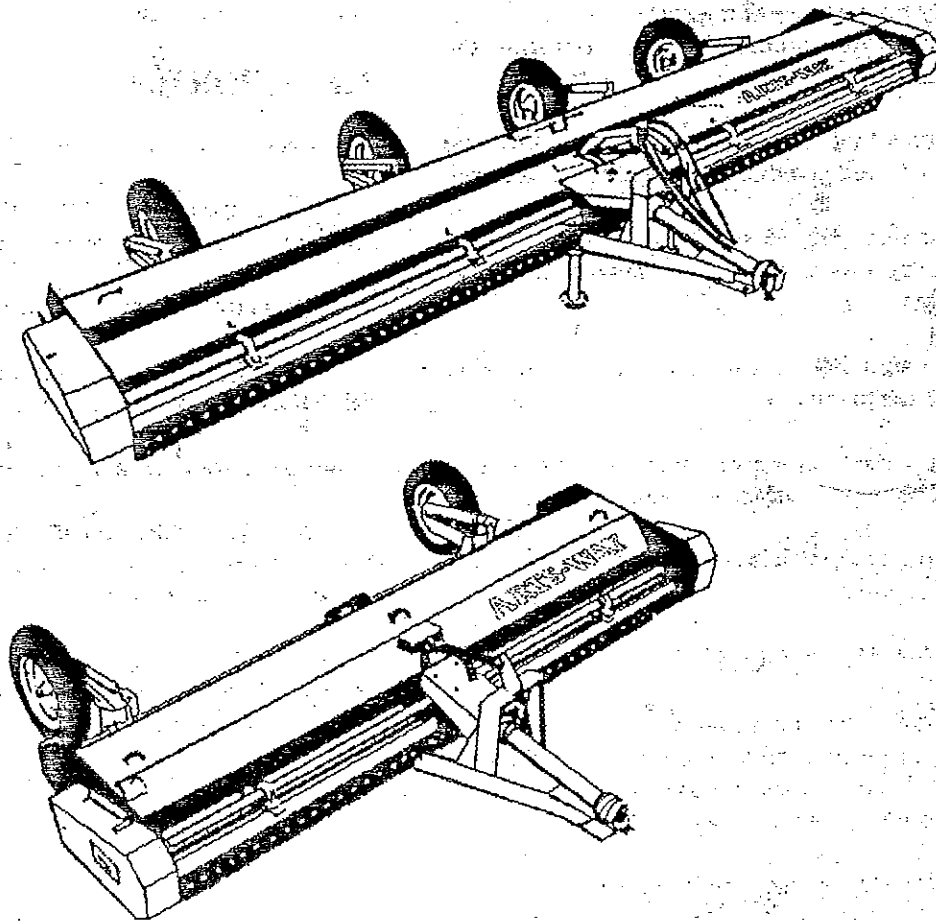


**ARTS-WAY**

# SHREDDER

PARTS AND OPERATORS MANUAL



MODELS 144B, 180B & 240B

ARTS-WAY MANUFACTURING CO., INC.  
ARMISTRO NG, IOWA 50514  
719) 864-5187

180910 REV F

# WORK SAFELY - FOLLOW THESE RULES

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT

**CAUTION!** Before handling ANY equipment, READ the OPERATOR'S MANUAL.

Always use proper safety precautions. Tell your workers how to work safely.

## BEFORE OPERATING

Do not wear loose fitting clothing; it may catch in moving parts.

Make sure that all safety shields, including the tractor power take-off master shield, are in place and properly secured before operating the machine.

Be sure that the correct implement drive line parts are used and that they are properly secured.

After servicing, be sure that all tools, parts or servicing equipment are removed from the machine.

Make sure that there is no one near the machine before starting it.

Be sure the tractor power take-off is disengaged before starting the tractor engine.

Make sure the unit is adequately blocked before working on it.

## DURING OPERATION

Shut off the tractor engine, put key in pocket, and be sure to wait until all rotation has come to a complete stop before opening any covers, adjusting, cleaning, or lubricating.

No riders while machine is in operation, do not attempt to unclog, clean, or adjust machine while it is running.

Keep all shields and guards in place.

Keep hands, feet and clothing away from moving parts.

Keep children and bystanders away from the machine while in operation.

Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve all pressure before disconnecting the lines or performing other work on the hydraulic system. To find a leak under pressure use a small piece of cardboard or wood: Never use hands.

## TRANSPORTING

Always use the safety chain and secure safely.

Tow at a maximum of 10 M.P.H. over rough roads and when going down inclines.

Maximum towing speed - 20 M.P.H.

The weight of the trailed machine should NEVER exceed the weight of the towing vehicle.

Always use SMV (slow moving vehicle) emblem.

For daytime and nighttime, accessory light and devices should be used for adequate warning to operators of other vehicles.

Comply with your state and local laws governing highway safety, and with regulations when moving machinery on a highway.

Check clearances carefully wherever machine is towed.

## TO THE OWNER

This Art's-Way unit is another one of the fine products made and the purpose of this manual is to assist you in realizing the benefits you anticipated when you purchased this unit. Many people have contributed to the production of this product. They all have an interest in its successful performance and we are providing this manual to give you the benefit of the experience we have gained through years of building and testing this equipment. The way you operate and the care you give this unit will have much to do with the successful performance of this unit. This operators manual has been carefully prepared and illustrated to make it as easy as possible for you in the operation of your unit. It will pay you to read the entire manual carefully and familiarize yourself with all operations "before operating" this unit. Keep this manual handy for reference. We will be glad to answer any questions you may have. For further information call or write Art's-Way Manufacturing Co., Inc. (712) 864-3131, Armstrong, IA 50514.

### LIMITED WARRANTY

The **ART'S-WAY MANUFACTURING CO., INC.** warrants products sold by it to be free from defects in material and workmanship for a period of one(1) **YEAR** after the date of delivery to the first purchaser subject to the following conditions:

(1) **ART'S-WAY MANUFACTURING CO., INC.'S** obligation and liability under this warranty is to repair or replace at the company's option, any parts which upon manufacture were defective in material or workmanship.

(2) All parts and repairs under this warranty shall be supplied at an authorized **ART'S-WAY MANUFACTURING CO., INC.** dealer or at the factory at the option of **ART'S-WAY MANUFACTURING CO., INC.**

(3) **ART'S-WAY MANUFACTURING CO., INC.'S** warranty does not extend to parts and elements not manufactured by **ART'S-WAY MANUFACTURING CO., INC.** and which carry the warranty of the other manufacturer.

(4) Transportation or shipping to an authorized dealer for necessary repairs is at the expense of the purchaser.

(5) **ART'S-WAY MANUFACTURING CO., INC. MAKES NO OTHER WARRANTY OR IMPLIED AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE BEYOND THAT EXPRESSLY STATED IN THIS WARRANTY. ART'S-WAY MANUFACTURING CO., INC.'S LIABILITY IS LIMITED TO THE TERMS SET FORTH IN THIS WARRANTY AND DOES NOT INCLUDE ANY LIABILITY FOR DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSE OF DELAY AND THE COMPANY'S LIABILITY IS LIMITED TO REPAIR OR REPLACEMENT OF DEFECTIVE PARTS AS SET FORTH HEREIN IN THE WARRANTY.**

(6) Any improper use, including operation after discovery of defective or worn parts, operation beyond rated capacity, substitution of parts not approved by **ART'S-WAY MANUFACTURING CO., INC.**, or any alteration or repair by other than an authorized **ART'S-WAY MANUFACTURING CO., INC.** dealer which affects the product materially and adversely, shall void this warranty.

(7) No dealer, employee or representative is authorized to change this warranty in any way or grant any other warranty unless such change is made in writing and signed by an officer of **ART'S-WAY MANUFACTURING CO., INC.** at its home office.

(8) Some states do not allow limitations on how long an implied warranty lasts or exclusions of or limitations on relief such as incidental or consequential damages so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

# ACCIDENTS can be prevented

A large number of accidents can be prevented by the operator anticipating the result before it happens and doing something about it. No power-driven equipment can be safer than the man at the controls.

The manufacturer is striving to make the equipment safe, but one careless act by the operator can void all such efforts.

The best kind of a safety device is a careful operator. **BE THAT KIND OF AN OPERATOR**, as no accident-prevention program can be a success without the co-operation of the operator of the equipment.

## INFORMATION FOR ORDERING PARTS

OWNERS NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

DEALERS NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

DATE PURCHASED \_\_\_\_\_

A Careful Operator

IS THE BEST INSURANCE

AGAINST AN ACCIDENT

National Safety Council

Art's-Way reserves the right to make changes or add improvements to its products at any time without incurring any obligation to make such changes to products previously produced. Art's-Way, or its dealers, accept no responsibility for variations which may be evident in the actual construction of its products and the instructions and illustrations contained in this publication.

