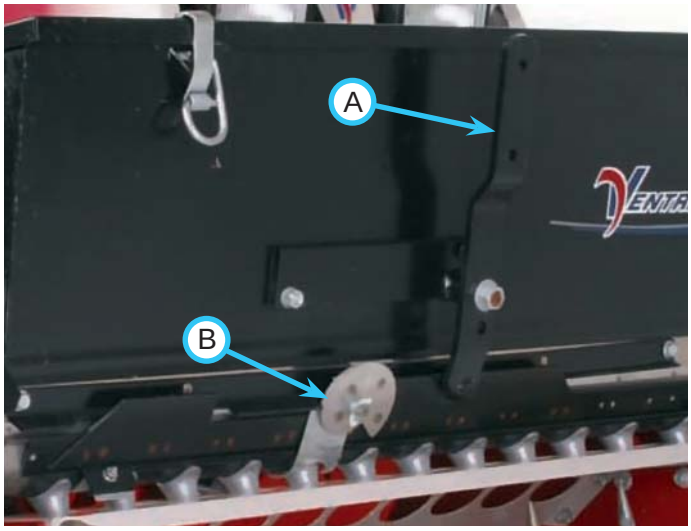
1. Remove the 405VP seeder from the crate and remove the hardware and bracket package from the seeder hopper.
2. Remove the Ventrac weights (if equipped) and the weight retainer pins from the EA600 AERA-vator frame.
3. Using a lift strap and hoist, lift the seeder and position it above the AERA-vator with the seeder tube spouts toward the front of the AERA-vator.
4. Align the seeder mounting brackets with the AERA-vator main frame tube and lower into place. The brackets sit over the frame tube and the seeder tube spouts go into the holes in the AERA-vator top shields as shown below.



5. Position the right mounting bracket (motor mount side) against the inside of the AERA-vator main frame end plate. Install a 3/8 x 1” bolt and washer through the frame and mounting bracket and fasten with a 3/8” flange nut. Torque to 31 ft-lbs (42 Nm).
6. Loosen the bolts that fasten the left mounting bracket to the seeder. Adjust the mounting bracket against the outside of the AERA-vator main frame end plate. Install a 3/8 x 1” bolt and washer through the mounting bracket and frame and fasten with a 3/8” flange nut. Torque the mounting bracket bolt and the 2) seeder bolts to 31 ft-lbs (42 Nm).
7. Bolt the wire channel bracket to the AERA-vator frame using 2) 5/16 x 3/4” flange bolts and 5/16 flange nuts. Torque to 210 in-lbs (24 Nm).

8. Run the wire harness inside the wire channel bracket. Place the clamp over the wire and insert the 1/4 x 5/8” flange bolt through the clamp flange and the wire channel bracket. Fasten with 1) 1/4” flat washer and 1/4” lock nut. Torque to 100 in-lbs (11 Nm).

Operational Control Locations



A - Shut Off Lever
B - Cam Gauge
C - 12 Volt Switch

Shut Off Lever (A)

The shut off lever opens and closes the slide to control the product flow. When facing the front of the seeder, move the lever to the left until the slide stop contacts the hopper stop to close the bottom hopper openings. Move the lever to the right to open the bottom hopper openings.

Slide Gauge Cam (B)

When the shut off lever is moved to the right, the slide opens until the slide gauge cam contacts the hopper stop, thereby regulating the application rate of the product. The bottom hopper openings increase as the cam is rotated from 0 to 80. When the slide gauge cam is set, it allows the slide to be closed and opened while maintaining the application rate.

12 Volt Switch (C)

The 12 volt switch on the power unit controls power to the motor. When the motor is switched on, it turns the rotor to assure a constant flow of product to the bottom hopper openings. When the motor is switched off, the rotor stops and restricts the flow of the product, allowing only the particles in the rotor segment(s) over the bottom hopper openings to flow out.

Daily Inspection

⚠ WARNING

Always set the parking brake, shut off the power unit engine, remove the ignition key, and ensure all moving parts have stopped before checking mower deck or blade condition, or attempting any repair or adjustment.

1. Park power unit, AERA-vator, and seeder on a level surface, with the engine shut off and all fluids cold.
2. Perform a visual inspection of the power unit, AERA-vator, and seeder. Look for loose or missing hardware, damaged components, or signs of wear. Inspect hydraulic hoses, hydraulic fittings, and fuel lines to ensure tight, leak free connections.
3. Refer to the power unit operator's manual. Check the power unit's engine oil, hydraulic oil, cooling system, tire pressure, and fuel level. Add fluid or service system as required.
4. Inspect the drive belt. Belt should be in good condition. Service as required.
5. Refer to the power unit operator's manual. Test the power unit's operator safety interlock system.

Calibration Procedure

⚠ Attention

It is the responsibility of the operator to ensure that each material is properly calibrated in the applicator prior to application in the field. Failure to do so may cause under application with poor results, or over application which can result in poor start or excessive seed rates.
The seed rate charts are to serve only as guides in initial setting, as seed are supplied and run under factory laboratory conditions.

Each product flows differently, requiring calibration for each product. Variations in formulations, particle size, humidity, temperature, and age of product may affect application rates.

A few minutes invested before application results in the most effective use of your seed and makes the wisest use of your turf management efforts

Remember flow rates can change because:

- mixes vary within the same brand or between brands.
- mixes vary between batches or years of production.
- atmospheric conditions alter the flow rate.
- poor applicator maintenance alters the flow rate.
- incorrect control/sprocket installation alters the flow rate.
- slide closure, rate gauge, or setting has been moved from the correct position.
- miscalculation of flow rate.

To calibrate:

- catch material for weighing. Do not apply directly to the soil.
- plan the materials you need for quick calibration: Example: scale, recovery bags, calibration tubes, distance measurement or timing device.

⚠ CAUTION

Catching material from all or a portion of the outlets (the others being closed) is the recommended calibration procedure, so that no material is applied to the soil until calibration is completed. Doing otherwise is at the operator's risk and responsibility.

Calibration takes minimal time if you are prepared to do it correctly.

1. Determine the desired application rate based on pounds per 1,000 square feet. Divide pounds per acre by 43.6 to convert to pounds per 1,000 square feet.
2. Establish the desired power unit ground speed for application.
3. Determine the amount of time required to cover 1,000 square feet at the desired speed. For the model 405VP seeder, this would be the time to travel a distance of 200 feet.

Speed (MPH)	Time required to travel 200 feet
1/2	4 minutes & 33 seconds
1	2 minutes & 16 seconds
1-1/2	1 minute & 31 seconds
2	1 minute & 8 seconds
2-1/2	55 seconds
3	45 seconds
3-1/2	39 seconds
4	34 seconds
4-1/2	30 seconds
5	27 seconds
5-1/2	25 seconds
6	23 seconds

4. With a tarpaulin spread to catch the product, switch on the rotor and open the slide until a uniform flow is attained through the tubes. Slowly close the slide until the flow is estimated to be the desired application rate. Set the slide gauge cam and close the slide. Switch the rotor off and clean the tarp.

⚠ CAUTION

Do not leave the rotor switched on with the slide closed for long periods of time. This causes undue wear of the rotor vanes and could cause damage to the product (seed) in the hopper.

5. With the rotor switch on, open the shut off lever until the gauge cam contacts the hopper stop. Catch the product for the exact time required to travel 200 feet and close the shut off lever. Weigh the product caught in the tarp and compare it to the desired application rate. Adjust the gauge cam to attain the desired application rate.

⚠ Attention

To maintain the desired application rate, always operate the power unit at the established speed.

Operating Procedure

Before operation, perform daily inspection and confirm that the seeder is properly calibrated. Load the hopper with the product to be applied.

⚠ Attention

Road travel with the hopper filled can cause compaction of some materials and make it difficult for the motor to start. It is recommended that the hopper be filled just before use in the field.

Move into position and engage the PTO switch. Start the power unit moving forward and switch on the 12 volt switch to start the seeder. Lower the AERA-vator into the ground and place the power unit's primary S.D.L.A. control lever in the float position by pushing it to the right until the detent engages. The lever will stay in this position until intentionally removed.

When the edge of the application area is reached, switch off the 12 volt switch to shut off the seeder and lift the AERA-vator out of the ground. Turn the power unit around and align for the next pass.

When the job is complete, switch off the 12 volt switch to shut off the seeder and close the shut off lever. Empty any remaining product from the hopper by discharging onto a tarp.

NOTE: the AERA-vator clutch will disengage when the AERA-vator is lifted out of the ground. Always remember to disengage the power unit's PTO switch when the job is complete.

Transport of AERA-vator and Seeder

Transport the AERA-vator and seeder with the power unit front hitch and AERA-vator fully raised to reduce wear of the equipment. Travel slowly when transporting over undulating and rough surfaces to maintain control of power unit and to reduce the shock to the power unit and attachments. Always disengage the power unit PTO and shut off the seeder motor before transport.

