KUBOTA

MODEL K-420
ROTARY TILLER

INDEX

INTRODUCTION

Your new rotary tiller is designed to meet today's exacting operating requirements. The ease of operation and ability to adjust to field conditions lighten your work and shorten your hours on the job.

Be sure to read the instructions for Adjusting and Operating in this manual. Check each item referred to and acquaint yourself with the adjustments required to obtain efficient operation and maximum trouble-free performance. Remember a machine which is properly lubricated and adjusted saves time, labor, and fuel.

After the operating season, thoroughly clean your equipment and inspect it. Preventive maintenance pays dividends. Your dealer has original-equipment parts which assure proper fit and best performance. He is able to recondition your equipment to a like new condition.

The tiller is powered from the tractor Power Take-off through the universal gear box and chain drive.

The tine shaft is driven by chains which are enclosed in a housing. They are factory lubricated and require no periodec maintenance.

The tiller is raised or lowered by the tractor hydraulic control lever. This tiller is ideal for seedbed preparations, shallow mulching, cultivating between rows, under shrubs, in groves, etc.

It has a low profile with shielded tines to avoid damaging branches and foliage.

ADJUSTING AND OPERATING

For the operating controls and adjustments on the tractor, refer to the tractor Operator's Manual.

FOR SHIPPING, THE REAR EXTENSION SHIELD HAS BEEN MOUNTED REVERSE TO OPERATION POSITION. IT MUST BE REMOVED AND TURNED OVER BEFORE USING THE TILLER.

GENERAL

Before going into the field with a new machine or one which has been stored, check to see that all bolts are tight and that all cotters are spread.

After the first hour of operation, check all bolts for adequate tightness.

SAFETY SUGGESTIONS

The rotary tiller has been designed to minimize the chance of an accident. However, there is no substitute for a careful operator.

Do not wear loose-fitting clothing.

Never place hands or feet under the tiller or raise the rear plate to look under the tiller while the tractor engine and tiller are running. Stay clear of all moving parts.

Before operating, be sure all stones, branches, or any other debris are removed to avoid possible damage to the tiller.

Be sure the tiller is properly mounted and all shields are in place and properly secured before starting to operate the equipment.

Disengage the power take-off clutch before starting the tractor engine.

Do not leave the tractor engine running unattended or permit it to be operated by persons not acquainted with its use and the rules for safe operation.

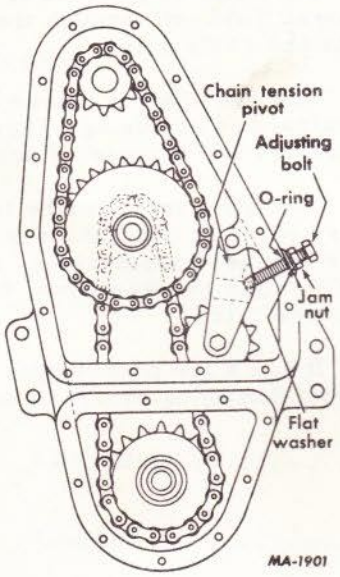
Use extreme care and maintain minimum ground speed when transporting on hillsides, over rough ground, and when operating close to ditches and fences.

Do not allow anyone in the area behind the tiller while operating.

Disengage the power take-off and stop the tractor engine before attempting to clean or work on the tiller.

