

SHREDDER

ASSEMBLY - OPERATION

AND MAINTENANCE

INSTRUCTIONS

MODEL

10-12-12R

SH72

MATHEWS COMPANY . CRYSTAL LAKE, ILLINOIS, 60014 . U.S.A.

ASSEMBLY INSTRUCTIONS

CHECK PACKAGES AND BUNDLES TO MAKE SURE THAT THEY CORRESPOND WITH YOUR SHIPPING DOCUMENTS. MAKE CLAIMS FOR SHORTAGES IMMEDIATELY.



FIGURE 1.

Place the Shredder Body Assembly on blocking so that it sets approximately 6" to 10" above the ground. Mount the tires and wheels to the Wheel Mount Weldment (Figure 8. Ref. 19). Determine the desired wheel spacing for the crop to be cut and place the Wheel Mount Weldment against the axle of the machine. Proper alignment with the axle may be obtained by use of the rear Mechanical Ram. Place the Wheel Mount Clamping Bracket in position (Figure 8. Ref. 18), and bolt securely using the ½-13 x 2" H.H.C.S., nuts and washers provided. Follow the same bolting procedure for the remaining three wheel mounts. Tighten bolts evenly into place.

The drawbar assembly may now be bolted to the front of the machine using the $5/8-11 \times 1-1/2$ HHCS provided. At this time, the front mechanical ram should also be installed.

The rear Hitch Weldment is held in place by $5/8-11 \times 1-3/4$ HHCS Place all bolts in holes and draw finger tight, before tightening down. Tighten bolts evenly into place.

Mount the power Take-Off Shaft in place as shown in Figure 8

LUBRICATION

Check oil level in gear box. Use No. 140 oil. Oil level should be up to oil level plug at side of gear box. Chain oiler should be filled with light engine oil to within 1/8" of the top of the tube. Be sure oiler is positioned correctly. Illustration shows points to lubricate with grease gun. The bearings have been greased; no additional lubricant is necessary to start. Regrease at required intervals. Add grease slowly with shaft revolving wherever possible until grease comes rapidly out of pressure relief hole in grease fitting. Use caution when using high-pressure high-volume gun. Use grease sparingly and just give it enough to do the job. When you put the machine away at the end of the season, fill the bearings with grease to eliminate any cavities where condensation may occur.

OPERATING INSTRUCTIONS

Adjust Drawbar for Best Performance

Drawbar should operate level between the machine and tractor. Adjustment is provided for raising or lowering by means of a mechanical ram, located above the drawbar.

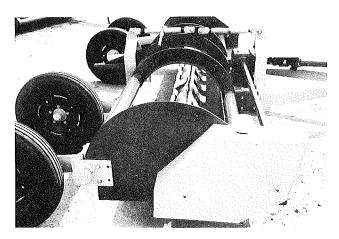


FIGURE 2.

ASSEMBLY INSTRUCTIONS

CUTTING HEIGHT ADJUSTMENT

Cutting Height Adjustment is made by cranking the mechanical rams furnished on the machine, or by using a hydraulic cylinder in place of the rear mechanical ram, such as used on a plow. A hydraulic cylinder is desirable in rocky fields, especially if you see a rock you can raise the machine up and over. It is best, however, to stop and pick up the rocks.

TRACTOR GROUND SPEED AND POWER TAKE-OFF SPEED

Operating with a Power Take-Off speed of 540 RPM's and with a ground speed of from three to six miles per hour, you may shred heavy crops provided you have power available. The Model 12 Shredder requires a 4 plow tractor. Horsepower requirements vary with the weight of crop and the type of shredding. Horsepower is reduced by traveling at a slower forward speed. The right combination of power take-off speed and ground speed will produce the best results.

BREAKING IN PERIOD

It takes approximately 10 to 15 acres of shredding to get the inside of the machine and the blades polished to get the best performance. As the machine works in, performance will get better. After the machine has been operated a few hours, check all nuts and bolts to make sure they are tight. Open front cover and check knife bolts to be sure they are tight. NOTE: When sharpening blades,

try to maintain original angle of cutting edge as close as possible.

