

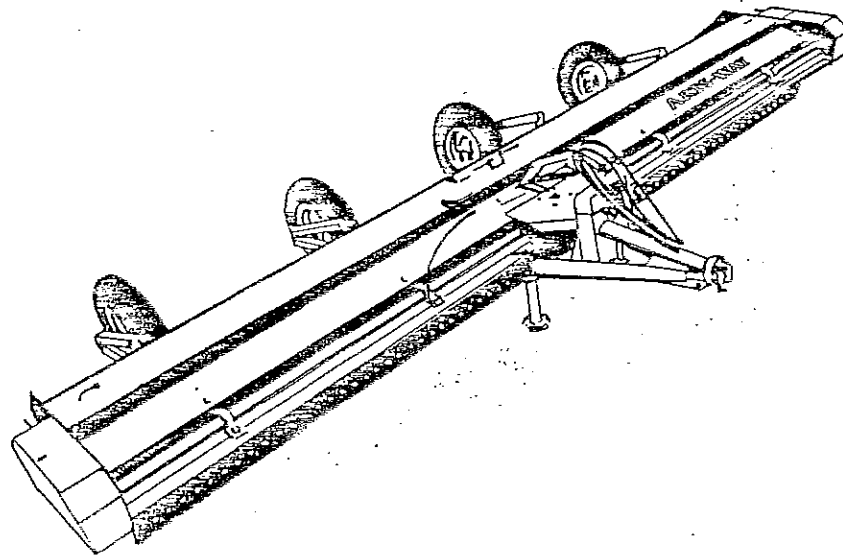
ARTS-WAY

OPERATOR AND

PARTS MANUAL

FOR

SHREDDER



MODELS 144A, 180A & 24CA

ARTS-WAY

Mfg. Company / Armstrong, Iowa 50514 / Phone (712) 864-3131

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.

Be careful when ascending or descending the ladder. Wet shoes or boots are slippery.

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 Arts-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 Arts-Way Manufacturing Company, Inc. (712) 864-3131, Armstrong, IA 50514

LIMITED WARRANTY

The ART'S-WAY MANUFACTURING COMPANY, INCORPORATED 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 COMPANY, INCORPORATED'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 COMPANY, INCORPORATED dealer or at the factory at the option of ART'S-WAY MANUFACTURING COMPANY, INCORPORATED.

(3) ART'S-WAY MANUFACTURING COMPANY, INCORPORATED'S warranty does not extend to parts and elements not manufactured by ART'S-WAY MANUFACTURING COMPANY, INCORPORATED 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 COMPANY, INCORPORATED MAKES NO OTHER WARRANTY EXPRESS 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 COMPANY, INCORPORATED'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 COMPANY, INCORPORATED, or any alteration or repair by other than an authorized ART'S-WAY MANUFACTURING COMPANY, INCORPORATED 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 COMPANY, INCORPORATED 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.

Arts-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 manufactured previously. Arts-Way, or its dealers, accept no responsibility for variations which may be evident in the actual specifications of its products and the statements and descriptions contained in this publication.

144A, 180A, 240A, SHREDDER
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INTRODUCTION

This manual has been prepared to acquaint you with the proper assembly, operation, adjustment, service and lubrication of the Arts-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 144A, 180A and 240A Shredders have been designed to efficiently chop stalks, stuble, 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)	3,328	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" - 12 (.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.

* Based on IFI 5th Edition Technical Data N-12/N-1E, using Equation (1) and a torque coefficient: K = 0.20 for nonplated steel fasteners and K = 0.15 for plated fasteners.

FIGURE 1 BOLT TORQUE

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.



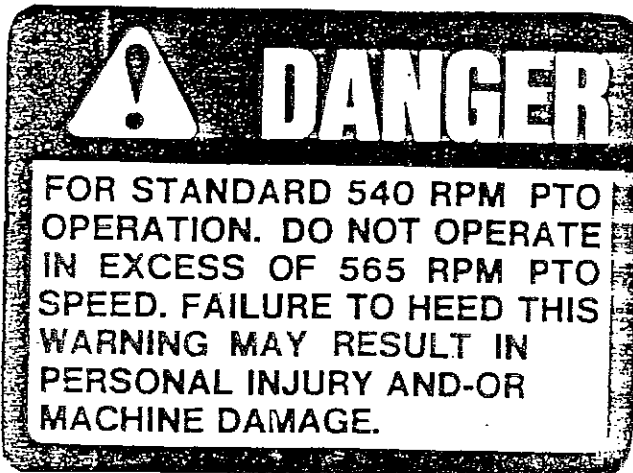
WARNING

Denotes a specific potential hazard.

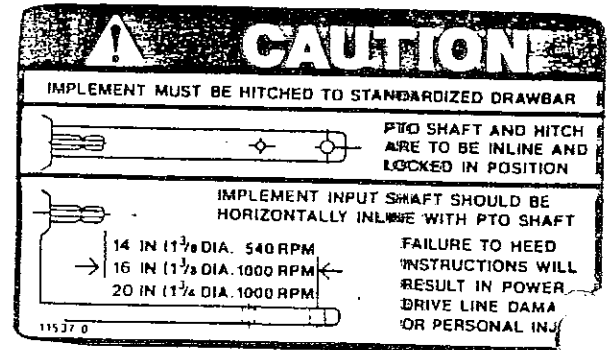


DANGER

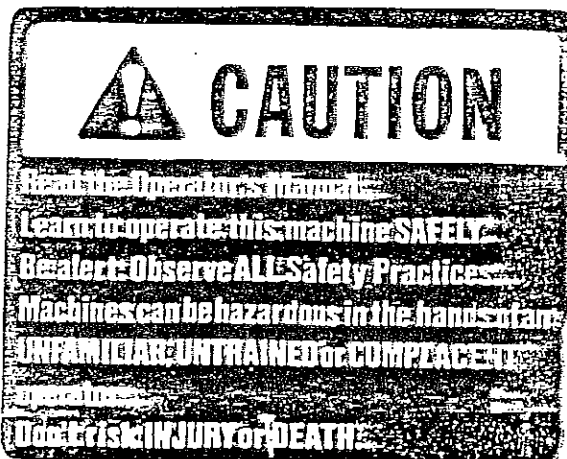
Denotes the most serious specific potential hazard.



