M-C

SHREDDER

ASSEMBLY — OPERATION

AND MAINTENANCE

INSTRUCTIONS

MODEL 12

12S67

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

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 1/2-13 x 1-1/2 H.H.C.S. provided. At this time, the front mechanical ram should also be installed.

The rear Hitch Weldment is held in place by 6-1/2-13 x 1-1/4" H.H.C.S. 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.

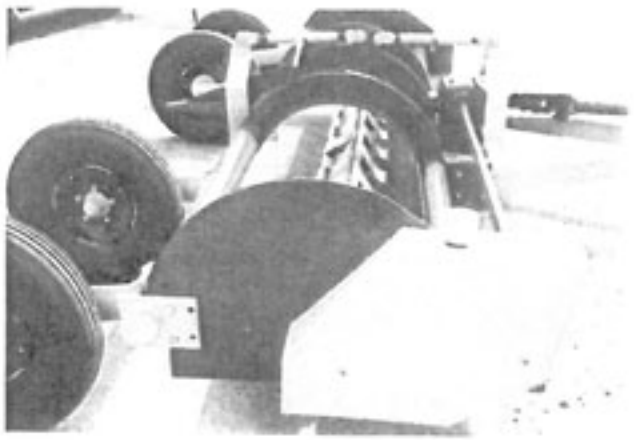

FIGURE 2.

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: Electric Grinder Model 0038993 is available as an accessory to the shredder. When sharpening blades, try to maintain original angle of cutting edge as close as possible. For replacement discs for Electric Grinder order part No. 0038994.

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.

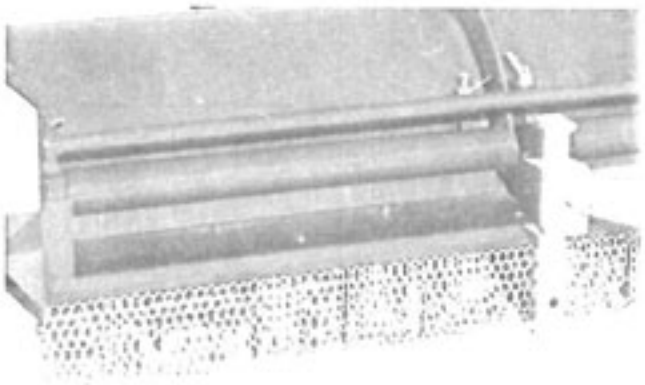

FIGURE 4.

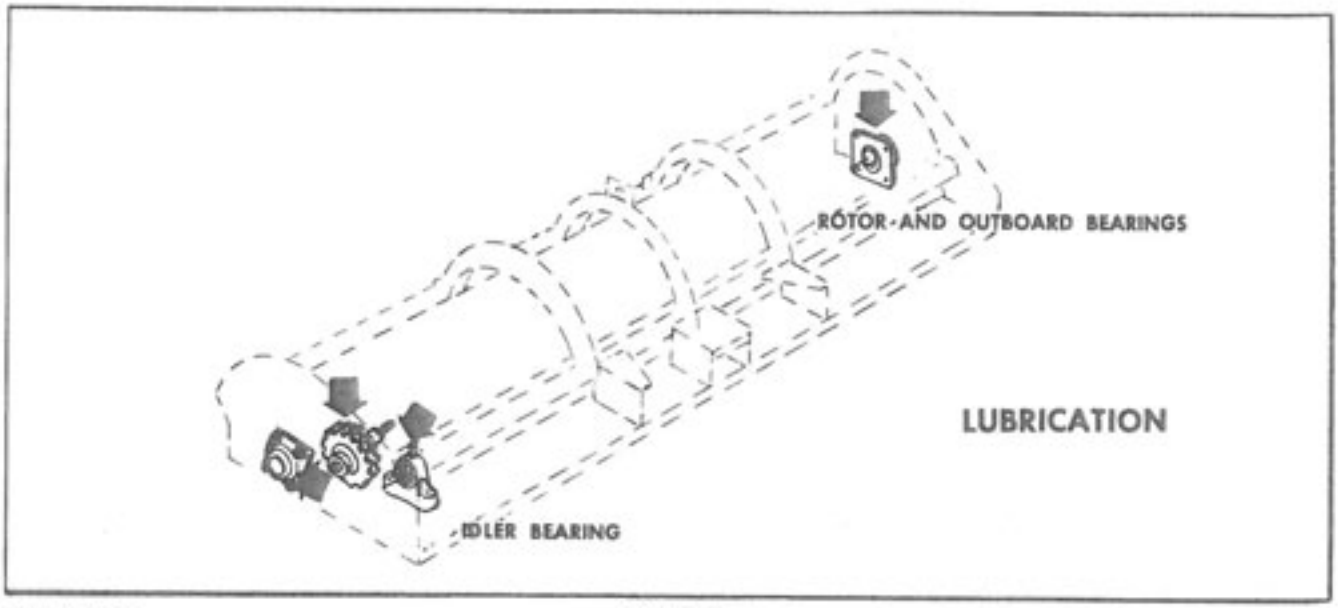

FIGURE 5.