ADJUSTING AND OPERATING

CHAIN ADJUSTMENT

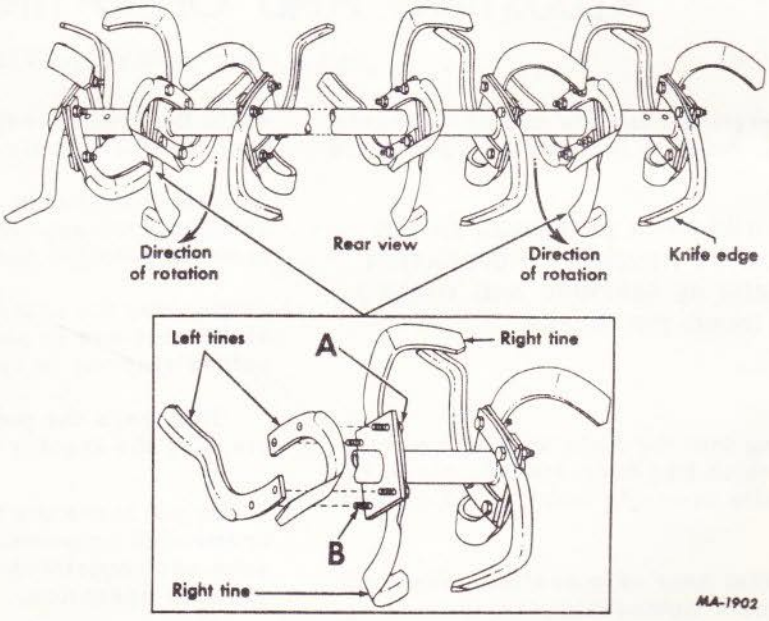


Illust. 4

Adjusting Lower Drive Chain

Loosen the jam nut. Be sure the adjusting bolt turns freely in housing. Turn in the adjusting bolt finger tight against chain tension pivot and back off one-half turn. Tighten the jam nut. See Illust. 4.

REPLACING TINES



Illust. 4A
Rear view showing proper tine assembly for correct timing.

Position the tine shafts with the mounting plates having two holes "A" and "B" in line with the shaft pin hole to the left, as shown.

The tines are marked "Left" and "Right". Bolt the tines to the plate, the end hole of a right tine and the inner hole of a left tine goes at hole "A", the end hole of a left tine and the inner hole of a right tine goes at hole "B". Complete the assemblies as shown in Illust. 4A.

All knife edges must lead in the direction of rotation.

SETTING UP

Remove all parts from the shipping carton and arrange the parts conveniently.

Whenever the terms "left" and "right" are used, it should be understood to mean from a position behind and facing the machine.

FOR SHIPPING, THE REAR EXTENSION SHIELD HAS BEEN MOUNTED REVERSE TO OPERATION POSITION. IT MUST BE REMOVED AND TURNED OVER BEFORE USING THE TILLER.

1. Replace Klik pin with chain and cotter pin from stabilizer bar pin, with pin from main frame of tiller, attach Klik pin with chain to stabilizer bar.

2. Attach left and right lower link of three-point hitch and stabilizer bar to tiller sides and secure with Klik pin.

Illust.

Type 5 bolts furnished with the machine are identified by 3 radial lines on the head, See Illust. Bolts without radial lines are type 1 bolts.

3. Adjust and attach upper link to tiller using headed pin and quick-attachable cotter.

4. Connect the universal drive to the power take-off. To connect the universal drive to the tiller use a snap ring, bolt and lock nut.

LUBRICATION

Before taking the tiller to the field, lubricate it thoroughly. Use the illustrations and the lubrication guide to locate all points.

Use a good-quality lubricant and keep it free of dust and dirt.

