Robinson

Wadkin BURSGREEN

WOODWORKING MACHINERY

PLEASE HAND THIS INSTRUCTION MANUAL

TO THE MACHINE OPERATOR

INSTRUCTION MANUAL FOR

MACHINE ROLLER FEED SAW BENCH

TYPE XP/T

MACHINE TEST No.

TELEPHONE LEICESTER 0116 2769111

INSTRUCTIONS

All machines are tested before leaving our Works, and are not passed out unless in perfect working order. Although simple to operate, care is nevertheless necessary in their use and the following instructions should be carried out.

INSTALLATION

For every machine despatched from our Works, we supply a foundation drawing to enable our clients to make the necessary preparations for the installation of the machine prior to its delivery. The drawing gives full particulars of the space occupied, position of the fixing bolts and the foundations we recommend.

NOTE: The latter must be taken as a general guide only, as site conditions may govern the foundation to some extent. On some machines certain modifications may be necessary if the machine is to be coupled to a dust extraction system, and before construction is commenced Exhaust Engineers should be consulted.

If the machine is to be fixed on concrete proceed as follows:

(a) Prepare the foundation on well consolidated earth and as directed on the foundation drawing of the machine, leaving holes to receive the fixing bolts. These holes may be formed by boxes of thin timber, which can be easily removed when the concrete has set.

(b) Raise the machine so that the bolts can be suspended through the holes provided in the base or feet.

(c) Lower the machine into position, levelling by placing slate or metal packings on each side of the bolt holes.

(d) See that the moving parts are free.

(e) Place shuttering of suitable depth around machine base and run in sufficient grout to hold bolts and base.

(f) Do not attempt to tighten bolts or work machine until the grout is thoroughly hard.

IMPORTANT: Do not attempt to fix the bolts before the machine is placed in position.

Short centre individual motor drives with endless belts. Fix the stand, in accordance with the foundation plan, in a similar manner to the machine, but before grouting in place check the alignment of the drive pulleys and correct, if necessary. After the machine has been running some little time again check the alignment of the pulleys.

If the machine is to be driven from a countershaft set the countershaft level and parallel with the horizontal cutterspindles in accordance with the foundation plan, and fix in a similar manner to the machine. Make sure that both the machine and the countershaft are set correctly with respect to the line shaft where this is the method of driving.

Important. When locating side head drive pulleys on the countershaft, line them up with the side spindles in the mid position of the horizontal adjustment.

We advise the use of good quality leather or balata belts of the strengths given on the foundation plan, with spliced or wire butt joints. Inferior belts, badly pieced joints or heavy fasteners produce marks on the planed surface of the timber and are detrimental to the bearings.

ELEC RICAL CONNECTIONS made on site must be carried out by ex rienced electricians only. For full details see the wiring diagram.

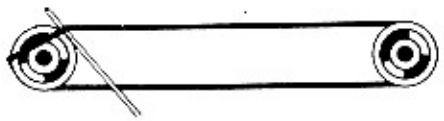
EE BELT INSTRUCTIONS

To ensure trouble free service from vee belts careful observance of the following rules concerning their application is important:-

(1) When fitting the belts make sure that the grooves in the two pulleys are clean, i.e. free from dirt, grease or rust preventative etc.

(2) Always mount the belts loosely by hand. Do not force them into the pulley grooves with a screwdriver or any other such implement, as this would tend to damage the outer envelope or possibly rupture the load carrying cords. Any such damage might not be immediately apparent but could result in the belts failing within a matter of hours.

CORRECT METHOD OF FITTING.



INCORRECT METHOD OF FITTING.

(3) Tension the belts carefully. After one hour's running, and again after eight hour's running, check the tension and adjust, if necessary.

The tension applied should be just sufficient to prevent the belts slipping

Too little tension will allow slipping and will result in loss of driving power and belt life.

Too much tension will result in short belt life.

(4) Do not use belt dressing under any circumstances. It is not necessary and would only cause deterioration of the rubber compounds, and "snatch" due to temporary localised increases in the co-efficient of friction.

(5) Do not run old and new belts in the same set. If new belts are required always order and fit a complete 'matched' set.

(6) If belts flap excessively, increase tension. If the spindle shows signs of pulling up, stop the machine and feel if either of the pulleys is unduly warm. Such a condition indicates incorrect tension in the drive and this should be remedied by the means provided.

