INSTRUCTION MANUAL

FOR

FBP 300

PLANING AND MOULDING MACHINE

SAFETY RULES

THE SAFE OPERATION OF WOODWORKING MACHINERY REQUIRES CONSTANT ALERTNESS AND CLOSE ATTENTION TO THE WORK IN HAND.

CAREFULLY READ INSTRUCTION MANUAL BEFORE OPERATING MACHINE.

DO NOT OPERATE WITHOUT ALL GUARDS AND COVERS IN POSITION.

BE SURE MACHINE IS ELECTRICALLY EARTHED - GROUNDED.

REMOVE OR FASTEN LOOSE ARTICLES OF CLOTHING SUCH AS NECKTIES ETC, CONFINE LONG HAIR.

REMOVE JEWELLERY SUCH AS FINGER RINGS, WATCHES, BRACELETS ETC.

USE SAFETY FACE SHIELD, GOGGLES, OR GLASSES TO TO PROTECT EYES AND OTHER PERSONAL SAFETY EQUIPMENT AS REQUIRED.

STOP MACHINE BEFORE MAKING ADJUSTMENTS OR CLEANING CHIPS FROM WORK AREA.

BLUNT CUTTERS OFTEN CONTRIBUTE TO ACCIDENTS. AN EFFICIENT MACHINIST KNOWS WHEN RE-SHARPENING IS NECESSARY, BUT IF THERE IS RELUCTANCE TO SPEND TIME ON GRINDING AND RE-SETTING, THE CUTTERS MAYBE RUN BEYOND THEIR EFFICIENT LIMITS AND INSTEAD OF CUTTING EFFICIENTLY AND SMOOTHLY, THEY TEND TO CHOP AND SNATCH AT THE WOOD. THIS NOT ONLY INCREASES THE RISK OF ACCIDENTS BUT ALSO LOWERS THE QUALITY OF WORK.

CUSTOMERS ARE STRONGLY ADVISED TO USE AT ALL TIMES, HIGH TENSILE STRENGTH CUTTER BLOCK BOLTS WHICH SHOULD BE TENSIONED BY MEANS OF A TORQUE SPANNER.

KEEP THE FLOOR AROUND THE MACHINE CLEAN AND FREE FROM SCRAPS, SAWDUST, OIL OR GREASE TO MINIMISE THE DANGER OF SLIPPING.

THIS MACHINE, WHEN UNDER WORKING CONDITIONS, MAY PRODUCE A NOISE LEVEL IN EXCESS OF 90 D.B. WADKIN LTD., WILL SUPPLY INFORMATION ON ACOUSTICAL ENCLOSURES ON REQUEST, AND WILL REQUIRE A WRITTEN UNDERTAKING THAT THE NECESSARY STEPS WILL BE TAKEN TO ENSURE THAT THE MACHINE IS ONLY USED IN COMPLIANCE WITH THE TERMS OF HEALTH AND SAFETY AT WORK - ACT 1974.

IMPORTANT

IT IS OUR POLICY AND THAT OF OUR SUPPLIERS TO REVIEW CONSTANTLY THE DESIGN AND CAPACITY OF OUR PRODUCTS. WITH THIS IN MIND WE WOULD REMIND OUR CUSTOMERS THAT WHILST THE DIMENSIONS AND PERFORMANCE DATA CONTAINED HEREIN ARE CURRENT AT THE TIME OF GOING TO PRESS, IT IS POSSIBLE THAT, DUE TO THE INCORPORATION OF LATEST DEVELOPMENTS TO ENHANCE PERFORMANCE, DIMENSIONS AND SUPPLIES MAY VARY FROM THOSE ILLUSTRATED.

ATTENTION :

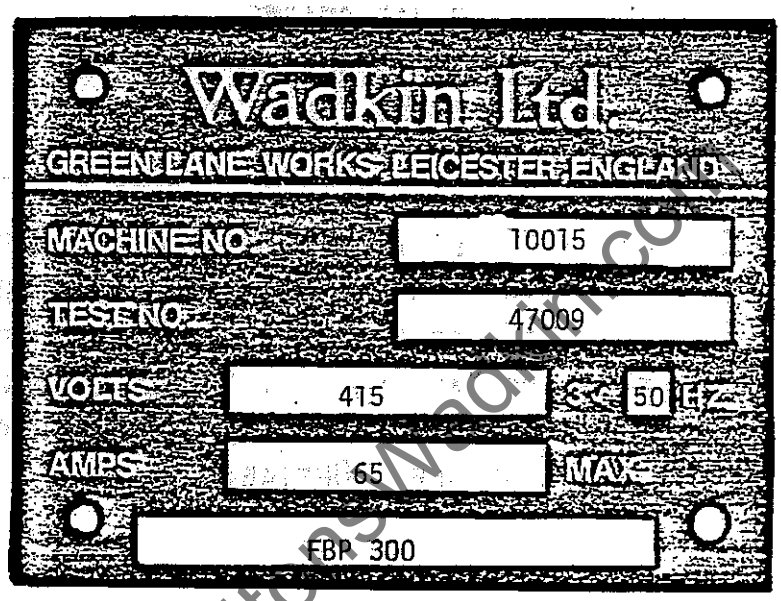
THIS MACHINE CAN BE DANGEROUS
IF IMPROPERLY USED.

ALWAYS USE GUARDS
KEEP CLEAR UNTIL ROTATION HAS CEASED
ALWAYS OPERATE AS INSTRUCTION AND IN
ACCORDANCE WITH GOOD PRACTICE.
READ THE INSTRUCTION MANUAL.

IT IS RECOMMENDED THAT ALL PERSONNEL INVOLVED WITH THE MACHINE ARE ACQUAINTED WITH THE WOODWORKING MACHINES REGULATIONS, 1974 AND ALSO BOOKLET NO. 41 - SAFETY IN THE USE OF WOODWORKING MACHINES -, THE LATTER IS ISSUED BY THE DEPARTMENT OF EMPLOYMENT AND AVAILABLE FROM HER MAJESTY'S STATIONERY OFFICE.

SPARE PARTS

SHOULD SPARE PARTS BE REQUIRED DUE TO BREAKAGE OR WEAR, FULL PARTICULARS INCLUDING MACHINE AND TEST NUMBER MUST BE GIVEN. THIS INFORMATION IS ON THE NAME PLATE ATTACHED TO THE FRONT OF THE MACHINE AND SHOULD BE FORWARDED TO THE SERVICE MANAGER.



SAMPLE TYPE ORDER

MACHINE	FBP 300
MACHINE NO.	10015
TEST NO.	47009

PARTS REQUIRED

1	-	FB 12962	Knurled Nut
1	-	KOS 27 210	Chamfered Notch Nut
1	-	FB 12961	Inner Bearing Spacer

Wadkin Ltd., Green Lane Works. Leicester LE5 4PF Telephone: 0533 769111
Cables: Woodworker Leicester
Telex: 34646 (Wadkin Leicester

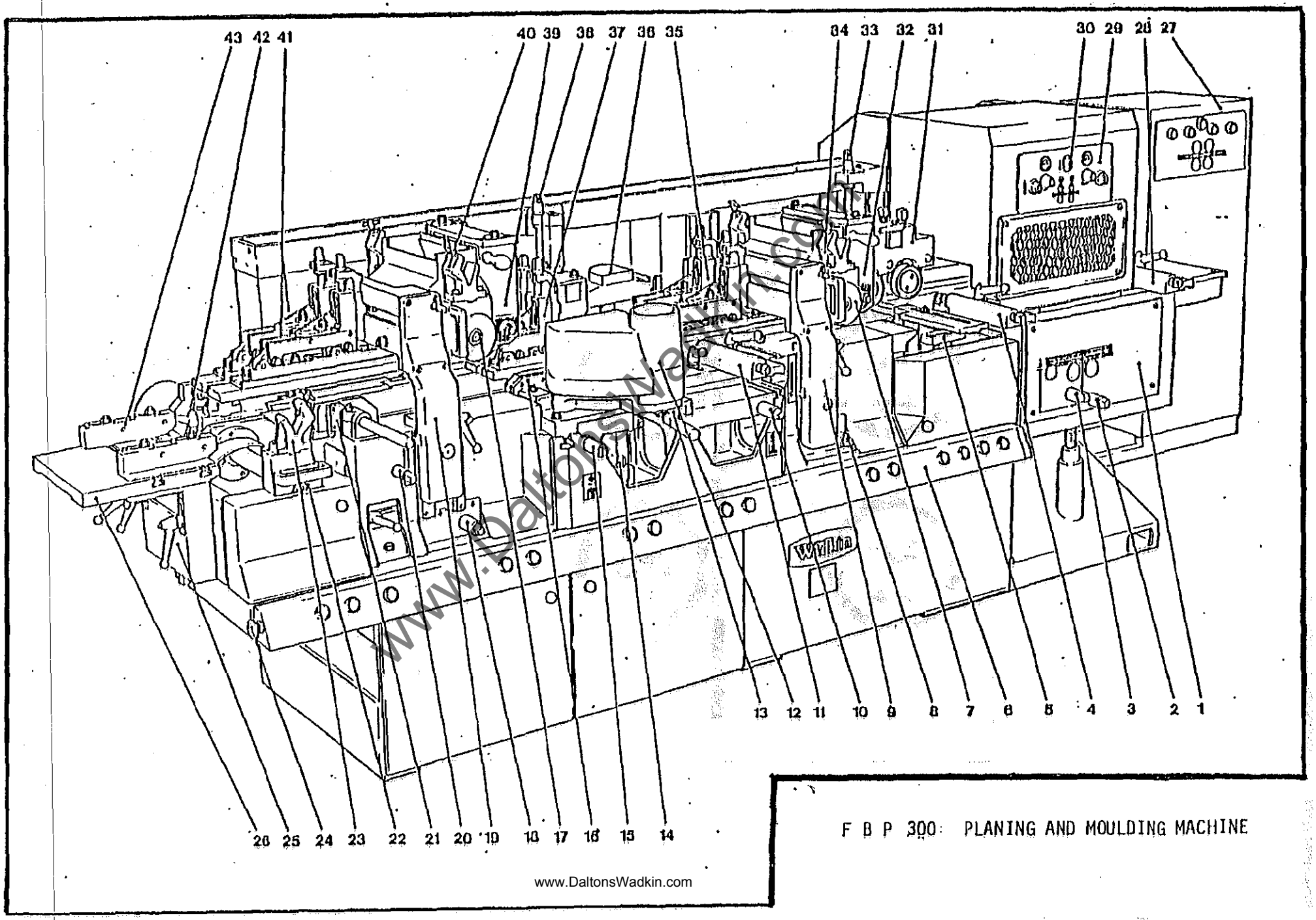
London Office: York House, Empire Way, Wembley, Middlesex. HA9 0PA Telephone: 01 - 9027714
Telex: 262210

INDEX

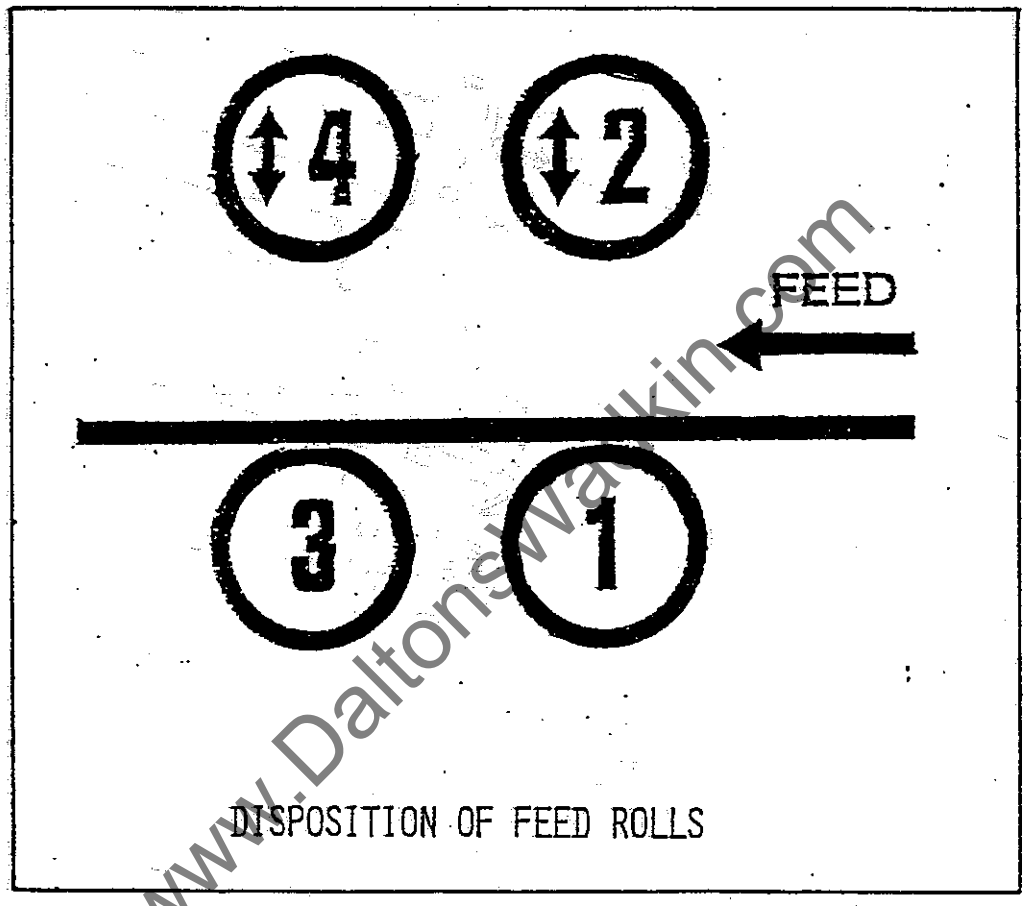
1. Mark III Feedworks
2. Vertical Adjustment - Infeed table
3. Vertical Adjustment - Bottom feedrolls
4. Side Pressure
5. First Bottom Head
6. Trunking with Push Button Controls
7. First Top Head
8. Vertical Adjustment - First top head
9. Outboard Bearing for First Top Head
10. Horizontal Adjustment - Fence side head
11. Side Pressure
12. Near Side Head
13. Near Side Head Chipbreaker
14. Vertical Adjustment - Near side head
15. Horizontal Adjustment - Near side head
16. Front Timber Guide
17. Second Top Head
18. Vertical Adjustment - Second top head
19. Outboard Bearing for Second Top Head
20. Vertical Adjustment - Second bottom head
21. Front Timber Guide
22. Second Bottom Head
23. Jointer Mounting Bracket - Second bottom head
24. Master Stop Button
25. Outfeed Table Slide
26. Outfeed Table
27. Console
28. Side Pressure
29. Pneumatic Control Panel
30. Vertical Adjustment - Top feedrolls
31. Top Roller Pressure
32. Top Head Chipbreaker
33. Vertical Adjustment - Top roller pressure
34. Jointer Mounting Bracket - First top head
35. Top Pad Pressure
36. Fence Side Head
37. Top Pad Pressure
38. Vertical Adjustment - Top pad pressure
39. Top Head Chipbreaker
40. Jointer Mounting Bracket - Second top head
41. Top Pad Pressure

42. Horizontal Adjustment - Second bottom head

43. Adjustable Outfeed Fence



F B P 300: PLANING AND MOULDING MACHINE



DISPOSITION OF FEED ROLLS

PRINCIPAL DIMENSIONS AND CAPCITIES

Maximum size of timber admitted	312mm x 137mm (12.1/2in. x 5.1/2in
Maximum size of finished work	300mm x 125mm (12in. x 5in.)
Minimum size of finished work	25mm x 7mm

Maximum Cutting Circle

First Bottom Horizontal Head	190mm (7.1/2in.)
Fence Side Vertical Head	216mm (8.1/2in.)
Near Side Vertical Head	216mm (8.1/2in.)
Top Horizontal Head	216mm (8.1/2in.)

Minimum Cutting Circle

First Bottom Horizontal Head	165mm (6.1/2in.)
Fence Side Vertical Head	165mm (6.1/2in.)
Near Side Vertical Head	165mm (6.1/2in.)
Top Horizontal Head	165mm (6.1/2in.)

Speed Of Cutter Spindles

First Bottom Horizontal Head	6000 RPM
Fence Side Vertical Head	6000 RPM
Near Side Vertical Head	6000 RPM
Top Horizontal Head	6000 RPM

Power Output Of Cutter Spindles

First Bottom Horizontal Head	7.1/2 KW (10 HP)
Fence Side Vertical Head	7.1/2 KW (10 HP)
Near Side Vertical Head	7.1/2 KW (10 HP)
Top Horizontal Head	7.1/2 KW (10 HP)
Feed Motor for Gear Box Drive	7, 12, 17, 20, 26 and 30 metres/mir 25, 39, 56, 66, 85 and 100 feet/mir
Diameter of Feed Rolls	250mm (10in.)
Cutter spindle diameter	50mm
Bed Height	990mm (3ft. 3in.)
Overall Height	1600mm
Refer to Foundation Plan	FBP 10035

Size Of Exhaust Outlet

First Bottom Horizontal Head	1E 150mm x 125mm
Fence Side Vertical Head	2E 160mm x 90mm
Near Side Vertical Head	4E 153mm x 90mm
Top Horizontal Head	2E 278mm x 120mm

INSTALLATION

Foundation bolts are not supplied with the machine. If the mill floor consists of 4in. to 6in. solid concrete, no special foundation is necessary. Rag type holding-down bolts may be used. Cut 6in. square holes in concrete for bolts. Run in liquid cement when machine has been levelled.

Clean protective coating from bright parts with cloth soaked in paraffin, turpentine OR another solvent.

See foundation drawing supplied separately.

It is essential that the machine is connected to a dust collecting system. The machine has a built-in outlet for each head.

WIRING DETAILS

The motors and control gear have been wired in before despatch. All that is required is to connect the power supply to the isolating switch. Points to note when connecting to power supply:-

1) Check the voltage, phase and frequency with those on the machine plate.

2) Check that the main fuses are of the correct capacity in accordance with the machine name plate.

3) Connect the incoming supply leads to the appropriate terminals.

4) Check that all connections are sound.

5) Check that the spindle rotation is correct (start forward feed; from front of machine the top feed rolls should rotate clockwise). Reverse any two of the line lead connections of the incoming supply to reverse rotation.

PNEUMATICS

The pneumatic equipment is fitted and tested before despatch. All that is required is to connect an air pipe to the filter unit, located under the front of the feedworks. The regulator on this unit should be set to read 5.6 kg/cm^2 (80 p.s.i.).on the gauge.

The lubricator on this unit MUST be filled with Mobil Almo No.1. oil.

ELECTRICAL CONTROLS

The electrical supply isolating (disconnect) switch is situated at the main control cubicle and before any cutterhead or feed can be started the switch must be turned to the 'ON' position.

The master 'LOCK-OFF' pushbuttons must be turned and released before any head or feed can be started, these buttons are situated at the infeed and outfeed end of the pushbutton channel on the front of the machine.

To start the cutterheads, first ensure that the cutterblocks are free to rotate then press the respective 'START' pushbutton situated on the pushbutton channel, to stop the cutterhead press the associated 'STOP' button. These buttons are conveniently situated in line with the respective cutterheads.

To start the feed motor (pump motor) press the start feed push button at the infeed end of the machine, to stop the feed press the stop feed button. The feed rolls can be reversed by depressing and holding the inch (jog) reverse pushbutton situated at the infeed end of the machine. Similarly the feed can be 'inched' (jogged) forward by holding depressed the 'inch' (jog) pushbuttons situated at both the infeed and outfeed end of the machine. The outfeed 'inch' (jog) pushbutton when depressed will also stop the feed rolls, if it is required to 'inch' (jog) forward the feed rolls from the outfeed end of the machine, this pushbutton reverts to its normal control function i.e. it is an inch (jog) and stop feed button.

Failure To Start

1. Electrical supply is not available
2. Fuses have blown or are not fitted.
3. Isolating (disconnect) switch has not been closed.
4. One or both of the master stop buttons are locked in the 'OFF' position.

Shut Down During Operating And Failure To Re-start

1. Fuses have 'blown'.
2. Overloads have tripped, these will automatically reset after a short time.

THE FEEDWORKS

The feedworks consist of four power driven rolls (10), (11), (12) and (13) at the infeed end of the machine - See page(23).

The rolls are driven directly from a three speed gearbox (19), two stepped cone pulleys (20) and (21) and single speed squirrel cage induction motor (22) to give a choice of six speeds 8, 12, 17, 20, 26, 30metres/min. (25, 38, 57, 66, 85, 100ft/min.), these are located at the rear of the machine as is the hand operated gear lever (23) and the belt change operating lever (24). The pneumatically operated feed rolls are electrically controlled from remote push buttons (1) and (2) from an independent control panel (26).

PNEUMATIC CONTROLS TO THE FEED WORKS.

A pre requisite necessity before attempting to lower any of the top rolls is to ensure that the disconnnect switch and master "STOP" buttons are switched on at the electrical control console.

THE INFEED ROLLS are pneumatically operated from push buttons (1) and (2), the degree of pressure can be adjusted by controls (3) and (4). The respective pressure gauges are (5) and (6). Vertical adjustment to the top rolls is by cranked handle on square (7).

THE BOTTOM FEED ROLLS are adjusted vertically by means of a crank handle on square (8) whilst the height of the rolls relative to the bedplate can be adjusted by means of a cranked handle on square (9).

The feedworks electrical control buttons are as follows:-

Start feed
Stop feed
Jog (inch) Forward Feed
Jog (Inch) Reverse

ADJUSTMENT OF THE FEED ROLLS

THE TOP FEED ROLLS (10) and (11) must be set relative to the thickness of the timber by lowering the rolls by depressing the button (2). The amount of vertical travel should be sufficient to moderatly hold the workpiece in position. At this stage the workpiece should be withdrawn. Following which further vertical adjustment to the top rolls should be made by means of the crank handle on square (7). The adjustment should be such that the rolls take up a position which represents approximately 6mm.(0.25in.) less than the thickness of the workpiece. The input air pressure should be set to 5.7 kg/cm^3 (80 lbs/sq.in).

TO LOWER THE TOP ROLLS depress button (2).

TO RAISE THE TOP ROLLS depress button (1) OR either of the electrical master "STOP" buttons.

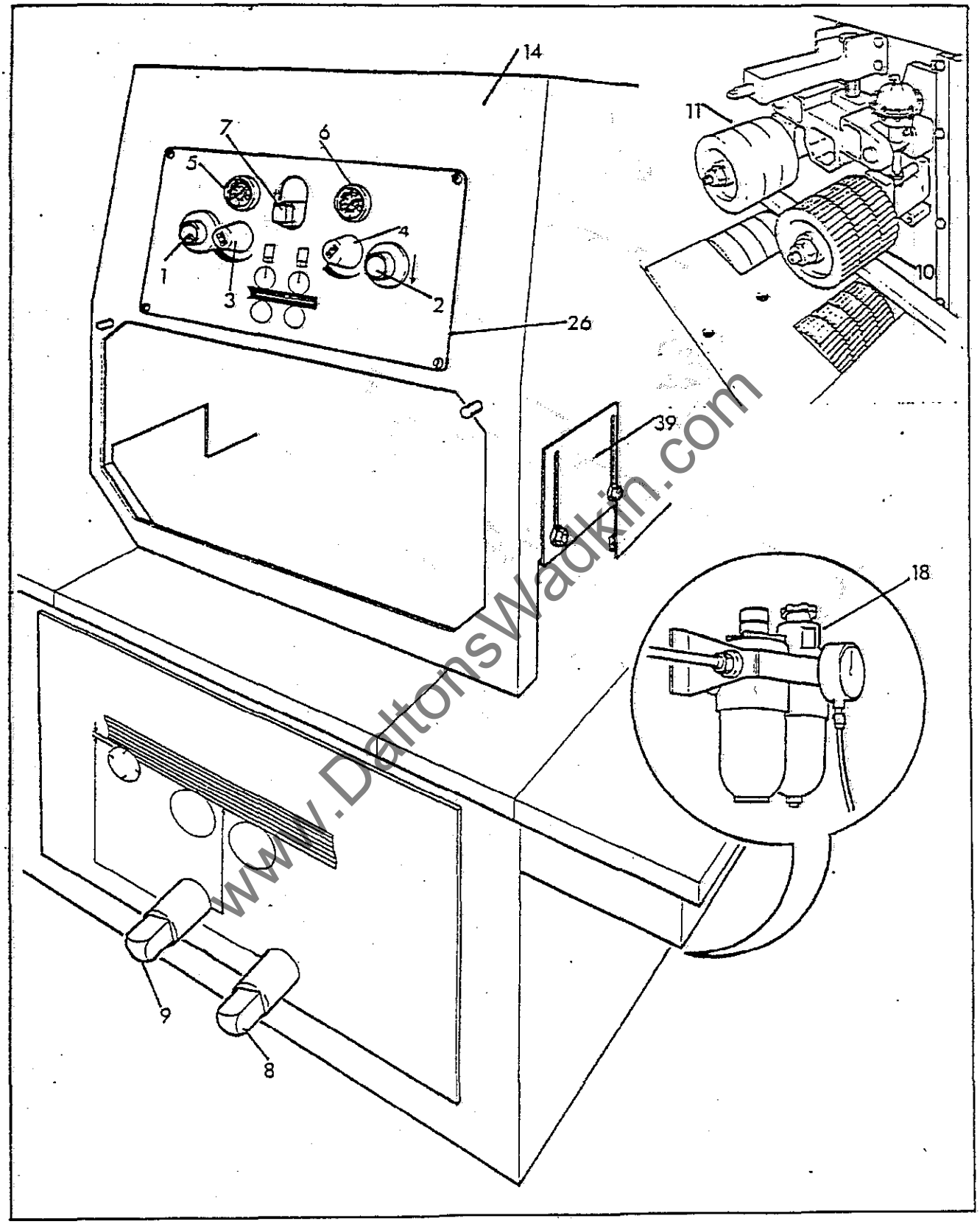
The amount of pressure each top roll exerts on the timber should be such that the traction is sufficient without defacing the timber. Each roll is independently controlled. To increase the pressure to the infeed roll turn knob (3) counterclockwise. The amount of pressure applied is registered on gauge (5), knob (4) and gauge (6) similarly control the second top roll.

At the initial starting of the feed rolls a fine mist of oil should be added to the air supply by opening the regulating screw on the filter regulator oiler unit (18) for a brief period but not longer than five minutes. It will be necessary to repeat this process at intervals of two weeks.