MAINTENANCE OF SHREDDER BLADES

The machine is designed for easy inspection of shredder blades and rotor. To make this inspection, loosen "J" bolts and remove the cover. The shredder blades will last a long time with only occasional sharpening. It is important to check the blades occasionally to get good shredding action. The blades are eccentrically pivoted to the rotor shaft so that when they cut into the stalk, they swing back slightly causing an extended arc of cutting, thereby giving a smoother cut. It is important that the knives swing freely. When replacing blades to the hangers, be sure the whole blade assembly swings free. Be sure to tighten all bolts.

MAINTENANCE OF CHAIN DRIVE AND SPROCKETS

The sprockets must be lined up so that the chain runs perfectly straight on the sprockets. If chain runs extremely hot, this means the sprockets are not in line and the chain is dragging on the side of one of the sprockets. When your chain becomes excessively worn, it will then cause excessive wear on the sprockets. Be sure the sprockets are in line and set screws are tight. This is your best assurance of good service. Keep Chain Oiler reservoir filled (see lubrication instructions).

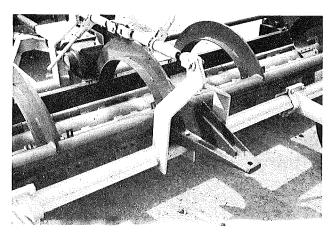


FIGURE 3.

SAFETY SHEAR PIN DEVICE

All M-C Shredders are equipped with safety shear bolts which fasten the drive sprocket to a flange on the gearbox output shaft. These shear pins are to protect the gear box and drive chain from damage. They will snap if the tractor clutch is let out too fast, or if the machine is submitted to severe impact from an unseen object in the line of travel. DO NOT USE HARDENED BOLTS FOR SHEAR PINS.

PROVISION FOR 1000 RPM POWER TAKE-OFF TRACTOR

The M-C Model 12 Shredder is designed primarily for use with a 540 RPM Power Take-Off. However, the shredder is designed so as to allow for use with 1000 RPM P.T.O.'s by use of a 1000 RPM Conversion Kit.

CHAIN CURTAIN ASSEMBLY

A Chain Curtain Assembly is available for the Model 12 Shredder at an additional cost.

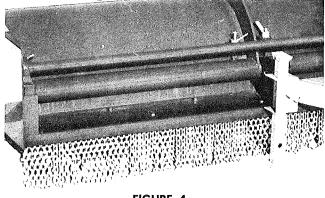
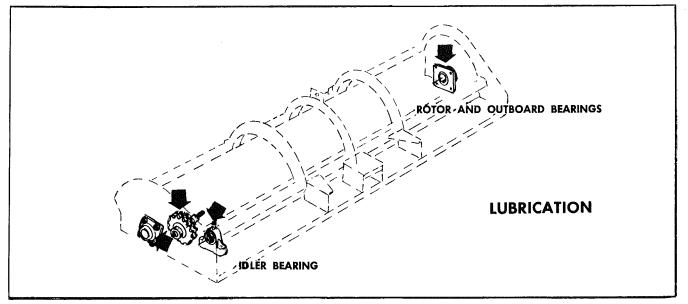


FIGURE 4.



LUBRICATION

FIGURE 5.

Check oil level in gear box. Use No. 140 oil. Oil'level should be up to oil level plug at side of gear box. Chain Oil of the two should be up to oil level plug at side of gear box. Chain Oiler should be filled with a light engine oil to within 1/8'' of the top of the tube. Be sure oiler is positioned correctly. Illustration shows points to lubricate with grease gun. All points should be lubricated once a day if machine is getting

constant use. A hand grease gun is best because there will be less tendency to break the seals in the bearings by forcing too much grease into them. Use grease sparingly and just give it enough to do the job. When you put the machine away at the end of the season, fill the bearings with grease to eliminate any cavities where condensation may occur.

