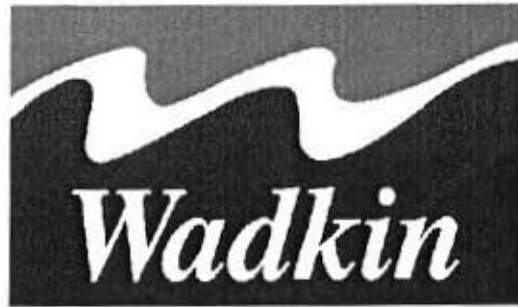


# TD630

## HEAVY DUTY THICKNESSER

INSTRUCTION MANUAL No 3018/2



# TD630

## HEAVY DUTY THICKNESSER

M/C Type:- .....

TEST No:- .....

INSTRUCTION MANUAL

## MANUFACTURERS E.C. DECLARATION OF CONFORMITY

The following machine has undergone "Conformity Assessment" in accordance with:-

Supply of Machinery (Safety) Regulations 1992  
and Amendment No. 2063

### COMPANY

WADKIN LTD  
Green Lane Road  
Leicester  
LE5 4PF

### RESPONSIBLE PERSON

Mr A C Lott (Managing Director)

### MACHINE DESCRIPTION

#### TYPE

HEAVY DUTY THICKNESSER

#### MODEL

TD690

### DIRECTIVES COMPLIED WITH

Supply of Machinery (Safety) Regulations 1992  
Amendment No. 2063 1994  
Draught Proposal CEN/TC 142  
ISO 9001 Part 1

### SIGNED ON BEHALF OF WADKIN PLC



## **PREFACE**

### **IMPORTANT**

It is our policy and that of our suppliers to constantly review the design and capacity of our products. With this in mind we would remind our customers that while the dimensions and performance data contained herein are correct at the time of going to press, it is possible that due to the incorporation of the latest developments to enhance performance, dimensions and suppliers may vary from those illustrated.

This manual is written as a general guide. A typical machine is shown to illustrate the main features. For reason of clarity certain guards, safety devices and machine parts may not be shown on particular illustrations but **MUST** be fixed to the machine, correctly set and working before operating.

**Failure to comply with instructions in this manual may invalidate the guarantee**

## CONTENTS

Section	Page no.
<b>1.0 Extent of Manual</b>	<b>1-1</b>
<b>2.0 SAFETY</b>	<b>2-1</b>
2.1 Health & Safety Statement	2-2
2.2 Safety Instructions	2-4
2.3 Specific Information	2-6
<b>3.0 SPECIFICATIONS</b>	<b>3-1</b>
3.1 Figure 1	3-1
<b>4.0 ASSEMBLY INSTRUCTIONS</b>	<b>4-1</b>
Figure 2	4-1
Figure 3	4-1
4.1 Standard Items Despatched with Machine	4-1
Figure 4 foundation drawing	4-2
Figure 5	4-3
4.2 Slings	4-4
4.3 Foundation	4-4
4.4 Cleaning	4-4
4.5 Electrical	4-5
4.5.1 Fuse Lists	4-5
4.5.2 Wiring Diagrams	4-6
4.6 Dust Extraction Details	4-6
<b>5.0 CONTROLS</b>	<b>5-1</b>
5.1 Safe Practices	5-1
5.1.1 Pre-operation Check	5-1
5.1.2 Checks During Operation	5-1
Figure 13	5-2
Figure 14	5-2
5.2 Start/Stop	5-3
5.3 Brake Motor (Optional)	5-3
5.4 Variable Feed Speed	5-3
5.5 Power Rise & Fall	5-3
5.6 Digital Timber Thicknesser Indicator	5-4
5.7 Table Rollers	5-4
5.8 Rear Pressure Bar Setting	5-5
5.9 Motorised Knife Grinder (Optional)	5-5
Figure 26	5-6
Figure 15	5-6
Figure 16	5-6

Section	Page no
---------	---------

<b>6.0</b>	<b>MAINTENANCE</b>	<b>6-1</b>
6.1	Feed Roller Settings	6-1
6.2	Front Pressure Bar Setting	6-1
6.3	Cutterblock Belt Tension	6-1
	Figure 17	6-2
	Figure 18	6-3
	Figure 19	6-4
	Figure 20	6-5
	Figure 21	6-5
6.4	Feed Chain Removal	6-6
6.5	Variable Drive Belt Removal	6-6
6.6	Table Rise & Fall Belt Replacement	6-6
	Figure 23A	6-7
	Figure 23B	6-7
6.7	Feed Timing Belt Replacement	6-8
6.8	Rise & Fall Chain Tension	6-9
6.9	Cutter Settings	6-9
6.10	General Hints	6-11
6.11	Lubrication	6-12
	Lubrication Chart	6-13
6.12	Instructions for Fitting/Replacing Tresa Knives	6-14
<b>7.0</b>	<b>SPARES</b>	<b>7-1</b>
8.1	Instruction for Ordering Spare Parts	8-1
8.2	Mechanical Spares List	8-2 to 8-25

**1.0 EXTENT OF MANUAL**

www.DaltonsWadkin.com

**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 all of the instruction manual before  
installing, operating or maintaining machine.**

**Wadkin Limited  
Green Lane Road  
LE5 4PF**

**Telephone: 0116 276-9111**

**Fax: 0116 274-2310**

**E-mail: spares@wadkin.com**

This Section covers all aspects of safe operation and safe use of woodworking machinery. It refers to various statutory Health and Safety regulations, and also includes information and advice derived from many years' experience in the building, operation and maintenance of woodworking machinery.

**It is of the utmost importance that the user or employer reads this Section of the document and understands clearly all of the stated requirements concerning safe operation of the equipment.**



## 2.1 Health and Safety

There are a number of statutory regulations which apply to the safe operation of woodworking machinery in the UK. These regulations are listed below, and the user is advised to refer to the relevant parts of these regulations and ensure that the requirements are complied with.

Where the machinery is used outside the UK, then the regulations of that country will apply, and should be complied with.

*Note:*

*The list below relates to the most recent published editions of the regulations including all amendments and supplements.*

Factories Act.

Health and Safety at Work Act.

Electricity Regulations.

Provision and use of Work Equipment Regulations.

Woodworking Machines Regulations.

### 2.1.1 Factories Act

This Act requires that rotating machinery shall be of good mechanical construction and that it shall be **properly maintained and serviced by competent and experienced persons.**

### 2.1.2 Health and Safety at Work Act

This Act imposes obligations to apply similar standards to those of the Factories Act as a minimum requirement, **especially where a machine is installed in a place of work where no suitable legislation applies.**

### 2.1.3 Electricity Regulations

These regulations place general requirements on the installation and maintenance of electrical equipment. Users should be aware of the requirements concerning the availability of lighting and free working space for maintenance personnel, and the importance of personnel being fully competent and trained when working on electrical equipment.

#### 2.1.4 Provision and use of Work Equipment Regulations

Compliance with these regulations is necessary for equipment to be considered to be conforming with the EC declaration of conformity.

The regulations also place obligations on the user (see Section 1.2).

#### 2.1.5 Woodworking Machines Regulations

These regulations place absolute legal requirements on employers and users to ensure **that all fitted guards and safety devices are always used, securely fitted, correctly adjusted and properly maintained.**

The regulations also require that **maintenance be undertaken only by suitably qualified and competent personnel, and that all power supplies are isolated from the machine before any maintenance is undertaken.**

It is also required that **operators (users) receive suitable training and instruction into the possible dangers arising from machine usage and that local working practices are followed.**

#### 2.1.6 Other Documents for Reference

Other documents which refer to woodworking machinery operation and maintenance in the UK include:

Noise at Work Regulations.

Control of Substances Hazardous to Health Regulations.

Code of Practice BS5304 - Safeguard of Machinery.

Code of Practice BS6854 - Safeguard of Woodworking Machines.

Health and Safety Executive note IND(G) 1(L).

## 2.2 Supply of Machinery (Safety) Regulations 1992

A machine manufactured in accordance with the Essential Health and Safety Requirements of the Supply of Machinery (Safety) Regulations 1992, complies with the EC conformity requirements and can thus have the CE mark appended (Harmonised Standard BS EN 860:1997).

These regulations also impose legal requirements on both the employer and the user of the machine with regard to proper usage, user working conditions, risks of injury and many more. These requirements are wide ranging, and in some cases specific to only certain types of machine or process. Some of the more general requirements which apply to woodworking machinery are briefly detailed below.

1 An employer shall ensure that the equipment is constructed/adapted as to be suitable for the purpose that it is used.

2 In selecting the equipment, the employer shall have due regard to the working conditions and the risks to health and safety of persons which exist in the premises in which the equipment is to be used.

3 The employer shall ensure that the equipment is used for the operations for which, and under the conditions for which it is suitable.

4 During Machining:

An employer should ensure that suitable protective equipment, must be worn where necessary, e.g., goggles; ear defenders and dust mask.

The operator should ensure all moving parts of the machine are stationary before setting, cleaning or making any adjustments.

Report immediately to a person in authority any machine malfunction or operator hazard. Do not attempt to repair the machine unless authorised to do so.

Ensure machine is electrically isolated before any maintenance/cleaning work commences.

Other requirements include provision of suitable training of users, provision of suitable documentation (information and instructions), and declarations of any specific risks.

## 2.3 Specific Information

Various sections of this manual detail general safe working practices and specific local practices which should be adopted when using the machine. In addition to this information two hazards, specific to woodworking machinery should be considered in more detail.

### 2.3.1 Noise

Noise levels can vary widely depending upon the machine and the conditions of use.

The Noise at Work Regulations place legal duties on employers to prevent damage to hearing. Noise levels of up to 140dB are considered.

Employers are required to take reasonably practicable measures to reduce noise levels where a person is expected to be exposed to continuous noise in excess of 90dB over a working day. Additionally suitable ear protection must be made available.

Machines producing 'unhealthy noise levels' must be marked with a warning of the need to wear ear protection.

Additionally, it may be necessary to identify particular areas of the workplace 'ear protection zones'.

The noise declaration shall be accompanied by the following BS EN 860: 1997 declaration:

*'The figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of the work force include the characteristics of the work room, the other sources of noise, etc. i.e. the number of machines and other adjacent processes. Also the permissible exposure level can vary from country to country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.'*

### 2.3.2 Dust

Wood dust can be harmful to health through inhalation and also skin contact.

The Control of Substances Hazardous to Health Regulations place legal requirements on employers to prevent exposure of the user to substances hazardous to health or, where prevention is not practicable, to adequately control the exposure. Adequate control should be achieved by measures other than provision of personal protective equipment.

The Regulations require that airborne dust levels should not exceed 5mg/m<sup>3</sup>.

### 3.0 SPECIFICATIONS

#### 3.1 SPECIFICATION



Specification of machine:- TD630

Capacity of machine	633 x 250mm	25 x 9.3/4 in.
Feed speed	6-15m/min	20-50 f/min
HP Cutterblock Motor	5.5Kw	7.5HP
Speed of Cutterblock	4500 rpm	
Speed of Motor - 60 cycle	3000rpm	
Speed of Motor - 60 cycle	3600rpm	
Dia of Cutting Circle	120mm	4.3/4 in
Dia of Feed Rollers	85mm	3.1/4 in
Maximum Stock Removal	10mm	3/8 in
Maximum Stock Length	280mm	11 in
HP of Rise and Fall Motor	.18Kw	1/4HP
Length of Table	1000mm	39 in
Floor Space	1000 x 1310mm	39 x 51 in
Approx. Net Weight	675Kg	1488 lbs
Approx. Gross Weight	860Kg	1896 lbs
Shipping Dimensions	1.42 x 1.12 x 1.48m	55.9 x 44 x 58.26 in

## 4.1 Standard Items Despatched with Machine

Before accepting the machine at its destination check the packages/items against the bill of loading. Confirm that all listed fittings/accessories have been received and carry out a visual inspection of the packages/items for obvious signs of damage.

Report any omissions or damage; note these for any future reference.

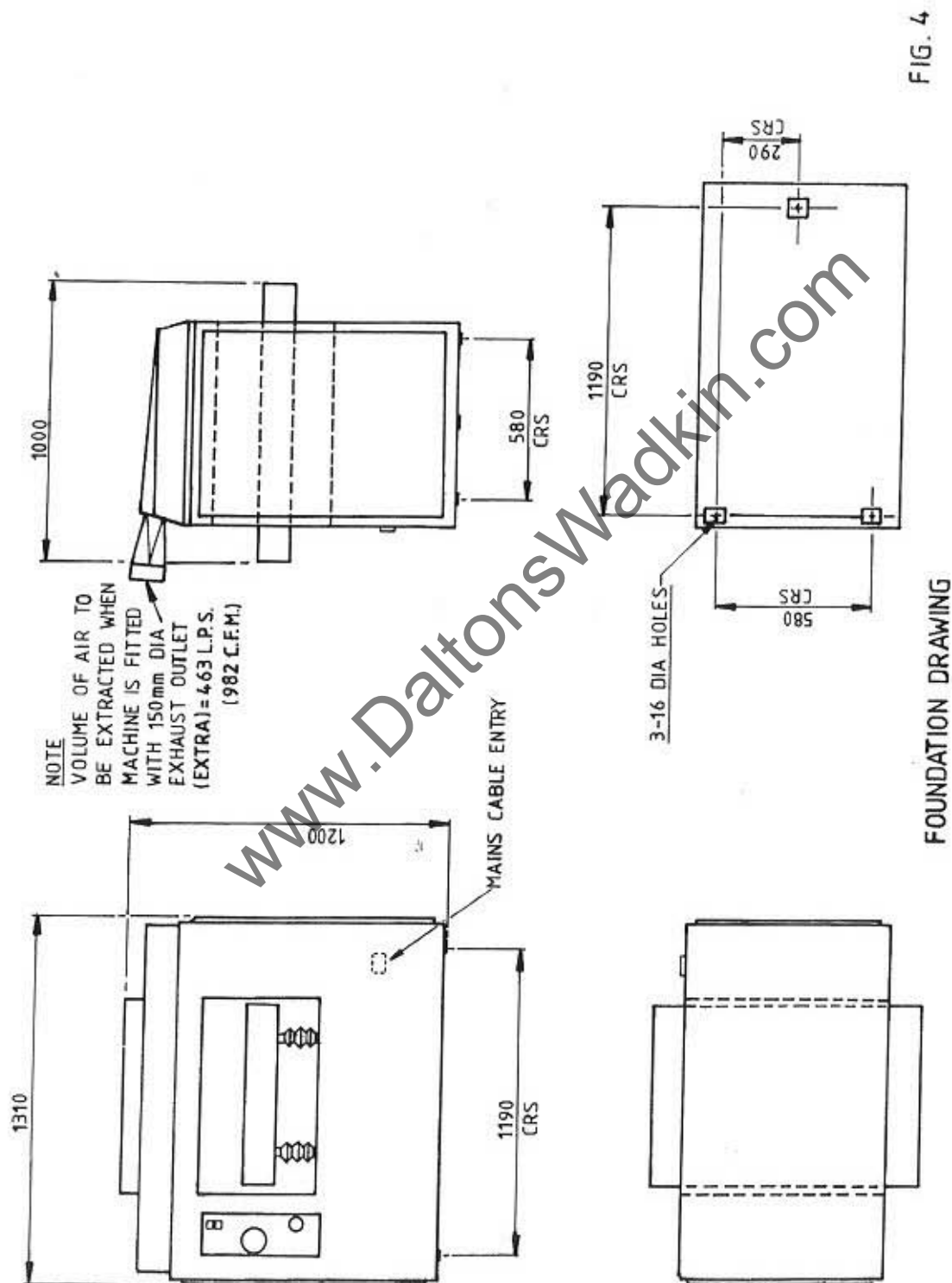
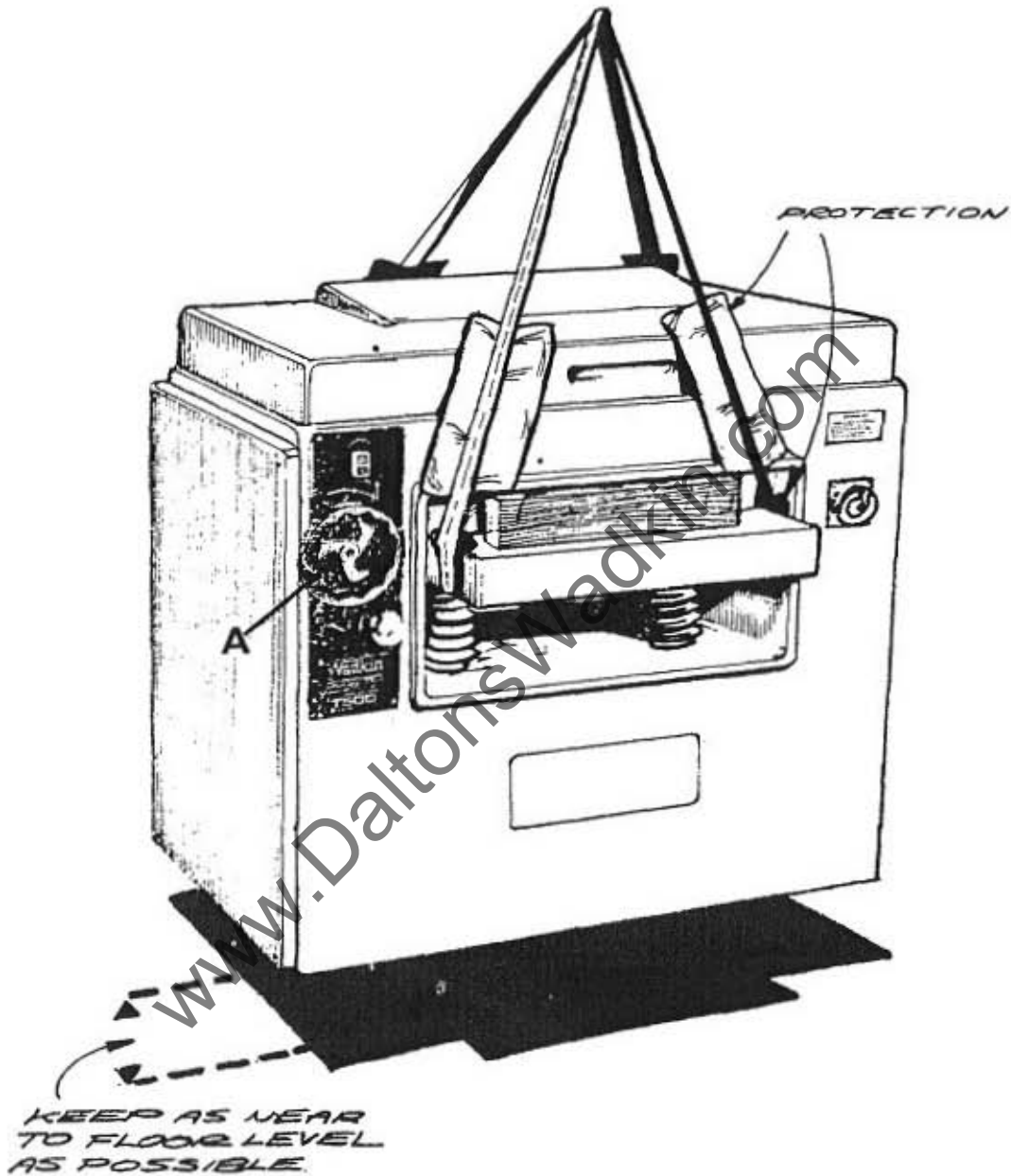