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 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.

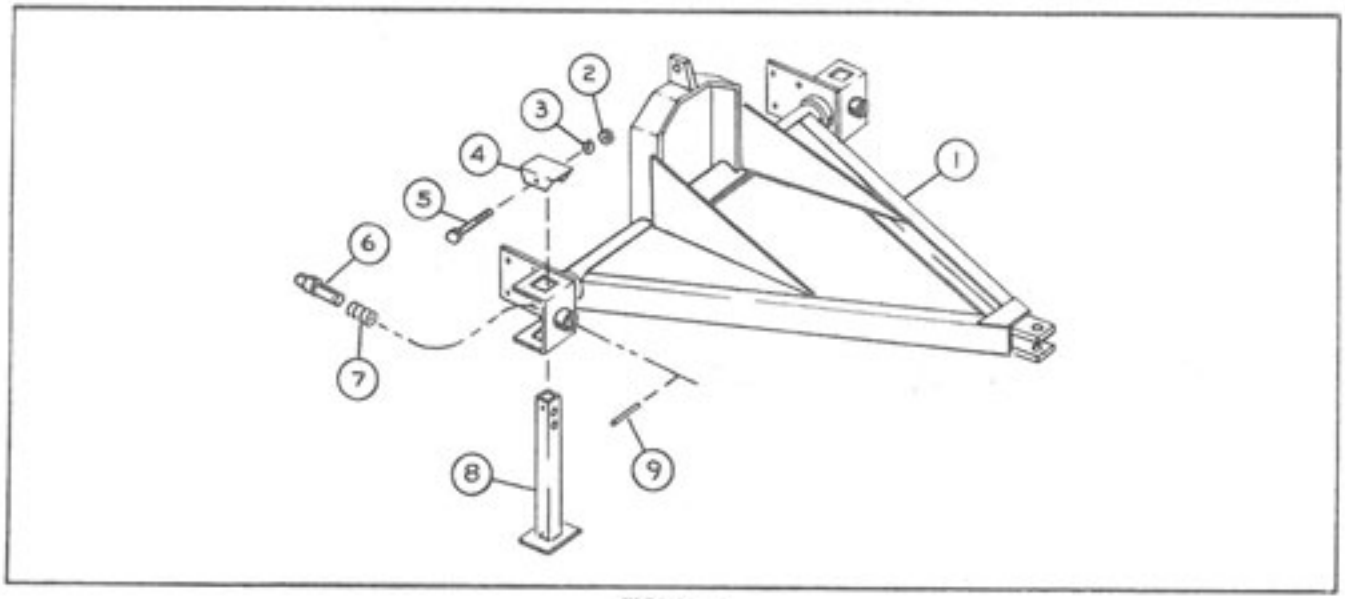

FIGURE 6.

DRAWBAR ASSEMBLY

REF. NO.	PART	DESCRIPTION
1	1110024	Drawbar Weldment
2		5/16-18 Hex Nut
3		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