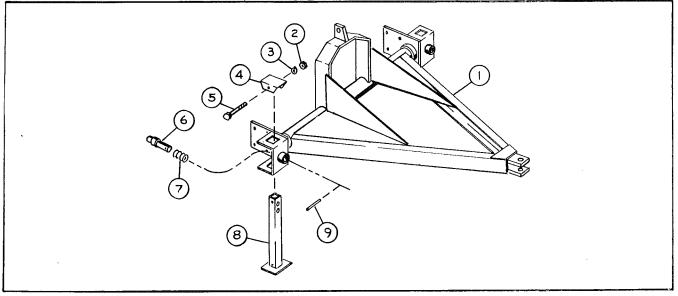


FIGURE 6.

DRAWBAR ASSEMBLY

REF. NO.	PART	DESCRIPTION
1	1110024	Drawbar Weldment
2		5/16-18 Hex Nut 5/16" Lock Washer
4	1114765	Stand Cover
5		5/16-18 x 2-1/2 H.H.C.S.

REF.		
NO.	PART	DESCRIPTION
6	1110026	Lockpin Weldment
7	1118999	Lock Pin Spring
8	1110025	Stand Weldment
9	1118100	1/4" x 3" Roll Pin

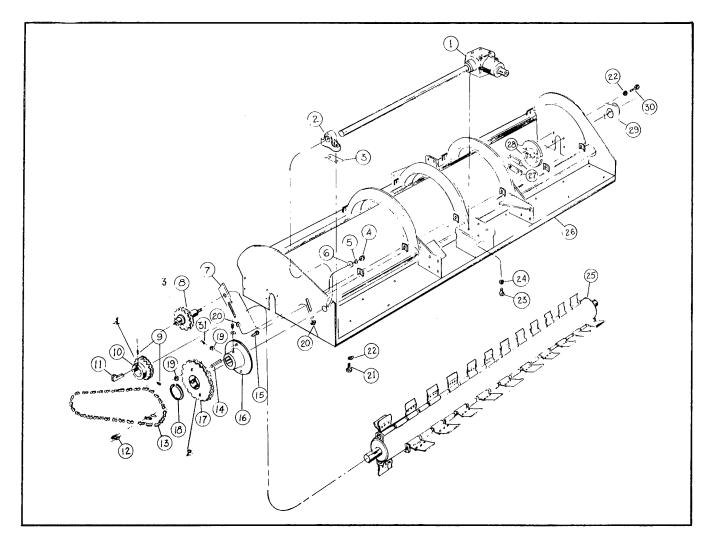


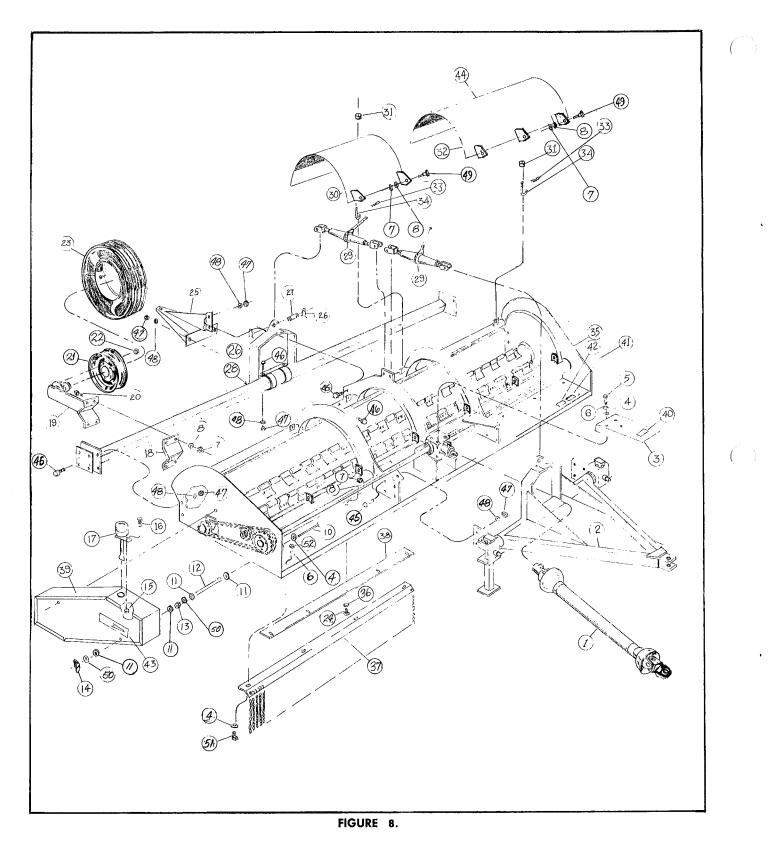
FIGURE 7.