FIG. 4

Figure 5

**ALWAYS USE A SLING WITHIN SAFE WORKING  
LOAD OF MACHINE WEIGHT**



**IMPORTANT  
ENSURE DAMAGE WILL NOT BE CAUSED  
TO MACHINE DURING SLINGING OPERATION**



### Standard Items Despatched with Machine

A set of operational spanners is despatched with the machine.

## 4.2 Slinging

Always use a sling within safe working load of machine weight.

Approximate net weight of machine - 675 KG (1488 lbs)

Approximate gross weight of machine - 860 KG (1896 lbs)

a) Carefully position sling under both sides of table as shown in FIG.5, ensuring damage will not be caused to machine or sling during slinging operation.

NOTE: Use only rope slings not chains

b) Slowly lift machine and ensure slings are not slipping and machine is not tilting.

**IMPORTANT: DO NOT WALK OR STAND UNDER MACHINE DURING SLINGING OPERATION.**

NOTE: If machine is to be moved at a later date, raise table by handwheel until table hits stops in top position, then proceed as above.

## 4.3 Foundation

The machine should be so placed that the traffic of men and materials to and from it fits smoothly into the general scheme of traffic. It should also not be necessary for the operator to stand in or near an aisle so as to cause a hazard. The minimum clearance on each working side of the machine should be at least 750mm greater than the largest material worked on the machine.

Ensure floor is level, then mark to suit 3 - M12 rawlbolts, refer to foundation plan FIG.4. Drill floor to suit rawlbolts. These bolts are not supplied with the machine, but can be supplied at an additional charge. To obtain access to foundation bolts, remove base side covers.

NOTE: Always replace covers.

### **Warning**

**The machine must be firmly bolted down before connecting the electrical supply and any other services.**

## 4.4 Cleaning

Remove protective coating from bright parts by applying a cloth soaked in paraffin or other solvents.



## 4.5 Electrical

### 4.5.1 Wiring Connections

The motor and control gear have been wired in before despatch, all that is required is to connect the power supply to the starter or isolating switch when fitted.

#### **Warning**

**A competent and experienced electrician must make connection of the electrical supply.**

Points to note when connecting power supply: -

- a) Check the voltage, phase and frequency correspond to those on the motor plate.
- b) It is important that the correct cable is used to give the correct voltage to the starters, as running on low voltage will damage the motors.
- c) Connect the line leads to the appropriate terminals. See wiring diagrams. (Refer to 4.5.2)
- d) Check all connections are sound.
- e) Check rotation of all motors for the correct direction. If these are incorrect, reverse any two of the incoming mains leads connections.

### 4.5.2 Wiring Diagrams

Wiring diagrams specific to the machine supplied are included in the main machine cabinet to aid installation.

## 4.6 Dust Extraction Details

The extraction outlet is situated on top hood at the rear of the machine. The outlet size is a 150mm dia exhaust outlet and should be connected to a flexible extraction hose from the main plant. The volume of air to be extracted is 463 LPS (982 CFM) with a velocity of 26 MPS (5,000 ft per min).

*Note:*

*Refer also to Section 1 for information on general statutory requirements when operating woodworking machinery.*

## **5.1 Safe Practices**

Safe and proper working practices must be followed when setting-up and operating the machine. Adequate advice and information are readily available in the form of local working practices, notices, warnings and the information contained in this manual. Other useful information is available from the HSE in their Woodworking Information Sheets (WIS).

**IT IS THE OPERATOR'S RESPONSIBILITY TO USE THE MACHINE FOLLOWING THE PROCEDURES LAID DOWN AND ONLY FOR THE PURPOSES FOR WHICH IT WAS DESIGNED.**

### **5.1.1 Pre-operation Checks**

All guards are fitted securely and properly adjusted to suit their purpose.

Dust extraction equipment is working correctly.

Machine controls are functioning correctly.

Adequate working space is provided and lighting is available.

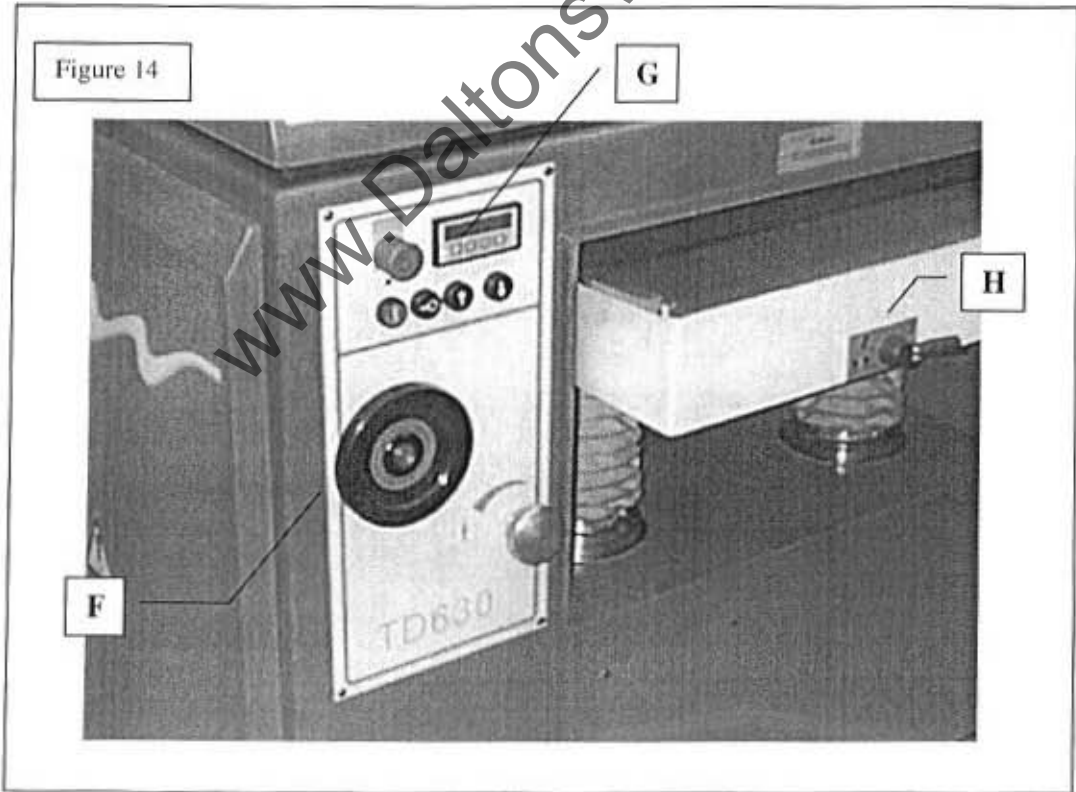
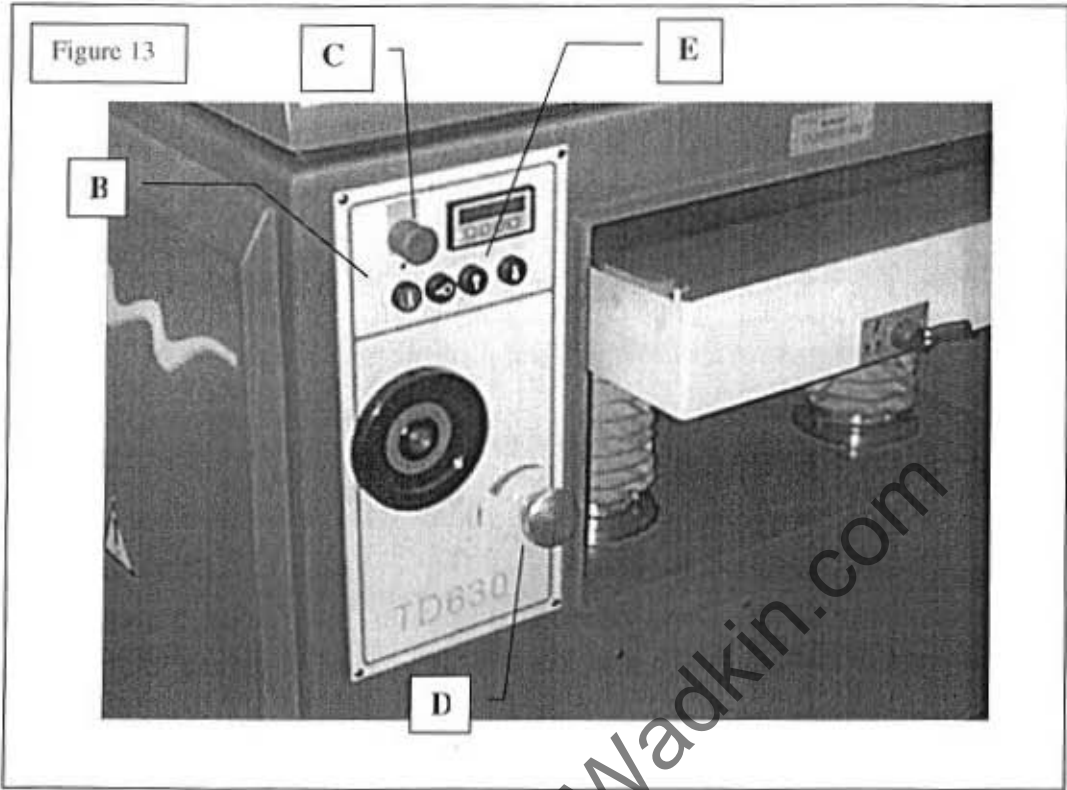
### **5.1.2 Checks During Operation**

Proper protective equipment is available and employed where necessary and/or recommended (goggles, ear defenders, face mask, etc).

Area around the machine is kept clean and free of refuse

Any machine malfunction is recorded and reported to a person in authority

Machine is made stationary and electrically isolated before any cleaning work of work area or ANY adjustments are made to the machine or any ancillary equipment



**Before using the machine, operators should familiarise themselves with the machine controls.**

## **5.2 Start /Stop**

Before starting machine ensure cutter blades are locked in place and all guards are closed or in position.

When an isolator, which is situated at rear of machine, is fitted (CE standard), proceeds as follows: -

To start, turn isolator to 'I', then press green button 'B' (Fig13) on left-hand panel to start cutter. To stop, press the red button 'C'. To isolate machine, turn isolator to 'O' position.

## **5.3 Brake Motor**

Brake motor (CE standard) comes into effect when stop button is pressed the cutter-block cannot then be rotated. To release brake, turn switch situated on front right of machine, clockwise.

## **5.4 Variable Feed Speed Control**

Feed roller drive is by infinitely variable pulley and belt from the motor. To alter feed speed, proceed as follows:

Turn variable feed speed hand-wheel 'D' clockwise to decrease speed, anti-clockwise to increase speed. (Fig13)

a) When altering feed speed, motor must be turning.

b) To prevent undue wear on variable pulley, turn hand-wheel throughout complete range once weekly.

## **5.5 Power Rise and Fall**

Power table rise or fall drive is transmitted from a gearbox by a timing belt to table rise and fall screws, which is in turn connected by chain to the three remaining rise and fall screws and manual rise and fall handwheel.

To power raise or lower table, proceed as follows:

a) Ensure top cover and side covers are secured in position.

b) Press power rise and fall switch 'E' (Fig13) in direction required to either raise or lower the table. For micro table adjustment when required, turn handwheel 'F'.

NOTE: If so desired handwheel 'F' may be used to rise and fall the table through its full travel.

- c) Check digital thickness counter 'G' (Fig14) to ensure correct table position for timber to be planed.

## 5.6 Digital Timber Thickness Indicator

A digital timber thickness indicator 'G' is conveniently situated on the control plate. (Fig14) The scale is operated by vertical movement of the table.

## 5.7 Table Rollers

The anti-friction rollers or bed rollers, revolve on sealed for life bearings which require no lubrications. The height of these rollers may be adjusted by means of hand lever 'H' on the front of the table (Fig14)

A clockwise rotation would raise the rollers to a maximum of 1.5m above the table surface.

An anti-clockwise rotation would lower to a minimum of 0.05m above table surface.