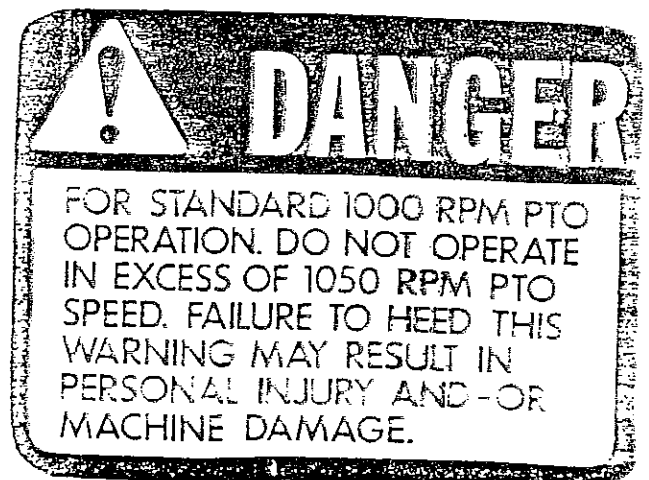
OPERATE POWER TAKE OFF
AT PROPER RPM



HITCH PROPERLY TO TRACTOR



OPERATE MACHINE SAFELY



OPERATE POWER TAKE OFF
AT PROPER RPM

⚠ 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.

684459M1

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 cleaning 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.

11538-0

FOLLOW 4 CAUTION ITEMS

⚠ 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

40h 20h 40h 8h n=hours

When used in winter the outer tube must be greased to prevent it freezing solid!
196RD-C

P.T.O. GUARDS & LUBRICATION

⚠ 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 ONTO TRACTOR AND IMPLEMENT SHAFTS. BE SURE TRACTOR DRAWBAR AND IMPLEMENT HITCH ARE ADJUSTED CORRECTLY. GREASE TELESCOPING SHAFT REGULARLY TO MINIMIZE THRUST FORCES.

P7K 15110-C

ROTATING DRIVE LINE

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 (two) 1"-8 x 3" hex bolts and the (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.

II. ATTACHING WHEEL ASSEMBLY

1. Calculate approximate position of axle brackets according to the row spacing desired. The outer wheels should run between the out two rows being cut. The bracket should be mounted to the inside of the tire. On the 180A&240A, or if equipped with additional set of carrier wheels, install in reversed position on the next row in on the 180A or two rows in on the 240A.
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 Figure 2 for 540 or 1000 RPM operation of P.T.O.

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

Install safety chain from Shredder to tractor drawbar.

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.

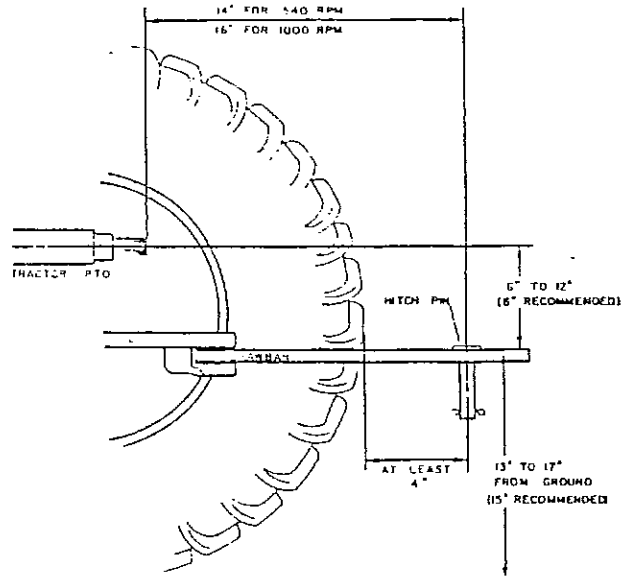


FIGURE 2 TRACTOR DRAWBAR

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

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.

GEARBOX OIL LEVEL

Check to insure that the gear box has sufficient oil. DO NOT over fill the gear box. Correct gear box 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 show in Figure 3, so a nickel will just pass between each coil.

