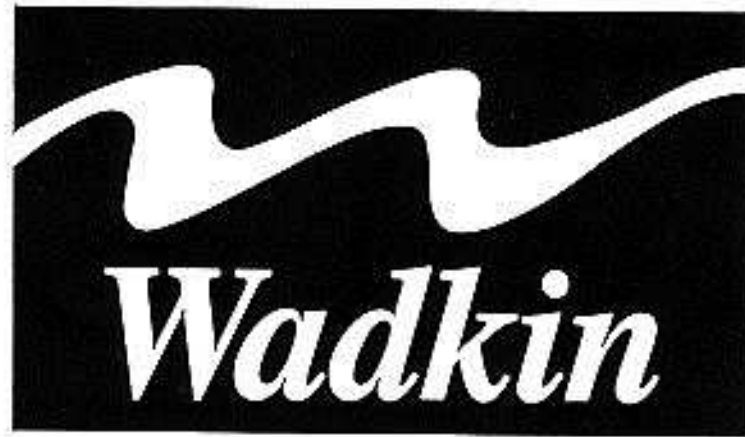


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AGS 250/300
TILTING ARBOR
SAWBENCH

M/C No

TEST No

INSTRUCTION MANUAL

**BE CAREFUL
THIS MACHINE CAN BE DANGEROUS
IF IMPROPERLY USED**

Always use guards.
Keep clear until rotation has ceased.
Always operate as instructed
and in accordance with good practice.
Read instruction manual before installing
operating or maintaining machine.

*Manufactured by :- WADKIN PLC
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HEALTH AND SAFETY

The CE mark on this machine signifies that an EC declaration of conformity is drawn up indicating that the machine is manufactured in accordance with the Essential Health and Safety Requirements of the 'Supply of Machinery (Safety) Regulations 1992'.

The 'requirements for supply of relevant machinery' in the General Requirement of the Regulations are not only that the machine satisfies the relevant essential health and safety requirements, but also that 'the manufacture.....carries out the necessary research or tests on components, fittings or the complete machine to determine whether by its design or construction the machine is capable of being erected and put into service safely'.

Persons who install this machine have duties under the 'Provision and Use of Work Equipment Regulations 1992'. An indication of these duties is given in the following extracts, but the user should be familiar with the full implications of the regulations.

REGULATION 5 requires that;

Every employer shall ensure that work equipment is so constructed or adapted as to be suitable for the purpose for which it is used or provided.

In selecting work equipment, every employer shall have regard to the working conditions and to the risks to health and safety of persons which exist in the premises or undertakings in which that work equipment is to be used and any additional risk posed by the use of that work equipment.

Every employer shall ensure that work equipment is used only for the operations for which, and under conditions for which, it is suitable.

In this regulation 'suitable' means suitable in any respect which it is reasonably foreseeable will affect health or safety of any person.

The Provision and Use of Work Equipment Regulations also include requirements as follows:-

regulation 6 - maintenance

regulation 7 - specific risks

regulation 8 - information and instructions

regulation 9 - training

Note:-

Attention is drawn to those requirements of the 'Woodworking Machines Regulations 1974' which are not replaced by the Supply of Machinery (Safety) Regulations or other, eg; Regulation 13 of the Woodworking Machinery Regulation, - 'Training', still applies.

Whilst the prime duty for ensuring health and safety rests with employers, employees too have legal duties, particularly under sections 7 and 8 of the Health and Safety at Work Act. They include:

Taking reasonable care for their own health and safety and that of others who may be affected by what they do or don't do;

co-operating with their employer on health and safety;

not interfering with or misusing anything provided for their health, safety and welfare.

These duties on employees have been supplemented by regulation 12 of the Management of Health and Safety at Work Regulations 1992. One of the new requirements is that employees should use correctly all work items provided by their employer in accordance with their training and the instructions they receive to enable them to use the items safely.

Noise

Noise levels can vary widely from machine to machine depending on the conditions of use. Persons exposed to high noise levels, even for a short time, may experience temporary partial hearing loss and continuous exposure to high levels can result in permanent hearing damage.

The Noise at Work Regulations 1989 place legal duties on employers to prevent damage to hearing.

There are three action levels of noise defined in regulation 2;

The first action level:-

a daily personal noise exposure ($L_{EP,d}$) of 85dB(A)

The second action level:-

a daily personal noise exposure ($L_{EP,d}$) of 90dB(A)

The peak action level

a peak sound pressure of 200 pascals (140dB re 20pa)

The exposure level is obviously influenced by the emission level of all the equipment in use.

Emissions levels for machines are provided in the particular machine instruction manual.

These levels are measured in accordance with ISO 7960 under certain specified test conditions, they do not necessarily represent the highest noise level, which is influenced by many factors, eg number of spindles in operation, type and condition of work piece, spindle speeds etc.

For regulations and information on relevant personal protective equipment i.e ear defenders, employers should refer to the Personal Protective Equipment at Work Regulations 1992.

Dust

Wood dust can be harmful to health by inhalation and skin contact and concentrations of small particles in the air can form an explosive mixture.

The Control of Substances Hazardous to Health Regulations (COSHH) 1989 place legal duties on employers to ensure that:-

the exposure of his employees to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled.

....adequate control to exposure of employees to a substance hazardous to health shall be secured by measures other than the provision of personal protective equipment.

where the measures taken in accordance with the paragraph above do not prevent or provide adequate control of, exposure to substances hazardous to the health of employees, then in addition to taking those methods, the employer shall provide those employees with such suitable personal protective equipment as will adequately control their exposure to substances hazardous to health.

Instructions for Use

Machinery manufactures are required by the Supply of Machinery Safety Regulations to provide comprehensive "Instructions for Use" of equipment, it is important that this information is transmitted to the person using the machine.

SECTION 1 GENERAL INFORMATION

The AGS sawbenches are general purpose machines suitable of performing a variety of machining operations. The types of work which may be carried out are:-

- a) Panel sizing
- b) Ripping
- c) Angled cutting:- with saw blade canted
- d) Compound angles:- using the canted saw blade and a mitre fence

The working of the machine is usually a one man operation although when sizing large panels an assistant can be used to off load cut material

The saw blade is mounted on a spindle below the table of the machine and for best results, blades of varying tooth characteristics should be fitted according to the nature of the material being machined, the desired finished cut quality and type of cut being applied.

The height of the saw blade above the table may be varied by means of a handwheel. This and the main controls are located on the front face of the machine.

The canting adjustment is positioned at the side of the machine.

NOISE EMISSION VALUES

Machine criteria

The machine was free standing on a concrete floor, not bolted down and not on any vibration dampening.

A flexible pipe connected the machine to the dust extraction.

There was no enclosure around the machine.

Machine cutting criteria

The machine was fitted with a 300mm saw rotating at 3850 R.P.M
The saw blade had 48 carbide tipped teeth and a cutting width of 3.2mm. The blade thickness was 2.2mm

Feed rate:- 4-8 M/min
Cut width:- 50mm
Saw blade projection:- 30mm

Material criteria

Material:- particle board
(3 layer construction)
Moisture content:- 6-10%
Board thickness:- 16mm
Board length:- 800-600mm
processed down to a
final width of
150mm.

Preliminary machining:- none

The figures quoted in the noise emission chart are emission levels and not necessarily safe working levels. Whilst there is a correlation between emission levels and exposure levels, this cannot be used reliably to determine whether or not further precautions are required to achieve safe working levels.

Factors that influence the actual level of exposure to the work force include the duration of exposure, the characteristics of the work room, sources of noise etc i.e the number of machines and other adjacent processes, also the permissible exposure levels can vary from country to country.

Emission levels, however will enable the user of the machine to make a better evaluation of the 'hazard and risk'.

NOISE EMISSION CHART		
MODEL:- AGS TYPE :- AGS 300 50HZ 415V		
DECLARED NOISE EMISSION VALUES in accordance with ISO4871		
	Idling	Operating
Declared A-weighted sound power level (L_{WAD}) in dB re 10^{-12} W	85.97	93.38
Declared A-weighted emission sound level (L_{pAd}) in dB re 20uPa at the operators position	74.39	81.81
Environmental correction factor (K)	= 3	
values determined according to specific test code IS7960 Annex A		

Tooling criteria

The AGS benchesaws have been designed to accept 250mm or 300mm saw blades suitable to fit on a 30mm spindle and with a peg location.

Never exceed the specified maximum speed of the saw blades.

Wadkin supplied riving knives are marked as to their saw blade suitability and the operator should ensure that the knife and blade are compatible.

Only tools made in conformity to pr EN847-1 shall be used on the AGS machines.

It should also be noted that H.S.S saw blades may be prohibited by law in certain countries and the operator should ascertain the position on this point.