Seed Rate Charts

Athletic Mix 50/blu 50/rye
Futura Pickseed

Cam Gauge Settings	Rate in Pounds Per 1,000 Square Feet									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
20	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
21	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
22	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
23	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
24	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
25	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
26	0.7	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
27	0.8	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
28	0.9	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
29	1.0	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
30	1.1	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
31	1.3	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1
32	1.5	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2
33	1.8	0.9	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2
34	2.0	1.0	0.7	0.5	0.4	0.3	0.3	0.3	0.2	0.2
35	2.3	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.2
36	2.7	1.3	0.9	0.7	0.5	0.4	0.4	0.3	0.3	0.3
37	3.0	1.5	1.0	0.8	0.6	0.5	0.4	0.4	0.3	0.3
38	3.4	1.7	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.3
39	3.8	1.9	1.3	0.9	0.8	0.6	0.5	0.5	0.4	0.4
40	4.2	2.1	1.4	1.0	0.8	0.7	0.6	0.5	0.5	0.4
41	4.6	2.3	1.5	1.2	0.9	0.8	0.7	0.5	0.5	0.5
42	5.1	2.6	1.7	1.3	1.0	0.9	0.7	0.6	0.6	0.5
43	5.6	2.8	1.9	1.4	1.1	0.9	0.8	0.7	0.6	0.6
44	6.1	3.0	2.0	1.5	1.2	1.0	0.9	0.8	0.7	0.6
45	6.5	3.3	2.2	1.6	1.3	1.1	0.9	0.8	0.7	0.7
46	7.0	3.5	2.3	1.8	1.4	1.2	1.0	0.9	0.8	0.7
47	7.6	3.8	2.5	1.9	1.5	1.3	1.1	0.9	0.8	0.8
48	8.1	4.0	2.7	2.0	1.6	1.3	1.2	1.0	0.9	0.8
49	8.6	4.3	2.9	2.1	1.7	1.4	1.2	1.1	1.0	0.9
50	9.1	4.6	3.0	2.3	1.8	1.5	1.3	1.1	1.0	0.9
51	9.7	4.8	3.2	2.4	1.9	1.6	1.4	1.2	1.1	1.0
52	10.3	5.1	3.4	2.6	2.1	1.7	1.5	1.3	1.1	1.0
53	10.9	5.4	3.5	2.7	2.2	1.8	1.6	1.4	1.2	1.1
54	11.5	5.7	3.8	2.9	2.3	1.9	1.6	1.4	1.3	1.1
55	12.0	6.0	4.0	3.0	2.4	2.0	1.7	1.5	1.3	1.2
56	12.8	6.4	4.3	3.2	2.6	2.1	1.8	1.6	1.4	1.3
57	13.6	6.8	4.5	3.4	2.7	2.3	1.9	1.7	1.5	1.4
58	14.4	7.2	4.8	3.6	2.9	2.4	2.1	1.8	1.6	1.4
59	15.2	7.6	5.1	3.8	3.0	2.5	2.2	1.9	1.7	1.5
60	16.0	8.0	5.3	4.0	3.2	2.7	2.3	2.0	1.8	1.6
61	16.8	8.4	5.6	4.2	3.4	2.8	2.4	2.1	1.9	1.7
62	17.7	8.8	5.9	4.4	3.5	2.9	2.5	2.2	2.0	1.8
63	18.5	9.3	6.2	4.6	3.7	3.1	2.6	2.3	2.1	1.9
64	19.4	9.7	6.5	4.9	3.9	3.2	2.8	2.4	2.2	1.9
65	20.3	10.1	6.8	5.1	4.1	3.4	2.9	2.5	2.3	2.0
66	21.0	10.5	7.0	5.3	4.2	3.5	3.0	2.6	2.3	2.1
67	21.8	10.9	7.3	5.5	4.4	3.6	3.1	2.7	2.4	2.2
68	22.6	11.3	7.5	5.6	4.5	3.8	3.2	2.8	2.5	2.3
69	23.4	11.7	7.8	5.8	4.7	3.9	3.3	2.9	2.6	2.3
70	24.1	12.1	8.0	6.0	4.8	4.0	3.4	3.0	2.7	2.4
71	24.5	12.2	8.2	6.1	4.9	4.1	3.5	3.1	2.7	2.4
72	24.8	12.4	8.3	6.2	5.0	4.1	3.5	3.1	2.8	2.5
73	25.2	12.6	8.4	6.3	5.0	4.2	3.6	3.1	2.8	2.5
74	25.5	12.8	8.5	6.4	5.1	4.3	3.6	3.2	2.8	2.6
75	25.9	12.9	8.6	6.5	5.2	4.3	3.7	3.2	2.9	2.6
76	26.0	13.0	8.7	6.5	5.2	4.3	3.7	3.2	2.9	2.6
77	26.1	13.1	8.7	6.5	5.2	4.4	3.7	3.3	2.9	2.6
78	26.3	13.1	8.8	6.6	5.3	4.4	3.8	3.3	2.9	2.6
79	26.4	13.2	8.8	6.6	5.3	4.4	3.8	3.3	2.9	2.6
80	26.5	13.3	8.8	6.6	5.3	4.4	3.8	3.3	2.9	2.7

Athletic Mix 50/blu 50/rye
Futura Pickseed

Cam Gauge Settings	Rate in Pounds Per Acre									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
20	13.1	6.5	4.4	3.3	2.6	2.2	1.9	1.6	1.5	1.3
21	13.1	6.5	4.4	3.3	2.6	2.2	1.9	1.6	1.5	1.3
22	17.4	8.7	5.8	4.4	3.5	2.9	2.5	2.2	1.9	1.7
23	17.4	8.7	5.8	4.4	3.5	2.9	2.5	2.2	1.9	1.7
24	21.8	10.9	7.3	5.4	4.4	3.6	3.1	2.7	2.4	2.2
25	26.1	13.1	8.7	6.5	5.2	4.4	3.7	3.3	2.9	2.6
26	30.5	15.2	10.2	7.6	6.1	5.1	4.4	3.8	3.4	3.0
27	34.8	17.4	11.6	8.7	7.0	5.8	5.0	4.4	3.9	3.5
28	39.2	19.6	13.1	9.8	7.8	6.5	5.6	4.9	4.4	3.9
29	43.6	21.8	14.5	10.9	8.7	7.3	6.2	5.4	4.8	4.4
30	47.9	24.0	16.0	12.0	9.6	8.0	6.8	6.0	5.3	4.8
31	56.6	28.3	18.9	14.2	11.3	9.4	8.1	7.1	6.3	5.7
32	69.7	34.8	23.2	17.4	13.9	11.6	10.0	8.7	7.7	7.0
33	78.4	39.2	26.1	19.6	15.7	13.1	11.2	9.8	8.7	7.8
34	87.1	43.6	29.0	21.8	17.4	14.5	12.4	10.9	9.7	8.7
35	100.2	50.1	33.4	25.0	20.0	16.7	14.3	12.5	11.1	10.0
36	117.6	58.8	39.2	29.4	23.5	19.6	16.8	14.7	13.1	11.8
37	130.7	65.3	43.6	32.7	26.1	21.8	18.7	16.3	14.5	13.1
38	148.1	74.1	49.4	37.0	29.6	24.7	21.2	18.5	16.5	14.8
39	165.5	82.8	55.2	41.4	33.1	27.6	23.6	20.7	18.4	16.6
40	183.0	91.5	61.0	45.7	36.6	30.5	26.1	22.9	20.3	18.3
41	200.4	100.2	66.8	50.1	40.1	33.4	28.6	25.0	22.3	20.0
42	222.2	111.1	74.1	55.5	44.4	37.0	31.7	27.8	24.7	22.2
43	243.9	122.0	81.3	61.0	48.8	40.7	34.8	30.5	27.1	24.4
44	265.7	132.9	88.6	66.4	53.1	44.3	38.0	33.2	29.5	26.6
45	283.1	141.6	94.4	70.8	56.6	47.2	40.4	35.4	31.5	28.3
46	304.9	152.5	101.6	76.2	61.0	50.8	43.6	38.1	33.9	30.5
47	331.1	165.5	110.4	82.8	66.2	55.2	47.3	41.4	36.8	33.1
48	352.8	176.4	117.6	88.2	70.6	58.8	50.4	44.1	39.2	35.3
49	370.3	185.1	123.4	92.6	74.1	61.7	52.9	46.3	41.1	37.0
50	396.4	198.2	132.1	99.1	79.3	66.1	56.6	49.5	44.0	39.6
51	422.5	211.3	140.8	105.6	84.5	70.4	60.4	52.8	46.9	42.3
52	448.7	224.3	149.6	112.2	89.7	74.8	64.1	56.1	49.9	44.9
53	474.8	237.4	158.3	118.7	95.0	79.1	67.8	59.4	52.8	47.5
54	500.9	250.5	167.0	125.2	100.2	83.5	71.6	62.6	55.7	50.1
55	522.7	261.4	174.2	130.7	104.5	87.1	74.7	65.3	58.1	52.3
56	557.6	278.8	185.9	139.4	111.5	92.9	79.7	69.7	62.0	55.8
57	592.4	296.2	197.5	148.1	118.5	98.7	84.6	74.1	65.8	59.2
58	627.3	313.6	209.1	156.8	125.5	104.5	89.6	78.4	69.7	62.7
59	662.1	331.1	220.7	165.5	132.4	110.4	94.6	82.8	73.6	66.2
60	697.0	348.5	232.3	174.2	139.4	116.2	99.5	87.1	77.4	69.7
61	731.8	365.9	243.9	183.0	146.4	122.0	104.5	91.5	81.3	73.2
62	771.0	385.5	257.0	192.8	154.2	128.5	110.1	96.4	85.7	77.1
63	805.9	402.9	268.6	201.5	161.2	134.3	115.1	100.7	89.5	80.6
64	845.1	422.5	281.7	211.3	169.0	140.8	120.7	105.6	93.9	84.5
65	884.3	442.1	294.8	221.1	176.9	147.4	126.3	110.5	98.3	88.4
66	914.8	457.4	304.9	228.7	183.0	152.5	130.7	114.3	101.6	91.5
67	949.6	474.8	316.5	237.4	189.9	158.3	135.7	118.7	105.5	95.0
68	984.5	492.2	328.2	246.1	196.9	164.1	140.6	123.1	109.4	98.4
69	1019.3	509.7	339.8	254.8	203.9	169.9	145.6	127.4	113.3	101.9
70	1049.8	524.9	349.9	262.4	210.0	175.0	150.0	131.2	116.6	105.0
71	1067.2	533.6	355.7	266.8	213.4	177.9	152.5	133.4	118.6	106.7
72	1080.3	540.1	360.1	270.1	216.1	180.0	154.3	135.0	120.0	108.0
73	1097.7	548.9	365.9	274.4	219.5	183.0	156.8	167.2	122.0	109.8
74	1110.8	555.4	370.3	277.7	222.2	185.1	158.7	138.8	123.4	111.1
75	1128.2	564.1	376.1	282.1	225.6	188.0	161.2	141.0	125.4	112.8
76	1132.6	566.3	377.5	283.1	226.5	188.8	161.8	141.6	125.8	113.3
77	1136.9	568.5	379.0	284.2	227.4	189.5	162.4	142.1	126.3	113.7
78	1145.6	572.8	381.9	286.4	229.1	190.9	163.7	143.2	127.3	114.6
79	1150.0	575.0	383.3	287.5	230.0	191.7	164.3	143.7	127.8	115.0
80	1154.3	577.2	384.8	288.6	230.9	192.4	164.9	144.3	128.3	115.4

