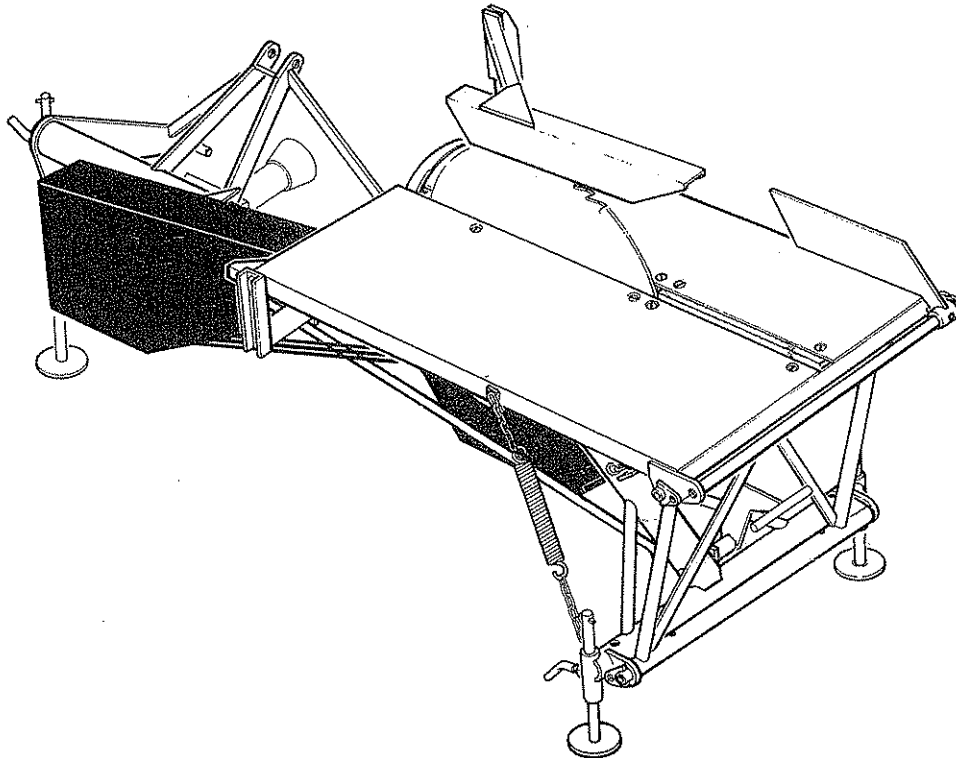


Instruction and Spare Parts Manual

ALLWORK SAWBENCH



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F W McConnell Ltd

agricultural and industrial machinery

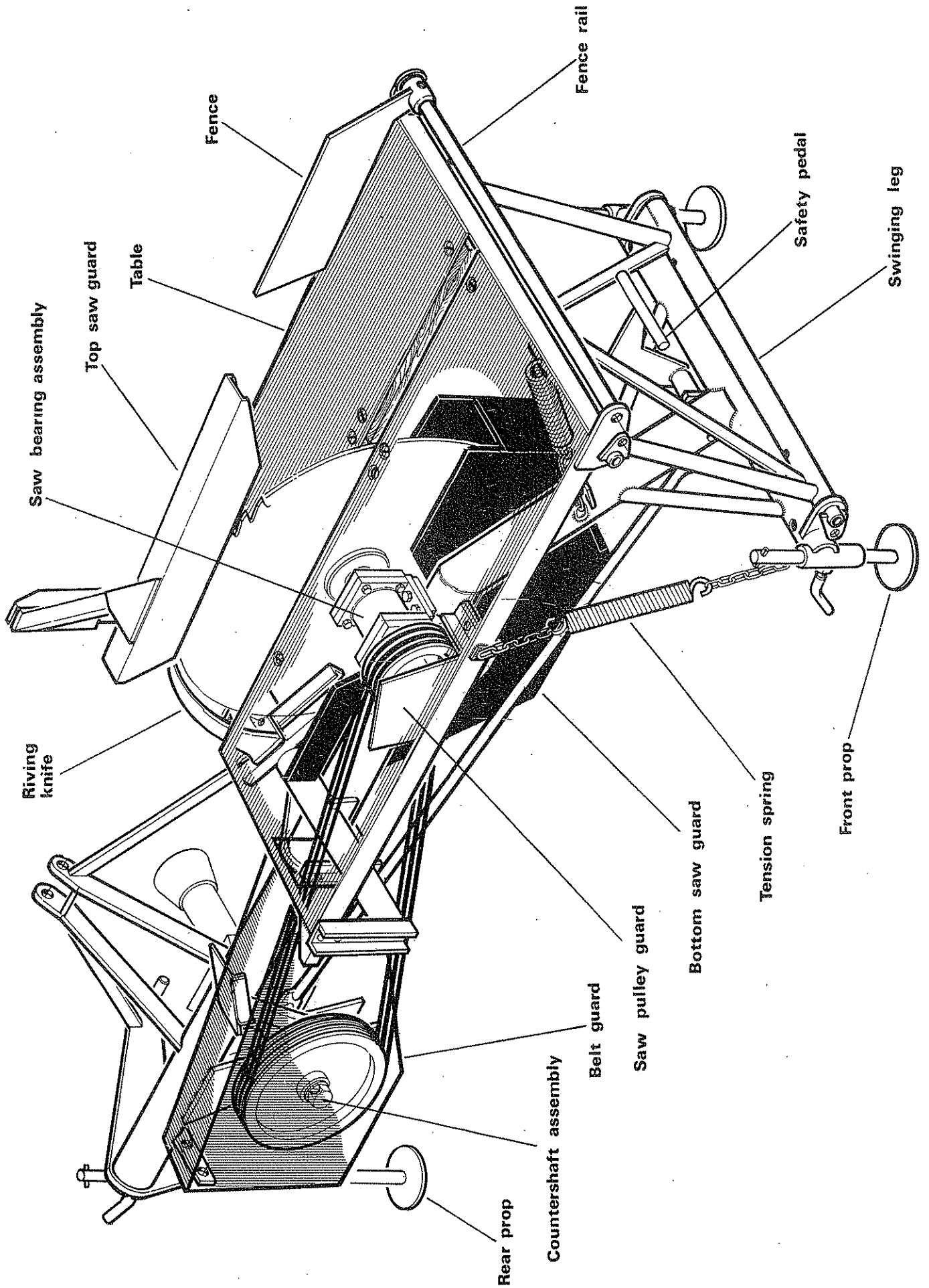
Registered office: Temeside Works
Ludlow, Shropshire, SY8 1JL
England

