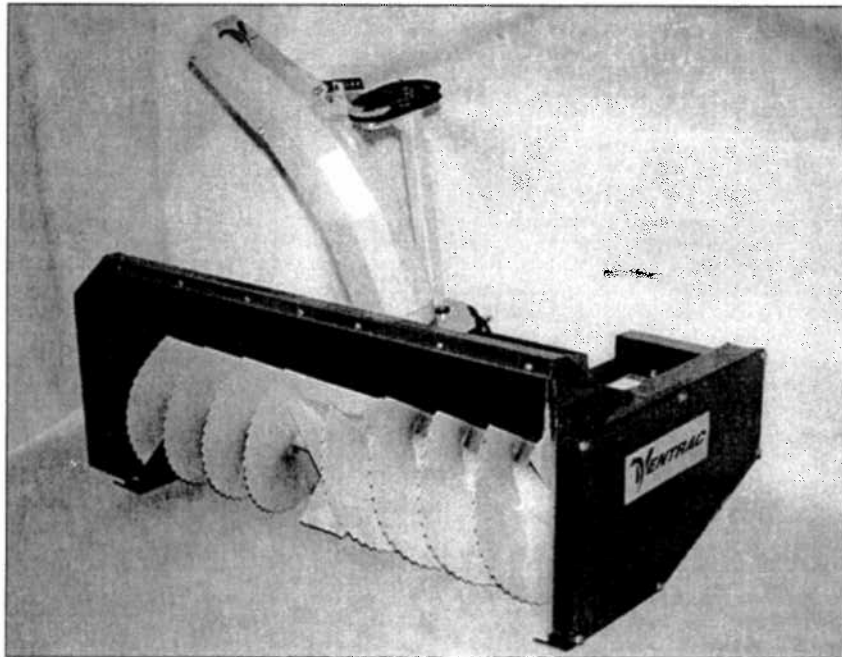




**OWNER/OPERATOR'S
MANUAL & PARTS
LIST**

SNOWBLOWER

Model HS520



ORRVILLE, OHIO

11/99

09.OM-HS99



12657 Church Road
P.O. Box 148
Orrville, OH 44667
Email: venture@venturepro.com
Web: <http://www.venturepro.com>
Tel. 330-683-0075
Fax. 330-683-0000

TO THE OWNER

Congratulations on the purchase of a new VENTRAC HS520 Snowblower! The purpose of this manual is to assist you in its safe and effective operation and maintenance.

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

Please fill in the following information for future reference:

Date of Purchase: Month _____ Day _____ Year _____

Serial Number: _____

Dealer: _____

Dealer Address: _____

Dealer Phone Number: _____

Dealer FAX Number: _____

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

TABLE OF CONTENTS

INTRODUCTION	Section A
Description & Specifications	A-1
SAFETY	Section B
Decals.....	B-1
Safety	B-2
Safety Operation & Techniques	B-3
Rotating Augers	B-4
OPERATION	Section C
Attaching	C-1
Detaching	C-1
MAINTENANCE	Section D
Bearing Lubrication	D-1
Gearbox Lubrication	D-1
Belt Replacement	D-1
Chute Adjustment	D-2
Skid Shoe Adjustment.....	D-2
PARTS & ILLUSTRATED DRAWINGS	Section E
WARRANTY	Section F
Ventrac Warranty	F-1

SECTION A
INTRODUCTION

Product Description

The Ventrac Model HS520 Snowblower is a unique high capacity snowblower that combines the simplicity and economy of a single stage blower with the high performance of a two stage blower.

An aggressive double spiral auger from each side converges separately on each of the four rotor paddles. The saw-tooth auger perimeter, the sure-fed center paddles and the high velocity discharge make a powerful, efficient snow moving attachment for the Ventrac 4000.

Ventrac HS520 Specifications

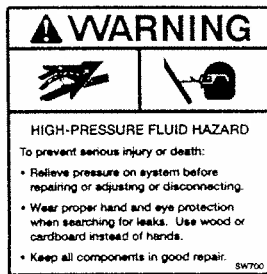
- ◆ **Width**52 inches
- ◆ **Height**42 inches
- ◆ **Length**36 inches
- ◆ **Weight**320 pounds



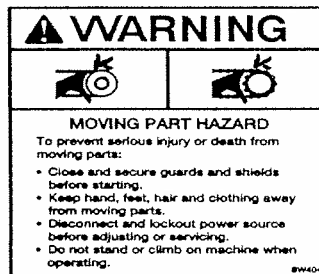
SECTION B SAFETY

Decals

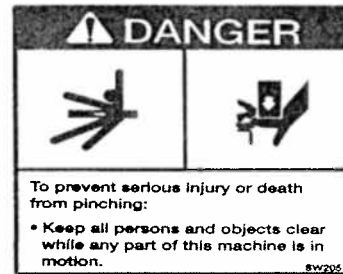
The following decals must be maintained on your Ventrac snowblower. If any decals are faded or missing, contact the factory promptly for replacements.