Daily or after every ten hours of operation

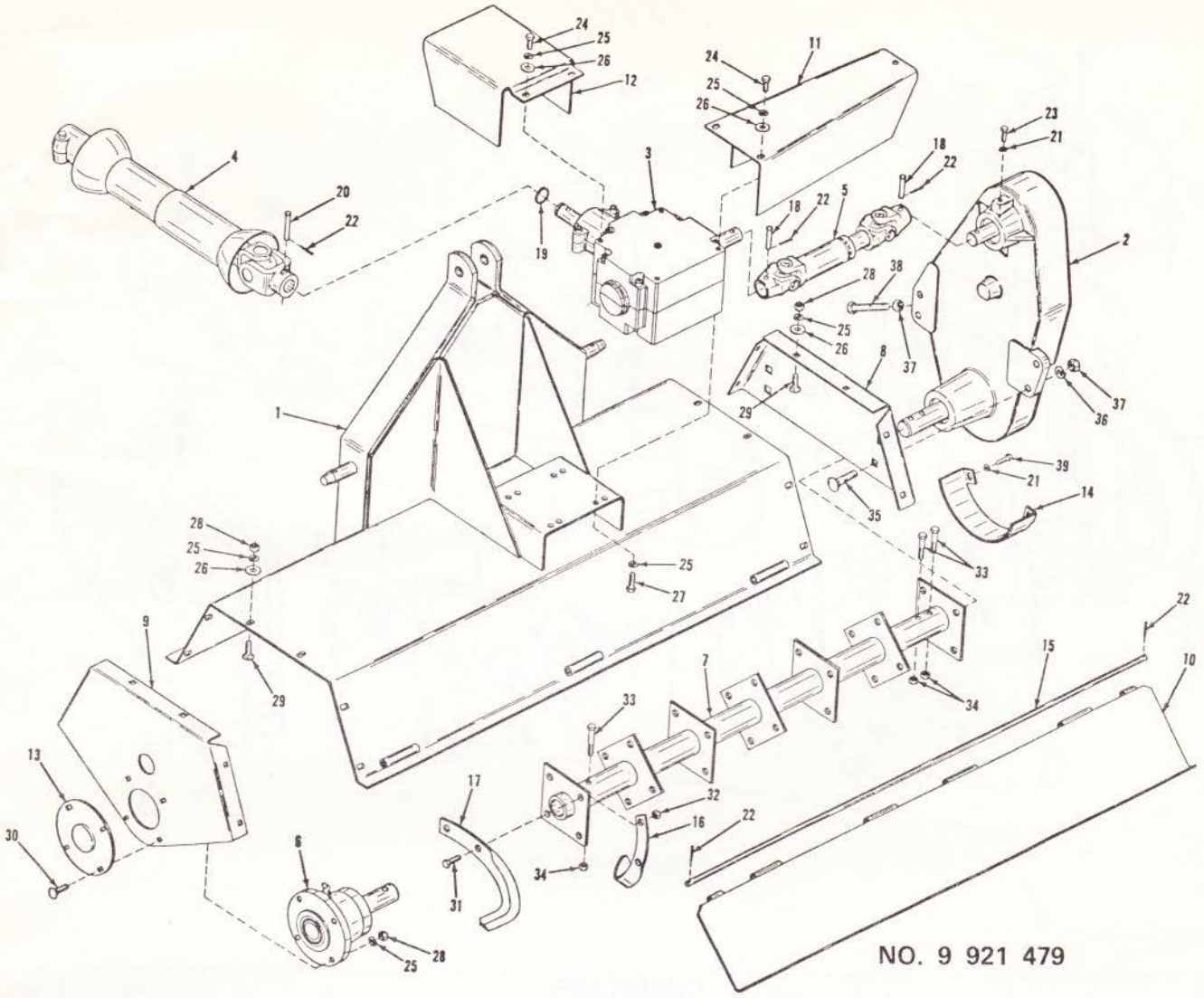
Daily or after every ten hours of operation, lubricate the tiller using No. 2 multi-purpose lithium grease. Use pressure lubricator and apply sufficient grease to flush out all of the old grease and dirt. When working in extremely dusty conditions, lubricate after every five hours of operation.

Be sure that all lubrication fittings are free of paint and dirt so that the lubricant gets to the bearings. Always force the lubricant through the full length of each bearing until it emerges at the end, carrying with it the old lubricant and any dirt that may have entered the bearings.

Check the oil level of the gear box periodically to see that it is filled to the correct level. If lubricant is required fill to lower level plug opening with SAE-80 oil.