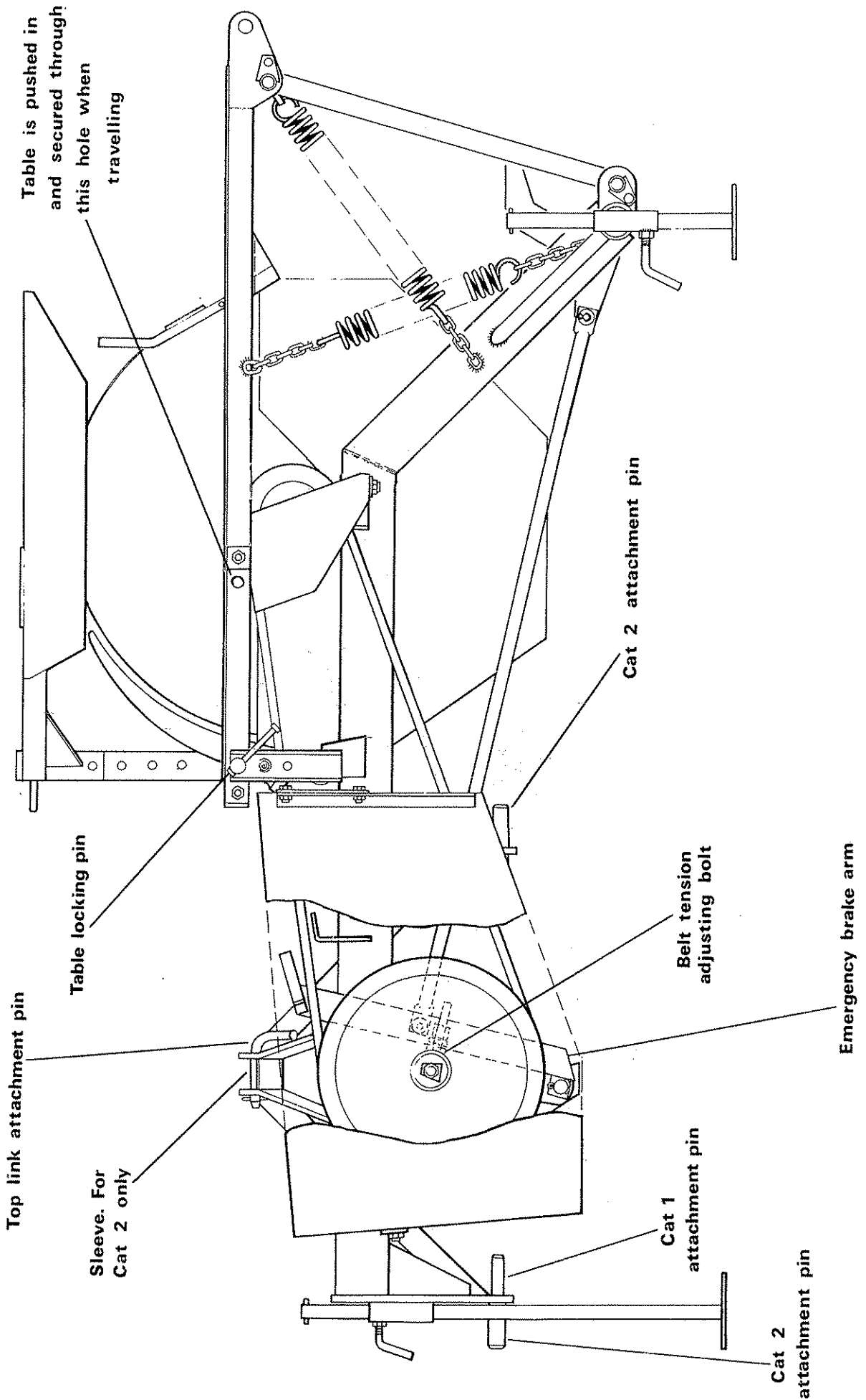
*registered number 305192 England
telephone: Ludlow 3131 (std 0584)
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*cables & telegrams: McConnell 35313
Ludlow Shropshire telex*



McCONNEL ALLWORK SAWBENCH





SECTION 1 FITTING

Check that your machine is complete and undamaged.

1. TRACTOR PREPARATION

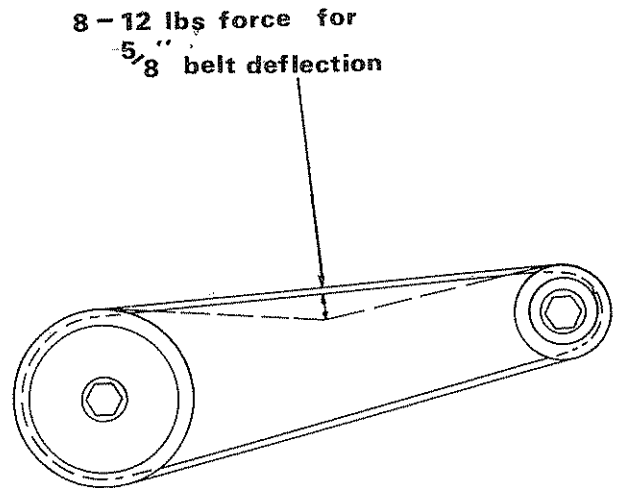
Ensure that the drop arms of the hydraulic lift are set in a fixed position and not in a 'floating position'. This will not apply to some tractors where fixed positions only are obtainable.

2. ATTACHMENT

- i) Stop tractor and disengage P.T.O.
- ii) Attach the tractor lower linkage arms to the attachment pins.
Cat. 1 on the inside Cat. 2 on the outside.
- iii) Fit the PTO drive shaft to the tractor.
On smaller tractors with shorter lift arms the PTO shaft may have to be shortened, equal amounts being cut off both sections.
- iv) Attach the tractor adjustable top link. The sleeve supplied with the top link attachment pin is required only for Cat.2 linkage.

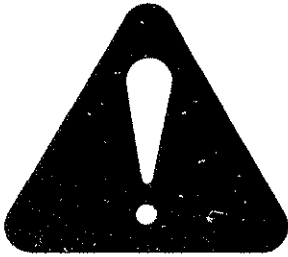
3. SAWBENCH PREPARATION

- i) Tension the belts by removing the belt guard and unscrewing the tensioning bolt which is located on the side of the emergency brake arm. The belts must be tightened until it requires a force of 8 - 12 lbs (3.5 - 5.5 kg) to deflect each belt $\frac{5}{8}$ " (16 mm) at the centre of the span. To allow for initial stretch in new belts check tension after first few hours use.



- ii) Push the table in and secure with locking pin.
- iii) Raise machine on tractor linkage.
- iv) Fully raise the props and lock in this position.
- v) Adjust stabilizer chains on tractor linkage to prevent sideways.

The Sawbench is now ready to be transported to the work-site.



WARNING

SAFETY PRECAUTIONS

- NEVER
- Allow inexperienced personnel to operate the machine without supervision.
 - Operate the machine without all safety guards fitted securely in position.
 - Use a cracked or distorted blade.
 - Make any adjustments to machine without stopping the tractor engine and disengaging the PTO shaft.
 - Never stop the saw with the safety pedal except in an emergency.
 - Stop the tractor engine with the PTO in gear.
- ALWAYS
- Run machine at 540 RPM on the PTO shaft.
 - Disengage the PTO when machine is left unattended.
 - Keep blades sharp and correctly set for the type of timber being cut.
 - Push the table forward, secure with locking pin; raise machine to maximum height on three point linkage and adjust stabilizer chains to prevent sidesway before transporting the saw.
 - Check timber for any metalwork e.g. nails, barbed wire etc., and clean off any mud and stones before cutting.
 - Clear the area around the operator's feet of anything that may cause him to trip or stumble.