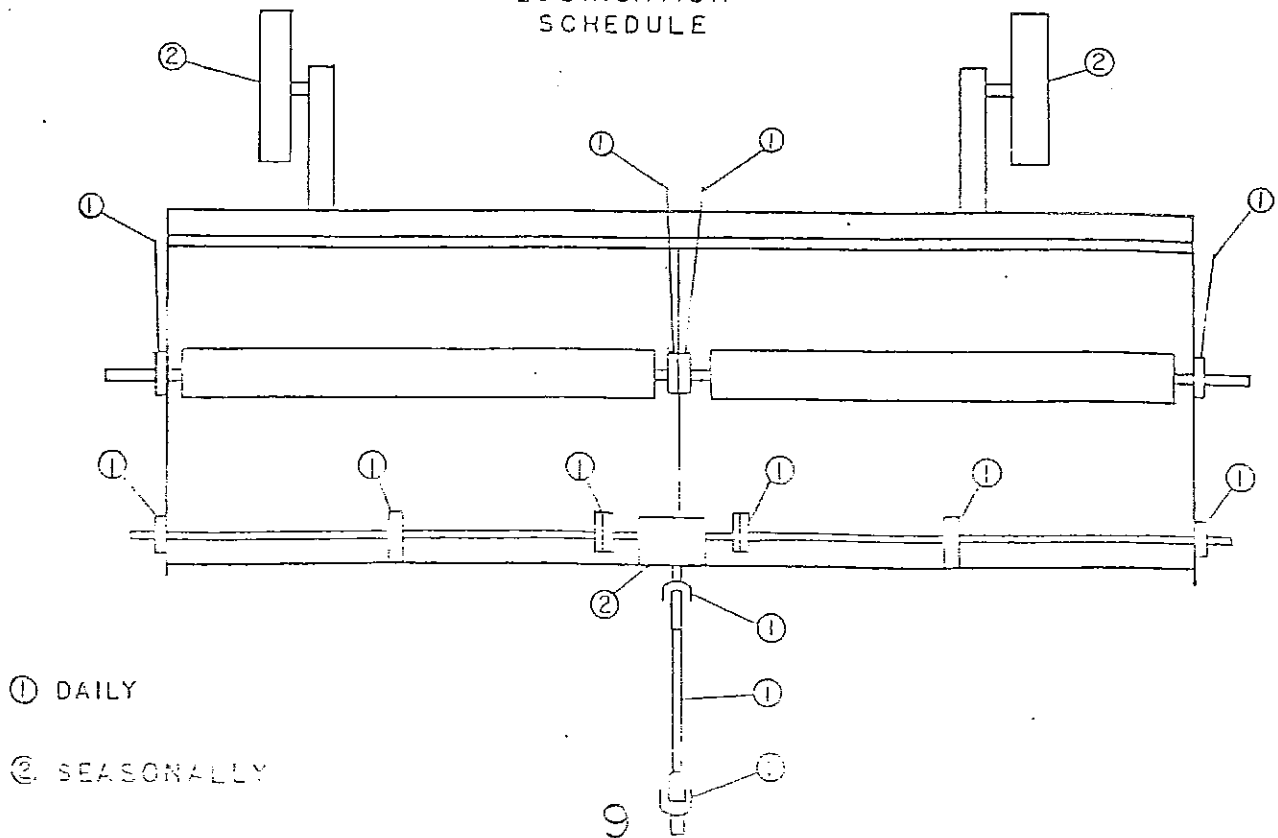


FIGURE 3 BELT TENSION

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 CHART BELOW.
- II. CHECK GEAR BOX LUBRICATION LEVEL SEASONALLY. CORRECT GEAR BOX 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).

LUBRICATION
SCHEDULE



I. REPLACEMENT OF KNIVES

1. Disconnect P.T.O. from tractor. Make sure machine is adequately blocked.
2. When replacing knives, 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.
7. 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.
8. Re-attach remote lubrication lines, turn shredder over and re-assemble. Lubricate new bearings with three (3) pumps of grease.

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

1. Do not attempt to replace bearings from underneath the shredder. The proper way is to 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. 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.



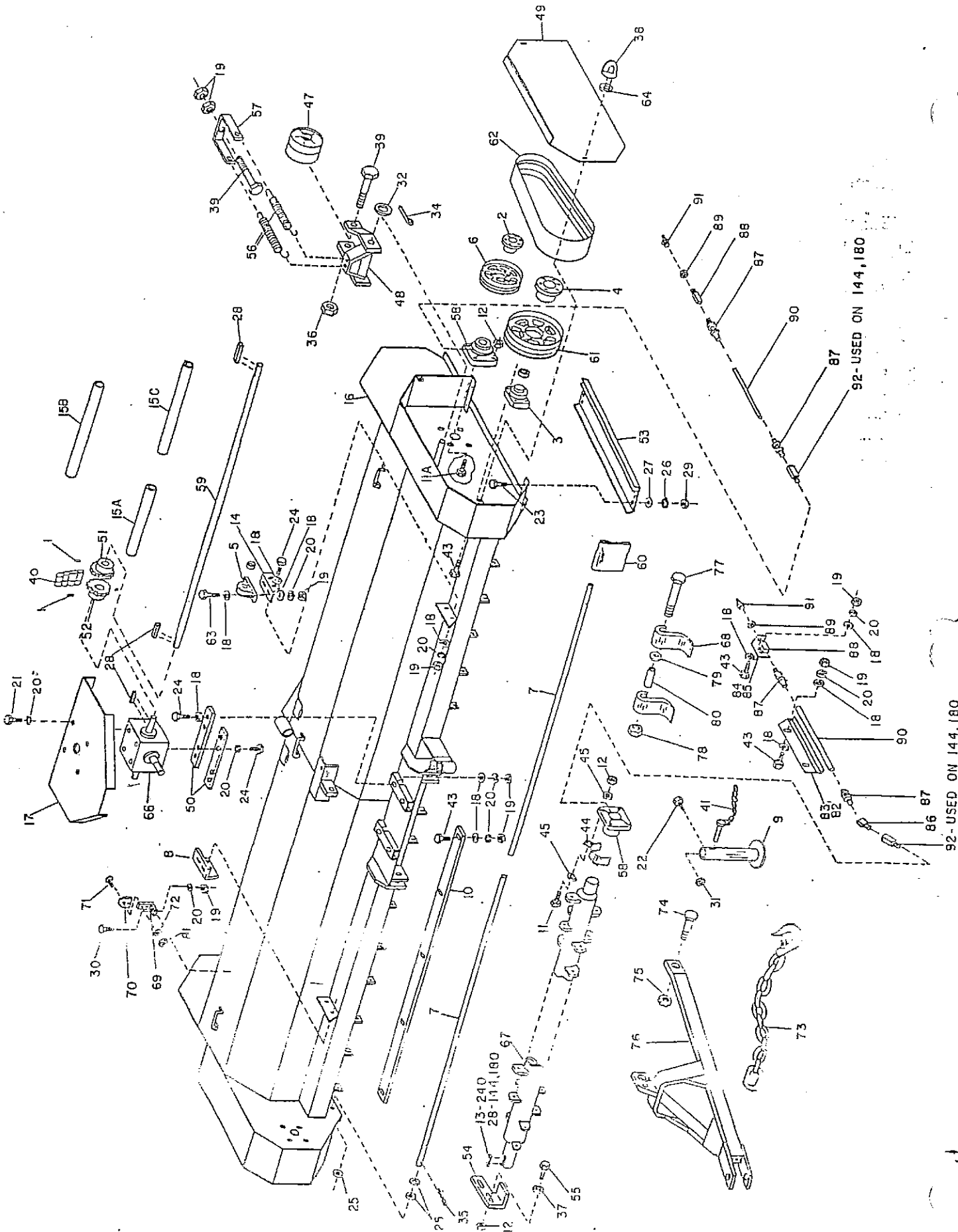
CAUTION: Never put your hands inside of the machine during operation, or perform any kind of an adjustment, lubrication or repair to the machine without shutting off the tractor ignition and placing key in pocket. Keep children and bystanders away from machine in operation.

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.