The maximum height position is for use with wet, twisted or roughly sawn materials, where feeding is a most important feature. In all cases the lowest position consistent with good and regular feed should be used to give the best possible results.

Should the rollers be removed for any reason, care must be taken to replace them exactly as before, otherwise the settings will be disturbed.

It must be emphasised that a really good surface finish from a thicknessing machine is only possible when the face of the timber resting on the machine table is flat and has a reasonable finish. Whenever practicable, this face should be pre-machined on a surfacer to remove twist and other irregularities.

## 5.8 Rear Pressure Bar Settings

Rear pressure bar is adjustable by means of hand lever 'J' (Fig15) on the front right hand side of machine. Some slight advantage in finish or feeding may on occasion be obtained by raising or lowering pressure bar.

## 5.9 Motorised Knife Grinder (Currently not available)

Figure 15



## 6.0 MAINTENANCE

### 6.0 Maintenance

All adjustments and alignments following have been carefully set and checked and the complete machine thoroughly tested before despatch from the works.

During the first few weeks of operation and at regular intervals afterwards, certain items such as belt tension and chain tension should be checked carefully. When adjustments are necessary, proceed in accordance with the relative instructions given.

#### 6.1 Feed Roller Settings

These are pre-set at works. Should the replacement of feed rollers be fitted at any time, the settings should be carefully checked with FIG.17. Some slight advantage in finish or feeding may on occasions be obtained by increasing or decreasing the tension on the feed roller springs.

#### 6.2 Front Pressure Bar Settings

These are pre-set at works. Should the replacement of front pressure bars be fitted at any time, the settings should be carefully checked with FIG.17. Some slight advantage in finish or feeding may on occasions be obtained by increasing or decreasing the tension on the screw and nut FIG. 18.

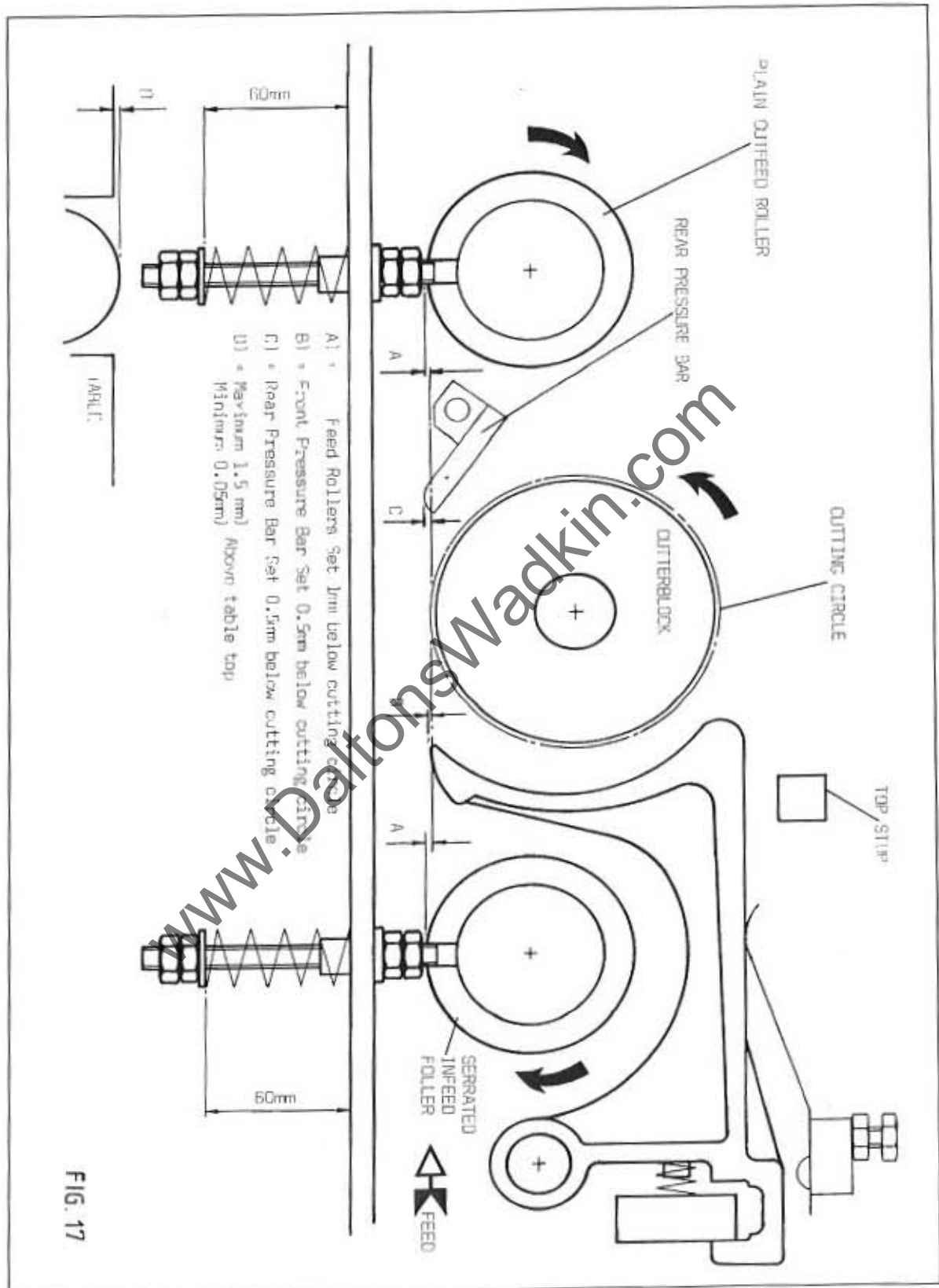
NOTE: The springs should never be compressed to a point where feed rollers and pressure bars cannot lift sufficient to allow the maximum cut to be taken.

#### 6.3 Cutterblock Belt Tension

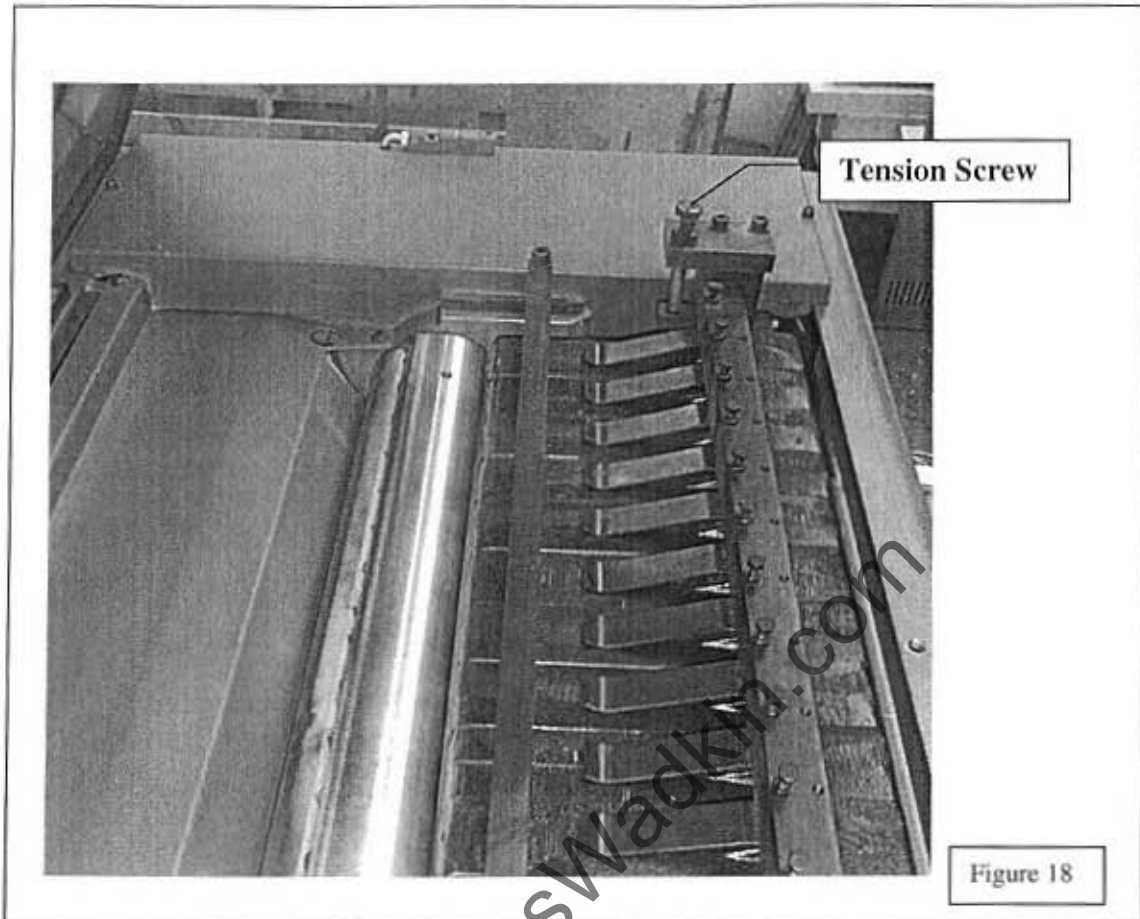
The cutterblock is driven by 3 vee belts from the motor to tension belts, proceed as follows:-

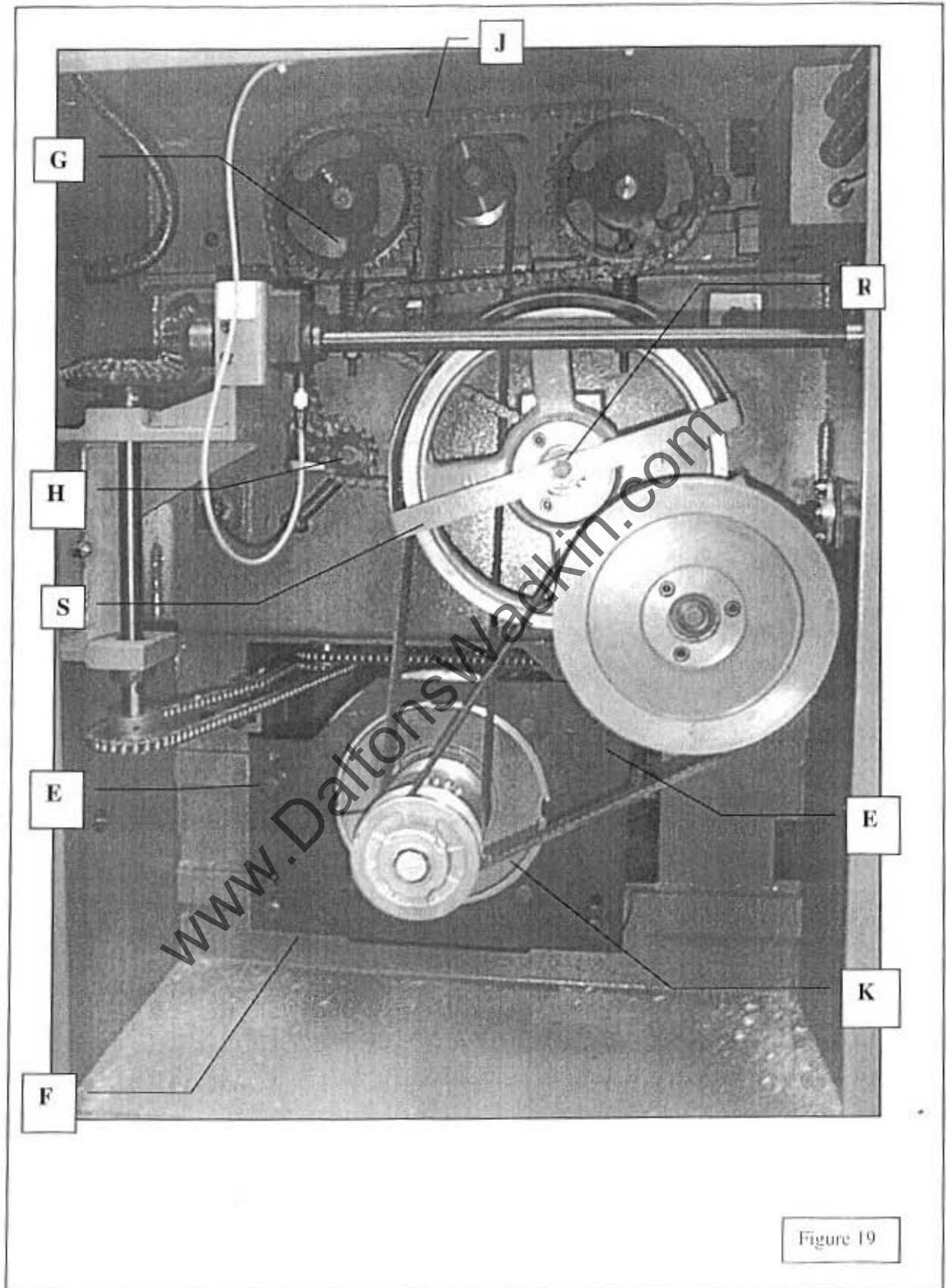
- a) Isolate machine electrically.
- b) Remove left side base cover.
- c) Loosen 4 - M12 hexagon bolts 'E' FIG.19.
- d) Lower motor mounting plate 'F' until weight of motor tensions belt.
- e) Retighten bolts 'E' then replace side cover.

NOTE: Check tension of belt 2 weeks after receipt of machine and check at monthly intervals after that.









## 6.4 Feed Chain Removal

Feed roller drive is transmitted from main motor through a variable pulley and belt, to feed drive chain 'G' FIG.19. Chain is automatically tensioned by chain tension sprocket 'H'.

To change chain, proceed as follows and refer to diagram inside left side of base:

- a) Isolate machine electrically.
- b) Remove left side base cover.
- c) Extract split link 'J' and remove chain.
- d) Reverse above procedure to refit chain then replace side cover.

## 6.5 Variable Drive Belt Removal

To change variable drive belt, proceed as follows:

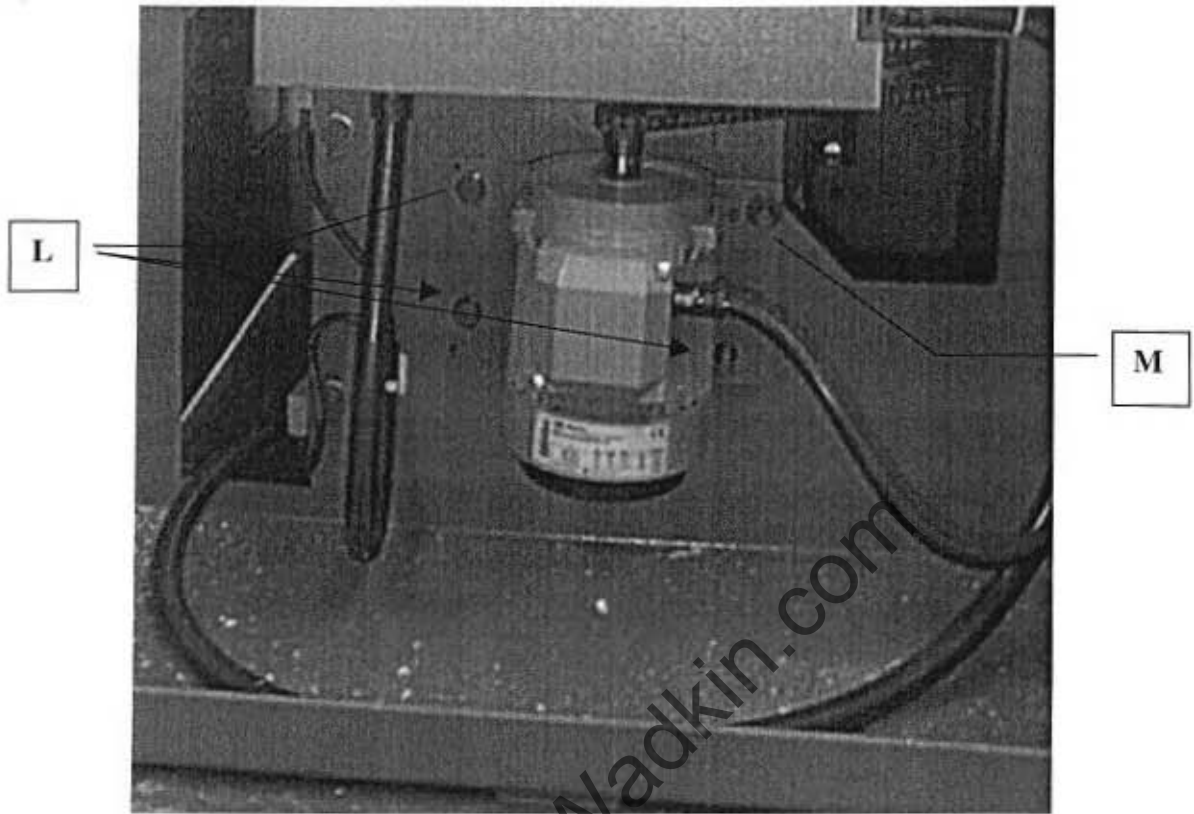
- a) Isolate machine electrically.
- b) Remove left side base cover.
- c) Turn variable feed speed handwheel 'D' FIG.13 anti-clockwise to maximum position.
- d) Remove variable drive belt 'K' FIG.19.
- e) Reverse above procedure to refit belt then replace side cover.