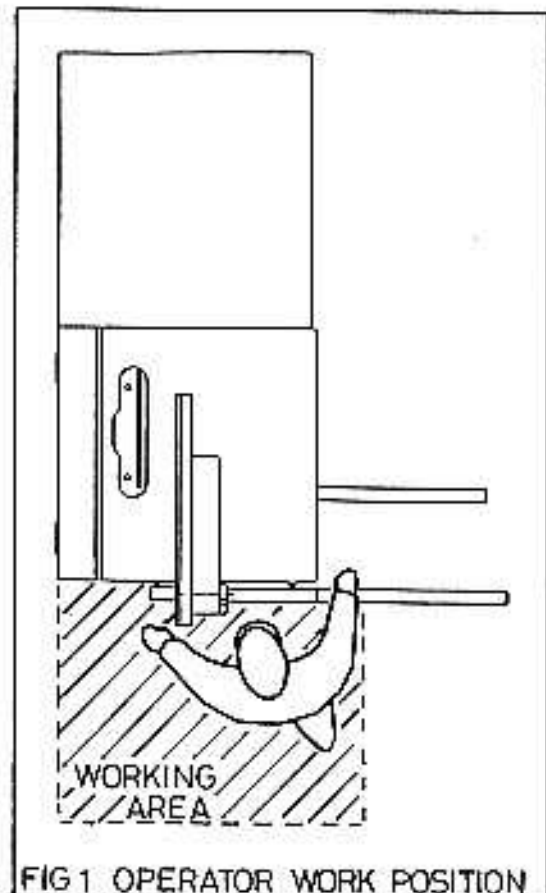


FIG 1 OPERATOR WORK POSITION

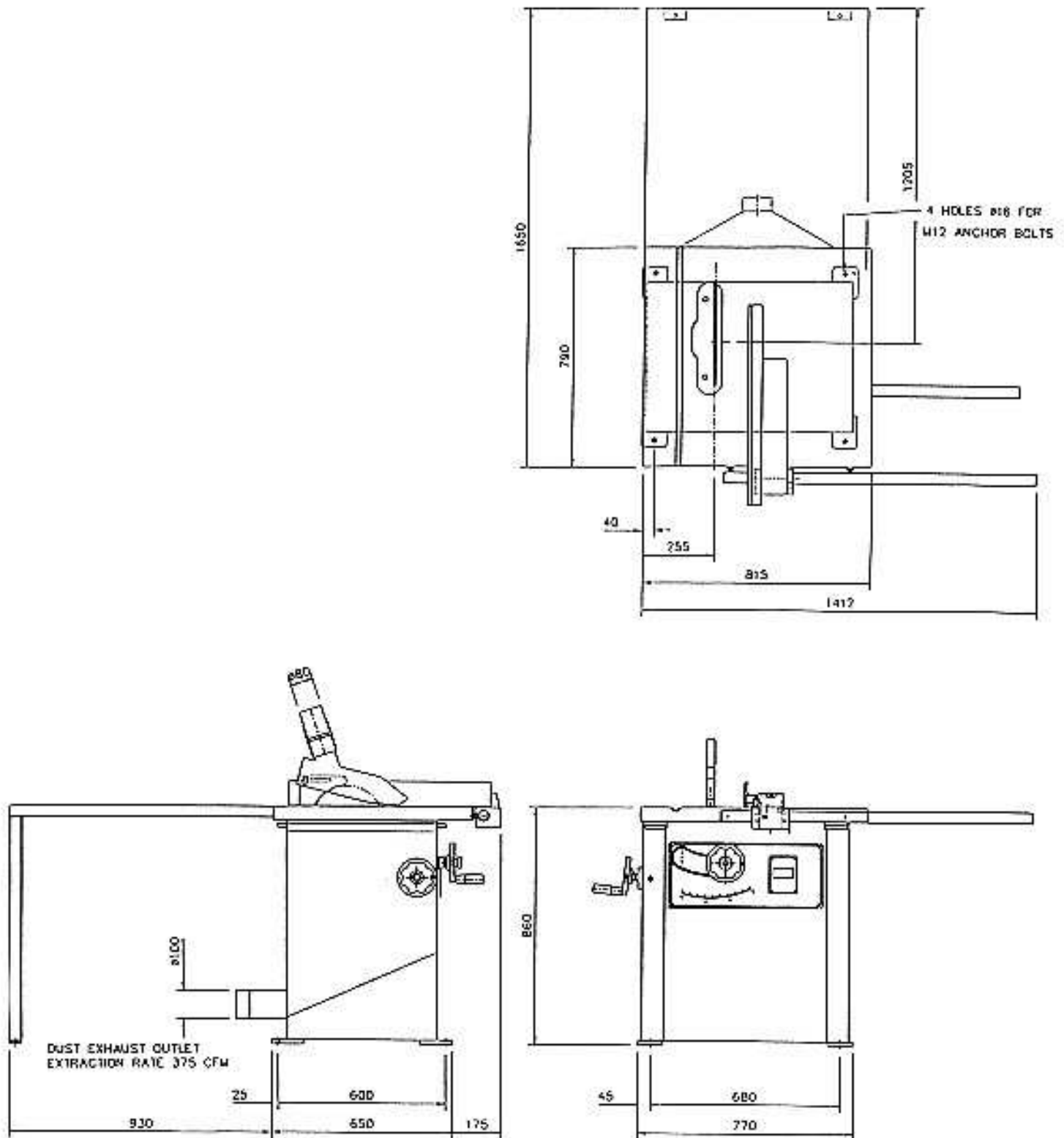


FIG 2 FOUNDATION AND MACHINE DIMENSION



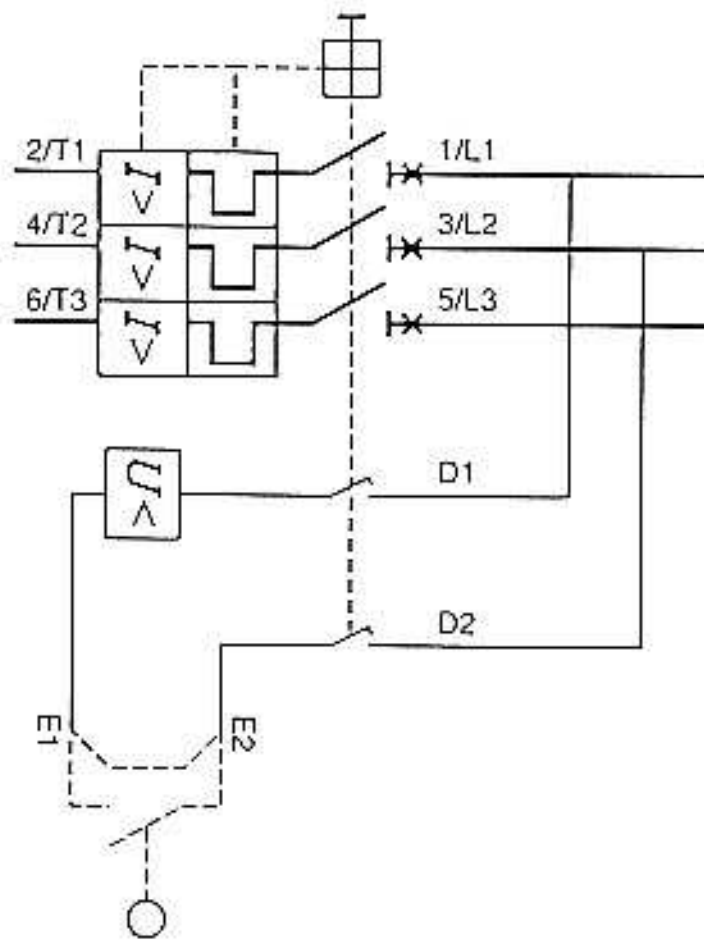
MACHINE SPECIFICATION

Size of main table	1650mm x 815mm
Maximum distance from saw to rip fence	916mm
Usable saw diameters	300mm , 250mm
Maximum saw projection with 300 mm saw	100mm
maximum saw projection with 250 mm saw	75mm
Drive motor rating	2.2KW (standard) 3.7KW (optional)
Spindle speed	3850 r.p.m
Spindle diameter	30mm
Approximate net weight	265Kg
Approximate gross weight	320Kg



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SECTION 2 UNLOADING, UNPACKING AND INSTALLATION

Unloading (Fig 1)

Verify the weight of the machine (see **Machine specification section 1**) and check that the lifting equipment used is capable of lifting this weight as a minimum.

Attach slings to machine as shown in the illustration.

WARNING:- Never walk or stand under a raised machine

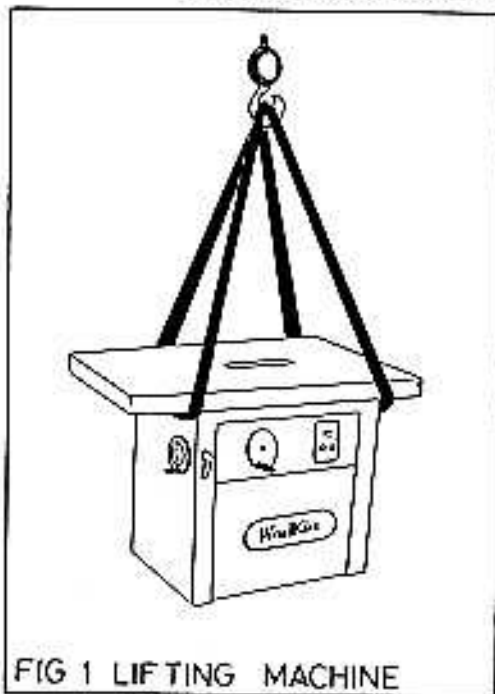


FIG 1 LIFTING MACHINE

Unpacking

To reduce the size of the machine for transport and to avoid possible damage certain items will have been removed and individually packed. These items as well as the main machine should be unwrapped and checked to ascertain that the machine is complete with all its fittings. Check delivered items against the following list:-

Extension table	Saw blade (250mm dia)
Table support legs	Instruction manual
5mm allen key	Push stick
10mm toggle bar	Mitre fence
8mm allen key	
17mm A/F spanner	
32mm A/F spanner	
Top saw guard	
Riving knife	

Note:- The rip fence and fence guide bars may also have been removed and individually wrapped on certain export machines.

Optional extras or customer special parts are not listed and should be checked against order

Installation

For machine weight, dimensions and specification refer to **Section 1 General information**.

Cleaning

Before levelling the machine carefully remove the anti-rust material from the bright areas.

Clean the machine with paraffin or diesel and a soft rag. Do not use a substitute as it may precipitate an explosion.

Location and foundations

To obtain the best results from the 'Wadkin' woodworking machine, it is important that the floor on which the machine is to stand has been prepared, is dry and level.

The bench saw should be so placed that the traffic flow of men and materials to and from the machine fits smoothly into the general production flow.

The operators normal working position should be away from the aisle, so as not to cause a hazard. The minimum clearance on each working side of the machine should be at least one metre greater than the maximum machine capacity.

The AGS saw bench **MUST** be secured to the floor before use with suitable fastenings i.e 12mm raw bolts.

Electrical supplies

The customer is responsible for an adequate electrical supply. Details of power requirements are provided with the machine.

The machine is delivered with its complete electrical equipment ready for connection.

The electrical connection/schematic diagram is found in the electrical control cabinet as well as within this manual. The only connection to make is the power supply to the disconnect (isolator) switch.

POINTS TO NOTE WHEN CONNECTING THE POWER SUPPLY

- a) Check the voltage, phase and frequency correspond with those on the machine name plate.
- b) Check the main fuses are of the correct capacity in accordance with the machine name plate details.
- c) Connect the incoming supply leads to the appropriate terminals.

- d) Check the saw rotation is correct i.e towards the operator.

To reverse the rotation of drive, reverse any two of the line lead connections at the incoming supply, after having first isolated the machine at the mains.

WARNING:- Electrical work must be carried out by a qualified electrician.

Exhaust (Dust Extraction) connections

The machine has two dust extraction points, one at the rear for the base and the other at the saw guard.

Both outlets should be connected via a length of flexible pipe (suitable to cater for adjustments) to the main duct.

The flow of air to the exhaust outlets should be approximately 20 meters per second for timber with a moisture content of below 18% or 28 meters per second if above.

The total volume of extracted air is :-
927 cubic meters per hour at 20 m/s
or
1298 cubic meters per hour at 28 m/s

The measured static pressure in the main extraction duct is 340Pa at 20 M/sec and 635Pa at 28 M/sec.

Machine Re-assembly

Once the saw bench has been correctly sited and secured the machine can be re-assembled as below. Sections 1) to 4) only apply to machines where the rip fence and support rails have been removed for transport purposes.

- 1) Identify front rip fence support rail and locate the rail studs into the holes at the front of the machine

NOTE:- The two lock nuts already tightened on the support rail studs **MUST** not be disturbed as these are factory set to ensure correct fence alignment.

