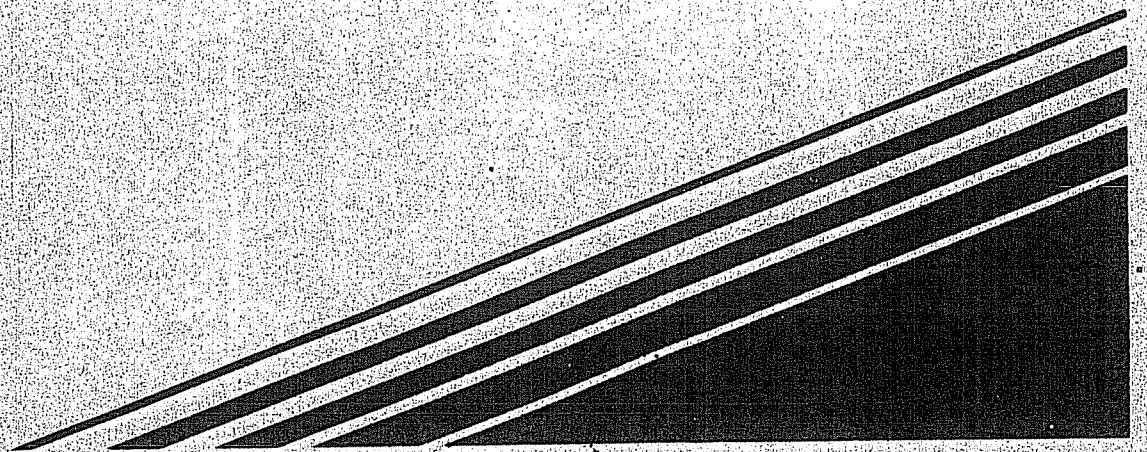




TURBOMOWER 40 & 50

OPERATOR'S and PARTS Manual

£5



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THE TURBOMOWER 40 AND 50 ARE ALMOST IDENTICAL IN DESIGN. THE MAIN DIFFERENCE BEING THE HOOD, ROTOR SHAFT, ROLLER ASSEMBLY FRONT AND REAR FLAPS AND THE ROTOR SHAFT BEARINGS.

THE KEY NUMBERS THAT ARE AFFECTED ARE AS FOLLOWS, WITH THE TURBOMOWER 50 NUMBERS SHOWN IN BRACKETS.

A 8 (A77)	A21 (A78)	A22 (A79)	A25 (A80)
A26 (A81)	A32 (A82)	A36 (A83)	AA41 (A86)
B41 (B86)	A45 (A84)	A58 (A85)	

THE HOLDERS, CUTTERS AND CLIPS ARE IDENTICAL TO THOSE USED ON THE TURBOMOWER 40, BUT THE QUANTITY IS INCREASED TO 40 EACH.

Introduction

This manual has been prepared to assist customers operate and maintain their machines in the most economical manner.

Non-observance of any recommendation or instruction contained within this manual will invalidate any Warranty. The Company reserves the right to modify the machine specification, as represented in this manual, without prior notification.

Safety



Throughout this manual this symbol is used to indicate areas of possible personal danger and/or machine damage. All safety precautions contained within the tractor manufacturers manual should also be observed and your attention is also drawn to the pamphlets as issued by the Health and Safety Executive, Eagle House, Cannon Street, London. If you are in any doubt, refer to your nearest Turner Dealer or contact our Service Department.

Remember - The best kind of safety is a careful operator.

Fitting Instructions

Introduction

For despatch within the United Kingdom the machines leave the works in a 'ready to fit' condition.

Fitting the Machine to the Tractor

1. The machine is simply fitted via the tractor three-point linkage. The lower lift arms are engaged with the machine's Hitch Pins and the top hitch link is attached to the top of the machine's 'A' Frame.

Before connecting the P.T.O. Drive Shaft, raise machine to its highest position on the lift arms and, by offering up P.T.O. shaft to machine and tractor, check that there is sufficient travel without shaft 'bottoming.' A further check should be made with machine in operating position to ensure sufficient drive remains i. e. approximately 2 inches (50 mm). The P.T.O. Drive Shaft from the gearbox is connected to the tractor P.T.O.

Checks Subsequent to Fitting Machine

1. Adjust top link until the gearbox input shaft when viewed from the side, is parallel with the tractor P.T.O. Shaft. For this adjustment the machine roller should be in contact with the ground and the tractor linkage lowered.



2. Check that the tractor P.T.O. drive is disengaged, select the tractor hydraulics to raise the linkage and TURBOMOWER to give access to the rotor shaft; check that all cutters hang freely.
3. With the machine standing level, check gearbox grease level by removing the upper plug on the gearbox end cover, through the access hole on the rear of the machine.

Suitable lubricants for the gearbox are as follows:-

Shell Semi Fluid EP Grease

Cutters



Never operate the machine with broken or missing cutters as this will cause the rotor shaft to vibrate, and subsequent damage to the machine may result.

Maintenance

Carry out routine maintenance as prescribed in appropriate Section of this manual.

Operating Instructions

The TURBOMOWER is a simple robust machine which requires the minimum of operating skills. It will continue to give long, trouble-free service providing the following instructions are complied with.

1. Raising and Lowering Machine



The TURBOMOWER is lowered to its cutting position via operation of the tractor three-point linkage. When lowering, the roller should not be allowed to 'hammer' to the ground; this imposes unnecessary shock loading on the bearings and shaft, thereby reducing their effective life.

2. Tractor and P.T.O. Speed



The machine is designed to operate at 1000 R.F.M. input speed. Because some tractors have a range of P.T.O. speeds that do not include a P.T.O. speed of exactly 1000 R.F.M., it is important that the correct P.T.O. gear is selected.

The following gears are recommended on the corresponding tractors:-

KUBOTA

B 5100	12 HP	2nd gear	963 rpm
B 6100 D.P.	14 HP	2nd gear	876 rpm
B 7100 D.P.	16 HP	2nd gear	876 rpm
L 245 D.T.	25 HP	3rd gear	1000 rpm

B 6000
NOT COMPATIBLE DUE TO
P.T.O. HAVING OPPOSITE
DIRECTION OF ROTATION
TO STANDARD.

ISEKI

TX 1000 F	11	HP	2nd gear	752 rpm
TX 1300 F	13	HP	2nd gear	752 rpm
TX 1500 F	14.8	HP	2nd gear	752 rpm
TS 1910 GE	18.2	HP	2nd gear	1000 rpm
TS 1910 GLFE	18.2	HP	2nd gear	1000 rpm
TS 25 ic	25	HP	3rd gear	990 rpm
TS 28 ic	28	HP	3rd gear	990 rpm

It is not recommended that the Turbomower 40 is used on tractors with more than 25 HP at the F.T.O. Shaft.

Should you require information concerning other tractors, please contact our Service Department.

Please note that we have only given the information concerning the above tractors as a general guide. No other interpretation is either implied or suggested.