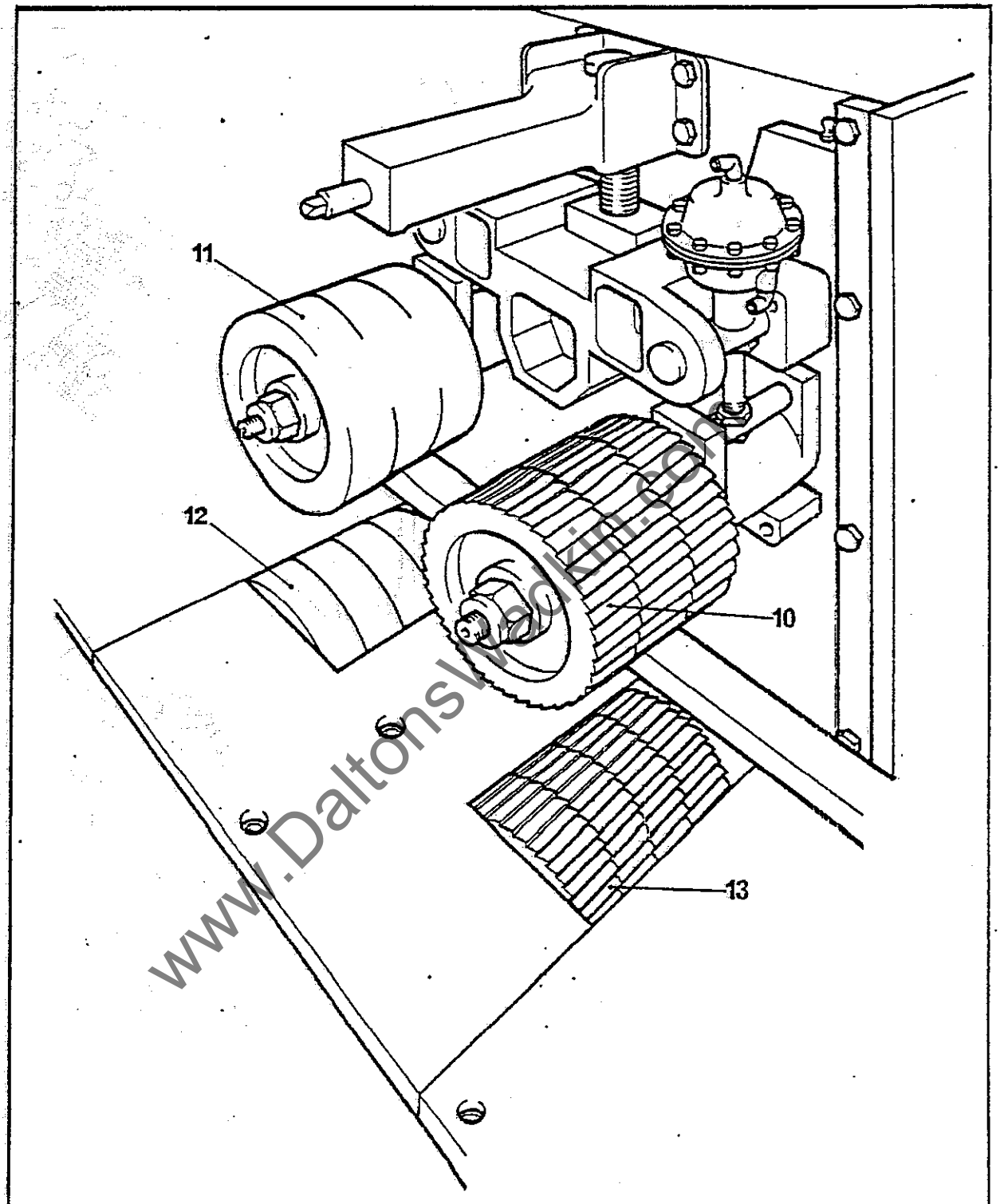
IMPORTANT:

IF WORKING CONDITIONS DEMAND INCREASED TRACTION, INCREASE THE AIR PRESSURE AT THE REGULATORS (3) AND (4) OR IF THE AIR SUPPLY HAS SUFFICIENT RESOURCES - INCREASE THE PRESSURE AT THE FILTER REGULATOR UNIT (18) LOCATED UNDER THE INFEED TABLE. UNDER NO CIRCUMSTANCES SHOULD TRACTION BE INCREASED BY THE VERTICAL ADJUSTMENT OF THE ROLLS BY MEANS OF THE CRANK HANDLE ON SQUARE (7).

FAILURE TO OBSERVE THIS PRECAUTION WILL PRECIPITATE MECHANICAL DAMAGE TO THE FEEDWORKS DRIVE.



FRONT VIEW OF FEED WORKS WITH COVERS IN POSITION



TOP FEED ROLLERS (COVER REMOVED)

FFEDWORKS

SPEED SELECTION OF FEED ROLLS

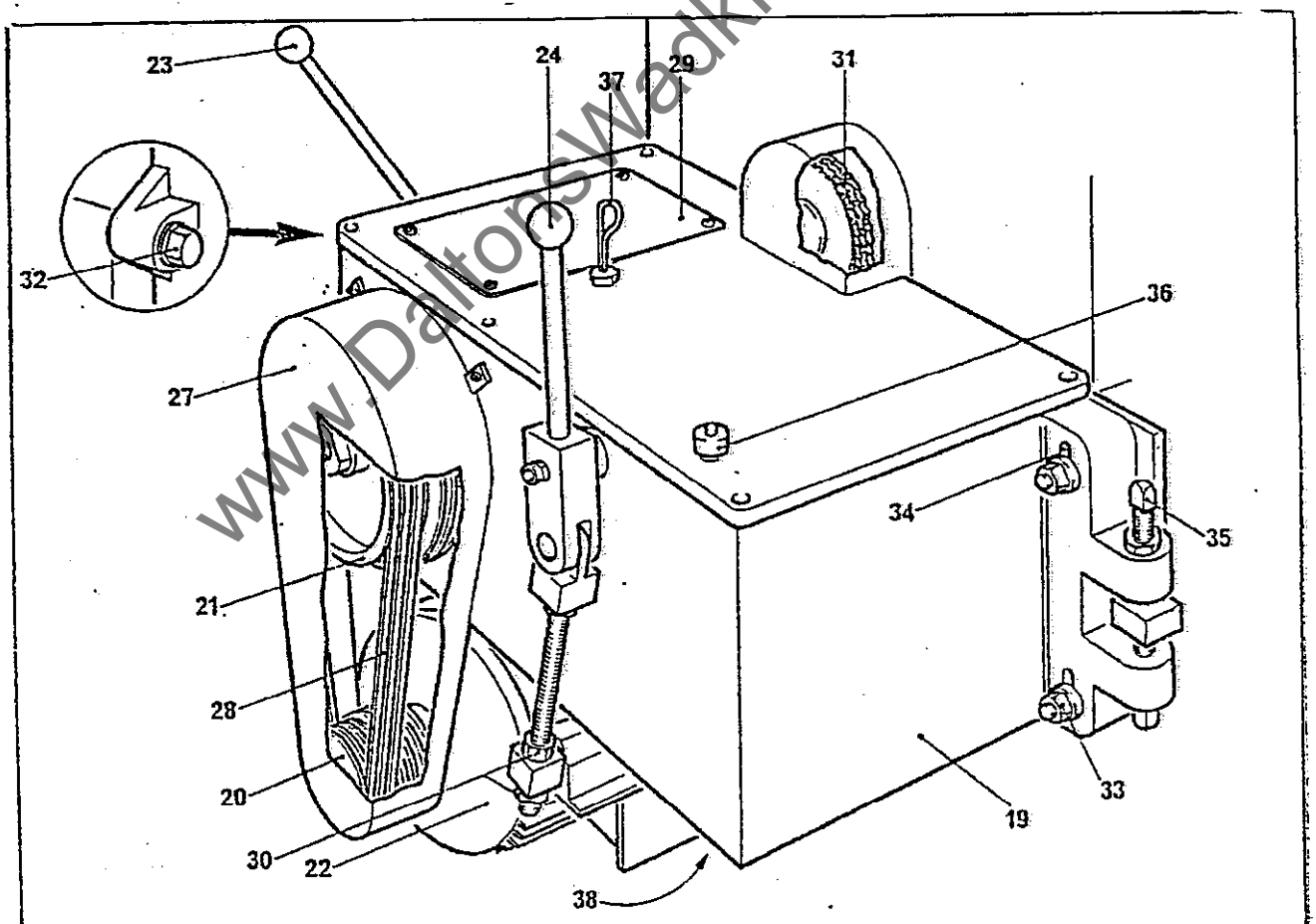
Six separate feed speeds are provided by the medium of a three speed gear box, a single speed squirrel cage induction motor and two step driving pulleys. The feed speed plate (29) is located near to the gear lever (23). To change speed a choice of three speeds is obtained by gear changing by means of a lever (23) and three alternative speeds are obtained by changing the pulley sheave ratios. To put this into effect it will be necessary to remove the guard (27) and operate the belt change toggle lever (24) and release locknuts (30) so as to release the tension of the belt (28) to a degree which will permit the belt to be removed from the pulley sheaves and replaced on the alternative pulley sheaves.

IMPORTANT:

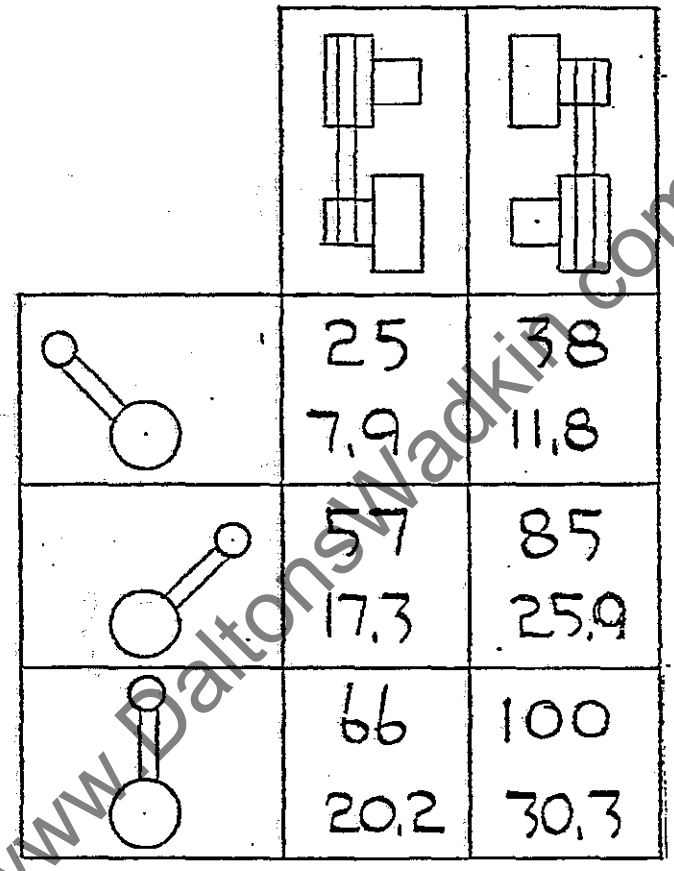
IT IS ESSENTIAL THAT THE FEED MUST BE STOPPED BEFORE CHANGING SPEED.

The chain drive (31) can be tensioned by slackening off bolt (32) and two nuts (33) enabling the gear box to be moved in the elongated slots (34) by adjustment of the jack screws (35).

The gear box is provided with an oil filler / cum breather (36) dipstick (37) and drain plug (38) (See Lubrication Instructions).



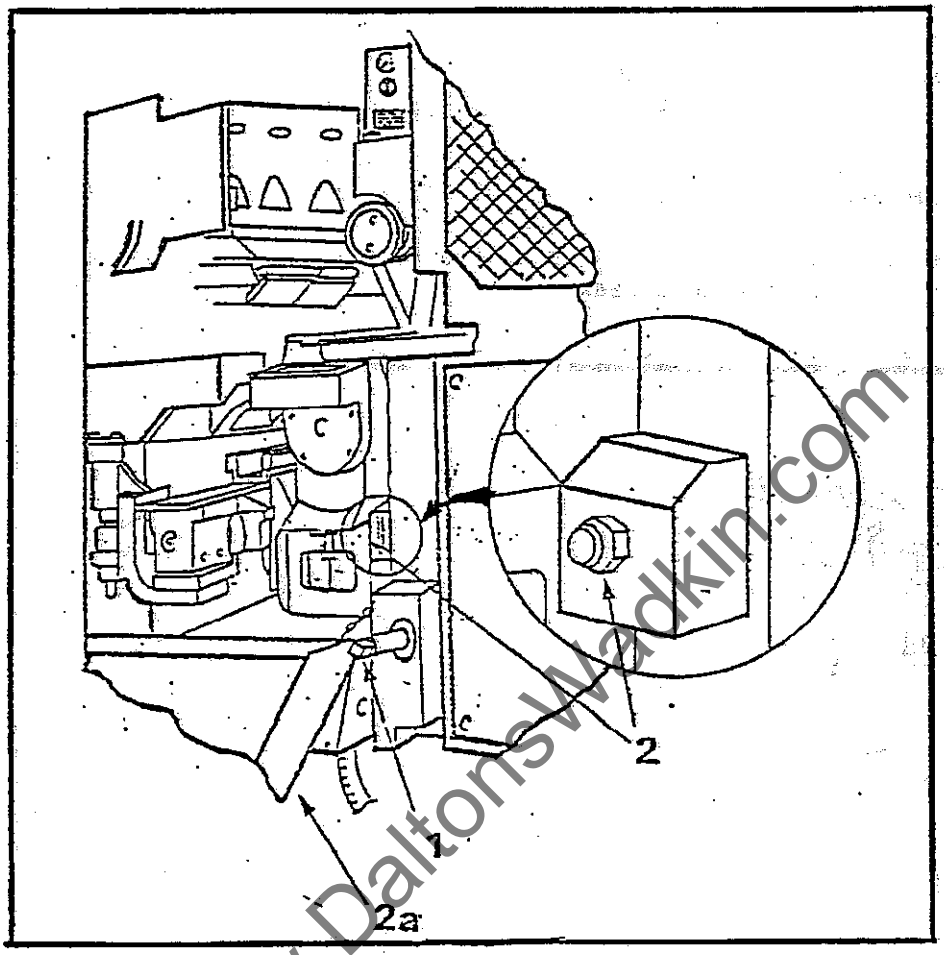
REAR VIEW OF ENCLOSED FEEDWORKS SHOWING GEARBOX AND PULLEY DRIVE



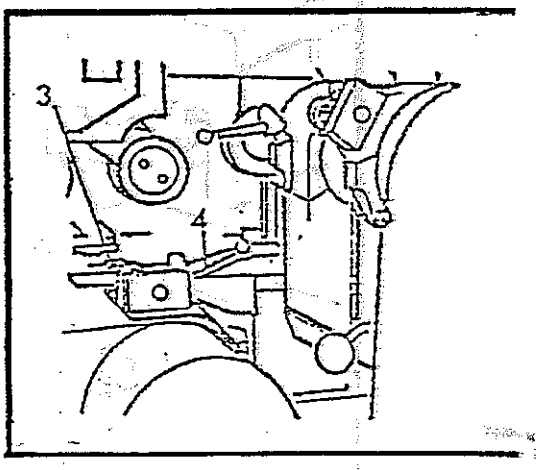
FEED SPEED INDICATOR PLATE

FIRST BOTTOM HORIZONTAL HEAD

Vertical adjustment of the First Bottom Horizontal Head is made by applying a crank handle to the square (1). The nut (2) is the lock for this movement. To loosen or tighten the nut will necessitate the employment of a spanner. Access to the locking nut is via door (2a).



Horizontal adjustment is made by means of square (3). Locking lever (4) is the lock for this movement.



TOP HEAD AND CHIPBREAKER

Vertical adjustment of the top head is made by applying a crank handle to the square (1). Nut (2) is the lock for this movement.

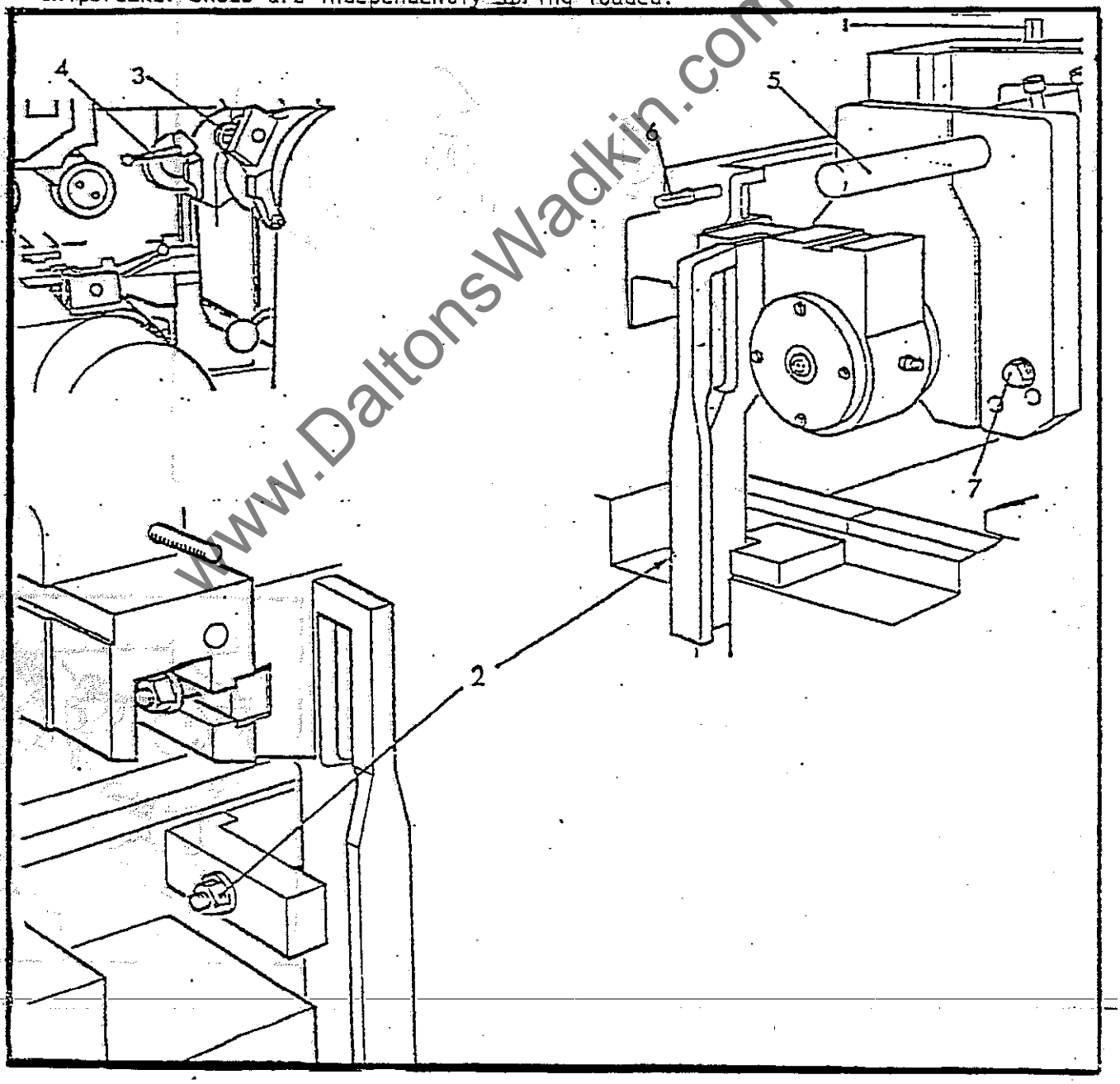
Horizontal adjustment is made by square (3). Locking lever (4) is the lock for this movement.

The chipbreaker hood can be swung back for access to the cutterblock by lifting handle (5). The hood is held back by pushing in shaft (6).

The chipbreaker may be set in one of three positions (relative to hood) for different cutterblock diameters. Stud (7) locks the chipbreaker in position.

The chipbreaker hood may be adjusted in the vertical from a stud and locking 'nut' at the rear of the chipbreaker.

Chipbreaker shoes are independently spring loaded.

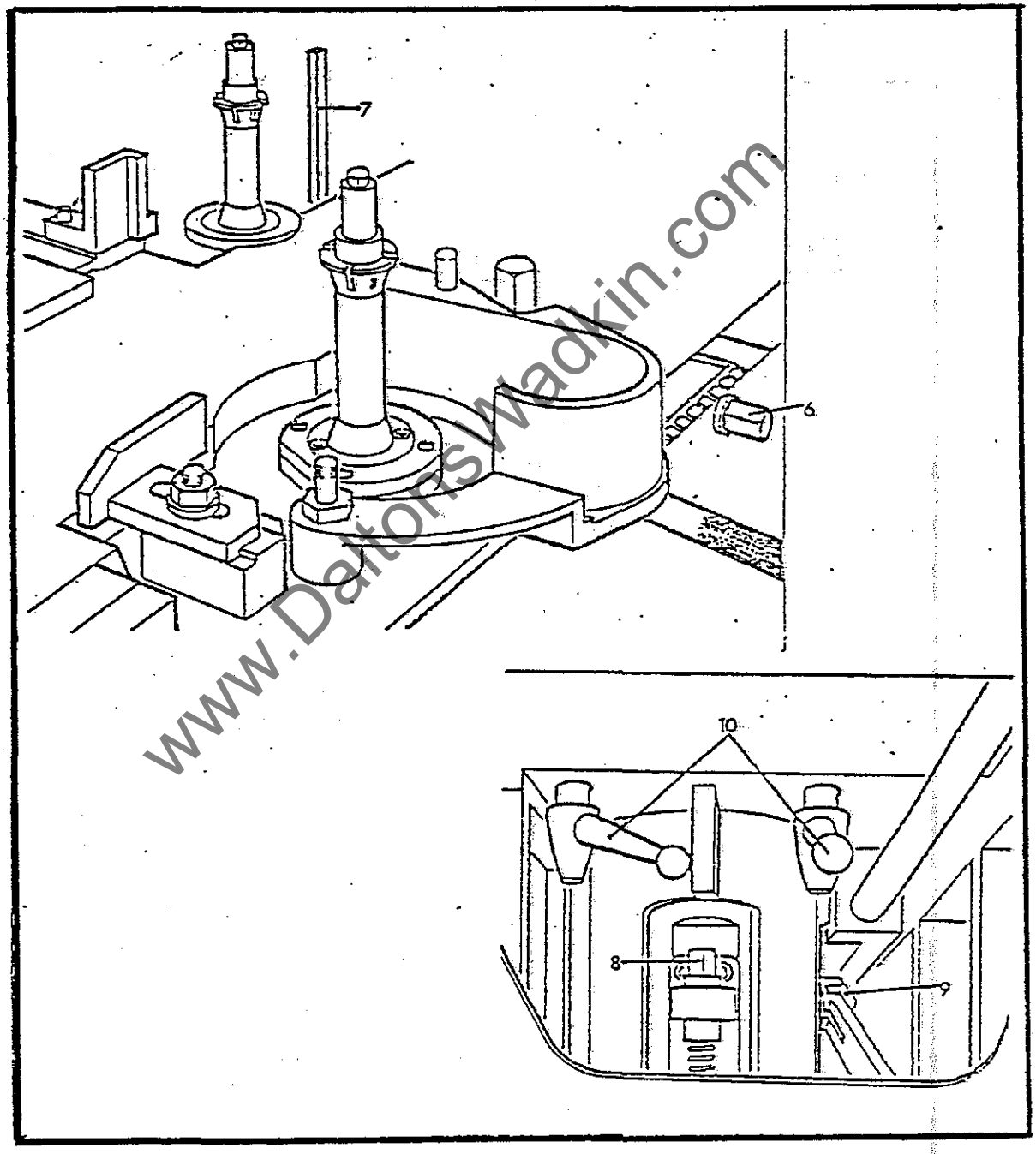


FENCE SIDE HEAD

Horizontal adjustment of fence side head is made by applying a crank handle to square (6) at front or rear of machine. Nut (7) is the lock for this movement.

Vertical adjustment of fence side head is made by means of a square (8). Nut (9) is the lock for this movement.

The bedplate may be adjusted to allow for larger cutting circles by slackening off two locking handles (10) (underneath the carriage from front of machine) and sliding plate by hand.



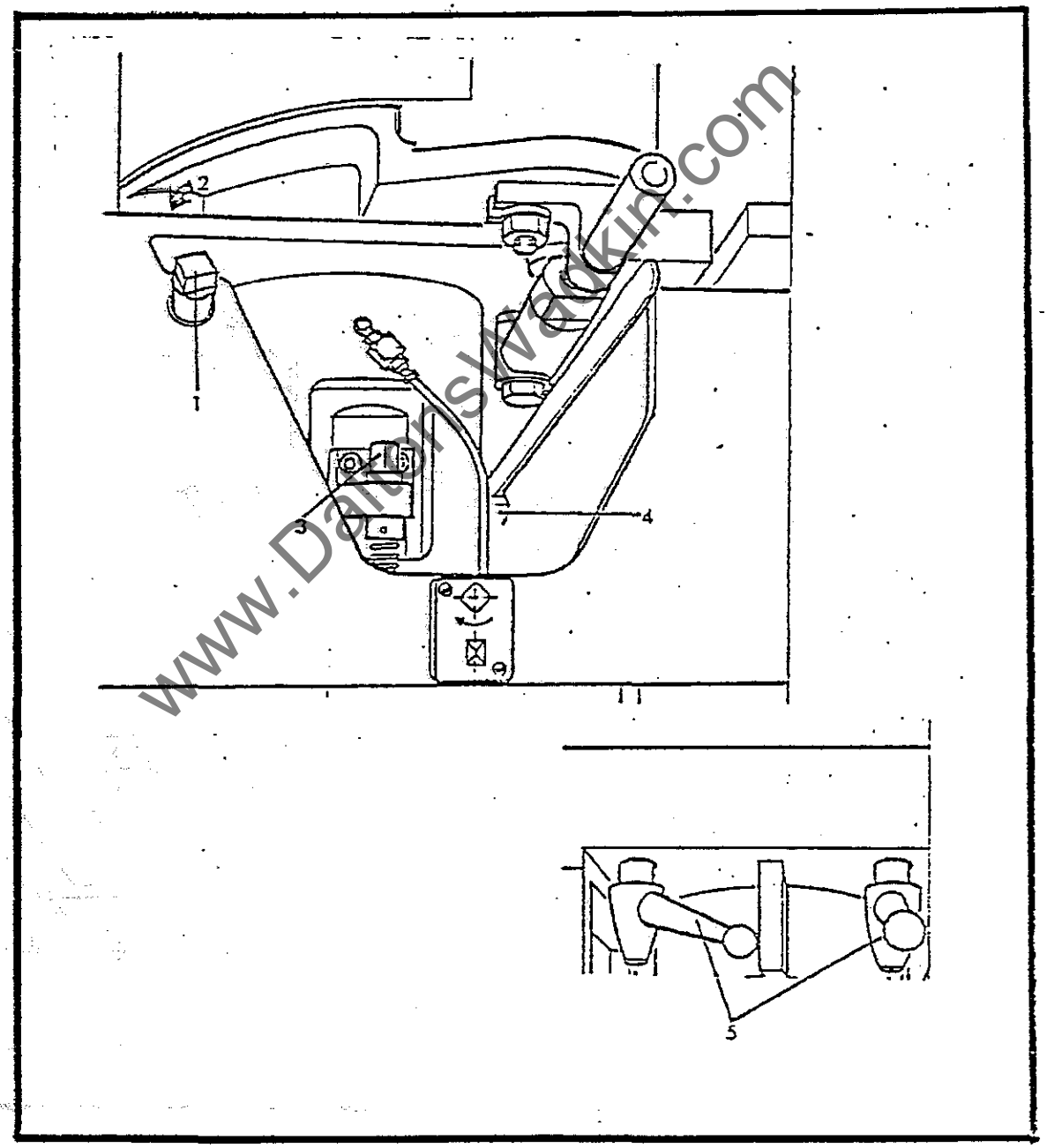
SIDE HEADS

Near Side Head

Horizontal adjustment of near side head is made by means of a crank handle on the square (1). Nut (2) is the lock for this movement.