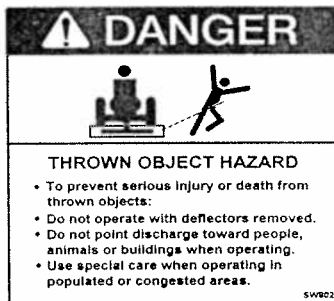
A



B



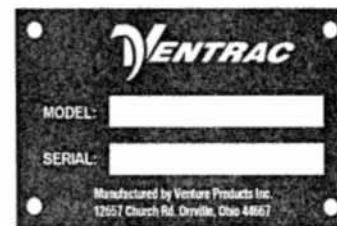
C



D

















E



F

- A— 1 on left top
- B— 1 on left top
- C— 1 on right top
- D— 1 on chute
- E— 2 one on each end
- F— 1 on inside left panel

Safety

-  Please read and understand this manual before operating the equipment.
-  Always use proper safety precautions. Observe all safety decals.
-  Before adjusting, cleaning, lubricating, or changing parts on the blower, set tractor brake, stop the engine and remove ignition key.
-  All shields and guards must be in place during operation.
-  Be sure attachment is locked securely to tractor (power unit) before operating. Rotate hitch lock on the tractor counter-clockwise over the detent to approximately 9 o'clock position.
-  Be sure bystanders are clear of tractor and blower before operating.
-  Never allow anyone to ride on the blower or tractor. Be especially careful and observant when people are present.
-  Never assume that bystanders will remain where you saw them last.
-  Always look in the direction the tractor is moving.
-  Be alert for any sign of equipment failure. An unusual noise can be a sign or warning of something needing immediate attention.
-  Never direct the discharge chute toward people, animals, buildings, vehicles or objects of value.
-  **Operate the blower in the float position on hard surfaces.** On gravel and/or to increase front tire traction, lift and carry the blower.
-  Do not blow snow that contains stones, sticks or other foreign objects that may be thrown.
-  Use common sense!



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

SECTION B SAFETY

Safety Operation & Techniques



The snowblower is an aggressive power attachment for moving snow, especially snow that may be too deep for a snow plow or that needs to be piled or thrown some distance.



The design and the power used to move snow must be effective to break up snow and to throw it for relocation. This also makes the snowblower a lethal “weapon” when misused. Operators should be extremely careful never to direct the snow blower attachment or its discharge chute toward people or anything of value. Even discharged snow from the machine can be solid enough to cause serious injury. Frozen snow, ice, gravel and other objects can be thrown at deadly speeds.



Operators should know the area being cleared and make preparations ahead of time. Place guide stakes appropriately, remove stones or markers of any sort that will become invisible after a snow fall. Curbs, offsets, steps, manholes, broken pavement, etc. should be noted. Operators are encouraged to map the area(s) to be cleared before the snow fall season to refresh the memory of potential hazards. If an area is to be cleared that is unfamiliar to the operator, travel slowly and use **EXTREME CAUTION**. Inquire of anyone who might know of potential hazards.



The operator should never proceed if visibility is poor. Keep the tractor windshield clear, wait for blinding snow storms and squalls to subside and discharge the snow in the direction of the wind as much as possible.



Extra care should be used when clearing snow from gravel drive and road ways. Adjust the skid shoes to an appropriate setting. The snow blower may be lifted by the tractor hitch to a height that avoids picking up gravel.










Never attempt to clean out the snow blower or work on, fix or maintain any part with the tractor running. **ALWAYS stop the engine and remove the key!**





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


Rotating Augers Are Dangerous

-  **DO NOT** let children or any untrained person operate tractor/blower.
-  Shut off PTO when you are not blowing snow.
-  Use extra care when you come to shrubs, trees, or other objects that may block your vision.
-  Cooperate with the direction of wind as much as possible. Discharging snow against the wind reduces the throw distance and generally reduces visibility by creating a “snow storm” effect.
-  **DO NOT** operate tractor if you are under the influence of alcohol, drugs or not feeling well.
-  Always stop the blower and engage the park brake before dismounting to adjust the end deflector or the discharge chute. Shut off the tractor engine before attempting to clean or unplug the blower.