Centipede Seed
Prime Turf

Cam Gauge Settings	Rate in Pounds Per 1,000 Square Feet									
		@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
6	0.7	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
7	0.9	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
8	1.1	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
9	1.4	0.7	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.1
10	1.6	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2
11	1.9	1.0	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2
12	2.3	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.2
13	2.6	1.3	0.9	0.6	0.5	0.4	0.4	0.3	0.3	0.3
14	3.0	1.5	1.0	0.8	0.6	0.5	0.4	0.4	0.3	0.3
15	3.5	1.8	1.2	0.9	0.7	0.6	0.5	0.4	0.4	0.4
16	4.0	2.0	1.3	1.0	0.8	0.7	0.6	0.5	0.4	0.4
17	4.5	2.2	1.5	1.1	0.9	0.7	0.6	0.6	0.5	0.4
18	4.9	2.5	1.6	1.2	1.0	0.8	0.7	0.6	0.5	0.5
19	5.7	2.9	1.9	1.4	1.1	1.0	0.8	0.7	0.6	0.6
20	6.5	3.2	2.2	1.6	1.3	1.1	0.9	0.9	0.7	0.6
21	7.1	3.6	2.4	1.8	1.4	1.2	1.0	0.9	0.8	0.7
22	7.8	3.9	2.6	1.9	1.6	1.3	1.1	1.0	0.9	0.8
23	8.5	4.2	2.8	2.1	1.7	1.4	1.2	1.1	0.9	0.8
24	9.6	4.8	3.2	2.4	1.9	1.6	1.4	1.2	1.1	1.0
25	10.7	5.3	3.6	2.7	2.1	1.8	1.5	1.3	1.2	1.1

Centipede Seed
Prime Turf

Cam Gauge Settings	Rate in Pounds Per Acre									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
3	4.0	2.0	1.3	1.0	0.8	0.7	0.6	0.5	0.4	0.4
4	11.7	5.8	3.9	2.9	2.3	1.9	1.7	1.5	1.3	1.2
5	19.4	9.7	6.5	4.8	3.9	3.2	2.8	2.4	2.2	1.9
6	28.6	14.3	9.5	7.2	5.7	4.8	4.1	3.6	3.2	2.9
7	37.9	19.0	12.6	9.5	7.6	6.3	5.4	4.7	4.2	3.8
8	47.2	23.6	15.7	11.8	9.4	7.9	6.7	5.9	5.2	4.7
9	59.2	29.6	19.7	14.8	11.8	9.9	8.5	7.4	6.6	5.9
10	71.2	35.6	23.7	17.8	14.2	11.9	10.2	8.9	7.9	7.1
11	84.7	42.3	28.2	21.2	16.9	14.1	12.1	10.6	9.4	8.6
12	98.2	49.1	32.7	24.6	19.6	16.4	14.0	12.3	10.9	9.8
13	111.8	55.9	37.3	27.9	22.4	18.6	16.0	14.0	12.4	11.2
14	132.4	66.2	44.1	33.1	26.5	22.1	18.9	16.6	14.7	13.2
15	153.1	76.6	51.0	38.3	30.6	25.5	21.9	19.1	17.0	15.3
16	173.6	86.8	57.9	43.4	34.7	28.9	24.8	21.7	19.3	17.4
17	194.2	97.1	64.7	48.5	38.8	32.4	27.7	24.3	21.6	19.4
18	214.7	107.4	71.6	53.7	42.9	35.8	30.7	26.8	23.9	21.5
19	248.4	124.2	82.8	62.1	49.7	41.4	35.5	31.0	27.6	24.8
20	282.0	141.0	94.0	70.5	56.4	47.0	40.3	35.3	31.3	28.2
21	310.7	155.3	103.6	77.7	62.1	51.8	44.4	38.8	34.5	31.1
22	339.4	169.7	113.1	84.8	67.9	56.6	48.5	42.4	37.7	33.9
23	368.1	184.0	122.7	92.0	73.6	61.3	52.6	46.0	40.9	36.8
24	416.7	208.3	138.9	104.2	83.3	69.4	59.5	52.1	46.3	41.7
25	465.3	232.7	155.1	116.3	93.1	77.6	66.5	58.2	51.7	46.5

Penncross Creeping Bentgrass

Cam Gauge Settings	Rate in Pounds Per 1,000 Square Feet									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
6	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
7	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0
8	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
9	0.7	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
10	0.9	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
11	1.1	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
12	1.3	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1
13	1.5	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2
14	1.7	0.9	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2
15	1.9	1.0	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2
16	2.3	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.2
17	2.6	1.3	0.9	0.7	0.5	0.4	0.4	0.3	0.3	0.3
18	2.9	1.5	1.0	0.7	0.6	0.5	0.4	0.4	0.3	0.3
19	3.3	1.6	1.1	0.8	0.7	0.5	0.5	0.4	0.4	0.3
20	3.6	1.8	1.2	0.9	0.7	0.6	0.5	0.5	0.4	0.4
21	4.1	2.1	1.4	1.0	0.8	0.7	0.6	0.5	0.5	0.4
22	4.6	2.3	1.5	1.2	0.9	0.8	0.7	0.6	0.5	0.5
23	5.1	2.6	1.7	1.3	1.0	0.9	0.7	0.6	0.6	0.5
24	5.6	2.8	1.9	1.4	1.1	0.9	0.8	0.7	0.6	0.6
25	6.1	3.1	2.0	1.5	1.2	1.0	0.9	0.8	0.7	0.6
26	6.7	3.4	2.2	1.7	1.3	1.1	1.0	0.8	0.7	0.7
27	7.3	3.6	2.4	1.8	1.5	1.2	1.0	0.9	0.8	0.7
28	7.9	3.9	2.6	2.0	1.6	1.3	1.1	1.0	0.9	0.8
29	8.5	4.2	2.8	2.1	1.7	1.4	1.2	1.1	0.9	0.8
30	9.1	4.5	3.0	2.3	1.8	1.5	1.3	1.1	1.0	0.9
31	9.8	4.9	3.3	2.4	2.0	1.6	1.4	1.2	1.1	1.0
32	10.5	5.3	3.5	2.6	2.1	1.8	1.5	1.3	1.2	1.1
33	11.3	5.6	3.8	2.8	2.3	1.9	1.6	1.4	1.3	1.1
34	12.0	6.0	4.0	3.0	2.4	2.0	1.7	1.5	1.3	1.2
35	12.7	6.4	4.2	3.2	2.5	2.1	1.8	1.6	1.4	1.3
36	13.7	6.9	4.6	3.4	2.7	2.3	2.0	1.7	1.5	1.4
37	14.7	7.4	4.9	3.7	2.9	2.5	2.1	1.8	1.6	1.5
38	15.7	7.8	5.2	3.9	3.1	2.6	2.2	2.0	1.7	1.6
39	16.7	8.3	5.6	4.2	3.3	2.8	2.4	2.1	1.9	1.7
40	17.7	8.8	5.9	4.4	3.5	2.9	2.5	2.2	2.0	1.8