## 144B, 180B, 240B SHREDDER TABLE OF CONTENTS

DESCRIPTION	PAGE
WORK SAFELY - FOLLOW THESE RULES	1
TO THE OWNER & LIMITED WARRANTY	2
ACCIDENTS CAN BE PREVENTED	3
TABLE OF CONTENTS	4
INTRODUCTION & BOLT TORQUE	4
SAFETY DECALS	5,6
ASSEMBLY	7
PREPARING FOR FIELD OPERATION	8
FIELD OPERATION AND ADJUSTMENTS	9
LEVELING AND HEIGHT ADJUSTMENTS	9
DRIVE BELT TENSION	9
DAILY MAINTENANCE & LUBRICATION	10
SERVICE	11
STORAGE	12
PARTS LISTINGS	
BASIC UNIT ASSEMBLY	13,14,15
GEARBOX PARTS	16
P.T.O. PARTS	17
WHEEL ASSEMBLY	18
SCREW JACK ASSEMBLY	19
DISK HITCH	19

### INTRODUCTION

This manual has been prepared to acquaint you with the proper assembly, operation, adjustment, service and lubrication of the Art's-Way Shredder. Take time to be careful and better understand the efficient operation and care of your machine.

Whenever the terms "Left" and "Right" are used, it should be understood to mean standing behind the machine and facing the direction of the forward travel.

The 144B, 180B, and 240B Shredders have been designed to efficiently chop stalks, stubble, or just trim an area. The cupped knife design creates a suction that lifts plant material into the cutting chamber to allow running maximum height from the ground.

The rotors of the Shredder are balanced with knives in place to assure vibration free operation.

### Tightening Torque Guide

#### SAE GRADE 5 Coarse Thread

SIZE	CLAMP LOAD	PLAIN	PLATED
1/4 - 20(.250)	2,025	8 ft. lbs.	76 in. lbs.
5/16 - 18(.3125)	3,338	17 ft. lbs.	13 ft. lbs.
3/8 - 16(.375)	4,950	31 ft. lbs.	23 ft. lbs.
7/16 - 14(.4375)	6,788	50 ft. lbs.	37 ft. lbs.
1/2 - 13(.500)	9,075	76 ft. lbs.	57 ft. lbs.
9/16 - 12(.5625)	11,625	109 ft. lbs.	82 ft. lbs.
5/8 - 11(.625)	14,400	150 ft. lbs.	112 ft. lbs.
3/4 - 10(.750)	21,300	266 ft. lbs.	200 ft. lbs.
7/8 - 9(.875)	29,475	430 ft. lbs.	322 ft. lbs.
1 - 8(1.000)	38,625	644 ft. lbs.	483 ft. lbs.
1-1/8-7(1.125)	42,375	794 ft. lbs.	596 ft. lbs.

# SAFETY DECALS

## WORK SAFELY - FOLLOW THESE RULES

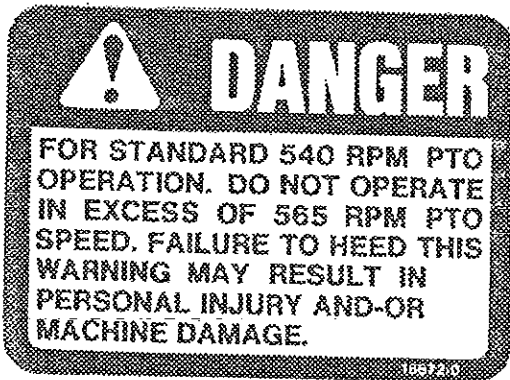


This safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!** When you see this symbol, read the message that follows.

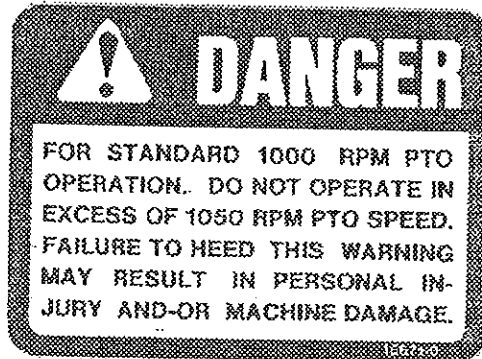
**CAUTION:** Is used for general reminders of good safety practices or to direct attention to unsafe practices.

**WARNING:** Denotes a specific potential hazard.

**DANGER:** Denotes the most serious specific potential hazard.



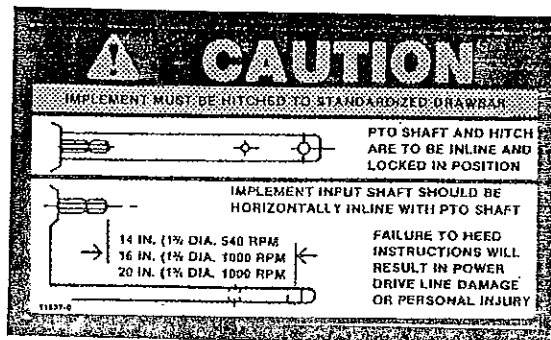
OPERATE POWER TAKE OFF AT PROPER RPM



OPERATE POWER TAKE OFF AT PROPER RPM



OPERATE MACHINE SAFELY



HITCH PROPERLY TO TRACTOR

**SAFETY DECALS**

**WARNING**

COMPONENTS CONTINUE TO ROTATE AFTER P.T.O. HAS BEEN DISENGAGED TO PREVENT PERSONAL INJURY WHEN SERVICING MACHINE:

- DISENGAGE P.T.O.
- SHUT OFF ENGINE
- LOOK AND LISTEN FOR EVIDENCE OF ROTATION.
- DO NOT OPEN ACCESS COVER UNTIL ALL COMPONENTS HAVE STOPPED
- NEVER ATTEMPT TO OPERATE MACHINE WITH ACCESS COVERS REMOVED
- ACCESS COVERS MUST BE CLOSED BEFORE STARTING ENGINE OR ENGAGING P.T.O.

**KEEP AWAY FROM MOVING PARTS**

**CAUTION**

1. Keep all shields in place.
2. Disengage power take-off and shut off engine before servicing, cleaning, or clearing a clogged machine.
3. Keep hands, feet, and clothing away from all moving parts.
4. No riders shall be allowed on this equipment at any time.

**FOLLOW 4 CAUTION ITEMS**

**DANGER**

Stay off machine when it is running. Shut off tractor engine and remove ignition key for safety while working in or around machine.

**STAY OFF MACHINE**

**DANGER**

**ROTATING DRIVE LINE**

FAILURE TO HEED THESE WARNINGS MAY RESULT IN PERSONAL INJURY OR DEATH.

KEEP CLOTHING, YOURSELF AND OTHERS WELL CLEAR

DO NOT OPERATE UNLESS PTO GUARDS, TRACTOR MASTER SHIELD AND IMPLEMENT GUARDS ARE IN PLACE.

PTO GUARDS MUST TURN FREELY AND BE PROPERLY ATTACHED AND MAINTAINED.

U-JOINT YOKES MUST BE SECURELY LOCKED UNTO TRACTOR AND IMPLEMENT SHAFTS.

BE SURE TRACTOR DRAWBAR AND IMPLEMENT HITCH ARE ADJUSTED CORRECTLY.

GREASE TELESCOPING SHAFT REGULARLY TO MINIMIZE THRUST FORCES.

**ROTATING DRIVE LINE**

**WARNING**

**ROTATING DRIVE LINE-KEEP AWAY**

U-JOINT YOKES MUST BE LOCKED IN PLACE. ADJUST TRACTOR DRAWBAR AND IMPLEMENT HITCH TO PROPER DIMENSIONS. KEEP TRACTOR MASTER SHIELD, PTO GUARDS, AND IMPLEMENT GUARDS IN PLACE.

**FREQUENCY OF LUBRICATION**

When used in water the outer tube must be greased to prevent it freezing solid.

**P.T.O. GUARDS & LUBRICATION**

## ASSEMBLY



**CAUTION:** In the set up procedure, keep **SAFETY IN MIND**. Use adequate blocking to prevent personal injury. Keep children away. Injury can occur from lifting too heavy of an item or from a falling member if it is not properly supported or blocked.

### I. INSTALLING THE "A" HITCH AND DRIVE LINE

1. Carefully tilt Shredder to operating position and remove wood blocks. Do not allow knives to contact the ground.
2. Secure Shredder on wood blocks so that the blades are clear of the ground. This will protect the balanced shafts.
3. Slide the "A" hitch into the front of the Shredder in the front mounting brackets located on each side of the gear box. Fasten in place with the 2(two) 1"-8 x 3" hex bolts and the 2(two) 1"-8 hex lock nuts provided.
4. Install Screw Jack or Hydraulic Cylinder from top of hitch to tab on Shredder housing. Cylinder or Screw Jack must be purchased separately.
5. Fill Gearbox to top of shafts with SAE 90 gear lubricant.
6. Before installing the P.T.O., lubricate and inspect telescoping members and shields. Install P.T.O. on input shaft of gearbox. Make sure it is securely locked to shaft of gearbox.
7. Lubricate between rotating P.T.O. parts and plastic shield through plastic grease fitting on shield.
8. Secure shield from rotating with chain provided.