 Many different circumstances and situations can occur for which the operator must determine a safe way to operate the tractor and snow blower. Always follow safety procedures and always use common sense.

 Approach every task with an underlying consideration for your safety as well as for the safety of anyone who happens to be near your work area. Make sure that all operators of this equipment are thoroughly trained in using it safely.

 Never direct the discharge chute toward people or anything that could be damaged by a thrown object!

 Always “play it safe!” Snow removal can be very important, even urgent, but one careless move can be far more serious!

SECTION C OPERATION

Operating Instructions

◆ Attaching:

The parked snow blower will have its hitch arms positioned for reattachment.

1. Disengage both traction boosters. It is possible to attach and detach attachments without disengaging the traction boosters; however, alignment and tension release is more difficult with traction transfer engaged. Turn control levers to "off." Raise hitch to its full height to release the booster spring latch and then lower to desired level.
2. Drive the tractor slowly forward to align the hitch lift arms with the mating arms on the blower. It may be necessary to slightly raise or lower the hitch to complete the engagement.
3. Once completely engaged, close the front hitch latch.
4. Stop the tractor engine.
5. Place attachment belt over the outside groove of the PTO drive pulley on the tractor.
6. Couple the discharge chute hoses to the right side quick couplers.
7. Engage the PTO spring tension lever.
8. Engage traction transfer system by turning both control levers to "on." Start engine and lift hitch to its full height. This connects the hitch to the booster springs.
9. Make sure the tractor has enough counterweight installed to keep the rear tires on the ground at all times.
10. **Always direct discharge chute toward open areas.**

◆ Detaching:

Reverse the above process.

SECTION D MAINTENANCE & SERVICE

BEARING LUBRICATION

A bearing on each end of the auger rotor should be greased with 1 to 2 pumps of grease at the beginning and end of the season. Before storing, run the auger for a minute or two to distribute the new grease throughout the bearing.

GEARBOX LUBRICATION

EP 80-90 weight gear lube is recommended. Lubricant level should be checked before the unit is placed in service and periodically thereafter. Fill unit approximately half full. Lubricant should be changed after the first 100 hours or 30 days of operation. Then change at the end of each season to remove moisture and corrosive contaminants.

BELT REPLACEMENT

PTO belt from the VENTRAC 4000 to the snow blower gearbox pulley is a B62. For other applications the belt size is _____. (Determine and note the size for future reference.)

The two (2) auger drive belts are B56.

To replace belts, shields need to be removed. Remove the three (3) top gearbox bolts to replace the PTO belt. Remove the five (5) left side shield bolts to replace and tension the double belt drive. **NOTE:** The flat belt idler goes on the outside of the V-belt. **ALWAYS** reinstall shields before operating the attachment. Shields not only protect you but prevent debris and snow from reducing or preventing the proper function of the snow blower.

A small A20 V-belt rotates the discharge chute. It is tensioned by the chute pivot bolt. Loosen the lower nut and move the pivot bolt in the mounting slot enough to create enough tension to operate the chute in the full 180 degree arc. The belt will slip enough to reposition itself with the 180 degree arc by a full stroke of the cylinder in both directions.

SECTION D MAINTENANCE

CHUTE ADJUSTMENT

1. The discharge deflector can be hand adjusted to five (5) different settings. Release the link by a side pull and move the deflector to the desired angle and re-engage the link.
2. At the base of the discharge chute are four (4) composite rollers. Each is adjustable in a mounting slot. Rollers should be free to turn but otherwise secured firmly to the frame. Discharge chute rollers can be adjusted to reduce misalignment, vibration or looseness.