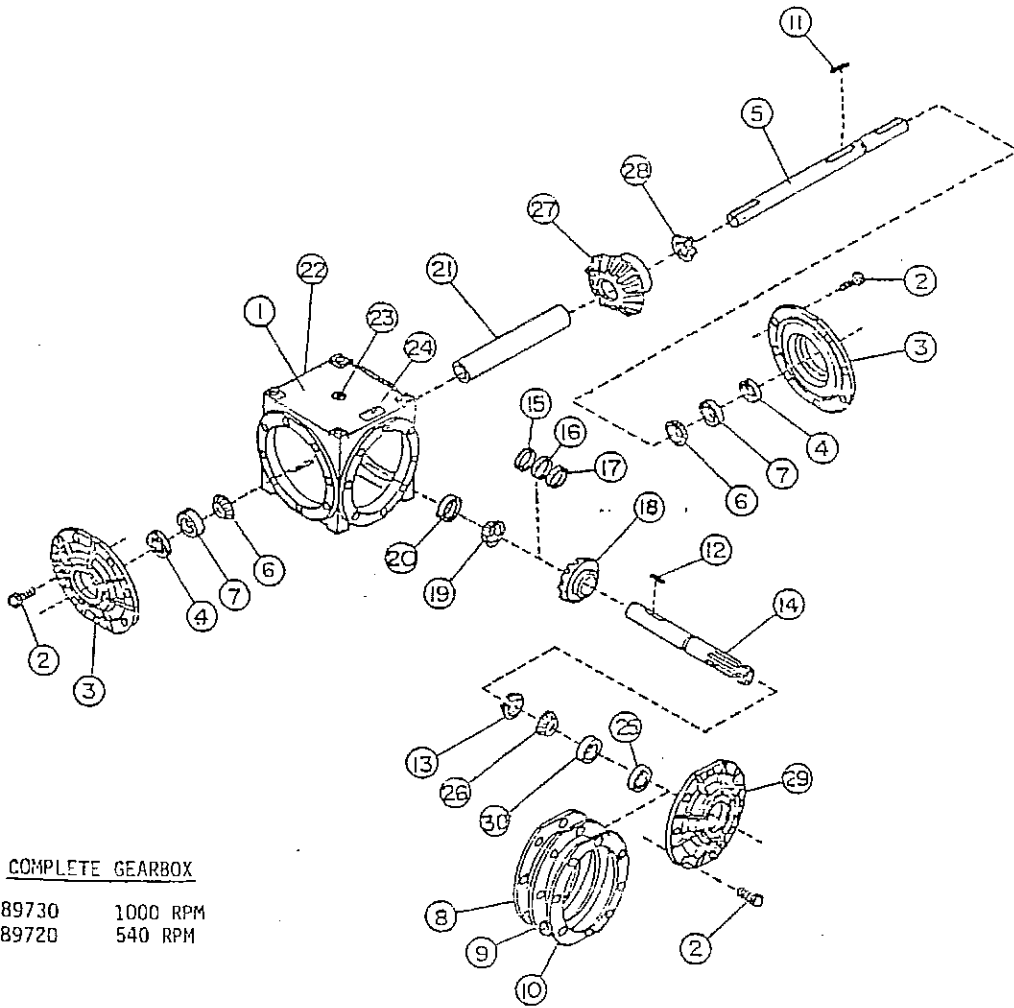
First, flush entire unit with water to remove all accumulations of dirt, grease, or material. Then check for cracked, worn, or damaged belts, bearings, blades, or other parts. Early detection and replacement of failing parts will save "Downtime" next season. Repaint any area(s) where the paint has been 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.



BASIC UNIT

ITEM	PART NO.	QTY 144	QTY 180	QTY 240	DESCRIPTION
1	120970	8	8	8	SCREW, 3/8"-16 x 1/2" AHSS NY-LK
2	R37960	2	2	-	HUB, ROTOR SHEAVE QD, SK 1-3/4"
	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
	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.
	R40750	2	-	-	SHEAVE, ROTOR 3B QD 8.38" O.D.
	R64761	-	-	2	SHEAVE, ROTOR 5B QD 8.35" O.D.
7	R42360	-	2	-	ROD, SKIRT 92"
	R42340	1	-	-	ROD, SKIRT 80"
	R42870	1	-	-	ROD, SKIRT 67"
	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
	R60589	2	-	-	BAR, SHREDDER
	R64368	-	-	2	BAR, SHREDDER
11	R61321	4	4	-	BOLT, 9/16"-18 x 3" HHCS G5 ZN
11A	R61718	4	4	-	BOLT, 9/16"-18 x 1-3/4" HHCS G5 ZN
11	R64706	-	-	4	BOLT, 5/8"-18 x 3-1/4" HHCS
11A	213260	-	-	8	BOLT, 5/8"-18 x 2-1/4" HHCS
12	R61575	12	12	-	NUT, 9/16"-18 2 WAY HEX LOCK
	1795104	-	-	12	NUT, 5/8"-18 2 WAY HEX LOCK
13	R66305	-	-	2	KEY, 1/2" SQ x 2"
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, 180
	R64451	1	-	-	HOUSING, 144
	R45220	-	-	1	HOUSING, 240
17	R67020	1	1	1	SHIELD, GEAR BOX
18	005200	38	38	56	WASHER, .562" x 1.375" x .109" FLT
19	005360	35	35	45	NUT, 1/2"-13 HEX GR5 ZN
20	005370	35	35	45	WASHER, 1/2" LOCK ZN
21	010730	4	4	4	BOLT, 1/2"-13 x 1-1/4" HHCS G5 ZN
22	012051	1	1	2	BOLT, 1/4"-20 x 3/4" HHCS G5 ZN
23	012260	8	8	8	BOLT, 3/8"-16 x 1" HHCS G5 ZN
24	014770	12	12	16	BOLT, 1/2"-13 x 1-1/2" HHCS G5 ZN
25	020430	6	6	6	WASHER, .688" x 1.75" x .134" FLT
26	021180	8	8	8	WASHER, 3/8" LOCK
27	021190	8	8	8	WASHER, .438" x 1.00" x .083" FLT
28	021530	8	8	6	KEY, 3/8" SQ x 2"
29	027260	8	8	8	NUT, 3/8" HEX
30	031080	1	1	1	BOLT, 1/2"-13 x 1" HHCS GR5 ZN
31	042371	1	1	1	NUT, 1/4"-20 HEX LE GA CC
32	1107389	2	2	2	WASHER, 1.06" x 1.00" x .134" FLT
33	115250	1	1	1	TAG, METAL SERIAL NO.
34	124340	2	2	2	PIN, 3/16" x 1-1/2" COTTER, ZN
35	124350	4	4	4	PIN, 1/8" x 1-1/2" COTTER, ZN
36	127890	2	2	2	NUT, 1/2"-13 HX LOCK, DISTHD G5
37	129230	4	4	-	WASHER, FLAT .594" x 1.187" x .095"
	025210	-	-	2	WASHER, FLAT .656" x 1.312" x .095"
38	156510	4	4	4	LATCH, MAIN DRIVE SHIELD
39	152920	2	2	2	BOLT, 1/2"-13 x 5-1/2" HF G1
40	153770	2	2	2	CHAIN ASSY, 60 x 1-
41	167160	1	1	2	PIN AND CHAIN ASSY
42					
43	1770500	19	19	21	BOLT, 1/2"-13 HHCS GR5 ZN
44	183530	4	4	-	GUARD WELD, BEARING W/SLOT
	223490	-	-	4	GUARD WELD, W/SLOT
45	183840	8	8	8	5/8" REWORK WASHER
46	204510	2	2	2	NAIL, 1/4" GRIP
47	210270	2	2	2	PULLEY ASSY, IDLER
48	210230	2	2	2	IDLER WELDMENT