## 6.6 Table Rise and Chain Tension

Should excessive free play be felt in the rise and fall chain this should be adjusted as follows: -

- a) Isolate machine electrically.
- b) Remove left hand side cover.
- c) Loosen locking screws 'L' FIG.20, to release tension on motor bracket.
- d) Tighten tensioning screw 'M' FIG.20.
- e) Tighten locking screws 'L'
- f.) Replace all covers

Figure 20



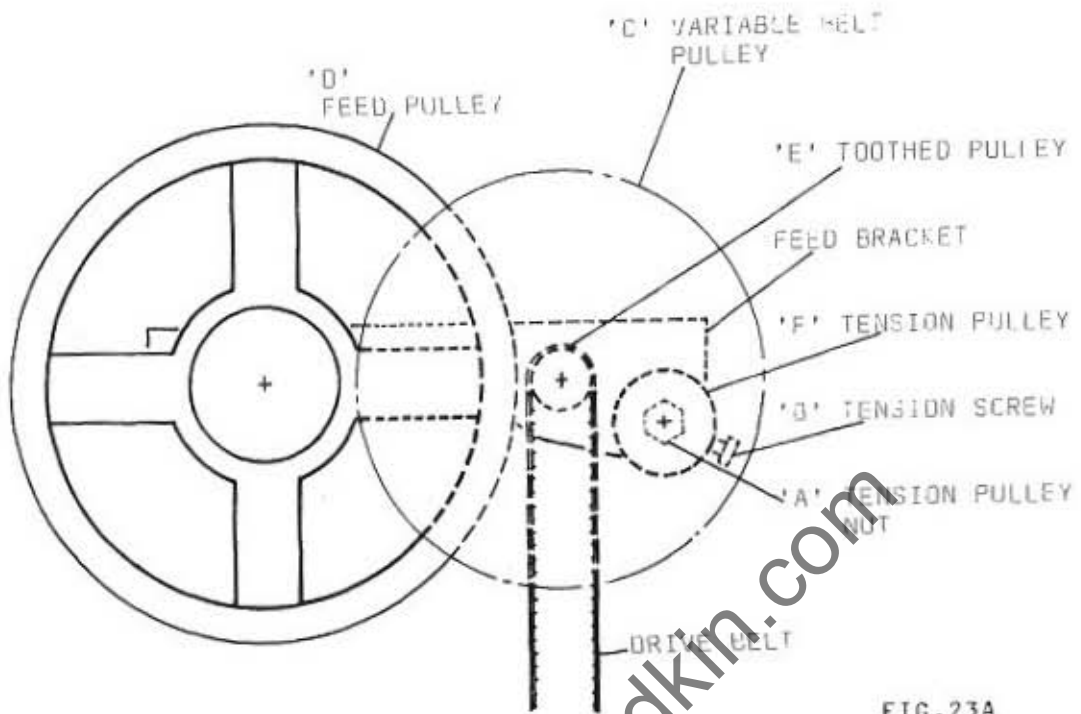


FIG. 23A

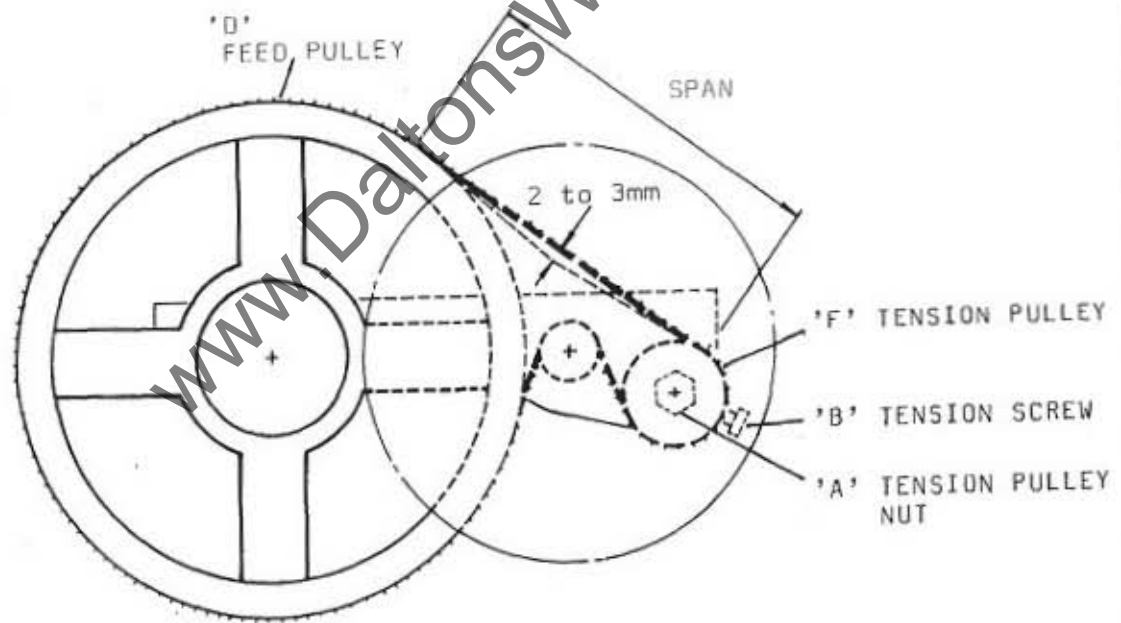


FIG. 23B

## 6.6 Table Rise and Fall Belt Replacement (continued)

- e) Position new belt over pulley 'P' on rise and fall screw FIG.21.
- f) Turn belt through 45 degrees and locate over pulley 'N' on rise and fall shaft.
- g) Adjust motor bracket to tension belt. Correct tension will have been achieved when belt can be deflected to 8mm in centre of span.
- h) Relock M10 aerotight nuts.
- i) Replace left hand side cover.

## 6.7 Replacement of Feed Timing Belt

- a) Isolate machine electrically.
- b) Remove left side base cover.
- c) Remove variable speed belt (refer to 7.5).
- d) Remove hexagon bolt 'R' on feed pulley and remove feed belt guard 'S' FIG.19.
- e) Loosen belt tension pulley nut 'A' and tension screw 'B' FIG.23A.
- f) To remove old timing belt, position belt between variable pulley 'C' and feed pulley 'D' at the same time turning variable pulley 'C' until belt is removed.

NOTE: New belt should never be forced or prised over the pulley flange. To ensure smooth operation and prevent premature failure, do not sharply bend or crease the belt.

- g) Position new belt between variable pulley 'C' and feed pulley 'D' at the same time turning pulley 'D' until teeth of belt located around teeth of pulley 'E' ensuring that the remainder of belt is hanging vertically FIG. 23A.
- h) Refer to FIG.23B. Position belt around tension pulley 'F' then turn belt so as to reverse teeth from inside of belt to outside. Position belt around feed pulley 'D'.
- i) Tighten tension screw 'B' to tension belt.

**IMPORTANT:** Belt must be tensioned very tight. This will have been achieved when belt can be deflected 2 to 3mm in centre of span FIG.23B.

## 6.7 Replacement of Feed Timing Belt (continued)

- j) Lock belt tension nut 'A'.
- k) Replace guard, variable speed belt guard and left side base cover.

## 6.8 Rise and Fall Chain Tension

- a) Raise thickener table to top position.
- b) Isolate machine electrically.
- c) Loosen M12 aerotight nut 'T' FIG.24 and turn M8 grubscrew.
- d) Retighten M12 aerotight nut 'T'.

## 6.9 Cutting Setting

Turn the isolator at the rear of the machine to the 'OFF' position. The knife is held in the cutterblock by a wedge into which is fitted spring loaded balls. These balls hold the knife finger tight whilst the 9 - M12 hexagon head screws are loose. This allows both hands to be free to adjust the blade and ensure that it will not slip back during setting or move whilst the wedge screws are being tightened up. Should any other method of cutter setting be employed, the amount of cutter projection must correspond exactly with that given by the setting gauge supplied and failure to observe this instruction will result in bad feeding and poor finish.

To remove the knives and reset with the "WADKIN" knife setting gauge, proceed as follows:

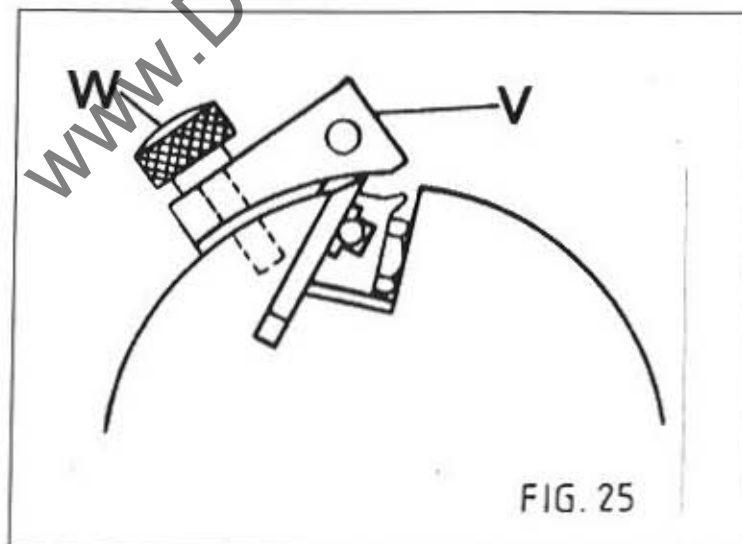
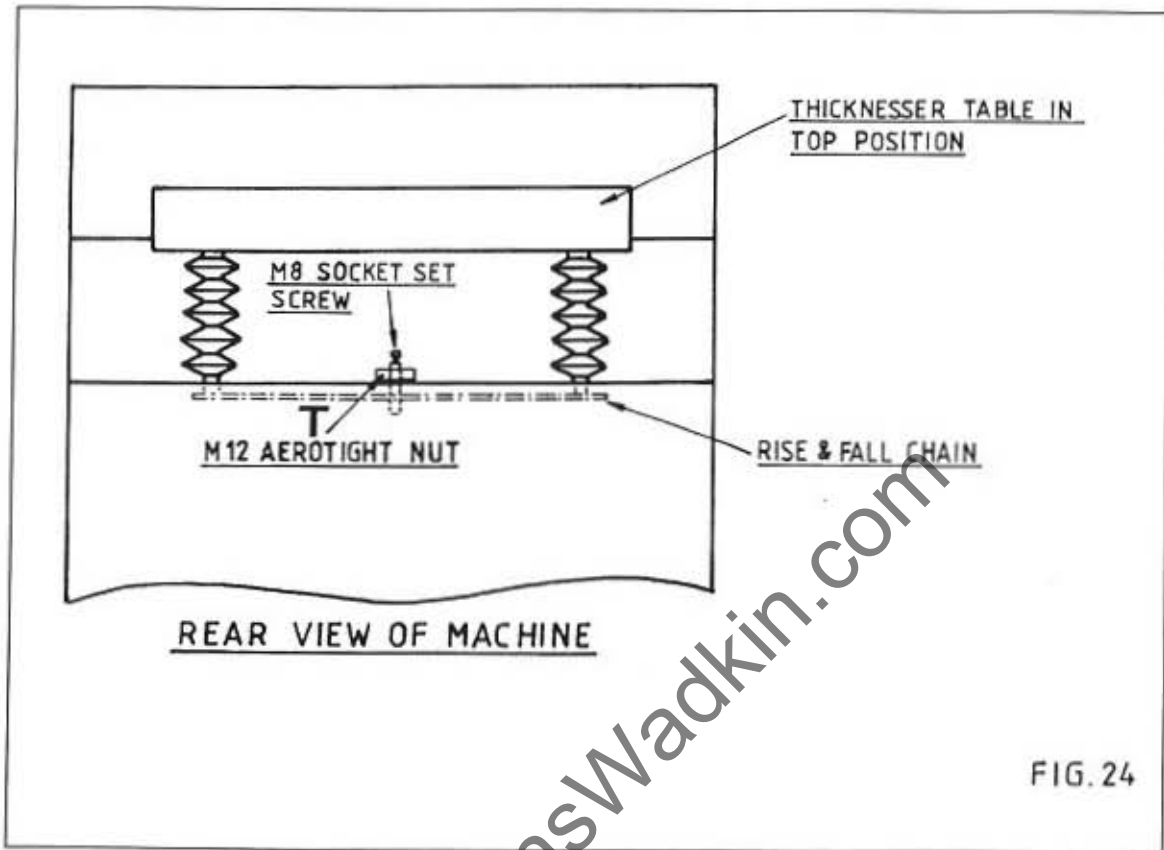
- a) Turn the cutterblock to approximately the position shown in FIG.25 and loosen the 9 - M12 hexagon head screws, carefully remove knife from cutterblock.

NOTE: When grinding it is most important that knives are ground dead straight and balanced in pairs or sets.

An efficient re-grinding service is available, charges are moderate and service prompt. To avail yourself with this service, return knives to Wadkin Ltd, Green Lane Road, Leicester, England. LE5 4PF.

- b) To reset the knives, the cutterblock should be in the approximate position shown in FIG.25. Place the knife in between wedge and cutterblock with the blade drawn forward slightly.
- c) Carefully secure the knife setting device 'V' FIG.25 (which when not in use is secured

to the left side base top cover) to the cutterblock with the two knurled locking screws 'W' as shown in FIG.25.





## 6.9 Cutter Setting (continued)

- d) Whilst turning these locking screws 'W' FIG.25, knife will be lowered to correct setting which is reached when knurled screws are locked in position and knife just touches knife setting device.
- e) When the knife is correctly set, tighten the 8 - M12 hexagon head screws, remove knife setting device then securely lock the 8 - M12 hexagon head screws.
- f) Rotate cutterblock until the next knife is in position and repeat the procedure until all the knives have been set.
- g) When changing knives it is advisable to check that all the locking screws are adequately lubricated and quite free. Periodically examine for damage or cracks. Any doubtful screws should be replaced and all screws well lubricated with 'Molyslip' or similar oil, before replacing.