DADT	DECONDENCI
PAKI	DESCRIPTION
1116604	Gear Box #12 & #12 Rice
1116606	Gear Box #10
0016013	Pillow Block Bearing 1-3/4
0014877	Bearing Shim
	3/4-10 Hex Nut
	3/4 Lock Washer
1118250	Flat Washer 3/4 ID x 1-1/2 OD
1110033	Idler Mount
1111009	Idler Assembly
	3/8-16 x 1/2 Allen Set Screw
1116401	Sprocket RC60-2, 19T x 1-15/16 B.
0018987	Gib Head Key $1/2 \ge 2-1/4$ Lg.
0026303	Connecting Link RC60-2
1116302	Chain RC60-2
0015139	3/8 x 3" Lq. Key Stock
	3/8-16 x 2-1/2" H.H.C.S.
0017651	Sprocket Shear Flange
	1116606 0016013 0014877 1118250 1110033 1111009 1116401 0018987 0026303 1116302 0015139

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REF.		
<u>NO.</u>	<u>PART</u>	DESCRIPTION
17	1116402	Sprocket RC60-2, 36T x 3-1/2 B.
18	0018100	Snap Ring - Shear Flange
19	0018149	Lock Nut
20		1/2-13 Hex Nut
21		1/2-13 x 1" H.H.C.S.
22		1/2 Lock Washer
23		5/8-11 x 3/4" H.H.C.S.
24		5/8 Lock Washer
25	1111002	Rotor Assembly #12
	1111012	Rotor Assembly #10
	1131002	Rotor Assembly #12 Rice
26	1110050	Body Weldment #12 & #12 Rice
	1110044	Body Weldment #10
27	0015175	Stud Anchor
28	0014652	Rotor Anti-Wrap
29	0016010	4-Bolt Flange Brg. 1-15/16"
30		1/2-13 x 1-1/2" H.H.C.S.