ITEM	PART NO.	QTY 144	QTY 180	QTY 240	DESCRIPTION
49	210390	1	1	1	SHIELD, RIGHT
	210400	1	1	1	SHIELD, LEFT
50	210650	2	2	2	BRACKET, GEAR BOX
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	212260	2	2	2	SCRAPER, SHREDDER
55	212970	4	4	-	BOLT, 9/16"-18 x 2" HHCS G5 ZN
56	220860	4	4	4	SPRING, EXTENSION 5.75" OAL
57	224400	2	2	2	CLIP, TAKE-UP BOLT
58	243440	4	4	-	BEARING, 1-3/4" FLG
	241740	-	-	4	BEARING, 2-3/16" FLG
59	243530	-	2	-	SHAFT, 180, 1-3/8" JACK
	243540	2	-	-	SHAFT, 144, 1-3/8" JACK
	210680	-	-	2	SHAFT, 240, 1-3/8" JACK
60	243650	15	2	25	DEFLECTOR, STEEL 9.50" x 5.5"
	243660	-	17	-	DEFLECTOR, STEEL 9.25" x 5.5"
61	R40330	2	-	-	SHEAVE, JACKSHAFT, 540 RPM, 12.75 O.D.
	R41170	-	2	-	SHEAVE, JACKSHAFT, 540 RPM, 12.75 O.D.
	243590	-	2	-	SHEAVE, JACKSHAFT, 1000 RPM, 11.35, O.D.
	243580	-	-	2	SHEAVE, JACKSHAFT, 1000 RPM, 11.35, O.D.
62	242300	2	-	-	BELT, 3B x 72"
	242290	-	2	-	BELT, 4B x 72", 540 RPM
	R41190	-	2	-	BELT, 4B x 70", 1000 RPM
	R65108	-	-	2	BELT, 5B x 70"
63	023950	4	4	8	BOLT, 1/2"-13 x 2" HHCS GR5 ZN
64	I120393	4	4	4	WASHER, 5/16" SAE x .340" I.D. x .690"O.D.
65					
66	189720	1	1	-	GEARBOX, 540 RPM COMPLETE
	189730	-	1	1	GEARBOX, 1000 RPM COMPLETE
67	182740	1	-	-	ROTOR ASSY W/KNIVES R.H. W/ OFFSET
	182750	1	-	-	ROTOR ASSY W/KNIVES L.H. W/ OFFSET
	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
	182780	-	1	-	ROTOR ASSY W/KNIVES R.H. W/ OFFSET
	182790	-	1	-	ROTOR ASSY W/KNIVES L.H. W /OFFSET
	182800	-	1	-	ROTOR ASSY W/H.S. KNIVES R.H. W/ OFFSET
	182810	-	1	-	ROTOR ASSY W/H.S. KNIVES L.H. W/ OFFSET
	182840	-	-	1	ROTOR ASSY W/H.S. KNIVES R.H. W/ OFFSET
	182850	-	-	1	ROTOR ASSY W/H.S. KNIVES L.H. W/ OFFSET
68	R62066	-	-	1	KIT, OFFSET KNIVES (2)
	R40140	80	96	-	STANDARD KNIVES
	R40141	80	96	-	HARD SURFACED KNIVES
	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	2	2	2	BOLT, 5/16"-18 x 3/4" CRG
72	023620	2	2	2	WASHER, 5/16" LOCK
73	1765302	1	1	1	KIT, SAFETY CHAIN
74	R66338	2	2	2	BOLT, 1"-8 x 3" HHC
75	R65072	2	2	2	NUT, 1"-8 HEX LOCK
76	R66834	1	1	1	HITCH ASSY.
77	R61567	40	48	64	BOLT, 5/8"-11 x 7" HHC
78	R66867	40	48	64	NUT, 5/8"-11 HEX LOCK
79	R41660	40	48	64	SPACER, BLADE
80	R41650	40	48	64	BUSHING, BLADE
81	023630	2	2	2	NUT, 5/16"-18 HEX LOCK
82	244210	1	1	1	BRACKET, TUBE L.H.
83	244220	1	1	1	BRACKET, TUBE R.H.
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" NPT
87	244260	8	8	8	CONNECTOR, TUBE 1/8" NPT TO 1/4"
88	244280	4	4	4	CONNECTOR, BULKHEAD 1/4" PTF
89	244290	4	4	4	NUT, LOCK, BULKHEAD 1/8" NPSM
90	962500				TUBE, NYLON 1/4" O.D.
91	I102467H	4	4	4	1/4" LUBE FITTING
92	244270	4	4	-	BUSHING, REDUCER 1/4"-28 -1/8" NPT