### II. ATTACHING WHEEL ASSEMBLY

1. Calculate approximate position of axle brackets according to the row spacing desired. The outer wheels should run between the outer two rows being cut. The bracket should be mounted to the inside of the tire. On the 180B & 240B, or if equipped with additional set of carrier wheels, install in reversed position on the next row in on the 180B or two rows in on the 240B.
2. Install the axle attaching brackets to rear 4x4 tube in the determined positions with 5/8"-11 x 6" hex head cap screws, flat washers and lock nuts. Slide the axle arm into attaching bracket, using 1" washers to take the entire space; secure with 1"-8 x 10" hex head cap screws and lock nuts (leave loose until height is adjusted).
3. Install outer tube adjuster to front and inner tube adjuster to the rear tabs on above brackets. Secure at each end with 1"-8 x 3" hex head cap screws and lock nuts. Slide to center hole of inner adjuster secure with 5/8"-11 x 3" hex head cap screw, install square shim between inner and outer tube, and lock nut. Tighten all hardware.
4. Mount tire and wheel to hub. Tire pressure should be 32 PSI.



## PREPARING FOR FIELD OPERATION

### REVIEW THE MACHINE

Generally review the machine for:

- Any loose bolts or set screws.
- Proper tensioning of drive belts.
- Proper P.T.O. installation.
- Hydraulic cylinders and hoses being properly installed.
- Oil level in gearbox.
- All shields and guards being in place.
- Proper installation of any options.

### HITCHING TO THE TRACTOR



**CAUTION:** Never put your hands inside of the machine during operation. Keep children and bystanders away from machine in operation. Shut off tractor engine and place ignition key in pocket before adjusting, lubricating or repairing machine.

Adjust front and rear wheels of the tractor to fit desired row spacing.

Adjust the tractor drawbar as shown in Fig. 2 for 540 or 1000 RPM operation of P.T.O.

Attach Shredder to tractor with suitable hitch pin. Raise Shredder to retract Jack Stands.

Connect P.T.O. driveline to proper tractor P.T.O. shaft.

Check flails to make sure they are free swinging and all in place.

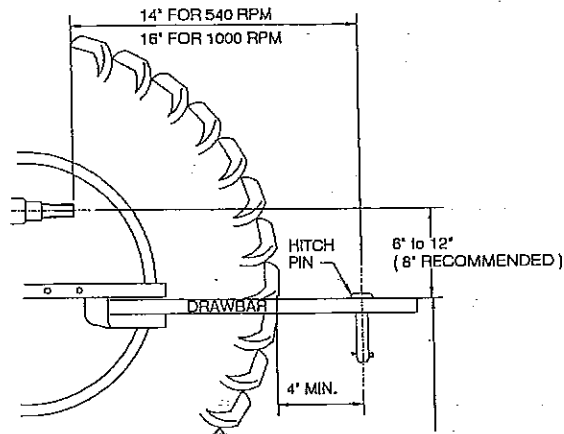


FIGURE 2

### TEST RUN SHREDDER

Run tractor at low RPM, slowly engage P.T.O. Check operation of machine at low RPM. Slowly increase RPM's to proper operating speed of 540 or 1000 RPM. Check operation, alignment and clearances of all moving parts. Make any necessary adjustments.




**CAUTION:** Keep well clear of moving parts. Be sure to shut off tractor and place key in pocket while making adjustments. Wait for all movement to stop before approaching machine.

Run machine for 10 to 15 minutes. After running is complete re-check machine for any loose hardware and re-check drives.

It is important that the Shredder be operated and adjusted correctly. The following explains how to get the best service out of the machine.

## FIELD OPERATION AND ADJUSTMENT

 **CAUTION:** Never make any adjustment or replace any part without first observing all safety procedures outlined in this manual and waiting until all moving parts have stopped.

### LEVELING AND HEIGHT ADJUSTMENT

The end of the blade tips should be 4" to 6" from the top of the ground. The rear wheels will most likely be adjusted to center hole.

Lower front of machine to height desired, run as high as possible. Use cylinder stop to maintain height.

If necessary, reposition rear wheel height. A Screw Jack instead of a Hydraulic Cylinder helps prevent lowering knives into ground.

Damage to knives and excessive wear will occur with knives too close to ground.

Shredder bars are adjustable. For a finer cut, move the Shredder bar towards the knives; for a coarser cut, move the Shredder bar away from the knives.

### GEARBOX OIL LEVEL

Check to insure that the gearbox has sufficient oil. DO NOT over fill the gearbox. Correct gearbox lubricant level is verified by removing top vent plug. Then use clean dip stick or visually verify that oil is even (level) with the top of main cross shaft. Use EP90 gear lubricant or equal as required.

### BELT TENSION

It is important to maintain belt tension. Be sure to check daily. Extend springs as shown in Figure , a nickel will just pass between each coil.



## DAILY MAINTENANCE AND LUBRICATION

I. GREASE BEARINGS WITH ONE OR TWO PUMPS OF GREASE FROM A HAND GREASE GUN EVERY 10(TEN) HOURS OF OPERATION. THIS IS ESPECIALLY IMPORTANT ON FOUR ROTOR BEARINGS. SEE DRAWING BELOW.

II. CHECK GEARBOX LUBRICATION LEVEL SEASONALLY. CORRECT GEARBOX LUBRICANT LEVEL IS VERIFIED BY REMOVING TOP VENT PLUG. THEN USE CLEAN DIP STICK OR VISUALLY VERIFY THAT OIL IS EVEN (LEVEL) WITH THE TOP OF MAIN CROSS SHAFT. USE EP90 GEAR LUBRICANT OR EQUAL AS REQUIRED.

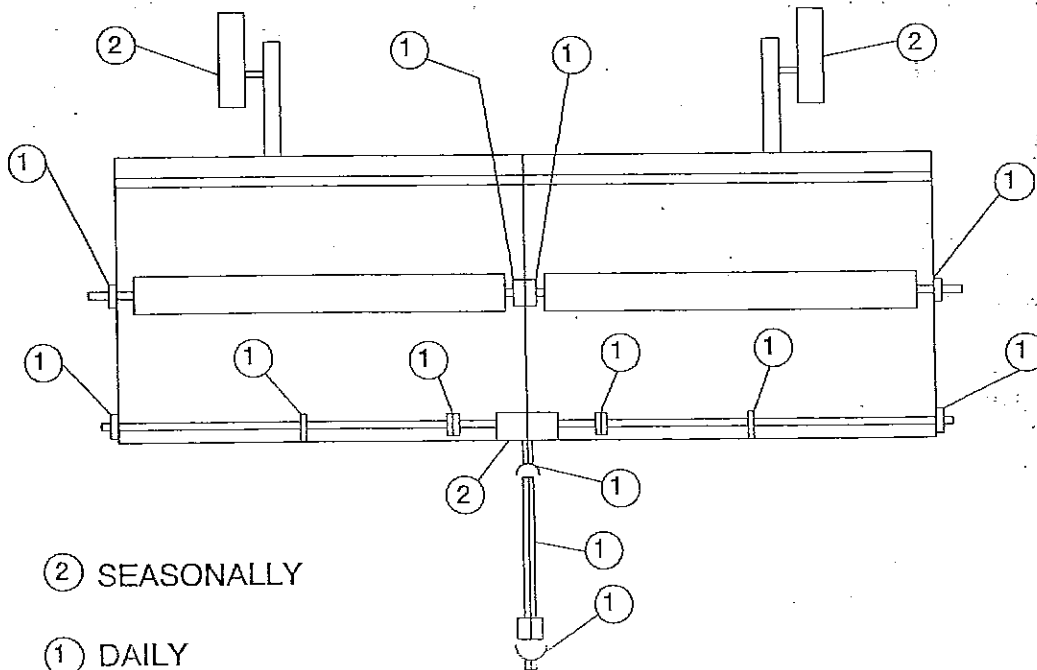
III. CHECK SPRING TENSION ON DRIVE BELTS.

IV. CHECK FOR LOOSE OR DAMAGED FASTENERS.

V. CHECK ALL KNIVES FOR EXCESSIVE WEAR, OR BENT, OR BROKEN KNIVES. (REMEMBER, ALWAYS REPLACE TWO KNIVES AT A TIME).

VI. DO NOT OPERATE THE MACHINE IF EXCESSIVE VIBRATION IS PRESENT.

### LUBRICATION SCHEDULE



## SERVICE

### I. REPLACEMENT OF KNIVES

1. Disconnect P.T.O. from tractor. Make sure machine is adequately blocked.

2. When replacing knife, replace in pairs, replace damaged knife plus knife most directly opposite. Be sure to inspect other parts and replace if necessary torque bolts to 150 ft.lb.

**IMPORTANT: AN UNBALANCED ROTOR WILL CAUSE THE MACHINE TO VIBRATE EXCESSIVELY AND MAY DAMAGE BOTH THE BEARINGS AND THE SHAFTS.**

### II. REPLACEMENT OF ROTOR SHAFT BEARINGS

Do not attempt to replace bearings from underneath the Shredder. The safe and proper way is:

1. Remove the axle arms and "A" Hitch.

2. Loosen spring loaded idler and remove belts.

3. Turn the Shredder on its back.

4. Remove drive sheave from rotor shaft and clean and smooth shaft. Remove remote lubrication line.

5. Loosen bearing lock collar and remove bearing mounting bolts on drive end. Remove bearing from shaft, taking care not to damage shaft.