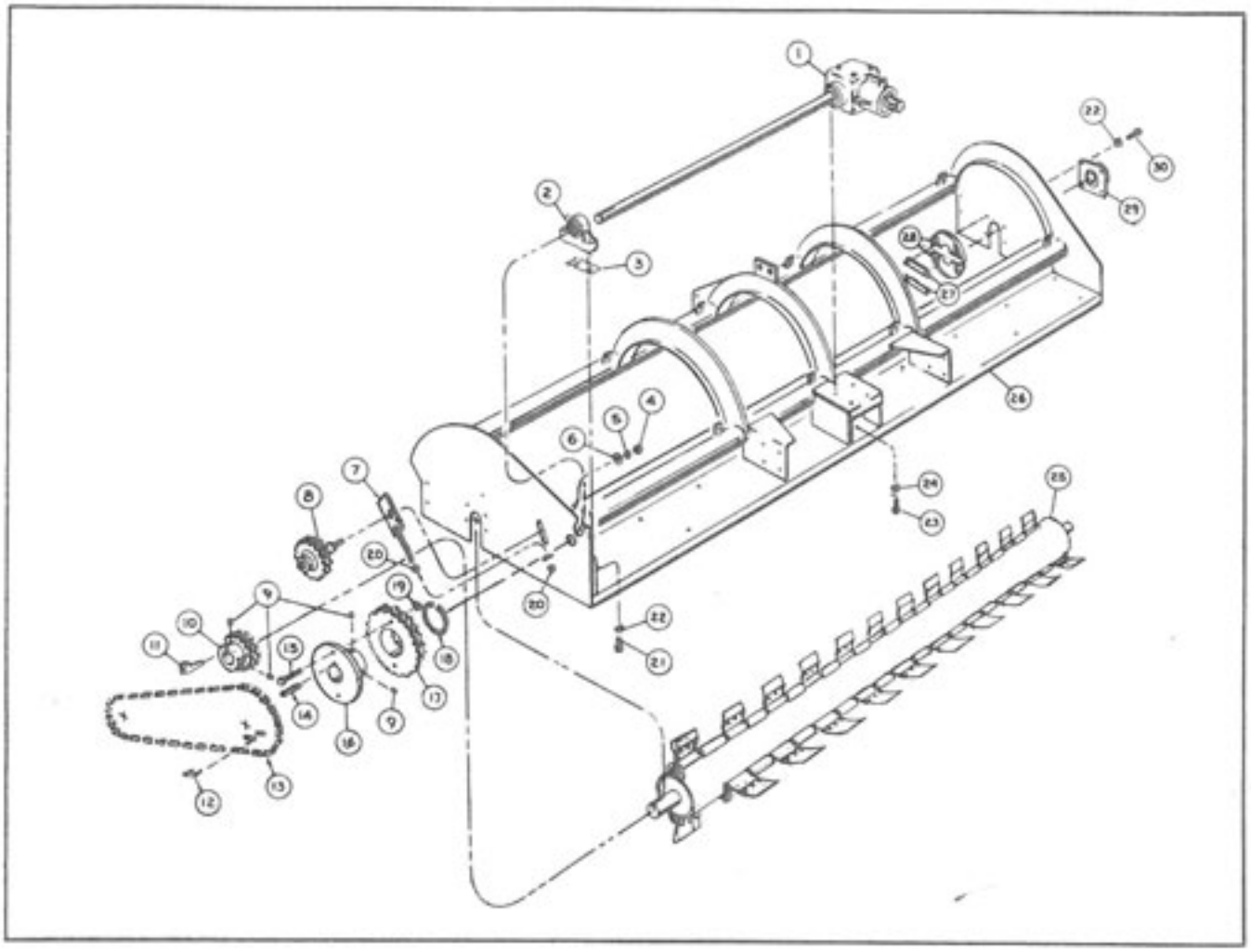

FIGURE 7.

BODY ASSEMBLY

REF. NO.	PART	DESCRIPTION
1	1116604	Gear Box
2	0016013	Pillow Block Bearing 1-3/4
3	0014877	Bearing Shim
4		3/4-10 Hex Nut
5		3/4 Lock Washer
6	1118250	Flat Washer 3/4 ID x 1-1/2 OD
7	1110033	Idler Mount
8	1111009	Idler Assembly
9		3/8-16 x 1/2 Allen Set Screw
10	1116401	Sprocket RC 60-2 19T x 1-15/16 Bore
11	0018987	Gib Head Key 1/2 x 2-1/4 Lg.
12	0026303	Connecting Link RC 60-2
13	1116302	Chain RC 60-2
14	0015139	3/8 x 3" Lg. Key Stock
15		3/8-16 x 2-1/2 H.H.C.S.

REF. NO.	PART	DESCRIPTION
16	0017651	Sprocket Shear Flange
17	1116402	Sprocket RC 60-2, 36T x 3-1/2 Bore
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
26	1110021	Body Weldment
27	0015175	Stud Anchor
28	0014652	Rotor Anti-Wrap
29	0016010	4-Bolt Flange Bearing 1-15/16"
30		1/2-13 x 1-1/2 H.H.C.S.