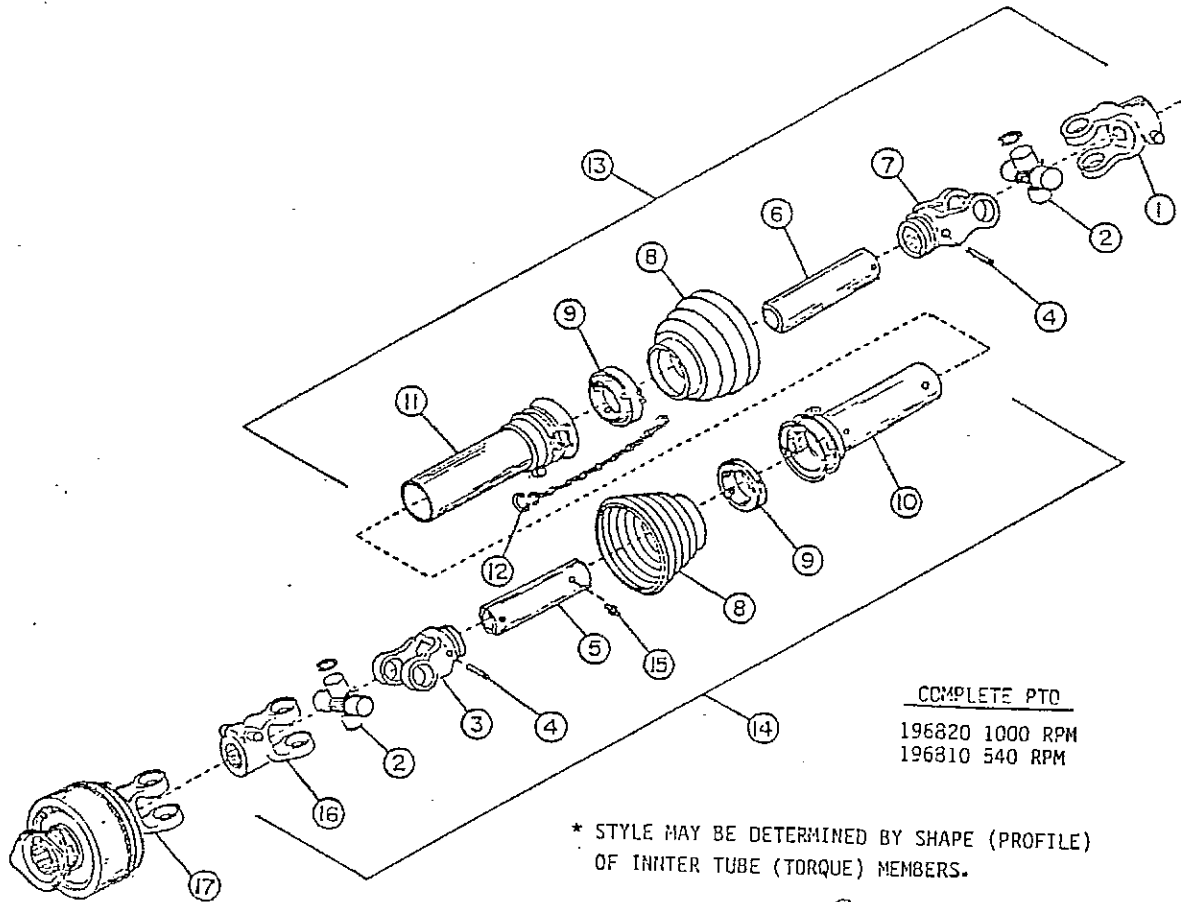


COMPLETE GEARBOX

189730 1000 RPM
 189720 540 RPM

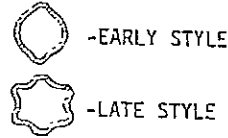
KEY	PART NO.	QTY	DESCRIPTION
1	R67294	1	HOUSING
2	184750	24	CAPSCREW, SEMS 3/8-16 x 1-1/4
3	R67295	2	CAP
4	R67296	2	SEAL, NTL 470136 1.50 x 2.25 x .50
5	237390	1	SHAFT, OUTPUT
6	R67298	2	CONE, BRG TMKN 27889 1.50 ID
7	R67299	2	CUP, BRG TMKN #27820 3.15 OD
8	R67301	VAR	GASKET (.015)
9	R67302	VAR	GASKET (.005)
10	R67303	VAR	GASKET (.003)
11	235700	1	KEY
12	236580	1	KEY
13	R67305	1	RETAINING RING
14	237400	1	SHAFT
15	R67309	VAR	SHIM (.002)
16	R67310	VAR	SHIM (.005)
17	R67311	VAR	SHIM (.010)
18	R67312	1	GEAR, 22 TOOTH (1000 RPM)
	R67313	1	GEAR, 30 TOOTH (540 RPM)
19	R67314	1	CONE, BRG TMKN #2696 1.16 ID
20	R67315	1	CUP, BRG TMKN #2631 3.62 OD
21	R67316	1	SPACER
22	R66520	1	PLUG, PIPE 1/2 NPT SOC HD
23	R66521	1	PLUG PIPE 1/2 NPT SOC HG VENT
24		1	ID TAG
25	R67307	1	SEAL, NTL #470169 1.37 x 2.25 x .50
26	189740	1	CONE, BRG #HM88649 (LATE STYLE USE WITH 189760)
	R67308	1	CONE, BRG TMKN #27875 1.38 ID (EARLY STYLE USE WITH R67299)
27	R67317	1	GEAR, 22 TOOTH (1000 RPM)
	R67318	1	GEAR, 20 TOOTH (540 RPM)
28	R67319	1	RETAINING RING
29	189750	1	CAP (LATE STYLE USE WITH 189740 AND 189760 BRG)
	R67295	1	CAP (EARLY STYLE USE WITH R67308 AND R67298 BRG)
30	189760	1	CUP, BEARING #HM88610 1.84 OD (LATE STYLE USE WITH 189740)
	R67299	1	CUP, BEARING TMKN #27820 3.15 OD (EARLY STYLE USE WITH R67308)

POWER TAKE OFF



COMPLETE PTO
196820 1000 RPM
196810 540 RPM

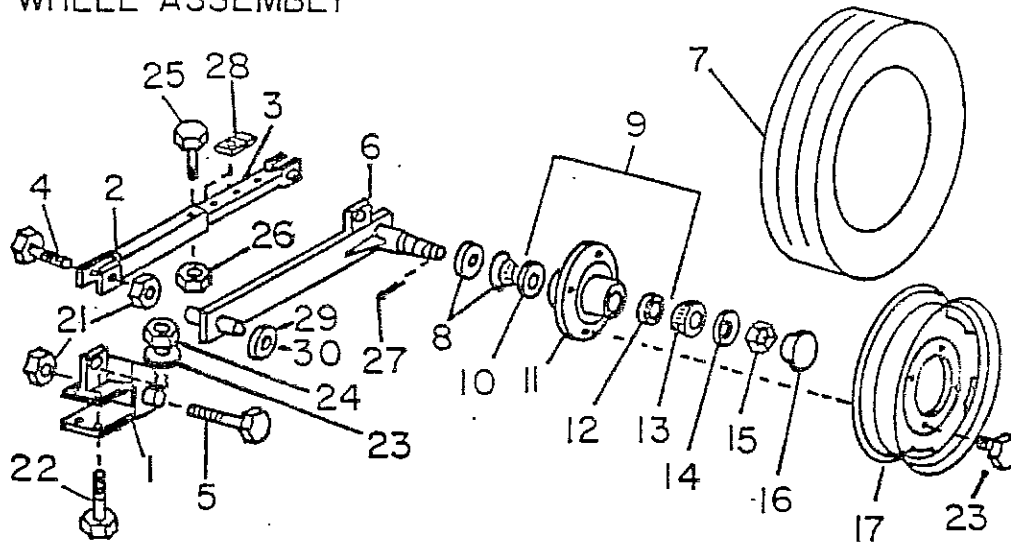
* STYLE MAY BE DETERMINED BY SHAPE (PROFILE) OF INNER TUBE (TORQUE) MEMBERS.