- 2) Set rail level with table top using a straight edge and secure in position with supplied nuts.

- 3) Offer rear support rail up to table and loosely fasten in position with M10 bolt and tapered washer. Place a straight edge on the table and projecting over the rear rail. The securing bolt hole is drilled eccentrically in the end of the rail bar and by rotating the rail it can be levelled to the table. Once set tighten bolt ensuring rail does not rotate.
- 4) Slide rip fence onto front support rail and then screw stop bolt in end of rail
- 5) Fit saw blade (refer to section 3)
- 6) Fit and adjust riving knife (refer to section 3)
- 7) Fasten saw guard to riving knife

SECTION 3 OPERATING INSTRUCTIONS

The safe operation of woodworking machinery requires the constant alertness and close attention to the work in hand.

Read this instruction manual in its entirety before operating the machine.

Blunt saw often contribute to accidents. An efficient machinist knows when sharpening is necessary, but if there is a reluctance to spend time on sharpening then instead of cutting efficiently and smoothly the blade will tend to chop and snatch at the work piece. This not only increases the risk of accidents but also lowers the quality of work.

When choosing a saw blade ensure it is suitable for the machine, material and saw speed.

WARNING:- Never raise the saw guard until the blade has come to rest.

Safety devices

All guards and covers must remain in position until rotating elements have come to rest.

The emergency stop located on the front of the machine can also act as a safety stop and **must** be engaged before working near components that can rotate i.e. saw blade, belts.

A push stick is provided with the machine and **must** always be used to push the trailing edge of the workpiece past the saw.

Machine Controls (Fig 1)

Before starting the machine operators must familiarise themselves with the various controls, their usage and position.

The standard features as illustrated are

- 1) SAW START:- Green push button
- 2) MASTER STOP:- Red button. Push in to stop, pull out before re-starting saw with green button
The machine isolator is located at the rear of the sawbench and is in the 'on' position when the central bar of the switch is in the vertical position. In the 'off' position it is possible, using a padlock, to immobilise the switch and prevent unauthorised use.
- 3) RISE AND FALL :- Rotating handwheel with locking knob in the centre.
- 4) CANTING HANDWHEEL:- Locking handle is located to the side of the handwheel.
- 5) RIP FENCE BODY LOCK.
- 6) FENCE PLATE LOCKS.
- 7) FINE ADJUSTMENT:- Fence body.

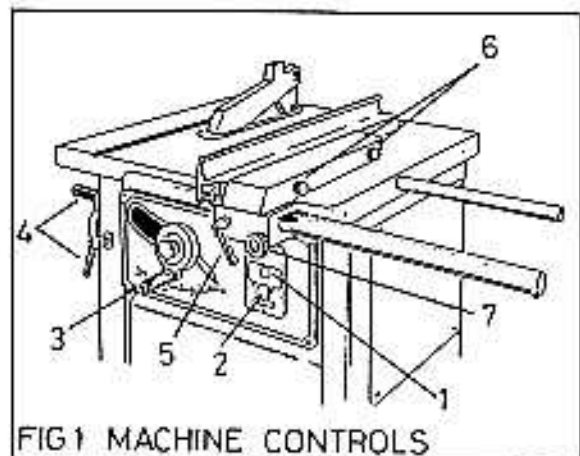


FIG 1 MACHINE CONTROLS

Depending on machine destination and/or customer request the AGS sawbench may be fitted with either a brake or non brake motor.

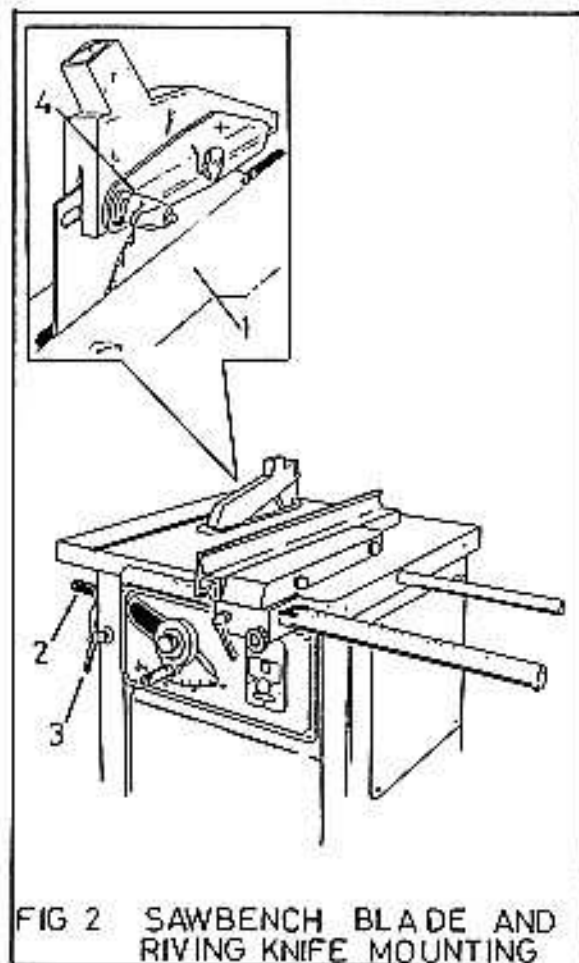
On pressing the Master Stop button the non braked version will take considerably longer to come to rest as the saw free wheels to a halt

Saw blades on the braked version, once at rest, will not be free to rotate by hand. The brake automatically releases on machine start up.

MOUNTING SAW BLADE AND RIVING KNIFE

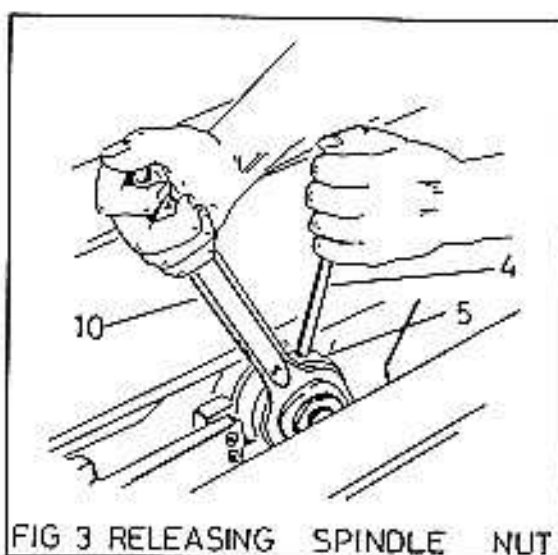
Saw and Riving Knife Replacement or Fitting (Fig 2, Fig 3, Fig 4)

- 1) Isolate power at mains or at master stop. If replacing a saw allow the blade to come to rest before proceeding.
- 2) Remove table insert (1). Slacken off locking handle (4) and pivot saw guard clear.
- 3) Raise saw spindle to its upper most position by rotating handwheel (2) clockwise after first releasing the rise and fall lock (3).

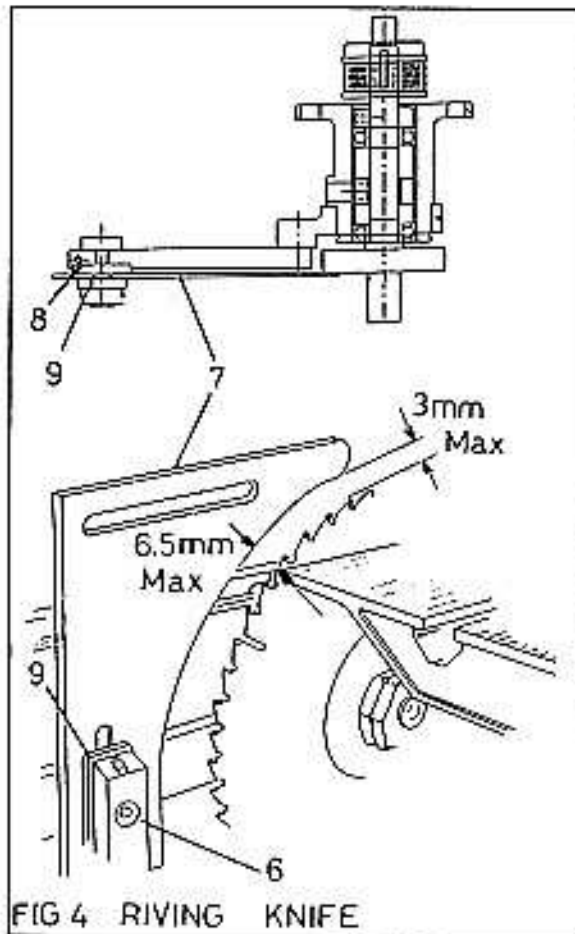


- 4) Locate 10mm toggle bar (4) into one of the holes in the rear saw flange (5). Using supplied spanner (10), unscrew and remove arbor nut and front saw flange.

Note:- The arbor nut has a left hand thread.



- 5) Check flanges and saw blade are clean before assembling. The rear flange has a peg which locates through the saw and in to the front flange. These must all align before tightening the arbor nut.
- 6) Having secured the saw blade, slacken off clamp screw (6) and slide riving knife (7) between guide plate (8) and pressure plate (9). Position the riving knife so that its tip is no greater than 3mm from the blade and at table level the distance between the two is no greater than 6.5mm.



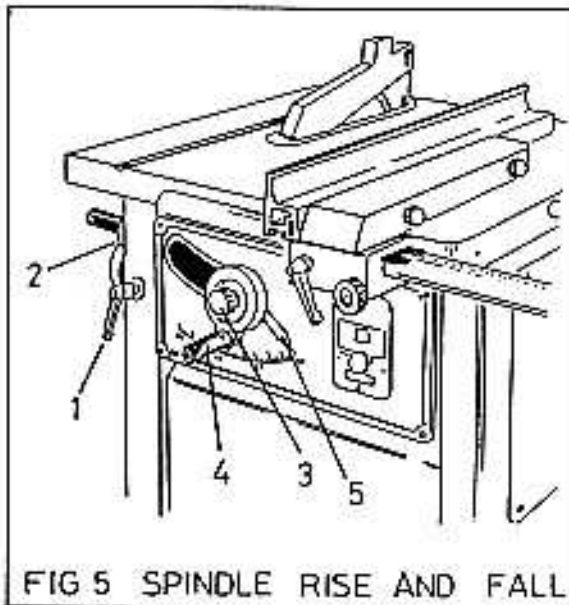
- 7) Tighten clamp screw (6)
- 8) Replace table insert (1).
- 9) Position saw guard within 12mm of workpiece.

MACHINE ADJUSTMENTS

Spindle Rise and Fall (Fig 5)

WARNING;-Do not raise or lower a saw blade through a stationary workpiece. If setting blade to a particular height using a rule, timber sample, etc, then the power MUST be isolated and the blade stationary before approaching the saw and lifting guard.