Penncross Creeping Bentgrass

Cam Gauge Settings	Rate in Pounds Per Acre									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
5	8.7	4.4	2.9	2.2	1.7	1.5	1.2	1.1	1.0	0.9
6	17.4	8.7	5.8	4.4	3.5	2.9	2.5	2.2	1.9	1.7
7	21.8	10.9	7.3	5.4	4.4	3.6	3.1	2.7	2.4	2.2
8	26.1	13.1	8.7	6.5	5.2	4.4	3.7	3.3	2.9	2.6
9	30.5	15.2	10.2	7.6	6.1	5.1	4.4	3.8	3.4	3.0
10	39.2	19.6	13.1	9.8	7.8	6.5	5.6	4.9	4.4	3.9
11	47.9	24.0	16.0	12.0	9.6	8.0	6.8	6.0	5.3	4.8
12	56.6	28.3	18.9	14.2	11.3	9.4	8.1	7.1	6.3	5.7
13	65.3	32.7	21.8	16.3	13.1	10.9	9.3	8.2	7.3	6.5
14	74.1	37.0	24.7	18.5	14.8	12.3	10.6	9.3	8.2	7.4
15	82.8	41.4	27.6	20.7	16.6	13.8	11.8	10.3	9.2	8.3
16	100.2	50.1	33.4	25.0	20.0	16.7	14.3	12.5	11.1	10.0
17	113.3	56.6	37.8	28.3	22.7	18.9	16.2	14.2	12.6	11.3
18	126.3	63.2	42.1	31.6	25.3	21.1	18.0	15.8	14.0	12.6
19	143.7	71.9	47.9	35.9	28.7	24.0	20.5	18.0	16.0	14.4
20	156.8	78.4	52.3	39.2	31.4	26.1	22.4	19.6	17.4	15.7
21	178.6	89.3	59.5	44.6	35.7	29.8	25.5	22.3	19.8	17.9
22	200.4	100.2	66.8	50.1	40.1	33.4	28.6	25.0	22.3	20.0
23	222.2	111.1	74.1	55.5	44.4	37.0	31.7	27.8	24.7	22.2
24	243.9	122.0	81.3	61.0	48.8	40.7	34.8	30.5	27.1	24.4
25	265.7	132.9	88.6	66.4	53.1	44.3	38.0	33.2	29.5	26.6
26	291.9	145.9	97.3	73.0	58.4	48.6	41.7	36.5	32.4	29.2
27	318.0	159.0	106.0	79.5	63.6	53.0	45.4	39.7	35.3	31.8
28	344.1	172.1	114.7	86.0	68.8	57.4	49.2	43.0	38.2	34.4
29	370.3	185.1	123.4	92.6	74.1	61.7	52.9	46.3	41.1	37.0
30	396.4	198.2	132.1	99.1	79.3	66.1	56.6	49.5	44.0	39.6
31	426.9	213.4	142.3	106.7	85.4	71.1	61.0	53.4	47.4	42.7
32	457.4	228.7	152.5	114.3	91.5	76.2	65.3	57.2	50.8	45.7
33	492.2	246.1	164.1	123.1	98.4	82.0	70.3	61.5	54.7	49.2
34	522.7	261.4	174.2	130.7	104.5	87.1	74.7	65.3	58.1	52.3
35	553.2	276.6	184.4	138.3	110.6	92.2	79.0	69.2	61.5	55.3
36	596.8	298.4	198.9	149.2	119.4	99.5	85.3	74.6	66.3	59.7
37	640.3	320.2	213.4	160.1	128.1	106.7	91.5	80.0	71.1	64.0
38	683.9	341.9	228.0	171.0	136.8	114.0	97.7	85.5	76.0	68.4
39	727.5	363.7	242.5	181.9	145.5	121.2	103.9	90.9	80.8	72.7
40	771.0	385.5	257.0	192.8	154.2	128.5	110.1	96.4	85.7	77.1

Pyramid Bermuda Grass
International Seeds Inc.

Cam Gauge Settings	Rate in Pounds Per 1,000 Square Feet									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
5	0.7	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
6	1.1	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
7	1.4	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1
8	1.8	0.9	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.2
9	2.1	1.1	0.7	0.5	0.4	0.4	0.3	0.3	0.2	0.2
10	2.5	1.2	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.2
11	3.1	1.5	1.0	0.8	0.6	0.5	0.4	0.4	0.3	0.3
12	3.6	1.8	1.2	0.9	0.7	0.6	0.5	0.5	0.4	0.4
13	4.2	2.1	1.4	1.0	0.8	0.7	0.6	0.5	0.5	0.4
14	4.7	2.4	1.6	1.2	0.9	0.8	0.7	0.6	0.5	0.5
15	5.3	2.6	1.8	1.3	1.1	0.9	0.8	0.7	0.6	0.5
16	6.1	3.0	2.0	1.5	1.2	1.0	0.9	0.8	0.7	0.6
17	6.9	3.4	2.3	1.7	1.4	1.1	1.0	0.9	0.8	0.7
18	7.6	3.8	2.5	1.9	1.5	1.3	1.1	1.0	0.8	0.8
19	8.4	4.2	2.8	2.1	1.7	1.4	1.2	1.1	0.9	0.8
20	9.2	4.6	3.1	2.3	1.8	1.5	1.3	1.2	1.0	0.9
21	10.3	5.2	3.4	2.6	2.1	1.7	1.5	1.3	1.1	1.0
22	11.5	5.7	3.8	2.9	2.3	1.9	1.6	1.4	1.3	1.1
23	12.6	6.3	4.2	3.2	2.5	2.1	1.8	1.6	1.4	1.3
24	13.8	6.9	4.6	3.4	2.8	2.3	2.0	1.7	1.5	1.4
25	14.9	7.5	5.0	3.7	3.0	2.5	2.1	1.9	1.7	1.5
26	16.4	8.2	5.5	4.1	3.3	2.7	2.3	2.0	1.8	1.6
27	17.9	8.9	6.0	4.5	3.6	3.0	2.6	2.2	2.0	1.8
28	19.4	9.7	6.5	4.8	3.9	3.2	2.8	2.4	2.2	1.9
29	20.8	10.4	6.9	5.2	4.2	3.5	3.0	2.6	2.3	2.1
30	22.3	11.2	7.4	5.6	4.5	3.7	3.2	2.8	2.5	2.2
31	24.3	12.1	8.1	6.1	4.9	4.0	3.5	3.0	2.7	2.4
32	26.2	13.1	8.7	6.6	5.2	4.4	3.7	3.3	2.9	2.6
33	28.1	14.1	9.4	7.0	5.6	4.7	4.0	3.5	3.1	2.8
34	30.1	15.0	10.0	7.5	6.0	5.0	4.3	3.8	3.3	3.0
35	32.0	16.0	10.7	8.0	6.4	5.3	4.6	4.0	3.6	3.2

Pyramid Bermuda Grass
International Seeds Inc.

Cam Gauge Settings	Rate in Pounds Per Acre									
		@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
5	30.5	15.2	10.2	7.6	6.1	5.1	4.4	3.8	3.4	3.0
6	47.9	24.0	16.0	12.0	9.6	8.0	6.8	6.0	5.3	4.8
7	61.0	30.5	20.3	15.2	12.2	10.2	8.7	7.6	6.8	6.1
8	78.4	39.2	26.1	19.6	15.7	13.1	11.2	9.8	8.7	7.8
9	91.5	45.7	30.5	22.9	18.3	15.2	13.1	11.4	10.2	9.1
10	108.9	54.5	36.3	27.2	21.8	18.2	15.6	13.6	12.1	10.9
11	135.0	67.5	45.0	33.8	27.0	22.5	19.3	16.9	15.0	13.5
12	156.8	78.4	52.3	39.2	31.4	26.1	22.4	19.6	17.4	15.7
13	183.0	91.5	61.0	45.7	36.6	30.5	26.1	22.9	20.3	18.3
14	204.7	102.4	68.2	51.2	40.9	34.1	29.2	25.6	22.7	20.5
15	230.9	115.4	77.0	57.7	46.2	38.5	33.0	28.9	25.7	23.1
16	265.7	132.9	88.6	66.4	53.1	44.3	38.0	33.2	29.5	26.6
17	300.6	150.3	100.2	75.1	60.1	50.1	42.9	37.6	33.4	30.1
18	331.1	165.5	110.4	82.8	66.2	55.2	47.3	41.4	36.8	33.1
19	365.9	183.0	122.0	91.5	73.2	61.0	52.3	45.7	40.7	36.6
20	400.8	200.4	133.6	100.2	80.2	66.8	57.3	50.1	44.5	40.1
21	448.7	224.3	149.6	112.2	89.7	74.8	64.1	56.1	49.9	44.9
22	500.9	250.5	167.0	125.2	100.2	83.5	71.6	62.6	55.7	50.1
23	548.9	274.4	183.0	137.2	109.8	91.5	78.4	68.6	61.0	54.9
24	601.1	300.6	200.4	150.3	120.2	100.2	85.9	75.1	66.8	60.1
25	649.0	324.5	216.3	162.3	129.8	108.2	92.7	81.1	72.1	64.9
26	714.4	357.2	238.1	178.6	142.9	119.1	102.1	89.3	79.4	71.4
27	779.7	389.9	259.9	194.9	155.9	130.0	111.4	97.5	86.6	78.0
28	845.1	422.5	281.7	211.3	169.0	140.8	120.7	105.6	93.9	84.5
29	906.0	453.0	302.0	226.5	181.2	151.0	129.4	113.3	100.7	90.6
30	971.4	485.7	323.8	242.8	194.3	161.9	138.8	121.4	107.9	97.1
31	1058.5	529.3	352.8	264.6	211.7	176.4	151.2	132.3	117.6	105.9
32	1141.3	570.6	380.4	285.3	228.3	190.2	163.0	142.7	126.8	114.1
33	1224.0	612.0	408.0	306.0	244.8	204.0	174.9	153.0	136.0	122.4
34	1311.2	655.6	437.1	327.8	262.2	218.5	187.3	163.9	145.7	131.1
35	1393.9	697.0	464.6	348.5	278.8	232.3	199.1	174.2	154.9	139.4