LUBRICATION (See also at the end of the booklet additional notes on lubrication and recommended lubricants).

Plain bearings

Power-driven shafts. The lubricators fitted allow grease to be applied directly to the bearings by means of a grease gun. In some cases the nipples fitted are similar to those fitted to the ball bearing housings, in which case only one grease gun is supplied. This should be filled with ball bearing grease, and used for charging both the ball bearing and plain bearing lubrication points.

Hand motion shafts. In most cases an oil cup, hole or groove is provided for application of oil by means of an oil can. Alternatively, a grease nipple is provided for application of grease by means of a grease gun. Apply lubricant regularly and according to usage.

Oil retaining bushes. Bushes of this type normally require no attention from the operator. After a long period of inacitivity in a dusty atmosphere, however, it is advisable to apply a little oil on the shaft adjacent to the bearings. This also applies if the bearings become noisy.

Phosphor-bronze bearings

A grease nipple or oilcup with wick feeder is provided for each bearing.

When a grease nipple is fitted, grease can be applied directly to the bearing by means of a grease gun. Use the recommended grease and apply according to usage.

When an oilcup is provided, frequently check the level of oil and top up as required. Always replace the oilcup cover. Do not remove the wick feeder.

Ball and Roller Bearings

Bearings with replenishable grease

Lubricant - It is necessary to use lubricant specially prepared for ball bearings, a sample tin of which is supplied with each machine. This grease is free from acid, alkali and resin, and is supplied in 7 lb. (3.17 kilos) tins. We recommend the exclusive use of "Robinson" Ball bearing grease for all ball bearings, but alternatives are listed on a later page

Recharging with fresh lubricant - The lubricators fitted allow grease to be applied directly to the bearings by means of a grease gun. Great care should be taken not to charge the bearings too tightly with lubricant as this might result in their heating up.

NOTE:- Every care is taken in packing to protect the bearings from dirt, but, in spite of this, grit may obtain access during transit To detect its presence turn each spindle slowly by hand when the slightest resistance will be noticed. If any resistance is encountered the bearings must be cleaned out. Take off the end cover and remove as much as possible of the old grease by hand. Wash out the remainder with benzine, then replace the end cover and replenish with fresh lubricant.

CAUTION:- Neither paraffin nor kerosine should be used for washing out

the bearings as they cause rust, and for the same reason persons whose hand perspire should exercise care when handling bearings.

Sealed-for-life Bearings. This type of bearing requires no further attention from the operator.

Grease packed bearings. Grease which is packed in these bearings during assembly should suffice to keep them lubricated for an indefinite period of time. When it becomes necessary to re-pack the bearings use specially prepared ball bearing grease, taking the same precautions as outlined for replenishable grease type bearings.

Thrust races. Apply oil regularly and according to usage by means of an oil can to the groove, when provided, or to the seating.

Gearboxes

Gears and bearings are splash-lubricated from the gearbox oil. Maintain the gearbox oil level, as shown on the dipstick or oil level indicator, by topping-up as necessary. The oil should be filtered every six months and changed every two years. When a breather pipe is fitted, periodically check that the small air holes in it are clear.

NOTE: The gearbox oil is run off before the machine is despatched from our Works, and it is necessary, therefore, to re-fil the gearbox before the machine is run. For quantity of oil required see 'Technical Data'.