SECTION 3

OPERATION

IMPORTANT

Your attention is drawn to the following information:-

The standard saw guard meets the requirements of paragraph 5 of Part 1 of the First Schedule of the Agriculture (Circular Saws) Regulations 1959 for use on agricultural and forestry undertakings.

An industrial guard (part no 14 68 287) is available that meets the requirement of Regulation 16 of the Woodworking Machines Regulations 1974, when used in factory premises.

PREPARATION

Lower the sawbench on the three point linkage to a convenient working height. Check the table is level, if not, correct by adjusting the tractor top link. Lower the support props to the ground and secure tightly.

OPERATION

The Allwork Sawbench is designed for two operations:-

- i) Logging or cross-cutting.
- ii) Ripping or planking.

For both operations a tractor PTO speed of 540 RPM is required for maximum efficiency and safety. This will give a saw spindle speed of 1250 RPM and a cutting speed of 10,000 feet per minute with a 30" blade.

An emergency brake is fitted to the sawbench and is operated by depressing a 'T' shaped foot pedal, situated on the lower cross-tube between the support props. This releases tension off the belts and clamps them between two jaws thus stopping the saw.

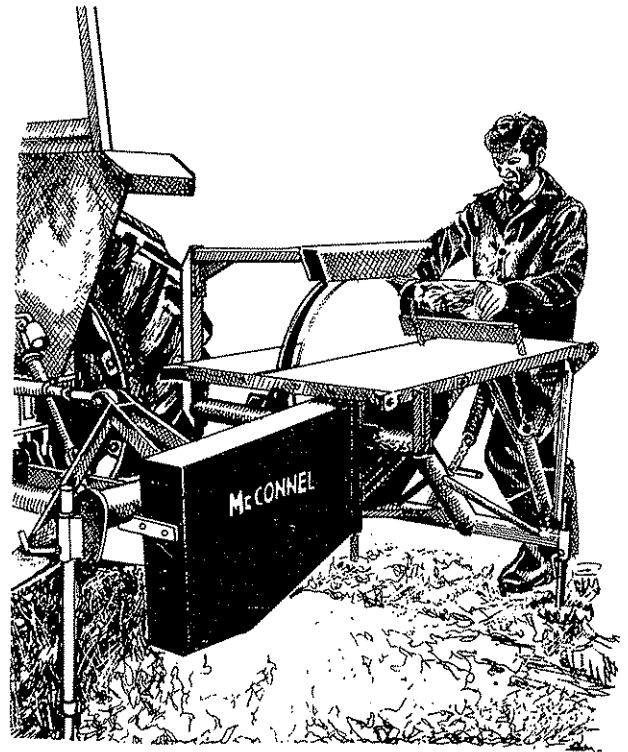
CAUTION

The emergency brake should never be used as a clutch or to stop and start the machine during normal operation as it causes unnecessary belt wear.

During the working life of the saw the blade will become progressively smaller due to sharpening. As this happens the top saw-guard must be lowered until the sides overlap the depth of tooth. The riving knife must also be adjusted down its channel until there is a minimum distance of $\frac{1}{2}$ " (12 mm) between it and the sawblade.

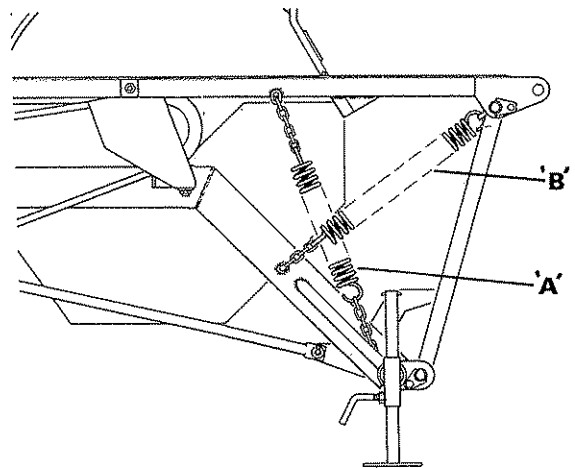
1. LOGGING OR CROSS-CUTTING

The Allwork Sawbench can be used to cross-cut up to a diameter of nine inches (235 mm) allowing for minimum clearance under the top saw-guard, on logs, poles, gate-posts etc. For long or heavy material, two operators will be required.



i) Remove the table locking pin and place in the tapped hole just below the table roller. The table is now free to slide.

ii) Adjust the tension of the table travel springs so that the spring 'A' just overcomes the resistance of spring 'B' and returns the table to the 'out' position automatically after the log or post is cut. The amount of effort required to push the table in is a matter for individual preference, but for a fast table return the tension in spring 'A' must be increased.

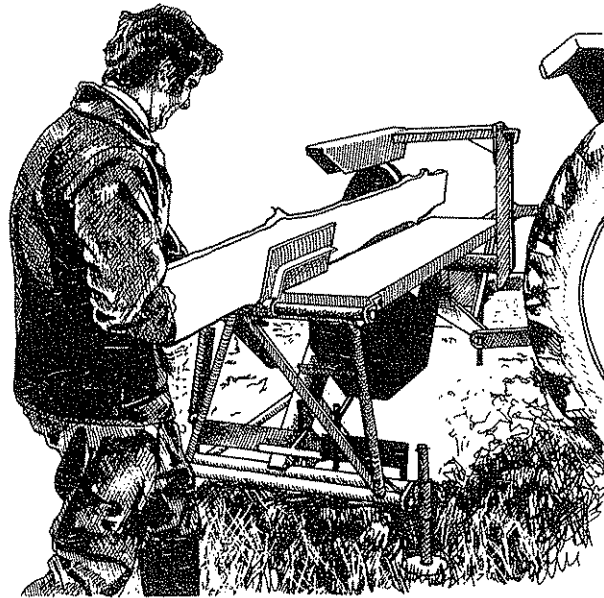


- iii) Remove the logging guards from the storage position on the cross-tube and push into the sloping location holes on the table-top.
- iv) Check the blade is sharp and free from cracks.
- v) Clean the area under the operator's feet of anything that may cause him to trip or stumble.
- vi) Start the saw by engaging PTO and easing in the clutch.
- vii) Inspect timber to be cut for nails, barbed wire etc., and clean-off any mud and stones.
- viii) Place the log hard up against the logging guard, hold firmly and push with hands and hips keeping the thumbs alongside the hand and not splayed at right angles.
- ix) Allow the table to return fully to the 'out' position before the cut material is removed and another cut is made.