Flowers and Grass
Pickseed West

Cam Gauge Settings	Rate in Pounds Per 1,000 Square Feet									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
20	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
21	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
22	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
23	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
24	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
25	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
26	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
27	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
28	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
29	0.7	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
30	0.7	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
31	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
32	0.9	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
33	1.0	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
34	1.0	0.5	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1
35	1.1	0.6	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
36	1.2	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1
37	1.3	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1
38	1.4	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1
39	1.5	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2
40	1.6	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2
41	1.8	0.9	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2
42	2.1	1.0	0.7	0.5	0.4	0.3	0.3	0.3	0.2	0.2
43	2.3	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.2
44	2.5	1.2	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.2
45	2.7	1.4	0.9	0.7	0.5	0.5	0.4	0.3	0.3	0.3
46	3.0	1.5	1.0	0.7	0.6	0.5	0.4	0.4	0.3	0.3
47	3.3	1.6	1.1	0.8	0.7	0.5	0.5	0.4	0.4	0.3
48	3.6	1.8	1.2	0.9	0.7	0.6	0.5	0.4	0.4	0.4
49	3.9	1.9	1.3	1.0	0.8	0.6	0.6	0.5	0.4	0.4
50	4.1	2.1	1.4	1.0	0.8	0.7	0.6	0.5	0.5	0.4
51	4.6	2.3	1.5	1.1	0.9	0.5	0.7	0.6	0.5	0.5
52	5.0	2.5	1.7	1.3	1.0	0.5	0.7	0.6	0.6	0.5
53	5.5	2.7	1.8	1.4	1.1	0.9	0.5	0.7	0.6	0.5
54	5.9	3.0	2.0	1.5	1.2	1.0	0.8	0.7	0.7	0.6
55	6.4	3.2	2.1	1.6	1.3	1.1	0.9	0.8	0.7	0.6
56	6.7	3.4	2.2	1.7	1.3	1.1	1.0	0.8	0.7	0.7
57	7.1	3.5	2.4	1.8	1.4	1.2	1.0	0.9	0.8	0.7
58	7.5	3.7	2.5	1.9	1.5	1.2	1.1	0.9	0.8	0.7
59	7.8	3.9	2.6	2.0	1.6	1.3	1.1	1.0	0.9	0.8
60	8.2	4.1	2.7	2.1	1.6	1.4	1.2	1.0	0.9	0.8
61	8.6	4.3	2.9	2.2	1.7	1.4	1.2	1.1	1.0	0.9
62	9.1	4.5	3.0	2.3	1.8	1.5	1.3	1.1	1.0	0.9
63	9.5	4.8	3.2	2.4	1.9	1.6	1.4	1.2	1.1	1.0
64	10.0	5.0	3.3	2.5	2.0	1.7	1.4	1.2	1.1	1.0
65	10.4	5.2	3.5	2.6	2.1	1.7	1.5	1.3	1.2	1.0
66	10.8	5.4	3.6	2.7	2.2	1.8	1.5	1.4	1.2	1.1
67	11.3	5.6	3.8	2.8	2.3	1.9	1.6	1.4	1.3	1.1
68	11.7	5.8	3.9	2.9	2.3	1.9	1.7	1.5	1.3	1.2
69	12.1	6.1	4.0	3.0	2.4	2.0	1.7	1.5	1.3	1.2
70	12.6	6.3	4.2	3.1	2.5	2.1	1.8	1.6	1.4	1.3
71	12.9	6.4	4.3	3.2	2.6	2.1	1.8	1.6	1.4	1.3
72	13.2	6.6	4.4	3.3	2.6	2.2	1.9	1.6	1.5	1.3
73	13.5	6.7	4.5	3.4	2.7	2.2	1.9	1.7	1.5	1.3
74	13.8	6.9	4.6	3.5	2.8	2.3	2.0	1.7	1.5	1.4
75	14.1	7.1	4.7	3.5	2.8	2.4	2.0	1.8	1.6	1.4
76	14.2	7.1	4.7	3.6	2.8	2.4	2.0	1.8	1.6	1.4
77	14.3	7.2	4.8	3.6	2.9	2.4	2.0	1.8	1.6	1.4
78	14.4	7.2	4.8	3.6	2.9	2.4	2.1	1.8	1.6	1.4
79	14.5	7.3	4.8	3.6	2.9	2.4	2.1	1.8	1.6	1.5
80	14.6	7.3	4.9	3.7	2.9	2.4	2.1	1.8	1.6	1.5

Flowers and Grass
Pickseed West

Cam Gauge Settings	Rate in Pounds Per Acre									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
20	13.1	6.5	4.4	3.3	2.6	2.2	1.9	1.6	1.5	1.3
21	13.1	6.5	4.4	3.3	2.6	2.2	1.9	1.6	1.5	1.3
22	13.1	6.5	4.4	3.3	2.6	2.2	1.9	1.6	1.5	1.3
23	17.4	8.7	5.8	4.4	3.5	2.9	2.5	2.2	1.9	1.7
24	17.4	8.7	5.8	4.4	3.5	2.9	2.5	2.2	1.9	1.7
25	17.4	8.7	5.8	4.4	3.5	2.9	2.5	2.2	1.9	1.7
26	21.8	10.9	7.3	5.4	4.4	3.6	3.1	2.7	2.4	2.2
27	26.1	13.1	8.7	6.5	5.2	4.4	3.7	3.3	2.9	2.6
28	26.1	13.1	8.7	6.5	5.2	4.4	3.7	3.3	2.9	2.6
29	30.5	15.2	10.2	7.6	6.1	5.1	4.4	3.8	3.4	3.0
30	30.5	15.2	10.2	7.6	6.1	5.1	4.4	3.8	3.4	3.0
31	34.8	17.4	11.6	8.7	7.0	5.8	5.0	4.4	3.9	3.5
32	39.2	19.6	13.1	9.8	7.8	6.5	5.6	4.9	4.4	3.9
33	43.6	21.8	14.5	10.9	8.7	7.3	6.2	5.4	4.8	4.4
34	43.6	21.8	14.5	10.9	8.7	7.3	6.2	5.4	4.8	4.4
35	47.9	24.0	16.0	12.0	9.6	8.0	6.8	6.0	5.3	4.8
36	52.3	26.1	17.4	13.1	10.5	8.7	7.5	6.5	5.8	5.2
37	56.6	28.3	18.9	14.2	11.3	9.4	8.1	7.1	6.3	5.7
38	61.0	30.5	20.3	15.2	12.2	10.2	8.7	7.6	6.8	6.1
39	65.3	32.7	21.8	16.3	13.1	10.9	9.3	8.2	7.3	6.5
40	69.7	34.8	23.2	17.4	13.9	11.6	10.0	8.7	7.7	7.0
41	78.4	39.2	26.1	19.6	15.7	13.1	11.2	9.8	8.7	7.8
42	91.5	45.7	30.5	22.9	18.3	15.2	13.1	11.4	10.2	9.1
43	100.2	50.1	33.4	25.0	20.0	16.7	14.3	12.5	11.1	10.0
44	108.9	54.5	36.3	27.2	21.8	18.2	15.6	13.6	12.1	10.9
45	117.6	58.8	39.2	29.4	23.5	19.6	16.8	14.7	13.1	11.8
46	130.7	65.3	43.6	32.7	26.1	21.8	18.7	16.3	14.5	13.1
47	143.7	71.9	47.9	35.9	28.7	24.0	20.5	18.0	16.0	14.4
48	156.8	78.4	52.3	39.2	31.4	26.1	22.4	19.6	17.4	15.7
49	169.9	84.9	56.6	42.5	34.0	28.3	24.3	21.2	18.9	17.0
50	178.6	89.3	59.5	44.6	35.7	29.8	25.5	22.3	19.8	17.9
51	200.4	100.2	66.8	50.1	40.1	33.4	28.6	25.0	22.3	20.0
52	217.8	108.9	72.6	54.5	43.6	36.3	31.1	27.2	24.2	21.8
53	239.6	119.8	79.9	59.9	47.9	39.9	34.2	29.9	26.6	24.0
54	257.0	128.5	85.7	64.3	51.4	42.8	36.7	32.1	28.6	25.7
55	278.8	139.4	92.9	69.7	55.8	46.5	39.8	34.8	31.0	27.9
56	291.9	145.9	97.3	73.0	58.4	48.6	41.7	36.5	32.4	29.2
57	309.3	154.6	103.1	77.3	61.9	51.5	44.2	38.7	34.4	30.9
58	326.7	163.4	108.9	81.7	65.3	54.5	46.7	40.8	36.3	32.7
59	339.8	169.9	113.3	84.9	68.0	56.6	48.5	42.5	37.8	34.0
60	357.2	178.6	119.1	89.3	71.4	59.5	51.0	44.6	39.7	35.7
61	374.6	187.3	124.9	93.7	74.9	62.4	53.5	46.8	41.6	37.5
62	396.4	198.2	132.1	99.1	79.3	66.1	56.6	49.5	44.0	39.6
63	413.8	206.9	137.9	103.5	82.8	69.0	59.1	51.7	46.0	41.4
64	435.6	217.8	145.2	108.9	87.1	72.6	62.2	54.5	48.4	43.6
65	453.0	226.5	151.0	113.3	90.6	75.5	64.7	56.6	50.3	45.3
66	470.4	235.2	156.8	117.6	94.1	78.4	67.2	58.8	52.3	47.0
67	492.2	246.1	164.1	123.1	98.4	82.0	70.3	61.5	54.7	49.2
68	509.7	254.8	169.9	127.4	101.9	84.9	72.8	63.7	56.6	51.0
69	527.1	263.5	175.7	131.8	105.4	87.8	75.3	65.9	58.6	52.7
70	548.9	274.4	183.0	137.2	109.8	91.5	78.4	68.6	61.0	54.9
71	561.9	281.0	187.3	140.5	112.4	93.7	80.3	70.2	62.4	56.2
72	575.0	287.5	191.7	143.7	115.0	95.8	82.1	71.9	63.9	57.5
73	588.1	294.0	196.0	147.0	117.6	98.0	84.0	73.5	65.3	58.8
74	601.1	300.6	200.4	150.3	120.2	100.2	85.9	75.1	66.8	60.1
75	614.2	307.1	204.7	153.5	122.8	102.4	87.7	76.8	68.2	61.4
76	618.6	309.3	206.2	154.6	123.7	103.1	88.4	77.3	68.7	61.9
77	622.9	311.5	207.6	155.7	124.6	103.8	89.0	77.9	69.2	62.3
78	627.3	313.6	209.1	156.8	125.5	104.5	89.6	78.4	69.7	62.7
79	631.6	315.8	210.5	157.9	126.3	105.3	90.2	79.0	70.2	63.2
80	636.0	318.0	212.0	159.0	127.2	106.0	90.9	79.5	70.7	63.6