Chains

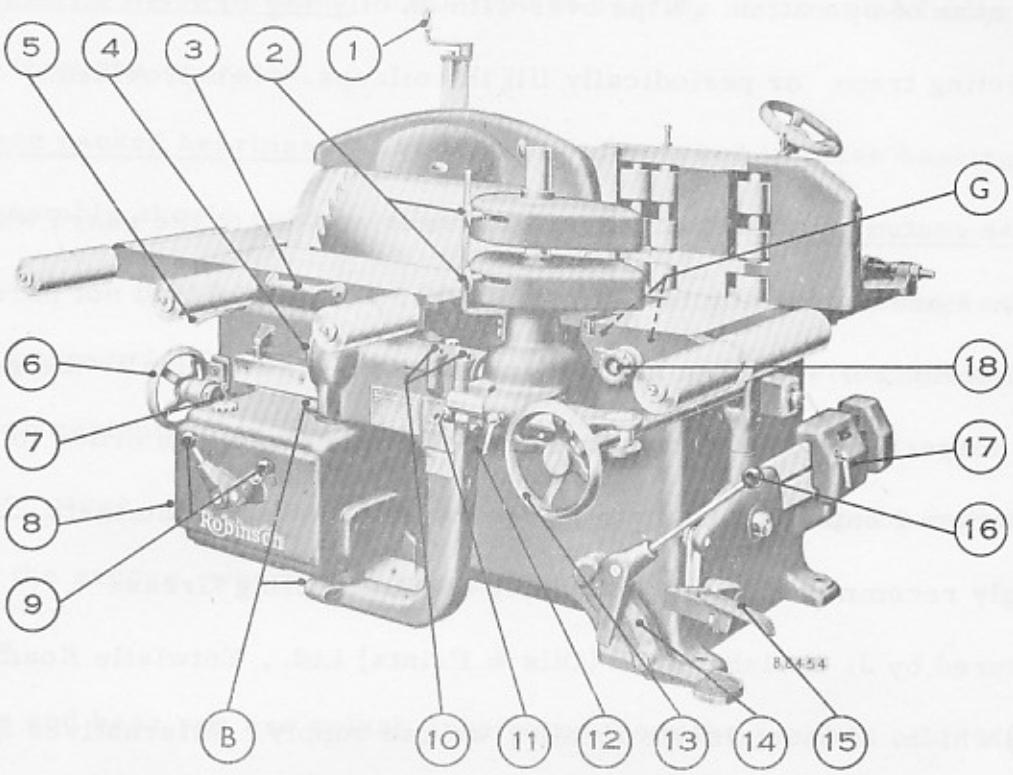
All chains should be periodically removed from the machine, thoroughly cleaned in a bath of benzine, dried and then immediately dipped in a bath of melted tallow before being replaced. Take care that the chain, when replaced, is mounted correctly, as shown in the illustrations.

Screws, slides and o er working parts. These must be frequently oiled to ensure ease of op ation. Wipe over with an oily rag to avoid forming dust-collecting traps or periodically fill the oilcups, when provided.

Gearing

Grease coated gears. Black cling grease is applied to the gears whilst the machines are undergoing test at our Works, and they should not normally require attention for some weeks after installation. Periodically the gears should be inspected and, if necessary, more grease applied in order to ensure continued smooth running and prevent undue wear on the teeth. We strongly recommend the exclusive use of 'Black Cling Grease' (manufactured by J. H. Isherwood (Oils & Paints) Ltd., Entwistle Road, Rochdale) which, if unobtainable locally, we can supply. Alternatives are listed on a later page.