- 1) Release the locking handle (1)
- 2) Use hand wheel (2) to adjust saw height (clockwise rotation raises the saw).
- 3) Relock handle (1)

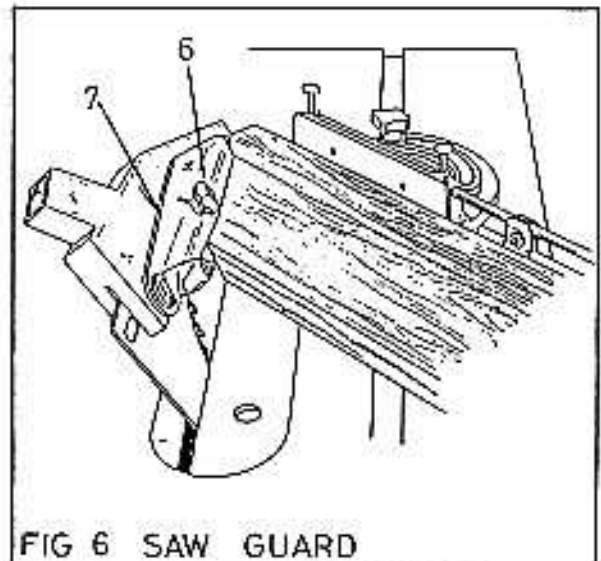


Canting Controls (Fig 5, Fig 6)

The saw cants 45 degrees to the right, with positive stops at 90 and 45 degrees.

WARNING;- Do not cant saw blade whilst machining timber

- 1) Isolate power at mains or at master stop.
- 2) Release locking handle (3).
- 3) Turn handwheel (4) to cant blade. The angle of the saw blade is indicated by the pointer (5).



- 4) Tighten locking handle (3).
- 5) Slacken off hand knob (6) and slide saw guard side cover (7) down to cover maximum amount of saw blade without interfering with timber passage. Tighten knob (6).
- 6) Re-engage power.

Rip Fence Adjustment (Fig 7)

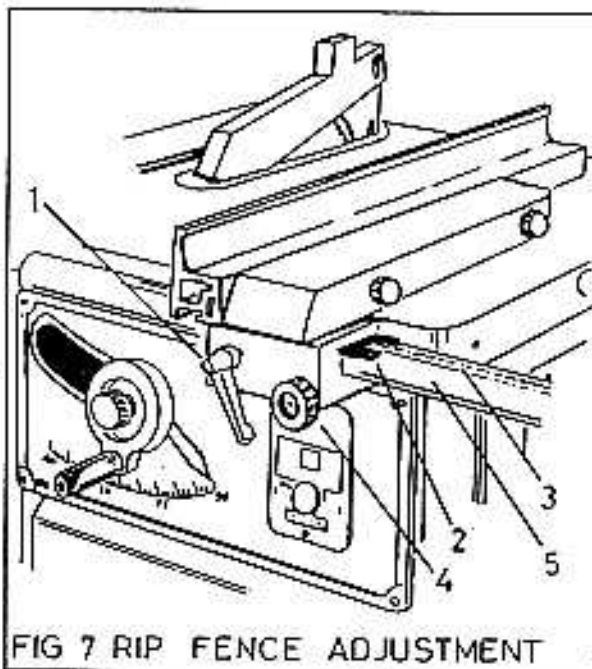
The rip fence slides on a round support bar fitted to front of the machine. Rapid adjustment or small micro adjustments are both catered for.

Rapid Adjustment

- 1) Loosen locking handle (1)
- 2) Using scale pointer (2) and reading off scale (3) position rip fence to suit.

NOTE:- If the fence plate orientation has been changed the pointer (2) will need to be recalibrated (see Fence plate adjustment).

- 3) Tighten handle (1).



Micro Adjustment

- 1) Loosen locking handle (1).

- 2) The micro adjustment knob (4) is sprung loaded and when pushed in and turned it engages a rack fitted to the under side of the support bar (5).

- 3) After adjustment tighten handle (1)

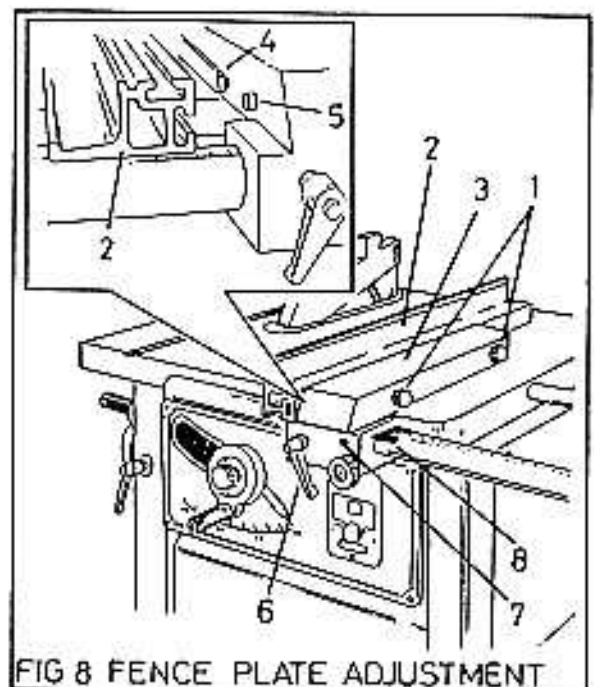
Fence Plate Adjustment (Fig 8)

The fence plate may be fitted in two different positions. In the upright position (as illustrated) the fence can be used for deep stock material, whilst in the alternative setting it may be used when machining panels, small components, etc.

If the orientation of the fence is altered then the scale pointer must be recalibrated.

Horizontal Adjustment

- 1) Loosen hand wheels (1) and slide fence plate to required position.
- 2) Tighten hand wheels (1).



Position Change of Fence Plate

- 1) Slacken off hand wheels (1).
- 2) Slide fence plate (2) from body (3).
- 3) Turn to alternative working face and slide 'T' slot over the locking plate (4) and guide collars (5).
- 4) Position horizontally to suit and then tighten hand wheels (1).

Fence Pointer Adjustment

- 1) Loosen locking handle (6) and move fence to a position which would allow a reasonably cut to be taken. Lock in position.
- 2) Start machine and using fence plate as a guide pass a piece of timber through. Stop machine.
- 3) Accurately measure the timber, then slacken off the grub screw (7) and recalibrate pointer (8) accordingly.
- 4) Relock grub screw.

Mitre Fence (Fig 9, Fig 10)

The mitre fence (1) slides in either of two table slots and can be used at either side of the saw blades. Two stop rods (2) are held together by two clamps (8) and wing nuts (3). These stop rods can be secured to the fence body by either of the two thumb screws (4) depending on which side of the fence body the rods are used.

WARNING:- Always ensure the stop rods are set clear of the saw blades.

The mitre fence can be rotated through 90 degrees with positive stops at 45 and 90 degrees.

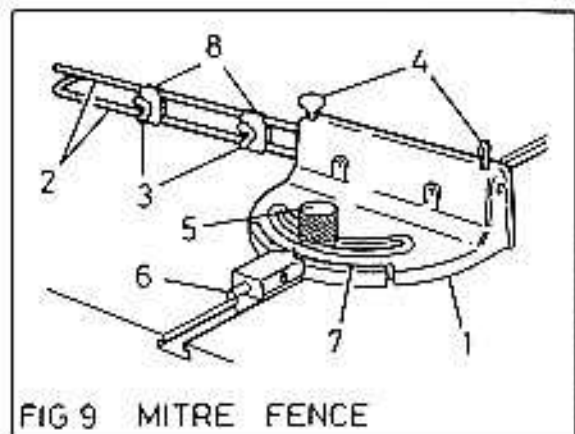


FIG 9 MITRE FENCE

- 1) To position fence at required angle first loosen hand wheel (5)
- 2) Pull plunger (6) from location.
- 3) Position fence as required using scale (7).
- 4) Relock hand wheel (5).

Setting Stop Rods

Accurate repetitive cutting can be made using the stop rods.

By slackening off the wing nuts (3) and the thumb screws (4) the rods can be arranged in a variety of set ups. After setting position re-tighten all nuts and screws.

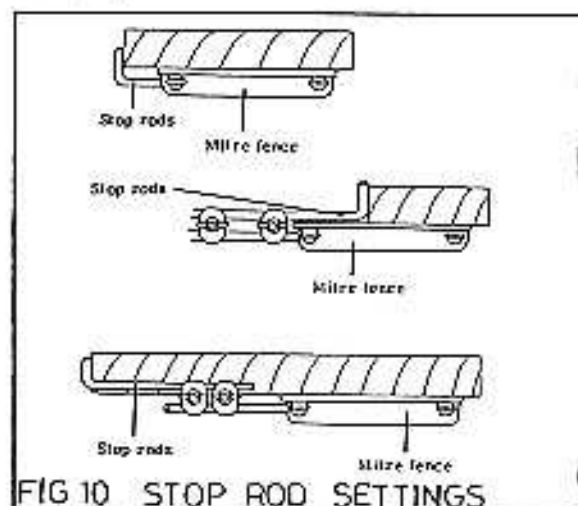


FIG 10 STOP ROD SETTINGS

SECTION 4 MAINTENANCE

The machine has been designed to keep the ease and scale of maintenance to a minimum.

Regular scheduled maintenance such as lubrication and cleaning should be carried out to ensure the machine is in a good operating condition and capable of safely producing good quality trouble free work with the minimum of downtime.

WARNING;- Always isolate power at master stop and allow saw blades to come to rest before carrying out any maintenance or lubrication.

Regular Maintenance and Lubrication (Fig 1, Fig 2)

When a brake motor is fitted there will be a need to replace the friction disc within the brake unit. The replacement period varies depending on the frequency of stop/starting, however, when the stopping time of the motor starts to significantly increase the disc should be changed.