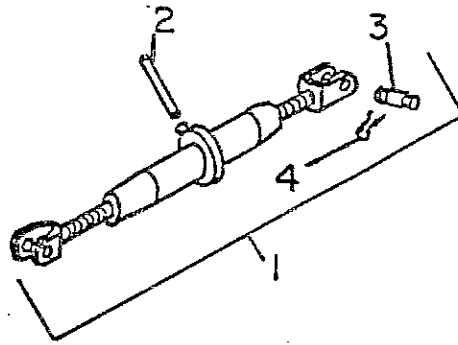
"WALTERSCHEID" POWER TAKE OFF

KEY	PART NO.	80	80VS	144	180	240	DESCRIPTION
1	182870	1	1	1	--	--	YOKE, 1-3/8" 6 SPL Q.D. 540 RPM
	182980	--	--	1	1	1	YOKE, 1-3/8" 21 SPL Q.D. 1000 RPM
2	182230	2	2	2	2	2	KIT, CROSS AND BEARING
3	182950	1	1	1	1	1	INBOARD YOKE 2S (EARLY STYLE)*
	196770	1	1	1	1	1	INBOARD YOKE S3 (LATE STYLE)*
4	182880	2	2	2	2	2	SPRING PIN 10 x 85 (EARLY STYLE)*
	196740	2	2	2	2	2	SPRING PIN 10 x 90 (LATE STYLE)*
5	182970	1	1	1	1	1	OUTER PROFILE 2S (EARLY STYLE)*
	196760	1	1	1	1	1	OUTER PROFILE S3 (LATE STYLE)*
6	182960	1	1	1	1	1	INNER PROFILE 1S (EARLY STYLE)*
	196750	1	1	1	1	1	INNER PROFILE S4 (LATE STYLE)*
7	182940	1	1	1	1	1	INBOARD YOKE 1S (EARLY STYLE)*
	196730	1	1	1	1	1	INBOARD YOKE S4 (LATE STYLE)*
8	182930	2	2	2	2	2	SHIELD CONE 6 RIB
9	182900	2	2	2	2	2	BEARING RING SC24
10	196790	1	1	1	1	1	INNER SHIELD TUBE
11	196780	1	1	1	1	1	OUTER SHIELD TUBE
12	182890	1	1	1	1	1	SAFETY CHAIN
13	183210	--	--	1	1	1	TRACTOR HALF 1000 RPM (EARLY STYLE)*
	196840	--	--	1	1	1	TRACTOR HALF 1000 RPM (LATE STYLE)*
	183220	1	1	1	--	--	TRACTOR HALF 540 RPM (EARLY STYLE)*
	196860	1	1	1	--	--	TRACTOR HALF 540 RPM (LATE STYLE)*
14	183190	1	1	1	1	1	IMPLEMENT HALF (EARLY STYLE)*
	196850	1	1	1	1	1	IMPLEMENT HALF (LATE STYLE)*
15	196890	1	1	1	1	1	GREASE ZERK
16	182870	1	1	1	1	1	YOKE, 1-3/8" 6 SPL Q.D.
17	182990	1	1	1	1	1	CLUTCH, FRICTION (REPLACES ITEM #16)
--	182860	2	2	2	2	2	KIT, Q.D. PIN (INCLUDED WITH ITEMS #1 & #16)
18	214570	--	--	1	1	1	YOKE, 1-3/4-20 SPLINE (AVAILABLE THROUGH PARTS ONLY)

WHEEL ASSEMBLY

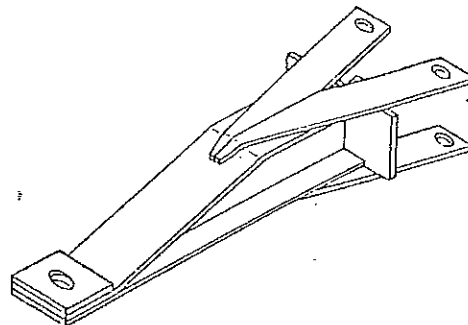


ITEM	PART NO.	QTY 144	QTY 180	QTY 240	DESCRIPTION
1	R40440	1	1	1	BRACKET, AXLE ADJ. & ATT. ASSY.
2	R60428	1	1	1	TUBE, OUTER ADJ. ASSY.
3	R60429	1	1	1	TUBE, INNER ADJ. ASSY.
4	R66338	-	-	-	BOLT, 1"-8 x 3" HHCS GR5 ZN
5	243640	-	-	-	BOLT, 1"-8 x 10" HHCS GR5 ZN
6	182100	1	1	1	AXLE ARM ASSY. L.H.
	182110	1	1	1	AXLE ARM ASSY. R.H.
7	219620	1	1	1	TIRE
8	I602958R91	1	1	1	CONE, 1.25" I.D. W/SEAL
9	1803506	1	1	1	HUB, 4-BOLT W/CUPS
10	I651817R1	1	1	1	CUP (18860)
11	1765108	1	1	1	HUB, 4-BOLT W/O CUPS
12	I651814R1	1	1	1	CUP (1748009)
13	1758209	1	1	1	CONE, .75" I.D.
14	I575813R1	-	-	-	WASHER, 3/4" FLAT
15	I69448D	-	-	-	NUT, 3/4"-16 SLOTTED HEX JAM
16	1799509	1	1	1	CAP, WHEEL HUB
17	1757903	1	1	1	RIM, 15" x 4-1/2"
	164420	1	1	1	VALVE STEM W/CORE & CAP
18	181840	1	1	1	KIT, WHEEL ASSY. L.H. (COMPLETE)
19	181850	1	1	1	KIT, WHEEL ASSY. R.H. (COMPLETE)
20	I351079R1	-	-	-	BOLT, WHEEL HUB
21	990510	-	-	-	NUT, 1"-8 HEX 2 WAY LOCK
22	201660	-	-	-	BOLT, 5/8"-11 x 6" HHCS
23	020430	-	-	-	WASHER, 5/8" FLAT
24	R61476	-	-	-	NUT, 5/8"-11 HEX LOCK
25	990650	-	-	-	BOLT, 5/8"-11 x 3" HHCS
26	R61480	-	-	-	NUT, 5/8"-18 HEX LOCK
27	I120123	-	-	-	PIN, 1/8" x 1-1/4" COTTER
28	243630	2	4	4	SHIM, ADJUSTING TUBE
29	003360	-	-	-	WASHER, 1.03 I.D.X.075
30	006870	-	-	-	WASHER, 1.03 I.D.X.060