2. RIPPING OR PLANKING

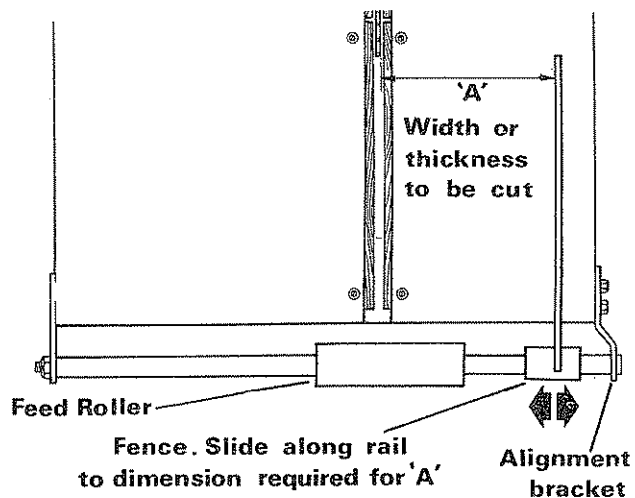
The Allwork Sawbench is capable of cutting planks up to 10" (250 mm) width or posts up to 9" (235 mm) square.

The timber is cut lengthwise and is usually a two-man operation working fore and aft, one man feeding and the other removing and stacking the cut material.



- i) Remove logging guards and store in their position on lower cross tube.
- ii) Check the blade is sharp and free from cracks.
- iii) Lock the table in the out position with the locking pin.
- iv) Clear the area under the operator's feet of anything that may cause him to trip or stumble.

- v) Swing the fence up on to the table and slide along the rail to the width required to cut, and clamp in position. The bracket holding the right hand end of the fence rail is slotted to allow the fence to be re-aligned parallel to the sawblade, if damage or wear should make this necessary.



- vi) Start the saw by engaging PTO and easing in the clutch.
- vii) Inspect timber for nails, barbed wire etc., and clean-off any mud and stones.
- viii) Place the material to be cut, up against the fence and push through, using a push stick for the last portion to keep hands away from the sawblade.
- ix) Allow your helper to remove the sawn timber from the front before making another cut.

WARNING

Never make adjustments to the machine during any operation without stopping the tractor engine and disengaging the PTO shaft.

GENERAL OPERATION

The blade must be constantly watched for signs of bluntness, cracking, or loss of tension.

Bluntness will be recognised by the timber being progressively harder to push through and in extreme cases the blade will be slowed down or even stopped.

Loss of tension is caused by operating the blade in a blunt condition causing heat to build-up and the appearance of blue or black spots. If this happens the blade will flap and wander in the timber.

Cracking may be suspected if the note of the cut suddenly alters, and may have been caused by incorrectly sharpened blades or hitting metalwork that was buried in the timber. A sound blade should ring if tapped with a piece of wood.

The blade should not be allowed to become blunt but should be sharpened lightly but frequently. In the case of loss of tension or cracking the servicing of the blade must be done by a skilled saw doctor.

If when operating a good blade still wanders in the timber the speed of feed must be reduced to give the blade more time to cut.

During operation the belts may slacken slightly causing belt slip and loss of cutting ability. They should be retightened to the same tension stated in the Fitting Section para. 3 after disengaging the PTO shaft and stopping the tractor engine.

The operator must NEVER remove the top guard to accommodate a larger piece of timber.

WARNING

Remember, by its nature, a saw is dangerous and should be treated with respect. Never rush the work, never allow yourself to become careless and always diligently follow the operating instructions.

Removal of Sawblade

Remove the top saw guard and the table locating pin if it is in position.

Disconnect the table travel tension springs.

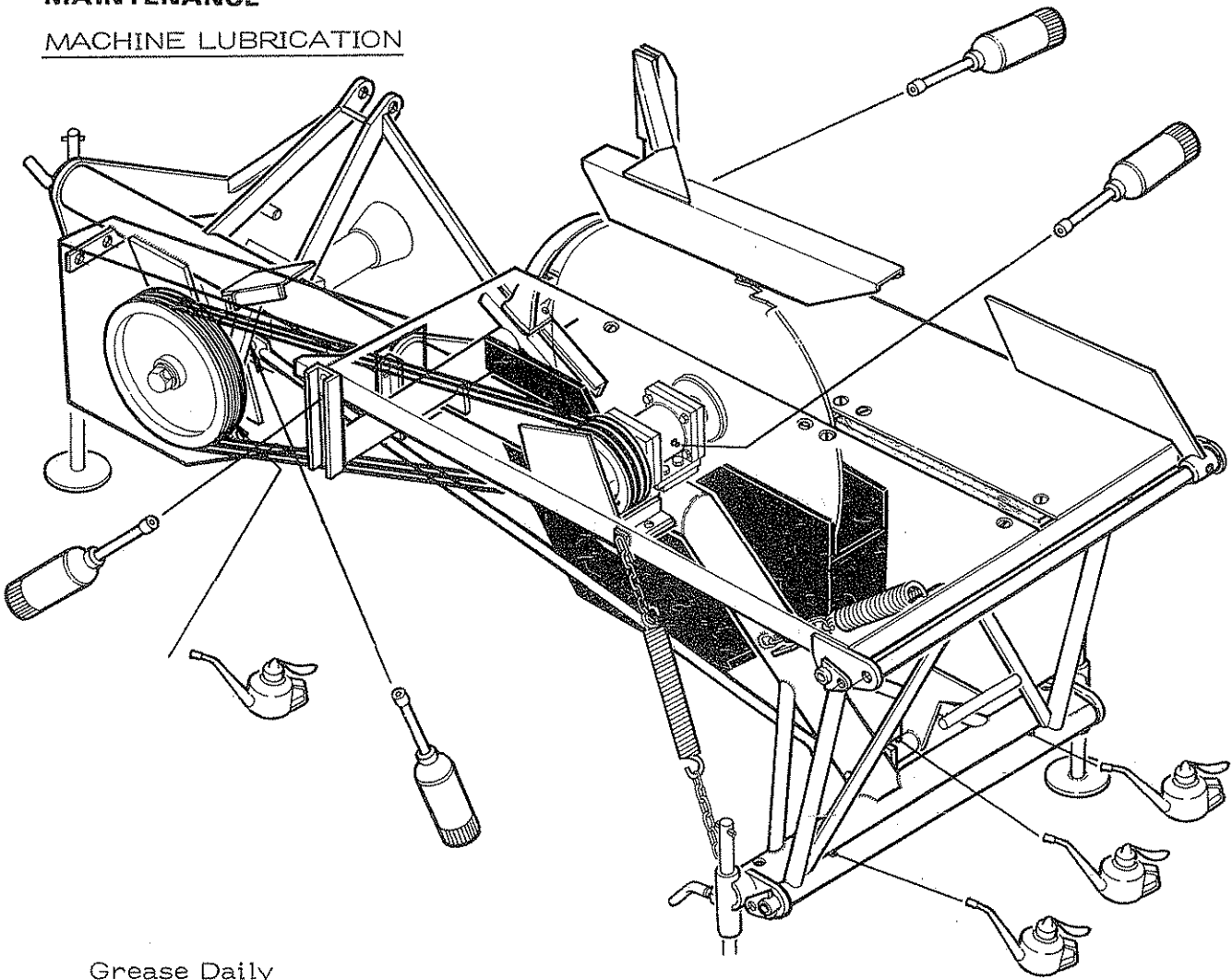
Lift table at far end, hinge back the operator's end and lower to the ground to allow free access to the sawblade.