Perennial Rye Grass
Medalist Gold #1

Cam Gauge Settings	Rate in Pounds Per 1,000 Square Feet									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
40	2.6	1.4	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3
41	3.2	1.6	1.1	0.8	0.6	0.5	0.5	0.4	0.4	0.3
42	3.6	1.8	1.2	0.9	0.7	0.6	0.5	0.5	0.4	0.4
43	4.0	2.0	1.3	1.0	0.8	0.7	0.6	0.5	0.4	0.4
44	4.4	2.2	1.5	1.1	0.9	0.7	0.6	0.6	0.5	0.4
45	4.8	2.4	1.6	1.2	1.0	0.8	0.7	0.6	0.5	0.5
46	5.4	2.7	1.8	1.3	1.1	0.9	0.8	0.7	0.6	0.5
47	6.0	3.0	2.0	1.5	1.2	1.0	0.9	0.7	0.7	0.6
48	6.5	3.3	2.2	1.6	1.3	1.1	0.9	0.8	0.7	0.7
49	7.1	3.6	2.4	1.8	1.4	1.2	1.0	0.9	0.8	0.7
50	7.7	3.8	2.6	1.9	1.5	1.3	1.1	1.0	0.9	0.8
51	8.3	4.1	2.8	2.1	1.7	1.4	1.2	1.0	0.9	0.8
52	8.8	4.4	2.9	2.2	1.8	1.5	1.3	1.1	1.0	0.9
53	9.4	4.7	3.1	2.3	1.9	1.6	1.3	1.2	1.0	0.9
54	9.9	5.0	3.3	2.5	2.0	1.7	1.4	1.2	1.1	1.0
55	10.5	5.3	3.5	2.6	2.1	1.8	1.5	1.3	1.2	1.1
56	11.1	5.6	3.7	2.8	2.2	1.9	1.6	1.4	1.2	1.1
57	11.8	5.9	3.9	2.9	2.4	2.0	1.7	1.5	1.3	1.2
58	12.4	6.2	4.1	3.1	2.5	2.1	1.8	1.6	1.4	1.2
59	13.0	6.5	4.3	3.3	2.6	2.2	1.9	1.6	1.4	1.3
60	13.7	6.8	4.6	3.4	2.7	2.3	2.0	1.7	1.5	1.4
61	14.3	7.2	4.8	3.6	2.9	2.4	2.0	1.8	1.6	1.4
62	15.0	7.5	5.0	3.7	3.0	2.5	2.1	1.9	1.7	1.5
63	15.6	7.8	5.2	3.9	3.1	2.6	2.2	2.0	1.7	1.6
64	16.3	8.1	5.4	4.1	3.3	2.7	2.3	2.0	1.8	1.6
65	16.9	8.5	5.6	4.2	3.4	2.8	2.4	2.1	1.9	1.7
66	17.8	8.9	5.9	4.4	3.6	3.0	2.5	2.2	2.0	1.8
67	18.6	9.3	6.2	4.7	3.7	3.1	2.7	2.3	2.1	1.9
68	19.4	9.7	6.5	4.9	3.9	3.2	2.8	2.4	2.2	1.9
69	20.3	10.1	6.8	5.1	4.1	3.4	2.9	2.5	2.3	2.0
70	21.1	10.6	7.0	5.3	4.2	3.5	3.0	2.6	2.3	2.1
71	21.8	10.9	7.3	5.5	4.4	3.6	3.1	2.7	2.4	2.2
72	22.6	11.3	7.5	5.6	4.5	3.8	3.2	2.8	2.5	2.3
73	23.3	11.6	7.8	5.8	4.7	3.9	3.3	2.9	2.6	2.3
74	24.0	12.0	8.0	6.0	4.8	4.0	3.4	3.0	2.7	2.4
75	24.7	12.4	8.2	6.2	4.9	4.1	3.5	3.1	2.7	2.5
76	24.8	12.4	8.3	6.2	5.0	4.1	3.5	3.1	2.8	2.5
77	24.9	12.4	8.3	6.2	5.0	4.1	3.6	3.1	2.8	2.5
78	24.9	12.5	8.3	6.2	5.0	4.2	3.6	3.1	2.8	2.5
79	25.0	12.5	8.3	6.2	5.0	4.2	3.6	3.1	2.8	2.5
80	25.1	12.5	8.4	6.3	5.0	4.2	3.6	3.1	2.8	2.5

Perennial Rye Grass
Medalist Gold #1

Cam Gauge Settings	Rate in Pounds Per Acre									
	@ 1.0 Mph	@ 2.0 Mph	@ 3.0 Mph	@ 4.0 Mph	@ 5.0 Mph	@ 6.0 Mph	@ 7.0 Mph	@ 8.0 Mph	@ 9.0 Mph	@ 10.0 Mph
40	122.0	61.0	40.7	30.5	24.4	20.3	17.4	15.2	13.6	12.2
41	139.4	69.7	46.5	34.8	27.9	23.2	19.9	17.4	15.5	13.9
42	156.8	78.4	52.3	39.2	31.4	26.1	22.4	19.6	17.4	15.7
43	174.2	87.1	58.1	43.6	34.8	29.0	24.9	21.8	19.4	17.4
44	191.7	95.8	63.9	47.9	38.3	31.9	27.4	24.0	21.3	19.2
45	209.1	104.5	69.7	52.3	41.8	34.8	29.9	26.1	23.2	20.9
46	235.2	117.6	78.4	58.8	47.0	39.2	33.6	29.4	26.1	23.5
47	261.4	130.7	87.1	65.3	52.3	43.6	37.3	32.7	29.0	26.1
48	283.1	141.6	94.4	70.8	56.6	47.2	40.4	35.4	31.5	28.3
49	309.3	154.6	103.1	77.3	61.9	51.5	44.2	38.7	34.4	30.9
50	335.4	167.7	111.8	83.9	67.1	55.9	47.9	41.9	37.3	33.5
51	361.5	180.8	120.5	90.4	72.3	60.3	51.6	45.2	40.2	36.2
52	383.3	191.7	127.8	95.8	76.7	63.9	54.8	47.9	42.6	38.3
53	409.5	204.7	136.5	102.4	81.9	68.2	58.5	51.2	45.5	40.9
54	431.2	215.6	143.7	107.8	86.2	71.9	61.6	53.9	47.9	43.1
55	457.4	228.7	152.5	114.3	91.5	76.2	65.3	57.2	50.8	45.7
56	483.5	241.8	161.2	120.9	96.7	80.6	69.1	60.4	53.7	48.4
57	514.0	257.0	171.3	128.5	102.8	85.7	73.4	64.3	57.1	51.4
58	540.1	270.1	180.0	135.0	108.0	90.0	77.2	67.5	60.0	54.0
59	566.3	283.1	188.8	141.6	113.3	94.4	80.9	70.8	62.9	56.6
60	596.8	298.4	198.9	149.2	119.4	99.5	85.3	74.6	66.3	59.7
61	622.9	311.5	207.6	155.7	124.6	103.8	89.0	77.9	69.2	62.3
62	653.4	326.7	217.8	163.4	130.7	108.9	93.3	81.7	72.6	65.3
63	679.5	339.8	226.5	169.9	135.9	113.3	97.1	84.9	75.5	68.0
64	710.0	355.0	236.7	177.5	142.0	118.3	101.4	88.8	78.9	71.0
65	736.2	368.1	245.4	184.0	147.2	122.7	105.2	92.0	81.8	73.6
66	775.4	387.7	258.5	193.8	155.1	129.2	110.8	96.9	86.2	77.5
67	810.2	405.1	270.1	202.6	162.0	135.0	115.7	101.3	90.0	81.0
68	845.1	422.5	281.7	211.3	169.0	140.8	120.7	105.6	93.9	84.5
69	884.3	442.1	294.8	221.1	176.9	147.4	126.3	110.5	98.3	88.4
70	919.1	459.6	306.4	229.8	183.8	153.2	131.3	114.9	102.1	91.9
71	949.6	474.8	316.5	237.4	189.9	158.3	135.7	118.7	105.5	95.0
72	984.5	492.2	328.2	246.1	196.9	164.1	140.6	123.1	109.4	98.4
73	1014.9	507.5	338.3	253.7	203.0	169.2	145.0	126.9	112.8	101.5
74	1045.4	522.7	348.5	261.4	209.1	174.2	149.3	130.7	116.2	104.5
75	1075.9	538.0	358.6	269.0	215.2	179.3	153.7	134.5	119.5	107.6
76	1080.3	540.1	360.1	270.1	216.1	180.0	154.3	135.0	120.0	108.0
77	1084.6	542.3	361.5	271.2	216.9	180.8	154.9	135.6	120.5	108.5
78	1084.6	542.3	361.5	271.2	216.9	180.8	154.9	135.6	120.5	108.5
79	1089.0	544.5	363.0	272.3	217.8	181.5	155.6	136.1	121.0	108.9
80	1093.4	546.7	364.5	273.3	218.7	182.2	156.2	136.7	121.5	109.3