6. Shaft seal should extend approximately 1/16" past the end plate on the bearing side when re-installed. Place lube plate between end plate and bearing.

7. If center bearing must be replaced, remove remote lubrication line, loosen bearing collar and remove bolts. Lift rotor up until bearing can be removed and replaced.

8. When re-assembling be sure to note lube fitting locations and make sure center shaft clears center housing plate. Torque bearing bolts to proper torque 9/16" diameter, GR5, plated to 82 ft. lb. and 5/8" diameter, GR5 plated to 112 ft. lb.

9. Re-attach remote lubrication lines, turn Shredder over and re-assemble. Lubricate new bearings with three(3) pumps of grease.



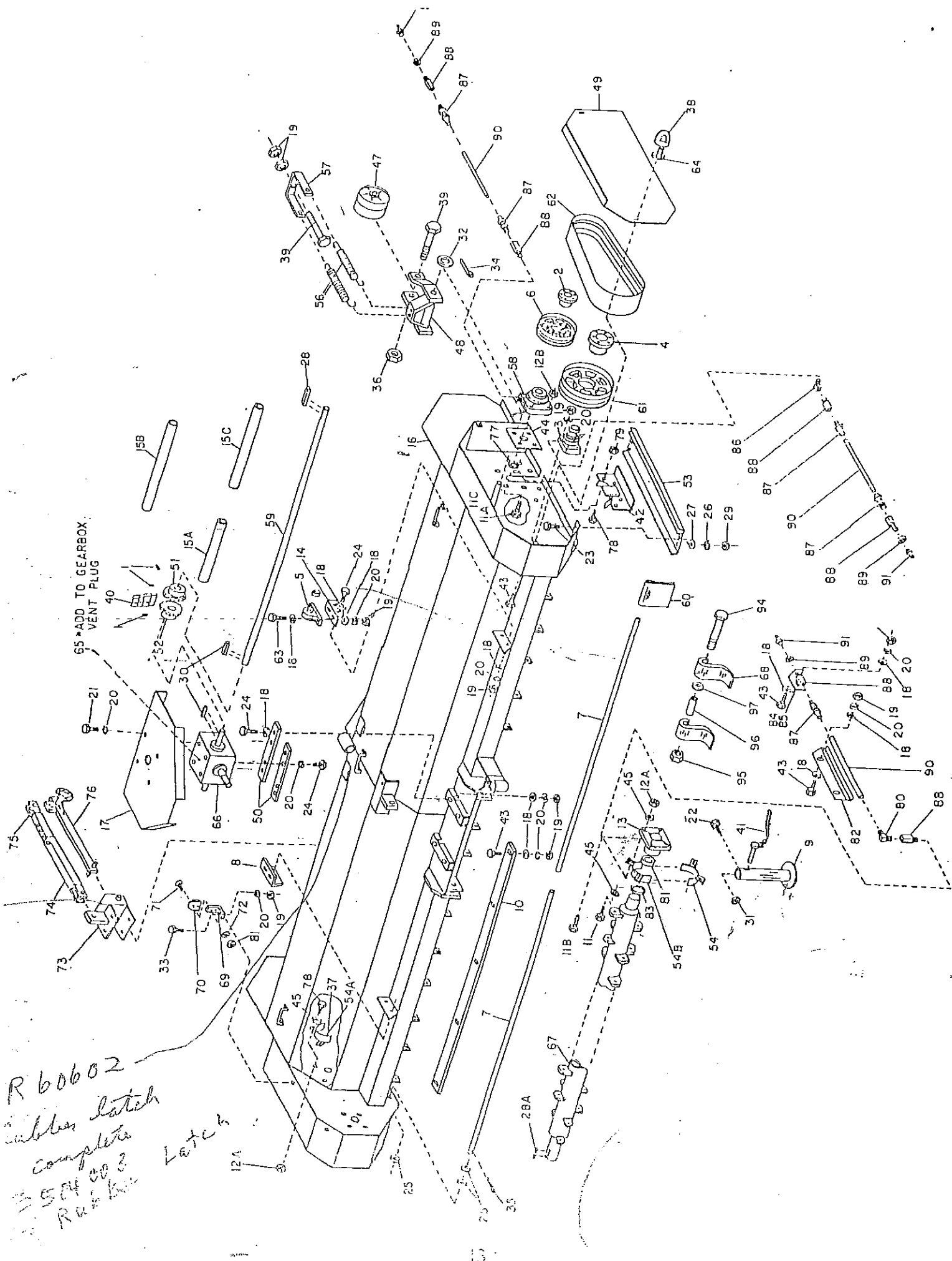
**CAUTION:** Never put your hands inside of the machine during operation, or perform any kind of an adjustment, lubrication or repair to the machine without shutting off the tractor ignition and placing key in pocket. Keep children and bystanders away from machine in operation.

Remove all wrenches, tools, grease rags, or other foreign objects from the machine, when work is complete.

## STORAGE

To obtain a long life and trouble free service from this unit, it should be properly prepared and stored.

First, flush entire unit with water to remove all accumulations of dirt, grease, or material. Then check for cracked, worn, or damaged belts, bearings, blades or other parts. Early detection and replacement of failing parts will save "Downtime" next season. Repaint any area(s) where the paint has been worn or chipped off. Replace all safety decals that are no longer legible. Remove and grease driveline and store in a dry place. Repack wheel bearings. Set machine on blocks and store inside.