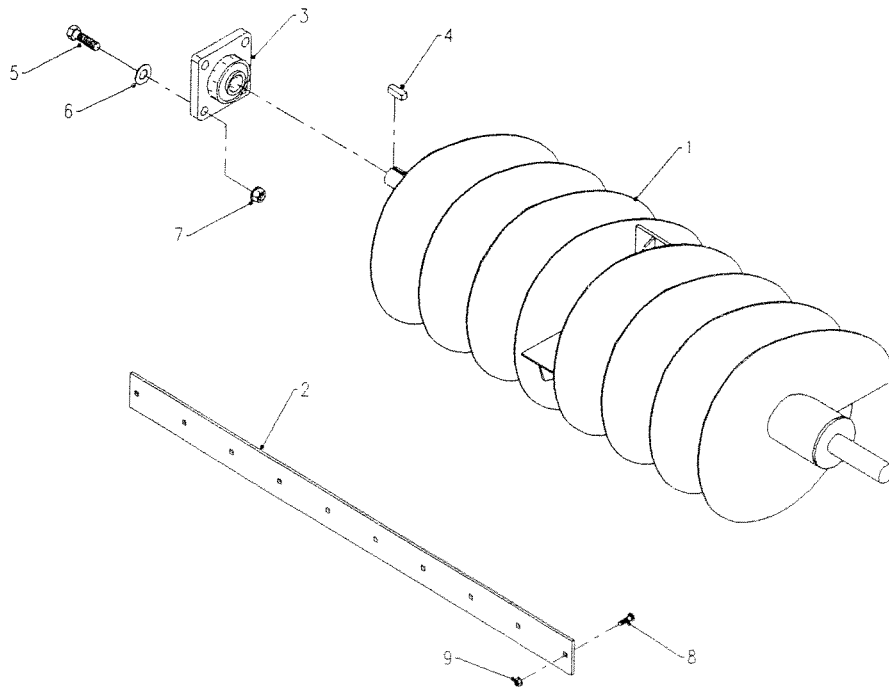
SKID SHOE ADJUSTMENT

Skid shoes are provided to lift the blower especially when clearing snow on gravel drives and roadways. Several mounting positions are available. After adjusting, be sure to secure each of the three (3) skid bolts properly.

SECTION E
PARTS

FIGURE 1
AUGER & CUTTING EDGE

REF.	PART NO.	DESCRIPTION	QTY.
1	80.0304.	Auger	1
2	78.0043.	Cutting Edge	1
3	55.FB22024	1-1/2 Flange Block Bearing	2
4	85.K0610.	3/8 x 1-1/4 Key	1
5	90.0812.	1/2 X 1-1/2 USS Bolt	8
6	95.08	1/2 SAE Washer	8
7	99.SF08	1/2 USS Flange Nut	8
8	97.0606.	3/8 x 3/4 Carriage Bolt	10
9	99.SF06	3/8 USS Flange Nut	10