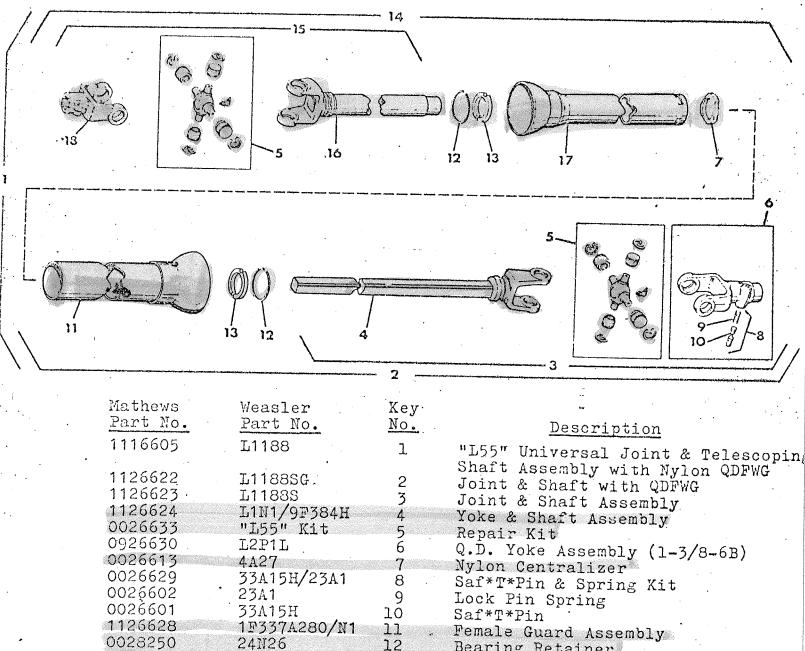
MACHINE ASSEMBLY

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PAGE 6

WEASLER ENGINEERING & MFG. CO., INC.

P. O. BOX 558 — WEST BEND, WISCONSIN 53095 UNIVERSAL JOINT TELESCOPING ASSEMBLY WITH NYLON QUICK DETACHABLE FREEWHEELING GUARD



Bearing Retainer Nylon Bearing

Joint & Tube W/QDFWG Joint & Tube Assembly Yoke & Tube Assembly Male Guard Assembly

Clamp Yoke (1-3/4-63)

540 RPM. Mathews Company

AF Part No. Drwg. No. & Rev. IG Inve Date AE Inve Date L1188 D-3990-D

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14

15

16

17

18

0026634

1126629

1126630

1126631

1126633

0026641

4N21

L2P3

L1188TG

7X227/L1N15

1E341S036/N2

L1188T

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1		ICK DETACHABLE				nonsecurity and
1						
3			5.			
I buinerain	Mathews <u>Part No.</u> 1136600	Weasler <u>Part No.</u> L1188A	2 Key <u>No.</u> 1	"L55" Universa	<u>rizzion</u> al Joint & Te	1.
	50° , ~	L1188ASG L1188AS L1N1/9F384H "L55" Kit 7/ L1P9L >> L1P9	2 3 4 5 6 7	Shaft Assembly Joint & Shaft Joint & Shaft Yoke & Shaft A Repair Xit Slide Lock Yok Slide Lock Yok	y W/Nylon QDF with (DFWG Assembly Assembly Assembly Ce Assembly	WG
	0026632 0026631 1126627 1126628 0026634 0028250	33A20 6A24 23A8 24A7 1F337A280/N1 4N21 24N26	8 9 10 11 12 13	Pawl Collar Spring Retaining Ring Female Guard A Nylon Bearing Bearing Retain	scembly	
•	1126629 1126630 1126631 0026641 1126633 0026613	L1188TG L1188T 7X227/L1N15 L2P3 1E341S036/N2 4A27	15 16 17 18 19	Joint & Tube W Joint & Tube A Yoke & Tube As Clamp Yoke (1- Male Guard Ass Nylon Centrali	/WDFWG ssembly 3/4-63) embly	