Release set screw and remove retaining washer and flange.

The blade may now be pulled off the spindle and lifted clear of the bottom saw guard.

SECTION 4 MAINTENANCE

MACHINE LUBRICATION



Grease Daily

- i) Greaser on saw-shaft bearing housing.
- ii) Greaser on countershaft bearing housing.
- iii) Table-roller greasers. These are located on the top saw guard support pillar and on the main frame just below the table locking pin.
- iv) Greaser on driveshaft universal joints.

Oil Daily

- i) Holes on swinging table hinges.
- ii) Hole in block on emergency brake arm.
- iii) Hole in emergency stop pedal.

REPLACEMENT OF SAW PACKING STRIPS

The timber packing strips are situated under the table and clamped in position by countersunk screws in the tabletop. They are to be kept adjusted close to the sawblade to prevent it contacting the metal tabletop and should be replaced immediately if there is a danger of this happening.

STORAGE

Lower the sawbench onto the props and disconnect the lower linkage arms, PTO shaft and adjustable top link. The sawbench will stand rigidly ready for use when next required.

Remove sawblade, coat with grease, and store in a dry place.

Grease or oil all points shown in lubrication section.

Cover tabletop with light coat of oil.

If left outside cover with tarpaulin.

CARE OF SAWBLADE

Care of the sawblade starts with the operator. At the first sign of inefficiency the blade should be lightly sharpened. Never continue to work the saw thus compounding the trouble. Time spent in keeping blades in top condition will rapidly repay itself.

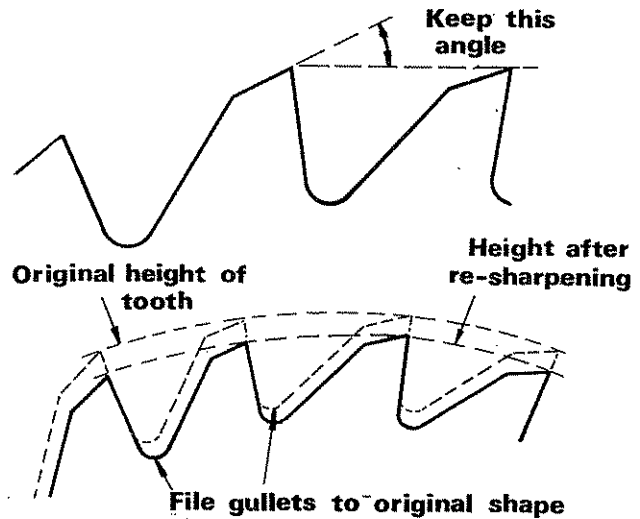
If on inspection the blade requires retensioning, is dished or cracked or needs major resharpener the servicing must be carried out by a skilled saw doctor

Re-sharpening

For optimum performance the profile of the original tooth must be maintained and all teeth must be equal in pitch, space, bevel, gullet and length.

Particular attention must be paid to the gullet radius as any sharp corners could start cracks.

The sawblade should be rotated to see if it is perfectly round, if not file down the points of any projecting teeth before sharpening.

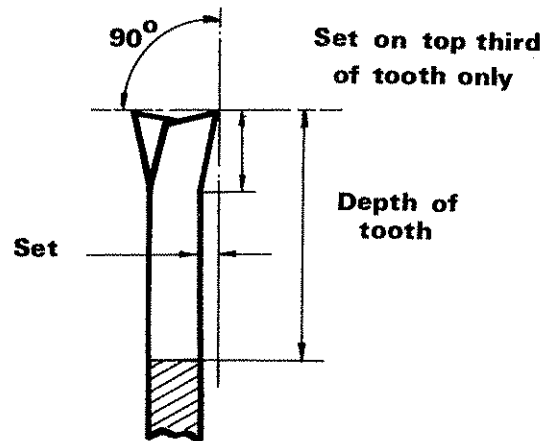


The re-sharpening is carried out with round and flat files that suit the teeth profile. The outline of the new blade should be followed and a teeth profile template can be used to check the finished work.

The standard 30" (750 mm) blade may be repeatedly re-sharpened and gulletted down to a diameter of 26" (650 mm). We do not recommend use of a blade below this diameter due to the reduction in the peripheral speed of the cutting teeth.

Set is the bending of the tips of alternate teeth to the right and left by an amount that will ensure the blade will not bind in the timber.

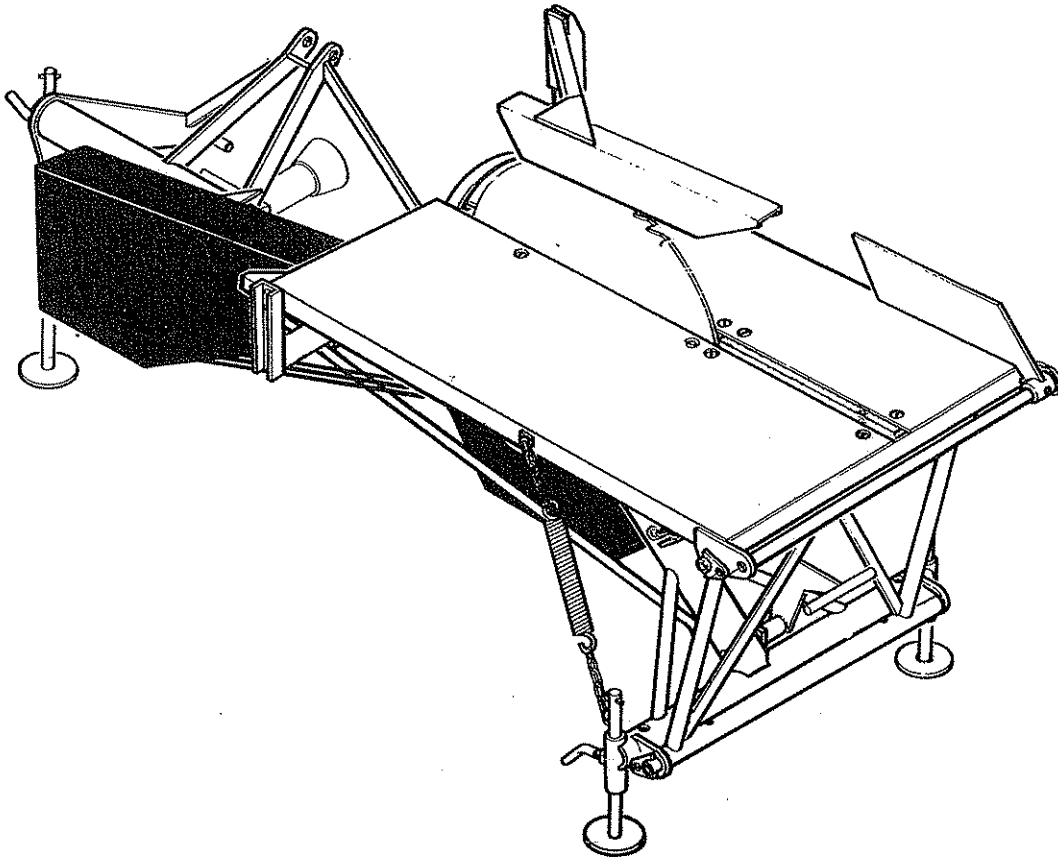
The amount of set must be equal on all teeth to prevent irregular wear and strain building up in the blade which could cause loss of tension or cracking. The operation is carried out with a special saw-setting tool and finished work should be checked with a 'set' gauge.