65\*ADD TO GEARBOX  
VENT PLUG

R 60602  
rubber latch  
complete  
3504003  
R 44602  
Latch

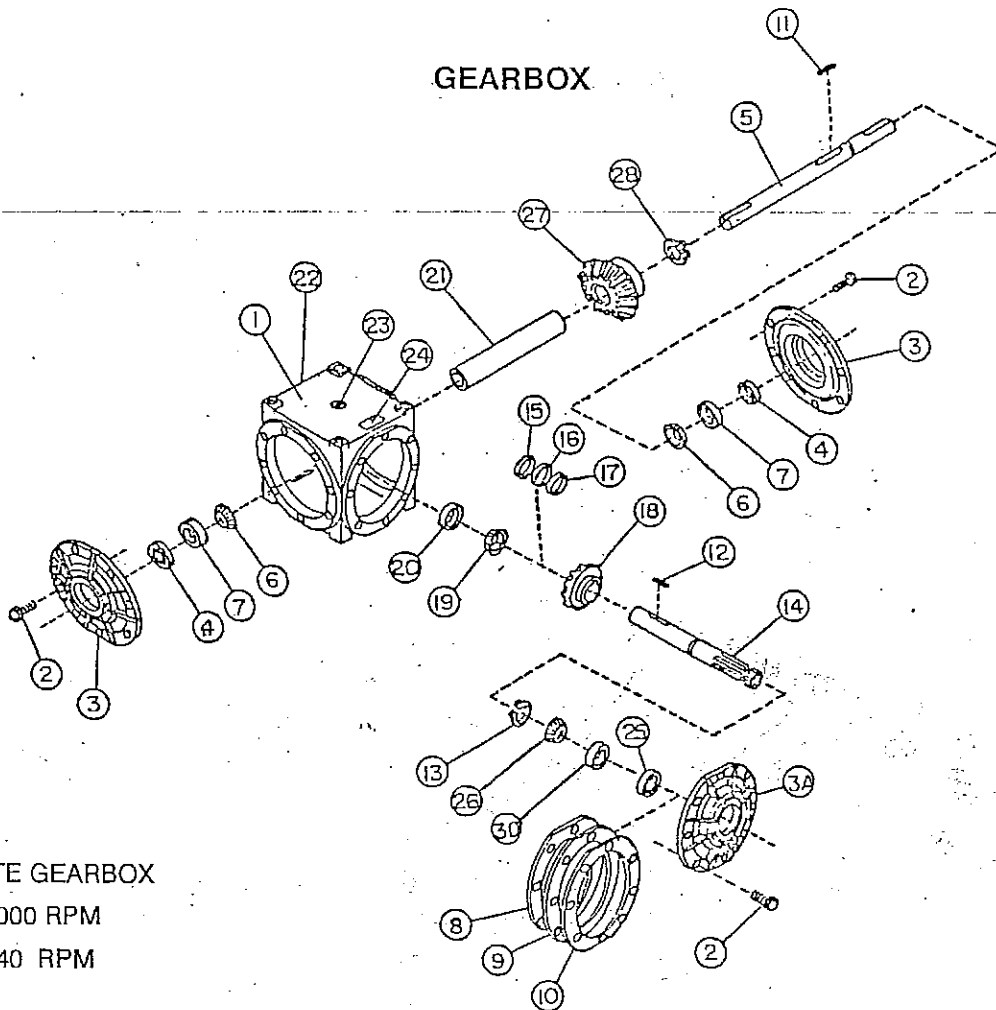
ITEM	PART NUMBER	BASIC UNIT			DESCRIPTION
		QTY 144B	QTY 180B	QTY 240B	
1	120970	-	-	-	SCREW, AHSS NY-LK 3/8" x 1/2"
2	R37960	-	-	-	HUB, ROTOR-SHEAVE QD, SK 1-3/4"
2	R66251	-	-	2	HUB, ROTOR SHEAVE QD, SF 2-3/16"
3	R40290	2	2	2	BEARING, FLANGE 1-3/8" 4-BOLT
4	R40340	2	2	-	HUB, JACKSHAFT SHEAVE
4	R64765	-	-	2	HUB, JACKSHAFT SHEAVE
5	R40741	2	2	4	BEARING, PILLOW BLOCK 1-3/8"
6	R41180	-	2	-	SHEAVE, ROTOR 4B QD 8.35" O.D.
6	R40750	2	-	-	SHEAVE, ROTOR 3B QD 8.38" O.D.
6	R64761	-	-	2	SHEAVE, ROTOR 5B QD 8.35" O.D.
7	R42360	-	2	-	ROD, SKIRT 92"
7	R42340	1	-	-	ROD, SKIRT 80"
7	R42870	1	-	-	ROD, SKIRT 67"
7	R45310	-	-	2	ROD, SKIRT 123.5"
8	R60608	1	1	2	BEARING MOUNTING, JACKSHAFT R.H.
9	R60636	1	1	2	STAND, PARKING
10	R61055	-	2	-	BAR, SHREDDER
10	R60589	2	-	-	BAR, SHREDDER
10	R64368	-	-	2	BAR, SHREDDER
11	R61321	-	-	-	BOLT, HHCS 9/16" x 3"
11A	252840	-	-	-	BOLT, 1/2" x 1-3/4"
11B	R64706	-	-	-	BOLT, HHCS 5/8" x 3-1/4"
11C	213260	-	-	-	BOLT, HHCS 5/8" x 2-1/4"
12	R61575	-	-	-	NUT, HEX LOCK 9/16" 2WAY
12A	1795104	-	-	-	NUT, HEX LOCK 5/8" 2WAY
12B	R61479	-	-	-	NUT, HEX LOCK 1/2" 2WAY
13	R16260	2	2	-	BEARING, FLANGE 1.75 W/ECCEN
13	R66250	-	-	2	BEARING, FLANGE 2.18 W/ECCEN
14	R62891	1	1	2	BEARING MOUNTING, JACKSHAFT L.H.
15A	R64473	-	2	-	SHIELD, SPIN 54-1/2"
15A	R64470	2	-	-	SHIELD, SPIN 37-1/2"
15A	R64476	-	-	2	SHIELD, SPIN 51-1/2"
15B	R64469	-	-	2	SHIELD, SPIN 33"
15C	119641	2	2	2	SHIELD, SPIN 24"
16	R64622	-	1	-	HOUSING, 180B
16	R64451	1	-	-	HOUSING, 144B
16	R45220	-	-	1	HOUSING, 240B
17	R67020	-	1	1	SHIELD, GEARBOX
18	005200	-	-	-	WASHER, FLAT .562" x 1.375" x .109"
19	005360	-	-	-	NUT, HEX 12" G5 ZN
20	005370	-	-	-	WASHER, LOCK 1/2"
21	010730	-	-	-	BOLT, HHCS 1/2" x 1-1/4"
22	012051	-	-	-	BOLT, HHCS 1/4" x 3/4"
23	012260	-	-	-	BOLT, HHCS 3/8" x 1"
24	014770	-	-	-	BOLT, HHCS 1/2" x 1-1/2"
25	020430	-	-	-	WASHER, FLAT .688" x 1.75" x .13"
26	021180	-	-	-	WASHER, LOCK 3/8"
27	021190	-	-	-	WASHER, FLAT .438" x 1.00" x .083"
28	021530	4	4	2	KEY, 3/8" SQ x 2"
28A	R66305	-	-	2	KEY, 1/2" SQ x 2"
29	027260	-	-	-	NUT, HEX 3/8"
30	039950	4	4	4	KEY, SQ 3/8" x 1-3/4"
31	042370	-	-	-	NUT, HEX 1/4"
32	1107389	-	-	-	WASHER, FLAT 1.06" x 2.00" x .134"
33	031080	-	-	-	BOLT, HHCS 1/2" X 1"
34	124340	-	-	-	PIN, COTTER 3/16" x 1-1/2"
35	124350	-	-	-	PIN, COTTER 1/8" x 1-1/2"
36	127890	-	-	-	NUT, HEX LOCK 1/2"
37	250370	2	2	-	ROTOR GUARD WELDMENT, UPPER
38	156510	4	4	4	LATCH, MAIN DRIVE SHIELD
39	162930	-	-	-	BOLT, HHCS 1/2" x 5-1/2"
40	163770	2	2	2	CHAIN ASSY, 60" x 14"
41	167160	1	1	2	PIN & CHAIN ASSY
42	250330	2	2	-	PLATE, SPLICE WELDMENT
42	250430	-	-	2	PLATE, SPLICE WELDMENT
43	1770500	-	-	-	BOLT, HHCS 1/2"
44	250560	2	2	-	PLATE, SEAL
44	250580	-	-	2	PLATE, SEAL
45	183540	16	16	12	WASHER, REWORK 5/8"
46					
47	210270	2	2	2	PULLEY ASSY, IDLER
48	210330	2	2	2	IDLER WELDMENT

ITEM	PART NUMBER	QTY 144B	QTY 180B	QTY 240B	DESCRIPTION
49	210390	1	1	1	SHIELD, RIGHT
49	210400	1	1	1	SHIELD, LEFT
50	210650	2	2	2	BRACKET, GEARBOX
51	210690	2	2	2	SPROCKET, 1-3/8" 60B14
52	210700	2	2	2	SPROCKET, 1-1/2" 60B14
53	210890	2	2	2	CHANNEL, WELDMENT BOTTOM
54	250400	-	-	2	ROTOR GUARD WELDMENT, CENTER
54	250490	4	-	-	ROTOR GUARD WLEDMENT, CENTER
54	183530	-	4	-	GUARD WELDMENT, BEARING W/SLOT
54A	250480	-	-	2	ROTOR GUARD WELDMENT, W/TABS
54B	250540	-	-	2	ROTOR GUARD WELDMENT, UPPER CTR
55	R61669	-	-	-	WASHER, LOCK 9/16"
56	220860	4	4	4	SPRING, EXTENSION 5.75" OAL
57	224400	2	2	2	CLIP, TAKE-UP BOLT
58	250640	4	4	-	BEARING, FLANGE 1-3/4"
58	250630	-	-	4	BEARING, FLANGE 2-3/16"
59	243530	-	2	-	SHAFT, JACK 180B 1-3/8"
59	243540	2	-	-	SHAFT, JACK 144B 1-3/8"
59	210680	-	-	2	SHAFT, JACK 240B 1-3/8"
60	243650	15	2	25	DEFLECTOR, STEEL 9.50" x 5.5"
60	243660	-	17	-	DEFLECTOR, STEEL 9.25" x 5.5"
61	R40330	2	-	-	SHEAVE, JACKSHAFT 540 RPM 12.75 O.D.
61	R41170	-	2	-	SHEAVE, JACKSHAFT 540 RPM 12.75 O.D.
61	243590	-	2	-	SHEAVE, JACKSHAFT 1000 RPM 11.35 O.D.
61	243580	-	-	2	SHEAVE, JACKSHAFT 1000 RPM 11.35 O.D.
62	242300	2	-	-	BELT, 3B x 72"
62	242290	-	2	-	BELT, 4B x 72" 540 RPM
62	R41190	-	2	-	BELT, 4B x 70" 1000 RPM
62	R65108	-	-	2	BELT, 5B x 70"
63	023950	-	-	-	BOLT, HHCS 1/2" x 2"
64	1120393	-	-	-	WASHER, FLAT 5/16" x .340" x .690"
65	023090	-	-	-	PIN, COTTER 3/32" x 3/4"
66	189720	1	1	1	GEARBOX, 540 RPM COMPLETE
66	189730	-	1	1	GEARBOX, 1000 RPM COMPLETE
67	182740	1	-	-	ROTOR ASSY W/KNIVES R.H. W/OFFSET
67	182750	1	-	-	ROTOR ASSY W/KNIVES L.H. W/OFFSET
67	182760	1	-	-	ROTOR ASSY W/H.S. KNIVES R.H. W/OFFSET
67	182770	1	-	-	ROTOR ASSY W/H.S. KNIVES L.H. W/OFFSET
67	182780	-	1	-	ROTOR ASSY W/KNIVES R.H. W/OFFSET
67	182790	-	1	-	ROTOR ASSY W/KNIVES L.H. W/OFFSET
67	182800	-	1	-	ROTOR ASSY W/H.S. KNIVES R.H. W/OFFSET
67	182810	-	1	-	ROTOR ASSY W/H.S. KNIVES L.H. W/OFFSET
67	182840	-	-	1	ROTOR ASSY W/H.S. KNIVES R.H. W/OFFSET
68	182850	-	-	1	ROTOR ASSY W/H.S. KNIVES L.H. W/OFFSET
68	R62066	-	-	1	KIT, OFFSET KNIVES (2)
68	R40140	80	96	-	STANDARD KNIVES
68	R40141	80	96	-	HARD SURFACED KNIVES
68	R45450	-	-	128	HARD SURFACED KNIVES
69	I493166R1	1	1	2	BRACKET, SOCKET MOUNTING
70	167330	1	1	1	SOCKET, S.M.V. MOUNTING
71	012410	-	-	-	BOLT, CRG 5/16" x 3/4"
72	023620	2	2	2	WASHER, LOCK 5/16"
73	R40440	2	4	4	AXLE ADJ & ATTACH ASSY
74	R60428	2	4	4	TUBE, OUTER ADJ ASSY
75	R60429	2	4	4	TUBE, INNER ADJ ASSY
76	181890	1	2	2	ARM & SPINDLE ASSY R.H. AXLE
76	181880	1	2	2	ARM & SPINDLE ASSY L.H. AXLE
77	251130	-	-	2	SEAL, V-RING
77	251120	2	2	-	SEAL, V-RING
78	990610	-	-	-	BOLT, HHCS 5/8" x 1-1/2"
79	038850	-	-	-	NUT, HEX 5/8"
80	253370	2	2	2	ELBOW, 90, BRASS .25 TUBES .13 NPT
81	252510	-	-	2	COLLAR, ECCEN LOCK
81	252500	2	2	-	COLLAR, ECCEN LOCK
82	250530	2	2	2	BRACKET, TUBE
83	250590	-	-	2	SPACER, ROTOR
83	250550	2	2	-	SPACER, ROTOR
84	244230	1	1	1	CLIP, CENTER LUBE L.H.
85	244240	1	1	1	CLIP, CENTER LUBE R.H.
86	244250	2	2	2	ELBOW, 45 DEG. STREET 1/8"
87	244260	10	10	10	CONNECTOR, TUBE 1/8" TO 1/4"
88	244280	12	12	12	CONNECTOR, BULKHEAD 1/4"
89	244290	-	-	-	NUT, LOCK BULKHEAD 1/8"
90	962500	-	-	-	TUBE, NYLON 1/4"
91	1102467H	4	4	4	FITTING, LUBE 1/4"