Vertical adjustment of near side head is made by means of a square (3). Nut (4) is the lock for this movement.

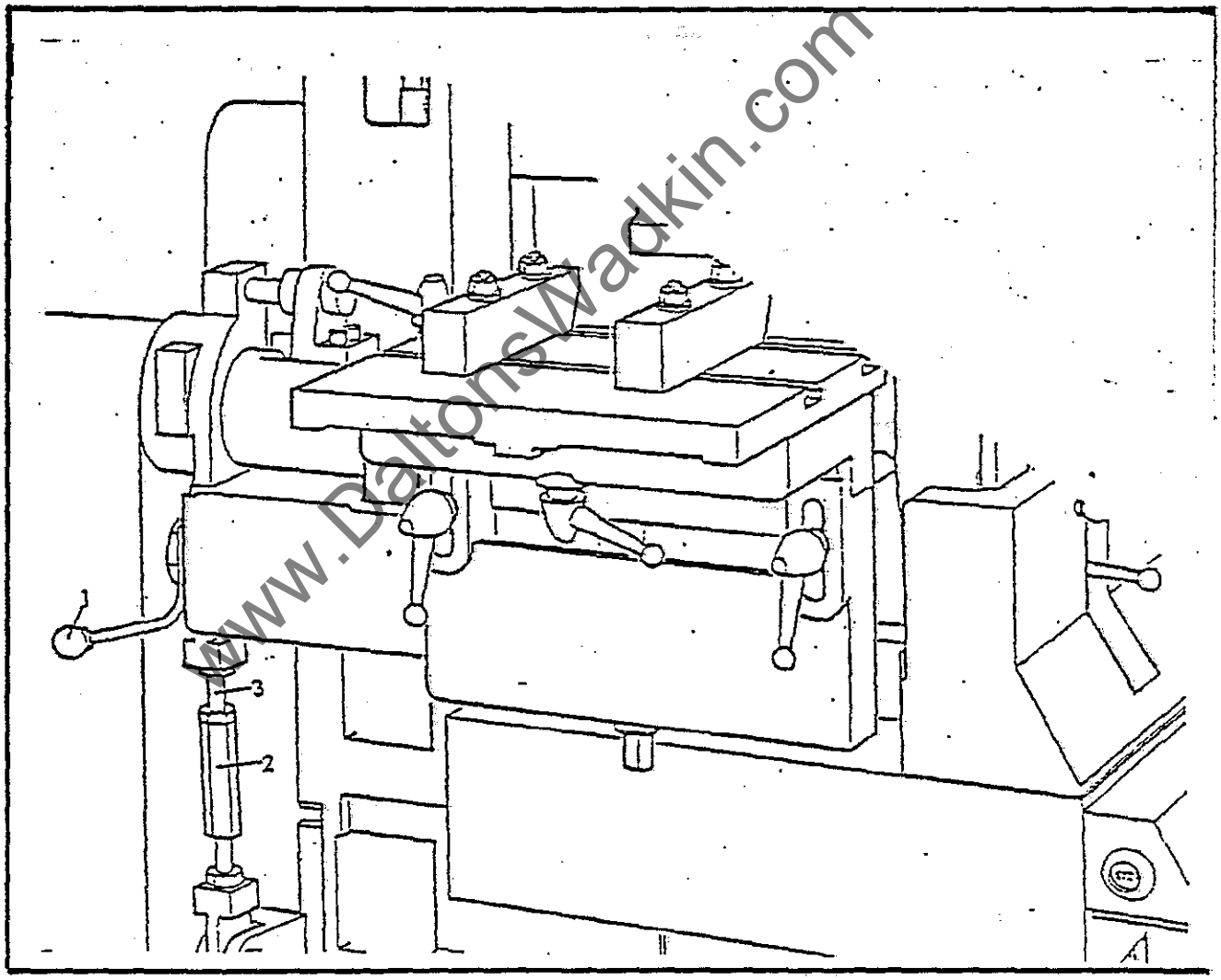
The bedplate may be adjusted to allow for larger cutting circles by slackening off two locking handles (5) (underneath the carriage at the rear of the machine) and sliding plate by hand.



HORIZONTAL HEAD DRIVES (BELT)

To change speed, lift handle (1). This raises the motor and allows belts to be changed. Lower handle back to original position after changing speed.

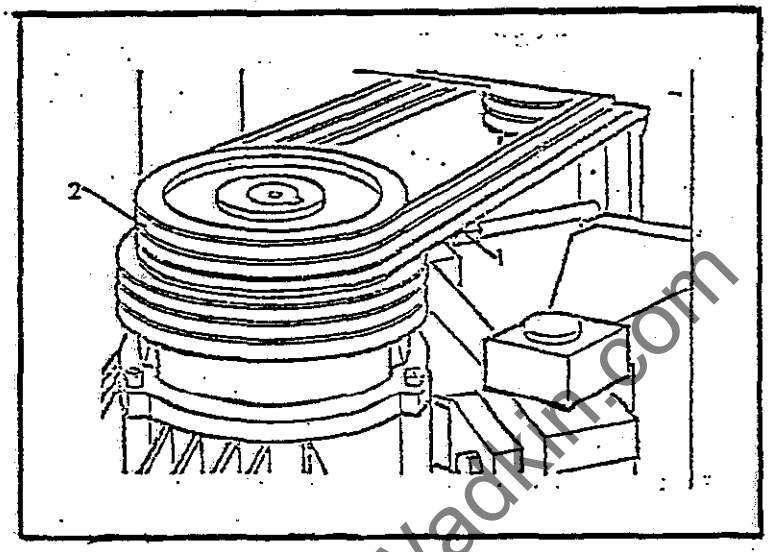
To tension belts, rotate turnbuckle (2). This is locked with locknut (3).



SIDE HEAD DRIVES (BELT)

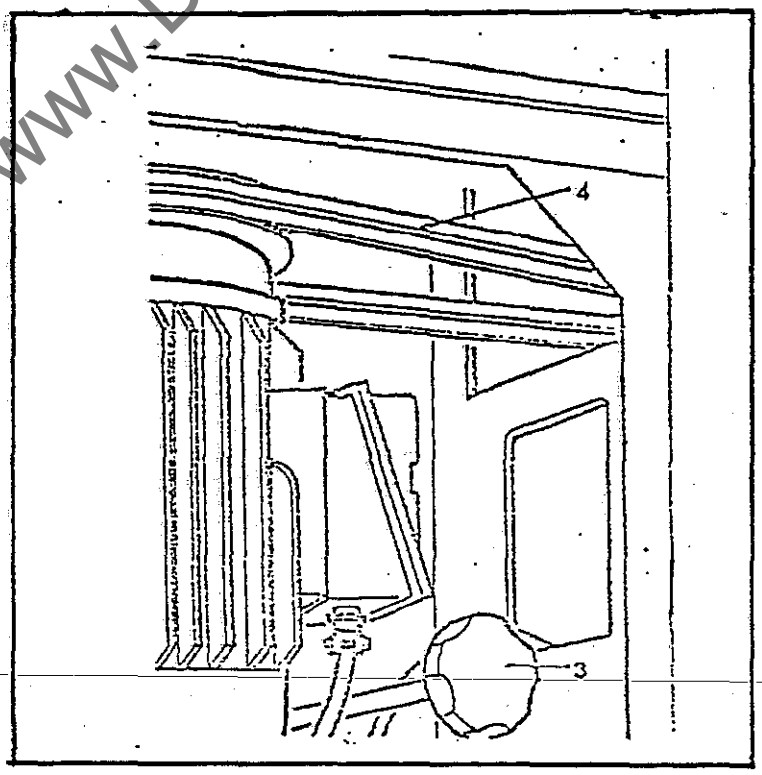
FENCE SIDE HEAD DRIVE

To change (or replace belts), remove cover, release tension via square (1), change belts (2) and re-tension.



NEAR SIDE HEAD DRIVE

Access to near side head belts is through doors at front of machine. To change speed (or replace belts), release tension by means of knob (3), change belts (4) and re-tension.



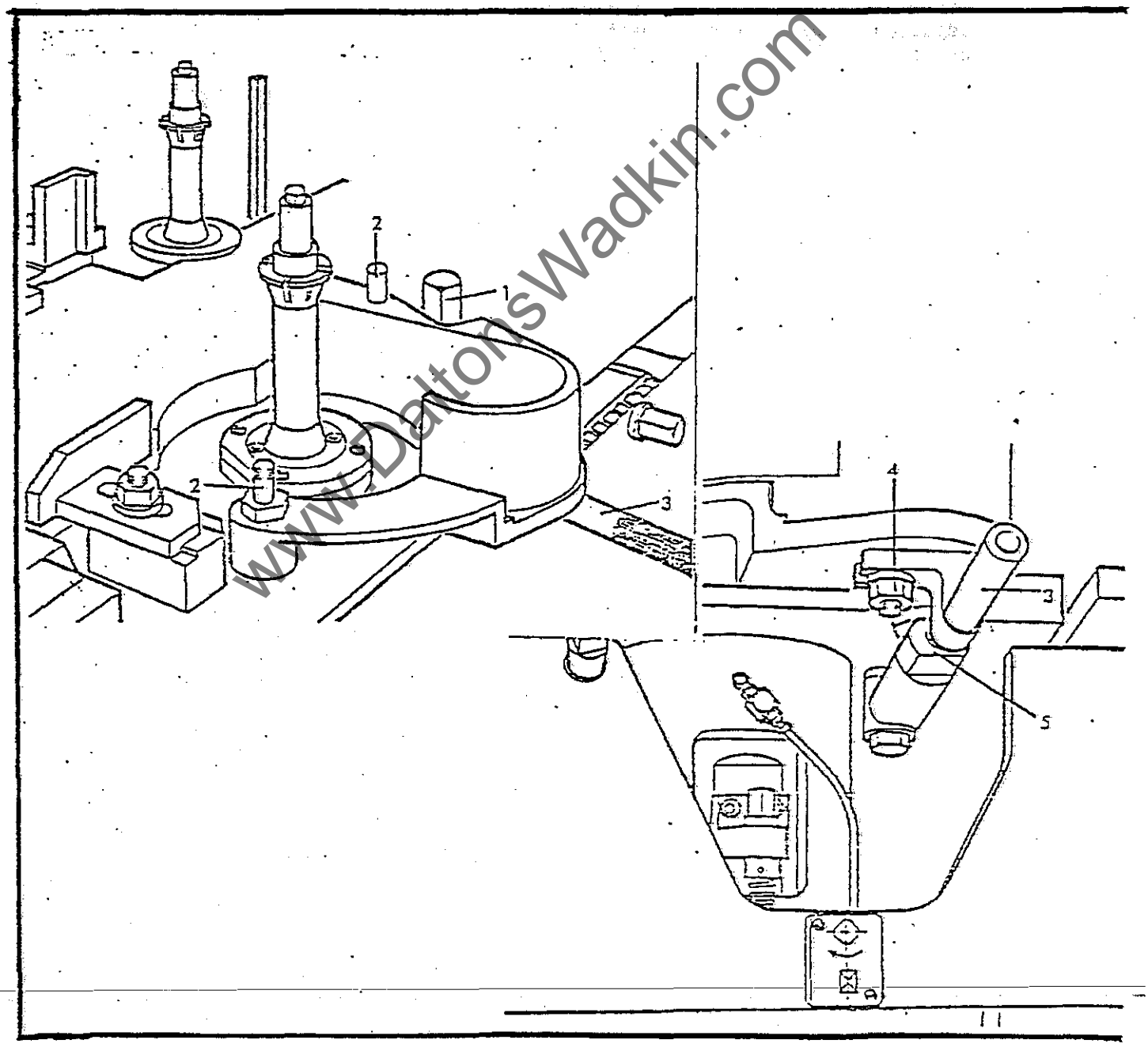
NEAR SIDE HEAD CHIPBREAKER

The chipbreaker may be set in one of two positions, to allow for different cutting circle diameters, by repositioning locking screw (1).

The dust hood is removed by lifting from locating pins (2).

Handle (3) can be swung sideways, (in the direction of arrow) by releasing nut (4). This allows the chipbreaker mechanism to be swung clear of the block.

No adjustment to spring pressure is required, releasing locknut (5) enables adjustment of the chipbreaker position to be made by knurled handle (3).



FENCES AND TIMBER GUIDE

The infeed fence (1) is fixed and requires no adjustment.

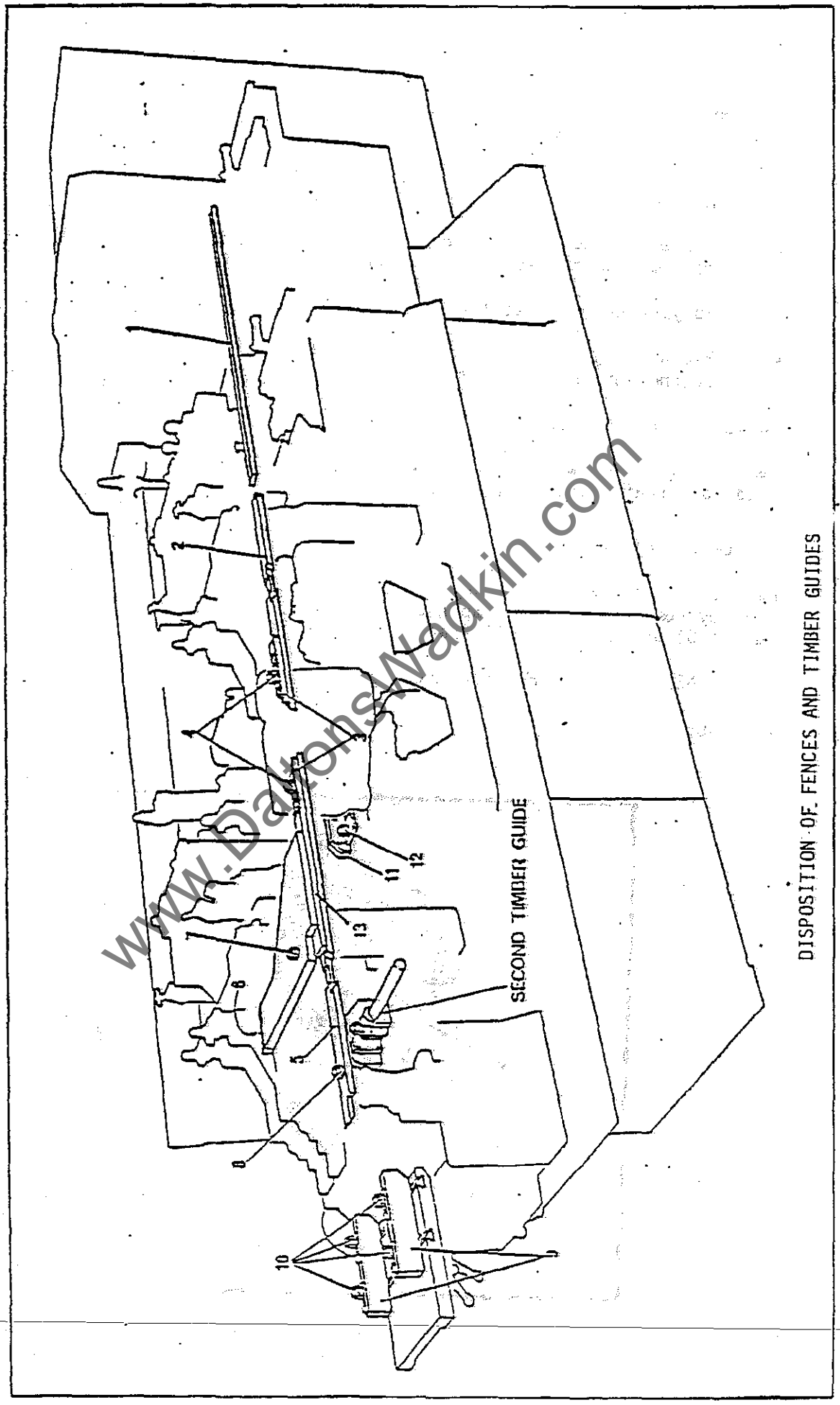
The fence (2) under the first top horizontal head is also fixed and requires no adjustment.

A timber guide (11) is provided immediately after the near side vertical head. Transverse adjustment relative to the near side head (to cater for different cutting circle diameters) can be achieved by slackening off nut (12) and sliding by hand.

The fence shoes (3) located either side of the fence side head are adjusted by slackening off nuts (4) and sliding by hand. This is to allow for variation in cutting circle diameters.

The fence and guide at the second top horizontal head and before the second bottom horizontal head is an assembly of parts (5) and (13). This is adjustable by means of square (6) at the rear of the machine. (7) and (8) are the two locking nuts for this fence.

The outfeed fences (9) are adjustable both laterally and transversely by slackening off nuts (10) and sliding by hand.



REMOVAL OF FEED ROLLS

The Feed Rolls (10), (11) OR (12) and (13) must be removed after excessive wear OR when it is required to fit different types of rolls. The following types are available.

1) Knurled chrome for Hardwood Mouldings.

2) Fluted for normal duty work. For heavy duty work a second fluted roll may be fitted in the second top roll position.

3) Polyurethane coated for pre-machined work.

4) Plain for general purpose work. These are normally fitted in the second top and second bottom position.

TO REMOVE THE TOP FEED ROLLS (10) and (11).

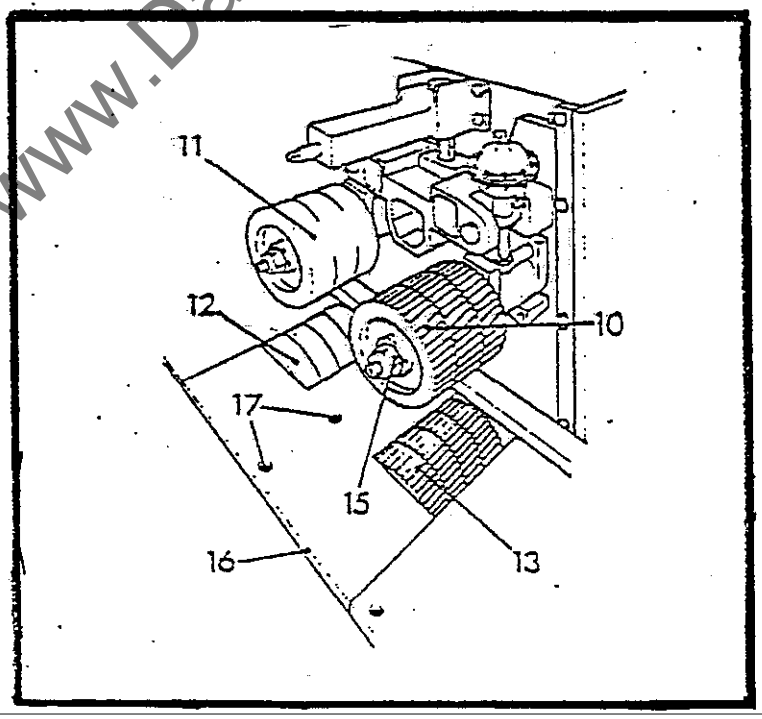
* Remove cover (14) and release the self locking retaining nuts (15) at the Feed Roll shafts and withdraw the feed rolls.

TO REMOVE BOTTOM FEED ROLLS (12) and (13).

Remove fill-in Table section (16) between the bottom feed rolls (12) and (13) by removing the two cap head screws (17) and release the self locking nuts (15) at the Feed Roll Shafts and withdraw the feed rolls.

TO FIT NEW ROLLS - reverse the procedure.

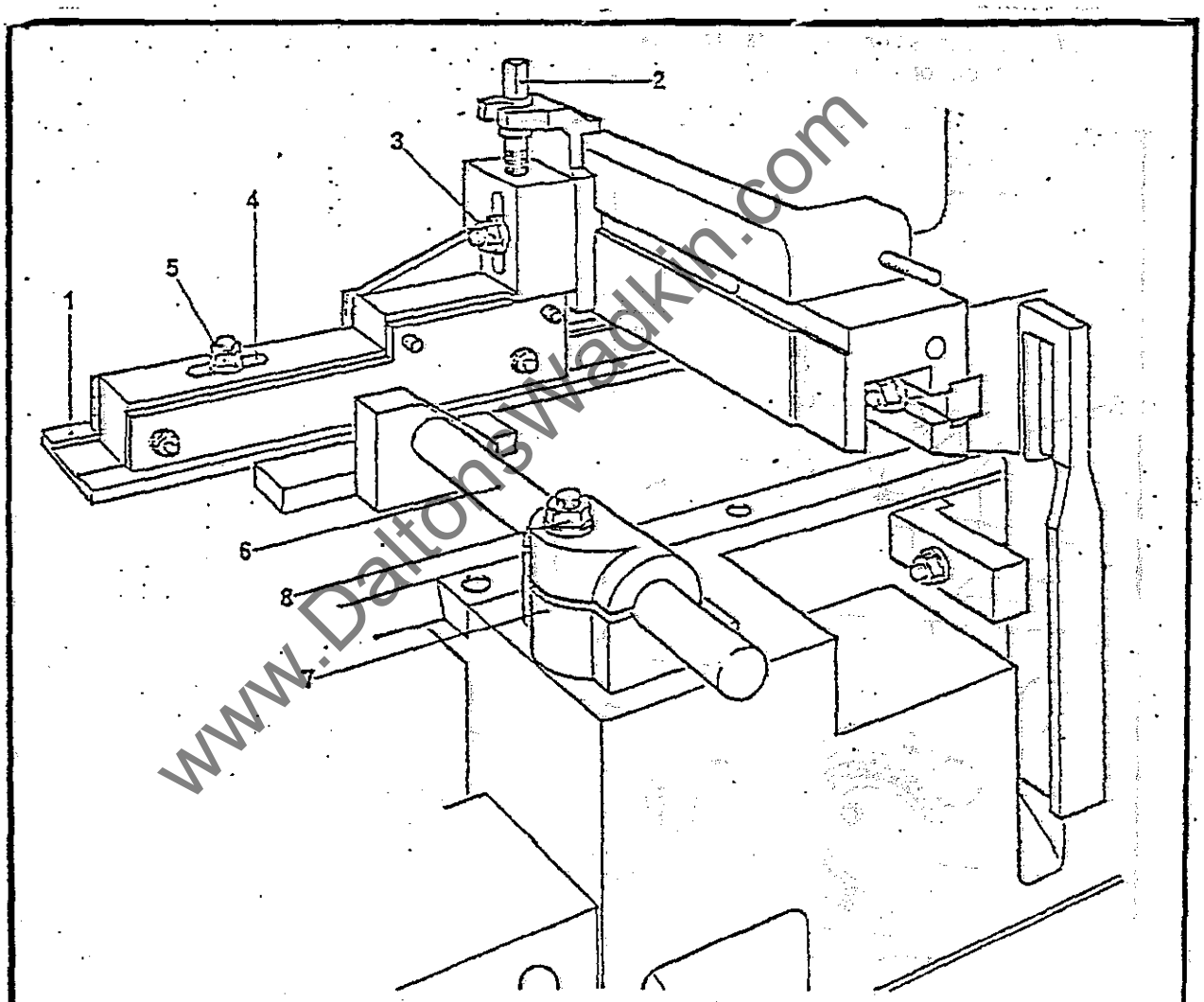
* See page 11



TOP PAD PRESSURE

The pad pressure (1) are all interchangeable on both the square bar mounting and the chipbreaker support mounting.

The main vertical adjustment when the pressure is mounted on the square bar is by means of the square (2) on top of the beam. The square (2) also provides the means for fine vertical adjustment. Nut (3) is the lock for this movement. The pad can be adjusted laterally about the elongated slots (4) and locked in position by nut (5).