The sawblade is sent out set for dry wood but for everyday farmwork e.g. logging a set of .035" (1 mm) per side is recommended).

If in doubt about the amount of set ask an experienced saw doctor to recommend a figure for your particular requirements.

SPARE PARTS MANUAL



USE ONLY McCONNEL SPARE PARTS

To be assured of the latest design improvements purchase your genuine replacements from the original equipment manufacturer F.W.McConnel Ltd. through your local dealer or stockist.

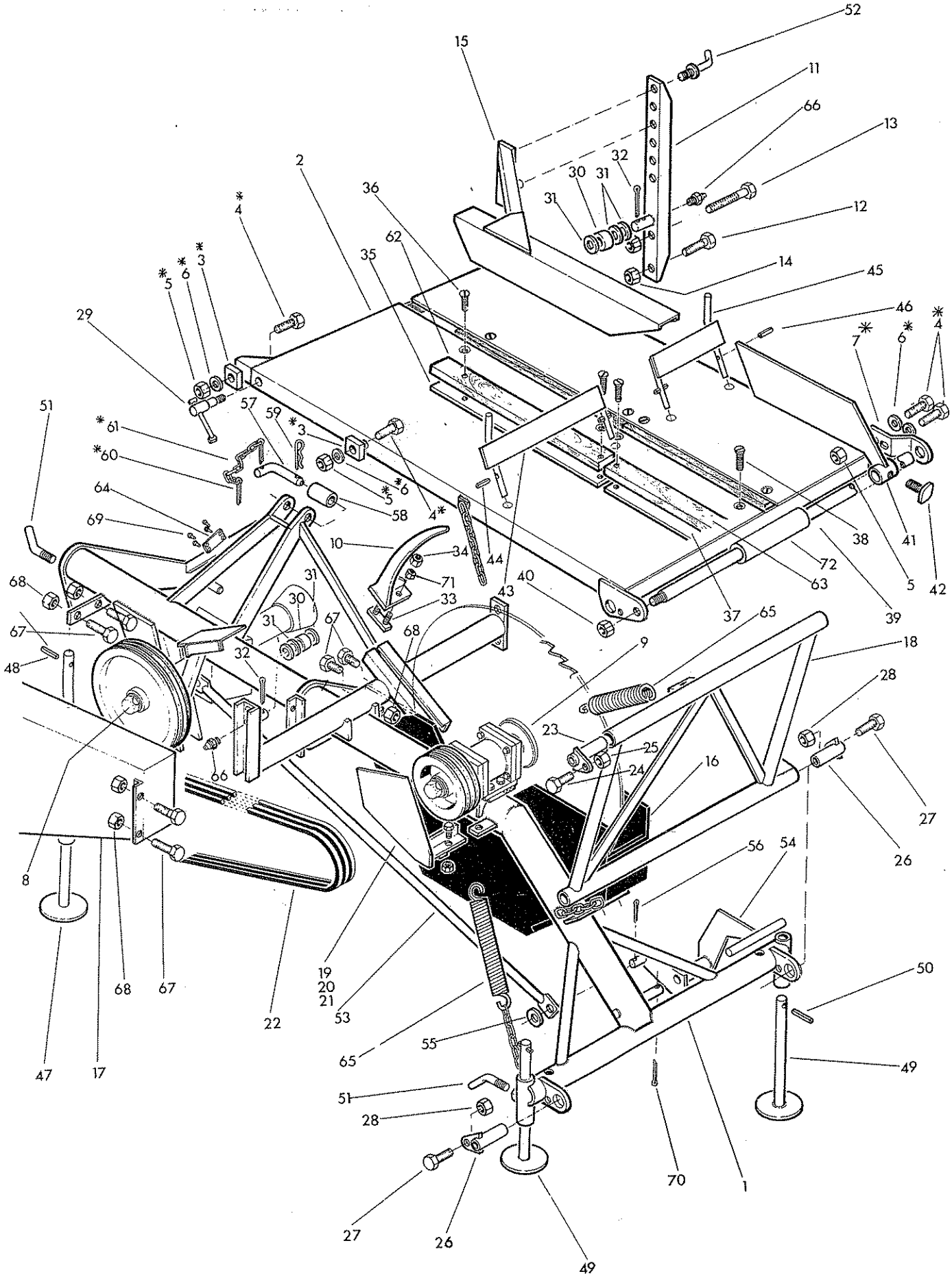
Always quote machine type and serial number as well as the part number.

Design improvement may have altered some of the parts listed in this manual – the latest part will always be supplied when it is interchangeable with an earlier one.

THE DOT SYSTEM

Many spares are supplied as Assemblies or as Sub-assemblies and to help the customer determine the composition of an Assembly the Dot System is used. The Main Assembly will not show a dot preceding its description and is printed in BLOCK CAPITALS. Subsequent listed parts are preceded by one or more dots until the next major assembly is reached. An increase in the number of preceding dots indicates that the item is an associated part of the preceding item. Whenever the number of dots are decreased by one this indicates the termination of an assembly.