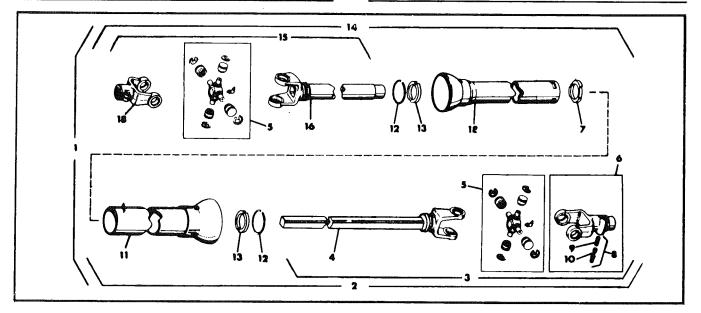
1000 RPM

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MACHINE ASSEMBLY

REF. NO.	PART	DESCRIPTION	REF. NO.	PART	DESCRIPTION
1	1116605	Power Shaft	30	1110049	Center Cover Weldment #10 & #12
2	1111000	Drawbar Assembly	50	1130003	Right Center Cover Weld, #12 Rice
3	0014876	Universal Guard		1130006	Left Center Cover Weld. #12 Rice
4		3/8 Flat Washer	31	0018982	Clamping Nut
5		3/8-16 x 3/4" H.H.C.S.	32	1110048	End Cover Weldment #12
6		3/8 Lock Washer		1110046	End Cover Weldment #10
7		1/2-13 Hex Nut		1130004	Right End Cover Weld, #12 Rice
8		1/2 Lock Washer		1130005	Left End Cover Weld, #12 Rice
9		1/2-13 x 1-1/2" H.H.C.S.	33		$1/8 \times 3/4$ Cotter Pin
10		5/16-18 x 6-1/2" Carriage Bolt	34	0018132	"J" Bolt 3/8-16 x 4
11		5/16 Flat Washer	35	1111011	Body Assembly #12 & #12 Rice
12	1115570	Chain Guard Spacer		1111013	Body Assembly #10
13		5/16-18 Hex Nut	36		1/2 Flat Washer
14		5/16 Wing Nut	37	1131000	Chain Curtain Assembly #12
15		5/16 Whiz Nut		1131001	Chain Curtain Assembly #10
16		5/16-18 x 1/2" H.H.C.S.	38	0003470	Cutter Bar #12 & #12 Rice
17	1110036	Oiler Weldment		1113435	Cutter Bar #10
	0017982	Oiler Cap	39	1110038	Chain Guard
18	1113572	Clamping Brk't Wheel Mount	40	0018309	Decal (Warning-Do Not Operate)
19	1111006	Wheel Mount Assembly	41	0018304	Serial No. Plate
20		1/2-13 x 2-1/2" H.H.C.S.	42	0018310	Decal (Warranty)
21	0018993	Wheel Rim	43	0018303	Decal (R.H. Arrow)
22	0018989	Wheel Lug Nut	44	0018302	Decal (M-C)
23	0008999	Tire & Tube 15" Implement	45		5/8-11 x 1-1/2" H.H.C.S.
24		1/2-13 x 1-1/4" H.H.C.S.	46		5/8-11 x 1-3/4" H.H.C.S.
25	1110043	Rear Hitch Weldment	47		5/8-11 Hex Nut
26	0928250	Spring Clip-Ram Pin	48		5/8 Lock Washer
27	0928230	Ram Pin	49	0018163	1/2-13 Shoulder bolt
28	1110041	Axle Weldment #12 & #12 Rice	50		5/16 Lock Washer
	1110045	Axle Weldment #10	51		3/8-16 x 1-1/4" H.H.C.S.
29	0018985	Ratchet Jack	52		3/8-16 Hex Nut



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FIGURE 9. **P. T. O. SHAFT** Part No. 1116605

REF. NO.	PART	DESCRIPTION	REF. NO.	PART	DESCRIPTION
1	-1116602	"L55" Universal Jnt & Telescop.	10		Saf*T*Pin
		Shaft w/QDFWG	11	1126628	Female Guard Assembly
2	1126622	Joint & Shaft w/QDFWG	12	0028250	Bearing Retainer
3	1126623	Joint & Shaft Assembly	1·3	0026634	Nylon Bearing
4	1126624	Yoke & Shaft Assembly	14	1126629	Joint & Tube w/QDFWG
5	0026633	Repair Kit	15	1126630	Joint & Tube Assembly
6	0026656	Q.D. Yoke Assembly (1-3/8-6B)	16	1126631	Yoke & Tube Assembly
7	0026613	Nylon Centralizer	17	1126633	Male Guard Assembly
8	0026629	Saf*T*Pin & Spring Kit	18	0026641	Clamp Yoke $(1-3/4-6B)$
9		Lock Pin Spring			

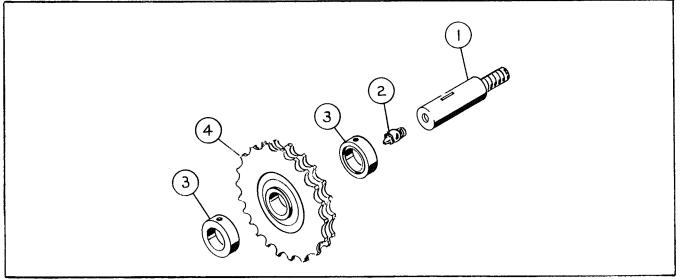


FIGURE 10.