⚠ WARNING

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

⚠ Attention

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

Cleaning and General Maintenance

For best results, clean the 405VP seeder to remove accumulated product and dust after the job is finished. Do not allow product to sit in the seeder's hopper, as compaction may occur. Dirt accumulations or poor maintenance may affect the performance of the seeder. Example: a partially blocked hopper opening and/or spout tube will not dispense product properly.

1. Close the shut off lever.
2. Place a container under the left hopper end to catch any product remaining in the hopper.
3. Loosen the bearing retainer wing nut and turn the bearing retainer out of the way. Using a rotating motion, slowly pull the bearing and rotor bar out of the hopper, allowing any product to fall into the container.

⚠ CAUTION

Under normal load, the motor will run hot to the touch. Allow motor to cool before performing work on or near the motor.

4. Remove the motor cover and drive chain from the right hopper end.
5. Repeat steps 2 & 3 for the right end bearing and rotor bar.
6. Loosen the center bearing retainer and remove the center bearing from the hopper.
7. Remove the seeder from the AERA-vator frame.
8. Remove the wing nuts and clips holding the spout/drop tube assembly to the bottom of the hopper.
9. Wipe clean the inner surfaces of the hopper, the hopper bottom and slide plates, and the spout/drop tube plate.
10. Reinstall the spout/drop tube assembly to the bottom of the hopper and fasten with the clips and wing nuts.
11. Reinstall the center bearing and tighten the bearing retainer.
12. Reinstall the seeder onto the AERA-vator frame, unless preparing to store the seeder. Torque the 2) nuts and bolts that fasten the end mounting brackets to the AERA-vator to 31 ft-lbs (42 Nm).
13. Using a rotating motion, reinsert the left and right rotor bars and end bearings into the hopper. Rotate the bearing retainers into place and tighten the wing nuts.
14. Reinstall the drive chain and the motor cover.

Lubrication

Proper lubrication will lengthen machine life. Regularly check all lubrication points for required maintenance.

Place a few drops of oil between the rotor ends and the rotor bearings (4 places) once a day. The bearings are oil impregnated and will replenish themselves to their absorption capacity. Do not over oil.

⚠ CAUTION

Under normal load, the motor will run hot to the touch. Allow motor to cool before performing work on or near the motor.

After every 20 hours of use, lightly oil the drive chain and check for proper chain tension. The chain should flex only by its own width.

Storage

Preparing the 405VP Seeder for Storage

1. Remove the seeder from the AERA-vator.
2. Clean the seeder, following the instructions in the Cleaning and General Maintenance section.
3. Inspect for loose or missing hardware, damaged components, or signs of wear. Repair or replace any damaged or worn components.
4. Lubricate the bearings and drive chain and wipe off all excess oil.
5. Store seeder indoors out of the weather.

Removing the 405VP Seeder from Storage

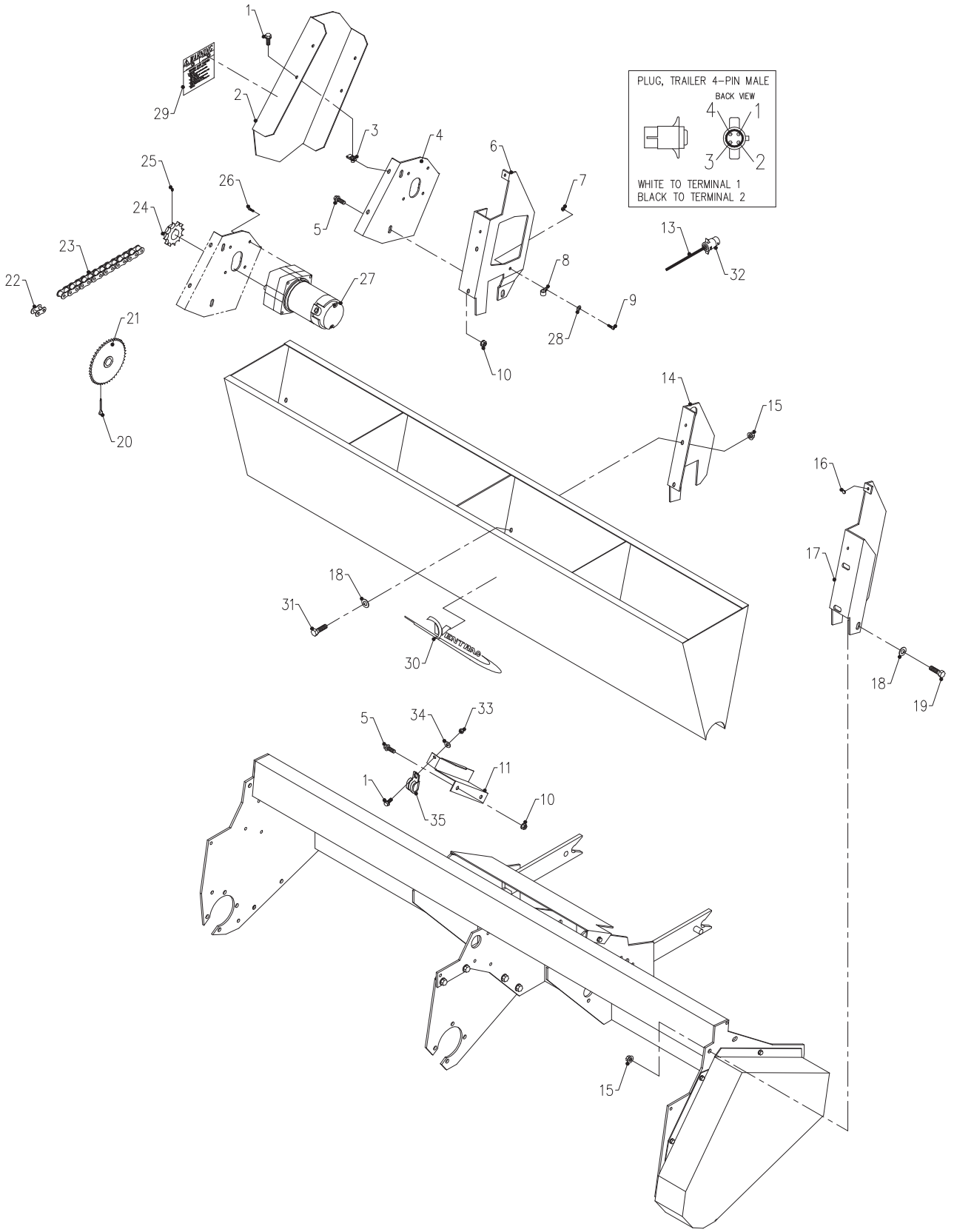
Inspect, clean, and prepare the seeder for use.

SPECIFICATIONS

Dimensions

Overall Height	20 inches (50.8 cm)
Overall Length	66 inches (167.6 cm)
Overall Width	16 inches (40.6 cm)
Weight	102 pounds (46.3 kg)
RPM	.15 (rotor); 30 (motor)
Capacity	2.5 ft^3 (.07 m^3)

ILLUSTRATED DRAWING
Seeder Mount & Motor



Use only original Ventrac replacement parts.