SPECIFICATIONS

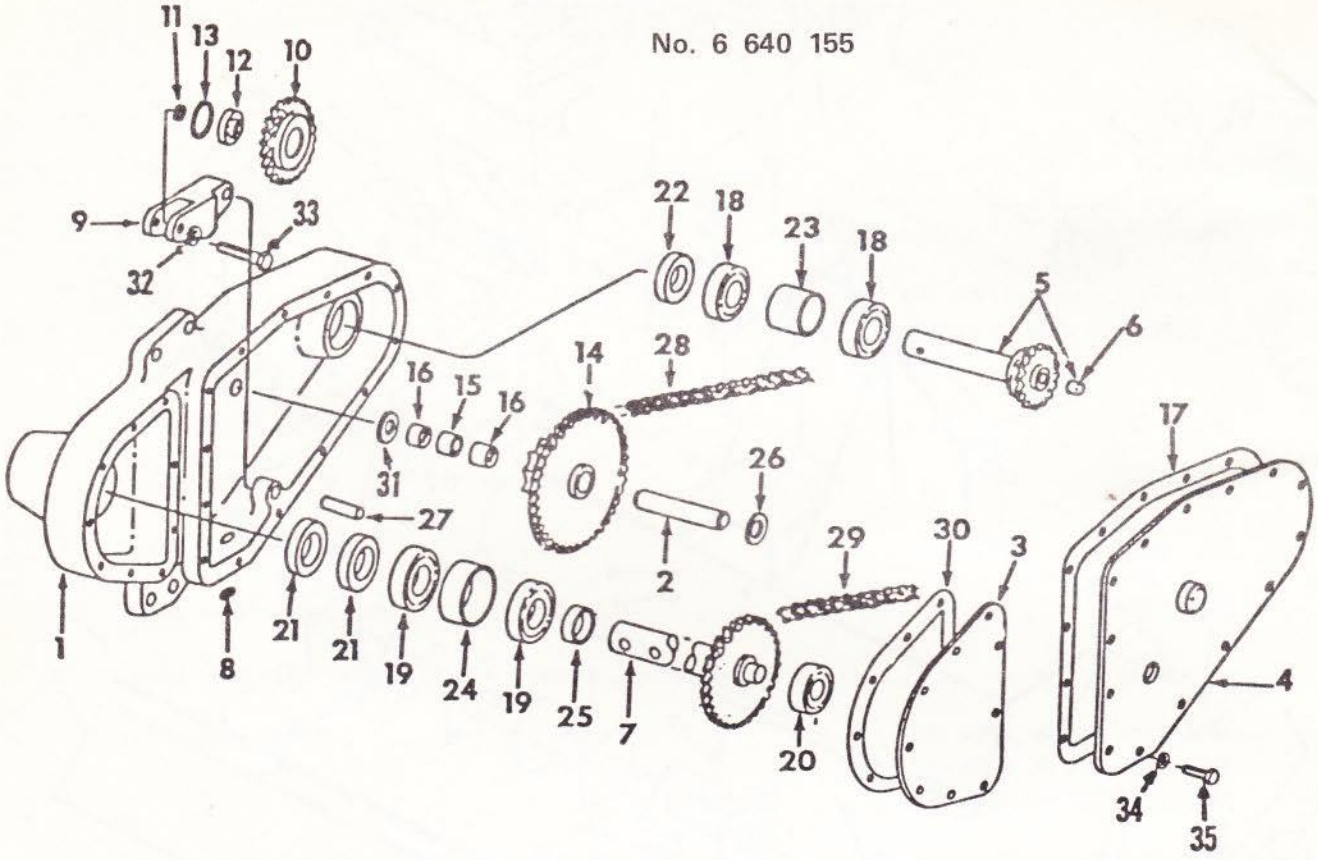
Type	Tractor rear mounted
Lift control	Hydraulic
Drive	Rear power take-off (completely shielded) Through right angle gearbox and chain case to tine shaft.
Tilling width	42 inches
Over-all width	47 inches
Number of tines	28
Tilling depth (maximum)	7 1/2 inches
Tilling depth (To bottom of chain case)	3 5/8 inches
Tilling rotor speeds	122 RPM, @ 515 PTO RPM 195 RPM, @ 820 PTO RPM 305 RPM, @1280 PTO RPM
Ground clearance (Transport)	5 inches
Unit weight	305 pounds
Shipping weight (approx.)	330 pounds
PTO shaft angle – raised	35°
PTO shaft angle – max. tilling depth	15°
Tiller offset from tractor centerline – (L.H.)	2 5/8