ITEM	PART NO.	QTY 144	QTY 180	QTY 240	DESCRIPTION
1	R39520	1	1	1	JACK, RATCHET
2	R41830	1	1	1	HANDLE, JACK
3	R41810	-	-	-	PIN, YOKE
4	R41820	-	-	-	PIN, COTTER HAIR

DISK HITCH



<u>KEY</u>	<u>PART NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	R42650	1	DISK HITCH
	20166-0	2	BOLT, 5/8 x 6 HHCS, G5
	02044-0	2	WASHER, 5/8 LOCK
	I124589	2	NUT, 5/8
	18194-0	-	KIT, DISK HITCH COMPLETE

(

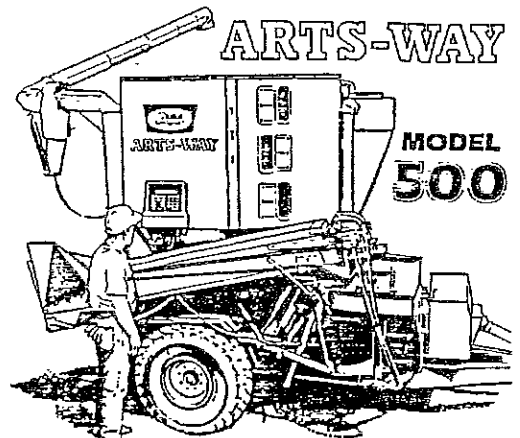
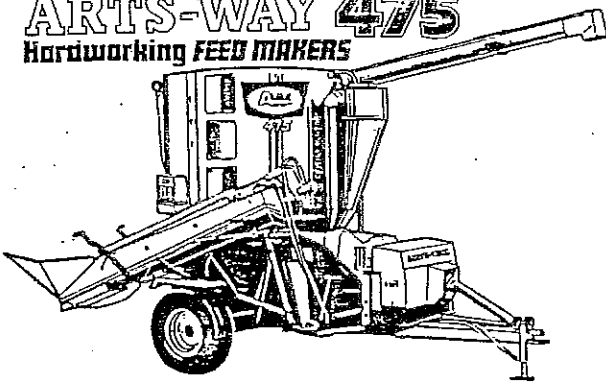
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ARTS-WAY

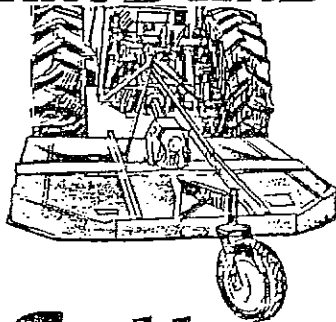


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Extra Capacity, Extra Value

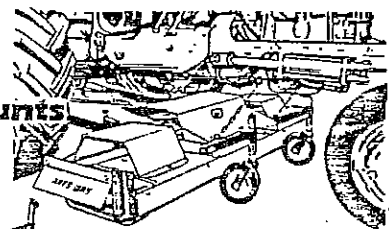
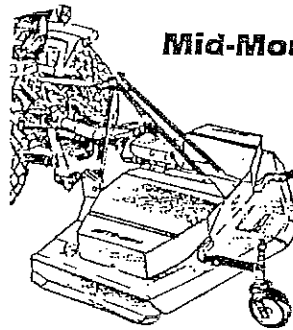
ARTS-WAY



Cutters

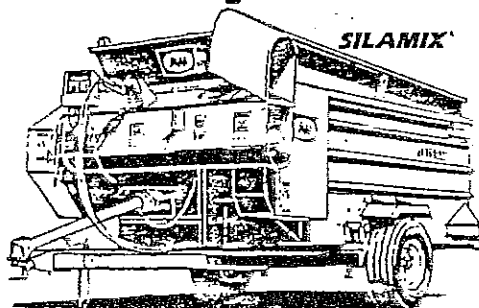
Rear-Mounts

Mid-Mounts



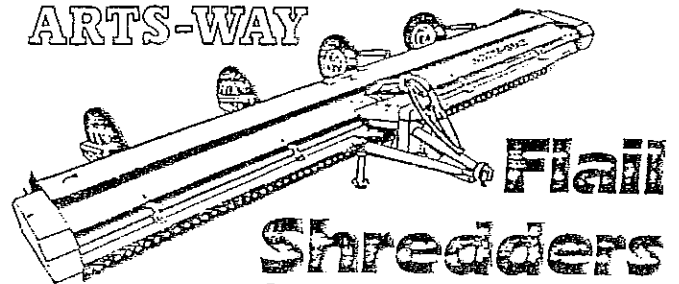
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Better Mixing at Lower Cost



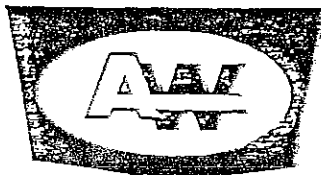
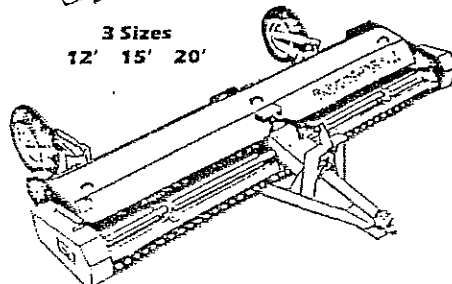
ARTS-WAY 800E & 850E

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Flail Shredders

3 Sizes
12' 15' 20'



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