PARTS

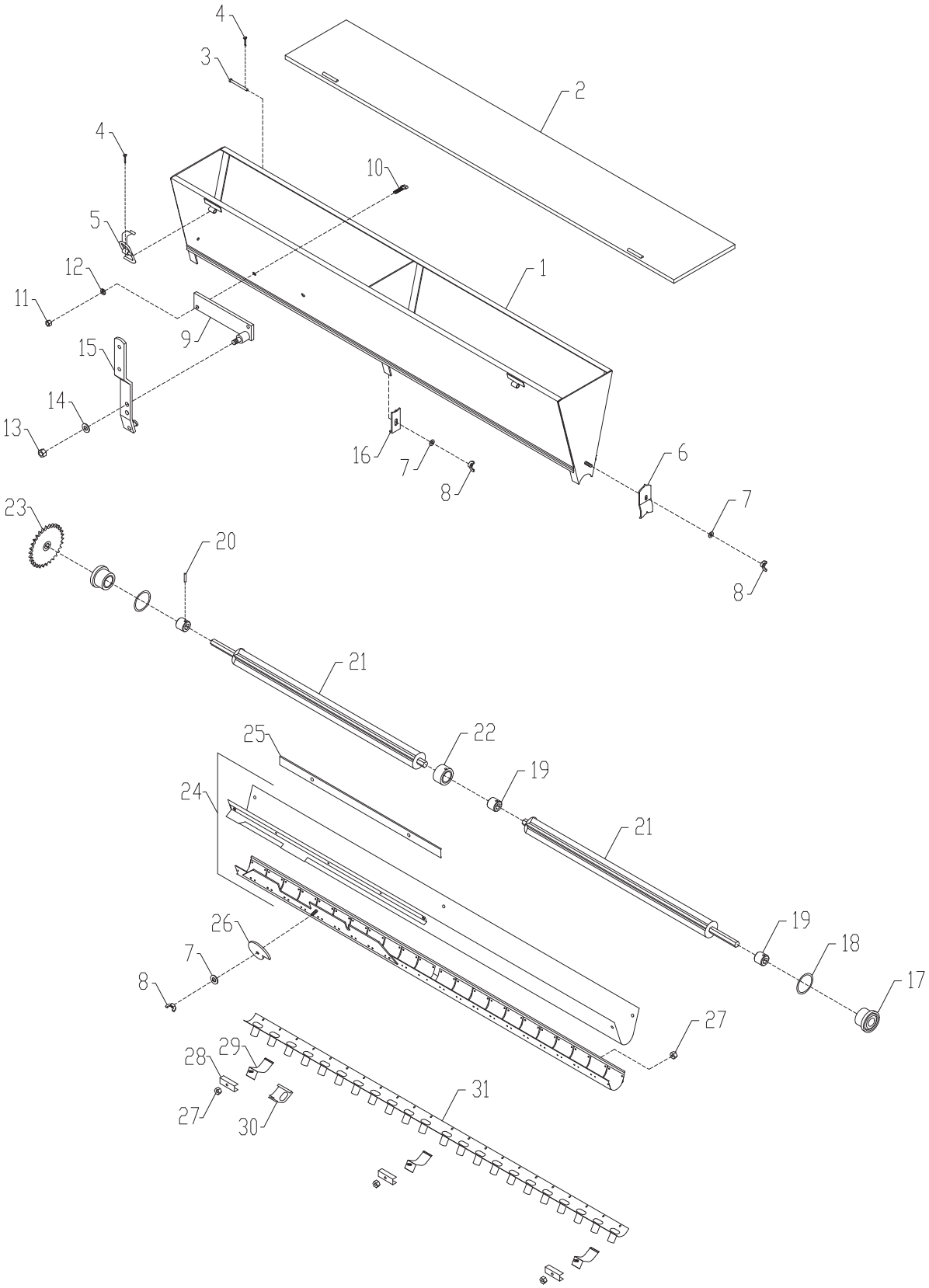
Seeder Mount & Motor

REF.	PART NO.	DESCRIPTION	QTY.
1	99.SF0405-1	BOLT, SF 1/4-20 X 5/8 W/RUBBER	5
2	60.0856	COVER, DRIVE SEEDER	1
3	99.E0046	NUT, “U” 1/4-20 EXTRUDED	4
4	62.0961	MOUNT, SEEDER MOTOR	1
5	99.SF0506	BOLT, SF 5/16-18 USS X 3/4	4
6	62.0960	MOUNT, RIGHT SIDE SEEDER	1
7	99.E0035	NUT, SF #10-32	1
8	30.0140	CLAMP, WIRE MT 3/8 NYLON BLK	1
9	99.K0071	MACHINE SCREW, 10-32 X 5/8	1
10	99.SF05	NUT, SF 5/16-18 USS	4
11	64.1057	BRACKET, WIRE CHANNEL	1
13	32.0075	HARNESS, WIRE SEEDER OPT	1
14	62.0959	MOUNT, CENTER SEEDER	1
15	99.SF06	NUT, SF 3/8-16 USS	8
16	05.0097	BUMPER, 1/4ID, 9/16OD, 3/16THK	2
17	62.0958	MOUNT, LEFT SIDE SEEDER	1
18	95.06	WASHER, FLAT 3/8 SAE	8
19	90.0608	BOLT, 3/8-16 USS X 1	2
20	02.CP0612	COTTER PIN, 3/16 X 1 1/2	1
21	07.16118	SPROCKET, 30-TOOTH 5/8 HEX HUB	1
22	81.0144	LINK, CONNECTOR #41	1
23	81.0143	CHAIN, ROLLER #41 X 28-7/8”	1
24	83.411508	SPROCKET, #41 15-T 1/2” BORE	1
25	85.SS20	SET SCREW, 10-24 X 3/16	2
26	99.K0073	BOLT, SHCS 10-32 X 1/2 ZP	4
27	87.0207	GEARMOTOR, 1/17 HP 30 RPM	1
28	99.B0051	WASHER, FLAT #10	1
29	00.0101	DECAL, HAZARD-MOVING PART	1
30	00.0189	DECAL, VENTRAC ORBITAL	1
31	90.0606	BOLT, 3/8-16 USS X 3/4	6
32	30.0218	PLUG, TRAILER 4-PIN MALE	1
33	99.A04N	LOCKNUT, NYLON 1/4-20	1
34	95.04	WASHER, FLAT 1/4 SAE	1
35	11.0058	CLAMP, CUSHIONED 3/8 ROUND	1

Use only original Ventrac replacement parts.

ILLUSTRATED DRAWING

Seeder



Use only original Ventrac replacement parts.

PARTS

Seeder

REF.	PART NO.	DESCRIPTION	QTY.
1	07.16111	HOPPER, 5-FT., PAINTED BLACK	1
2	07.16112	COVER, 5-FT., PAINTED BLACK	1
3	03.0421	CLEVIS PIN, 1/4 X 2-5/8	2
4	02.CP0306	COTTER PIN, 3/32 X 3/4	4
5	07.16104	LOCK, COVER	2
6	07.16103	RETAINER, BEARING	2
7	95.05	WASHER, FLAT 5/16 SAE	4
8	99.E0003	NUT, WING 5/16 USS 18	4
9	07.16115	BRKT, MOUNTING SHUT-OFF LEVER	1
10	90.0608	BOLT, 3/8-16 USS X 1	2
11	92.06	NUT, 3/8-16 USS	2
12	96.06	WASHER, LOCK 3/8	2
13	99.A08	LOCKNUT, STOVER 1/2-13 USS	1
14	95.08	WASHER, FLAT 1/2 SAE	1
15	07.16109	LEVER, SHUT-OFF, PAINTED BLACK	1
16	07.16105	RETAINER, BEARING - CENTER	1
17	07.16106	BEARING, END	2
18	07.16120	GASKET	2
19	07.16108	JOURNAL, 5/8” HEX	3
20	02.RP0608	ROLL PIN, 3/16 X 1”.	3
21	07.16110	ROTOR BAR, 5-FT., NEOPRENE	2
22	07.16107	BEARING, CENTER.	1
23	07.16118	SPROCKET, 30-TOOTH 5/8 HEX HUB	1
24	07.16113	BOTTOM & SLIDES, 5’ 22 OPENING	1
25	07.16101	HANGER, REAR	2
26	07.16102	CAM GAUGE	1
27	99.E0098	NUT, SRF # 10-24	7
28	07.16119	CLAMP	3
29	07.16117	HOLDER, CLIP AND PLATE	3
30	07.16116	CLIP, POSITION	1
31	07.16114	PLATE, SPOUT MOUNTING	

Use only original Ventrac replacement parts.

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 power units & attachments (excluding the HG100/HG150 generator) for **residential use only** is limited to **three (3) years** from original purchase date. Ventrac power units & 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 power units & 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 product; (g) repair or replacement necessitated by the use of parts, accessories or supplies, including gasoline, oil or lubricants, incompatible with the turf

LIMITED WARRANTY - VENTRAC TURF EQUIPMENT

equipment or other than as recommended in the operator's manual or other operational instructions provided by V.P.I.; (h) repairs or replacements resulting from parts or accessories which have adversely affected the operation, performance or durability of the turf equipment; or (i) damage or defects due to or arising out of repair of Ventrac turf equipment by person or persons other than an authorized Ventrac service dealer or the installation of parts other than genuine Ventrac parts or Ventrac recommended parts.

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

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

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

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

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

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

This warranty applies to all Ventrac turf equipment sold in the United States and Canada.