TOP PAD PRESSURE AND TIMBER GUIDE POSITIONED BETWEEN THE SECOND TOP HORIZONTAL HEAD AND SECOND BOTTOM HEAD

TOP ROLLER PRESSURE

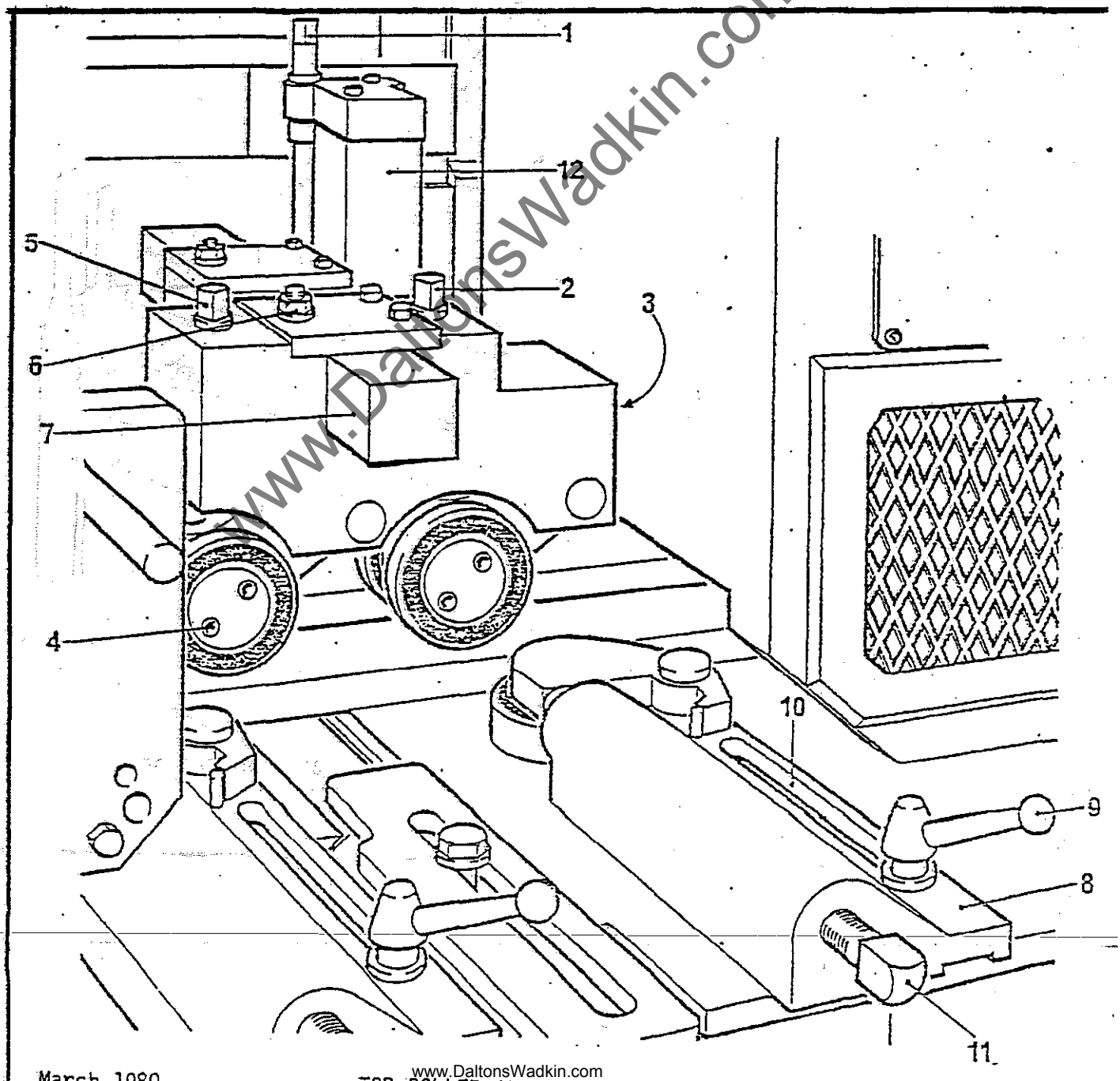
The vertical adjustment of the top roller pressure (12) is by means of applying a crank handle on square (1). Nut (3) is the lock for this movement.

The horizontal adjustment of the roller pressure is made by slackening off nuts (6) and sliding the pressure by hand along bar (7). The spring pressure applied to each roller can be adjusted by means of screws (2) and (5).

NARROW STOCK

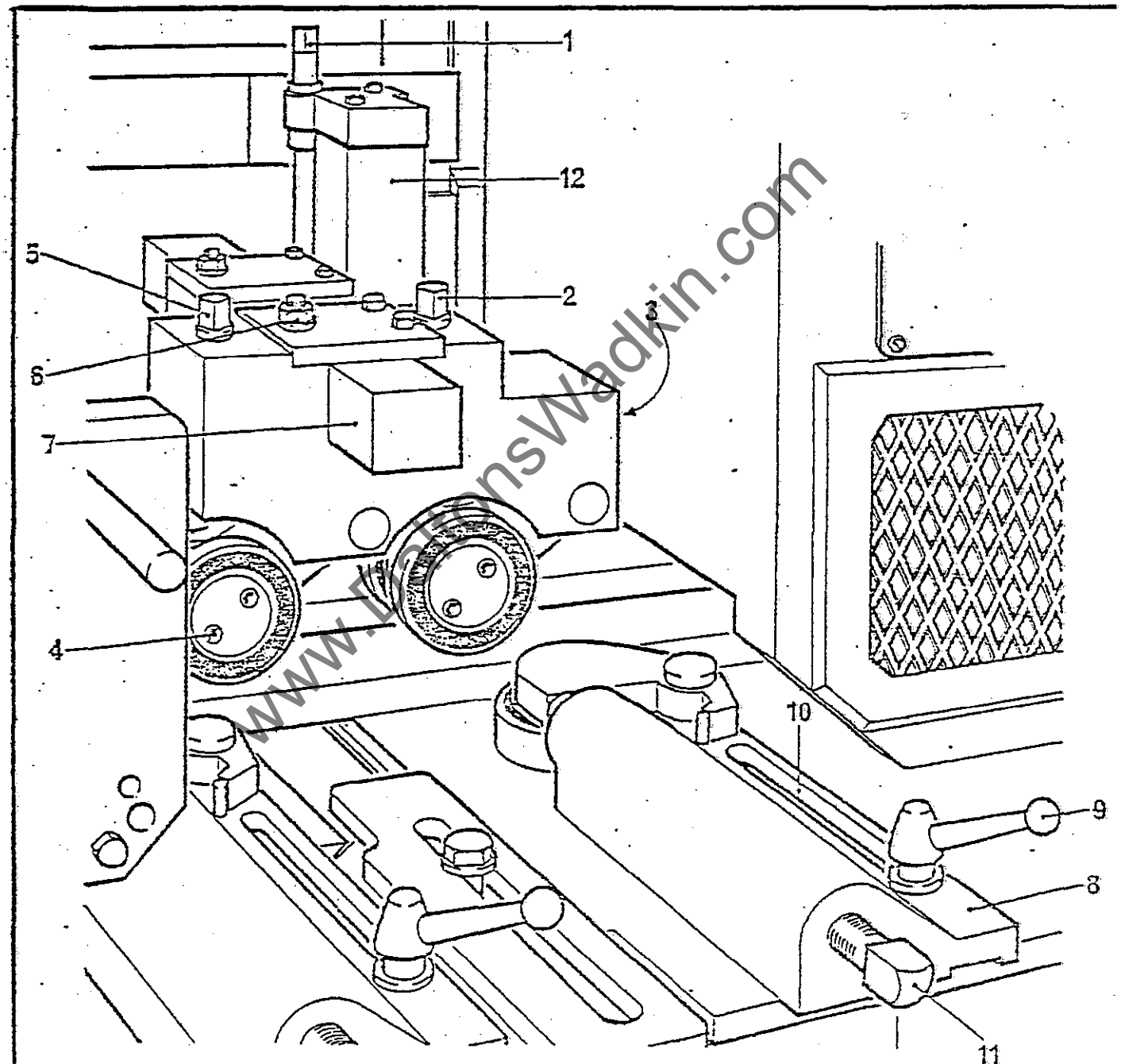
When cutting narrow stock it may be necessary to remove the outside roller from the pressure. To achieve this it will be necessary to remove the capscrews (4) this will enable side pressure access to the timber.

If the occasion demands the two narrow rolls (supplied with the machine) can be fitted on the inside of the pressure.



SIDE PRESSURES .

Three front roller pressures (8) are usually supplied with the machine. To cater for different widths of timber adjustment if effected by slackening off locking lever (9) and sliding the pressure (8) by hand about the elongated slot (10). A series of holes is provided across the bed. Locking lever (9) should be used in the most suitable hole. The spring pressure applied to the roller can be adjusted by means of screw (11).



TOP ROLLER AND SIDE PRESSURES

FENCES AND TIMBER GUIDE

The infeed fence (1) is fixed and requires no adjustment.

The fence (2) under the first top horizontal head is also fixed and requires no adjustment.

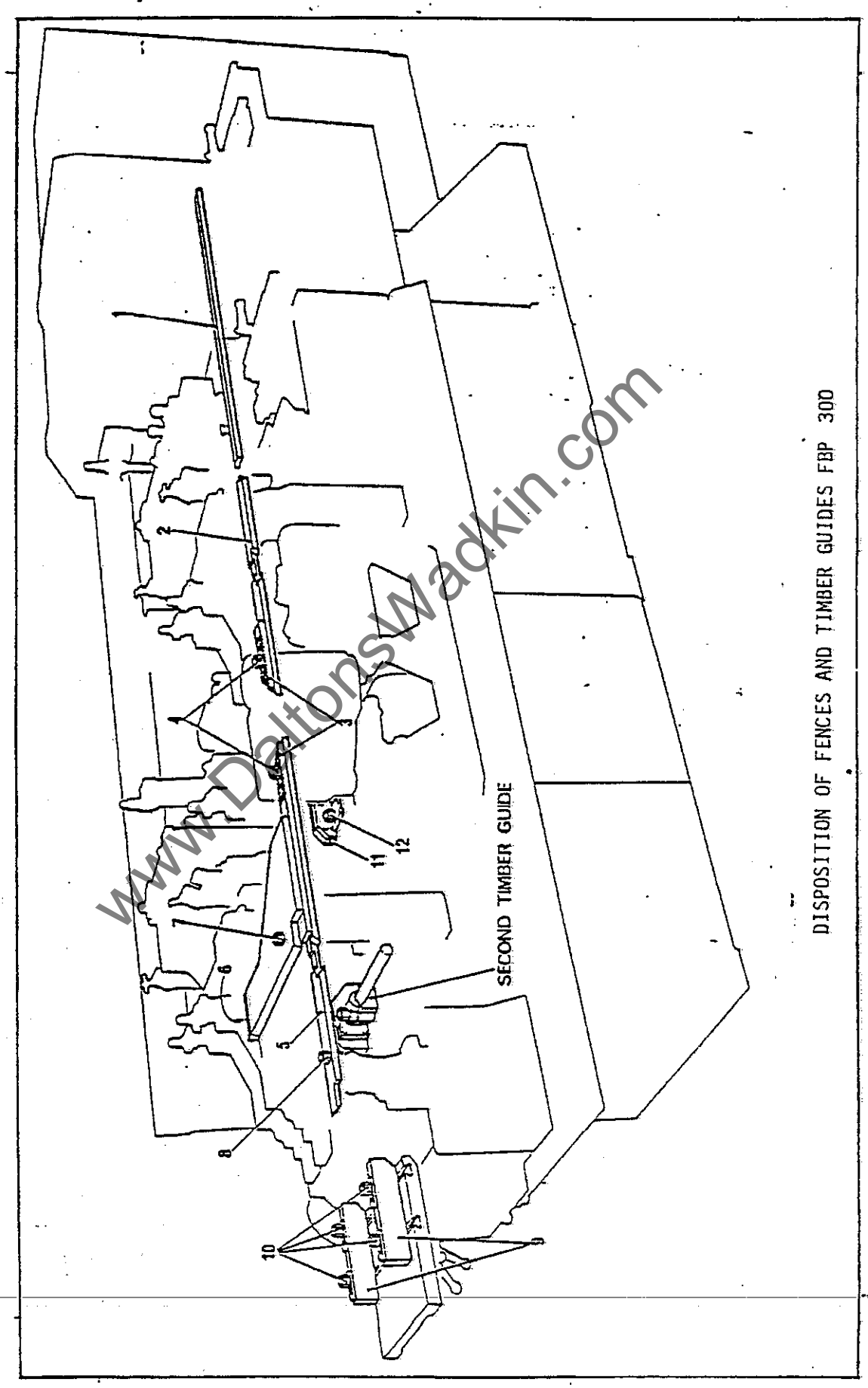
The fence shoes (3) located either side of the fence side head are adjusted by slackening off nuts (4) and sliding by hand. This is to allow for variation in cutting circle diameters.

The fence (5) under the second top horizontal head is adjustable by means of square (6) at the rear of the machine. The two nuts (7) and (8) are the locks for this fence.

The outfeed fences (9) are adjustable both laterally and transversely by slackening off nuts (10) and sliding by hand.

A timber guide (11) is provided immediately after the near side vertical head. Transverse adjustment relative to the near side head (to cater for different cutting circle diameters) can be achieved by slackening off nut (12) and sliding by hand.

A second timber guide (6) (see page (24) is positioned between the second top horizontal head and the second bottom horizontal head. This can be adjusted transversely by slackening off nut (8) and sliding by hand through mounting bracket (7).



DISPOSITION OF FENCES AND TIMBER GUIDES FBP 300

PREPARATORY STEPS TO MACHINING - FBP 300

Having knowledge of the dimensions of the finished workpiece the following sequential procedures should take place.

1. Set the section of fence which extends from the fence side head to the outfeed table. The setting should allow for the appropriate amount of timber removal by the fence side head. The method of setting is outlined on page 26 and page 21.

2. Adjust the fence side head to bring the cutting circle in line with the outfeed fence. Adjust the table to within 3mm to 6mm (1/8in. - 1/4in.) in front of the cutting circle. The method of setting is outlined on page 16.

3. Set the fence gap at the fence side head to clear the cutting circle by adjusting the fence shoes located on each side of the fence side head. The method of setting is outlined on page 16.

4. Set the vertical position of the infeed table section between the feed rolls and the first bottom head.
The setting should coincide with the amount of timber to be removed by the first bottom head.
Adjustment is via the square (9) lock in position following adjustments. See page 11.

5. The bottom feed roll should be adjusted to be 0.8mm (1/32in.) proud of the table by handle (8). 'Rough timber requires a greater projection'. See page 11.

6. The bottom head cutter block should be adjusted so that the cutting circle is level with the outfeed table and the cutterblock is laterally adjusted to be 3mm (1/8in.) behind the rear fence line.

7. Set the clearance of the stock gate (39) at the infeed so as to clear incoming material by 6mm (1/4in.) see page 11.

8. The first top head should be set to machine the required thickness. Vertical adjustment is via square (1) and lock nut (4). Lateral adjustment of cutter head is via square (6) and locking lever (7) and should be adjusted to be 3mm (1/8in.) behind the rear fence line see page 15.

9. The first top head chipbreaker shoes should be set for clearance to the cutting circle of the block and can be set to any one of three positions by stud (7) See page 15.

10. Chipbreaker shoes should rest on the timber with approximately 3mm (1/8in.) depression.

    NOTE: A JACKING SCREW IS PROVIDED ON THE REAR OF CHIPBREAKER HOOD TO RESTRICT DOWNWARD MOVEMENT OF THE HOOD ASSEMBLY.

11. Roller and pad pressures should be raised to permit free movement of timber for setting purposes and laterally adjusted to approximate positions for the timber to be machined.

12. The near side head should be set to machine the timber to the required width. Lateral movement via square (2) locknut (1). Adjust table to within 3mm to 6mm (1/8in. - 1/4in.) of cutting circle locking levers, under bedway through rear aperture see page 17.

PREPARATORY STEPS TO MACHINING - FBP 300 CONTD.

13. Near side head chipbreaker should be set by selection of one of the two positions by adjusting screw releasing the knurled handle locking nut and turn the knurled handle to align the chipbreaker shoes with the cutting circle.

14. Where second OR third top heads are fitted set head and chipbreaker as in procedures 9, 10 and 11.

15. Where second bottom head is fitted the outfeed table is set level with the cutting circle using a straight edge and the table is moved in OR out to provide minimum clearance to the cutting circle.

16. Adjust the vertical position of the head and outfeed table to gain the cut required, relative to the machine table.

MACHINING

1. Select a piece of timber to be machined, enter to the first feed roll allowing 6mm (1/4in.) clearance on the stock gate.

   NOTE: (WHERE AIR OPERATED ROLLS ARE FITTED THERE MUST BE A CLEARANCE OF AT LEAST 15MM (5/8IN.) BETWEEN THE ROLL AND THE TOP FACE OF THE TIMBER). WHERE HAND ADJUSTABLE ROLLS ARE FITTED A SUITABLE GRIPPING PRESSURE SHOULD BE SET ON THE TIMBER.

2. Adjust the first side pressure on the infeed table up to the timber with no exerted pressure (clearance - this is a guide only) where short stock is run a similar side pressure should be mounted between the feed rolls.

3. Inch (jog) forward the timber until it enters the first side pressure foller, then adjust in the roller to give 4mm (3/16in.) depression on the rollers.

4. Lower the first top roller pressure to 3mm (1/8in.) depression on the roller.

5. Start first bottom head cutterblock.

6. Inch (jog) the timber through until it just causes the first top head chipbreaker shoes to lift.

7. Start first top head and inch (jog) timber through until it enters 50mm (2in.) under the following top pressure (pad).

8. Wind the pressure down to touch the timber. This pressure is spring loaded and should not be 'wound' down until solid.

9. Inch (jog) the timber through to the next side pressure (roller) or (shoe) and set 3mm (1/8in.) depression.

10. Start the remaining heads.

11. Inch (jog) to move the timber up to the back fence.

12. Set second top pressure (first pad) to hold.

13. Inch (jog) timber through to end (back) of second pad pressure.

14. Wind down pressure to hold over the full length.

15. When a second top head is fitted Inch (jog) until the timber just causes the second top head chipbreaker shoes to lift.

16. Off up the near side fence to the approximate width of finished timber.

17. Inch (jog) through the timber until it enters 50mm (2in.) under the following top pressure pad.

18. Wind down the pressure to just touch the timber. This pressure is spring loaded and should not be 'wound' down until solid.

19. Inch (jog) through the timber approximately up to the last bottom head.

20. Reset pressure as in (21) to hold over the full length.

MACHINING.....CONTD

21. Set the outfeed side pressure to hold along the length.

22. Inch (jog) through timber to the outfeed table, run one complete place and check dimensions.

23. If the finished piece of timber is not dimensionally correct adjust where necessary.

LUBRICATION AND MAINTENANCE

In designing the "WADKIN" Four Sided Planer and Moulder much attention has been given to the question of maintenance and every endeavour has been made to keep lubrication maintenance to a minimum. In consequence of this 'sealed for life' bearings and 'oilite' bushes have been widely used.

However, there are exceptions which are as follows:-

In electric motors where 'sealed for life' bearings have not been fitted these are provided with grease nipples.

DAILY

Oil the machine and Feed Roll Slideways, all the Raise and Lower screws, also the Jointer Slideways at their associated lubricating nipples - using "WADKIN" L.4 oil.

NOTE: ACCESS TO THE FEED ROLL NIPPLES NECESSITATES THE REMOVAL OF THE WIRE MESH GUARD(S) AT THE FRONT OF THE FEEDWORKS.

CUTTERBLOCK SPINDLES - have been fitted with permanently lubricated bearings and should give trouble free service.

The pneumatic lubricating unit is conveniently located on the main frame of the machine under the infeed table. It comprises of a filter, regulator, "SOLENOID" and oil dispenser.

The latter should be filled with "MOBIL" ALMO' NO: 1 oil

The oil dispenser should be adjusted to give one drop of oil every minute and the aid.pressure should be regulated to give a pressure of 5.63kg/cm^2 (80lb/sq.inch).

IMPORTANT

If water condensation collects in the air line, it is recommended that an electrical extractor and water trap complete with 'turn off' gauge be incorporated in the circuit immediately before the filters.

Is is strongly recommended that the valves be opened daily to ensure that water does not enter the air line.

Each Universal joint driving the feed rolls have three lubricating points, one is and oil lubricator which should be charged with "WADKIN" Grade L4 oil.

EVERY THREE MONTHS

Lubricate all electric motors with "WADKIN" Grade L6 grease at the nipples provided.

All Universal joints driving the feed rolls with "WADKIN" Grade L6 grease at each of the two nipples provided.

Check the quantity of oil in the oil bath of the gearbox of the feed rolls oil bath holds three litres (Approximately six pints) of "WADKIN" Grade L4 oil.

Check the quantity of lubricant in the gearbox of the feedworks. Before leaving our works the gearbox is packed with 5.1 Kilos (11.3lbs) of "SHELL" Blameta Grease Grade 00.

LUBRICATION AND MAINTENANCE CONTINUED.

The machine is fitted with an electric oil lubricating pump which will automatically lubricate the machine bed and fences. The pump is electrically initiated when the disconnect switch at the electrical control cubicle is closed. The pump is uni-directional (clockwise rotation - when viewed from the pump inlet end), the built relief valve returns excess pressure oil to the tank internally; the tank holds 4.5 litres (8 pints) of oil. The nominal discharge is 390cc per minute using oil of 320 centistokes viscosity. The nominal discharge 14 Bar back pressure is 330cc per minute. An "ON/OFF" electric toggle switch is provided at the pump - operation of which allows the oil flow to be regulated should the oil flow be too great to suit the prevailing working conditions.

The oil reservoir is fitted with a mercury operated float switch which interrupts the motor circuit when the content level has fallen to a pre-determined minimum. The operation of the switch operates a red warning indicator light located in the electrical control station conveniently situated on the underside of the infeed bed of the machine. The lubricator is fitted a filter Part No. 67833.

APPROVED LUBRICANTS.

WADKIN GRADE	CASTROL	B.P.	SHELL	MOBIL	ESSO	GULF	CALTEX
L.1	Hyspin AWS 32	Energol H.L.65	Tellus 27	DTE Oil Light 24	Nuto 44 or Esstic H 44	Harmony 43 AW	Rando Oil HDA
L.2	Magna XH	Energol H.P.60	Vitrea 75	Vactra Extra Heavy	Esstic 65	Service 13	Ursa P40
L.4	Magna ED	Energol H.P.20	Vitrea 33	Vactra Oil Heavy Medium	Esstic 50	Service 51	Ursa P20
L.6	Spheerol AP 3	Energrease LS 3	Alvania Grease No.3	Mobilplex Grease No.48	Beacon 3	Gulfcrown Grease No.3	Regal Startak Premium

L.1 Oil — Plain mineral oil with anti-corrosion, anti-oxidization, anti-wear, anti-foam performance.

L.2 Oil — Plain mineral oil (viscosity 150 centi-stokes)

L.4 Oil — Plain mineral oil (viscosity 68 centi-stokes, viscosity 32 centi-stokes).

L.6 Oil — Grease - multipurpose catering for 58% of all greases providing extreme pressure characteristics.

DATE SIG
ALT. No. 20.5.01

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1) "ATLAS" "COPCO" CYLINDER
2) QUICK EXHAUST VALVE KQE 1/B4
3) 5. PORT VALVE KMV9/95
4) 3. PORT VALVE - PUSH BUTTON KMV1/43
5) 3. PORT VALVE - "SOLENOID" OPERATION KMVS2/20/4P
6) PRESSURE REGULATOR KASR 100PB4
7) PRESSURE GAUGE 0 - 100 304 - M1E0
8) LUBRICAT OR CONTROL ASSEMBLY K30 61 717

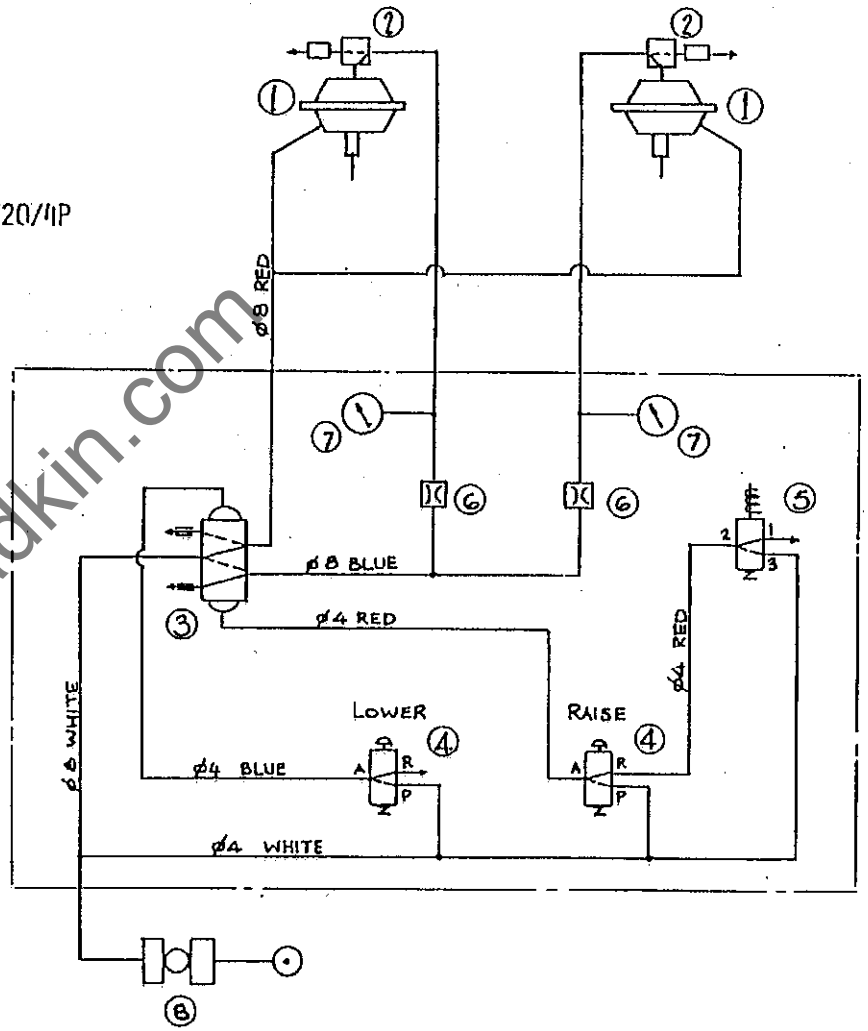


DIAGRAM FOR PNEUMATIC FEEDROLL CONTROL

GENERAL TOLERANCES LIMITS & SURFACE FINISH UNLESS STATED

FLATNESS, STRAIGHTNESS, SQUARENESS, PARALLELISM	⏥ ⏤ ⊥ //	0.04 IN ANY LENGTH UP TO 300, PLUS 0.04/300 THEREAFTER
RUN OUT	↗	0.08mm T.I.R. MAX
CYLINDRICITY	⌭	0.02mm MAX
ANGULARITY	∠	± 0.25° MAX
SYMMETRY	⌯	
WHOLE NUMBERS		± 1mm NON ACCUMULATIVE
1 DECIMAL PLACE		± 0.1mm
2 DECIMAL PLACE		± 0.05mm

▽ — 63·25.0 MICRONS. ROUGH M/C
▽▽ — 16·3.2 MICRONS. FINISH M/C
▽▽▽ — 16·3.2 MICRONS. ROUGH GRD
▽▽▽▽ — 04·0.8 MICRONS. FINISH GRD