NO. 9 921 479

Fig. No.	Part No.	Description	No. Req.	Fig. No.	Part No.	Description	No. Req.
1	6 666 770	Housing W.A.	1	22	0 062 075	Cotter Pin	5
2	6 640 155	Chaincase Assembly	1	23	0 701 011	Capscrew - 5/16 X 3/4	1
3	7 895 220	Gearbox	1	24	0 701 045	Capscrew - 3/8 X 3/4	3
4	7 895 238	Universal Assembly	1	25	0 705 038	Lockwasher - 3/8	23
5	0 793 810	Universal Assembly	1	26	0 705 657	Flat Washer - 3/8	15
6	6 639 645	Side Housing Assembly	1	27	0 701 052	Capscrew - 3/8 X 1	4
7	6 639 702	Tine Shaft W.A.	1	28	0 704 023	Hex Nut - 3/8	16
8	6 639 611	End Plate - R.H.	1	29	0 700 047	Carriage Bolt - 3/8 X 1	12
9	6 639 637	End Plate - L.H.	1	30	0 700 120	Carriage Bolt - 3/8 X 1 1/2	4
10	6 639 835	Extension Shield W.A.	1	31	0 772 541	Capscrew - 7/16 NF X 1 1/2 Gr. 5	28
11	6 666 739	Shield	1	32	7 704 133	Locknut - 7/16 NF Gr. B	28
12	6 666 713	Shield - Front PTO	1	33	0 073 643	Capscrew - 1/2 X 2 1/2 Gr. 5	3
13	6 639 678	Cover Plate	1	34	7 704 125	Locknut - 1/2 Gr. B	3
14	6 640 395	Bottom Skid	1	35	0 700 385	Carriage Bolt - 1/2 X 1 3/4	4
15	6 639 793	Rod - Extension Shield Mtg.	1	36	0 705 046	Lockwasher - 1/2	4
16	0 049 411	Tine - R.H.	14	37	0 704 031	Hex Nut - 1/2	5
17	0 049 403	Tine - L.H.	14	38	0 703 033	Capscrew - 1/2 X 3 1/2 Full Thread	1
18	0 863 183	Shear Pin - 5/16 X 2	2	39	0 771 071	Capscrew - 5/16 X 1 Gr. 5	2
19	0 740 159	Retaining Ring	1				
20	0 763 706	Shear Pin - 5/16 X 2 1/2	1				
21	0 705 020	Lockwasher - 5/16	3				