Weekly

Using a brush or similar method lightly lubricate with Wadkin grade L6 grease the following areas;-

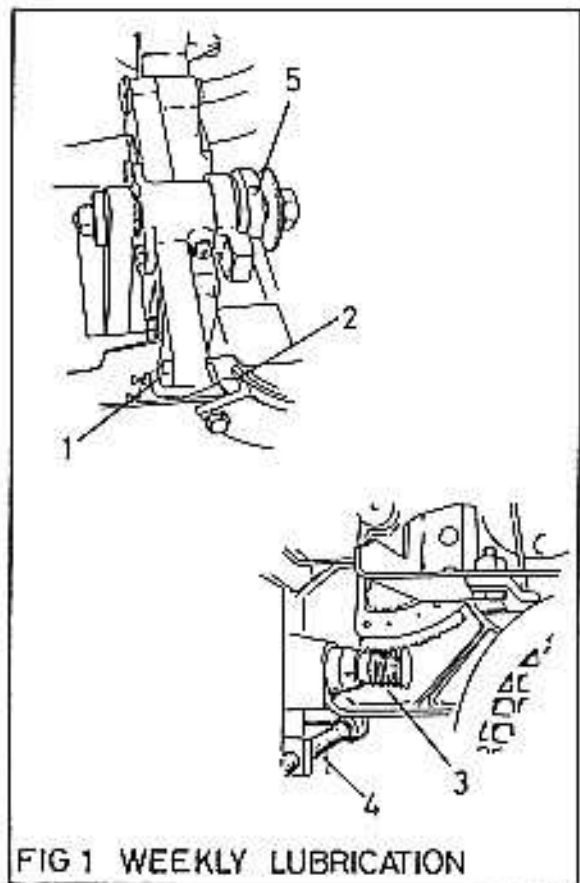
- 1) Saw rise and fall slides (1)
- 2) Saw cant slides (2)
- 3) Screw threads for rise and fall (3)
- 4) Screw threads for canting shaft (4)

Each week to prevent resin/saw dust build up on sliding parts, screw threads, etc the machine should be traversed to all its limits

It is recommended that the machine be cleaned thoroughly each week.

If cleaning with compressed air, take care not to point the jet directly at bearing housings slide joints or pivots.

Clean the saw spindles, collars, tables, fences and riving knife to remove all remains of resin and saw dust.

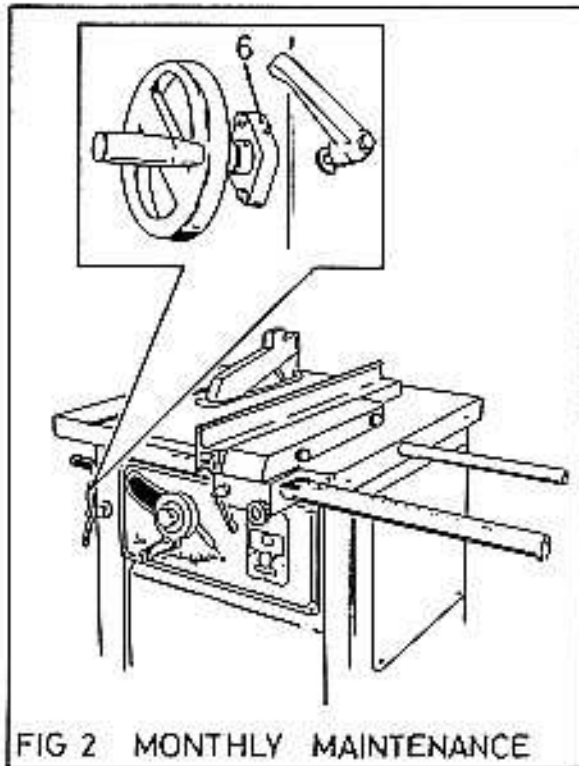


Particular attention should be taken to clean the locating holes (5) for the toggle bar (used when replacing saw blades) as residual build up in the hole prevents positive location.

Remove any saw dust from machine base.

Monthly

Using Wadkin grade L6 grease in a grease gun lubricate the rise and fall bearing housing (6).



Three Monthly

Prior to scheduled lubrication clean all screw thread adjustments and slides with a resin based solvent.

After lubrication traverse screw threads and slides to their limits to ensure even and total coverage of lubricant.

Check condition of drive belt.

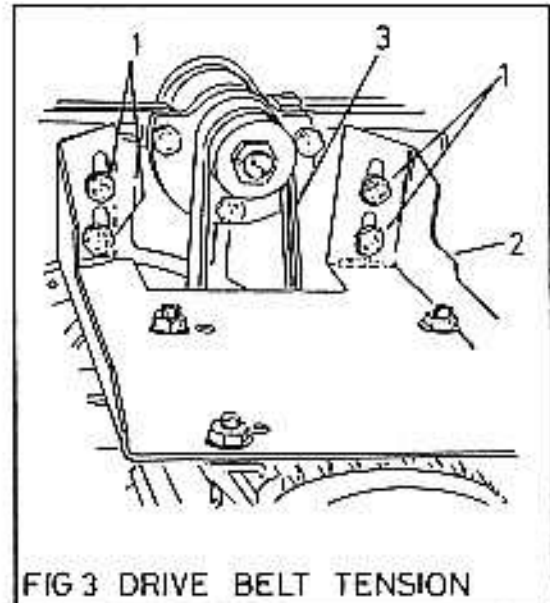
Remove motor fan cowl, check condition of fan blades, remove any saw dust or shavings and replace cowl.

Checking and Adjusting Drive Belt Tension (Fig 3)

The belt, at its correct tension, should be able to be depressed 8-10mm at the mid span by the application of an average thumb pressure of 22-31N (5-7 lbf).

Adjustment

- 1) Check that power is isolated and that the blade is at rest.
- 2) Remove side panel by unscrewing the four securing hexagonal screws



- 3) Loosen the four hexagon bolts (1) holding the motor support bracket (2).
- 4) Reposition bracket (3) on its slotted mountings until the belt is correctly tensioned.
- 5) Tighten bolts (1), replace and secure door and restore power.

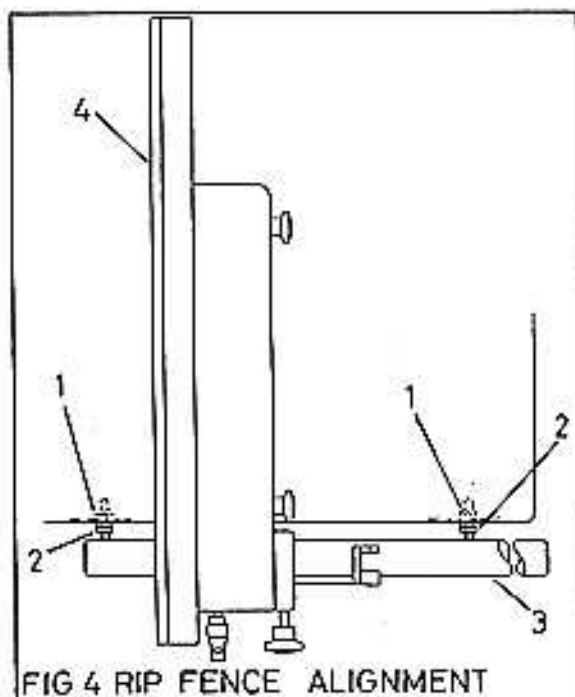
Machine Alignments and Settings

Although the machine is factory set with regards to fences, saw alignment etc it may become necessary at a latter date to reset items due to part replacement for example.

Rip Fence Alignment (Fig 4)

The rip fence (4) should be set level with the table (see **Section 2 Installation**) and parallel to the blade. To set the rip fence the support bar (3) must be adjusted.

- 1) Isolate power and ensure blade is at rest.
- 2) Slacken off the rear nuts (1) under the main table

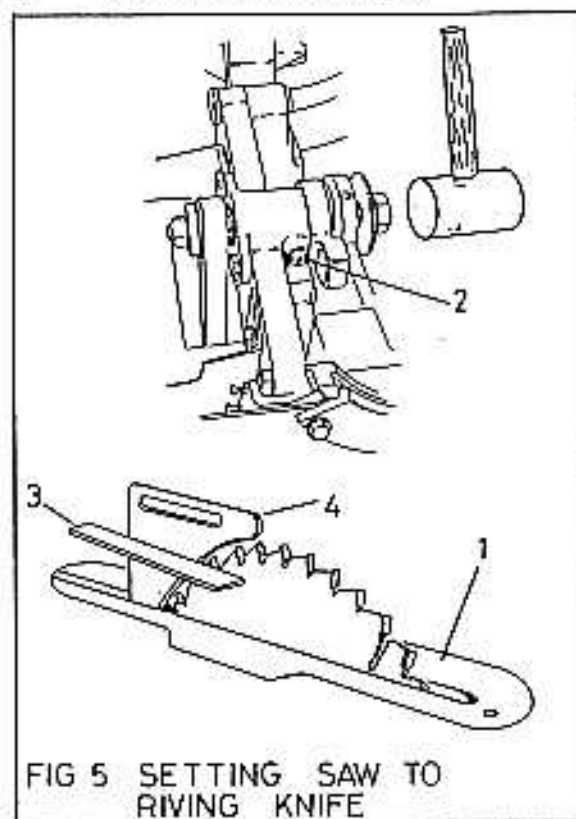


- 3) Adjust the front locknuts (2) to suit.
- 4) When set retighten rear locknuts (1).

NOTE:- When a dial indicator is run along the machined 'T' slot, the rip fence should not be greater than 0.1mm out of parallel and the greater distance must always be at the outfeed side of the fence.

Setting Saw to Riving Knife (Fig 5)

- 1) Isolate power and visually check saw blade is not rotating
- 2) Remove infill plate (1).

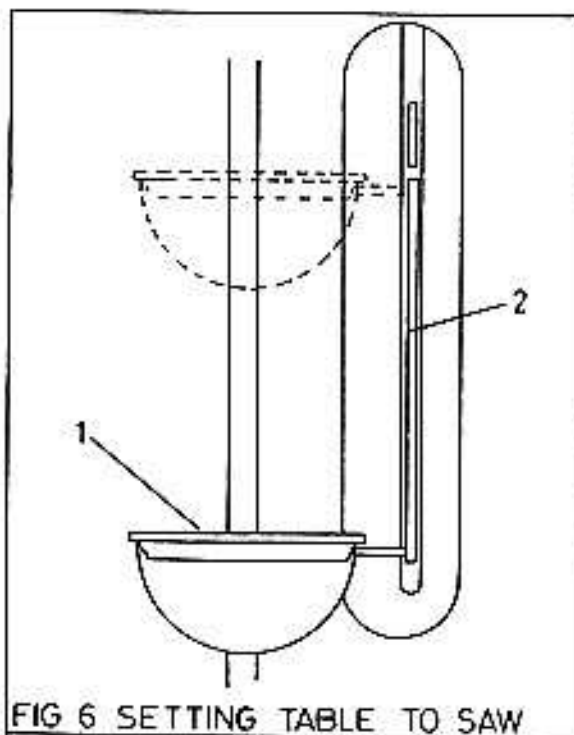


- 3) Loosen socket head capscrew (2)
- 4) Place a straight edge (3) along one side of the riving knife, projecting over the teeth of the saw blade and using feelers measure the gap between the two. Repeat this on the other side of the riving knife.

- 5) Using a soft faced mallet gently tap the spindle in the necessary direction to equalise the gap either side of the knife.
- 6) When set tighten capscrew (2).
- 7) Replace infill plate.

Setting Table Parallel to Saw (Fig 6)

- 1) Isolate power and ensure blade is stationary.
- 2) Loosen the four nuts securing the main table to the frame.
- 3) With the saw fitted, select a tooth and position the straight stop rod of the mitre fence so that it just touches the saw.