IDLER ASSEMBLY

Part No. 1111009

REF. NO.	PART	DESCRIPTION	REF. NO.	PART	DESCRIPTION
1	1115041	Idler Shaft	3	0016002	Bearing Lock Collar
2	0026604	Grease Fitting	4	0011002	Idler Sprocket Assembly

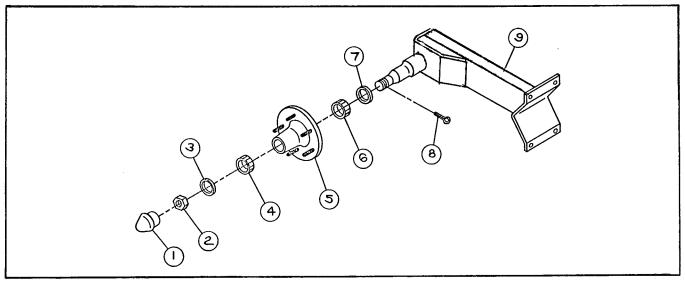


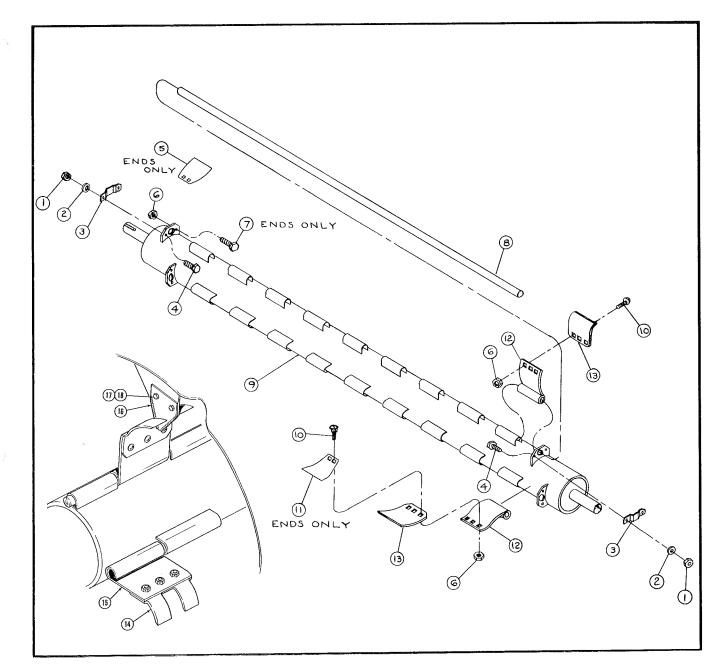
FIGURE 11.

WHEEL MOUNT ASSEMBLY

Part No. 1111006

REF. NO,	PART	DESCRIPTION	REF. NO.	PART	DESCRIPTION
1	0018996	Wheel Hub Cap	6	0016001	Wheel Inner Bearing
2	0018253	Wheel Spindle Nut	7	0018991	Wheel Seal
3	0018254	Wheel Spindle Washer	8	0018252	1/8 x 1-1/2 Lg. Cotter Pin
4	0016000	Wheel Outer Bearing	9	1110031	Wheel Mount Weldment
5	0018992	Wheel Hub Assembly			