The tractor forward speed should be adjusted relative to the density of growth being cut, i. e. the denser the growth the lower the forward speed. Cutting dense growth at a high forward speed will result in overloading of the rotor shaft which in turn will promote drive belt failure.

When engaging the P.T.O. to drive the rotor shaft, always endeavour to achieve a 'smooth take off.' Harsh snatching of the clutch induces unnecessary high loading on the transmission system.

3. Turning



Negotiating sharp turns with the TURBOMOWER in the cutting position is to be avoided.

Routine Maintenance and Adjustments

After 8 hours (New machine or whenever relevant components have been disturbed)

1. Check grub screws in pulley taper-locks for tightness.
2. Check grub screws in rotor and top drive shaft bearing locking collars for tightness.
3. Check all 'A' Frame attachment bolts for tightness.

Every 8 hours

1. Check for damaged cutters.
2. Check Cutter Holders and Clips.

Every 25 hours

1. Check gearbox for correct grease level, replenish as required.

Every 50 hours

1. Check all 'A' Frame attachment bolts for tightness.

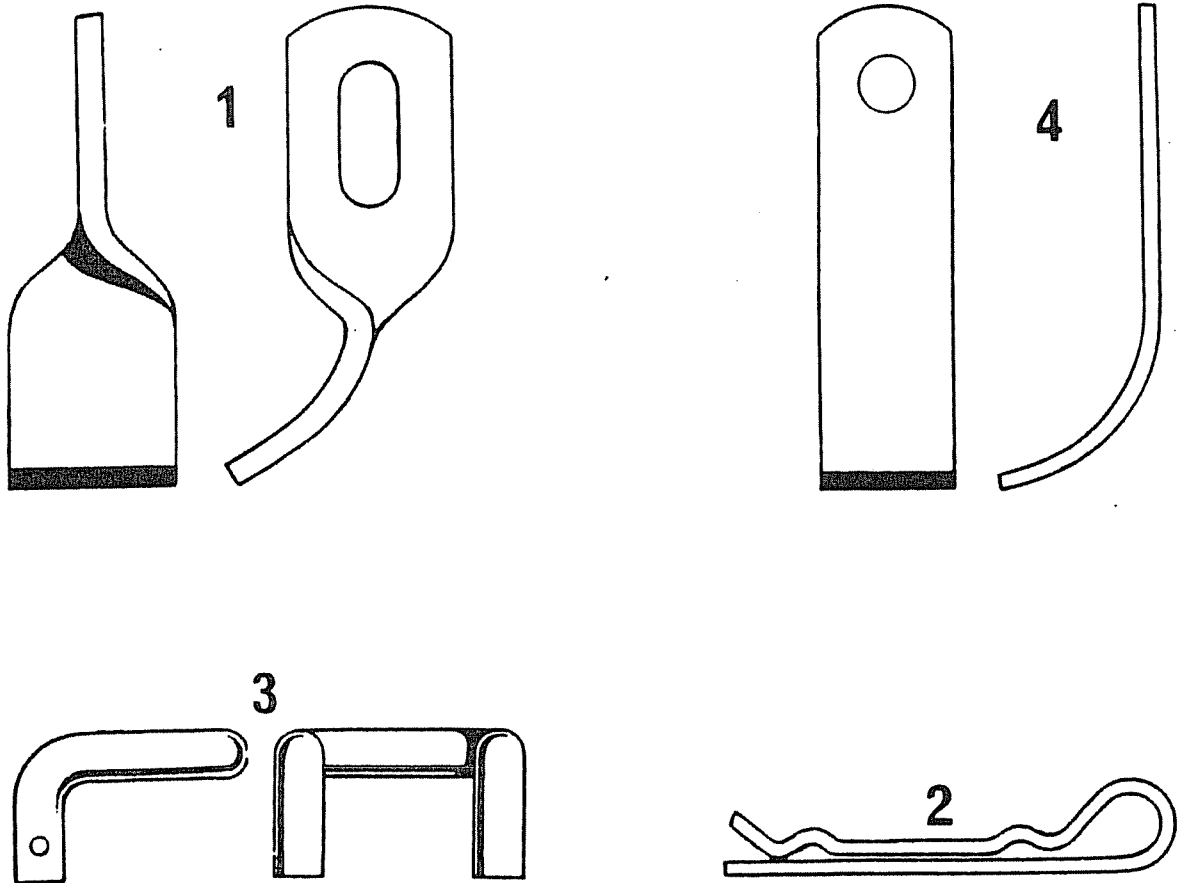
Every 100 hours

1. Lubricate the P.T.O. drive shaft and top drive shaft universal joint via the grease nipple provided.
2. Lubricate the Idler Pulley Bracket Pivot point.

Cutters

Cutters are simply replaced by removing the clip and holder, discarding the old items and fitting new ones.

We recommend that the holders and clips are replaced when replacing each second set of cutters.



1. Cutter (Medium Twisted)
2. Clip
3. Holder
4. Cutter (Optional)

Component Replacements

Rotor Shaft Flange Bearing (Drive Belt End)

1. Remove belt guard.
2. Slacken drive belts.
3. Remove both grubscrews from taper lock.
4. Insert one grub screw into 'jacking' hole, tighten grub screw to withdraw taper lock and key.
5. Remove pulley.
6. Slacken grub screw in bearing locking collar.
7. Remove locking collar by lightly tapping in direction opposite to shaft rotation.

Note: If the collar does not move tap lightly in direction of rotor shaft rotation, if the collar now moves it indicates incorrect fitting during a previous removal. The collar has the ability of being locked in both directions and note should be taken when refitting.
8. Remove grass guard to gain access to bolts securing bearing.
9. Remove bolts securing bearing flange to hood.
10. Remove defective bearing.
11. Examine exposed portion of rotor shaft for scores or burring, clean off as required.
12. Locate new bearing on rotor shaft and refit securing bolts ensuring inner grass guard correctly located.

Note: Flange bearings are supplied complete with new locking collars. The locking collar should be removed before fitting bearing.

13. Slide locking collar against cam end of bearing inner ring and engage cams by rotating collar until it slides over bearing inner ring.
14. Lock collar by tapping in direction of shaft rotation, tighten grubcrew in locking collar.
15. Assemble taper lock to pulley and loosely refit grubcrews.
16. Slide assembly over rotor shaft and align both pulleys.

Note: When tightening the grubcrews in the taper lock the lock will first bed on the rotor shaft and the pulley will be 'drawn' on to it.

17. Tighten taper lock grubcrews and refit key.
18. Check for correct pulley alignment.
19. Refit and tension drive belts.
20. Check that rotor shaft is central in hood and that shaft end discs do not foul bearing attachment bolts.

Note: A certain amount of distortion occurs to the end discs and the shaft should be rotated by hand when checking discs for fouling.