- 4) Slide mitre fence (1) to rear of the saw (2). Manually rotate saw blade until previous selected tooth is opposite stop rod. The distance between the rod and tooth should be equal at both sides.
The correct position of the saw in relationship to the table insert slot is 25.4mm from the right hand side. This will ensure clearance on the table insert when the blade is canted.
- 5) Tighten table nuts.
- 6) Restore power.

Replacing Friction Disc in Brake Motors (Fig 7)

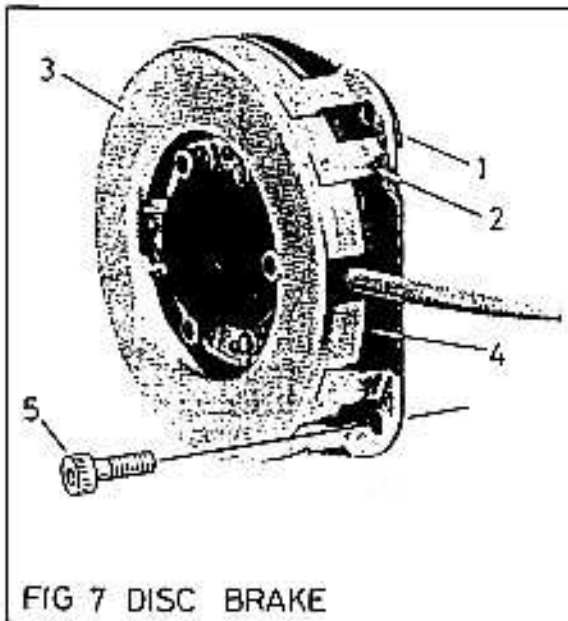
- 1) Isolate power at main isolator.
- 2) Remove side panel by unscrewing the four securing hexagonal screws.
- 3) Remove cowl from motor.
- 4) Remove motor fan. Depending on the type and size of motor the fan may be held onto the shaft by tension pins or grub screws. It may also be keyed.
- 5) Remove the four fixing screws (5) holding the brake in position and withdraw unit from the hub.
- 6) The rear mounting flange (1) has two locking tabs (2) on opposite corners which need to be slightly bent back to allow the unit to be separated.
- 7) With the tabs opened up rotate the rear flange (1) and the front magnet system (3) in opposite directions. This separates the unit and exposes the friction disc (4).

- 8) Replace disc (4).

NOTE:-

The friction disc has a protruding boss at one side of the toothed bore, ensure when installing the new disc, that this boss is situated at the mounting flange (1) side of the brake.

- 9) To re-assemble, reverse the dismantling procedure, then ensure the locking tabs are fully re-clamped. Visually centralise the disc toothed bore by thumb pressure, then re-mesh onto the motor shaft. Re-secure flange with screws (5), re-place and secure fan and cowl.



APPROVED LUBRICANTS

WADKIN	CASTROL	B.P	SHELL	MOBIL	ESSO	GULF	CALTEX
L1	Hyspin AWS 32	energol HLP 32	Tellus 37	DTE oil Light 24	Nuto H32 43 AW	Harmony Oil HDA	Rando
L2	Alpha ZN 150	Energol HP 150	Vitrea 150 or CS 150	Vactra Extra	Spartan EP 150 Heavy	Service 13	URSA P40
L4	Magna 68	Energol HP 68	Vitrea 68 or CS68	Vactral Oil	Nurray 68 Heavy Medium	Service 51	URSA P20
L6	Spheerol AP3	Energrease LS3	Alvania Grease No 3	Mobilplex Grease No 48	Beacon 3	Gullcrown Grease No 3	Regal Startak Premium 3

L1 Oil Hydraulic oil with anti-corrosion, anti -oxidation, anti wear, anti-foam performance.

L2 Oil Gear oil (viscosity 150 centi-stokes at 40 degrees c).

L4 Oil Plain mineral oil (viscosity 68 centi-stokes at 40 degrees c).

L6 Grease Grease NLG1 No3 consistency lithium bearing grease.



SECTION 5 ILLUSTRATED PARTS LIST

CONTENTS

1. Rip Fence
2. Riving Knife Assembly
3. Rise and Fall Assembly
4. Canting Assembly
5. Spindle Assembly
6. Drive Motor and Mounting

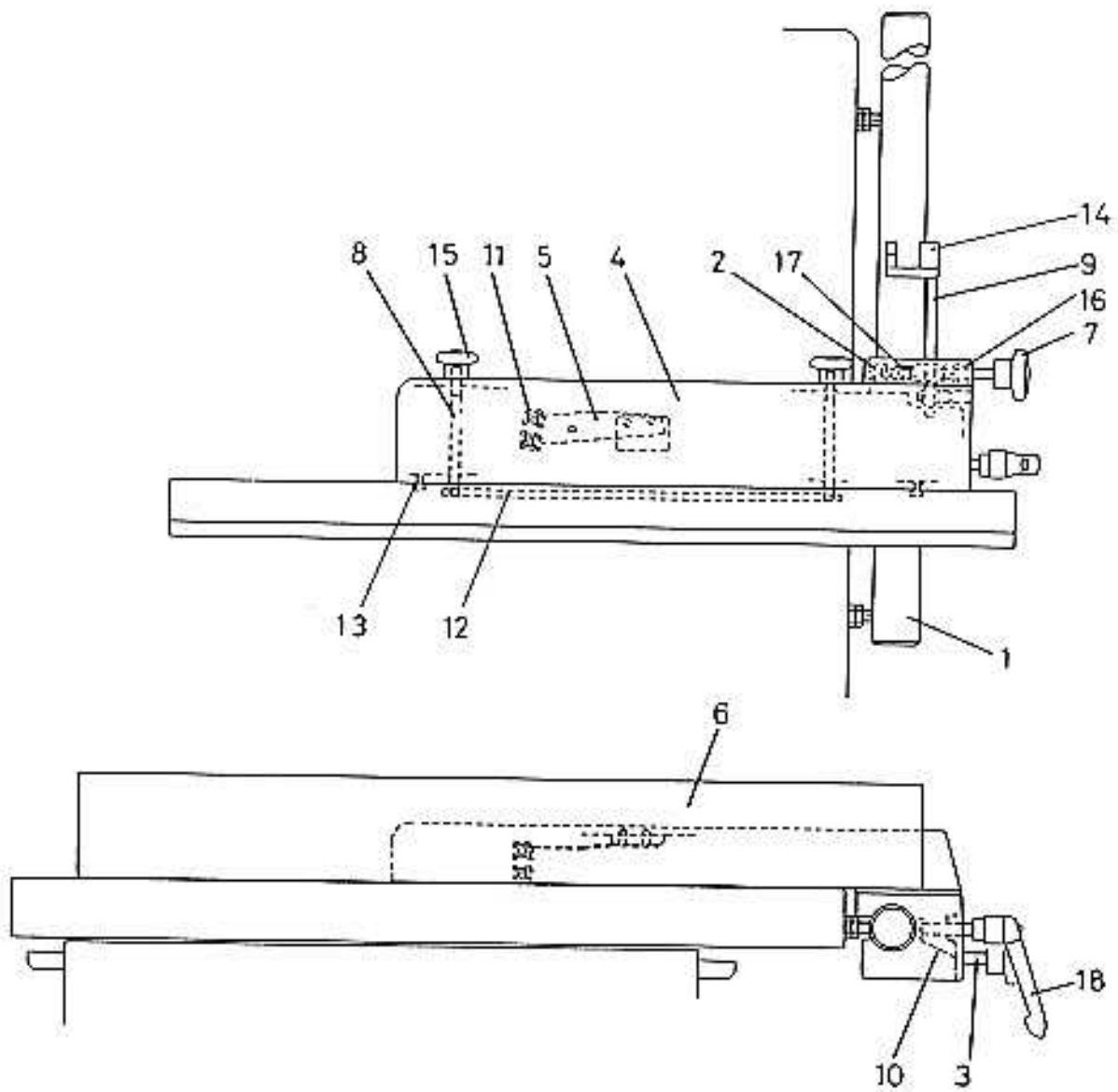


FIG 1 RIP FENCE

1. RIP FENCE

Ref No	Description	No Off
1.	Fence bar	1
2.	Retainer	1
3.	Pinion	1
4.	Rip fence	1
5.	Spring	1
6.	Fence plate	1
7.	Handwheel	1
8.	Stud for fence plate	2
9.	Pointer bar	1
10.	Clamp plate	1
11.	Roller	1
12.	Clamp bar	1
13.	Guide collar	2
14.	Pointer	1
15.	Handwheel	2
16.	Bush	1
17.	Compression spring	1
18.	Kipp handle	1