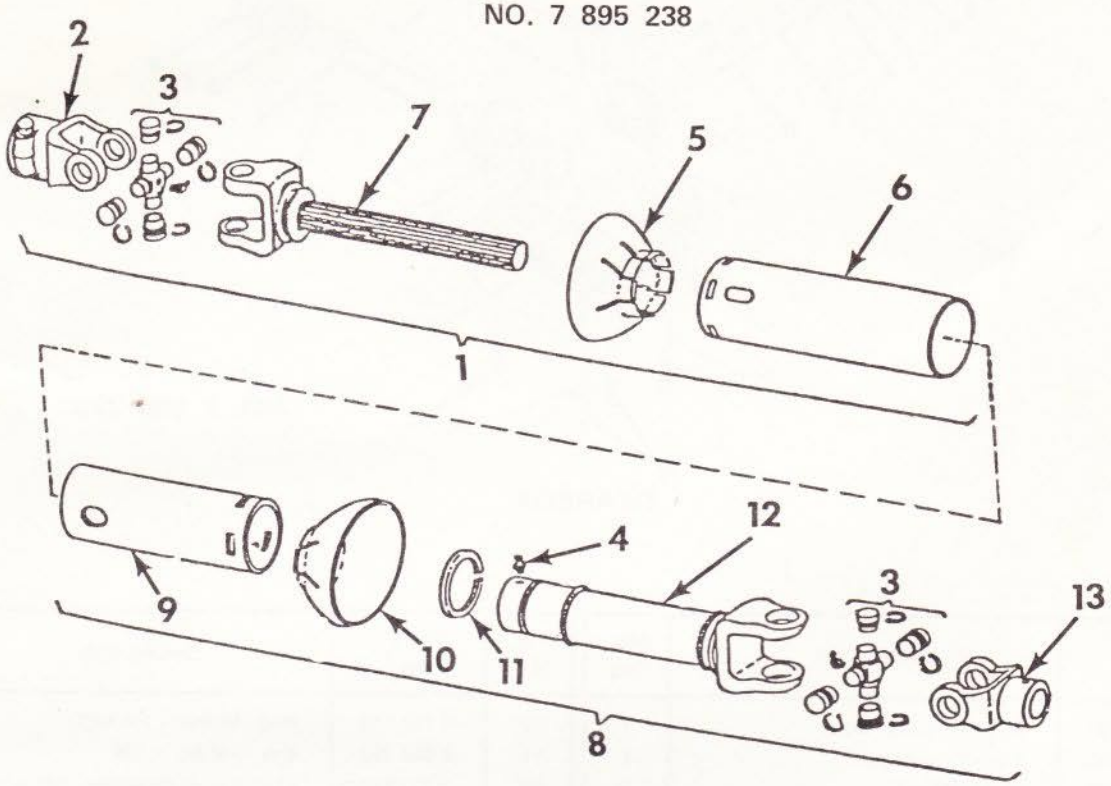
No. 6 640 155



CHAINCASE

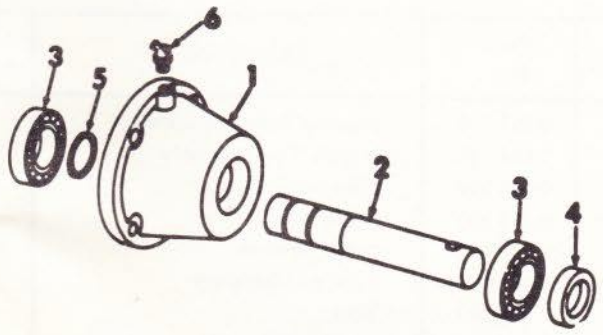
Fig. No.	Part No.	Description	No. Req.	Fig. No.	Part No.	Description	No. Req.
1	6 639 355	Chaincase Housing	1	19	7 712 607	Ball Bearing	2
2	0 863 175	Sprocket Asm. Shaft	1	20	7 712 607	Ball Bearing	1
3	6 640 205	Lower Cover W.A.	1	21	7 044 951	Oil Seal	2
4	6 640 171	Upper Cover W.A.	1	22	7 044 977	Oil Seal	1
5	6 640 239	Input Shaft W.A.	1	23	6 640 353	Spacer—Input	1
6	0 793 844	Insert	1	24	6 640 361	Spacer—Output (large)	1
7	6 640 254	Output Shaft W.A.	1	25	6 640 379	Spacer—Output (small)	1
8	7 044 985	O-Ring	1	26	7 712 649	Wear Plate	1
9	6 639 371	Chain Tension Bracket	1	27	6 640 387	Pivot Pin	1
10	7 848 294	Idler Tension Sprocket—12 T	1	28	7 848 278	Roller Chain No. 50 x 40 pitches	1
11	6 640 270	Spacer	1	29	7 047 830	Roller Chain No. 60 x 40 pitches	1
12	7 710 254	Ball Bearing	1	30	7 044 431	Lower Gasket	1
13	0 840 173	Retaining Ring	1	31	6 640 346	Wear Plate	1
14	6 640 288	Sprocket W.A. (Idler)	1	32	0 705 038	Lock Washer 3/8	1
15	6 640 338	Spacer	1	33	0 701 185	Capscrew—3/8 x 1 3/4	1
16	7 712 631	Needle Bearing	2	34	0 705 020	Lock Washer—5/16	21
17	7 044 449	Upper Gasket	1	35	0 772 004	Capscrew—5/16 x 3/4 (H.T.)	21
18	7 712 615	Ball Bearing	2				

NO. 7 895 238



UNIVERSAL

Fig. No.	Part No.	Description	No. Req.	Fig. No.	Part No.	Description	No. Req.
1	7 812 985	Tractor Half Complete	1	8	7 812 993	Tiller Half Complete	1
2	0 754 127	Yoke–Splined	1	9	7 812 977	Shield–Inner	1
3	0 854 032	Cross Repair Kit	2	10	7 803 844	Bell–Inner Shield	1
4	0 077 016	Grease Fitting	2	11	7 803 547	Support Bearing	1
5	7 803 851	Bell–Outer Shield	1	12	7 812 944	Yoke & Tube Asm	1
6	7 812 969	Shield–Outer	1	13	7 804 453	Yoke–1" Bore	1
7	7 812 951	Yoke & Splined Shaft Asm.	1				