210260  
72" BELT  
FOR BACK  
IDLER



# GEARBOX



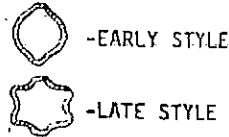
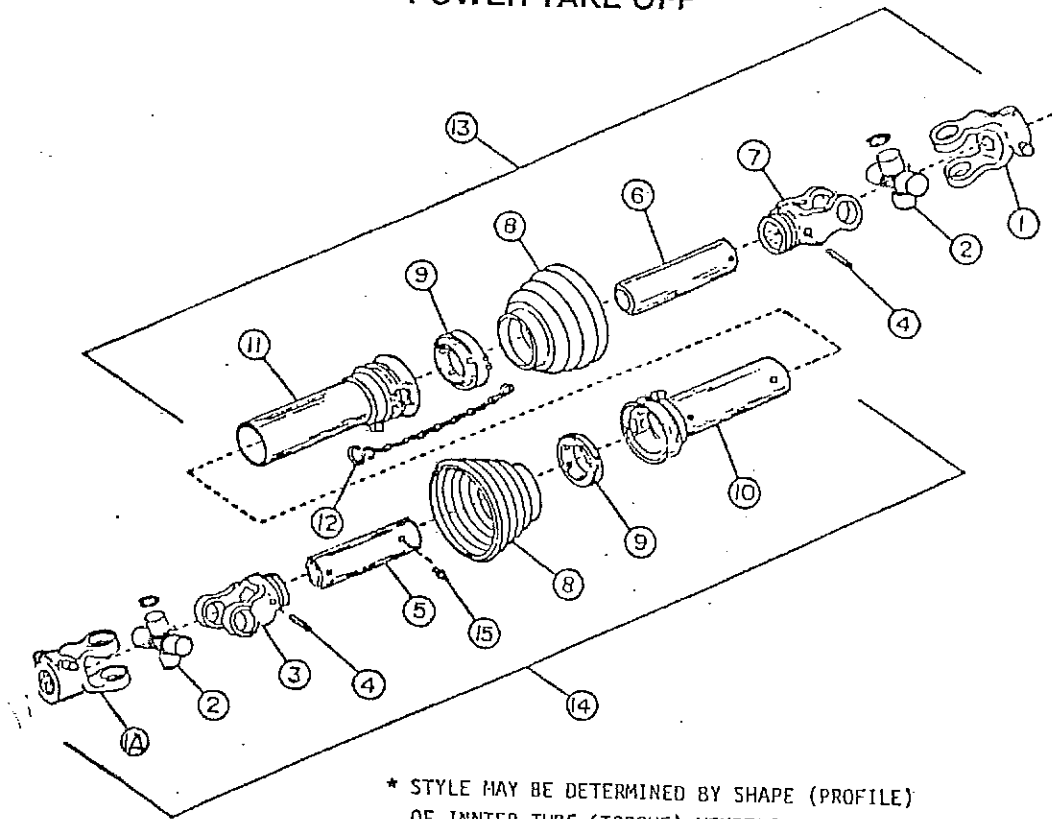
## COMPLETE GEARBOX

189730 1000 RPM

189720 540 RPM

ITEM	PART NUMBER	QTY 144B	QTY 180B	QTY 240B	DESCRIPTION
1	R67294	1	1	1	HOUSING
2	184750				BOLT, CS SEMS 3/8" x 1-1/4"
3	R67295	2	2	2	CAP
3A	R67295	2	2	2	CAP, EARLY W/R67308 & R67299 BRG
3A	189750	2	2	2	CAP, LATE W/189740 & 189760 BRG
4	R67296	2	2	2	SEAL, NTL 470136 1.50" x 2.25" x .50"
5	237390	1	1	1	SHAFT, OUTPUT
6	R67298	2	2	2	CONE, BEARING TMKN 27889 1.50"
7	R67299	2	2	2	CUP, BEARING TMKN 37820 3.15"
8	R67301	-	-	-	GASKET
9	R67302	-	-	-	GASKET
10	R67303	-	-	-	GASKET
11	235700	1	1	1	KEY
12	236580	1	1	1	KEY
13	R67305	1	1	1	RETAINING RING
14	237400	1	1	1	SHAFT
15	R67309	-	-	-	SHIM, .002
16	R67310	-	-	-	SHIM, .005
17	R67311	-	-	-	SHIM, .010
18	R67312	1	1	1	GEAR, 22 TOOTH 1000 RPM
18	R67313	1	1	1	GEAR, 30 TOOTH 540 RPM
19	R67314	1	1	1	CONE, BEARING TMKN 2690 1.16"
20	R67315	1	1	1	CUP, BEARING TMKN 2631 2.62"
21	R67316	1	1	1	SPACER
22	R66580	2	2	2	PLUG, PIPE 1/2" NPT SOC HD
23	R66581	1	1	1	PLUG, PIPE 1/2" NPT SOC HD VENT
24					
25	R67307	1	1	1	SEAL, NTL 470169 1.37" x 2.25" x .50"
26	189740	1	1	1	CONE, BEARING HM88649 W/189760
26	R67308	1	1	1	CONE, BEARING TMKN 27875 1.38" W/R67299
27	R67317	1	1	1	GEAR, 22 TOOTH 1000 RPM
27	R67318	1	1	1	GEAR, 20 TOOTH 540 RPM
28	R67319	1	1	1	RETAINING RING
29					
30	189740			1	CUP, BEARING HM88610 2.84" W/189740
30	R67299			1	CUP, BEARING TMKN 27620 3.15" W/R67299