## 6.10 General Hints

- a) When thicknessing long lengths of timber, always support before and after the machine table, otherwise a step will appear on either or both ends.
  - b) When a smooth finish is required, use the slow speed. For roughing when the finish is not important, use the fast feed speed.
  - c) For the best results, always feed the timber to cut with the grain.
  - d) Should the timber stick when thicknessing, the probable causes are as follows:
    - i) Too much friction on table.
    - ii) The spring pressure is too great on the rear pressure bar
    - iii) Not enough pressure on either front or rear feed rollers.
- NOTE: See feed roller, table roller and pressure bar setting.
- iv) Machine table sticky due to timber resin (clean table).
  - v) Wet timber being machined (use dry timber).

**IMPORTANT:** Always isolate machine electrically before adjustment, maintenance or cleaning.

## 6.11 Lubrication

The majority of machine working parts are designed to require no lubrication. All that is required is to periodically lightly oil the feed roller chain, situated inside left side base cover and loosen the shrouds and oil the four rise and fall screws.

Approved lubricants see page 6-13.

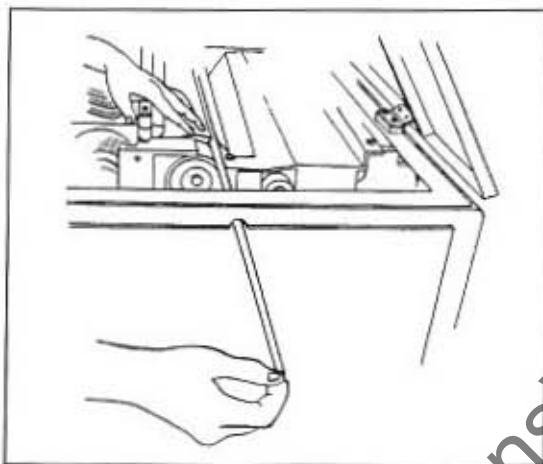
www.DaltonsWadkin.com

Application	A P P R O V E D L U B R I C A N T S					
	Castrol	BP	Shell	Esso	Texaco/Caltex	Wadkin
Worm Boxes	ZN220	Energol CS320	Vitrea 320	Spartan LP220	Regal Oil 320	L2
	Magna 68	Energol HP68	Vitrea 68	Muray	Ursa Oil PG8	L4
Pneumatic Lubricators	Hyspin AWS32	Energol HL32	Tellus 32	Nuto H32	Rando Oil HD32	
Grease	Spheerol AP3	Energrease L53	Alvania R3	Esso Multi-purpose grease	Regal Starfalk Premium 3	L6
Brake Cables	Brake Cable grease	Energrease L21M	Alvania R3			

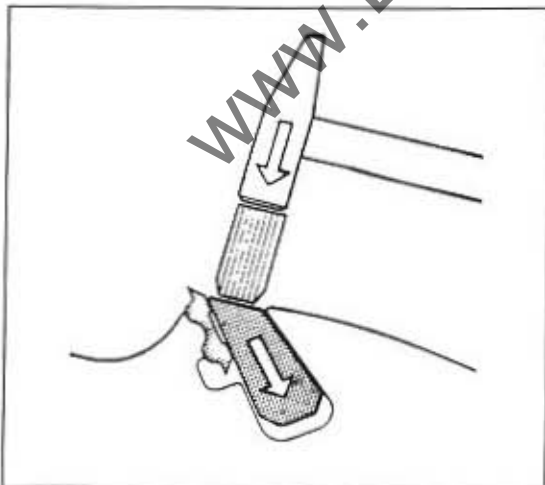
## 6.12 Instructions for Fitting/Replacing Tersa Knives

- 1) Ensure machine has been stopped and cutterblock is at rest.
- 2) Turn the isolator at the rear of the machine to the 'OFF' position.
- 3) Use an allen key to release a spring-loaded capscrew at the front of the machine near the handle. This will allow the lid to be raised. Open the lid until the lid support 'clicks' into position.

To release support the lid must be raised slightly and a release lever (located half way up the support) pulled forward.



- 4) If a knife is already fitted use a soft wood driver and a mallet to tap the securing wedge downwards along its length.



Slide knife out through extraction hole in side of frame

Note: Extreme care should be taken when handling knives

- 5) Insert new knife or turn existing knife around to use the second cutting edge. Ensure knife does not project outside length of cutterblock.
- 6) Turn cutterblock and repeat removal/insertion procedure on all knives. A new knife protrudes approximately 1mm above cutterblock.
- 7) Close and fasten lid. Turn isolator to the 'ON' position and start machine. The centrifugal force on the wedges tighten them onto the knives.
- 8) Stop and isolate machine after approximately 15 secs. When the cutterblock has come to rest check all wedges are tight. If any are loose, remove knife and clean wedge groove using compressed air jet to remove any dirt, wood chips etc, that may be preventing wedge tightening. Replace knife. Repeat steps (6) and (7) until all knives are secure. Ensure lid is locked down before returning to full use.

www.DaltonsWadkin.com

## 8.0 SPARES

### 8.1 Instructions When Ordering Spare/Replacement Parts

The undermentioned information should be given with all orders requesting spare/replacement parts

- a) Machine type.
- b) Machine serial number.
- c) Part number of required parts, as stated in the instruction manual
- d) If no manual available, as full a description as possible of the required part, including location within the machine.
- e) Order number and full company name and address.
- f) Company account number, with Wadkin, if known.
- g) All telephone orders must be followed by an official order, clearly marked "Confirmation Order".

**NOTE:** The company operate a 'Minimum Order Charge' on all spare/replacement part orders.

### 8.2 Mechanical Spares List

#### Index

Base Assembly	Page	8-2	8-3
Table Assembly	Page	8-4	8-5
Feed Roller Assembly	Page	8-6	8-7
Cutterblock	Page	8-8	8-9
Front Pressure Bar and			
Kick Back Finger Assembly	Page	8-10	8-11
Rear Pressure Bar Assembly	Page	8-12	8-13
Feed Assembly	Page	8-14	8-15
Rise and Fall Assembly	Page	8-16	8-17
Rise and Fall Assembly	Page	8-18	8-19
Main Motor Assembly	Page	8-20	8-21
Grinder Assembly	Page	8-22	8-23
Soundproofing Standard Machine	Page	8-24	8-25
Soundproofing Grinder	Page	8-26	8-27

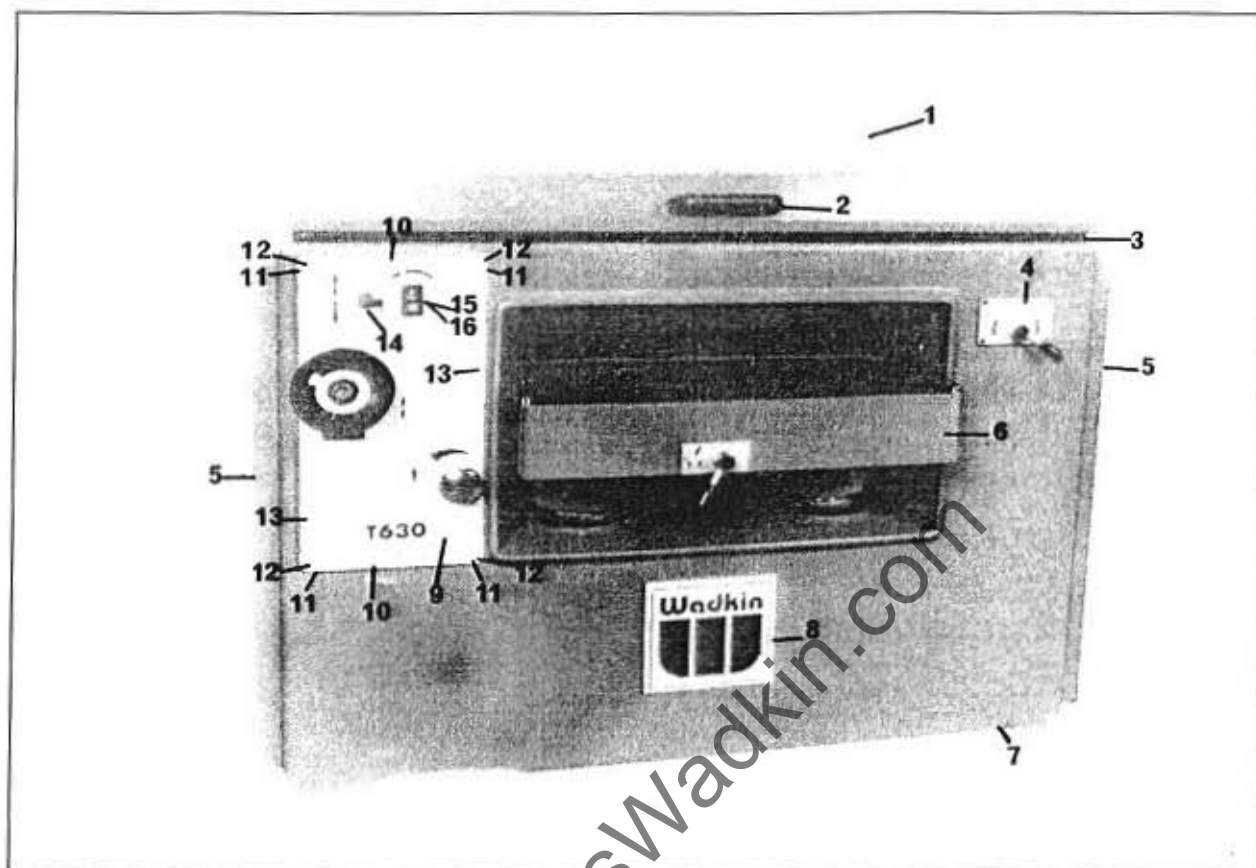
**ASSEMBLY: BASE**

FIG ITEM	PART NO.*	UNITS PER ASSEMBLY	DESCRIPTION
1	T6-107	1	Top Cover - Standard
	T6-101	1	Top Cover - Grinder
2	K51-27-200	1	Handle
3	K51-66-108	1	Edging Strip
4	T6-201	1	Control Plate
5	T5-262	2	Side Covers
6	T6-117	1	Table
7	T6-222	1	Base
8	QAJ-393	1	Wadkin Nameplate
9	T6-235	1	Control Plate
10	T6-111	2	Extrusions
11	BEL-51	4	Corner Mouldings
12	BEL-52	4	Corner Mouldings Caps
13	T6-112	2	Extrusions
14	K51-17-245	1	TQ-3-62355GB/E Switch
15	K51-17-300	1	ZB2-BL9434 Stop/Start Button
16	K51-17-314	1	IN/C & IN/O ZB2-BZ105 Contact Block

\*PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES

-ITEM NOT ILLUSTRATED

BASE





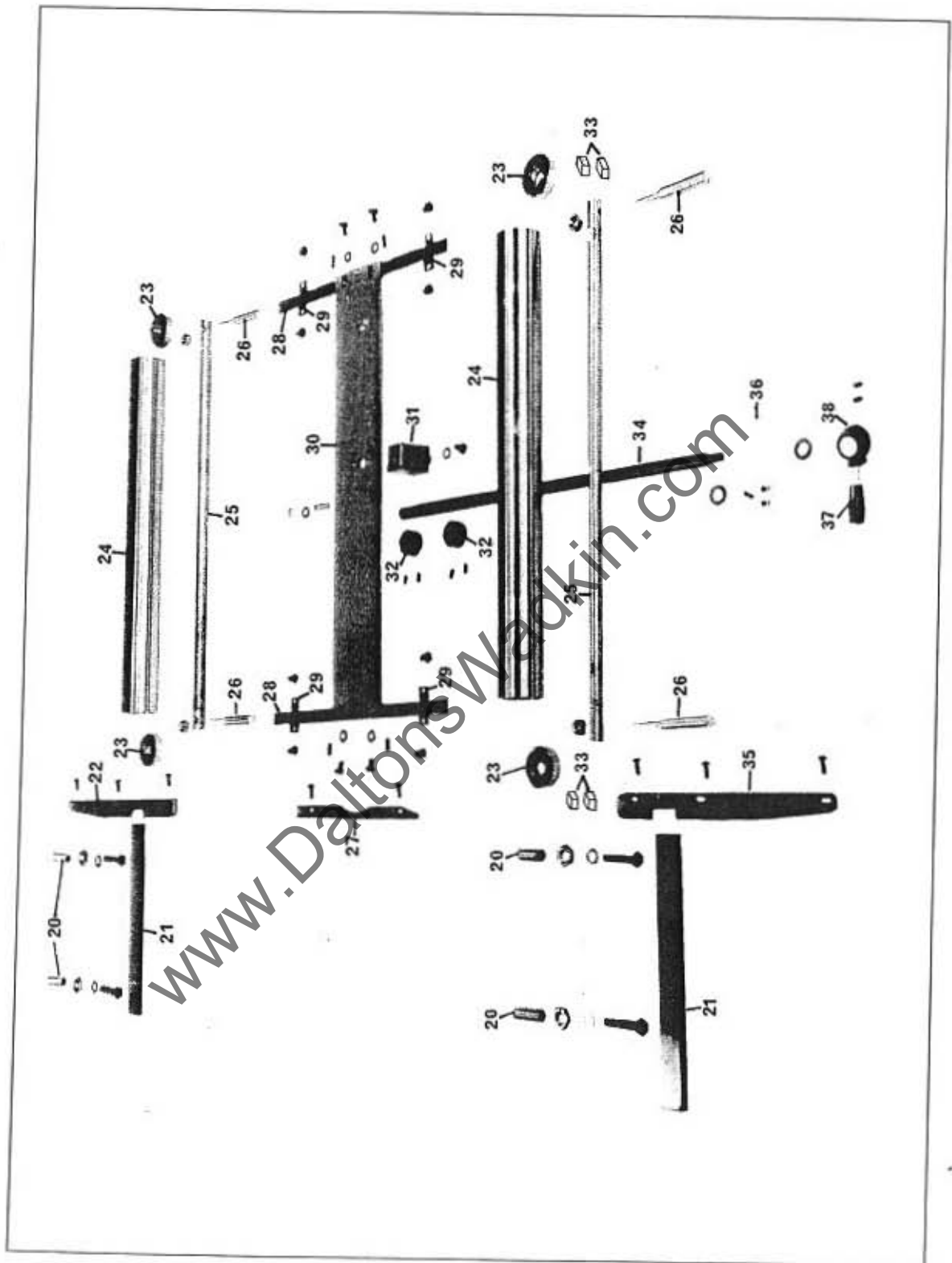
**ASSEMBLY: TABLE**

FIG ITEM	PART NO.*	UNITS PER ASSEMBLY	DESCRIPTION
20	T5-357	7	Adjusting Screws
21	T5-216	4	Table Guide Gibs
22	T5-244	2	Outfeed Table Fences
23	K06-01-331	4	6304-2RS Bearings
24	T6-17	2	Under Table Rollers
25	T6-118	2	Under Table Roller Shafts
26	T6-121	4	Under Table roller Height Adjusting Screw
27	T5-371	2	Intermediate Table Fences
28	T5-434	2	Under Table Roller Slide Bars
29	T5-500	4	Slide Bar Retaining Plate
30	T6-119	1	Under Table Roller Slide Bar Plate
31	079-1732	1	Cross Slide Nut
32	079-681	2	Stop Collars
33	T6-153	4	Dust Cover for Under Table Rollers
34	T5-436		Under Table Roller Screw
35	T5-367	2	Infeed Table Fences
36	T5-440	1	Control Plate
37	K51-27-195	1	Lever Arm
38	CP3-253	1	Lock Handle

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART &amp; MACHINE NUMBER WHEN ORDERING SPARES