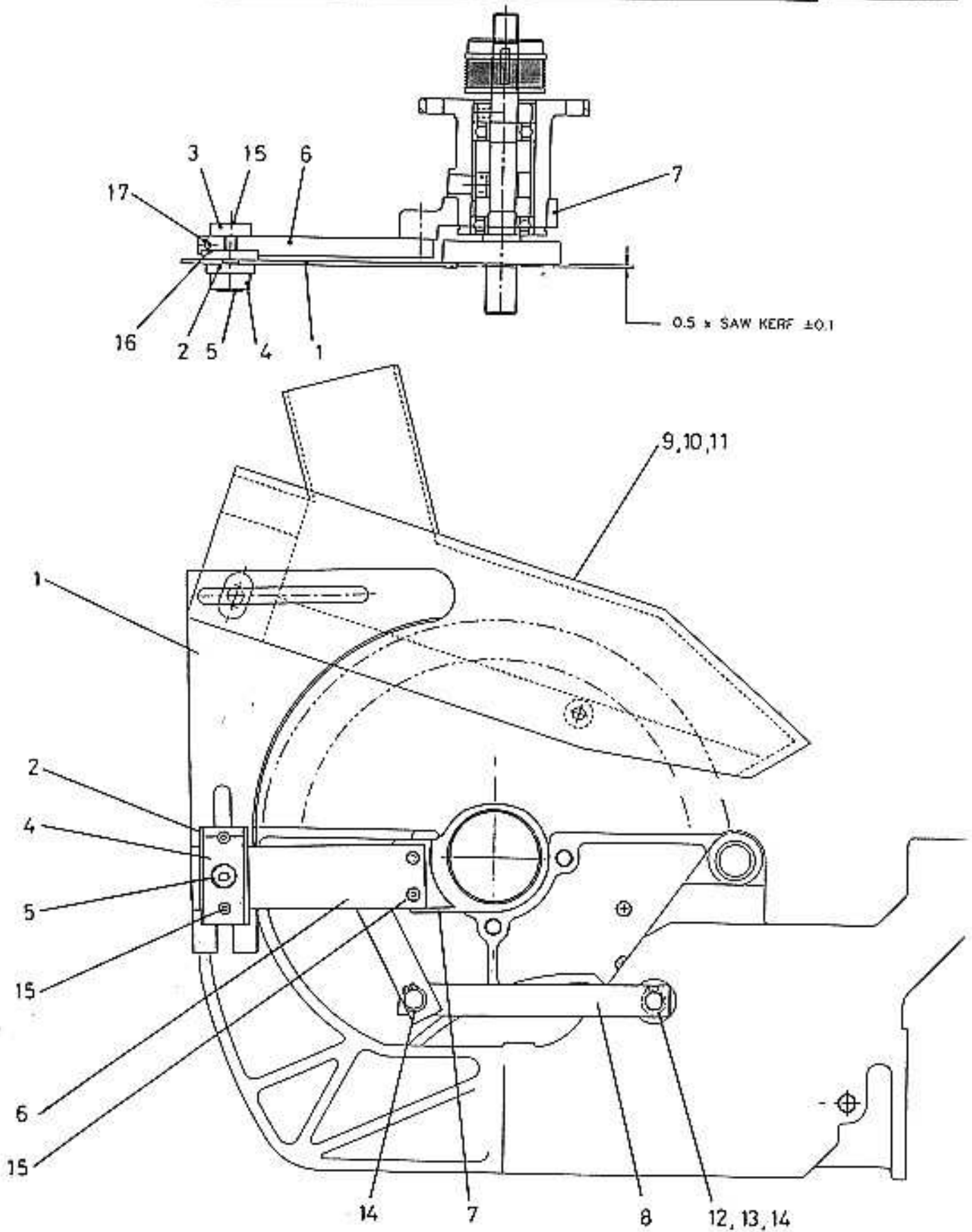


FIG 2 RIVING KNIFE ASSEMBLY

2. RIVING KNIFE ASSEMBLY

Ref No	Description	No Off
1.	Riving knife	1
2.	Pressure plate	1
3.	Rear clamp plate	1
4.	Front clamp plate	1
5.	Clamp screw	1
6.	Slide plate assembly	1
7.	Pivot bracket	1
8.	Rise and fall link plate	1
9.	Extraction adaptor (not illustrated)	1
10.	Extraction hood	1
11.	Extraction hood adjustable plate	1
12.	Link plate pivot pin	1
13.	Special locknut M12	1
14.	External circlip dia 12mm	2
15.	Hexagon socket capscrew M8 x 35mm long	4
16.	Riving knife guide plate	1
17.	Tension pin dia 4mm x 16mm long	1

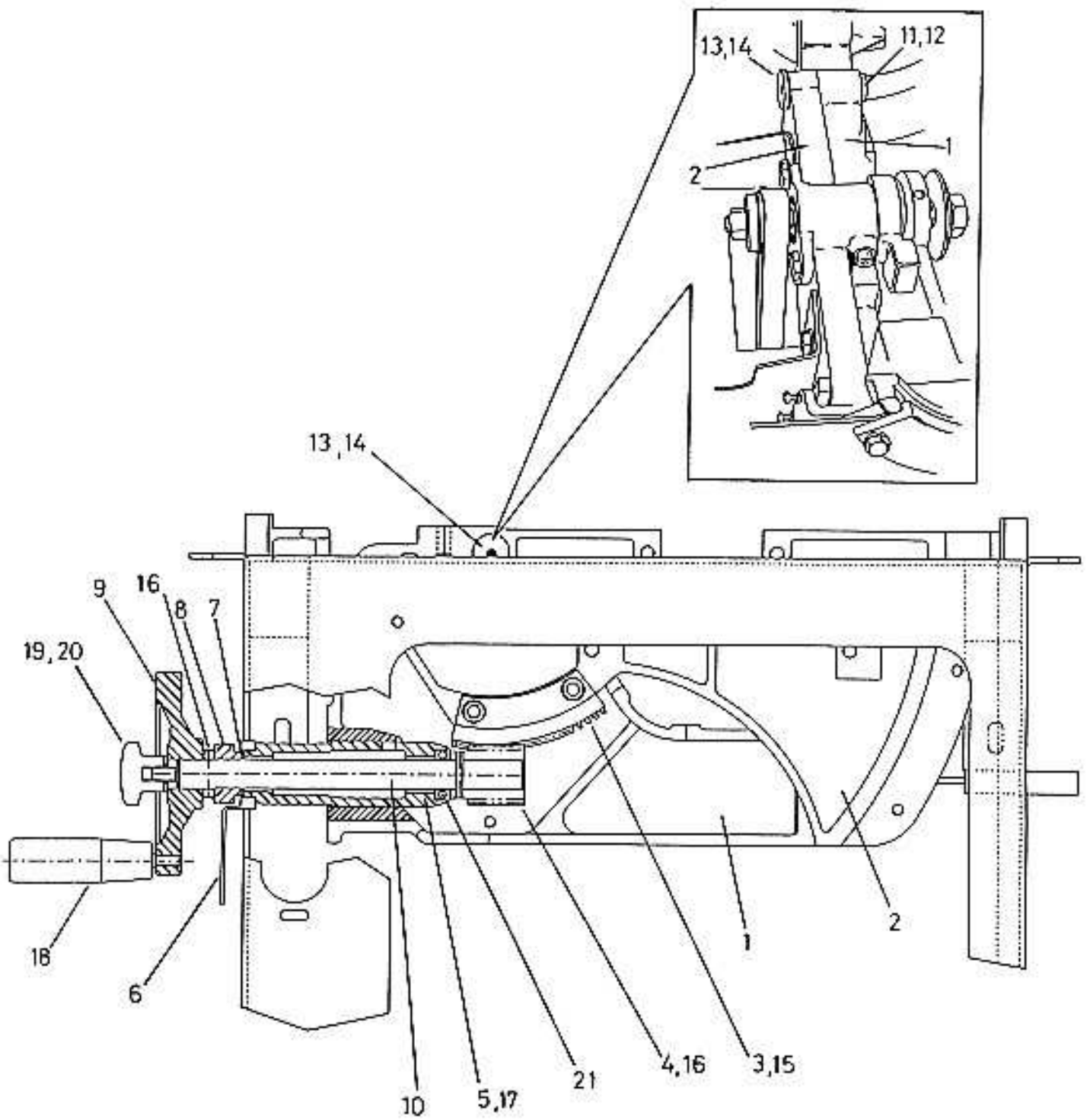


FIG 3 RISE AND FALL ASSEMBLY

3. RISE AND FALL ASSEMBLY

Ref No	Description	No Off
1.	Trunnion bracket	1
2.	Rise and fall slide	1
3.	Toothed gear quadrant	1
4.	Rise and fall worm gear	1
5.	Rise and fall shaft bearing housing	1
6.	Pointer assembly	1
7.	Brass washer	1
8.	Rise and fall shaft collar	1
9.	Hand wheel	1
10.	Rise and fall shaft	1
11.	Special washer 25mm O/D x 11mm I/D x 7mm thick	1
12.	Counter sunk hexagon socket screw M10 x 20mm long	1
13.	Rise and fall pivot	1
14.	Pre-load washer Ref EPL28	3
15.	Hexagon socket capscrew M10 x 25mm long	2
16.	Tension pin diameter 6mm x 30mm long	2
17.	Bronze bush 25mm O/D x 20mm I/D x 20mm long	2
18.	Handle	1
19.	Locking handle	1
20.	Plain washer M10	1
21.	'SKF' Thrust bearing ref 51104	1

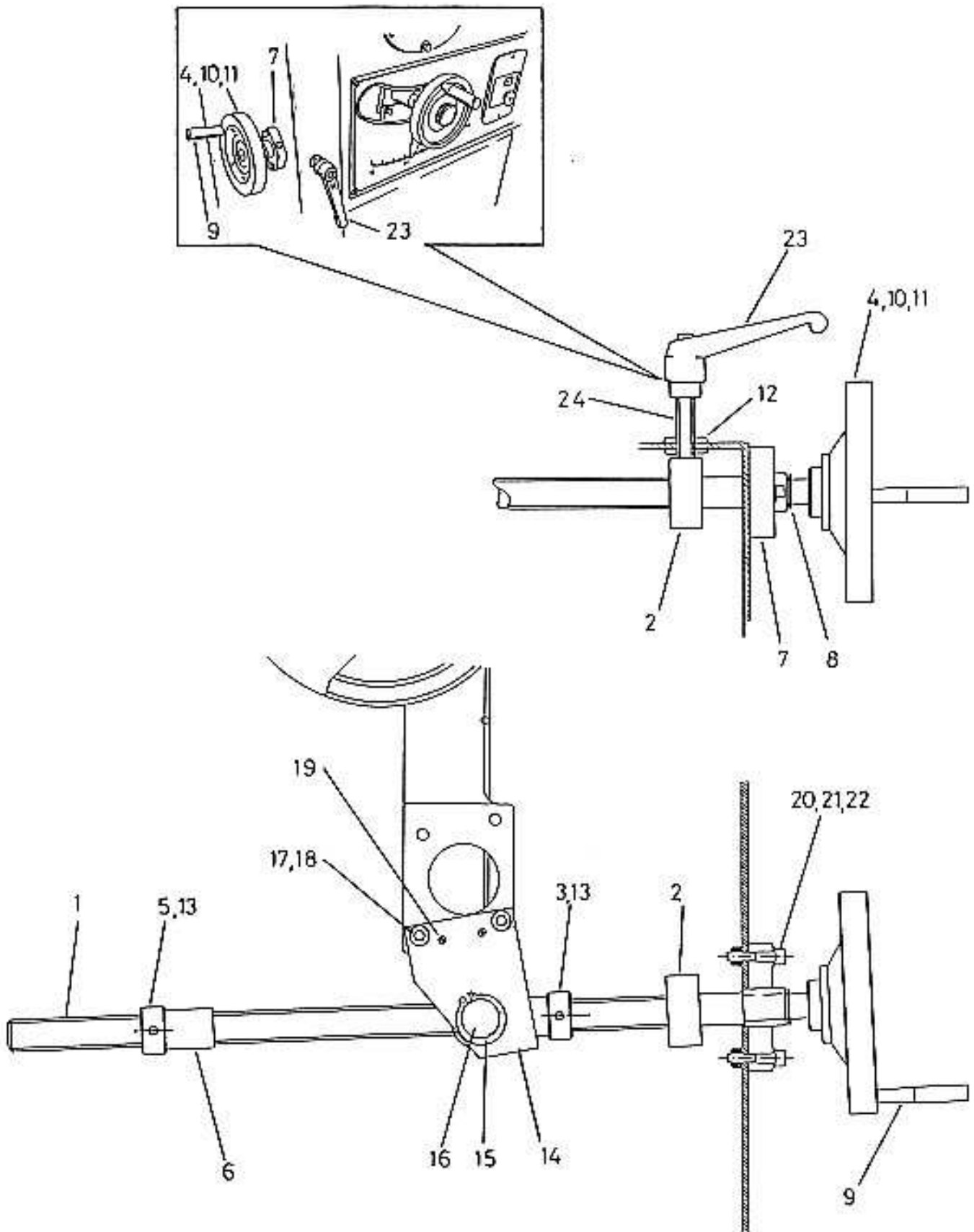


FIG 4 CANTING ADJUSTMENT

4. CANTING ASSEMBLY

Ref No	Description	No Off
1.	Canting screw	1
2.	Canting lock bush	1
3.	Locking nut	1
4.	Taper bush for handwheel	1
5.	Stop nut	1
6.	Stop collar	1
7.	'INA' Flanged bearing ref FLCTE 16	1
8.	External circlip diameter 16mm	1
9.	Handle	1
10.	Handwheel	1
11.	Hexagon socket countersunk screw M10 x 30mm long	1
12.	Rubber grommet 10mm	1
13.	Hexagon socket grub screw M6 x 6mm long	4
14.	Cant nut pivot plate	1
15.	Cant nut	1
16.	External circlip diameter 25mm	1
17.	Hexagon socket cap screw M8 x 20mm long	2
18.	Plain washer M8	2
19.	Tension pin diameter 6mm x 24mm long	2
20.	Hexagon socket capscrew M6 x 30mm long	2
21.	Plain washer M6	2
22.	Nut M6	2
23.	Kipp handle M10	1
24.	Stud M10 x 90mm long	1