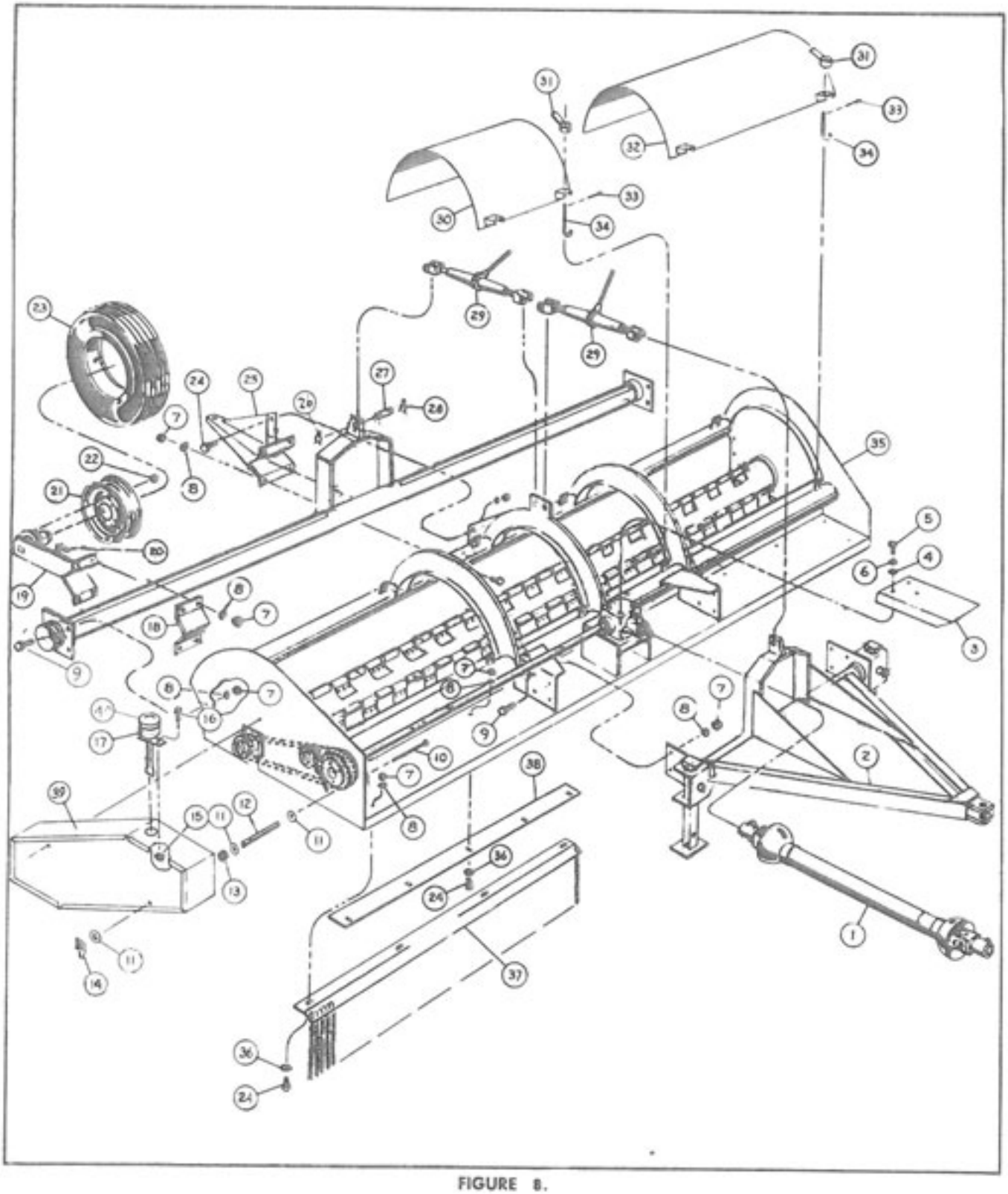

FIGURE 8.

MACHINE ASSEMBLY

MACHINE ASSEMBLY

REF. NO.	PART	DESCRIPTION
1	1116602	Power Shaft
2	1111000	Drawbar Assembly
3	0014876	Universal Guard
4		3/8 Flat Washer
5		3/8-16 x 1" H.H.C.S.
6		3/8 Lock Washer
7		1/2-13 Hex Nut
8		1/2 Lock Washer
9		1/2-13 x 1-1/2 H.H.C.S.
10		5/16-18 x 6-1/2 Carriage F .t
11		5/16 Flat Washer
12	1115570	Chain Guard Spacer
13		5/16-18 Hex Nut
14		5/16 Wing Nut
15		5/16 Whiz Nut
16		5/16-18 x 3/4 H.H.C.S.
17	1110036	Oiler Weldment
18	1113572	Clamping Brk't Wheel Mount
19	1111006	Wheel Mount Assembly
20		1/2-13 x 2 H.H.C.S.

REF. NO.	PART	DESCRIPTION
21	0018993	Wheel Rim
22	0018989	Wheel Lug Nut
23	0008999	Tire & Tube 15" Implement
24		1/2-13 x 1-1/4 H.H.C.S.
25	1110037	Rear Hitch Weldment
26	0928250	Spring Clip-Ram Pin
27	0928230	Ram Pin
28	1110023	Axle Weld
29	0018985	Ratchet Jack
30	1110034	Center Cover
31	0010014	Clamping Handle
32	1110035	End Cover
33		1/8 x 3/4 Cotter Pin
34	0018132	"J" Bolt 3/8-16 x 4
35	1111003	Body Assembly
36		1/2 Flat Washer
37	1131000	Chain Curtain Assembly (Acc.)
38	0003470	Cutter Bar
39	1110038	Chain Guard
40	0017982	Oiler Cap