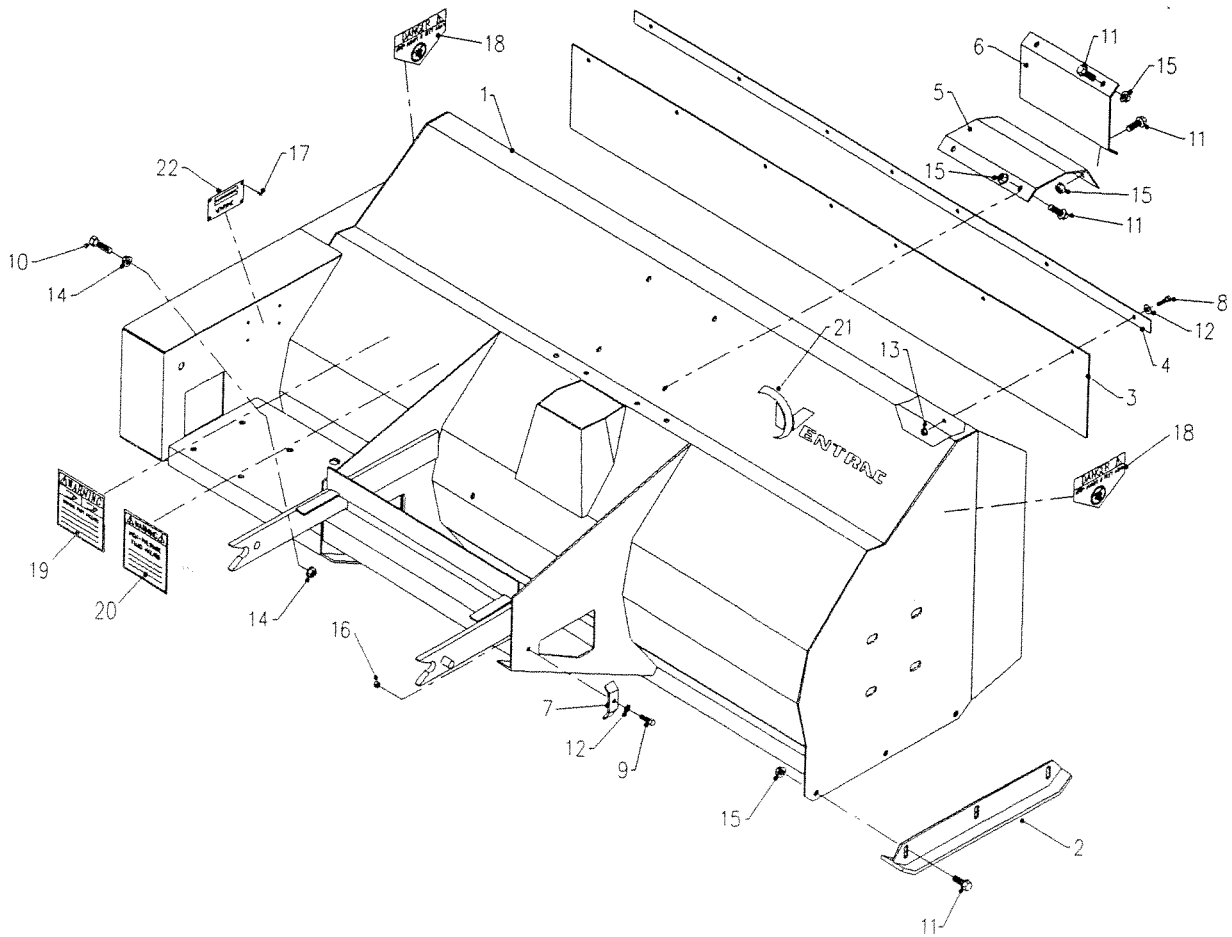
**SECTION E
PARTS**

**FIGURE 2
MAIN FRAME PARTS**

REF.	PART NO.	DESCRIPTION	QTY.
1	62.0842	Main Frame	1
2	62.0846	Skid Shoe	2
3	44.0164	Belting Curtain	1
4	64.0829	Belting Curtain Clamp	1
5	64.0830	Snow Guide Bracket	1
6	64.0831	Snow Guide Bracket Support	1
7	64.0673	Hydraulic Hose Clamp	1
8	90.0406	1/4 x 3/4 USS Bolt	7
9	90.0410	1/4 x 1-1/4 USS Bolt	1
10	90.0516	5/16 x 2 USS Bolt	1
11	99.SF0606	3/8 x 3/4 USS Flange Bolt	12
12	95.04	1/4 SAE Washer	8
13	99.SF04	1/4 USS Flange Nut	7
14	99.SF05	5/16 USS Flange Nut	2
15	99.SF06	3/8 USS Flange Nut	12
16	99.A04	1/4 USS Locknut	1
17	04.0007	1/8 x 1/8 Dome Pop Rivet	4
18	00.0123	Keep Hands and Feet Away Decal	2
19	00.0101	Hazard Moving Part Decal	1
20	00.0103	High-Pressure Fluid Hazard Decal	1
21	00.0127	Ventrac Decal	1
22	00.0128	Serial Number Plate	1