Gears with oil drip feed (individual oilcup type). An oil pipe, on one end of which is an oilcup with a plunger type of oil drip feed, is provided for each train of gears. Before setting the machine in motion the drip feed should be started by raising the levers on the oilcups. When the machine has been stopped, the levers should be re-set. The amount of oil fed in, which can be noted by observing the bases of the oil cups, can be regulated by the knurled thumb wheels. The latter should be locked in position by means of the locknuts. Frequently ch e level of oil in the oil cups, and top up as required.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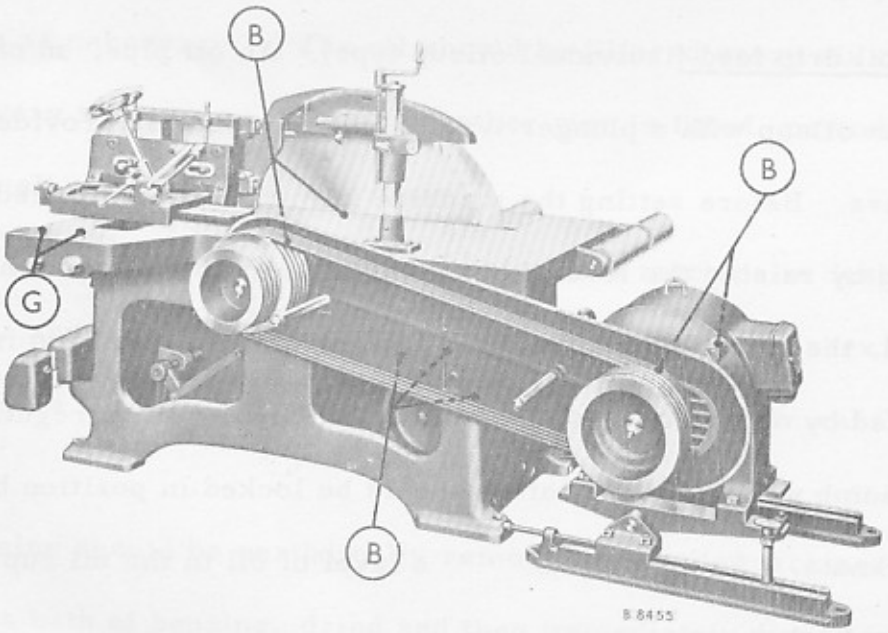
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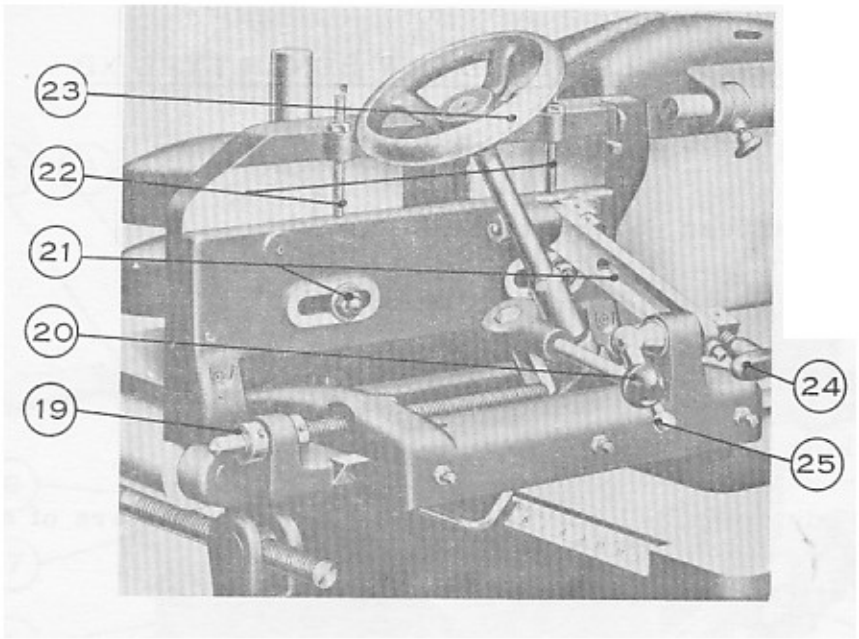
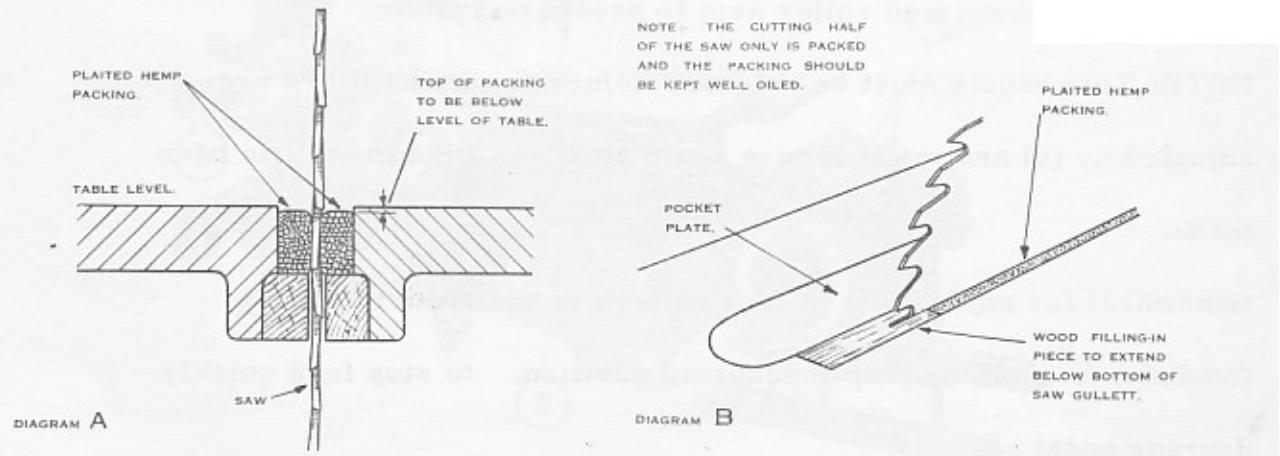
UNDER DRIVEN ROLLER FEED SAW BENCH TYPE XP

1. Handle for vertical adjustment of saw guard.
2. Adjustable stops for feed roller guards.
3. Handle for drawing forward loose portion of table.
4. Removable cover gives access to bevel gears for greasing.
5. Handle for locking loose portion of table in position.
6. Handwheel for adjusting feed rollers to suit varying diameters of saw.
7. Removable filler cap and dipstick for gear box.
8. Handwheel for turning gear shafts to facilitate changing gears when gear box is stopped.
9. Gear change levers.
10. Screws for locking support bracket for feed roller shaft when set vertical or canted to any angle up to 30°.
11. Stop for locating feed roller shaft in vertical position.
12. Handle for locking feed roller arm to pressure system.