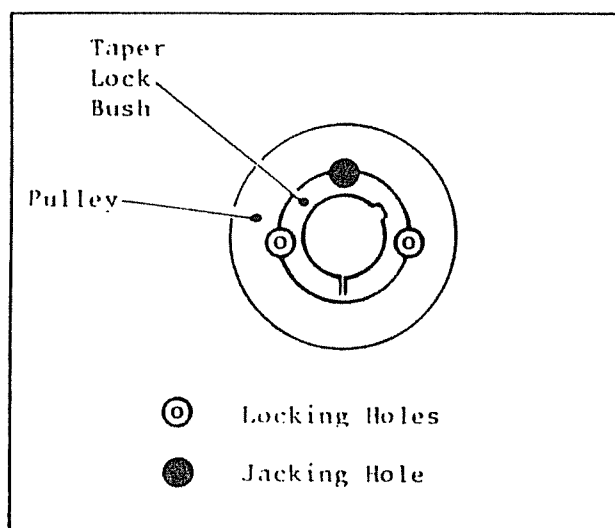
21. Refit belt guard.

Rotor Shaft Flange Bearing (Exposed End)

The procedure is identical to that outlined with the exception of those items related to the pulley assembly. If both flange bearings are removed together the rotor shaft should be centralised before fitting of the locking collar to the first bearing refitted.

Taper Locks

The main pulleys are retained on their respective shafts by taper lock bushes. It is important that when refitting, the grubscrews are inserted into their correct holes. Of the three holes on the taper lock, two only are used for locking, the third is for removal and known as the 'jacking hole'. The locking holes are identified by not having thread on the bush itself, only the pulley hole being threaded. Conversely, the jacking hole is threaded on the bush only, the pulley portion being blank.



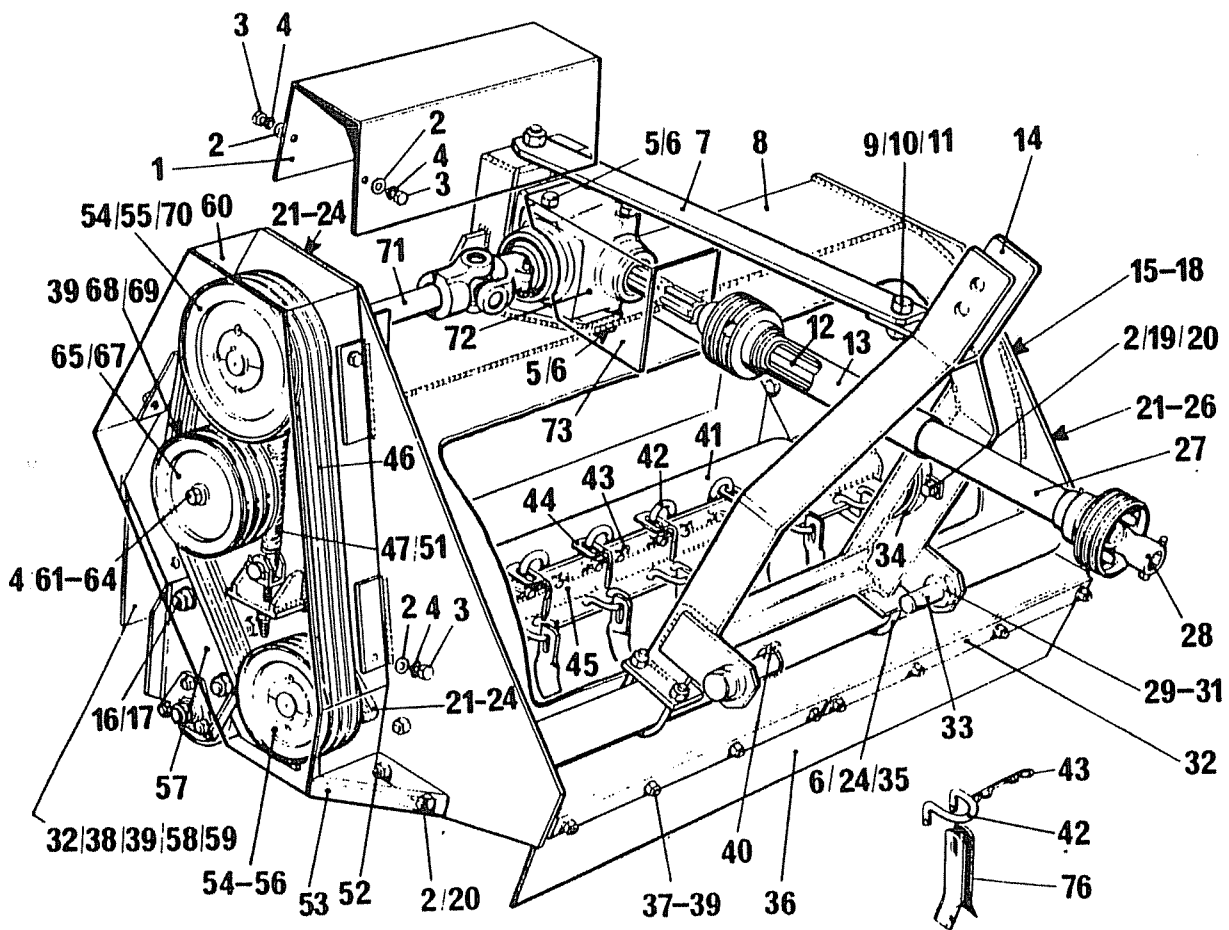
Note:

On Tractors that have 540 R.P.M. P.T.O. speeds, an alternative belt drive arrangement is required.

Please contact our Service Department for further details.