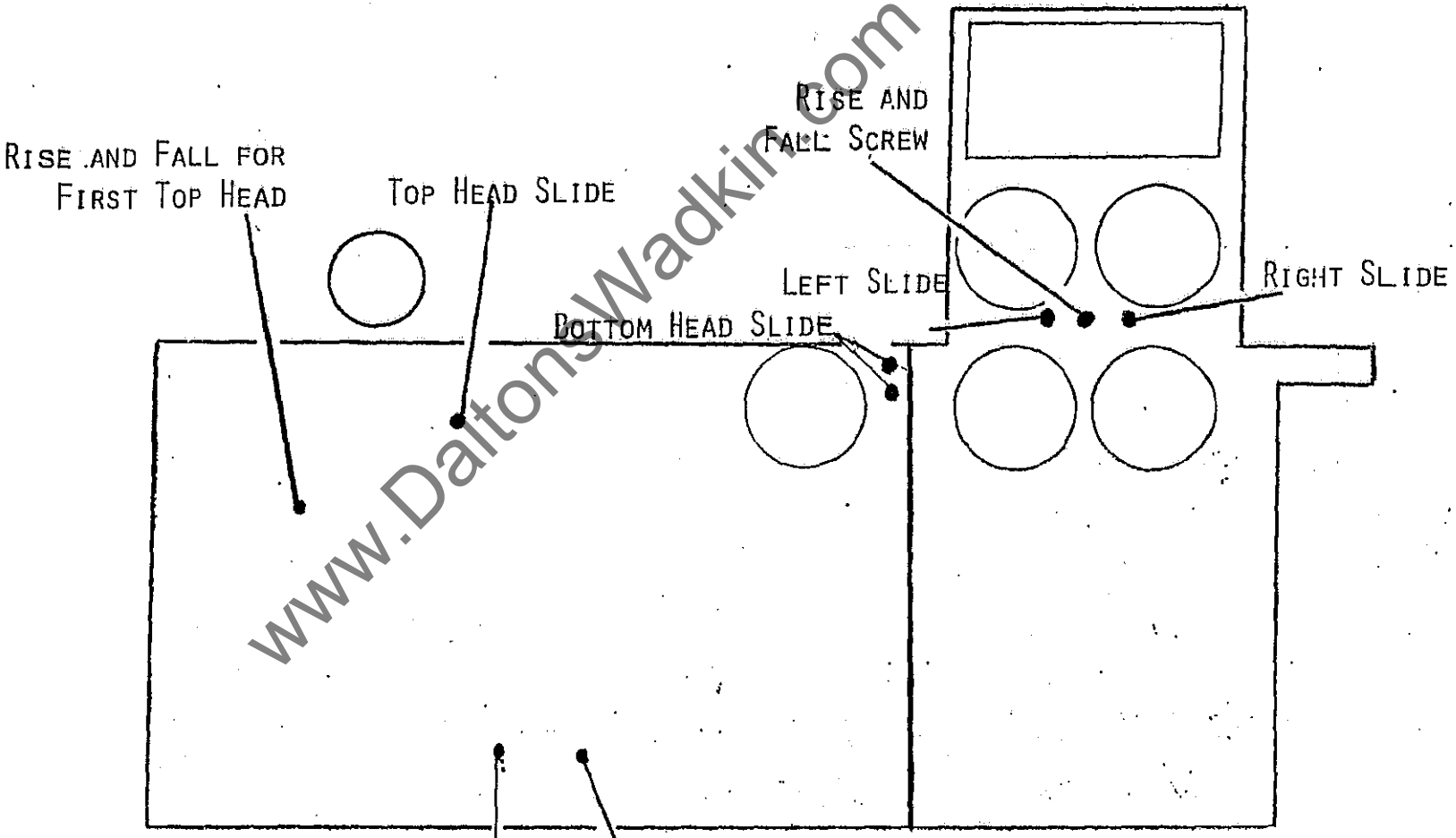
ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

MACHINE SHOP NOTE -

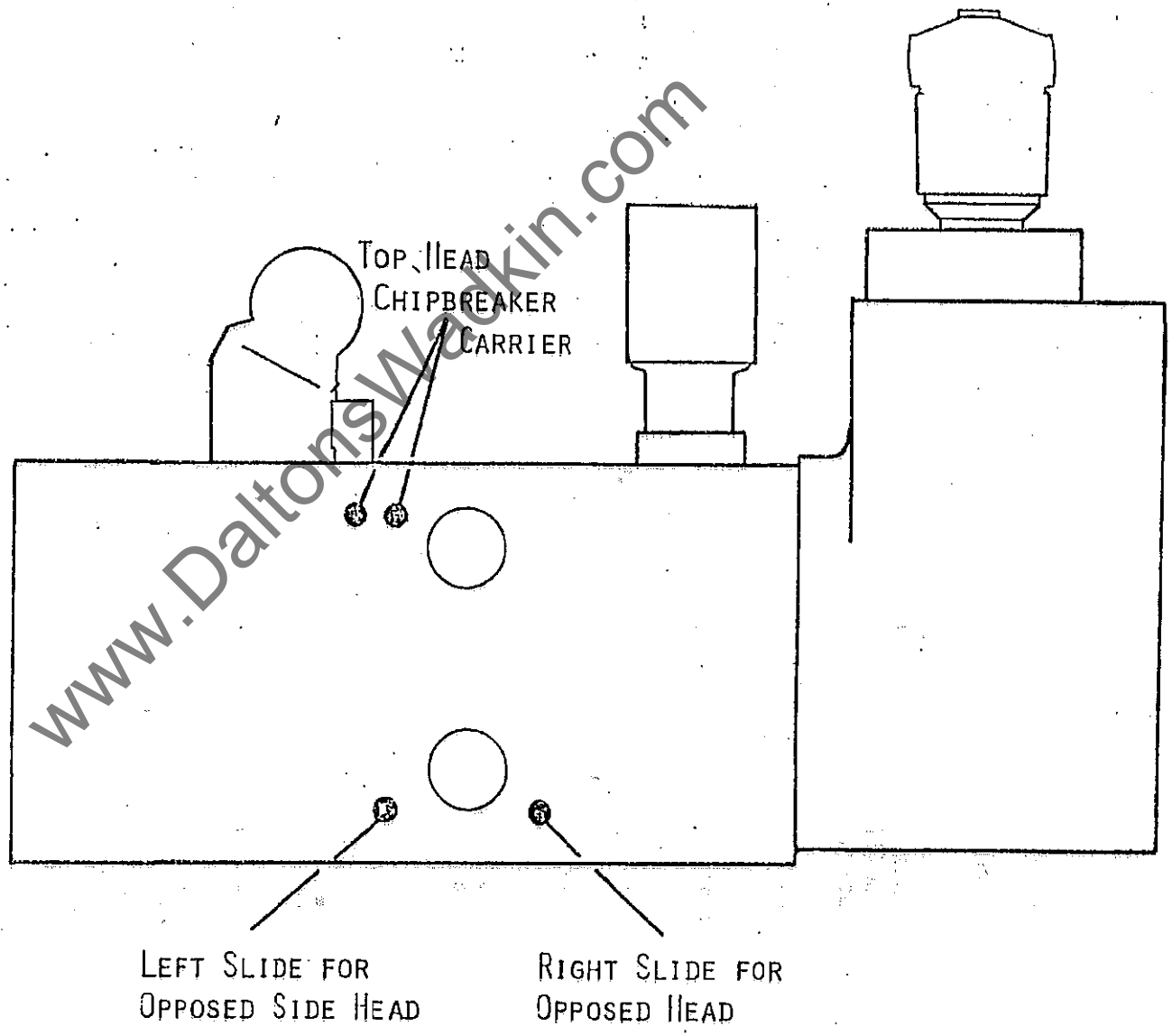
*INSPECTION MUST PASS THE FIRST COMPONENT OF A BATCH BEFORE STARTING THE SECOND

THIRD ANGLE PROJECTION	DATE	A	WADKIN LTD. LEICESTER	QTY.	MATERIAL
SIMILAR TO page 35	DRAWN		DESCRIPTION	SCALE	PART No.
	CHECKED		DIAGRAM FOR PNEUMATIC FEEDROLL CONTROL		

DAILY LUBRICATION POINTS - FRONT ELEVATION OF MACHINE



DAILY LUBRICATION POINTS - PLAN VIEW OF MACHINE



LUBRICATION AND MAINTENANCE

CUTTERBLOCK SPINDLES

Angular contact bearings have been employed and the bearings have been charged with "KLUBER" LUBRICANT TYPE "ISOFLEX" NBU.15. this is a permanent lubricant. It will only be necessary to re-charge in the event of the renewal of the bearings.

CHANGING THE BEARINGS

The bearings have been fitted to the cutterblock spindles (1) in an orthodox manner, however, at the drive end of the spindles a liquid engineering adhesive "LOCTITE" Grade 601 has been applied to the external diameter of the bearing locknut (2).

PREPARATION PRIOR TO FITTING THE BEARINGS

Before fitting the new bearing the protective lubricant must be meticulously removed with petroleum spirit, triethanolamine or other volatile solution.

In order to prevent the moving parts from bearing damaged by over cleansing add a small amount of the new lubricant to the cleansing agent at the second bath. The film of grease which remains after the solvent has evaporated will provide a good protection for the bearing.

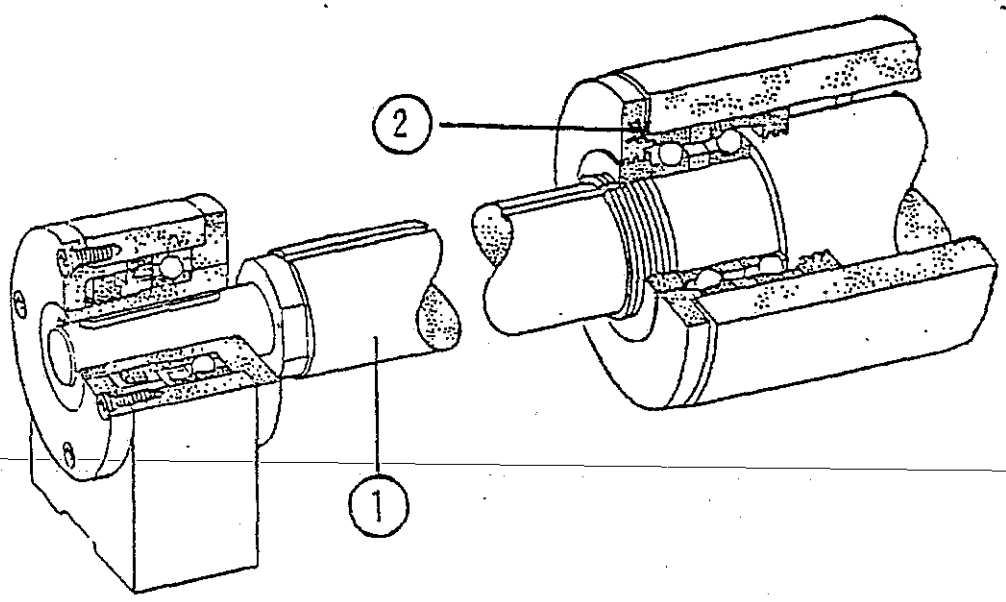
At this stage the new bearings should be charged with "KLUBER" LUBRICANT TYPE "ISOFLEX" NBU.15. It is very important that the correct amount of grease be applied to the bearing preferably the amount should be measured by applying the formula.

G (weight in grams) = d x B x 0.01 where d = bore of the bearing in mm. and B = the width in mm. OR approximately sufficient to fill one third of the bearing volume.

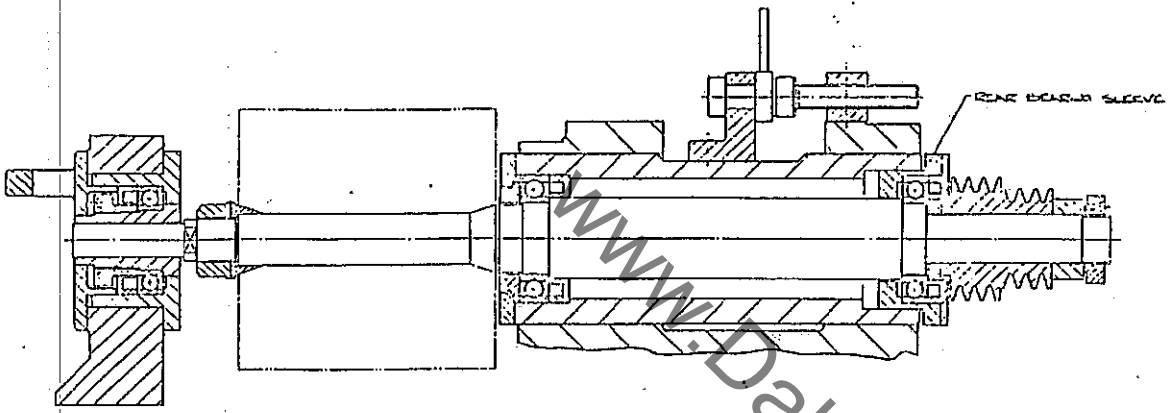
To disassemble the parts jointed by "LOCTITE", no special tools are necessary, use normal tools and methods. If, however, the holding force of the "LOCTITE" joint is too great then apply a gentle heat and break the bond whilst the parts are still hot. Sometimes the bond is left as a powder. This powder must be removed before applying further adhesive.

CUTTERBLOCK SPINDLE ASSEMBLY WITH GREASE LUBRICATED BEARINGS

ØIMPORTANT - USE "LOCTITE" GRADE LT 601 ON DIAMETER MARKED *

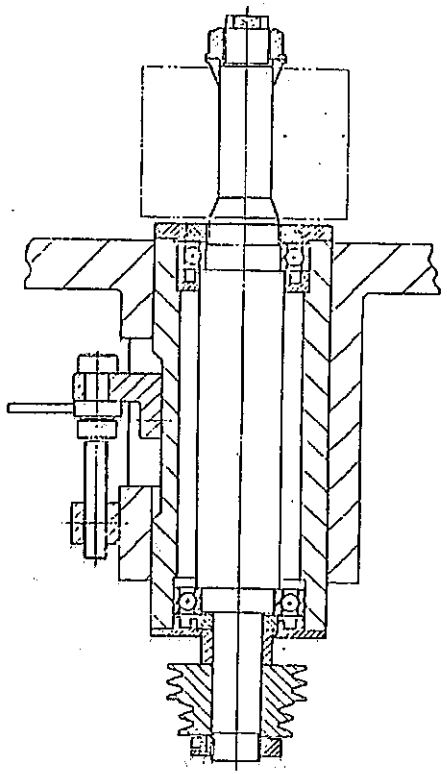


IF YOUR FB OR FBJ HAS GREASED FOR LIFE SPINDLE BEARINGS OR YOU ARE CONVERTING TO GREASED FOR LIFE BEARINGS READ THIS DRAWING CAREFULLY BEFORE COMMENCING ANY MAINTENANCE.



TYPICAL HORIZONTAL SPINDLE

BEARING PART NUMBERS		
POSITION	OILED BRG	GREASED FOR LIFE BRG
HORIZONTAL SPINDLES		
FRONT	KOYO 01 309	KOYO 20 110
REAR	KOYO 01 309	KOYO 20 110
VERTICAL SPINDLES		
TOP	KOYO 01 309	KOYO 20 110
BOTTOM	KOYO 01 309	KOYO 20 110
STANDARD OUTBOARD	KOYO 01 302	KOYO 20 106
COLLET LOCKING OUTBOARD		
LARGE BRG	KOYO 01 302	KOYO 20 106
SMALL BRG	KOYO 01 128	KOYO 20 130



TYPICAL VERTICAL SPINDLE

DO'S

ALWAYS WEAR THIN POLYTHENE GLOVES TO HANDLE BEARINGS
ALWAYS LIGHTLY SMEAR KLUBER ALTEMP Q PASTE NB 50 ON SPINDLE & INSIDE BEARING HOUSING DO NOT RUB IN
ALWAYS MAINTAIN BEARINGS CLINICAL CLEANLINESS AFTER REMOVAL FROM PROTECTIVE COVERING
ALWAYS RUN BEARINGS IN UNDER 'NO LOAD' CONDITIONS (SEE DON'TS *)
ALWAYS CHECK BEARING TEMPERATURES WHEN RUNNING IN (MAX 65°C)
ALWAYS RUN BEARING IN FOR AT LEAST TWO HOURS TOTAL AT LOW SPEED (SEE DON'TS *)
* CONSULT "WADKIN PROCEDURE FOR APPLYING KLUBER GREASE BEARINGS" BEFORE RE-GREASING
ALWAYS USE YOUR COMMON SENSE TO ENSURE ABSOLUTE CLEANLINESS
ALWAYS SEAL OUTER BEARING HOUSING WITH LOCTITE 'LT 601

DON'TS

NEVER ADD ANY MORE GREASE TO BEARINGS IT IS SUPPLIED WITH THE CORRECT AMOUNT APPLIED
NEVER HANDLE BEARINGS WITH BARE HANDS HOWEVER CLEAN THEY ARE
NEVER HANDLE BEARINGS WITH FLUFFY MATERIAL
NEVER CLEAN & RE-GREASE BEARINGS WITHOUT CONSULTING "PROCEDURE" NOTES (SEE DO'S *)
NEVER BLOW BEARING OUT WITH AIR LINE, PROPRIETORY AEROSOL OR MOUTH
NEVER EXPOSE BEARING TO CONTAMINATING CONDITIONS e.g. WORKBENCH, MACHINE etc.
* NEVER RUN BEARINGS IN INITIALLY FOR LONGER THAN 10 MINS. ALLOW TO COOL BEFORE RE-STARTING

ADDITIONAL POINTS WHEN CONVERTING TO GREASED FOR LIFE BEARINGS

BLANK ALL OIL WAYS WITH '6' B.S.P. BLANKING PLUGS
REPLACE OLD REAR BEARING SLEEVE FB1748 WITH NEW FB3548, ON HORIZONTAL SPINDLES
THOROUGHLY CLEAN SPINDLE HOUSING WITH PROPRIETORY DEGREASING AGENT AND DRY

GREASED FOR LIFE BEARINGS BECAME STANDARD ON FBN80 M/C Nº 2054 5" FDD & 7" FB M/C Nº 511
FBJ 250 M/C Nº 5030 9" FB M/C Nº 3148
FBJ 150 M/C Nº 1018

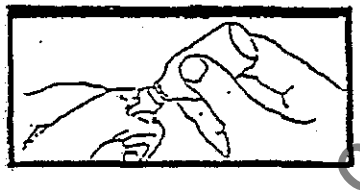
THIRD ANGLE PROJECTION | WADKIN LTD. LEICESTER

MAINTENANCE OF WADKIN PROVED

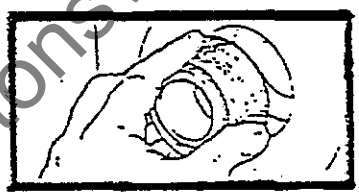
GENERAL MAINTENANCE

FITTING THE BEARINGS

It is not advisable to soak the bearing in a degreasing agent as this removes the protective lubricant from the bearing elements. The outer and inner bearing diameters should be cleaned using a clean cloth dampened with a degreasing agent and allowed to dry. Also ensure that the mating parts are clean and free from grease, then apply a thin bead of "LOCTITE" 601 to the bearing surface only and position it in the spindle barrel OR housing and at the same time rotating the bearing slowly so that the "LOCTITE" spreads evenly over the bearing surface.



The bearings should then be locked in position by the locknuts OR securing rings.



Allow the "LOCTITE" adhesive to cure for three hours with a minimum of one hour before use, however, the assembly can be handled after fifteen minutes.

Having fitted the bearings, they should be run in for a period of approximately 16 hours during which time they should not be fully loaded particularly so if the ambient temperatures are high or low.

Bearings that are fully loaded without a previous 'run in' period will suffer damage and have a short life. Bearings always experience an increase in temperature whilst they are being run in even if no particular thermal stress is put on them, the temperature will become normal once they are run in.

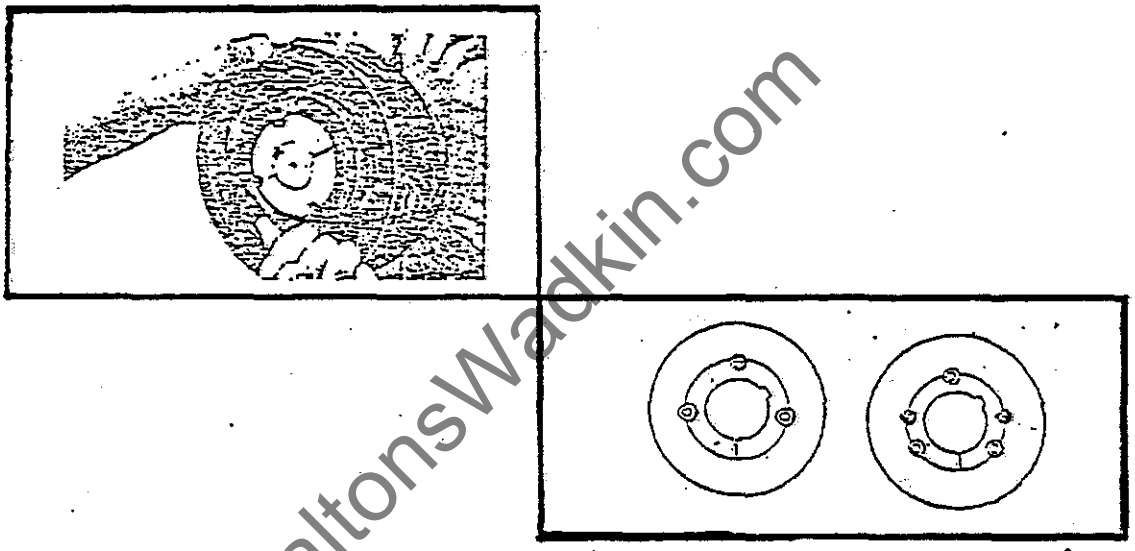
REPLACEMENT OF PARTS ASSOCIATED WITH THE MOTOR PULLEYS

1) Before access can be made to any belt OR pulley it will be necessary to remove the guard covers.

2) Slacken off the tension of motor pulley driving belt. This is effected by loosening the motor fixing bolts on the attendant motor bracket OR the motor tensioner bolts whichever apply. The belts can then be removed.

3) To remove cutterblock pulley. In certain instances the cutterblock and motor pulleys have been fitted with taper lock bushes instead of the orthodox keys.

TO REMOVE THE TAPER LOCK BUSH FROM THE PULLEYS.



1) Slacken all screws by several turns, remove one OR two according to number of jacking off holes shown thus ⊕ in diagram. Insert screws in jacking off holes after oiling thread and point of grub screws OR thread and under head of cap screws.

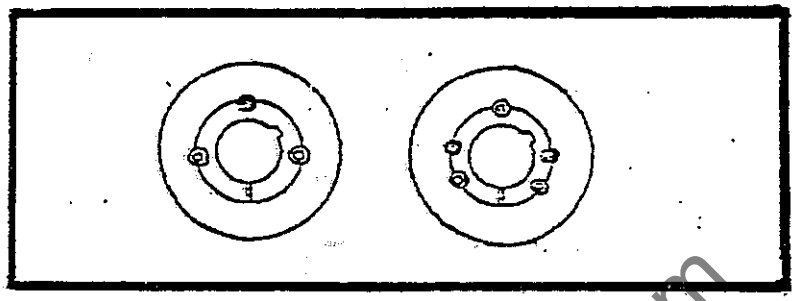
2) Tighten screws alternately until bush is loosened in hub and assembly is free on shaft.

3) Remove assembly from shaft.

RE-FITTING THE PULLEYS AND TAPER LOCK BUSHES

1) After ensuring that the mating tapered surfaces are completely clean and free from oil or dirt, insert bush in hub so that holes line up.

2) Oil thread and point of grub screws OR thread under head of cap screws. Place screws loosely in holes threaded in hub, shown thus ⊖ in diagram.



3) Clean shaft and fit hub and bush to shaft as one unit and locate in position desired, remembering that bush will nip the shaft first and then hub will be slightly drawn on to the bush.

4) Using a hexagon wrench, tighten screws gradually and alternately until all are pulled up very tightly. Use a piece of pipe on wrench to increase leverage.

5) After the bush has been tightened on to the shaft fit the parallel key which is side fitting with top clearance.

6) After drive has been running under load for a short time, stop and check tightness of screws.

7) Fill empty holes with grease to exclude dirt.

IMPORTANT: CHECK THE CONDITION AND TENSION OF THE CUTTER SPINDLE DRIVE BELTS AT REGULAR INTERVALS.

I M P O R T A N T

PRESSURES BETWEEN OPPOSED SIDE HEADS

Two Roller Pressure Units are supplied as standard

Two Pad Pressure Units can be fitted as optional

Narrow Pad Pressure can be supplied for narrow stock

A Micro switch is fitted to the Near Side Head Hood on Auto Setting Machines for safety purposes to prevent Near Side Head cutterblock from fouling pressure units.

When two Roller OR standard Pad Pressures are fitted the minimum width capacity is 125mm.

With one Roller OR standard Pad Pressure removed, the minimum width capacity is reduced to 70mm.

For width between 70 to 25mm. the Narrow Pad Pressure must be fitted.

Care must be taken when approaching minimum width of 25mm. as no Auto Safety is fitted to the Narrow Pad Pressure. Positions of Fence and Near Side Head cutters must be checked to ensure adequate working clearance between cutters and pressure unit.

NOTE: ALSO THAT FILLING-IN-BEDPLATES BETWEEN THE SIDE HEADS MUST BE REMOVED AS THE WIDTHS DECREASE.