    NOTE: This handle must be released before the feed rollers are adjusted by (6) and made secure again after the adjustment has been made.
13. Handwheel for adjustment of feed rollers to and from the fence.
14. Quadrant for holding (16) in required position; to stop feed quickly, depress pedal.
15. Foot lever for quick movement of feed roller to and from fence.
16. Belt tightener lever for starting and stopping feed.
17. Adjustable pressure weight for feed rollers.





Packing for Circular Saws.

18. Handwheel for fine adjustment of fence.
19. Screw for adjusting fence to suit saws of different diameters.
20. Handle for locking fence to cross-traverse shaft. This must be locked before fine adjustment handwheel (18) can be used.
21. Nuts for locking front plate in position.
22. Adjusting screws for use when lowering front plate as required when fence is tilted.
23. Handwheel for quick cross-traverse adjustment of fence.
24. Handwheel for tilting fence.
25. Handle for locking fence in either vertical or tilted position.

Saw Packings. Hardwood support pieces are provided below table level adjacent to the cutting half of the saw to allow filler pieces and packings to be fitted.

The hardwood filler pieces should be level with the table top, butt against the adjusting screw and reach on either side of the saw to just beyond the gullet depth. Various lengths will be required to suit various diameters of saws.

The packings should be pressed into position to below table level, as shown on the sketch opposite, inserting first the fence side packing of such a thickness as to hold the saw without distorting it, then the off-side packing which should be a push-in fit. Adjustable screws are provided in the sliding front portion of the table to adjust the gap to suit various gauges and/or types of saws, or, alternatively, various thicknesses of packing can be used.

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WORKING INSTRUCTIONS

TO MOUNT A SAW:

(1) Turn over the saw guard

(2) Release the locking handle under the table, and turn back the hinged stop which holds the table in position.

(3) Draw out the sliding front portion of the table.

(4) Remove the nut and washer from the spindle.

(5) Place the peg on the spindle at the top, then slide the saw on to the spindle.

(6) Replace the washer and nut, but before tightening up pull the saw hard back against the peg.

USEFUL HINTS

(1) Adjust the riving knife when changing the size of the saw, so that it is just clear of the saw teeth.

(2) See that the fence rollers are as close to the cutting edge of the saw as possible, and that the feed roller is in line with them.

(3) The pressure weight for the feed roller is adjustable on its lever and its position can be varied at the discretion of the operator, to suit the timber being sawn. Just sufficient weight should be applied to enable the roller to feed the timber through easily.

ROLLER FEED SAWBENCH - TYPE XP/T

TECHNICAL DATA

Cone pulleys provide spindle speeds of	1,200 r.p.m. & 1,800 r.p.m.	
Maximum diameter of saw at 1,200 r.p.m.	36 in.	914 mm.
Maximum diameter of saw at 1,800 r.p.m.	24 in.	610 mm.
Maximum depth of cut with 36in. dia. saw	13¾ in.	349 mm.
Maximum depth of cut with 24in. dia. saw	7¾ in.	197 mm.
Bore of saw	1¾ in.	44 mm.
Maximum distance saw to fence	12 in.	305 mm.
Maximum distance saw to feed rollers	12 in.	305 mm.
Fence tilts up to	45 degrees	
B.H.P. required	30	

Feed rates (saw at 1,200 r.p.m.)

25, 50, 60, 75, 115, 160ft. per minute

7.62, 15.24, 18.29, 22.86, 35.05, 48.77 metres per minute

Feed rates (saw at 1,800 r.p.m.)

38, 75, 90, 113, 173, 240ft. per minute

11.58, 22.86, 27.43, 34.44, 52.73 73.15 metres per minute

Nett weight 3,920 lb. 1,778 kilos.