# TABLE



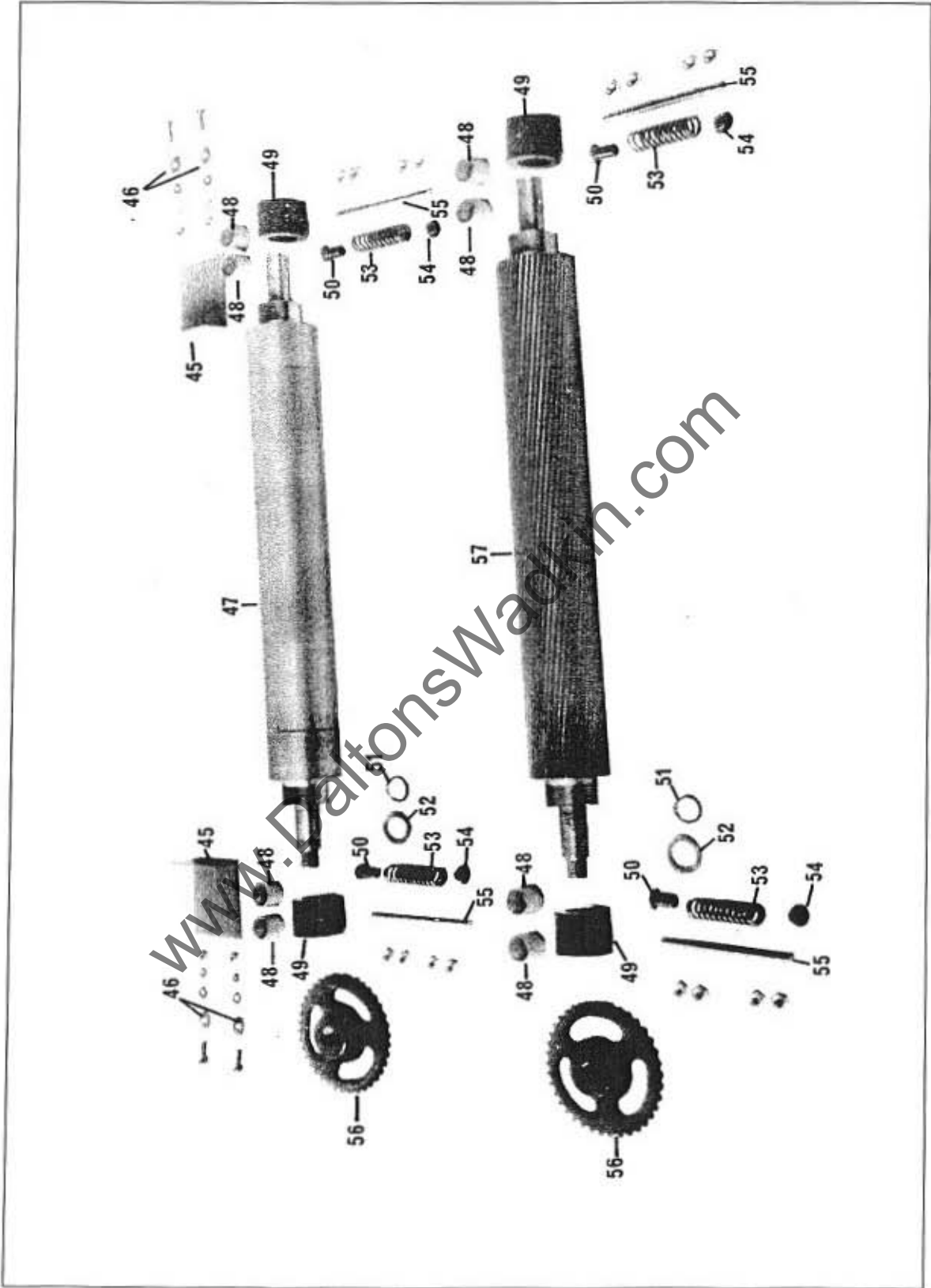
**ASSEMBLY: -FEED ROLLER**

FIG ITEM	PART NO.*	UNITS PER ASSEMBLY	DESCRIPTION
45	T5-257	2	Angle Brackets
46	041-88	4	Washers
47	T6-8	1	Outfeed Roller
48	K51-05-130	8	30 x 35 x 25 Oilite Bushes
49	T5-45	4	Feed Roller Bearing Housings
50	T5-154	4	Bushes for Feed Rollers
51	K51-10-408	2	7100-030 External Circlip
52	T5-83	2	Washers for Feed Rollers
53	K51-73-121	4	ETS 188 Springs
54	069-106	4	Spring Guides
55	T5-54	4	Studs for Feed Rollers
56	T5-9	2	Sprockets
57	T6-9	1	Infeed Roller

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES

FEED ROLLER



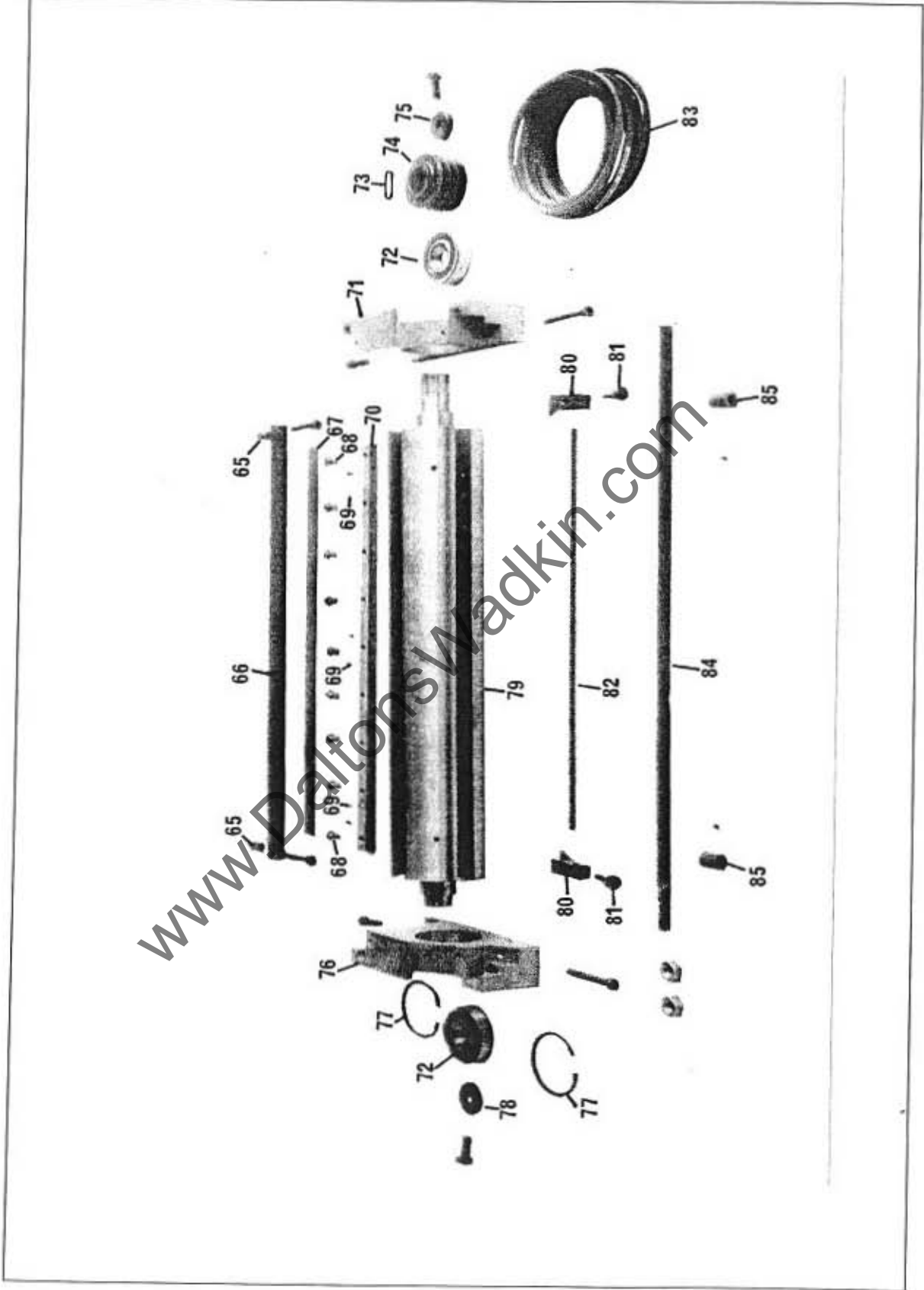
**ASSEMBLY: CUTTERBLOCK**

FIG ITEM	PART NO.*	UNITS PER ASSEMBLY	DESCRIPTION
65	024-74	2	Spacers
66	T6-87	1	Limited Bar
67	BVP-100	4	Knives
68	069-424	36	Screws for Cutterblock Wedges
69	K51-29-122	12	1/4" Dia Ball Catch
70	078-91	4	Cutterblock Wedges
71	T6-264	1	Drive Side Bearing Housing
72	K06-01-354	2	6307-2RS Bearings
73	K51-20-117	1	10 x 8 x 35 Long Parallel Key
74	T5-531	1	Cutterblock Pulley
75	070-193	1	Washer
76	T6-263	1	Non Drive Bearing Housing
77	K51-10-209	2	7000-080 Internal Circlips
78	EM-172	1	Washer
79	T6-97	1	Cutterblock
80	T5-70	2	Knife Setting Device Blocks
81	069-184	2	Knife Setting Device Screws
82	078-54	1	Knife Setting Device Tie Bar
83	K51-04-207	3	Sec 1600 Optibelt
84	T6-14	1	Top Stop Bar
85	T5-81	2	Top Stops

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES

CUTTERBLOCK



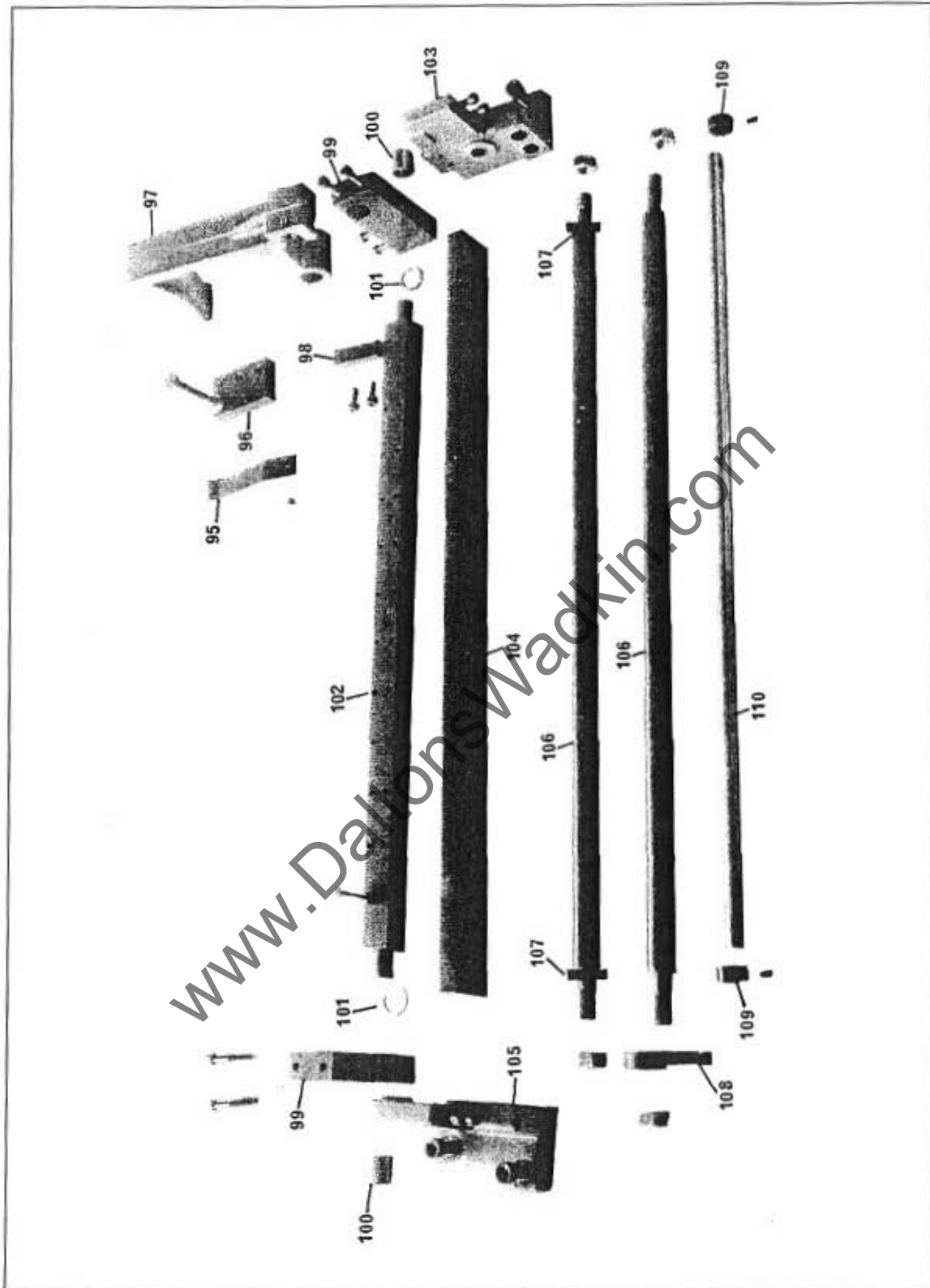
**ASSEMBLY: -FRONT PRESSURE BARS AND KICK BACK FINGERS**

FIG ITEM	PART NO -	UNITS PER ASSEMBLY	DESCRIPTION
95	T5-373	12	Chipbreaker Springs
96	T5-510	1	Top Plate
97	T6-103	12	Sectional Pressure Bars
98	T6-210	1	Pressure Plate
99	T5-509	2	Bearing Plates
100	KS 1-05-116	2	20 x 25 x 25 Long Ojute Bushes
101	T6-211	2	Washers
102	T6-192	1	Spring Support Bar
103	T5-491	1	Pressure Bar Support Bracket (RH)
104	T6-190	1	Pressure Bar Support
105	T5-492	1	Pressure Bar Support Bracket (LH)
106	T6-144	2	Support Bar for Kick Back Fingers
107	T5-385	2	Collars
108	BSK-1344	45	Kick Back Fingers
109	T5-81	2	Top Stops
110	T6-145	1	Stop Bar

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART &amp; MACHINE NUMBER WHEN ORDERING SPARES