ALLWORK SAWBENCH ASSEMBLY

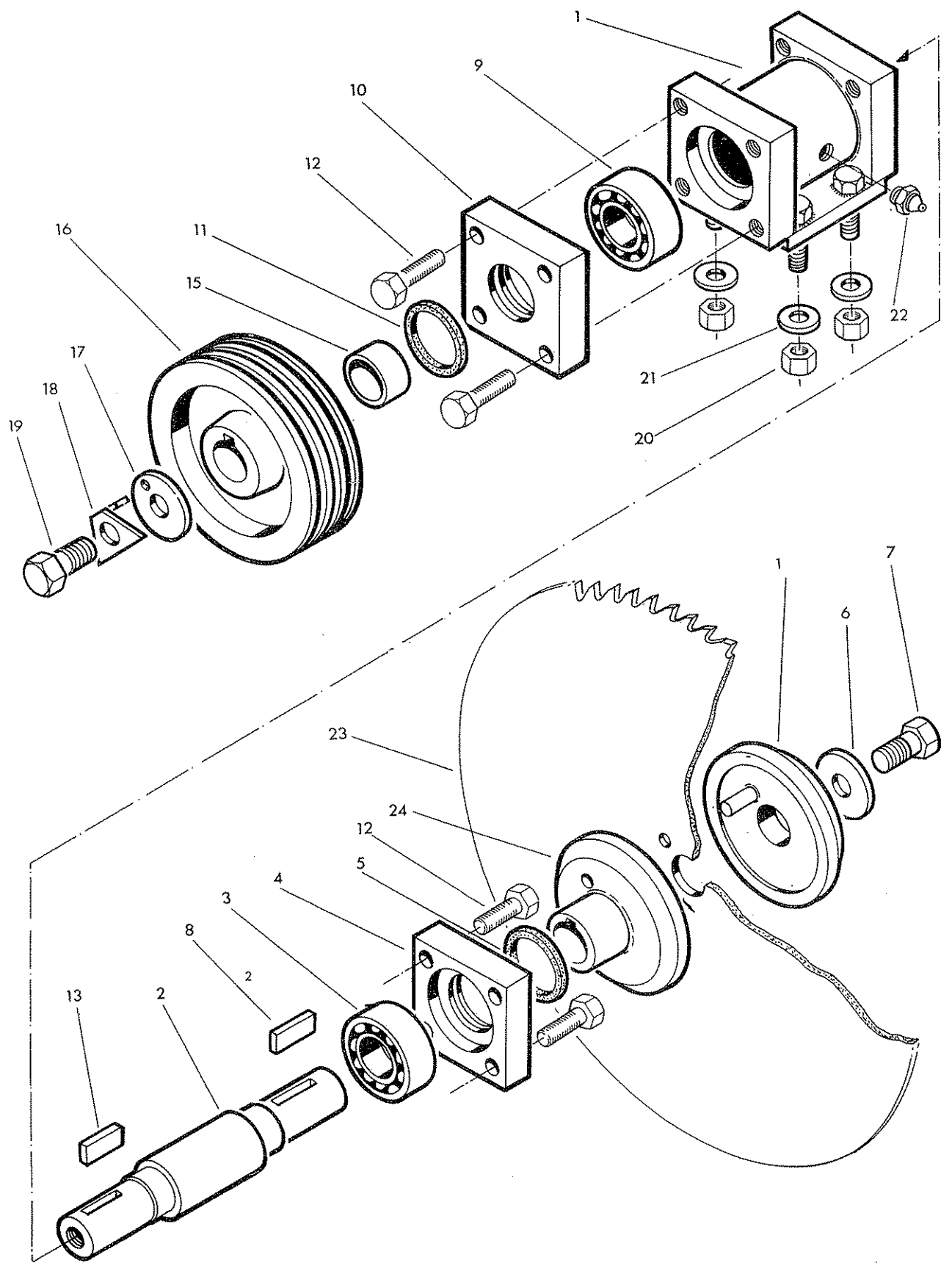


Ref	Part No	Qty	Description
	14 68 250		ALL WORK SAWBENCH GENERAL ASSEMBLY
1	14 68 251	1	.Main frame
2	14 68 255	1	.Table top c/w nuts, bolts etc.
* 3	14 67 038	4	..Tufnol block
* 4	92 13 065	6	..Bolt
* 5	91 13 005	6	..Aeronut
* 6	91 00 105	6	..Plain washer
* 7	14 68 019	1	..Fence rail plate — deleted 29.3.83 Integrally welded
8	14 68 256	1	.Countershaft assembly (see page 16)
9	14 68 259	1	.Saw bearing assembly (see page 14)
10	14 68 262	1	.Riving knife
11	14 68 263	1	.Top guard pillar c/w bolts etc.
12	92 13 066	1	..Bolt
13	92 13 136	1	..Bolt
14	91 43 006	2	..Aeronut
15	14 68 264	1	.Top saw guard
16	14 68 266	1	.Bottom saw guard
17	14 68 267	1	.Belt guard
18	14 67 260	1	.Swinging leg
19	14 68 031	1	.Saw pulley guard c/w nut and bolt
20	93 13 045	1	..Bolt
21	91 43 005	1	..Aeronut
22	14 68 034	1	.'V' belt set
23	14 68 036	2	.Stub tube top c/w nut bolt
24	92 13 055	1	..Bolt
25	91 43 005	1	..Aeronut
26	14 68 036	2	.Stub tube bottom - each c/w nut & bolt
27	92 13 055	1	..Bolt
28	91 43 005	1	..Aeronut
29	14 68 037	1	.Table locking pin
30	14 67 028	2	.Table roller
31	14 67 087	6	.Special washer
32	95 01 405	2	.Split pin
33	14 68 040	1	.Riving knife clamp c/w aeronut
34	91 43 005	2	..Aeronut
35	14 68 043	2	.Packing strap long - each c/w screws
36	14 68 066	2	..Countersunk screw
37	14 68 044	2	.Packing strap short - each c/w screws
38	14 68 066	2	..Countersunk screw
39	14 68 045	1	.Fence rail c/w aeronut
40	91 43 007	1	..M16 aeronut
41	14 68 046	1	.Fence c/w clamp screw
42	14 68 047	1	..Clamp screw
43	14 68 048	1	.Logging support long c/w spring dowel
44	04 25 540	2	..Spring dowel
45	14 68 049	1	.Logging support short c/w spring dowel
46	04 25 540	2	..Spring dowel
47	14 68 050	1	.Rear prop c/w spring dowel
48	04 25 640	1	..Spring dowel
49	14 68 051	2	.Front prop - each c/w spring dowel
50	04 25 640	1	..Spring dowel
51	14 68 052	3	.Clamp screw
52	14 68 053	1	.Clamp screw flanged
53	14 68 055	1	.Connecting rod
54	14 68 272	1	.Safety pedal c/w washer & split pin
55	91 00 106	1	..Plain washer
56	95 01 303	1	..Split pin
57	14 67 049	1	.Top link attachment pin c/w sleeve etc.
58	14 67 063	1	..Sleeve
* 59	04 31 105	1	..Spring cotter
60	95 01 255	2	..Split pin
61	14 67 086	1	..Light chain 6" long — Deleted 18.4.83
62	14 67 078	2	.Saw packing strip long
63	14 67 079	2	.Saw packing strip short
64	14 67 100	1	.Instruction plate
65	14 21 097	2	.Tension spring
66	09 01 121	2	.Greaser
67	92 13 055	8	.Bolt
68	91 43 005	8	.Aeronut
69	28 00 020	4	.Rivet
70	95 01 406	1	.Split pin
71	14 68 062	2	.Riving knife adjuster

OPTIONAL EXTRA

72	14 68 058	1	Feed roller
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SAW BEARING ASSEMBLY