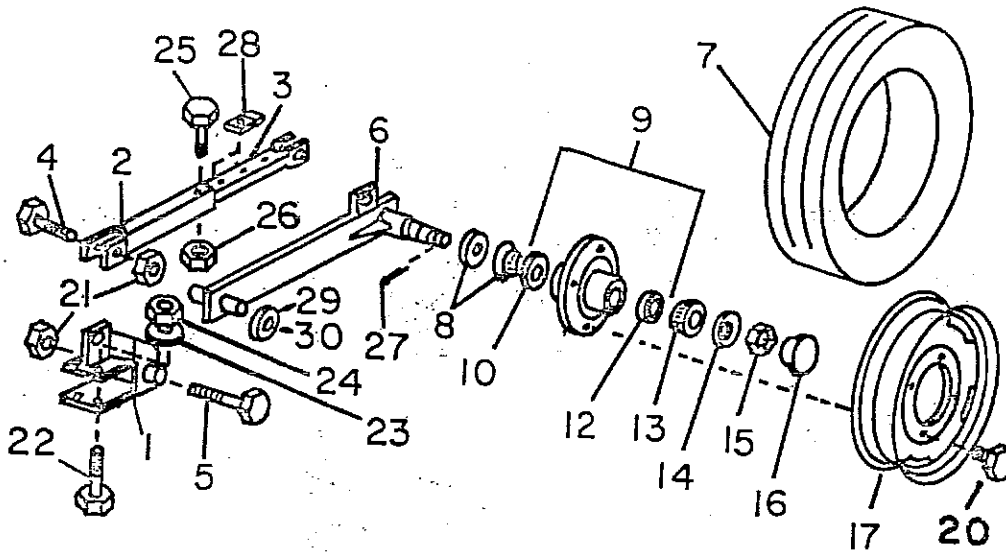
# POWER TAKE OFF



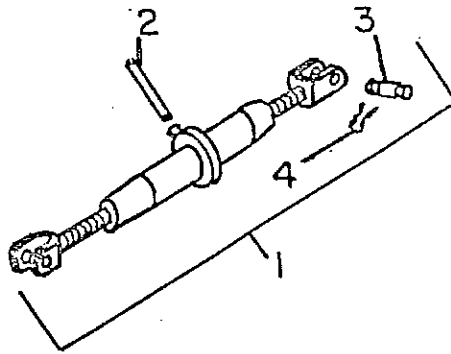
COMPLETE P.T.O.  
196820 1000 RPM  
196810 540 RPM

ITEM	PART NUMBER	QTY 144B	QTY 180B	QTY 240B	DESCRIPTION
1	182870	1	-	-	YOKE, 1-3/8" 6SPL QD 540 RPM
1	182980	1	1	1	YOKE, 1-3/8" 21SPL QD 1000 RPM
1A	182870	1	1	1	YOKE, 1-3/8" 6SPL QD
2	182230	2	2	2	KIT, CROSS AND BEARING
3	182950	1	1	1	INBOARD YOKE 2S
3	196770	1	1	1	INBOARD YOKE S5
4	182880	2	2	2	PIN, SPRING 10" x 85"
4	196740	2	2	2	PIN, SPRING 10" x 90"
5	182970	1	1	1	OUTER PROFILE 2S
5	196760	1	1	1	OUTER PROFILE S5
6	182960	1	1	1	INNER PROFILE 1S
6	196750	1	1	1	INNER PROFILE S4
7	182940	1	1	1	INBOARD YOKE 1S
7	196730	1	1	1	INBOARD YOKE S4
8	182930	2	2	2	SHIELD, CONE 6 RIB
9	182900	2	2	2	BEARING RING SC24
10	196790	1	1	1	SHIELD, INNER TUBE
11	196780	1	1	1	SHIELD, OUTER TUBE
12	182890	1	1	1	SAFETY CHAIN
13	183210	1	1	1	TRACTOR HALF 1000 RPM
13	196840	1	1	1	TRACTOR HALF 1000 RPM
13	183220	1	-	-	TRACTOR HALF 540 RPM
13	196860	1	-	-	TRACTOR HALF 540 RPM
14	183190	1	1	1	IMPLEMENT HALF
14	196850	1	1	1	IMPLEMENT HALF
15	196390	1	1	1	GREASE ZERK
16					
17					
18	214570	1	1	1	YOKE, 1-3/4" 20 SPLINE (AVAIL PARTS ONLY)

# WHEEL ASSEMBLY

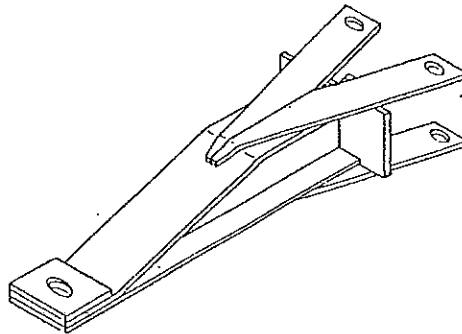


ITEM	PART NUMBER	QTY 144B	QTY 180B	QTY 240B	DESCRIPTION
1	R40440	1	1	1	BRACKET, AXLE ADJ. & ATT ASSY
2	R60428	1	1	1	TUBE, OUTER ADJ ASSY
3	R60429	1	1	1	TUBE, INNER ADJ ASSY
4	R66338	-	-	-	BOLT, HHCS 1" x 3"
5	243640	-	-	-	BOLT, HHCS 1" x 10"
6	182100	1	1	1	AXLE ARM ASSY, L.H.
6	182110	1	1	1	AXLE ARM ASSY, R.H.
7	219620	1	1	1	TIRE
8	I602958R91	1	1	1	CONE, W/SEAL 1.25"
9	250610	1	1	1	HUB, 4BOLT W/CUPS W/ZERK
10	I651817R1	1	1	1	CUP
11	I651814R1	1	1	1	CUP
12	1758209	1	1	1	CONE, .75"
13	I575813R1	-	-	-	WASHER, FLAT 3/4"
14	I69441D	-	-	-	NUT, SLOTTED HEX JAM 3/4"
15	1799509	1	1	1	CAP, WHEEL HUB
16	1757903	1	1	1	RIM, 15" x 4-1/2"
17	164420	1	1	1	VALVE STEM W/CORE & CAP
18	181840	1	1	1	KIT, WHEEL ASSY L.H. (COMP)
19	181850	1	1	1	KIT, WHEEL ASSY R.H. (COMP)
20	I351079R1	-	-	-	BOLT, WHEEL HUB
21	990510	-	-	-	NUT, HEX LOCK 1" 2WAY
22	201660	-	-	-	BOLT, HHCS 5/8" x 6"
23	020430	-	-	-	WASHER, FLAT 5/8"
24	R61476	-	-	-	NUT, HEX LOCK 5/8"
25	990650	-	-	-	BOLT, HHCS 5/8" x 3"
26	R61480	-	-	-	NUT, HEX LOCK 5/8"
27	I120123	-	-	-	PIN, COTTER 1/8" x 1-1/4"
28	243630	2	-	4	SHIM, ADJUSTING TIRE
29	003350	-	-	-	WASHER, 1.03" x .075"
30	003870	-	-	-	WASHER, 1.03" x .060"



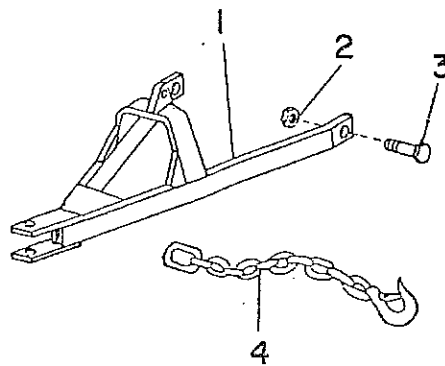
### JACK RATCHET

ITEM	PART NUMBER	QTY	QTY	QTY	DESCRIPTION
		144B	180B	240B	
1	R39520	1	1	1	JACK, RATCHET
2	R41830	1	1	1	HANDLE, JACK
3	R41810	2	2	2	PIN, YOKE
4	R41820	4	4	4	PIN, COTTER HAIR



### DISK HITCH

ITEM	PART NUMBER	QTY	QTY	QTY	DESCRIPTION
		144B	180B	240B	
1	R42650	1	1	1	DISK HITCH
	201660	-	-	-	BOLT, HHCS 5/8" x 6"
	020440	-	-	-	WASHER, LOCK 5/8"
	1124589	-	-	-	NUT, 5/8"
	181940	-	-	-	KIT, DISK HITCH COMPLETE



ITEM	PART NUMBER	QTY	QTY	QTY	DESCRIPTION
		144B	180B	240B	
1	R55834	1	1	1	HITCH ASSY
2	R65072	-	-	-	NUT, HEX, LOCK 1/2"
3	R55338	-	-	-	BOLT, HHCS 1/2" x 3"
4	1765302	1	1	1	CHAIN, 1/2" x 3'