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SIDE PRESSURE BEFORE FEEDROLLS

REF. NO.	PART NO.	DESCRIPTION	NO.OFF
1	FB 2592	Plunger for Side Pressure	1
2	FB 2314	Spring for Side Pressure	1
3	K05 29 173	12mm dia. x 40mm long Dowel	1
4	K05 26 124	M8 x 8mm long Hexagon Socket Screw - cup point	1
5	FB 2591	Roller Link for Side Pressure	1
6	K09 50 101	5/16in. Grease Nipple P.108	1
7	K05 30 302	M12 Adjustable Handlever	1
8	K05 28 105	12mm dia. Bright Washer	1
9	K05 26 298	M12 x 55mm long Stud	1
10	FB 30317	Bracket for Side Pressure	1
11	FB 2258	Tension Screw for Pressure	1
12	FB 2443	Check for Side Pressure	1
13	K05 25 332	M8 x 16mm long Hexagon Socket Countersunk Head Screw	2
14	K05 31 540	Bronze Oil Retaining Bush 20mm I/D x 25mm O/D x 15mm long	1
15	FB 2593	Pivot Pin for Side Pressure	1

ROLLER PRESSURE OVER FIRST BOTTOM HORIZONTAL HEAD

REF. NO.	PART NO.	DESCRIPTION	NO.OFF
1	KO5 25 209	M10 x 25mm Socket Head Capscrew	8
2	FB 14669	Pivot for Pressure Roller	4
3	KO6 01 249	"FAFNIR" Bearing DN 211	4
4	KO5 26 137	M10 dia. x 12mm long Hexagon Socket Grubscrew Cup Point	2
5	FB 14677	Link for Pressure Rollers	2
6	KO5 31 545	Bronze Oil Retaining Bush 25mm I/D x 30mm O/D	4
7	FB 14694	Pivot Pin for Roller	2
8	FB 14699	Roller Bracket	1
9	FB 2440	Spring for Top Roller Pressure	2
10	FB 14697	Plunger for Roller Pressure	2
11	FB 14732	Tension Screw for Pressure	2
12	KO5 27 113	Hexagon Locknut M2U	2
13	FB 14693	Clamp Plate for Horizontal Bar	1
14	KO5 25 531	M10 x 30mm long Hexagon Head Capscrews	2
15	KO5 30 302	M12 x 15° Adjustable Hand Lever	1
16	KO5 28 105	M12 diameter Washer	1
17	KO5 26 297	M12 dia. x 55mm long Stud	1
18	FB 15097	Horizontal Pressure Bar	1
19	FB 14976	Support Bracket for Horizontal Bar	1
20	FB 14976	Support Bracket for Horizontal Bar	1
21	FB 11425	Square End for Traverse Screw	1
22	FB 14981	Wear Strip for Support Bracket	1
23	FB 15033	Secondary Adjusting Slide Block for Pressure Rolls	1
24	FB 15035	Pressure Roll Fine Adjustment Screw Block	1
25	FB 15036	Floating Nut for Pressure Adjusting Screw	1
26	FB 15037	Pressure Fine Adjustment Screw	1
27	FB 15097	Pressure Roll Mounting Bar	1
28	KO5 28 211	Collar 20mm dia. Bore	1
29	KO5 20 505	Taper Pin No.2 for FB 11425, KO5 28 211	4
30	KO5 25 166	Hexagon Socket Screw M6 x 20mm long for FB 15036	2
31	KO5 25 519	Hexagon Head Screw M8 x 35mm long for FB 15035	3
32	KO5 25 520	Hexagon Head Screw M8 x 40mm long for FB 14981	3
33	KO5 25 731	Hexagon Head Screw M8 x 60mm long for FB 15097	3
34	KO5 26 130	Hexagon Socket Screw Cup Point M8 x 30mm long for FB 14976	

ROLLER PRESSURE OVER FIRST BOTTOM HORIZONTAL HEAD .....CONTD.

REF.NO.	PART NO.	DESCRIPTION	NO.OFF
35	KO5 27 109	Standard Locknut M8 for KO5 26 130	3
36	KO5 28 103	Bright MS Washer M8 for KO5 25 519, KO5 25 250, KO5 25 731	8
37	KO5 29 116	Plain Dowel 5mm dia. x 16mm long for FB 15036	2
38	KO5 31 331	Headed Bronze Oil Retaining Bush for FB 15033	2

MOUNTING PACKING FOR PRESSURE OVER FIRST BOTTOM HEAD

REF.NO.	PART NO.	DESCRIPTION	NO.OFF
1	FB 30306	Packing Strip for Press Slide Bracket over First Bottom Head	2
2	K05 25 241	M12 x 80mm long Hexagon Socket Screw for FB 30306	4

MOUNTING FOR PRESSURE OVER FIRST BOTTOM HORIZONTAL HEAD

REF.NO.	PART NO.	DESCRIPTION	NO.OFF
1	FB 30114	Slide Bracket for Pressure over First Bottom Head	1
2	FB 30332	Bracket for Raising Sceew	1
3	FB 30434	Support Bracket for Horizontal Bar	1
4	FB 13499	Wear Strip for Support Bracket	1
5	FB 14693	Clamp Plate for Horizontal Bar - metric	1
6	FB 30322	Raising Screw	1
7	FB 30323	Spacer Block for First Bottom Head Pressure Raising Screw Bracket	1
8	FB 30435	Mounting Bar for Pressure over First Bottom Head	1
9	K05 26 268	M10 x 55mm long Stud for FB 30332	1
10	K05 26 294	M12 x 40mm long Stud for FB 30434	
11	K05 28 211	20mm dia. bore Loose collar for FB 30322	1
12	K05 26 297	M12 x 50mm long Studfor FB 14693	1
13	K05 25 224	M10 x 100mm long Hexagon Socket Screws for FB 30332	2
14	K05 28 105	12mm dia. Mild Steel Washer for FB 14693	1
15	K05 25 212	M10 x 40mm long Hexagon Socket Screws for FB 30434	2
16	K05 26 130	M8 x 30mm long Hexagon Socket Screw cup point for FB 30434	2
17	K05 27 102	M8 Hexagon Thin Nuts for FB 30322	2
18	K05 20 505	No. 2 Taper Pin for FB 30322	1
19	K05 30 302	Mil2 Adjustable Hand Lever for FB 14693	1
20	K06 10 252	"INA" Thrust Washer AS 2035 for FB 30322	3
21	K06 10 212	"INA" Needle Cage AXK 2035 for FB 30322	2
22	K06 10 292	"INA" Housing Washer GS 2035 for FB 30322	1
23	K05 25 530	M10 x 25mm long Hexagon Head Screws for FB 30332	2
24	K05 28 104	M10 size Mild Steel Washer for FB 30332	1
25	K05 30 301	M10 Adjustable Hand Lever for FB 30332	1
26	K05 25 232	M12 x 35mm long Hexagon Socket Screws for FB 30114	4
27	K05 25 531	M10 x 30mm long Hexagon Head Screws for FB 14693	2

PRESSURE ROLLER ASSEMBLY BETWEEN SIDE HEADS

Ref. No.	Part No.	Description	No.Off
1	FB 14921	Pressure Mounting Roller Bracket	1
2	FB 14669	Pivot for Pressure Roller	2
3	FB 14697	Plunger for Pressure Roller	2
4	FB 14707	Tension Screw for Pressure Roller	2
5	FB 14919	Pressure Arm Pivot Pin	2
6	FB 14924	Pressure Roller Arm	2
7	KO5 26 296	Screwed Stud M12 dia. x 50mm long	1
8	FB 2240	Compression Spring for FB 14697	2
9	KO5 25 210	Hexagon Socket Screw M10 dia. x 30mm long for FB 14669	4
10	KO5 26 115	Hexagon Socket Screw - cup point - M6 dia. x 12mm long for FB 14924	2
11	KO5 30 302	Adjustable Hand Lever size M12 for KO5 26 296	1
12	KO5 31 540	Bronze Oil Retaining Bush 25mm O/D x 20mm I/D x 15mm long for FB 14921	1
13	KO6 01 249	Double Sealed Ball Bearing "FAFNIR" DN 211 for FB 14669	2

MOUNTING FOR PRESSURE BETWEEN SIDE HEADS

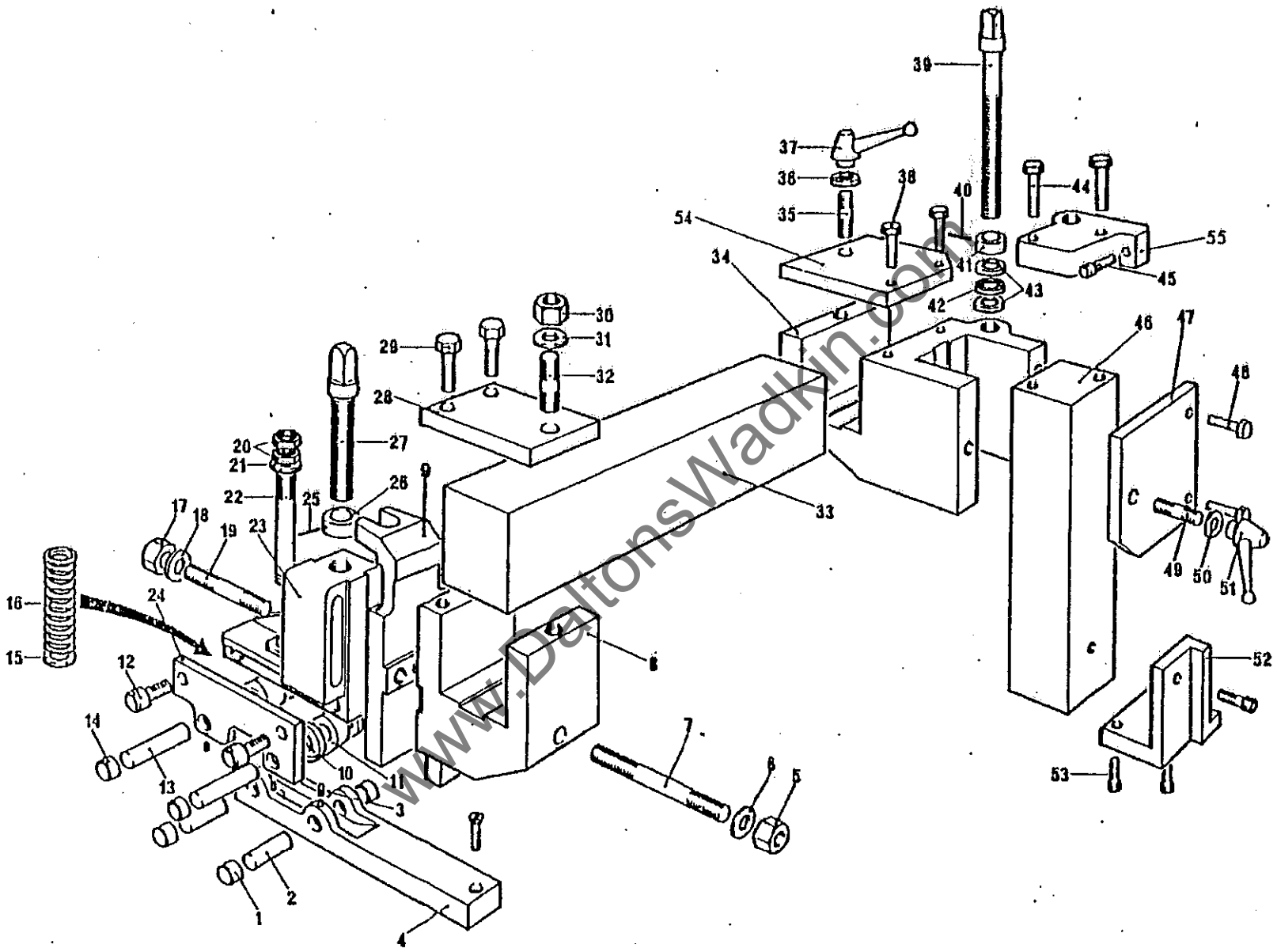
REF.NO.	PART NO.	DESCRIPTION	NO.OFF
1	FD 7366	Bracket for Vertical Adjustment	1
2	FB 14863	Support for Pressure between Side Heads	1
3	FB 30358	Support Bracket for Horizontal Bar	1
4	FB 30357	Horizontal Bar for Pressure between Side Heads	1
5	FB 2417	Clamp Plate for Vertical Bar	1
6	FB 30359	Vertical Bar for Pressure between Side Heads	1
7	FB 30360	Raising Screw for Pressure between side heads	1
8	KO5 20 103	3/4in. dia. bore Loose Collar for FB 30360	1
9	KO5 20 550	4mm dia. x 30mm long Tension Pin for FB 30360	1
10	KO5 28 105	M12 size Bright Mild Steel Washers for FD 7366	1
11	KO5 20 615	1/4in. dia. x 1.1/4in. long Dowels for FD 7366	2
12	KO5 25 545	M12 x 35mm long Hexagon Head Screws for FD 7366	1
13	KO5 25 234	M12 x 45mm long Hexagon Socket Screws for FB 30357	2
14	KO5 29 158	10mm dia. x 30mm long Dowels for FB 14863	2
15	KO5 25 232	M12 x 35mm long Hexagon Socket Screws for FB 14863	4
16	KO5 11 104	3/8in. size Mild Steel Bright Washers for FB 2417	2
17	KO5 05 176	3/8in. whit x 1in. long Hexagon Head Screws for FB 2417	2
18	KO5 21 450	1/2in. whit Adjustable Hand Lever for FB 2417	1
19	KO5 11 106	1/2in. size Mild Steel Bright Washer for FB 2417	1
20	KO5 08 471	1/2in. whit x 1.1/2in. long Stud for FB 2417	1
21	KO5 20 510	No. 7 Taper Pin for FB 14863	1

WIDE TOP PAD PRESSURE OPPOSITE NEAR SIDE HEAD

REF. NO.	PART NO.	DESCRIPTION	NO.OFF
1	KO5 31 526	12mm I/D x 16mm O/D x 12mm long Bronze Oil Retaining Bushes	4
2	KO5 29 174	12mm dia. x 45mm long Plain Dowels	2
3	KO5 26 112	M6 x 6mm long Hexagon Socket Screws - up point	2
4	FB 13460	Bracket for Pressure Shoe Plate	1
5	KO5 10 107	1/2in. whit Hexagon Nut	1
6	KO5 11 126	1/2in. Mild Steel Black Washer	1
7	KO5 08 477	1/2in. whit x 3in. long Screwed Stud	1
8	FB 13424	Bracket for Pressure	1
9	FB 13423	Bracket for Pad Pressure	1
10	FB 13447	Spacing Collar	4
11	FB 13446	Pivot Arm	2
12	KO5 25 187	M8 x 20mm long Hexagon Socket Capscrew	4
13	KO5 29 163	10mm dia. x 60mm long Plain Dowel	2
14	KO5 31 513	10mm I/D x 14mm O/D x 10mm long Bronze Oil Retaining Bushes	4
15	KO5 28 104	M10 Bright Mild Steel Washer	1
16	FB 14214	Pressure Spring	1
17	KO5 10 107	1/2in. whit Hexagon Nut	1
18	KO5 11 126	1/2in. Mild Steel Black Washer	1
19	KO5 08 476	1/2in. whit x 2.3/4in. long Screwed Stud	1
20	KO5 27 110	M10 Hexagon Thin Nut	2
21	KO5 28 104	M10 Bright Mild Steel Washer	1
22	FB 13465	Preload Stud	1
23	FB 13455	Holder for Pressure	1
24	FB 13462	Side Plate for Pressure	2
25	KO5 20 500	4mm dia. x 28mm long Tension Pin	1
26	FB 2355	Collar for Raising Screw	1
27	FB 2412	Adjusting Screw for Pad Pressures	1
28	FB 2416	Clamp Plate for Horizontal Bar	1
29	KO5 05 176	3/8in. whit x 1in. long Hexagon Head Screw	2
30	KO5 10 107	1/2in. whit Hexagon Nut	1
31	KO5 11 106	1/2in. dia. Washer	1
32	KO5 08 472	1/2in. whit x 1.3/4in. long Stud	1
33	FB 1389	Horizontal Pressure Bar	1
34	FB 2390	Support Bracket for Horizontal Bar	1
35	KO5 08 472	1/2in. whit x 1.3/4in. long Stud	1

WIDE TOP PAD PRESSURE OPPOSITE NEAR SIDE HEAD.....CONTD.

REF. NO.	PART NO.	DESCRIPTION	NO.OFF
36	K05 11 106	1/2in. dia. Washer	1
37	K05 21 450	1/2in. whit x 15° Adjustable Handlever	1
38	K05 05 176	3/8in. whit x 1in. long Hexagon Head Screws	2
39	FB 2413	Raising Screw for Pressure	1
40	K05 20 500	4mm dia. x 28mm long Tension Pin	1
41	K05 20 103	3/4in. dia. Collar	1
42	K06 10 106	"TORRINGTON" Needle Thrust Bearing NTA 1220	1
43	K06 10 145	"TORRINGTON" Thrust Race TRA 1220	2
44	K05 05 154	5/16in. whit x 1.1/2in. long Hexagon Head Screws	2
45	K05 01 173	3/8in. whit x 1.1/2in. long Socket Head Capscrew	1
46	FB 1366	Vertical Pressure Bar	1
47	FB 2417	Clamp Plate for Vertical Bar	1
48	K05 05 176	3/8in. whit x 1in. Hexagon Head Screws	2
49	K05 08 472	1/2in. whit x 1.3/4in. long Stud	1
50	K05 11 106	1/2in. dia. Washer	1
51	K05 21 450	1/2in. whit x 15° Adjustable Handlever	1
52	FB 13425	Lower Steady for Pressure Bar	1
53	K05 01 172	3/8in. whit x 1.1/4in. long Socket Head Capscrews	3
54	FB 2350	Clamp Plate for Horizontal Bar	1
55	FB 2318	Rise and Fall Bracket for Pressure	1



WIDE TOP PAD PRESSURE OPPOSITE NEAR SIDE HEAD

FENCES

REF. NO.	PART NO.	DESCRIPTION	NO.OFF
1	FB 14025	Infeed Fence	1
2	K05 25 551	Hexagon Head Screws M12 dia. x 70mm long for FB 14025	3
3	K05 29 165	Dowels 10mm dia. x 60mm long for FB 14025	2
4	K05 25 548	Hexagon Head Screw M12 dia. x 50mm long	1

FENCES

REF. NO.	PART NO.	DESCRIPTION	NO.OFF
1	FB 30214	Fence Between First Bottom Horizontal Head and Opposed Side Heads	1
2	FB 30304	Fence Nose Before Side Heads - Chrome Plated	1
3	FB 213	Plate for Right Hand Nose Piece	1
4	FB 229	Serrated Washer	1
5	K05 26 295	Screwed Stud M12 dia. x 45mm long for FB 30263	1
6	K05 27 104	Hexagon Nut size M12 for FB 30304	1
7	K05 20 614	Dowels 1/4in. dia. x 1in. long for FB 213	2
8	K05 01 147	Hexagon Head Socket Screws 5/16in. whit x 3/4in. long for FB 213	4
9	K05 29 160	Dowel 10mm dia. x 40mm long for FB 30113	2
10	K05 25 230	Hexagon Socket Screws M12 dia. x 25mm long for FB 30214	3
11	K05 25 210	Hexagon Socket Screws M10 dia. x 30mm long for FB 30304	4

FENCE AFTER OPPOSED SIDE HEADS AND BEFORE TOP HORIZONTAL HEAD

REF.NO.	PART NO.	DESCRIPTION	NO.OFF
1	FB 229	Serrated Washer for Fence	1
2	FB 30087	Bearing Plate	1
3	FB 30109	Square Drive Extension	1
4	FB 30110	Stud	1
5	FB 30172	Slide for Adjustable Fence before Second Bottom Head	1
6	FB 30176	Fence Nose Guide (Locking Plate after Opposite Side Head)	1
7	FB 30178	Spacing Block for Fence After Opposed Side Heads	1
8	FB 30303	Fence Nose	1
9	FB 30381	Fence after Side Heads and Before Second Top Head	1
10	K05 26 296	M12 x 50mm long Stud for FB 30303	1
11	K05 28 207	12mm I/D E Series 1 Loose Collar for FB 30110	1
12	K05 29 132	6mm dia. x 30mm long Dowel Pins for FB 30381	2
13	K05 29 131	6mm dia. x 25mm long Dowel Pins for FB 30381	2
14	K05 25 198	M8 x 75mm long Hexagon Socket Screws for FB 30176	2
15	K05 25 188	M8 x 25mm long Hexagon Socket Screws for FB 30176	1
16	K05 20 504	No. 1 Taper Pin 1 for FB 30109 1 for K05 28 207	2
17	K05 31 562	12mm I/D x 16mm O/D x 20mm long Bronze Bush for FB 30087 Reduce to 16mm long by fitter	1
18	FB 30413	Front Fence Under Top Horizontal Head	1
19	FB 30412	Fence after Top Horizontal Head	1
20	K05 29 163	Dowel Pins 10mm dia. x 60mm long 2 for FB 30412	2
21	K05 25 213	Hexagon Socket Screws M10 dia. x 45mm long 2 for FB 30412	2

BEDPLATES

MODEL NO. M	Head Sequence and Number						
	1	3	4	5			
FBP 300	Bottom Hor.	Fence Side	Near Side	Top Hor.			

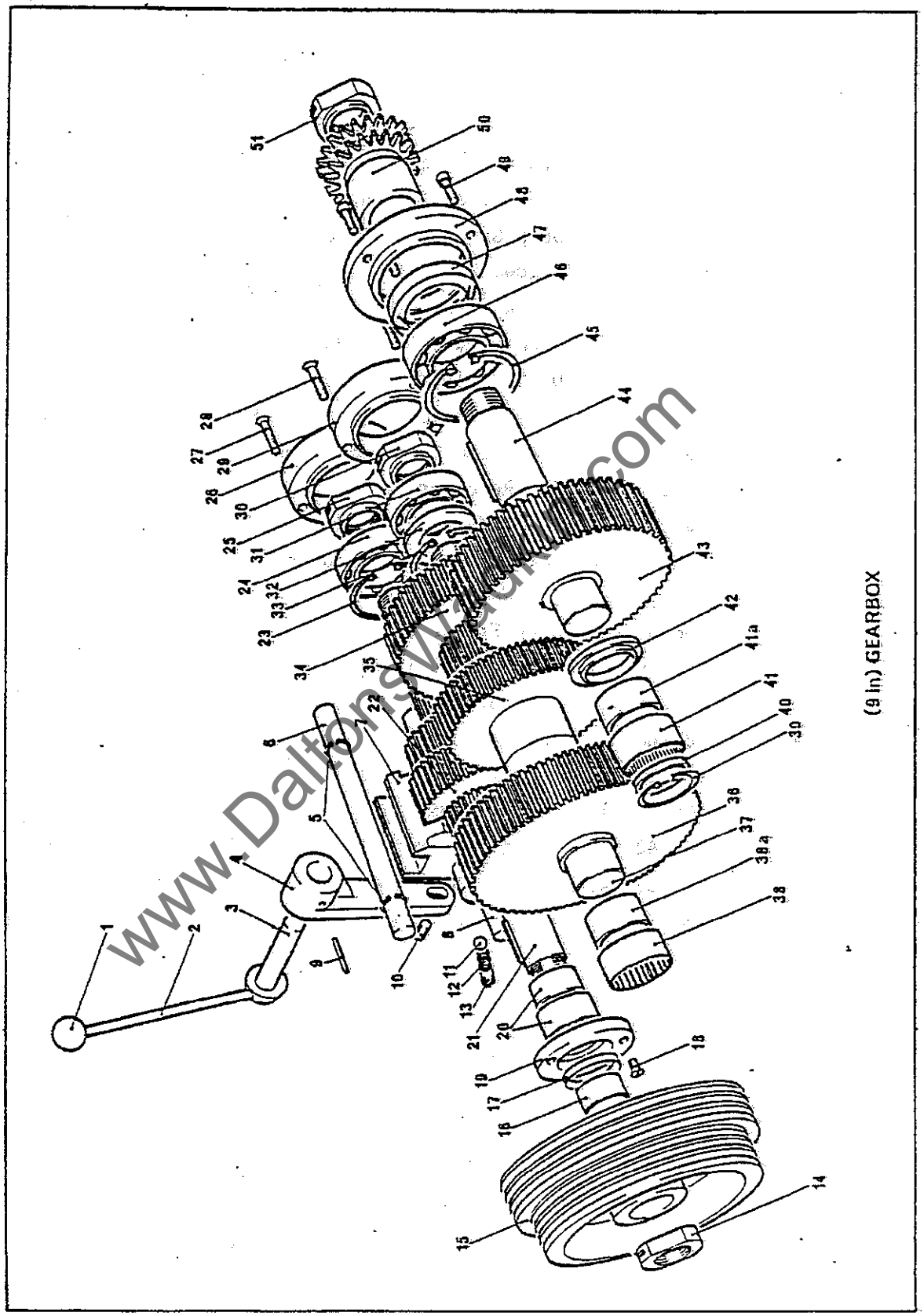
Infeed Bedplate with Spring Loaded Pressure	FB 30030
Hexagon Socket Screw M12 dia. x 25mm long 1 for FB 30030	K05 25 230
Bedplate Between Feed Rolls (Main Feedworks)	
Bedplate between Bottom Feed Rolls - front	FB 14022
Bedplate between Bottom Feed Rolls - rear	FB 30028
Hexagon Socket Screws M12 dia. x 25mm long 2 for FB 14022 2 for FB 30028	K05 25 230
Bedplate Before First Bottom Horizontal Head	FB 30041
Hexagon Socket Screws M12 dia. x 25mm long 2 for FB 30041	K05 25 230
Table between First Bottom Horizontal Head and Opposed Side Heads	FB 30364
Bedplate after First Bottom Head	FB 30368
Strip for Bedplate after First Bottom Head	FB 30361
Hexagon Head Screws M12 dia. x 30mm long 6 for FB 30364	K05 25 544
Dowel 10mm dia. x 40mm long 2 for FB 30364	K05 29 160
Hexagon Head Socket Screws M12 dia. x 25mm long 3 for FB 30361	K05 25 530
Bedplate Between Side Heads Up To Top Headq	FB 30377
Bedplate Under Top Head (Permali)	FB 30380
Bedplate after Top Head	FB 30411

FBP.300 GEARBOX

REF.NO:	PART NO:	DESCRIPTION	NO:OFF
1	K05 21 462	1.1/2in. dia. Ball Knob Black 1/2in. B.S.W. "RENCOL" 282	1
2	FB 12069	Gear Change Lever	1
3	FB 12068	Pivot pin for Selector Arm	1
4	FB 12005	Gear Selector Arm	1
5	K30 09 103	"SALTER" External Circlip 5100-100A	2
6	FB 12054	Gear Selector Shaft	1
7	FB 12082	Gear Selector	1
8	FB 12057	Guide Shaft for Gear Selector	1
9	K05 20 507	1/4in. dia. x 2in. long No.4 Taper pin	1
10	FB 12070	Pin for Selector	1
11	K30 05 302	3/8in. dia. Steel Ball	1
12	FB 12073	Spring for Selector	1
13	K05 01 152	5/16in. x 1.3/4in. long Hexagon Socket Capscrew	1
14	K05 19 169	1.1/4in. Ball Bearing Locknut - Right Hand Pegs	1
15	FB 12203	Gearbox Input Pulley 2-step - 50 cycles	1
	FB 12204	Gearbox Input Pulley 2-step - 60 cycles	1
16	FB 12067	Spacing Sleeve - Input	1
17	K30 73 212	"WESTON" Oil Seal W 20515727 R4	1
18	K05 01 103	3/16in. B.S.W. x 3/4in. long Hexagon Socket Capscrews	3
19	FB 12056	End Cap for Input Shaft	1
20	K06 15 149	"NADELLA" Needle Bush DL 4020/35	1
21	FB 12053	Input Shaft	1
22	FB 12081	Gear Cluster for Input Shaft	1
23	K30 09 141	"SALTER" Internal Circlip N244	1
24	K06 01 212	R.H.P. Bearing 6206	1
25	K05 19 169	1.1/4in. Ball Bearing Locknut - Right Hand Pegs	1
26	FB 12004	End Cap	1
27	K05 03 131	1/4in. B.S.W. x 1in. Long Countersunk Head slotted Screws	3
28	K05 03 131	1/4in. B.S.W. x 1in. long Countersunk Head slotted Screws	3
29	FB 12004	End Cap	1
30	K05 19 161	1in. Ball Bearing Locknut - Right Hand Pegs	1
31	K06 01 212	R.H.P. Bearing 6206	1
32	FB 12066	Spacing Collar - Intermediate	1
33	K30 09 141	"SALTER" Internal Circlip N244	1
34	FB 12080	Constant Mesh Gear for Intermediate Shaft	1