SECTION E
PARTS

FIGURE 2
ILLUSTRATED DRAWING
MAIN FRAME

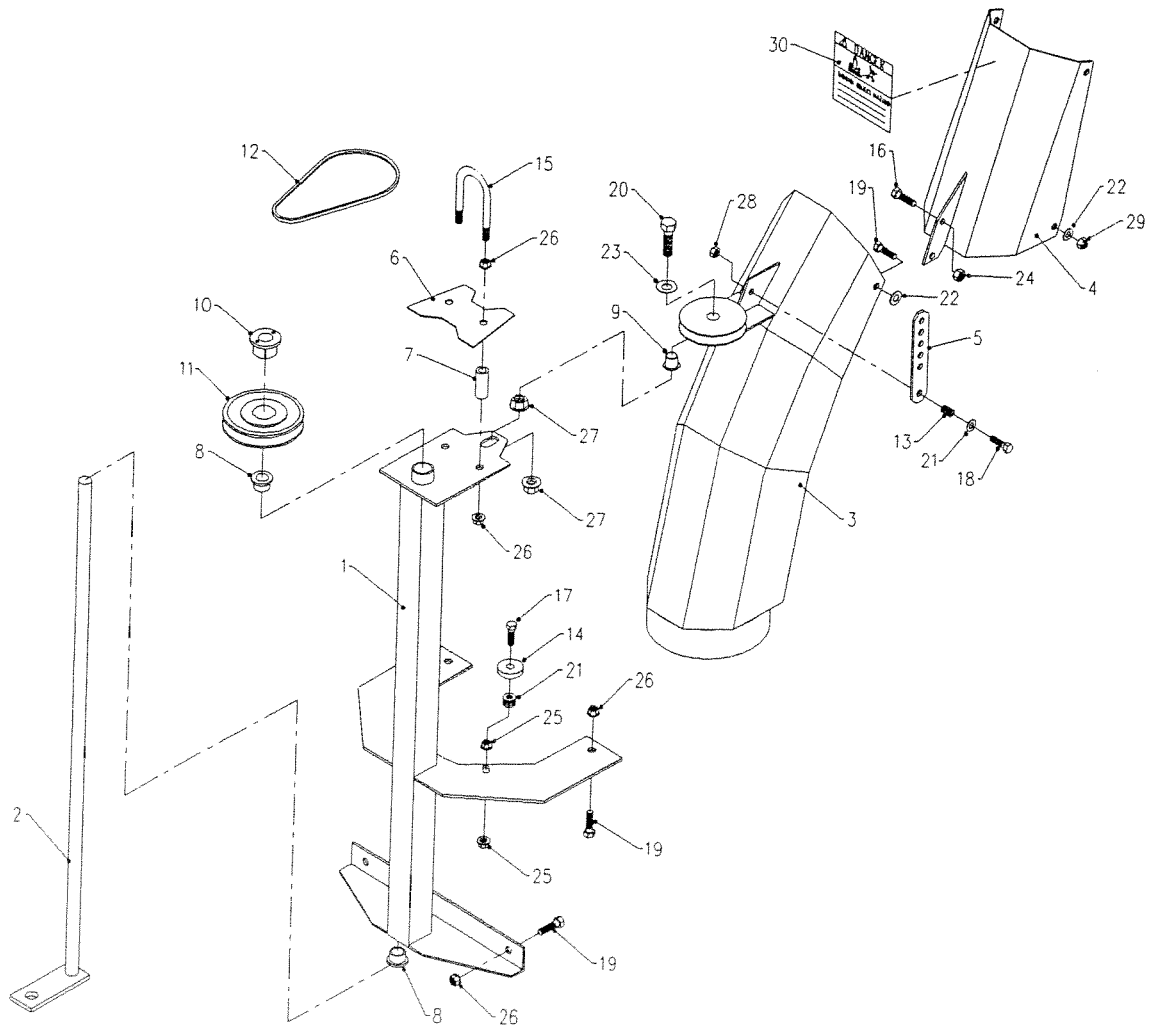


SECTION E
PARTS

FIGURE 3
CHUTE PARTS

REF.	PART NO.	DESCRIPTION	QTY.
1	62.0843	Chute Mount Post	1
2	64.0828	Cylinder Rotation Rod	1
3	62.0844	Main Chute	1
4	62.0845	Extension Chute	1
5	42.0423	Chute Tilt Link	1
6	60.0735	Cap Plate	1
7	64.0836	Cap Plate Spacer	2
8	85.B0065	5/8 x 13/16 Bushing	2
9	85.B0027	1/2 x 5/8 x 5/8 Bushing	1
10	83.H10	5/8 H Bushing	1
11	83.AK51H	AK 51H Pulley	1
12	81.A020	A20 Belt	1
13	41.0039	9/16 x 5/8 Compression Spring	1
14	05.0069	Nylon Washer	4
15	11.0055	3/8 x 1-1/2 U Bolt	1
16	90.0508	5/16 x 1 USS Bolt	1
17	90.0510	5/16 x 1-1/4 USS Bolt	4
18	90.0512	5/16 x 1-1/2 USS Bolt	1
19	90.0606	3/8 x 3/4 USS Bolt	6
20	90.0816	1/2 x 2 USS Bolt	1
21	95.05	5/16 SAE Washer	17
22	95.06	3/8 SAE Washer	4
23	95.08	1/2 SAE Washer	1
24	92.05	5/16 USS Nut	24
25	99.SF05	5/16 USS Flange Nut	8
26	99.SF06	3/8 USS Flange Nut	8
27	99.SF08	1/2 USS Flange Nut	2
28	99.A05	5/16 USS Locknut	1
29	99.A06	3/8 USS Locknut	2
30	00.0122	Thrown Object Hazard Decal	1