NOTES

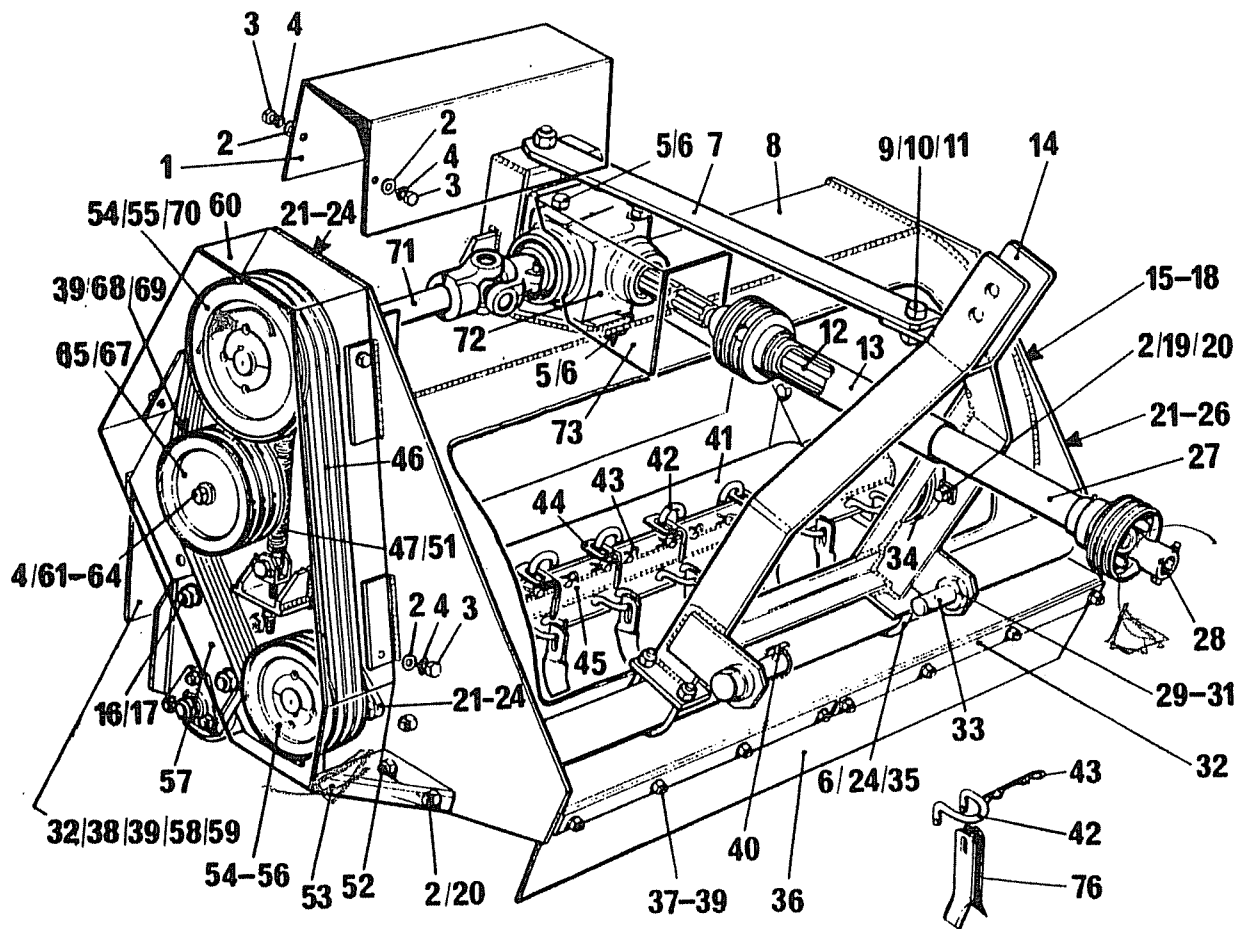
MAIN ASSEMBLY



MAIN ASSEMBLY

KEY No:	PART No:	DESCRIPTION
1	13119	GUARD, CROSS SHAFT
2	7114	WASHER, PLAIN
3	6914	BOLT
4	7122	WASHER, SPRING
5	6935	BOLT
6	7123	WASHER, SPRING
7	13121	TIE BAR
8	13110	HOOD
9	6985	BOLT
10	7117	WASHER, PLAIN
11	7069	NUT, NYLOC
12	20583	P. T. O. SHAFT FEMALE
13	20585	P. T. O. GUARD FEMALE
14	13122	'A' FRAME
15	13128	BRACKET, ROLLER LEFT HAND
16	6956	BOLT
17	7124	WASHER, SPRING
18	7068	NUT, NYLOC
19	6917	BOLT
20	7066	NUT, NYLOC
21	5188	BEARING
22	6938	BOLT
23	7115	WASHER, PLAIN
24	7067	NUT, NYLOC
25	6148	DUST CAP
26	13112	STRAP, DUST CAP
27	20584	P. T. O. GUARD, MALE
28	20582	P. T. O. SHAFT, MALE
29	13124	SPACER
30	5032	NUT, PLAIN
31	5260	WASHER, SHAKEPROOF
32	13127	STRIP, FLAP RETAINING
33	1105	HITCH PIN
34	10078	GRASS GUARD
35	13123	'U' BOLT
36	13125	FLAP, FRONT
37	6902	BOLT