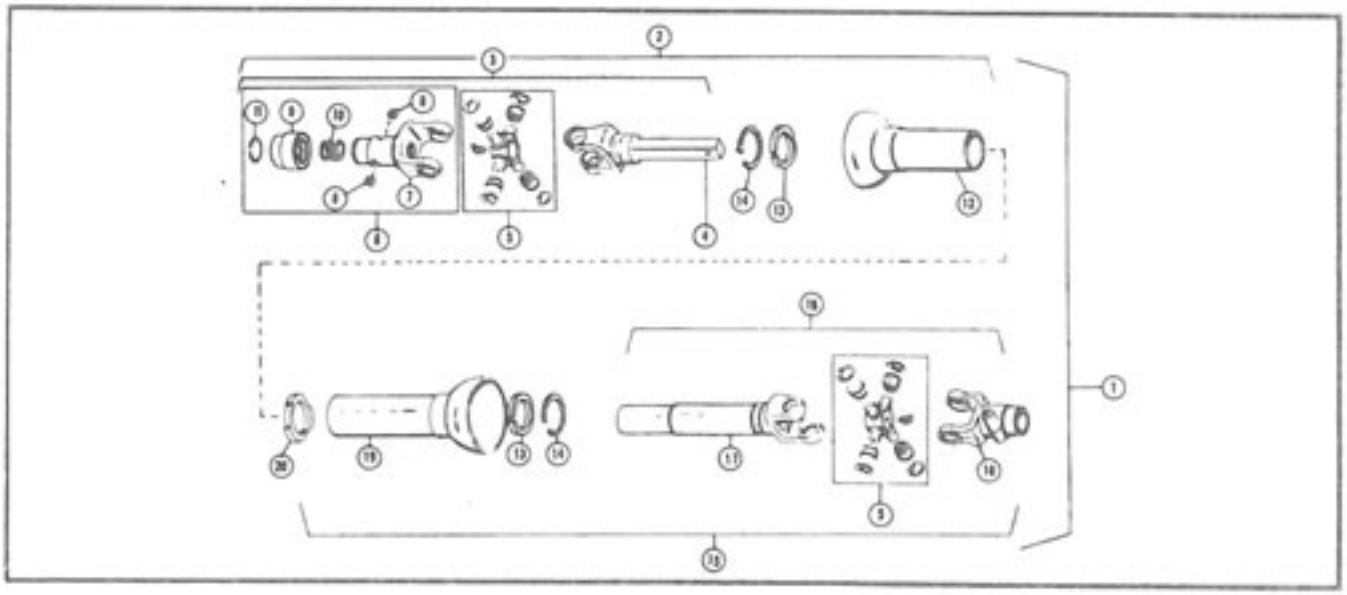

FIGURE 9.

P. T. O. SHAFT
Part No. 1116602

REF. NO.	PART	DESCRIPTION
1	1116602	"L55" Universal Jt. Tel. Shaft Assembly w/QDFWG
2	1126622	"L55" Universal Jt. Tel. and Shaft w/QDFWG
3	1126623	"L55" Universal Jt. Tel. and Shaft
4	1126624	Yoke and Shaft
5	0026633	Repair Kit
6	0026653	Slide Lock Yoke Assembly
7	1126626	Slide Lock Yoke (1-3/8-6B)
8	0026632	Pawl
9	0026631	Collar
10	0026630	Spring

REF. NO.	PART	DESCRIPTION
11	1126627	Retaining Ring
12	1126628	Female Guard Assembly
13	0026634	Nylon Bearings
14	0028250	Bearing Retainer
15	1126629	"L55" Universal Joint and Tube w/QDFWG
16	1126630	"L55" Universal Joint and Tube
17	1126631	Yoke and Tube
18	1126632	Clamp Yoke (1-3/4-6B)
19	1126633	Male Guard Assembly
20	0026613	Nylon Centralizer