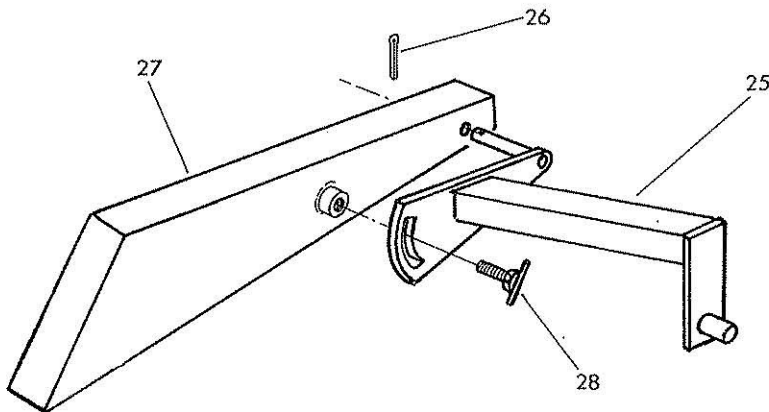


Ref	Part No.	Qty	Description
	14 68 259		SAW BEARING ASSEMBLY
	14 68 285		.Saw bearing comprising:-
1	14 68 260	1	..Bearing Housing.
2	14 68 261	1	..Saw spindle c/w bearing etc.
3	06 03 640	1	...Bearing.
4	60 13 026	1	...Bearing cover plate
5	14 67 072	1	...Felt oil seal.
6	14 68 054	1	...Saw flange retainer.
7	93 13 088	1	...Set screw
8	14 68 027	1	...Key
9	06 03 640	1	..Bearing.
10	60 13 026	1	..Coverplate.
11	14 67 072	1	..Felt oil seal.
12	92 13 063	8	..Bolt
13	14 68 027	1	..Key
14	60 13 028	1	..Loose flange
15	14 68 032	1	..Distance piece.
16	14 68 033	1	..'V' pulley.
17	60 13 030	1	..Special washer.
18	15 65 117	1	..Tab washer.
19	93 13 056	1	..Set screw
20	91 00 002	4	..Conelok
21	91 00 605	4	..Plain washer.
22	09 01 121	1	..Greaser
23	14 67 075	1	.Saw blade 30" dia.

Note

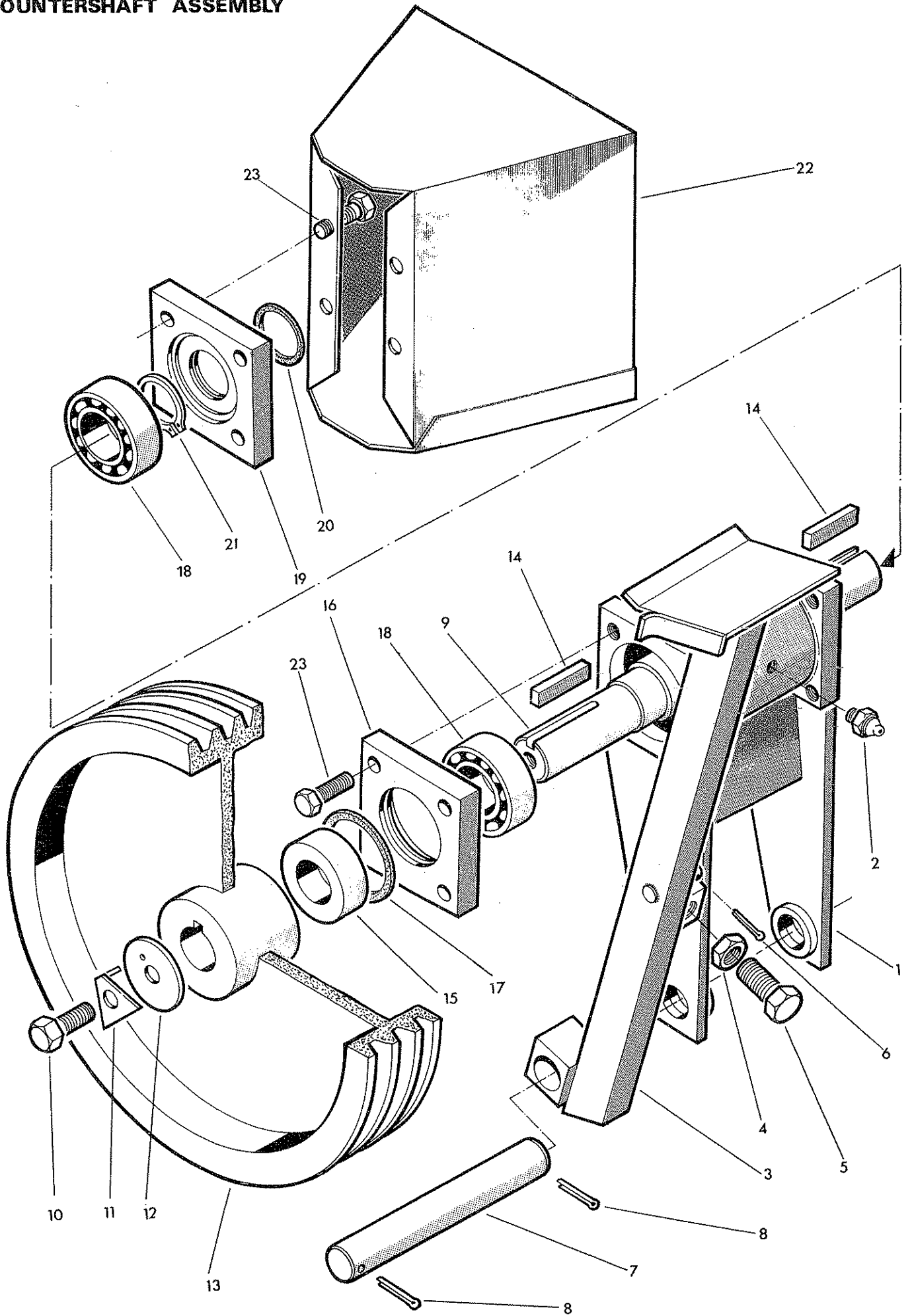
Item 24, the fixed saw flange is illustrated for assembly purposes only and is not available as a separate spare.

It is supplied only as part of item 2 to ensure correct alignment and balance between the spindle and the flange.



Ref	Part No	Qty	Description
	14 68 287	1	INDUSTRIAL SAW GUARD
25	14 68 290	1	.Guard arm c/w split pin
26	05 03 103	1	..Split pin 1/8" dia. x 1¼" long
27	14 68 289	1	.Guard cover
28	14 68 075	1	.Locking screw

COUNTERSHAFT ASSEMBLY



Ref	Part No	Qty	Description
	14 68 256	1	COUNTERSHAFT ASSEMBLY
1	14 68 273	1	.Bearing housing c/w greaser
2	09 01 121	1	..Greaser
3	14 68 271	1	.Brake arm c/w nut, bolt & split pin
4	91 33 007	1	..Locknut
5	93 13 167	1	..Setscrew
6	95 01 203	1	..Split pin
7	14 68 023	1	.Bearing housing pin c/w split pin
8	05 03 125	2	..Split pin
9	14 68 274	1	.Countershaft
10	93 13 056	1	.Setscrew
11	15 65 117	1	.Tab washer
12	60 13 030	1	.Special washer
13	14 68 257	1	. 'V' pulley
14	14 68 027	2	.Key
15	14 68 059	1	.Distance piece
16	60 13 026	1	.Bearing cover plate
17	14 67 072	1	.Felt oil seal
18	06 03 640	2	.Bearing
19	14 67 024	1	.Bearing cover plate
20	14 67 071	1	.Felt oil seal
21	04 01 240	1	.External circlip
22	14 67 265	1	.P.T.O. guard
23	92 13 063	8	.Bolt
	14 68 275	1	.P.T.O. shaft assembly comprising
	14 68 276	1	..P.T.O. shaft sawbench end
	14 68 277	1	..P.T.O. shaft tractor end
	14 68 279	1	..Plastic guard spline end
	14 68 280	1	..Plastic guard key end

} not
illustrated



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