FIGURE 3
ILLUSTRATED DRAWING
CHUTE



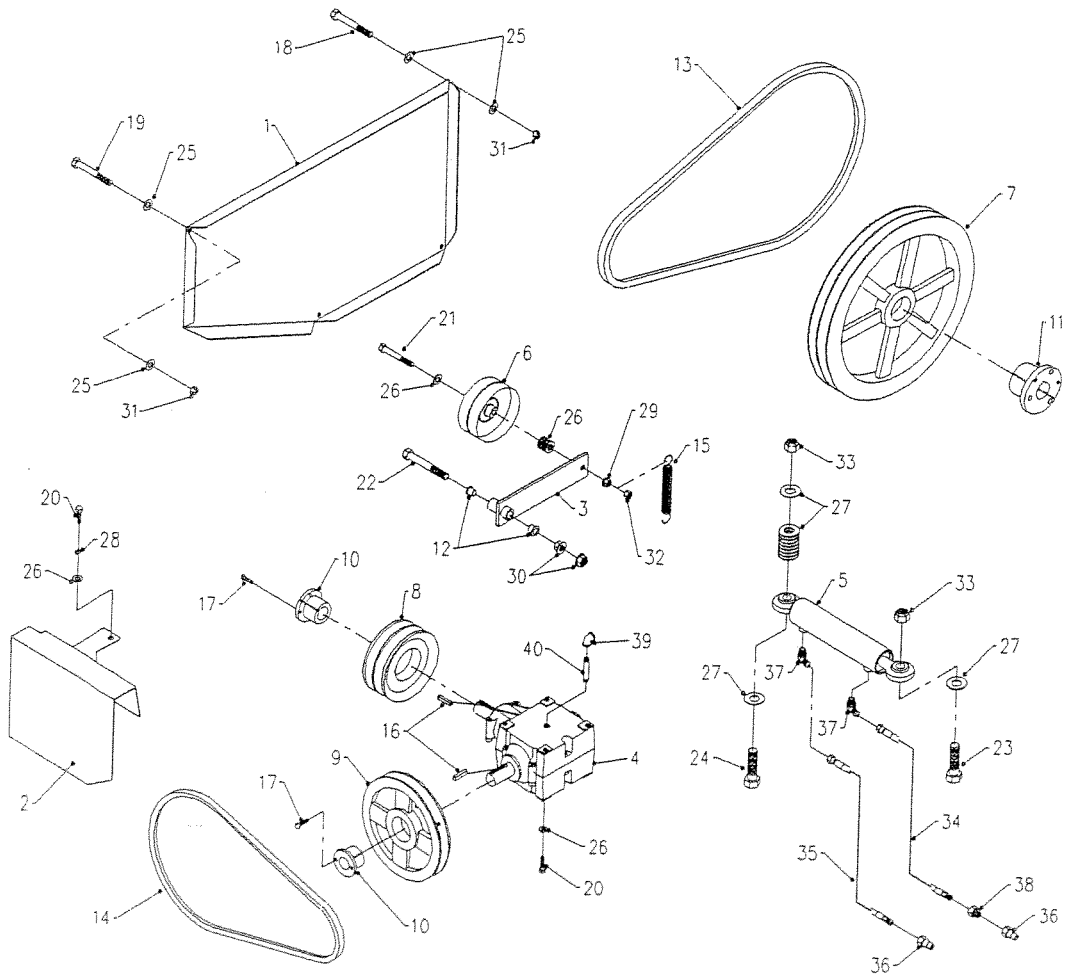
SECTION E
PARTS

FIGURE 4
HYDRAULICS, PULLEYS, SHIELDS PARTS

REF.	PART NO.	DESCRIPTION	QTY.
1	60.0733	Belt-Side Shield	1
2	60.0734	Belt-Drive Shield	1
3	40.0275	Belt Idler Arm	1
4	87.0170	Superior Gearbox	1
5	23.0100	1-1/2 x 5 Cylinder	1
6	83.0040	5" Flat Idler Pulley	1
7	83.2BK110SK	2B11 Pulley	1
8	83.2BK60H	2BK60 Pulley	1
9	83.BK80H	BK80 Pulley	1
10	83.H16S	1" Split Bushing	2
11	83.SK24	1-1/2 SK Bushing	1
12	85.B0027	1/2 x 5/8 x 5/8 Bushing	2
13	81.B056	B56 Belt	2
14	81.B062	B62 Belt	1
15	41.0020	4-1/4 Extension Spring	1
16	85.K0408	1/4 x 1 Key	2
17	90.0406	1/4 x 3/4 USS Bolt	4
18	90.0526	5/16 x 3-1/2 USS Bolt	3
19	90.0536	5/16 x 4-1/2 USS Bolt	2
20	90.0608	3/8 x 1 USS Bolt	7
21	90.0622	3/8 x 2-3/4 USS Bolt	1
22	90.0826	1/2 x 3-1/2 USS Bolt	1
23	90.1016	5/8 x 2 USS Bolt	1
24	90.1022	5/8 X 2-3/4 USS Bolt	1
25	95.04	1/4 SAE Washer	10
26	95.06	3/8 SAE Washer	15
27	95.10	5/8 SAE Washer	11
28	96.06	3/8 Lock Washer	3
29	99.SF06	3/8 USS Flange Nut	1
30	99.SF08	1/2 USS Flange Nut	2
31	99.A05	5/16 USS Locknut	5
32	99.A06	3/8 USS Locknut	1
33	99.A10	5/8 USS Locknut	2
34	20.0163	1/4 Hyd Hose x 44 Long	1
35	20.0164	1/4 Hyd Hose x 50 long	1
36	23.0104	Hyd Quick Coupler (Male)	2
37	25.2501-06-04	Hyd Fitting-90 deg 3/8-1/4	2
38	29.0092	Pipe Fitting-1/4, .025 Orifice	1
39	29.E9004G	Pipe Elbow-90 deg. 1/4	1
40	29.N0424G	Pipe Nipple-1/4 NPT x 3	1

SECTION E
PARTS

FIGURE 4
ILLUSTRATED DRAWING
HYDRAULICS, PULLEYS, SHIELDS



SECTION F WARRANTY

STATEMENT OF LIMITED WARRANTY OF

Venture Products Inc. 12657 Church Road, Orrville, OH 44667

Subject to the conditions and limitations hereafter, Venture Products Inc. ("the Company") warrants the Ventrac equipment manufactured by the Company ("equipment") to be free from defects in workmanship and material at the time of shipment from the Company's factory.

DURATION OF WARRANTY

- 1) The Ventrac equipment is warranted for a period of one year unless otherwise implied by suppliers of component parts.
- 2) New service parts sold by the Company are warranted for a period of 90 days from purchase date.

CUSTOMER ACCEPTANCE CERTIFICATE must be returned to the Company before any Warranty claims will be considered.

SOLE REMEDY FOR BREACH OF WARRANTY