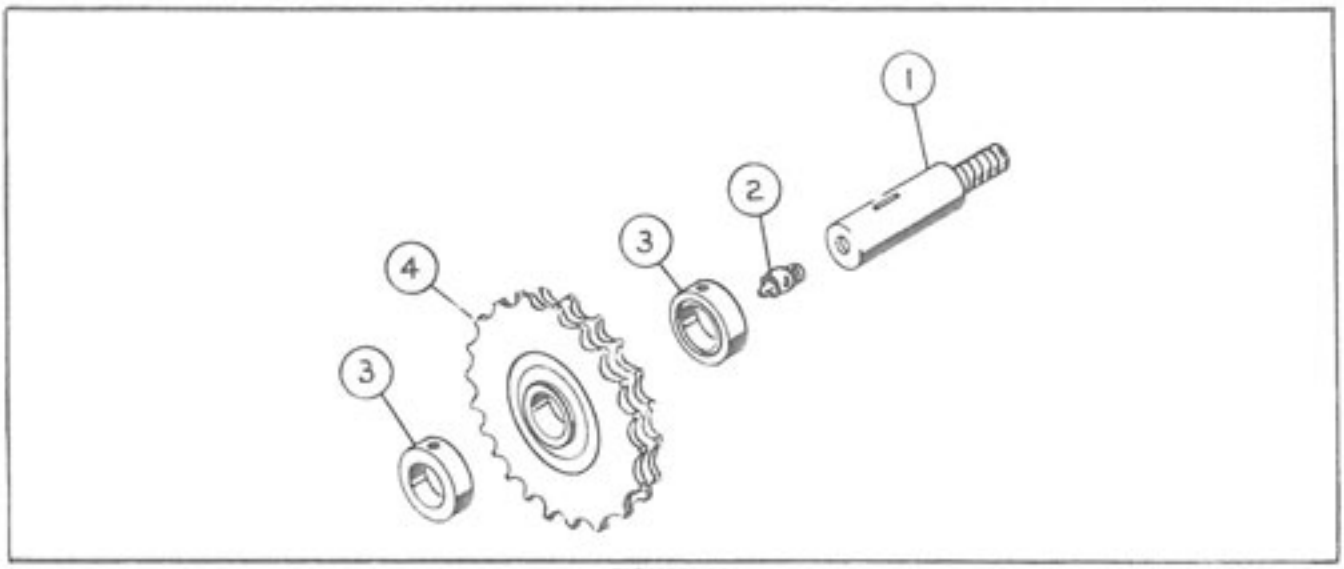

FIGURE 10.

IDLER ASSEMBLY

Part No. 1111009

REF. NO.	PART	DESCRIPTION
1	1115041	Idler Shaft
2	0026604	Grease Fitting
3	0016002	Bearing Lock Collar
4	1111008	Idler Sprocket Assembly

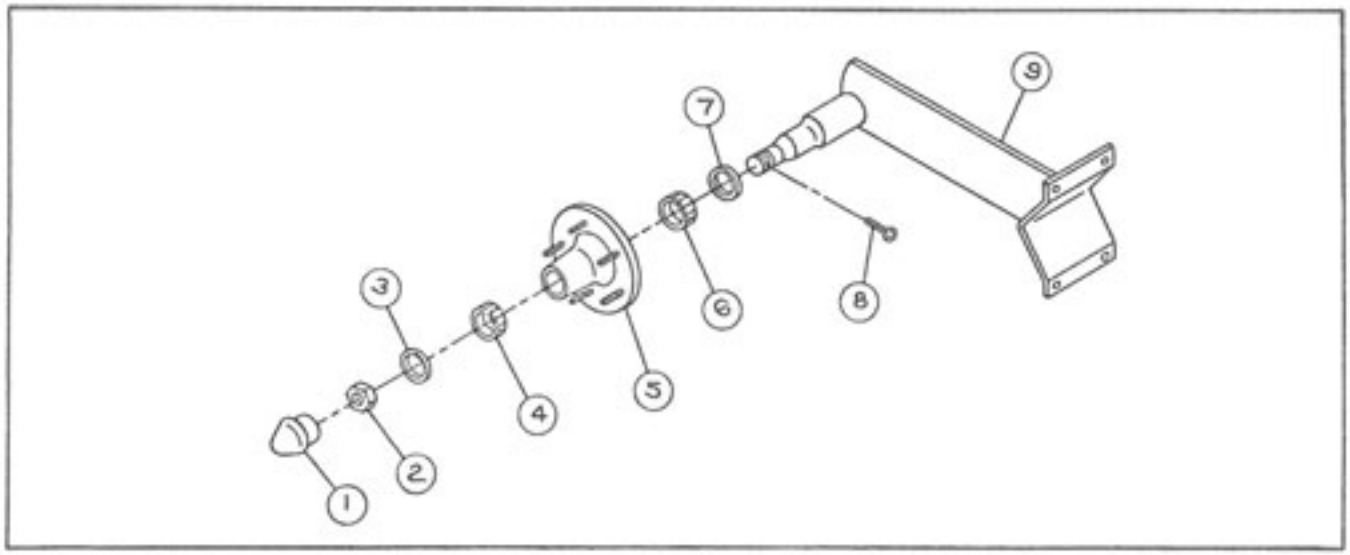

FIGURE 11.