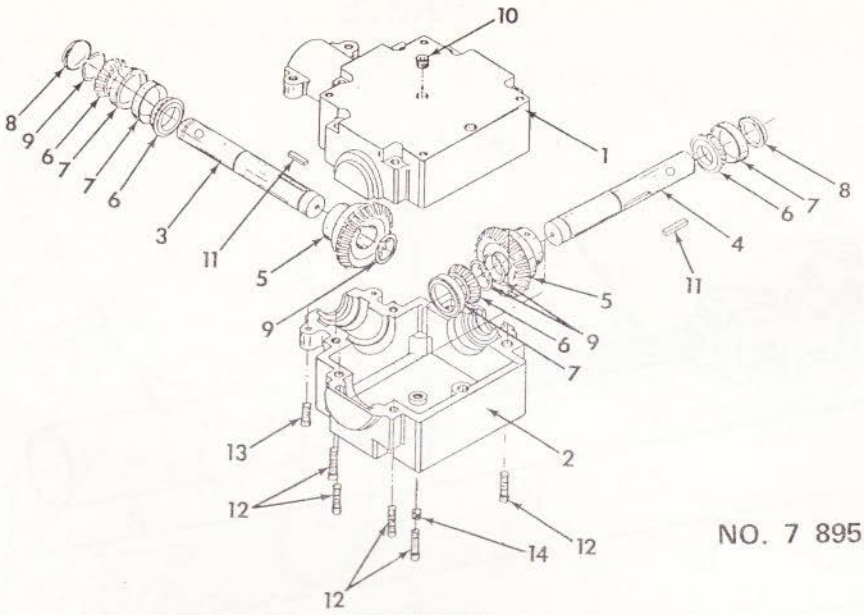


NO. 6 639 645

SIDE HOUSING

Fig. No.	Part No.	Description	No. Req.
1	6 639 652	Side Housing Asm. W/wear Ring	1
2	6 639 686	Shaft	1
3	7 712 623	Ball Bearing	2
4	7 044 951	Oil Seal	1
5	7 052 046	Retaining Ring	2
6	0 077 081	Grease Fitting	1

PARTS



NO. 7 895 220

GEARBOX

Fig. No.	Part No.	Description	No. Req.
1	7 812 894	Box - Threaded Holes	1
2	7 812 886	Box - Thru Holes	1
3	7 812 928	Shaft - Pinion	1
4	7 812 910	Shaft - Cross	1
5	7 812 936	Gear - 19T	2
6	0 710 236	Bearing Cone	4
7	0 710 228	Bearing Cup	4
8	8 044 042	Seal	2
9	7 852 445	Retaining Ring	4
10	0 750 315	Plug - Vented - 1/4 NPT	1
11	6 639 892	Key - 1/4 Sq. X 7/8	2
12	0 701 169	Socket Head Capscrew - 3/8 X 2 1/2	7
13	7 883 416	Socket Head Capscrew - 3/8 X 1 1/2	2
14	0 746 578	Plug - 1/4 NPT	1
	7 895 295	Loctite 504 - 10CC	1
	7 745 425	Locquic Primer - 6 oz.	1

UNIVERSAL

NO. 0 793 810

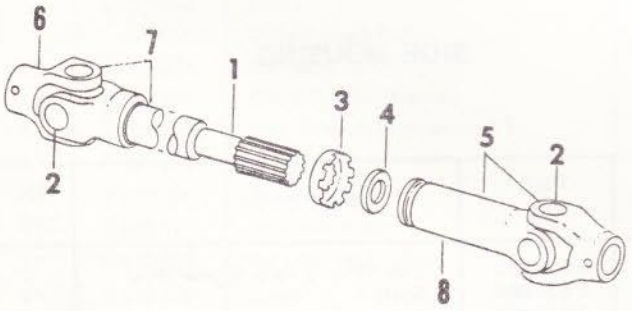


Fig. No.	Part No.	Description	No. Req.
	0 793 810	Universal Assembly Complete	1
1	7 804 313	Shaft & Yoke Assembly	1
2	0 816 934	Cross Repair Kit	2
3	0 916 892	Retainer Cap	1
4	0 816 918	Grease Retainer	1
5	7 803 927	Tube Half Complete	1
6	7 804 297	Yoke	2
7	7 804 321	Shaft Half Complete	1
8	0 816 884	Yoke & Tube	1

A Careful Operator

IS THE BEST INSURANCE

AGAINST AN ACCIDENT

— National Safety Council.

KUBOTA

Part No. 0 891 812