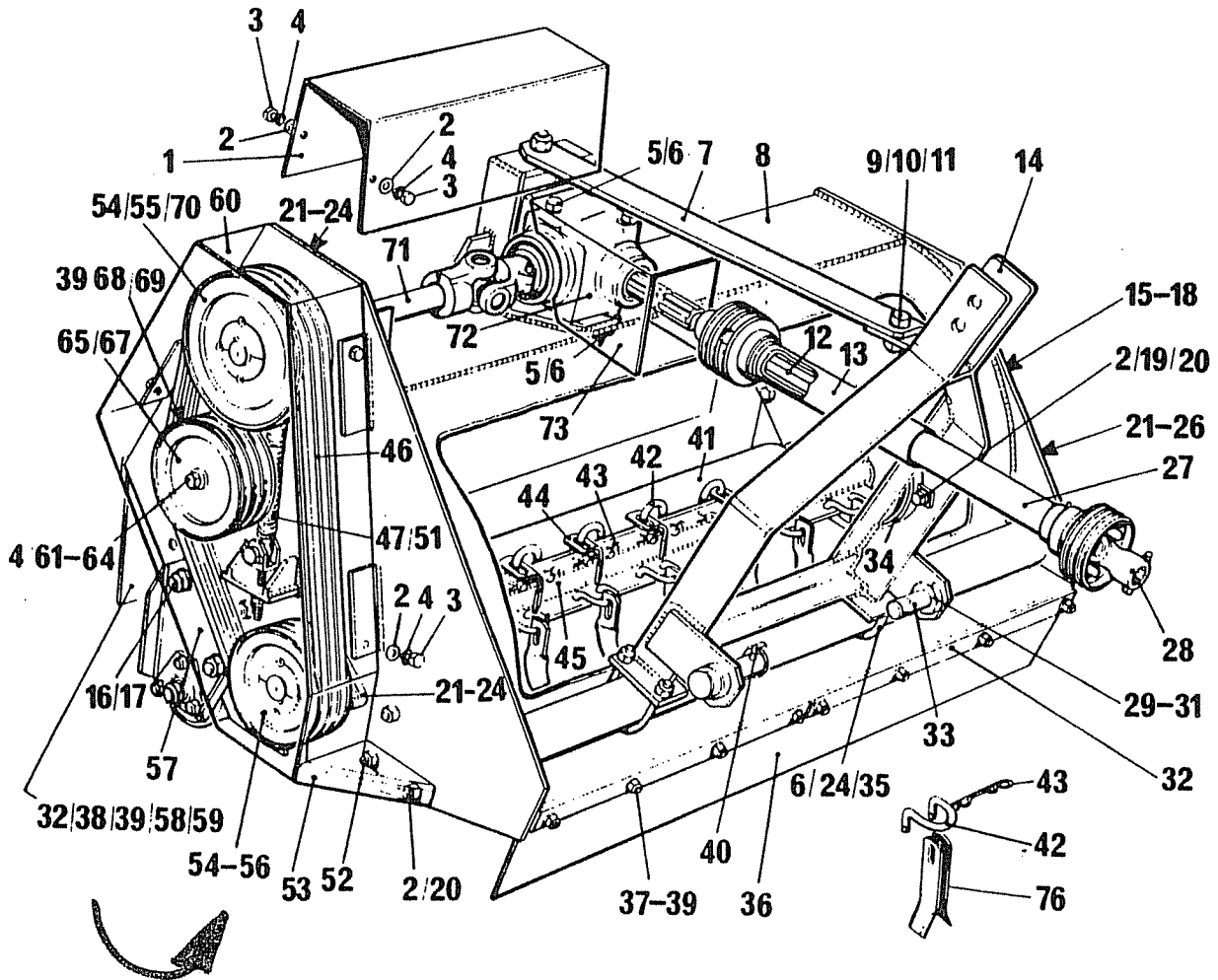
MAIN ASSEMBLY



MAIN ASSEMBLY

KEY No:	PART No:	DESCRIPTION
38	7113	WASHER, PLAIN
39	7065	NUT, NYLOC
40	7696	LINCH PIN
41	13130	ROLLER
42	1103	HOLDER
43	1107	CLIP
44	6046	CUTTER
45	4844	ROTOR SHAFT ASSEMBLY, COMPLETE
46	5195	BELT
47	20578	EXTENSION SPRING
48	525027	SPLIT PIN
49	13115	PIN, SPRING ATTACHMENT
50	13116	BOLT, TENSIONING
51	7051	NUT, PLAIN
52	6916	BOLT
53	13137	DEFLECTOR
54	1202	KEY
55	5230	TAPERLOCK
56	20572	PULLEY 140
57	13129	BRACKET, ROLLER RIGHT HAND
58	13126	FLAP, REAR
59	6898	BOLT
60	13117	GUARD, BELT
61	5254	WASHER, PLAIN
62	13113	BRACKET, IDLER PULLEY
63	5409	GREASE NIPPLE
64	6915	SETSCREW
65	20573	PULLEY, IDLER
66	20576	NEEDLE ROLLER BEARINGS
67	20577	INNER RING
68	13114	PIN, PIVOT
69	6901	BOLT
70	20574	PULLEY- 160
71	13118	CROSS SHAFT
72	20580	GEARBOX
73	13120	GUARD, INPUT SHAFT
74	20579	BEARING, ROLLER

MAIN ASSEMBLY



MAIN ASSEMBLY

KEY No:	PART No:	DESCRIPTION
75	6897	BOLT
76	20398	CUTTER, LIGHTWEIGHT. OPTIONAL ALTERNATIVE

S7D
↓

Note: On Tractors that have 540 R.P.M. P.T.O. speed, these spare parts change as follows:-

20572 becomes 7638

5230 becomes 5236

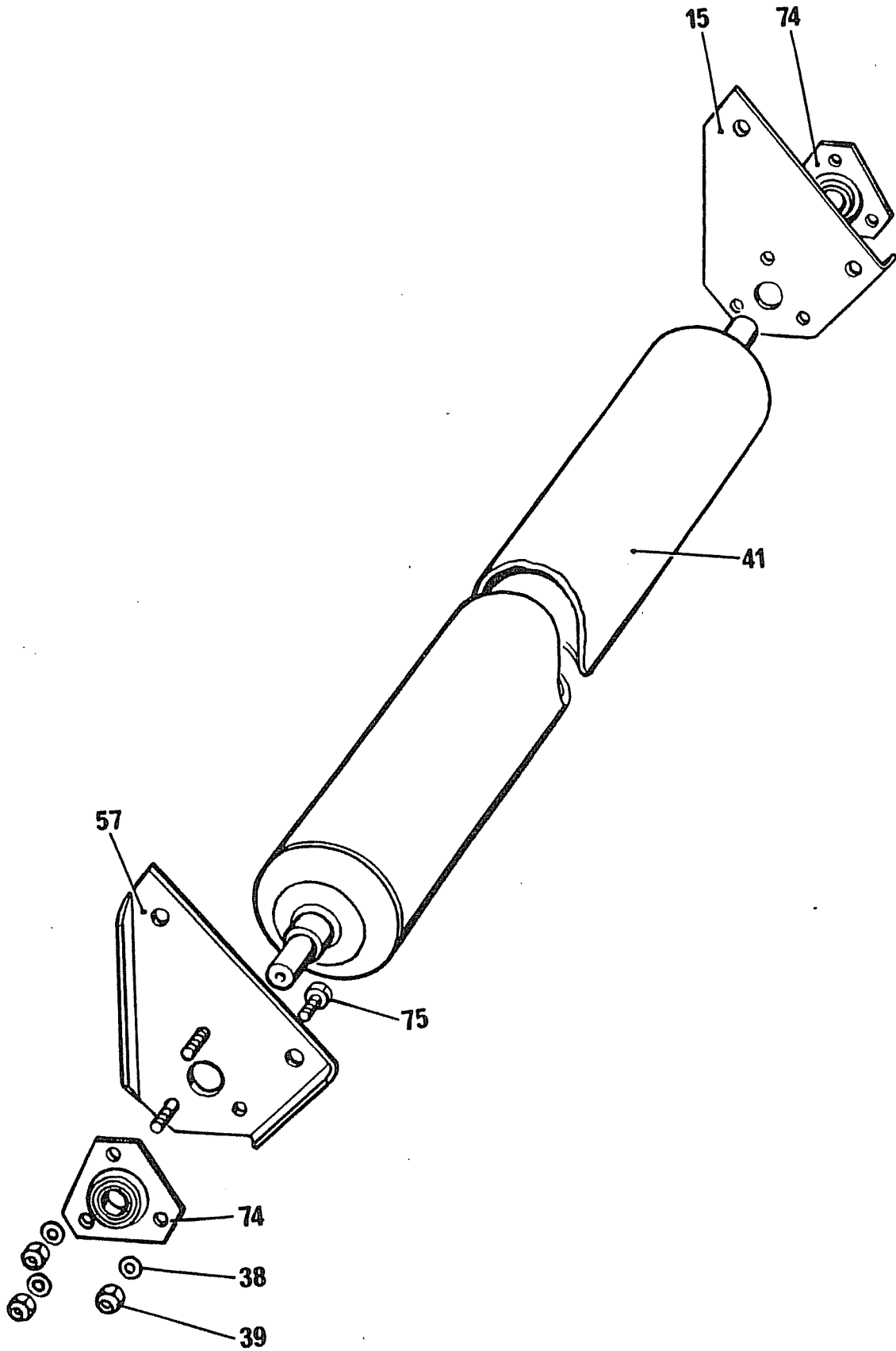
5195 becomes 7908

- 90 SPZ
16 10 TCB 19
SPZ 1200
47 29

The 'P.T.O. Speed' decal 13133 changes to 6404.