FBP.300 GEARBOX.....CONTD.,

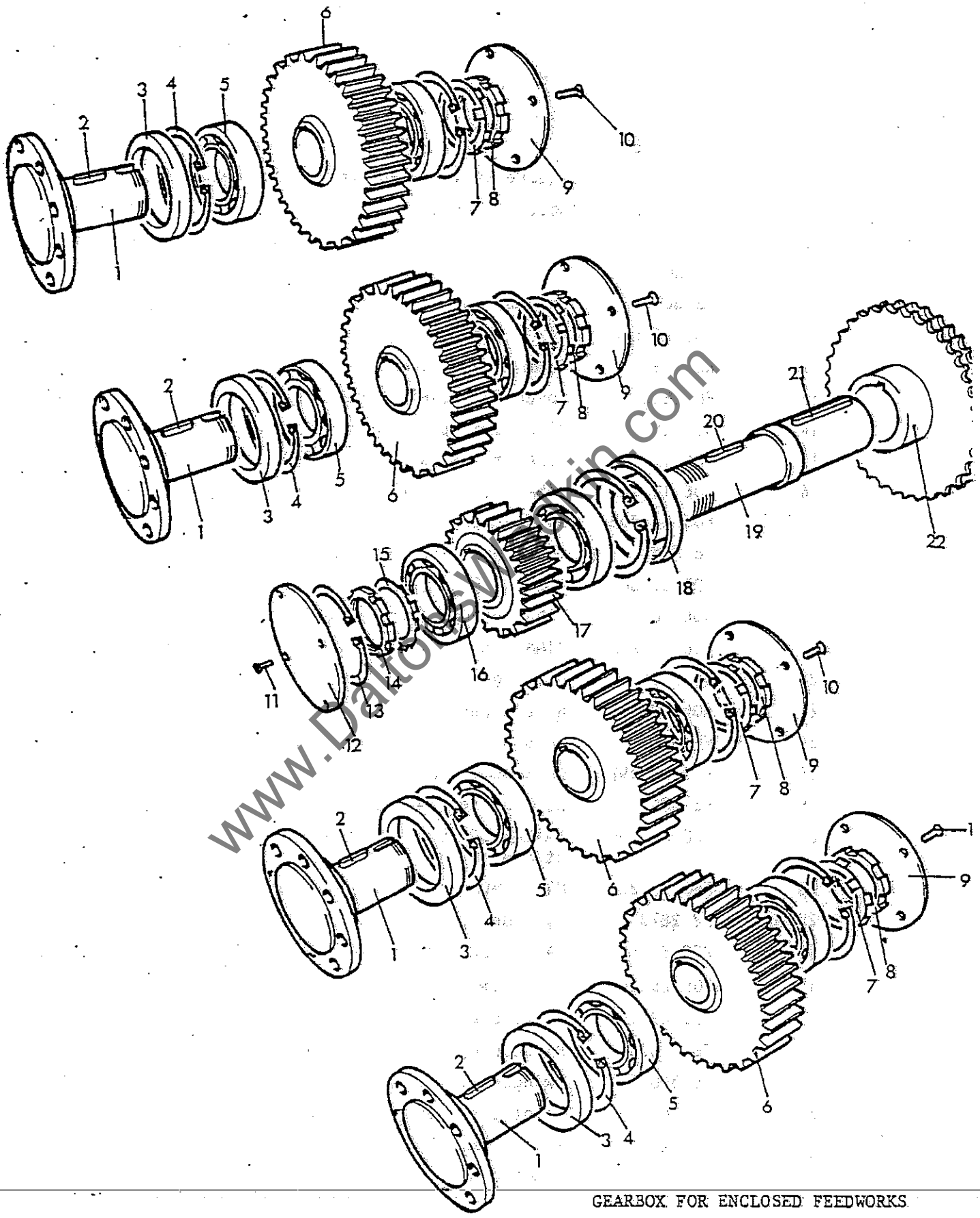
REF. NO:	PART NO:	DESCRIPTION	NO:OFF
35	FB 12079	Gear for Intermediate Shaft - High Speed Range	1
36	FB 12078	Gear for Intermediate Shaft - Low Speed Range	1
37	FB 12052	Intermediate Shaft	1
38	K06 15 124	"INA" Bearing HK 4520	1
38a	K06 16 181	"INA" Inner Race I.R. 40mm. x 45mm. x 20.5mm.	1
39	K30 09 156	"SALTER" External Circlip 5100 156A	1
40	FB 12065	Spacing Collar - Output	1
41	K06 15 138	"INA" Bearing BK 4520	1
41a	K06 16 181	"INA" Inner Race I.R. 40mm. x 45mm. x 20.5mm.	1
42	FB 12064	Spacing Collar - Output	1
43	FB 12077	Constant Mesh Gear for Output Shaft	1
44	FB 12051	Output Shaft	1
45	K30 09 283	"SALTER" Internal Circip No.334	1
46	K06 01 234	R.H.P. Bearing 6209	1
47	K30 73 211	"WESTON" Oil Seal W29521647 R4	1
48	FB 12055	End Cap for Output Shaft	1
49	K05 01 125	1/4in. B.S.W. x 3/4in. long Hexagon Socket Capscrews	3
50	FB 12084	Sprocket - Output Shaft	1
51	K09 19 169	1.1/4in. Ball Bearing Locknut - Right Hand Pegs	1



GEARBOX FOR ENCLOSED FEEDWORKS

	REF. NO.	PART NO.	DESCRIPTION	NO.OFF
	1	FB 2887	Gearbox Shaft	4
	2	K05 23 180	16mm x 10mm x 63mm long Key	4
	3	K30 74 297	Gaco Oil Seal MIM 65100	4
	4	K30 09 275	100mm dia. Internal Circlip	8
	5	K06 01 248	Deep Groove Ball Bearing	10
	6	FB 2868	Feedworks Driven Gear	4
	7	K05 27 261	Tab Washer 55mm dia.	4
	8	K05 27 212	Chamfered Notched Nut M55 x 1.5mm pitch	4
	9	FB 2879	Oil Retainer/Dust Seal	4
	10	K05 25 416	M5 x 12mm long Posidrive Pan Head Screw	16
	11	K05 25 416	M5 x 12mm long Posidrive Pan Head Screw	4
	12	FB 2879	Oil Retainer/Dust Seal	1
	13	K30 09 275	100mm dia. Internal Circlip	2
	14	K05 27 212	Chamfered Notched Nut M55 x 1.5mm pitch	1
	15	K05 27 261	Tab Washer 55mm dia.	1
	16	K06 01 248	Deep Froove Ball Bearing	2
	17	FB 2869	Feedworks Driving Gear	1
	18	K30 74 297	Gaco Oil Seal MIM 65100	1
	19	FB 2888	Gearbox Sprocket Shaft	1
	20	K05 23 180	16mm x 10mm x 63mm long Key	1
	21	K05 23 614	18mm x 11mm x 100mm long Key	1
	22	FB 14208	Input Sprocket	1
*	23	K30 09 340	Renold Chain Duplex 114-046 96 pitches	1
*	24	K30 09 348	Chain Connecting Link No. 26 for Chain 114-046	1

* Not Shown



GEARBOX FOR ENCLOSED FEEDWORKS

ENCLOSED FEEDWORKS - TOP

REF.NO:	PART NO:	DESCRIPTION	NO:OFF
1	K05 27 114	M24 thin nuts	2
2	FB 2983	Spacer for raising screw	1
3	K06 10 213	"INA" needle thrust bearing AXK 2542	1
4	K06 10 254	"INA" thrust washers AS 2542	2
5	K05 31 577	25mm. I.D. x 30mm. O.D. x 25mm. long bush	1
6	FB 30006	Square drive extension for top feedrolls	1
7	K05 20 505	No.2. taper pin	1
8	K05 31 564	20mm. I.D. x 25mm. O.D.x 20mm. long bush	1
9	FB 30007	Winding shaft for top bevel gears	1
10	FB 30004	Bracket for top feedworks adjustment	1
11	K05 25 544	M12 x 30mm. hexagon head screws	4
12	K05 29 158	10mm. dia. x 30mm. long dowels	2
13	FB 2866	Cover for bevel gears bracket	1
14	K05 25 415	M5 x 10mm. pan head screws	4
15	K06 10 254	"INA" thrust washers AS 2542	2
16	K06 10 213	"INA" needle thrust bearing AXK 2542	1
17	K05 20 508	No.5. taper pin	1
18	FB 2865	Bevel gear for rise and fall of feedworks	1
19	K05 31 564	20mm. I.D. x 25mm. O.D. x 20mm. long bush	1
20	K06 10 212	"INA" needle thrust bearing AXK 2035	1
21	K06 10 252	"INA" thrust washers AS 2035	2
22	FB 2864	Bevel gear for rise and fall of feedworks	1
23	K05 20 505	No.2 taper pin	1
24	FB 30091	Raising screw for top feedworks.	1
25	K05 25 192	M8 x 45mm. long socket head capscrews	4
26	FB 30005	Nut for top feedworks	1
27	K30 61 606	"ATLAS COPCO" cylinder type COD 300 1.1/2in. stroke.	2
28	K05 25 233	M12 x 40mm. long socket head capscrews	2
29	FB 2873	Cylinder pivot pins	2
30	K30 61 607	"ATLAS COPCO" locknuts 9141 - 1000	2
31	K05 25 240	M12x 75mm. long socket head capscrews	3
32	K05 29 158	10mm. dia. x 30mm. long dowels	2
33	FB 30003	Pivot pin for top feedworks swing	1
34	FB 30033	Swings pivot bracket for top feedworks	1
35	FB 14012	Pivot pin support for top feedworks swings	1
36	K05 25 235	M12 x 50mm. long socket head capscrews	3
37	K05 29 173	12mm. dia. x 40mm. long dowels	2

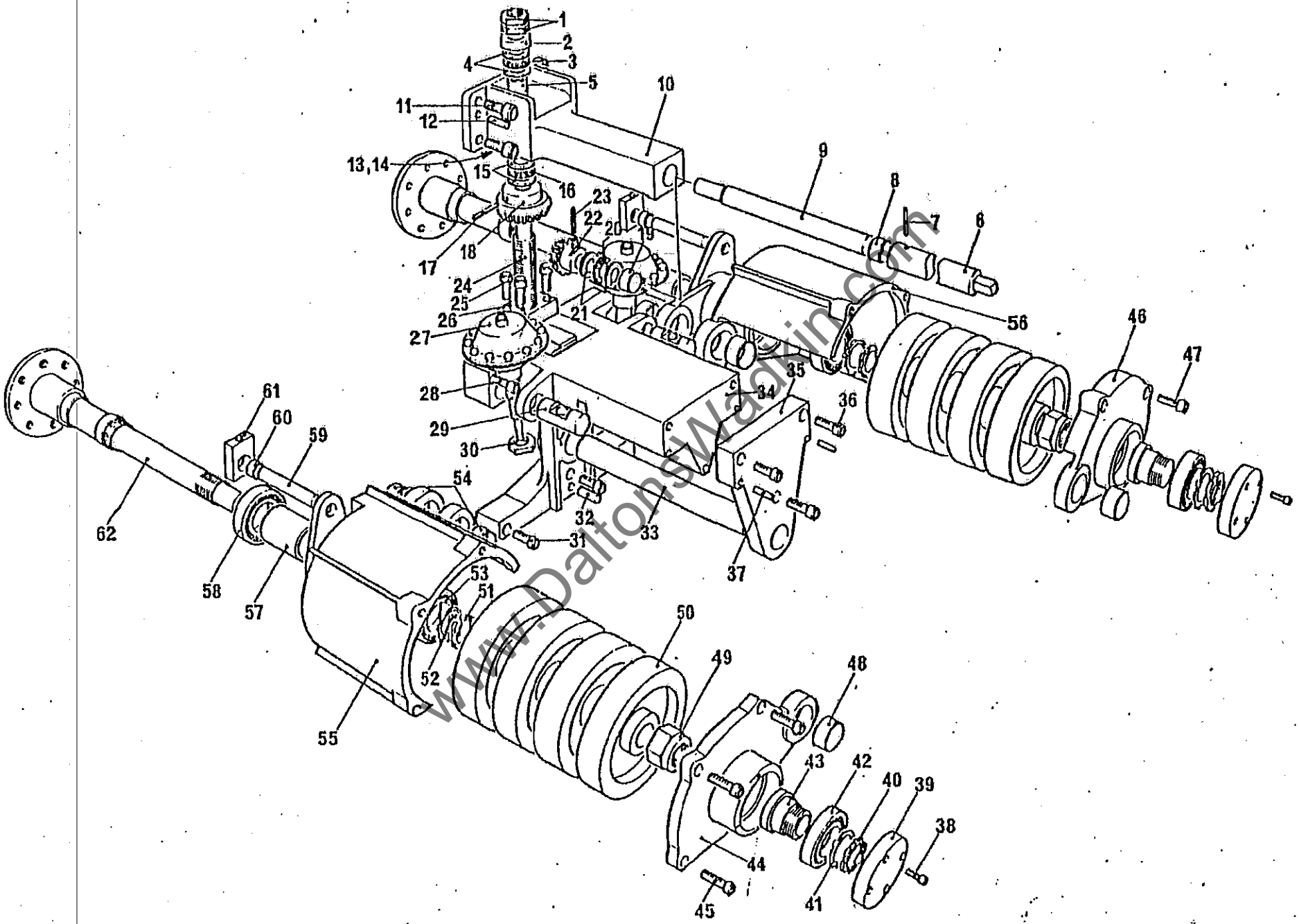
ENCLOSED FEEDWORKS - TOP.....CONTD.

REF.NO:	PART NO:	DESCRIPTION	NO:OFF
38	KO5 25 168	M6 x 30mm. long socket head capscrews	8
39	FB 30015	Bearing end caps	2
40	FB 30019	Ball bearing locknuts	2
41			
42	KO6 01 249	Bearing SKF 6211 2 RS.	2
43	FB 30014	Bearing sleeves	2
44	FB 30035	L.H. front swing for top feedrolls	1
45	KO5 25 233	M12 x 40mm. long socket head capscrews	3
46	FB 30034	R.H. front swing for top feedrolls	1
47	KO5 25 235	M12 x 50mm. long socket head capscrews	3
48	KO5 31 592	40mm. I.D. x 46mm. O.D. x 30mm. long bushes	2
49	KO5 27 162	"PHILIDAS" nut M42 x 4.5mm. type 42 MC1.	2
* 50		Feedrolls	8
51	FB 30019	Ball bearing locknuts	2
52			
53	KO6 01 249	Bearing SKF 6211 2 RS.	2
54	KO5 31 580	40mm. I.D. x 46mm. O.D. x 25mm. long bushes	4
55	FB 30037	L.H. rear swing for top feedrolls	1
56	FB 30036	R.H. rear swing for top feedrolls	1
57	FB 30018	Bearing spacing sleeves	2
58	KO6 01 249	Bearings SKF 6211 2 RS.	2
59	FB 30008	Rear swing cylinder pin for top feedrolls	2
60	KO5 31 589	25mm. I.D. x 30mm. O.D. x 30mm. long bushes	2
61	FB 14039	Cylinder pivot blocks for top feedrolls	2
62	FB 30032	Feedroll shafts	2

* FEED ROLLERS - 4 off each spindle

FB 30228 Straight fluted feed roll 250mm. dia.

FB 30229 Hard chrome plain feed roll 250mm. dia.



ENCLOSED FEEDWORKS (TOP)

ENCLOSED FEEDWORKS - BOTTOM.

REF.NO:	PART NO:	DESCRIPTION	NO:OFF
1	KO5 27 105	M16 hexagon nut	1
2	KO5 25 187	M8 x 20mm. long socket head capscrews	4
3	FB 30026	Bottom feedroll pivot pin support	1
4	FB 15174	40mm. I.D. x 46mm. O.D. x 30mm. long phosphor bronze bushes	2
5	FB 30013	Front swing for bottom feed rolls	1
6	FB 30013	Front swing for bottom feed rolls	1
7	FB 14057	Collar	1
8	K30 05 557	M16 x 30mm. long hexagon head screw	1
9	FB 30019	Ball bearing locknuts	2
10			
11	KO5 27 111	M12 thin nuts	2
12	FB 2877	Adjusting screws for bottom feed rollers	2
13	KO6 01 249	Bearings SKF 6211 2 RS.	2
14	FB 30014	Bearing sleeves	2
15	FB 30016	Bearing end caps	2
16	KO5 27 162	"PHILIDAS" nuts M42 x 4.5mm. type 42 MC1	2
17	KO5 25 142	M5 x 10mm. long socket head capscrews	8
*		Feedrolls	8
19	FB 30019	Ball bearing locknuts	2
20			
21	KO6 01 249	Bearing SKF 6211 2 RS.	2
22	KO5 31 580	40mm. I.D. x 46mm. O.D. x 25mm. long bushes	2
23	FB 30038	Rear swing for bottom feed rolls	1
24	FB 30038	Rear swing for bottom feed rolls	1
25	KO5 31 580	40mm. I.D. x 46mm. O.D. x 25mm. long bushes	2
26	FB 2874	Pivot pin for bottom feedworks swing	1
27	FB 30018	Bearing spacing sleeves	2
28	KO6 01 249	Bearing SKF 6211 2 RS.	2
29	FB 30031	Feedroll shafts	2
30	KO5 27 111	M12 thin nuts	2
31	FB 2877	Adjusting nut for bottom feed rollers	2
32	K30 09 134	40mm. dia. external circlips	4
33	FB 15174	40mm. I.D. x 46mm. O.D. x 30mm. long phosphor bronze oil retaining bushes	4
34	FB 14032	Eccentric shaft for rise and fall of bottom feedrolls	2
35	FB 2875	Worm for eccentric shafts.	2
36	KO5 20 506	No.3. taper pins	2
37	KO5 28 219	20mm. dia. loose collars	2

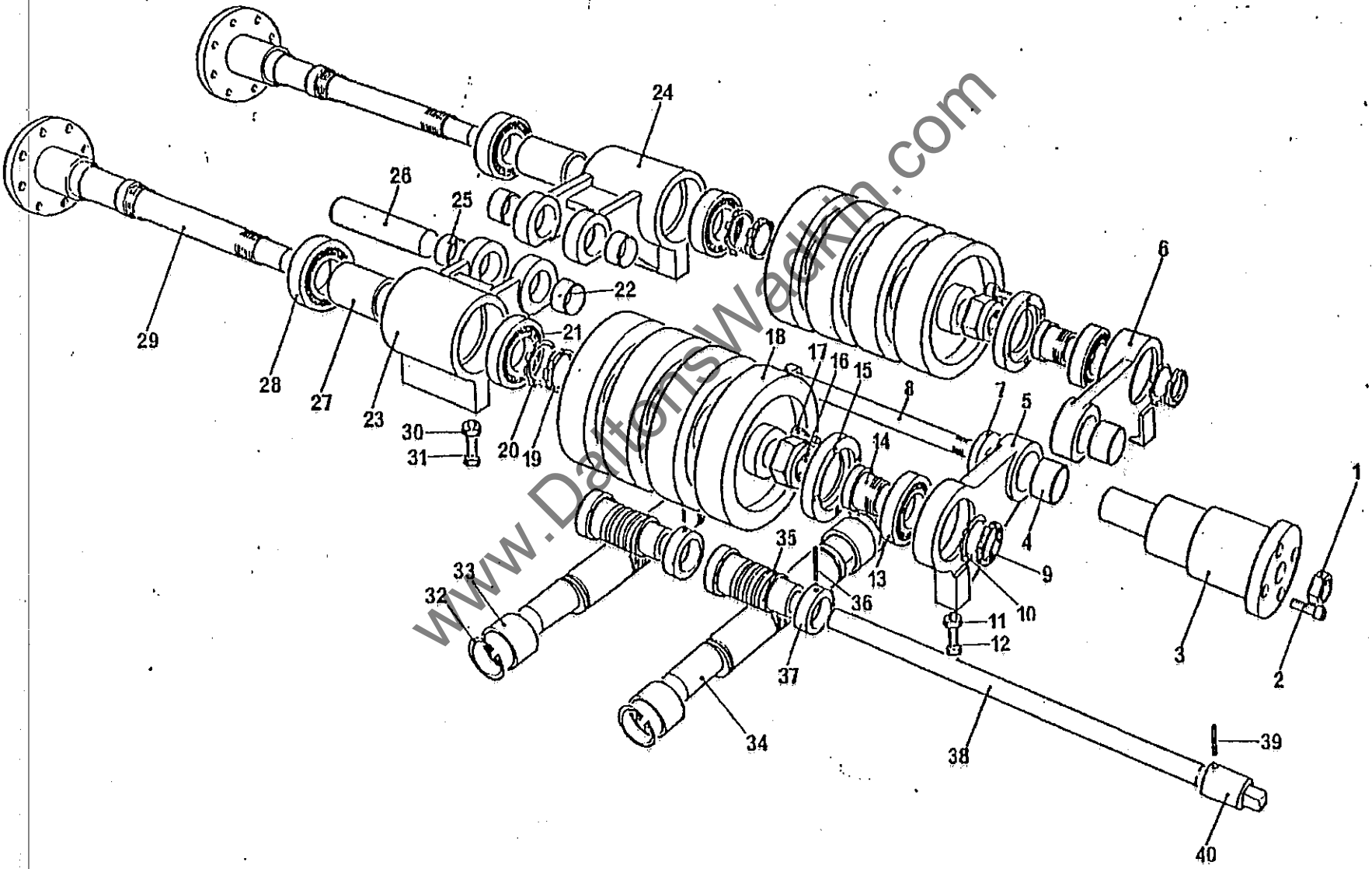
ENCLOSED FEEDWORKS - BOTTOM.....CONTD.

REF.NO:	PART NO:	DESCRIPTION	NO:OFF
38	FB 30010	Worm driven shaft	1
39	K05 20 505	No.2. taper pin	1
40	FB 2880	Square drive extension	1

* FEED ROLLERS - 4 off each spindle

FB 30228 Straight fluted feed roll 250mm. dia.

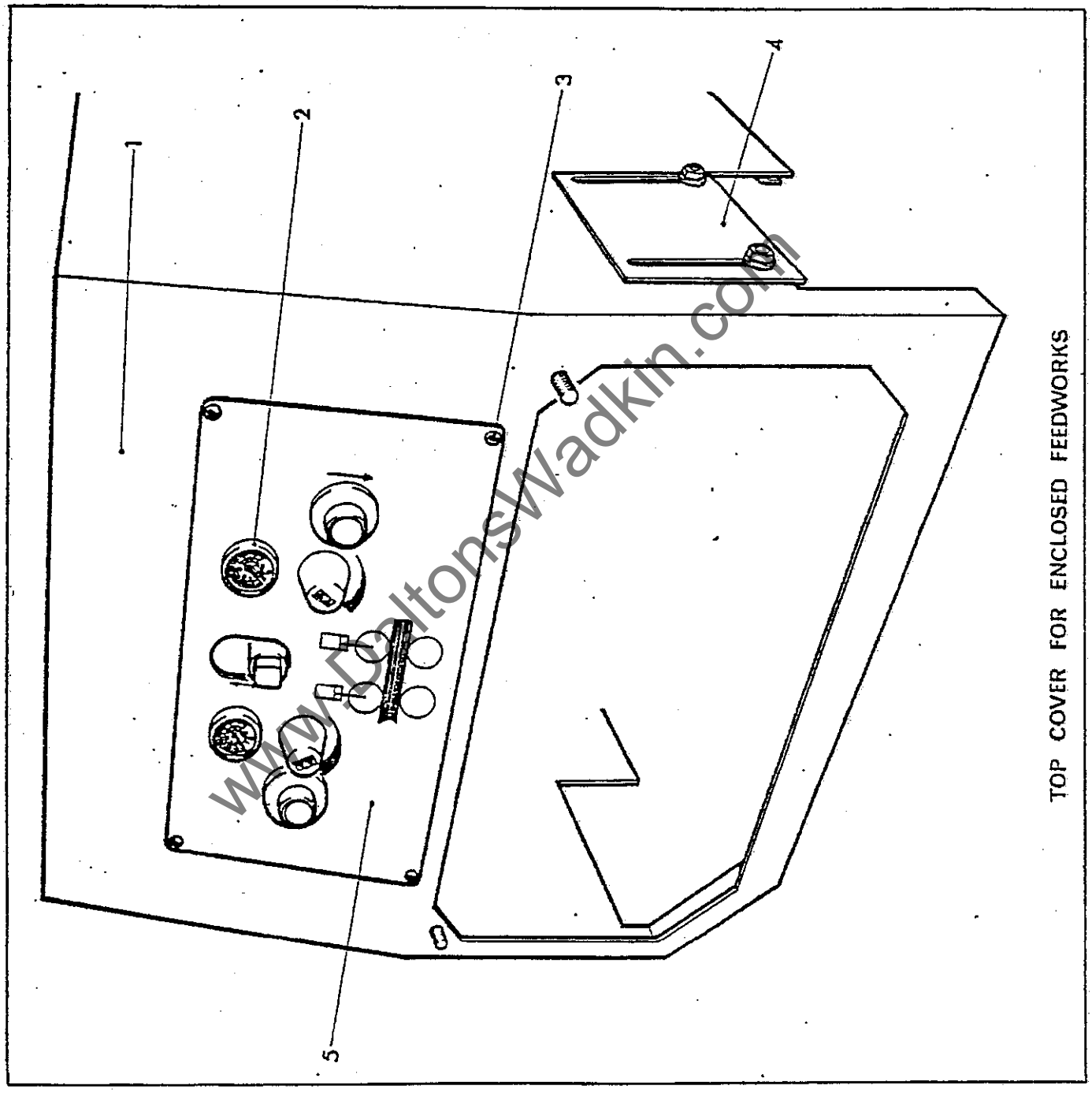
FB 30229 Hard chrome plain feed roll 250mm. dia.