# FRONT PRESSURE BARS & KICK BACK FINGERS





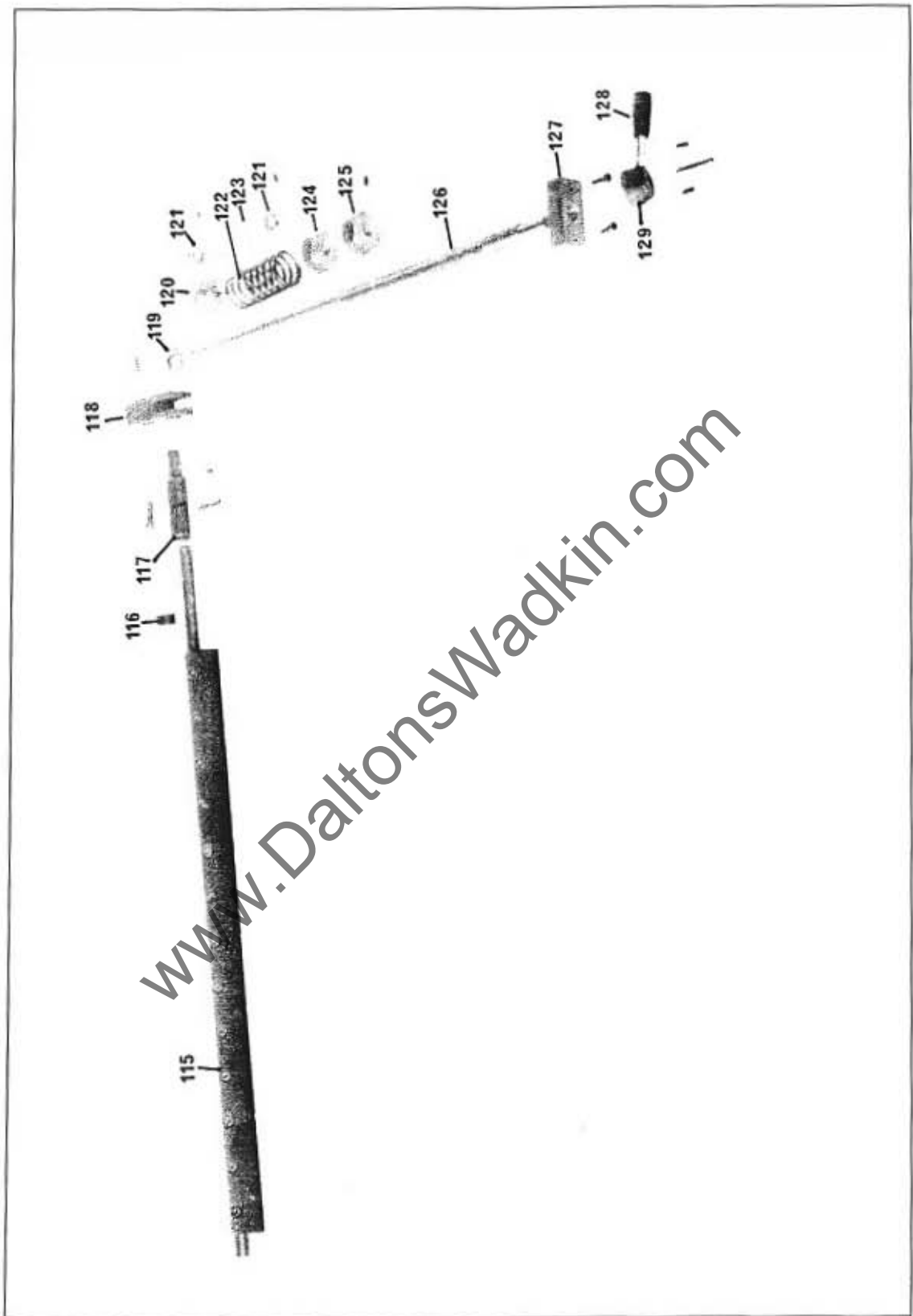
**ASSEMBLY: -REAR PRESSURE BAR**

FIG ITEM	PART NO. *	UNITS PER ASSEMBLY	DESCRIPTION
115	T6-255	1	Rear Pressure Bar
116	PAR-84	1	Locking Collar
117	T6-180	1	Extension Shaft
118	T6-175	1	Clamp Bar
119	T6-168	1	Swivel Nut
120	T6-166	1	Spring Retainer
121	T5-101	2	Stops
122	K51-73-123	1	ETS 217 Spring
123	T6-209	1	Washer
124	T6-167	1	Locknut
125	T6-165	1	Adjusting Nut
126	T6-174	1	Adjustment Screw
127	T6-245	1	Adjustment Plate
128	K51-27-195	1	Lever Arm
129	CP3-255	1	Locking Handle

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART &amp; MACHINE NUMBER WHEN ORDERING SPARES

REAR PRESSURE BAR



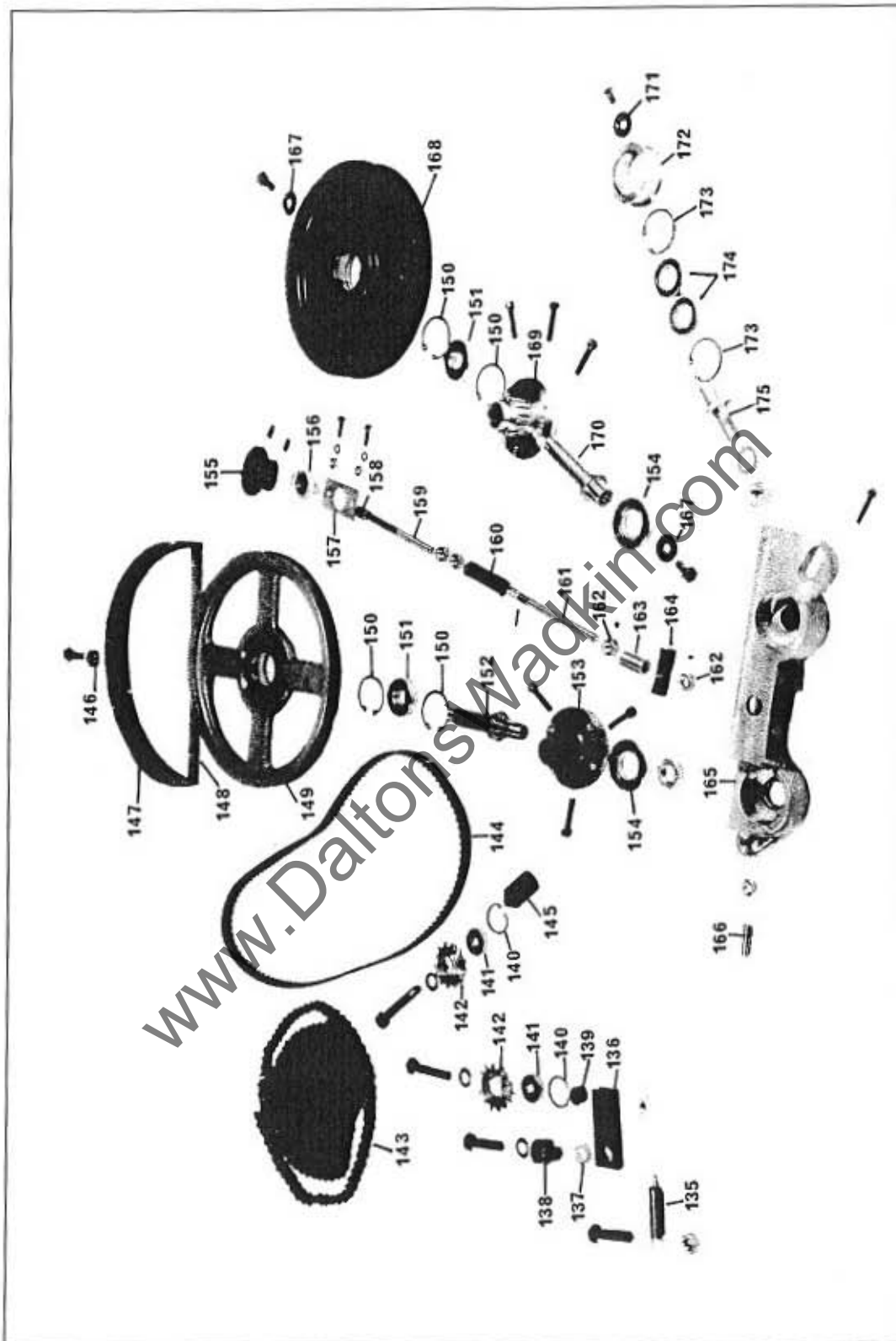
## ASSEMBLY: -FEED

FIG-ITEM	PART NO.	UNITS PER ASSEMBLY	DESCRIPTION
135	K51-73-129	1	ETS 579 Spring
136	T5-49	1	Plate for Chain Tensioner
137	K51-05-144	1	18 x 22 x 12 Long Oilite Bush
138	T5-50	1	Pivot Pin for Chain Tension
139	T5-48	1	Spacer
140	K51-10-202	1	7000-2RS Internal Circlips
141	K06-01-180	2	6201-2RS Bearings
142	T5-10	2	Sprockets
143	K51-08-131	1	138 Pitch 1/2" Chain
144	K51-04-653	1	480L075 Belt
145	T5-47	1	Spacer for Idle Sprocket
146	525-10	1	Spacer
147		1	Driven Pulley Guard Strip
148	T5-313	1	Driven Pulley Guard Bracket
149	T5-354	1	Driven Pulley
150	K51-10-205	4	7000-047 Internal Circlip
151	K06-01-200	2	6204-2RS Bearings
152	T5-44	1	Feed Change Spindle
153	T5-4	1	Sprockets
154	K06-01-126	2	6006-2RS Bearings
155	T5-135	1	Rise and Fall Handwheel
156	K06-30-401	1	Asahi UFL001 Bearing
157	T5-345	1	Bearing Back Plate
158	T5-108	1	Spacer
159	T5-327	1	Feed Adjusting Shaft - Plain
160	T5-329	1	Feed Adjusting Screwed Sleeve
161	T5-328	1	Feed Adjusting Shaft - Screwed
162	T5-101	2	Stops
163	T5-399	1	Spacer for Screwed Adjusting Shaft
164	T5-66	1	Feed Adjustment Nut
165	T5-19	1	Feed Change Bracket
166	T5-116	1	Brass Screw
167	036-396	2	Washers
168	T6-256	1	Feed Drive Pulley
169	T5-3	1	Gear
170	T5-43	1	Feed Drive Gear Spindle
171	032-22	1	Spacer
172	T5-248	1	Drive Belt Flange Roller
173	K51-10-204	2	7000-042 Internal Circlips
174	K05-01-121	2	6004-2RS Bearings
175	T5-249	1	Tension Roller Spindle

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART &amp; MACHINE NUMBER WHEN ORDERING SPARES

FEED



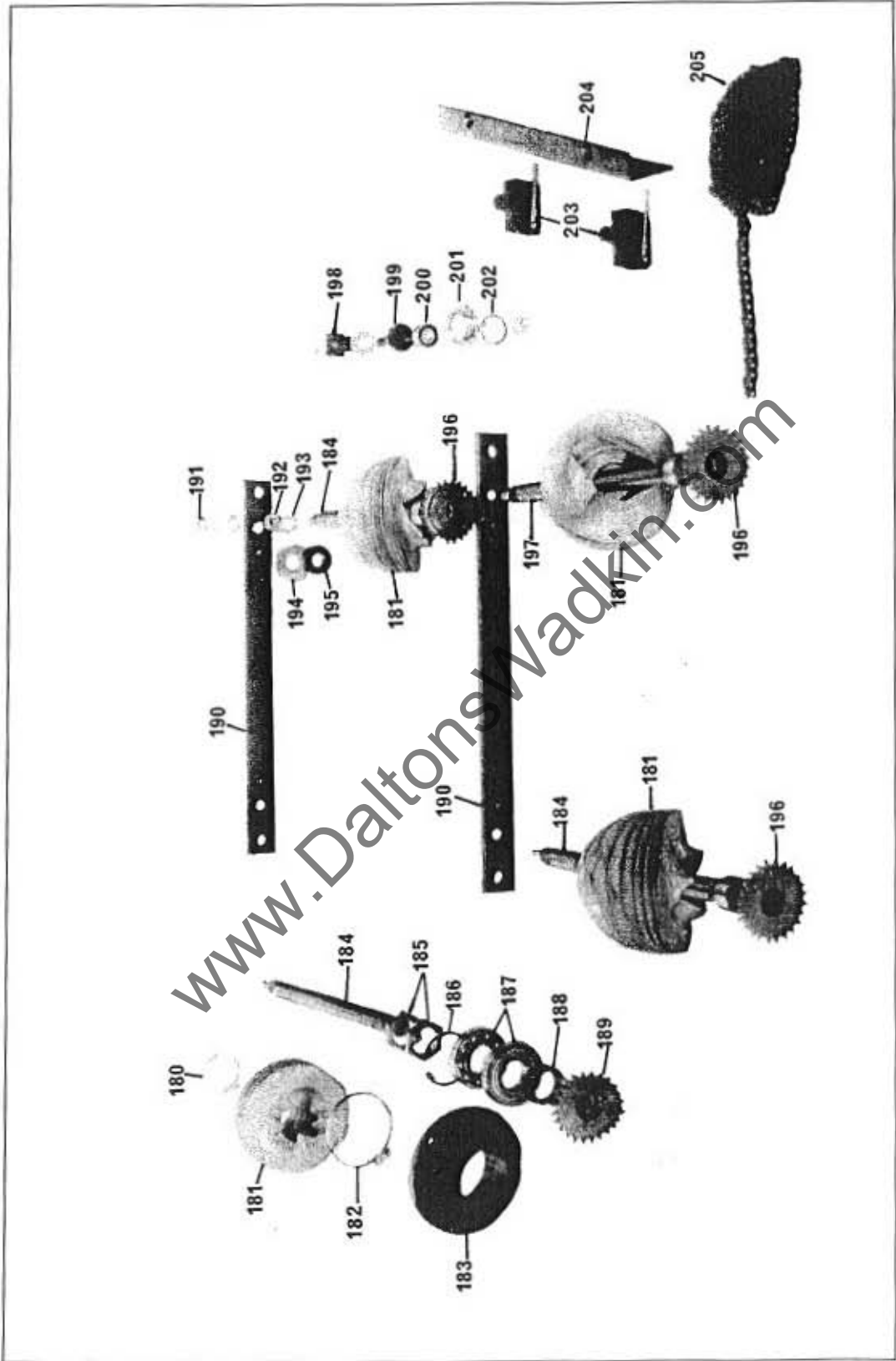
## ASSEMBLY: RISE &amp; FALL

FIG ITEM:	PART NO.*	UNITS PER ASSEMBLY	DESCRIPTION
180	K51-11-202	4	40mm Dia Jubilee Clips
181	T5-279	4	Bellows
182	K51-11-205	4	80mm Dia Jubilee Clips
183	T6-257	4	Bearing Housings
184	T5-324	3	Rise & Fall Screws
185	T5-256	8	Rise & Fall Locknuts
186	K51-10-208	4	72mm Internal Circlips
187	K06-01-219	8	6207Z Bearings
188	PAR-89	4	Driven Sprocket Spacers
189	T6-238	1	Drive Sprocket
190	T5-61	2	Rise & Fall Screw Tie Plate
191	041-88	4	Washers
192	T6-396	4	Rise & Fall Screw Domed Washers
193	T5-63	4	Rise & Fall Screw Washers
194	T5-330	4	Tab Washers
195	T5-64	4	Collars
196	T5-266	3	Sprockets
197	T5-447	1	Rise & Fall Screw
198	T6-214	1	Collar
199	T6-213	1	Chain Tensioner Shaft
200	K51-01-180	1	6201-2RS Bearing
201	PAR-178	1	Chain Tension Sprocket
202	K51-10-202	1	7000-032 Internal Circlip
203	K51-17-104	2	CYK
204	T5-448	1	Limit Switch Mounting Plate
205	K51-08-129	1	198 Pitch 3/8" Chain
	T6-228	1	Drive Sprocket Timing Pulley (used with Item 189)

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART &amp; MACHINE NUMBER WHEN ORDERING SPARES