0724208

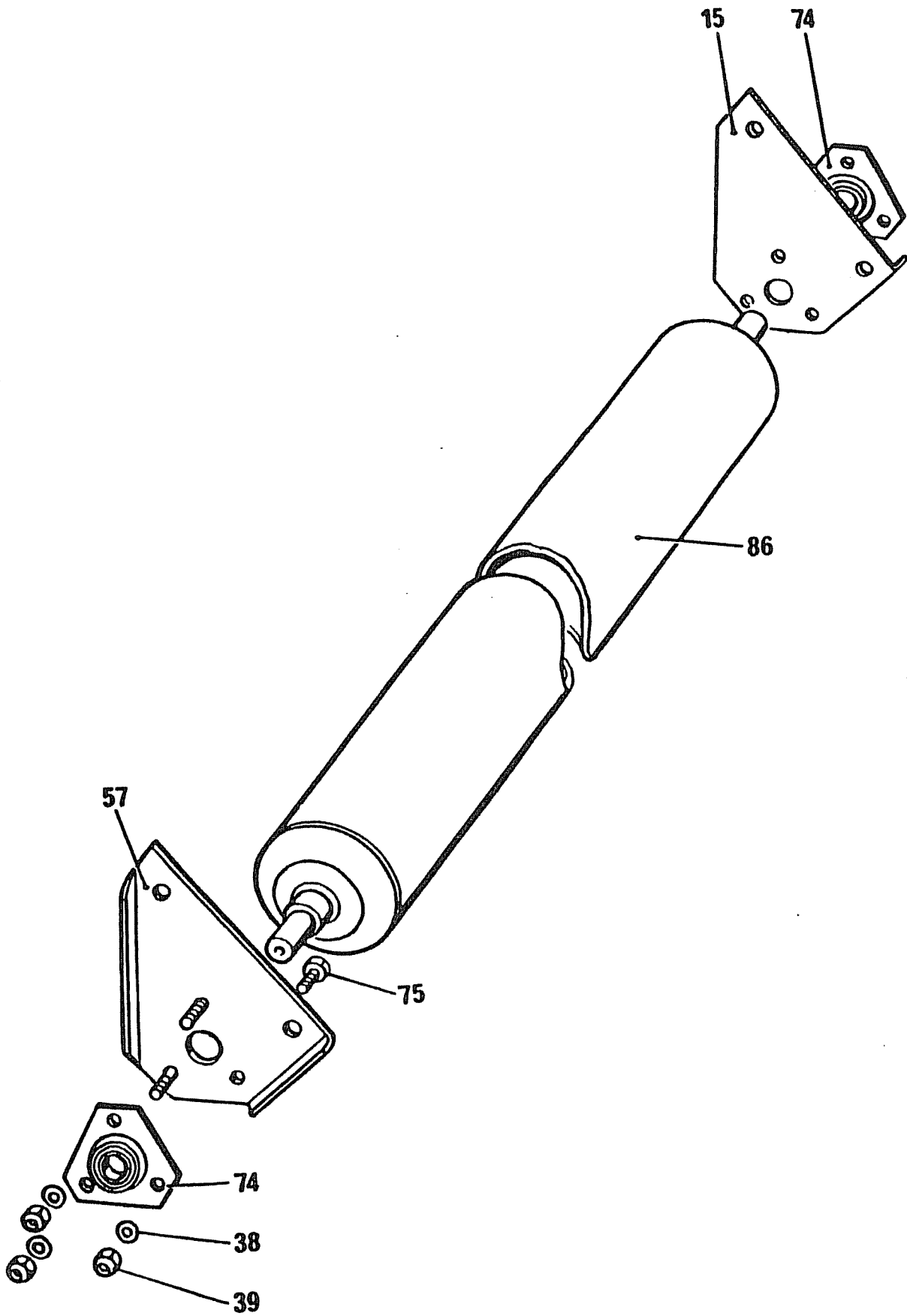
ROLLER



ROLLER

KEY No:	PART No:	DESCRIPTION
15	13128	BRACKET, ROLLER LEFT HAND
38	7113	WASHER, PLAIN
39	7065	NUT, NYLOC
41	13130	ROLLER
57	13129	BRACKET, ROLLER. RIGHT HAND
74	20579	BEARING, ROLLER
75	6897	BOLT

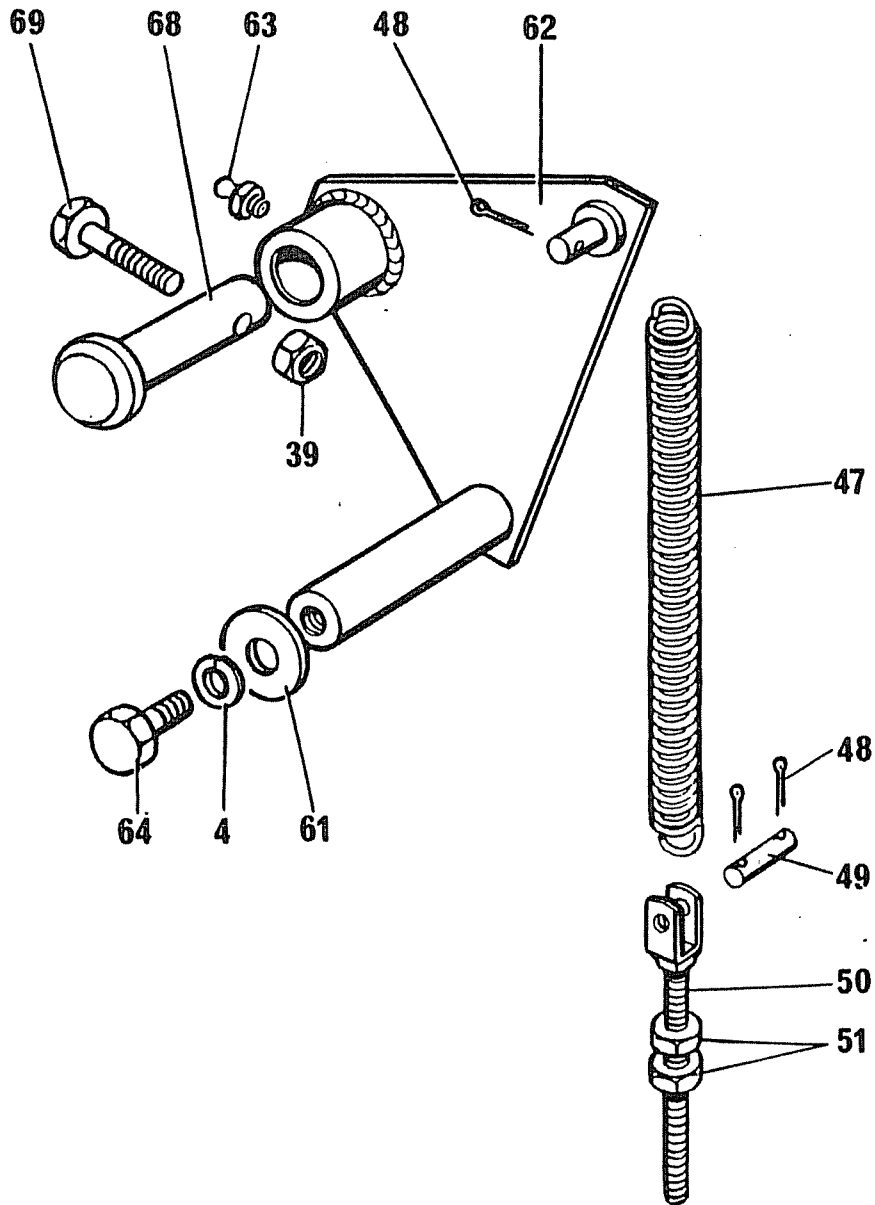
ROLLER (T.M.50)