WHEEL MOUNT ASSEMBLY

Part No. 1111006

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

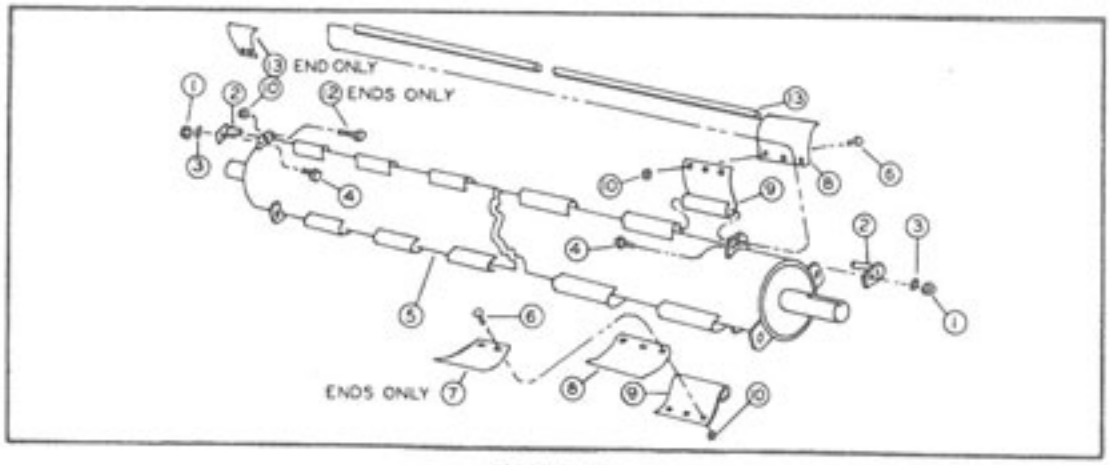

FIGURE 12.

ROTOR ASSEMBLY

REF. NO.	PART	DESCRIPTION
1		3/8" Hex Nut
2	0010012	Knife Tube End Pin Weldment
3		3/8" Lock Washer
4		3/8-16 x 1" H.H.C.S.
5	1110029	Rotor Weldment #12
6	0018131	Knife Carriage Bolt
7	0015206	End Knife Left
8	0015208	Heavy Duty Knife Blade
9	0015205	Wide Knife Hanger
10	0018149	Locknut 3/8-16
11	1117600	Knife Tube
12		3/8-16 x 1-1/2 Full Thread H.H.C.S.
13	0015207	End Knife Right

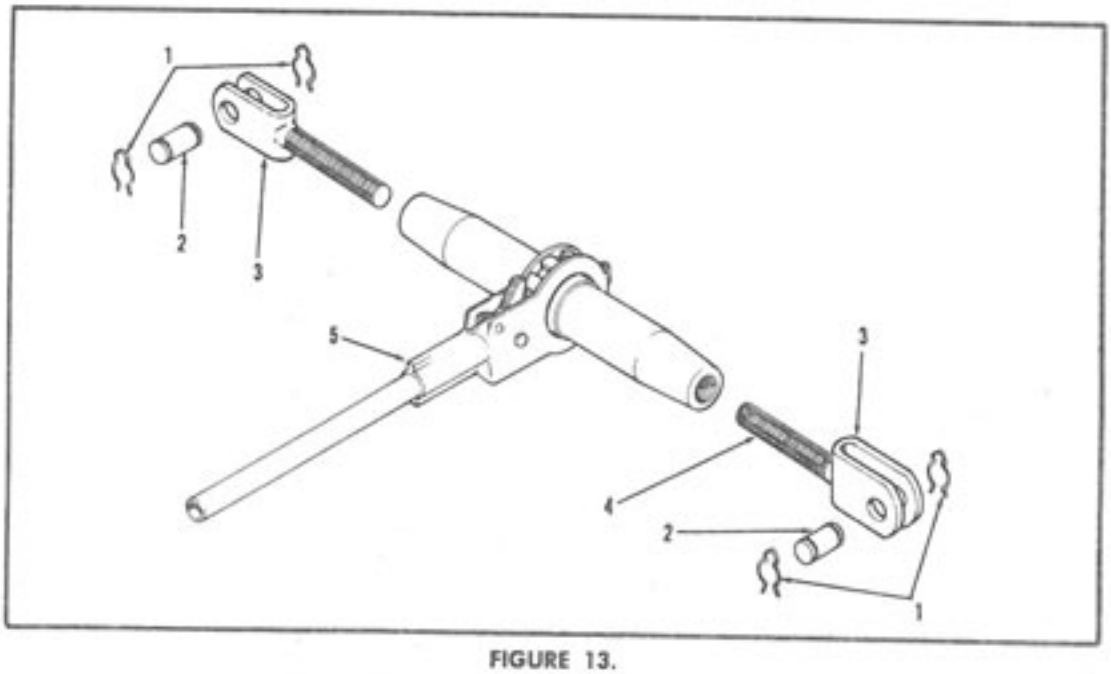

FIGURE 13.