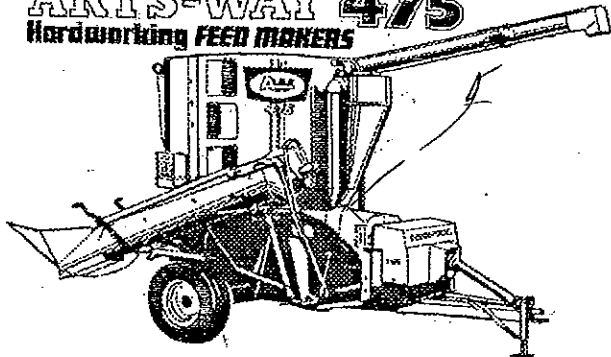
# Index

PART NUMBER	PAGE	KEY	PART NUMBER	PAGE	KEY	PART NUMBER	PAGE	KEY	PART NUMBER	PAGE	KEY
003360	18	29	196730	17	7	R16260	14	13	R67317	16	27
003870	18	30	196740	17	4	R37960	14	2	R67318	16	27
005200	14	18	196750	17	6	R39520	19	1	R67319	16	28
005360	14	19	196760	17	5	R40140	15	68			
005370	14	20	196770	17	3	R40141	15	68			
010730	14	21	196780	17	11	R40290	14	3			
012051	14	22	196790	17	10	R40330	15	61			
012260	14	23	196840	17	13	R40340	14	4			
012410	15	71	196850	17	14	R40440	18	1			
014770	14	24	196860	17	13	R40440	15	73			
020430	14	25	196890	17	15	R40741	15	5			
020430	18	23	201660	18	22	R40750	14	6			
020440	19	1	201660	19	1	R41170	15	61			
021180	14	26	210270	14	47	R41180	14	6			
021190	14	27	210330	14	48	R41190	15	62			
021530	14	28	210390	15	49	R41810	19	3			
023090	15	65	210400	15	49	R41820	19	4			
023620	15	72	210650	15	50	R41830	19	2			
023950	15	63	210680	15	59	R42340	14	7			
027260	14	29	210690	15	51	R42360	14	7			
031080	14	79	210700	15	52	R42650	19	1			
038850	15	79	210890	15	53	R42870	14	7			
039950	14	30	213260	14	11C	R45220	14	16			
042370	14	31	214570	17	18	R45310	14	7			
1107389	14	32	219620	18	7	R45450	15	68			
119641	14	15C	220860	15	56	R60428	15	74			
120970	14	1	224400	15	57	R60428	18	2			
124340	14	34	235700	16	11	R60429	15	75			
124350	14	35	236580	16	12	R60429	18	3			
127890	14	36	237390	16	5	R60589	14	10			
156510	14	38	237400	16	14	R60608	14	8			
162930	14	39	242290	15	62	R60636	14	9			
163770	14	40	242300	15	62	R61055	14	10			
164420	18	17	243530	15	59	R61321	14	11			
167160	14	41	243540	15	59	R61476	18	24			
167330	15	70	243580	15	61	R61479	14	12B			
1757903	18	17	243590	15	61	R61480	18	26			
1758209	18	13	243630	18	28	R61575	14	12			
1765302	19	4	243640	18	5	R61669	15	55			
1770500	14	43	243650	15	60	R62066	15	68			
1795104	14	12A	243660	15	60	R62891	14	14			
1799509	18	16	244230	15	84	R64368	14	10			
181840	18	18	244240	15	85	R64451	14	16			
181850	18	19	244250	15	86	R64469	14	15B			
181880	15	76	244260	15	87	R64470	14	15C			
181890	15	76	244280	15	88	R64473	14	15A			
181940	19	1	244290	15	89	R64476	14	15A			
182100	18	6	250330	14	42	R64622	14	16			
182110	18	6	250370	14	37	R64706	14	11B			
182230	17	2	250400	15	54	R64761	14	6			
182740	16	67	250430	14	42	R64765	14	4			
182750	16	67	250480	15	54A	R65072	19	2			
182760	16	67	250490	15	54	R65108	15	62			
182770	16	67	250530	15	82	R66250	14	13			
182780	16	67	250540	15	54B	R66251	14	2			
182790	16	67	250550	15	83	R66305	14	28A			
182800	16	67	250560	14	44	R66338	18	4			
182810	16	67	250580	14	44	R66338	19	3			
182840	16	67	250590	15	83	R66580	16	22			
182850	16	68	250610	18	9	R66581	16	23			
182870	17	1	250630	15	58	R66834	19	1			
182870	17	1A	250640	15	58	R67020	14	17			
182880	17	4	251120	15	77	R67294	16	1			
182890	17	12	251130	15	77	R67295	16	3			
182900	17	9	252500	15	81	R67295	16	3A			
182930	17	8	252510	15	81	R67296	16	4			
182940	17	7	252840	14	11A	R67298	16	6			
182950	17	3	253370	15	80	R67299	16	7			
182960	17	6	962500	15	90	R67299	16	30			
182970	17	5	990510	18	21	R67301	16	8			
182980	17	1	990610	15	78	R67302	16	9			
182990	17	17	990650	18	25	R67303	16	10			
183190	17	14	I102467H	15	91	R67305	16	13			
183210	17	13	I120123	18	27	R67307	16	25			
183220	17	13	I120393	15	64	R67308	16	26			
183530	15	54	I124589	19	1	R67309	16	15			
183840	14	45	I351079R1	18	20	R67310	16	16			
184750	16	2	I493166R1	15	69	R67311	16	17			
189720	15	65	I575813R1	18	14	R67312	16	18			
189730	15	66	I602958R91	18	8	R67313	16	18			
189740	16	26	I651214R1	18	12	R67314	16	19			
189750	16	3A	I651817R1	18	10	R67315	16	20			
189760	16	3C	I694460	18	15	R67316	16	21			

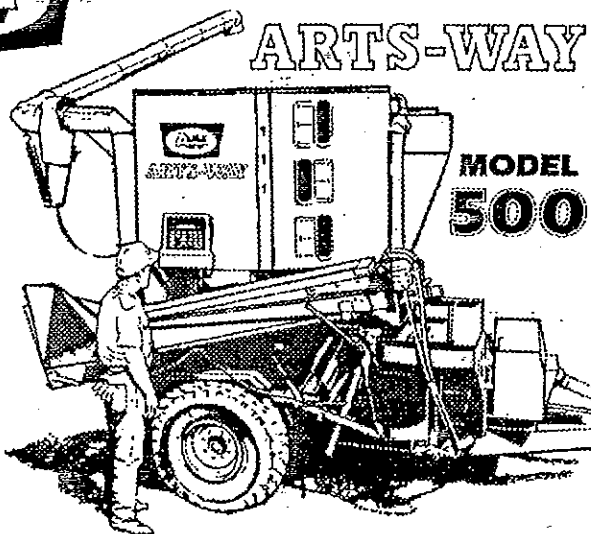
**ARTS-WAY**



**ARTS-WAY 475**  
Hardworking **FEED MIXERS**



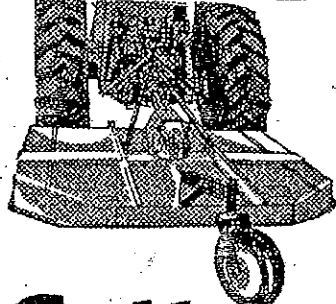
**ARTS-WAY**



**MODEL 500**

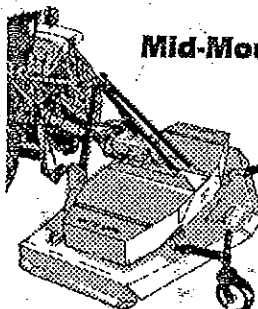
**Extra Capacity, Extra Value**

**ARTS-WAY**

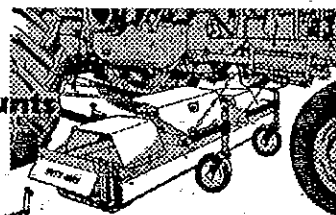


**Cutters**

**Rear-Mounts**

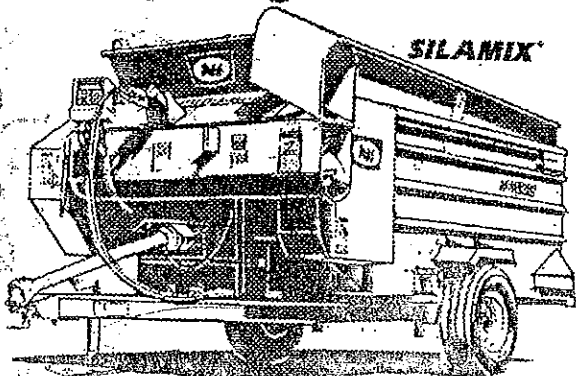


**Mid-Mounts**



**ARTS-WAY Mowers**

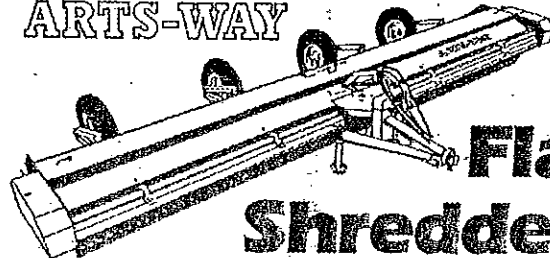
**Better Mixing at Lower Cost**



**SILAMIX**

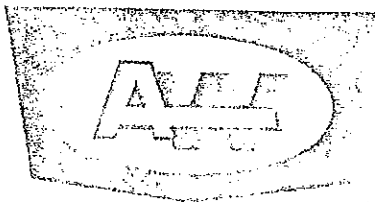
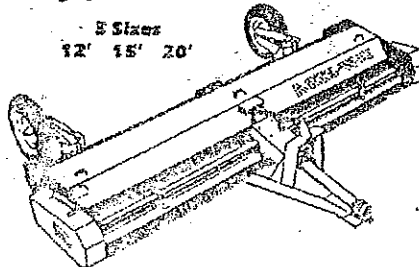
**ARTS-WAY 800B & 850B**

**ARTS-WAY**



**Flail Shredders**

**3 Sizes**  
12' 15' 20'



**ARTS-WAY MANUFACTURING CO., INC.**  
ARMSTRONG, IOWA 50514  
(712) 564-3131