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FIGURE 12. ROTOR ASSEMBLY

REF. NO.	PART	DESCRIPTION	REF. NO.	PART	DESCRIPTION
1		3/8-16 Hex Nut	11	0015206	Left End Knife
2		3/8 Lock Washer	12	0015205	Wide Blade Hanger
3	0012000	End Locator Bracket	13	0015208	Heavy Duty Knife Blade
Ā	0012000	3/8-16 x 1" H.H.C.S.	14	1135201	Rice Heavy Duty Knife Blade
5	0015207	Right End Knife	15	1135200	Rice Wide Blade Hanger
6	0018149	3/8-16 Lock Nut	16	1138999	Sickle Section Knife
7	0010119	$3/8-16 \times 1-1/2$ " HHCS Full Thread	17		5/16-24 Hex Lock Nut
8	0018983	Rotor Hanger Bar #10	18		5/16-24 x 1/2" HHCS Grade #5
0	1118998	Rotor Hanger Bar #12 & #12 Rice			
٥	1110029	Rotor Weldment #12 & #12 Rice			
9	0010016	Rotor Weldment #10			
LO	0018131	3/8-16 Carriage Bolt - Special			

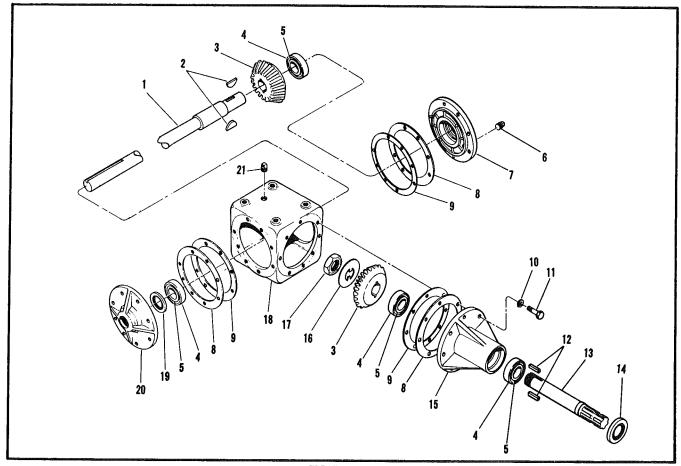


FIGURE 14. GEAR BOX

PART NO. 1116606 #10			PART NO.	1116604 #12 & #12 Rice	
REF. NO.	PART	DESCRIPTION	REF. NO,	PART	DESCRIPTION
1	1126634	Output Shaft - Gear Box #12 & 12Rice	11		1/2-13 x 1-1/2" Lg. Hex Bolt
	1126635	Output Shaft - Gear Box #10	12	0015134	Key, 3/8 x 3/8 x 1-3/8" Lg.
2	0018988	Woodruff Key, $3/8 \times 1-1/2$ "	13	0026638	Input Shaft
3	0026500	Bevel Gear	14	0026639	Grease Seal
4	0026011	Bearing Cone	15	0027656	Hub
5	0026010	Bearing Cup	16	0028252	Lock Washer
6	0028000	Oil Level Plug	17	0028251	Nut, Input Shaft
7	0027655	Cover, Solid - Gear Box	18	0027654	Gear Housing
8	0026636	Gasket Shim .005 Thick	19	0026635	Grease Seal
9	0026637	Gasket Shim .010 Thick	20	0027653	Cover, Gear Box Output
LO		1/2 Lock Washer	21	0026607	Plug Vent



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INSTRUCTIONS FOR ORDERING PARTS

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- 1. ALL PARTS MUST BE ORDERED FROM YOUR DEALER.
- 2. GIVE MODEL NAME, NUMBER and SERIAL NUMBER that is stamped on the NAME PLATE of your machine.
- 3. Order from your PARTS LIST as this is the ONLY means we have of identifying the parts you need. Order by the QUANTITY DESIRED, the PART NUMBER and the DESCRIPTION OF THE PART.
- NOTE: The Company reserves the right to incorporate any changes in design without obligation to make these changes on units previously sold.