If the Company determines to its reasonable satisfaction, after examination, that the equipment or a part or parts of the equipment are defective, the Company's obligation under this warranty shall be limited to either of the following, at the Company's option: a) the return of the equipment for credit, or b) the repair and replacement of the part or parts. The Company's liability, whether in contract or in tort, arising out of warranties, representations, instructions or defects from any cause shall be limited exclusively to a credit or repair and replacement, as aforesaid, and in no event shall the Company be liable for incidental or consequential damages of any nature.

DISCLAIMER OF ALL OTHER WARRANTIES

THERE ARE NO OTHER WARRANTIES WHICH EXTEND BEYOND THIS LIMITED WARRANTY AS STATED HEREIN AND THE COMPANY DISCLAIMS ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

CONDITIONS WHICH VOID WARRANTY

This limited warranty shall not apply if:

- 1) The equipment has had repairs or modifications performed by person(s) not authorized by the Company.
- 2) The equipment has been subject to misuse, negligent handling, improper installation or application, accident, fire or any acts of nature.
- 3) The equipment has had serial number altered, defaced or removed.

WARRANTY EXCLUSION

Warranty covers defective workmanship and materials only. Normal wear items that come from general operation practices including belts, tires, batteries, lights, blades, cutting edges, filters, spark plugs, and oils will not be covered under warranty. (See Engine warranty for other exceptions.)

COMPANY'S RESPONSIBILITY

The Company obligation under the terms of this warranty is limited to the repair, replacement or credit, at its option, of the equipment, parts or supply items that conform to this warranty.

OWNER'S RESPONSIBILITIES

The owner is obligated to operate and maintain the equipment in accordance with general operation practices and the recommendations published by the Company. The owner is responsible for the costs associated with such maintenance and any operating adjustments which may be required. Part or parts must be returned to the Company within a reasonable amount of time, not to exceed 30 days, before warranty can be considered or credit obtained (See Engine warranty for exception). Claims for equipment or parts damaged in transit should be referred to the freight carrier.