SPARE PARTS LIST

Description	Refernce Number
Main spindle bearing, saw end	SKF.1312
Main spindle bearing, pulley end	SKF.1612E
Ball bearings for fence rollers	FBC sealed bearings DN205
Bushes for vertical feed roller shaft	FS.3923 and FS.3928
Feed rollers	FS.4361
Vee ropes	7/8 in. vee ropes C128 (4-off)
Feed belt	3 ply balata 8ft. long 2½in. wide (2m.44 long, 63mm wide)

LUBRICATION

Machine part	Point **	Type of lubricant	Amount	Frequency of application
Saw spindle Replenishable grease type ball bearings	B	Ball & roller grease *	Small charge	Weekly
Motor Replenishable grease type ball bearings	B	Ball & roller grease *	Small charge	***
Feed Gear Gearbox - gears	-	Gearbox oil	Top up	As required
Gearbox - input shaft and vertical swing for arm - replenishable grease type ball bearings	B	Ball & roller grease *	Small charge	Monthly
Tightener and jockey pulleys - replenishable grease type ball bearings	B	Ball & roller grease *	Small charge	3-monthly
Radial arm gearboxes	-	Open gear grease	According to Use	As required
Radial arm drive shafts and bearings for levers - oil retaining bushes	-	General oilcan	*	*
General Fence rollers - sealed-for-life ball bearings	-	-	-	-

* See notes on lubrication

** Lubrication points are shown on pages 10 & 12

*** Motors leave our Works charged with sufficient grease to last approximately 12 months under normal service conditions. Thereafter charge once every three months.

NOTE. The frequency of application of lubricant, as stated above, should be taken as a GENERAL GUIDE ONLY, as the actual running time, working conditions, heat, humidity, type of lubricant used, sound and feel of the bearings, etc., must be taken into account.

RECOMMENDED LUBRICANTS

FOR ROBINSON WOODWORKING MACHINES

Make		Application	
	Gear Boxes	Hydraulics	Plain Bearings
Shell-Mex & B. P. Ltd.	Vitrea Oil 69 *	Tellus Oil 27	Unedo Grease 1 or Alvania Grease 3.
Esso Petroleum Co. Ltd.	Millcot K. 65 *	Esstic 42	Cazar K2 Grease
Castrol Limited	Magda BD *	Hyspin 70	Spheerol L or Spheerol AP. 3 Grease
Mobil Oil Co Ltd.	Mobilgear 629.	DTE Oil Light	Mobilgrease AA No. 2
Sternol Ltd.	-	-	Sternoline

Make		Application	
	Open Gears	General Oilcan use	Ball & Roller Bearings
Shell-Mex & B. P. Ltd.	Cardium Compound 'D'	Carnea Oil 35	Alvania Grease 2.
Esso Petroleum Co. Ltd.	Surett 800	Coray 55	T. S. D. 807
Castrol Limited	Grippa 33/5	Perfecto TT	A. P. 2.
Mobil Oil Co. Ltd.	Mobil Dorcia 150	Rubrex 500	Mobilux Grease No. 2

NOTE: The Skefko Ball Bearing Co. Ltd. approve Alvania Grease 2 and Mobilux No. 2, but are unable to comment on the suitability of the others for Ball and Roller Bearings.

* For VZ/T and WR/T Gear Boxes only use Mobilgear 629.

GENERAL INFORMATION

IMPORTANT: ON ALL CORRESPONDENCE RELATING TO THIS MACHINE PLEASE QUOTE THE MACHINE TEST NUMBER.

ROBINSON SERVICE

Customers faced with special applications will receive our recommendations if complete details, i.e. sample pieces or dimensioned drawings, are submitted to our Technical Department for examination.

ELECTRICAL EQUIPMENT

Inspection, maintenance or adjustment should be carried out by experienced electricians only, and prior to any investigation being made the current should be switched off at the isolating switch to avoid risk of accident.

It is recommended that this handbook should be read in conjunction with the following booklet:-

"SAFETY HINTS ON THE USE OF WOODWORKING MACHINERY" obtainable from H.M. Stationary Office, York House, Kingsway, LONDON, W.C.2., branch offices or any bookseller,

"Be guided by the instructions in this handbook, but never forget that equally important is operator intelligence."

Additional copies may be had at a nominal charge.

Illustrations and instructions given can be taken to give a generally true picture, but neither are binding as to detail.

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