RISE & FALL



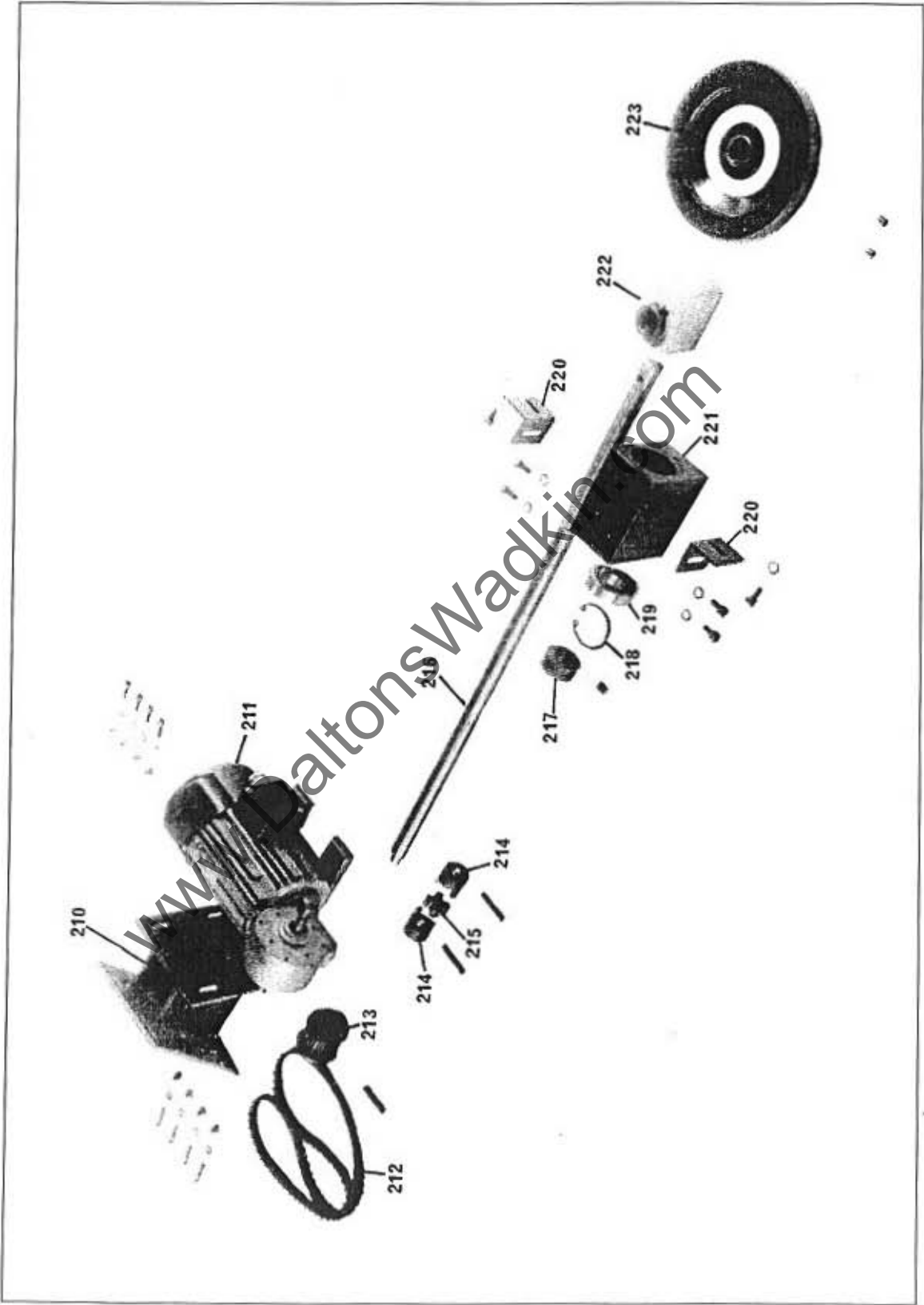
## ASSEMBLY: -RISE &amp; FALL

FIG ITEM	PART NO	UNITS PER ASSEMBLY	DESCRIPTION
210	T6-223	1	Motor Gearbox Bracket
211	K51-15-650	1	Rise & Fall Motor
212	K51-04-554	1	367 x L050 Timing Belt
213	T6-229	1	Gearbox Timing Pulley
214	T6-215	2	Couplings
215	K51-17-106	1	U4-26-736 Coupling Spider
216	T6-236	1	Handwheel shaft (Metric)
	T6-237	1	Handwheel Shaft (Imperial)
217	S25-394	1	Collar
218	K51-10-205	1	7000-047 Internal Clip
219	K06-30-415	1	1204 Self Align Bearing
220	T6-233	2	Brackets
221	T6-232	1	Bearing Housing (Metric)
	T6-240	1	Bearing Housing (Imperial)
222	K51-09-132	1	Counter (Metric)
	K51-09-110	1	Counter (Imperial)
223	T5-505	1	Rise & Fall Handwheel

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART &amp; MACHINE NUMBER WHEN ORDERING SPARES

RISE & FALL





**ASSEMBLY: -MAIN MOTOR**

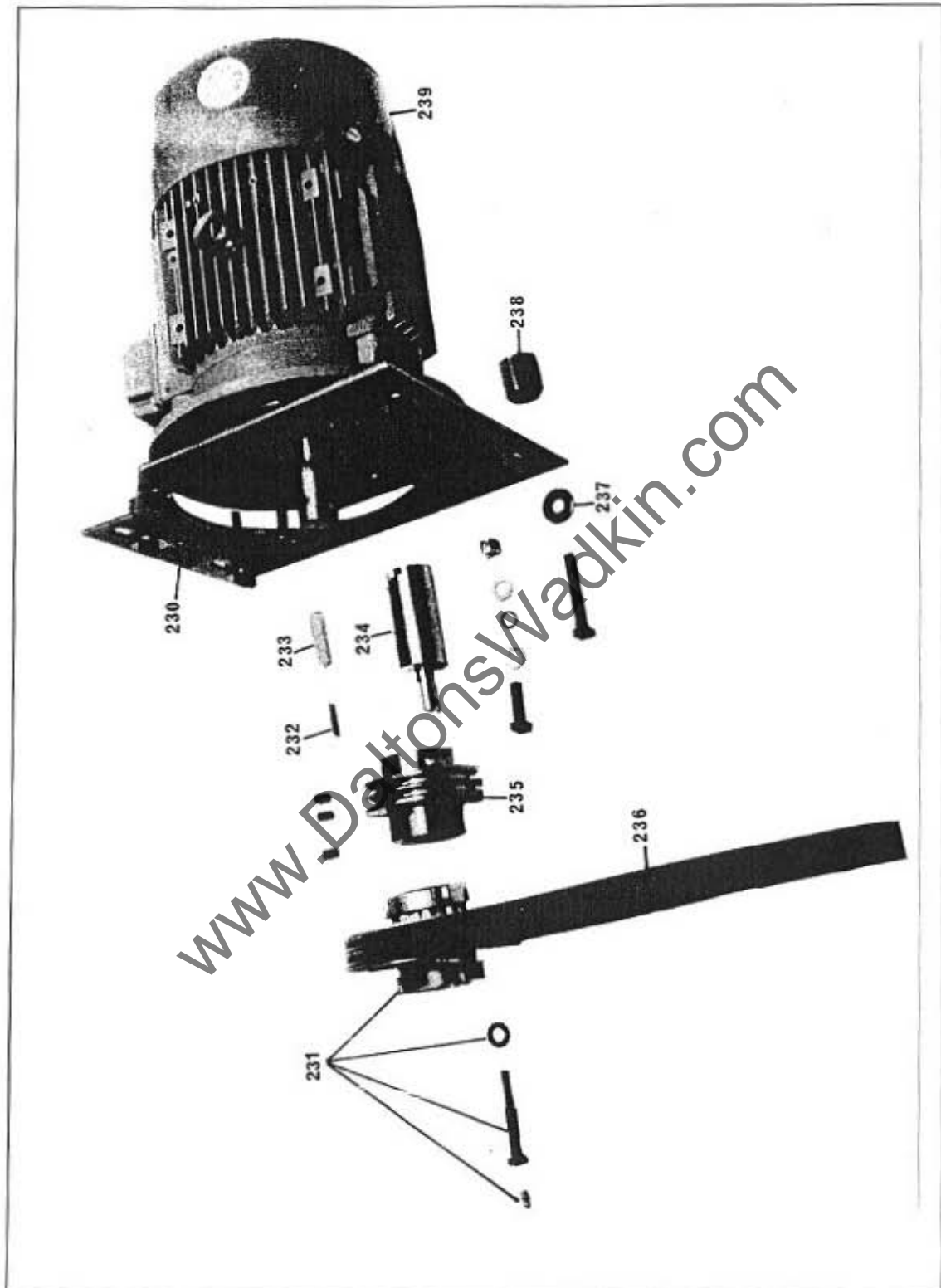
FIG ITEM	PART NO.*	UNITS PER ASSEMBLY	DESCRIPTION
230	T5-148	1	Motor Mounting Plate
231	K51-59-101	1	11.104.05.4.1 VS Pulley
232	T5-430	1	Key for Drive Pulley
233	K51-20-106	1	6 x 6 x 35 Long Parallel Key
234	T6-243	1	Pulley Adapter Shaft
235	T5-532	1	Motor Pulley
236	K51-04-663	1	ES-28-008 Simplabelt
237	026-22	4	Washers
238	T5-78	1	Spacer
239		1	Main Motor

NOTE: When re-ordering motor, state voltage; phase; HP and frame size from motor plate.

- ITEM NOT ILLUSTRATED

\* PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES

## MAIN MOTOR



## ASSEMBLY: -GRINDER

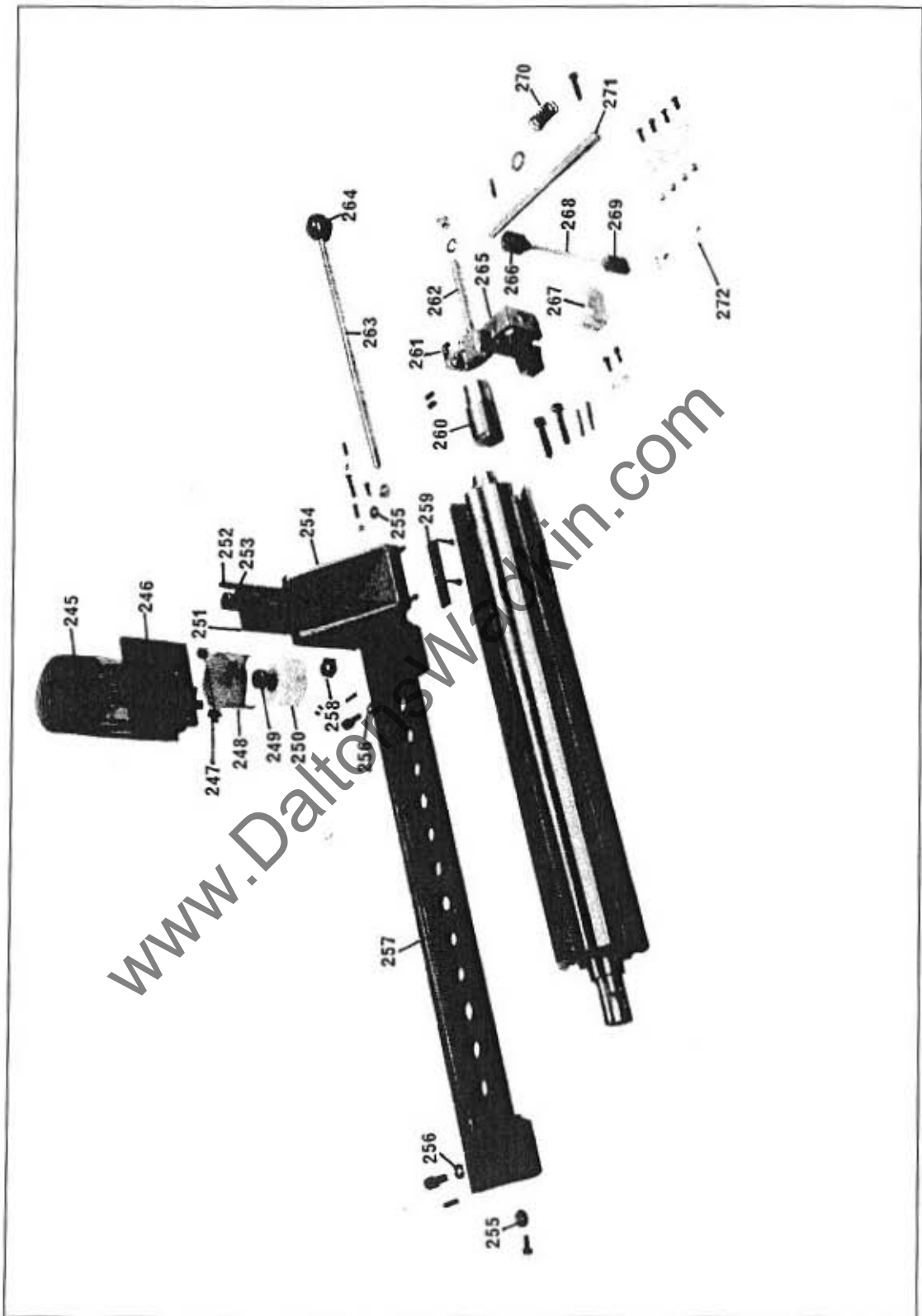
FIG ITEM	PART NO. *	UNITS PER ASSEMBLY	DESCRIPTION
245		1	Grinder Motor
246	T5-177	1	Motor Adapter Plate
247	T5-402	3	Spacers for Grinder Guard
248	T5-401	1	Guard for Grinder
249	T5-179	1	Grinder Wheel Holder
250	K51-02-141	1	Grinding Wheel
251	T5-184	1	Slide for Grinding Stone
252	T5-155	1	Gib Strip for Slide Bracket
253	T5-325	1	Depth Adjuster for Grinder
254	T5-94	1	Grinder Slide Bracket
255	T5-369	2	Washers
256	079-1008	2	Was hers
257	T6-19	1	Grinder Slide
258	T5-242	1	M20 x 1.5 Pitch Nut
259	T5-176	1	Gib Strip for Grinder Slide
260	T5-145	1	Grinder Extension
261	T5-73	1	Grinder Location Ring
262	T5-311	1	Extension Stud
263	T5-400	1	Pull Rod for Grinder
264	K51-27-153	1	1 3/4" Dia Ball Knobs
265	T5-146	1	Plunger Bracket
266	T5-182	1	Handle for Location
267	T5-499	1	Location Cam Bracket
268	T5-300	1	Cutterblock Location Pivot Arm
269	T5-185	1	Cutterblock Location Pivot
270	K51-73-117	1	ETS154 Compression Spring
271	T5-299	1	Cutterblock Location Plunger
272	T5-303	1	Location Plate

NOTE: When re-ordering motor, state voltage; phase; HP and frame size from motor plate.

- ITEM NOT ILLUSTRATED

\*PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES

GRINDER



**ASSEMBLY: SOUNDPROOFING STANDARD MACHINE**

FIG ITEM	PART NO *	UNITS PER ASSEMBLY	DESCRIPTION
280	T5-413	2	Side Covers
281	T5-472	2	Side Covers Soundproofing
282	T6-131	1	Drive Side Top Cover Soundproofing
283	T6-128	1	Back Centre Top Head Soundproofing
284	T6-124	1	Back Centre Top Head Soundproofing
285	T6-122	1	Plate for Top Hood Soundproofing
286	T6-125	1	Front Centre Top Hood Soundproofing
287	T6-129	1	Front Centre Top Hood Soundproofing
288	T6-135	1	Non Drive Side Top Cover Soundproofing
289	T6-126	1	R H S Top Hood Soundproofing
290	T6-130	1	R H S Top Hood Soundproofing
291	T6-132	1	Outfeed Roller Cover Soundproofing
292	T6-133	1	Outfeed Roller Cover Soundproofing
293	T6-134	1	Outfeed Roller Cover Soundproofing
294	T6-127	1	L H S Top Hood Soundproofing
295	T6-123	1	L H S Top Hood Soundproofing

- ITEM NOT ILLUSTRATED

\*PLEASE QUOTE PART &amp; MACHINE NUMBER WHEN ORDERING SPARES

This exploded perspective view illustrates the assembly of a multi-layered electronic component. The components are labeled with reference numerals: 280 and 281 point to the top rectangular layer; 282 and 286 point to the bottom rectangular layer; 283, 284, and 285 point to a central vertical assembly; 287 points to a side layer; 288 points to a top layer; 289 points to a bottom layer; 290 points to a top layer; 291 points to a central vertical assembly; 292 and 293 point to a central vertical assembly; 294 and 295 point to a central vertical assembly.