MAIN & ROLLER ASSEMBLIES(T.M.50)

KEY No:	PART No:	DESCRIPTION
77	12226	HOOD
78	20406	BEARING
79	6939	BOLT
80	20407	DUST CAP
81	11804	STRAP, DUST CAP
82	12230	STRIP, FLAP RETAINING
83	12228	FLAP, FRONT
84	4886	ROTOR SHAFT ASSEMBLY, COMPLETE
85	12229	FLAP, REAR
86	12231	ROLLER

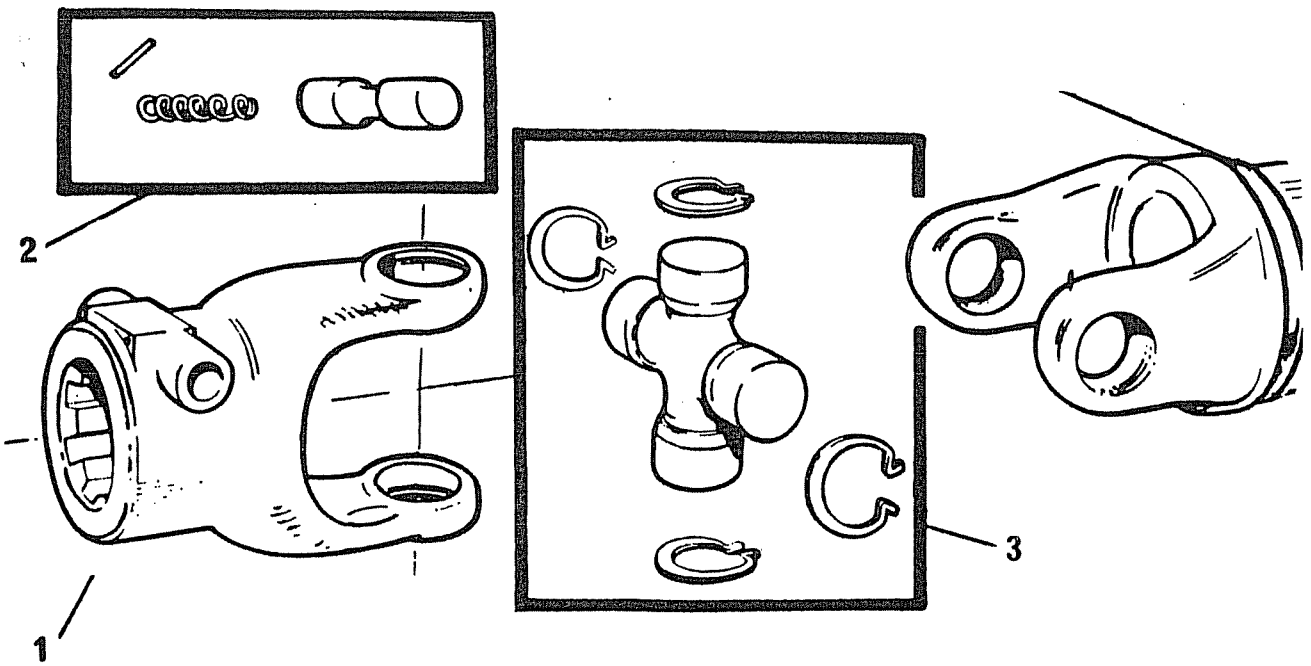
BELT TENSIONING



BELT TENSIONING

KEY No:	PART No:	DESCRIPTION
4	7122	WASHER, SPRING
39	7065	NUT, NYLOC
47	20578	EXTENSION SPRING
48	525027	SPLIT PIN
49	13115	PIN, SPRING ATTACHMENT
50	13116	BOLT, TENSIONING
51	7051	NUT, PLAIN
61	5254	WASHER, PLAIN
62	13113	BRACKET, IDLER PULLEY
63	5409	GREASE NIPPLE
64	6915	SETSCREW
68	13114	PIN, PIVOT
69	6901	BOLT