MECHANICAL RATCHETING JACK

Part No. 0018985.

REF. NO.	PART	DESCRIPTION
1.	0028253	Ratcheting Jack Pin, Clip
2.	0028254	Ratcheting Jack Pin, 1" Dia. x 2-3/4" Lg.
3.	0028255	Ratcheting Jack End Weldment, L.H. Thread
4.	0028256	Ratcheting Jack End Weldment, R.H. Thread
5.	0028257	Ratcheting Jack Handle Assembly

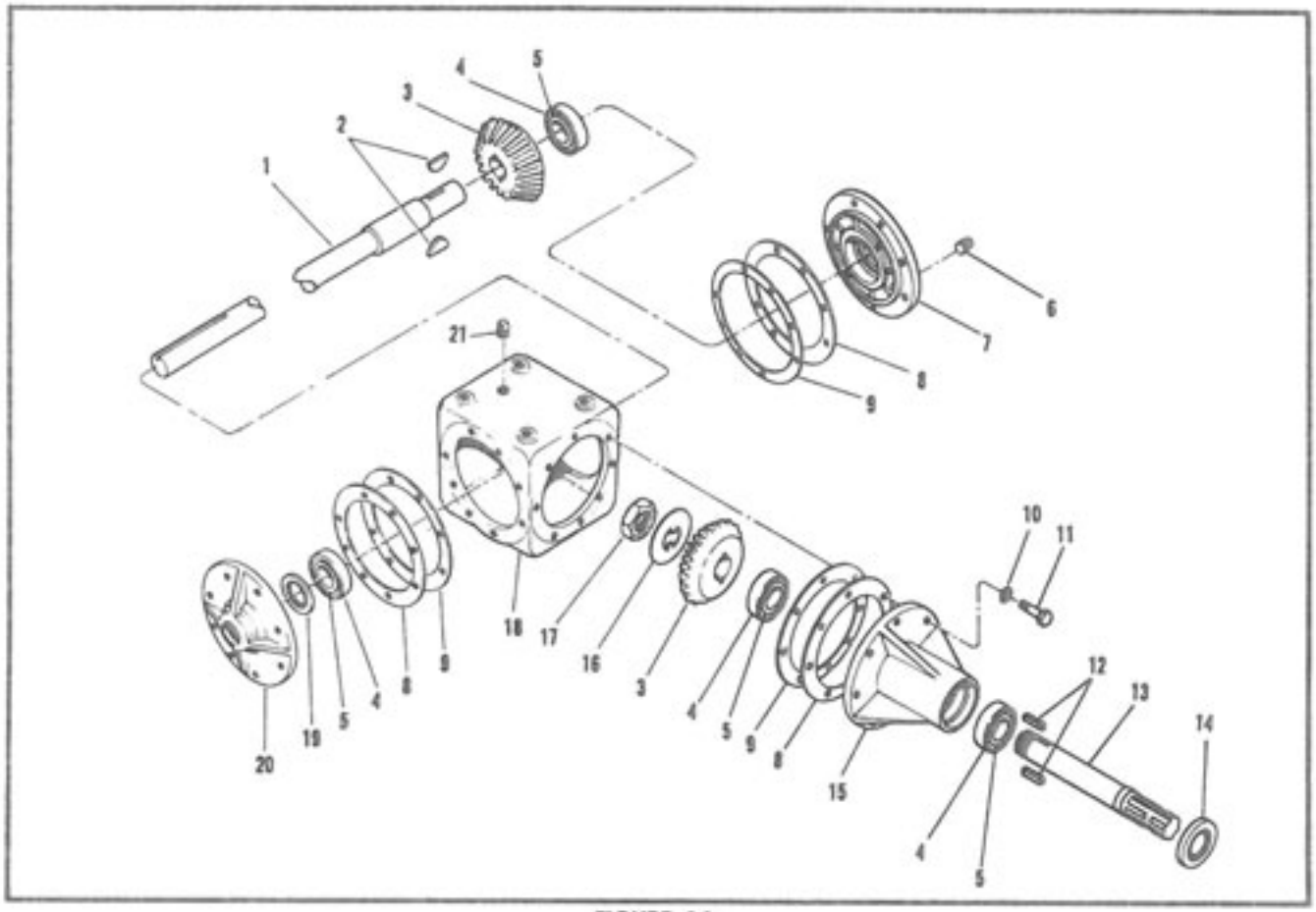

FIGURE 14.

GEAR BOX

Part No. 1116604

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

INSTRUCTIONS FOR ORDERING PARTS

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.

OWNERS NOTICE

TO INSURE WARRANTY CLAIMS, BE CERTAIN TO FILL OUT AND MAIL WARRANTY CARD WITHIN 30 DAYS.


M-C