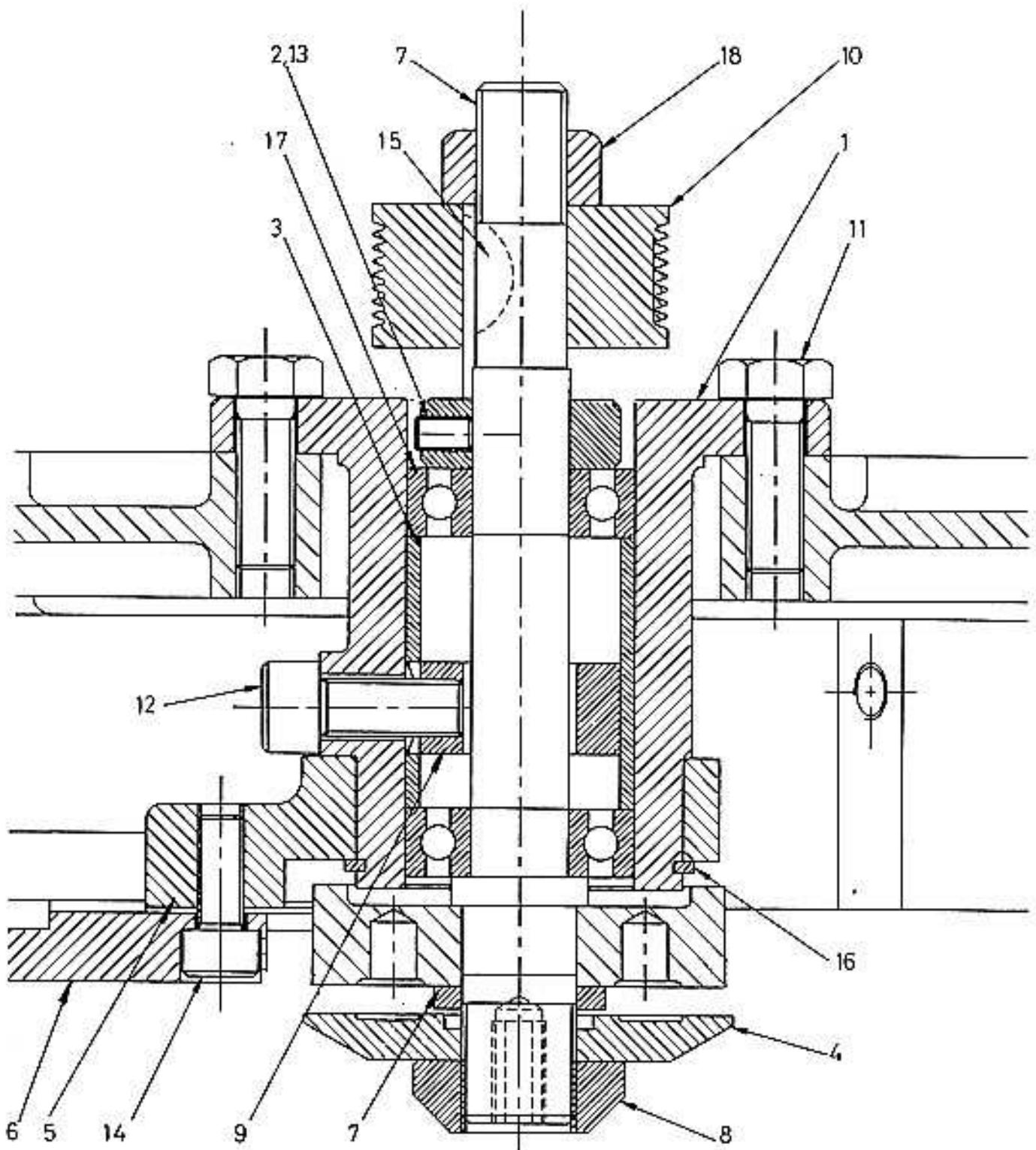


FIG 5 SPINDLE ASSEMBLY

5. SPINDLE ASSEMBLY

Ref No	Description	No Off
1.	Spindle housing	1
2.	Spindle locking collar	1
3.	Spindle distance piece	1
4.	Front saw flange	1
5.	Riving knife pivot bracket	1
6.	Spindle plate assembly	1
7.	Spindle assembly	1
8.	saw spindle nut	1
9.	Spindle trap collar	1
10.	Spindle pulley	1
11.	Hexagon head setscrew M10 x 30mm long	3
12.	Hexagon socket capscrew M10 x 25mm long	1
13.	Hexagon socket grub screw M6 x 10mm long	2
14.	Hexagon socket capscrew M8 x 20mm long	2
15.	Woodruff key	1
16.	External circlip diameter 57mm	1
17.	'RHP' Bearing ref 6203-2RS	2
18.	Nut M16	1

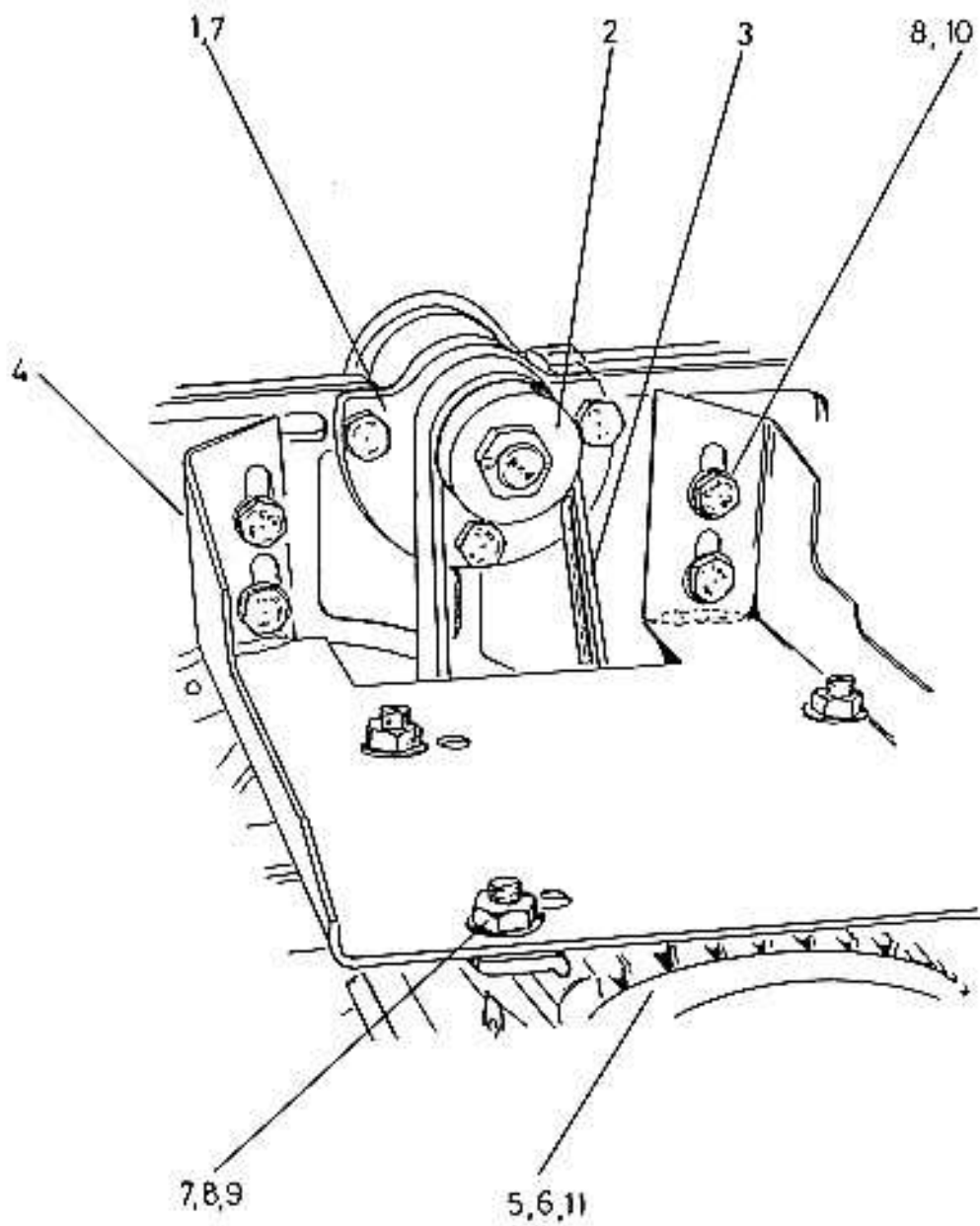


FIG 6 DRIVE MOTOR AND MOUNTING

6. DRIVE MOTOR AND MOUNTING

Ref No	Description	No Off
1.	Spindle housing	1
2.	Spindle pulley	1
3.	Poly 'v' belt Ref 220 J8	1
4.	Motor platform	1
5. *	Drive motor	1
6. *	Motor pulley	1
7.	Hexagon head setscrew M10 x 30mm long	7
8.	Plain washer M10	8
9.	Nut M10	4
10.	Hexagon head setscrew M10 x 25mm long	4
11.	Pulley key 7mm x 8mm x 32mm long (2.2 KW motor)	1
12.	Pulley key 7mm x 8mm x 40mm long (3.7 KW motor)	1

* Specify drive motor size (if in doubt refer to specification plate fixed to drive motor casing)