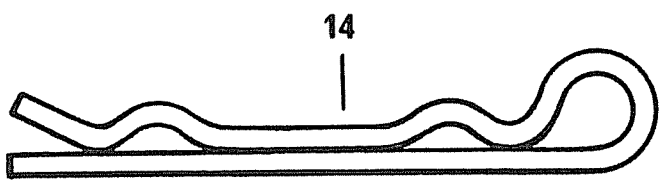
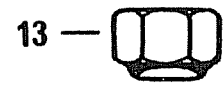
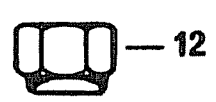
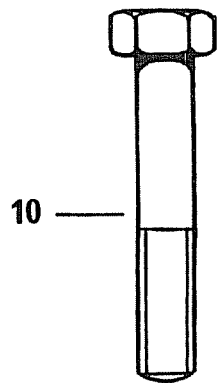
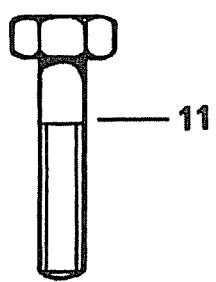
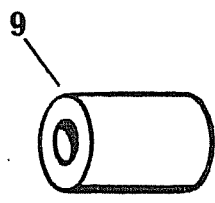
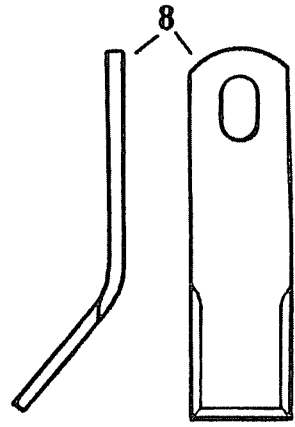
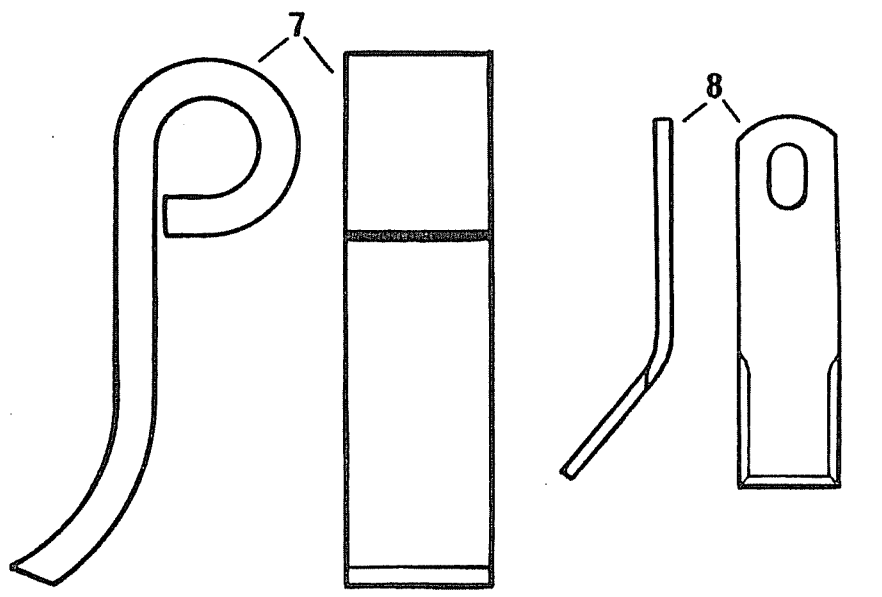
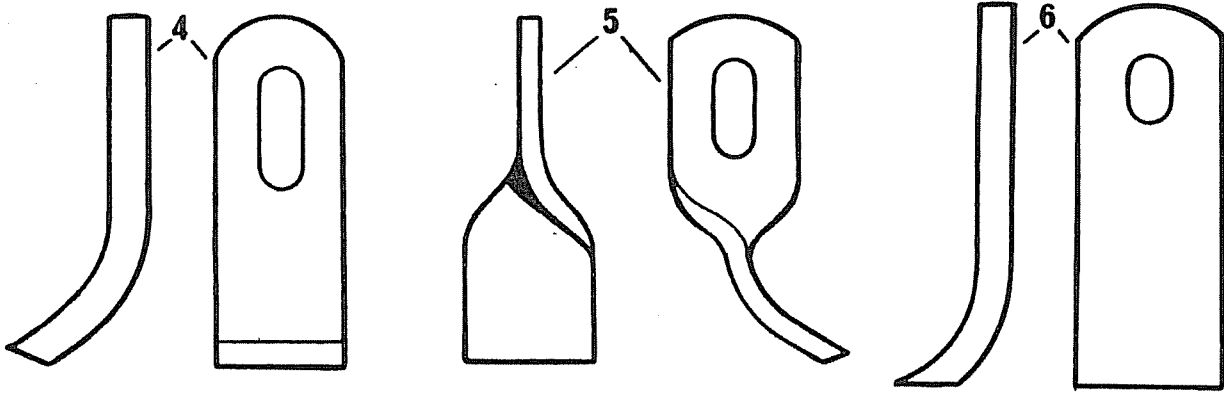
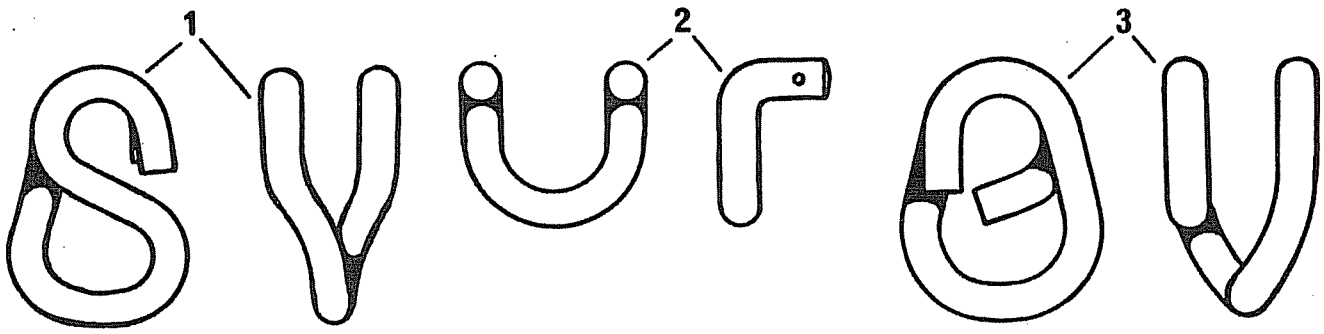
P.T.O. SHAFT REPAIR KIT



P.T.O. SHAFT REPAIR KIT

KEY No:	PART No:	DESCRIPTION
1	20622	END YOKE
2	5719	PIN KIT, QUICK RELEASE
3	20623	UNIT PACK

CUTTERS & SHACKLES



CUTTERS & SHACKLES

KEY No:	PART No:	DESCRIPTION	T/Mower 40	T/Mower 64	T/Mower 72 H. D.	T/Mower 84
			Qty.	Qty.	Qty.	Qty.
1	6495	Shackle, Twisted	-	52	-	68
2	1103	Holder	32	-	-	-
3	3789	Shackle, H. D.	-	-	52 *	-
4	6202	Cutter	-	52	-	68
5	6046	Cutter, Twisted	32	-	-	-
6	11540	Cutter	-	-	52 *	-
7	20616	Cutter	-	-	52 **	-
8	20398	Cutter, Lt. Wt.	64	-	-	-
9	12128	Bush	-	-	52 **	-
10	7354	Bolt	-	-	52	-
11	6034	Bolt	-	52	-	68
12	6033	Nut, Nyloc	-	52	-	68
13	7757	Nut, Nyloc	-	-	52	-
14	1107	Clip	32	-	-	-
* DISCONTINUED - REPLACED BY **						

NUMERICAL INDEX

PART No:	FIGURE	KEY	PART No:	FIGURE	KEY	PART No:	FIGURE	KEY
1103	A	42	7051	A/C	51	13123	A	35
1105	A	33	7065	A/B/C	39	13124	A	29
1107	A	43	7066	A	20	13125	A	36
1202	A	54	7067	A	24	13126	A	58
4844	A	45	7068	A	18	13127	A	32
5032	A	30	7069	A	11	13128	A/B	15
5188	A	21	7113	A/B	38	13129	A/B	51
5195	A	46	7114	A	2	13130	A/B	41
5230	A	55	7115	A	23	13137	A	53
5254	A/C	61	7117	A	10	20398	A	76
5260	A	31	7122	A/C	4	20572	A	56
5409	A/C	63	7123	A	6	20573	A	65
5719	D	2	7124	A	17	20574	A	70
6046	A	44	7696	A	40	20576	A	66
6148	A	25	10078	A	34	20577	A	67
6897	A/B	75	13110	A	8	20578	A/C	47
6898	A	59	13112	A	26	20579	A/B	74
6901	A/C	69	13113	A/C	62	20580	A	72
6902	A	37	13114	A/C	68	20582	A	28
6914	A	3	13115	A/C	49	20583	A	17
6915	A/C	64	13116	A/C	50	20584	A	27
6916	A	52	13117	A	60	20585	A	13
6917	A	19	13118	A	71	20622	D	1
6935	A	5	13119	A	1	20623	D	3
6938	A	22	13120	A	73	525027	A/C	48
6956	A	16	13121	A	7			
6985	A	9	13122	A	14			