ENCLOSED FEEDWORKS (BOTTOM)

TOP COVER FOR ENCLOSED FEEDWORKS

REF. NO.	PART NO.	DESCRIPTION	NO.OFF
1	FB 2910	Top Cover for Feedworks	1
2	K30 61 263	Norgren Miniature Pressure Gauge (0.160 PSI) 304 M 160	2
3	K05 25 415	M5 x 10mm long Posidrive Pan Head Screws	4
4	FB 2909	Guard (timber)	1
5	FB 14028	Control Panel	1



TOP COVER FOR ENCLOSED FEEDWORKS

FIRST BOTTOM HORIZONTAL CUTTERBLOCK SPINDLE 50MM.DIA. WITH ANGULAR CONTACT BEARINGS - SPEED 6000RPM.

	REF.NO:	PART NO:	DESCRIPTION	NO:OFF
	1	FB 3317	Handle for Collet Locking OUtboard Bearings	1
	2	FB 12962	Knurled Nut	1
	3	FB 12960	Bearing Cover	1
	4	KO5 01 123	Socket Head Capscrew 1/4in. whit x 1/2in. long	1
	5	FB 12957	Collet Locking Screw	1
	6	KO5 27 210	Chamfered Notch Nut 45mm. dia.	1
	7	KO5 27 259	Tab Lockwasher 45mm. dia.	1
Ø	8	KO6 20 150	Bearing RHP 6004	1
	9	FB 3306	Outboard Bearing Carrier	1
	10	FB 12955	Outboard Bearing Spacer	1
	11	FB 12961	Inner Bearing Spacer	1
Ø	12	KO6 20 106	Bearing RHP 6204 TB EP7	1
	13	FB 3311	Collet Type Outboard Bearing End Cap	1
	14	KO5 23 346	Key for Cutter Spindle 3/8in. square x 3.1/2in. long	1
	15	FB 30125	Bottom Horizontal Spindle 50mm. dia.	1
	16	MMT 216	Locking Cones 50mm. dia.	1
	17	MMT 216	Locking Cones 50mm. dia.	1
	18	FB 13510	Spindle Bearing Cap	1
Ø	19	KO6 20 140	Ball Bearings "FAFNIR" 2mm. 9112 WI CR DU M	2
	20	KO6 20 110	Ball Bearing RHP 6211 TB EP7	1
	21	FB 13508	Rear Bearing End Cap	1
	22	KO5 19 177	Locknut 1.1/2in. dia. x 14 T.P.I. - Right Hand	1
	23	FB 15190	Spindle Pulley	1
	24	KO5 23 354	Key for Pulley	1
	25	FB 15191	Spacing Collar	1
	26	FB 13507	Grease Retainer	1
	27	FB 13505	Spindle Barrel Housing	1
	28	FB 13507	Grease Retainer	1
	29	FB 13512	Outer Bearing Spacer	1
	30	FB 13513	Inner Bearing Spacer	1
	31	FB 13539	Locknut for Front Bearings	1
	32	FB 13532	Spindle Nuts 50mm.dia. x 1.5 pitch - Left Hand	1
*	33	KO5 25 166	Socket Head Capscrews M6. x 20mm. long - fit end cap to Bearing Carrier	4

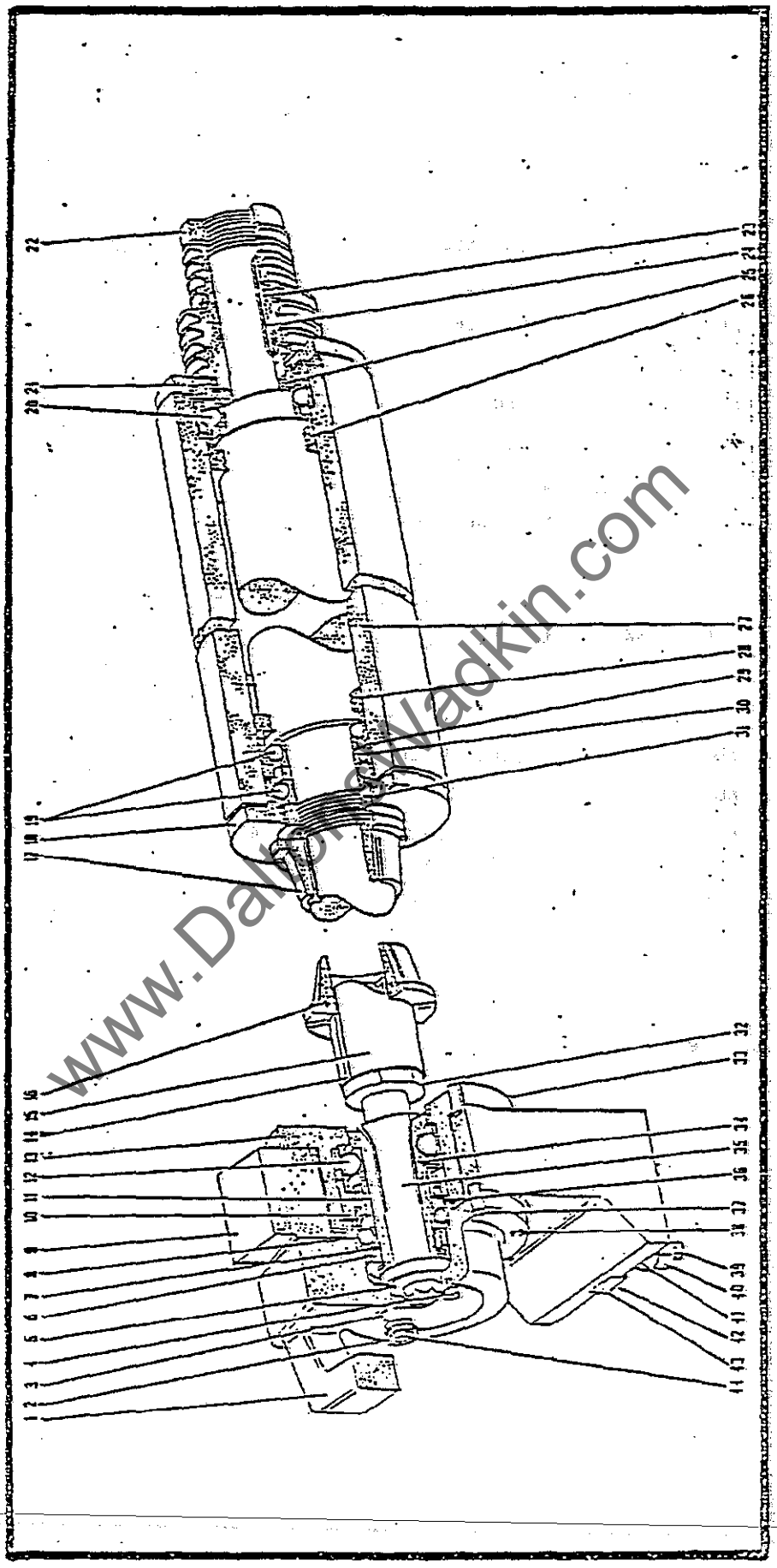
Ø "KLUBER" Grease Packed

* Not Shown

FIRST BOTTOM HORIZONTAL CUTTERBLOCK SPINDLE....CONTD.

	REF.NO:	PART NO:	DESCRIPTION	NO:OFF
	34	FB 12952	Outboard Bearing Sleeve	1
	35	FB 12954	Collet for Outboard Bearing Sleeve	1
	36	K30 89 109	"EMO" Waved Washer EPL 55	1
	37	K05 29 130	Plain Dowels 6mm. dia. x 20mm. long	2
	38	K05 25 165	Socket Head Capscrews M6. dia. x 16mm. long	4
	39	K05 26 300	Screwed Stud M12. dia. x 70mm. long	1
	40	K05 27 104	Hexagon Nut size M12.	1
	41	K05 28 105	Washer Mild Steel 12mm. dia. Hole	1
*	42	K05 25 142	Hexagon Socket Capscrews M5. dia. x 10mm. long to fit Key to Bearing Carrier	2
	43	FB 1720	Check Key	1
	44	K05 08 419	Stud 1/4in. whit x 1.1/4in. long	1
*	45	K30 77 125	"FENNER" Belts SPZ 1420	3
*	46	K05 25 187	Hexagon Socket Capscrews M5. dia. x 20mm. long (4) for FB 13508 and (4) for FB 13510	8
*	47	K05 03 115	Countersunk Head Screws 3/16in. whit x 3/8in. long for Ball Bearing Locknut K05 19 177	1

* Not Shown



FIRST BOTTOM HORIZONTAL CUTTERBLOCK SPINDLE

FENCE SIDE VERTICAL HEAD SPINDLE 50MM WITH ANGULAR CONTACT BEARINGS - SPEED 6000RPM

	REF.NO:	PART NO:	DESCRIPTION	NO:OFF
	1	FB 3047	Fence Side Vertical Spindle 50mm. dia.	1
*	1a	FB 13531	Spindle Nut 50mm. dia. x 1.5pitch - Right Hand	1
	2	MMT 216	Locking Cones 50mm. dia.	2
	3	FB 13539	Locknut for Spindle Front Bearing	1
	4	FB 13509	Front Bearing Cap	1
Ø	5	K06 20 140	Ball Bearing "FAFNIR" 2mm. 9112 WI CR DU M	2
	6	FB 13513	Inner Bearing Spacer	1
	7	FB 13512	Outer Bearing Spacer	1
	8	FB 14944	Spindle Housing	1
	9	FB 13507	Grease Retainer	1
	10	FB 13507	Grease Retainer	1
Ø	11	K06 20 110	Ball Bearing RHP 6211 TB EP7	1
	12	FB 13508	Rear Bearing Cap	1
	13	FB 15191	Spacing Collar for Spindle	1
	14	K05 23 346	Key for Pulley 3/8in. square x 3.1/2in. long	1
≠	15			
	16	FB 15190	Spindle Pulley	1
	17	K05 19 175	Locknut Right Hand Pegs 1.1/2in.	1
*	18	K05 77 125	"FENNER" Belts SPZ 1420	3
*	19	K05 25 187	Hexagon Socket Screws M8. x 20mm. long (4) for FB 13509 and (4) for FB 13508	8
*	20	K05 03 115	Countersunk Head Screw - slotted - 3/16in. whit x 3/8in. long for K05 19 177	1

* Not Shown

Ø "KLUBER" Grease Packed

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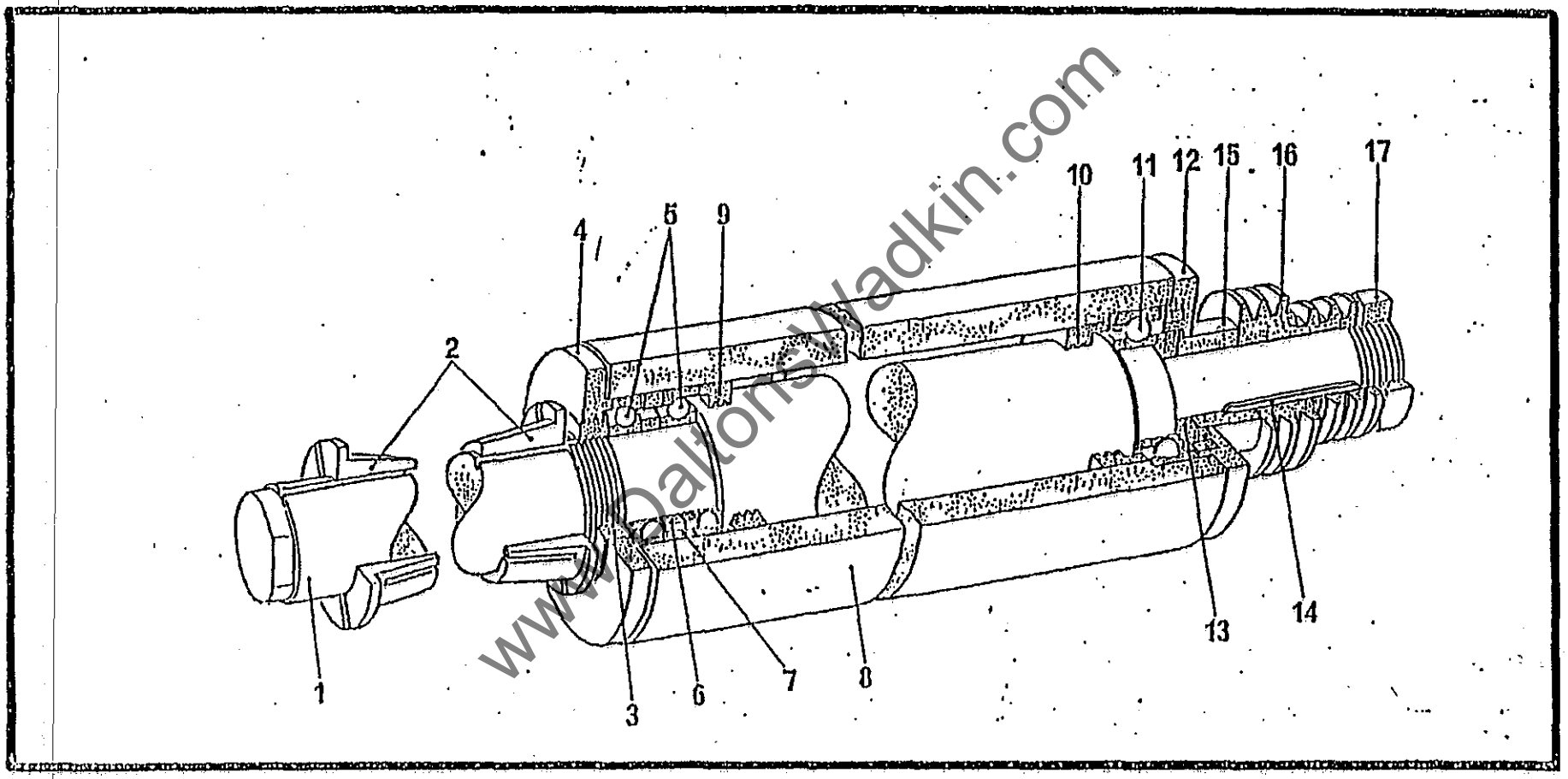

FENCE SDIE VERTICAL HEAD SPINDLE -- 6000 RPM

NEAR SIDE VERTICAL HEAD SPINDLE 50MM. WITH ANGULAR CONTACT BEARINGS - SPEED 6000RPM.

	REF.NO:	PART NO:	DESCRIPTION	NO:OFF
	1	FB 30418	Near Side Vertical Spindle 50mm. dia.	1
*	1a	FB 13532	Spindle Nut 50mm. dia. x 1.5 pitch - Right Hand	1
	2	MMT 216	Locking Cones 50mm. dia.	2
	3	FB 13539	Locknut for Spindle Front Bearing	1
	4	FB 13509	Front Bearing Cap	1
Ø	5	K06 20 140	Ball Bearing "FAFNIR" 2mm. 9112 WI CR DU M	2
	6	FB 13513	Inner Bearing Spacer	1
	7	FB 13512	Outer Bearing Spacer	1
	8	FB 14944	Spindle Housing	1
	9	FB 13507	Grease Retainer	1
	10	FB 13507	Grease Retainer	1
Ø	11	K06 20 110	Ball Bearing RHP 6211 TB EP7	1
	12	FB 13508	Rear Bearing Cap	1
	13	FB 15191	Spacing Collar for Spindles	1
	14	K05 23 346	Key for Pulley 3/8in. square x 3.1/2in. long	1
≠	15			
	16	FB 15190	Spindle Pulleys	1
	17	K05 19 177	Locknut Right Hand Pegs 1.1/2in.	1
*	18	K30 70 175	"FENNER" Belts SPZ 1420	3
*	19	K05 25 187	Hexagon Socket Screws M8. x 20mm. long (4) for FB 13509 and (4) for FB 13508	8
*	20	K05 03 115	Countersunk Head Screws - slotted - 3/16in.whit x 3/8in. long for K05 19 177	1

* Not Shown

Ø "KLUBER" Grease Packed

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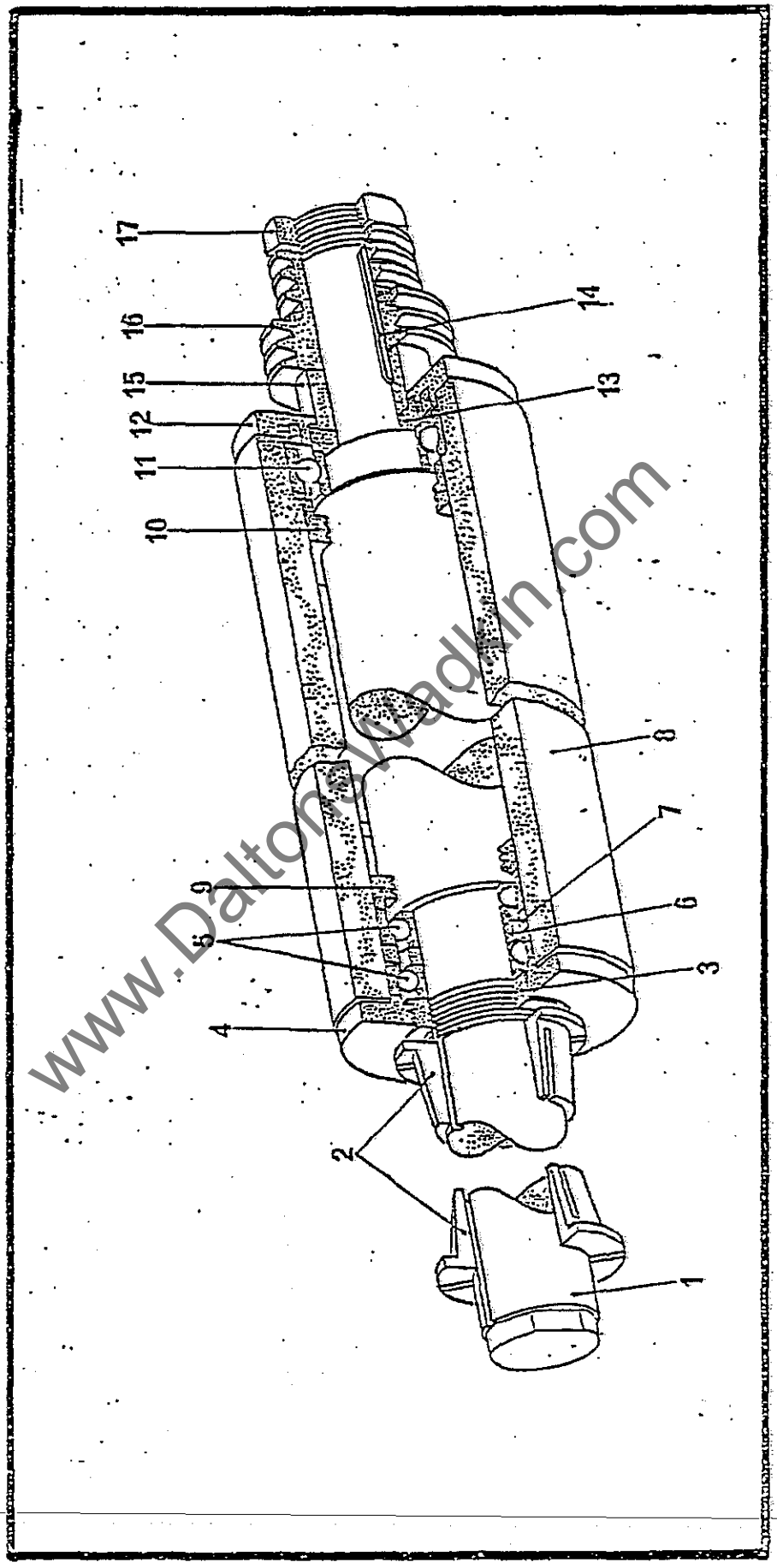


NEAR SIDE VERTICAL HEAD SPINDLE - 6000RPM

TOP HORIZONTAL CUTTERBLOCK SPINDLE 50MM. DIA. WITH ANGULAR CONTACT BEARINGS

	REF.NO:	PART NO:	DESCRIPTION	NO:OFF
	1	FB 14558	Outboard Bearing Carrier	1
	2	FB 12962	Knurled Nut	1
	3	K05 25 165	Socket Head Capscrews M6. x 16mm. long	4
	4	K05 27 210	Chamfered Notch Nut M45.	1
	5	K05 27 259	Tab Lock Washer 45mm. dia.	1
Ø	6	K06 20 150	Bearing RHP 6004	1
	7	K30 89 109	"EMO" Waved Washer EPL 55	1
	8	FB 12961	Inner Bearing Spacer	1
Ø	9	K06 20 106	Bearing RHP 6204 TB EP7	1
	10	FB 3311	Collet Type Outboard Bearing End Cap	1
*	11	K05 25 166	Socket Head Capscrews M6. x 20mm. long - fit End Cap to Outboard Bearing Carrier	4
	12	K05 23 346	Key for Cutter Spindle 3/8in. square x 3.1/2in. long	1
	13	MMT 216	Locking Cones 50mm. dia.	2
	14	FB 13509	Spindle Bearing Cap	1
Ø	15	K06 20 140	Ball Bearings "FAFNIR" 2mm. 9112 WI CR DU M	2
Ø	16	K06 01 309	Ball Bearings RHP 6211 TB EP7	1
	17	FB 13508	Rear Bearing End Cap	1
	18	K05 19 177	Locknut 1.1/2in. dia. x 14 T.P.I. - Right Hand	1
	19	FB 15190	Spindle Pulleys	1
	20	K05 23 346	Key for Pulley 3/8in. square x 3.1/2in. long	1
	21	FB 15191	Spacing Collars	1
	22	FB 13507	Grease Retainer	1
	23	FB 13502	Spindle Barrel Housing	1
	24	FB 13507	Grease Retainer	1
	25	FB 13512	Outer Bearing Spacer	1
	26	FB 13513	Inner Bearing Spacer	1
	27	FB 13539	Locknut for Front Bearing	1
	28	FB 30286	Top Horizontal Spindle 50mm. dia.	1
	29	FB 13531	Spindle Nut M50. dia. x 1.5 pitch Right Hand thread	1
	30	FB 12952	Outboard Bearing Sleeve	1
	31	FB 12953	Collet for Outboard Bearing Spacer	1

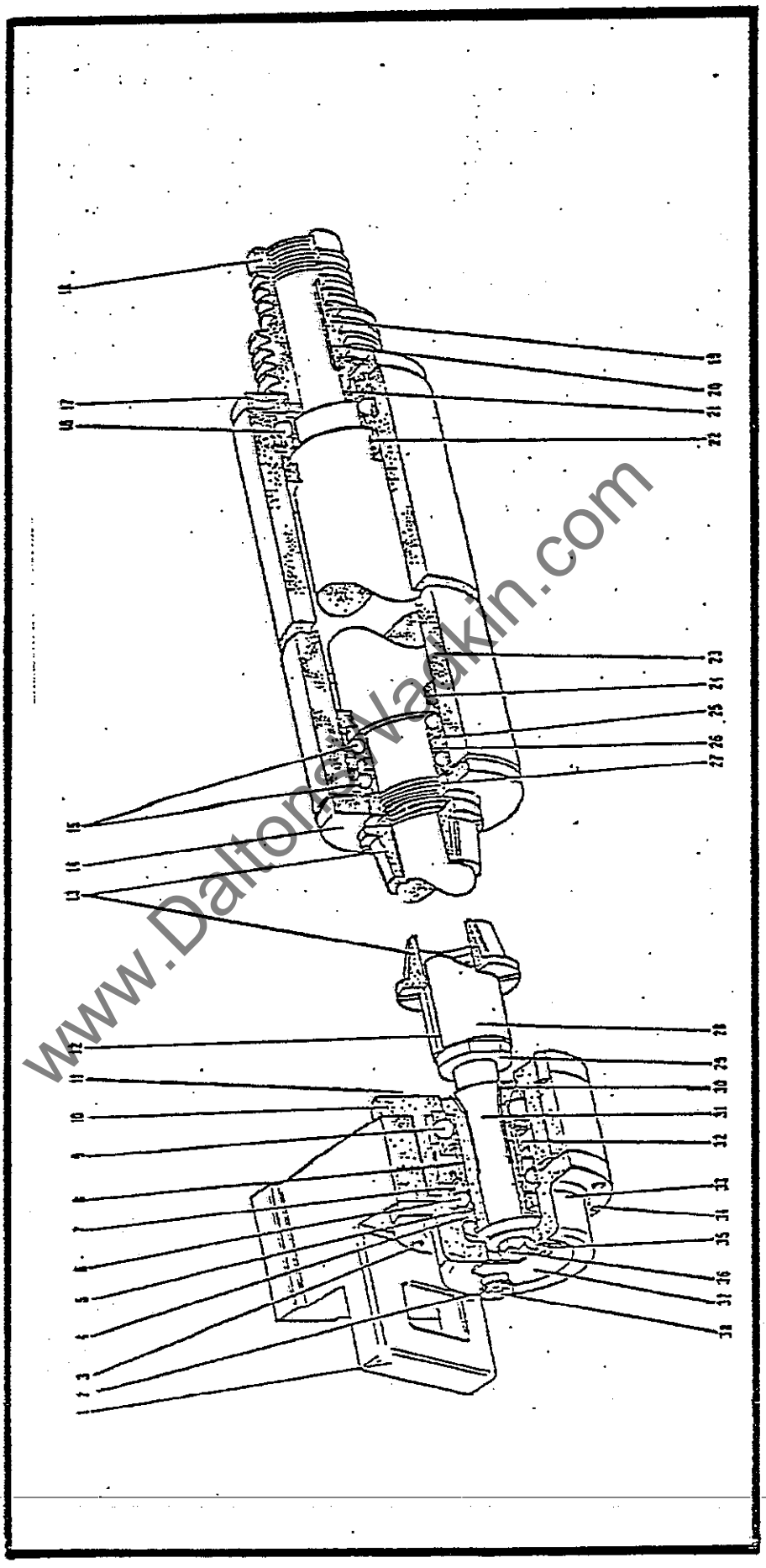
Ø "KLUBER" Grease Packed

* Not Shown

TOP HORIZONTAL CUTTERBLOCK SPINDLE

	REF.NO:	PART NO:	DESCRIPTION	NO:OFF
	32	FB 12955	Outboard Bearing Spacer	1
	33	FB 14560	Collet Locking Outboard Bearing End Cap	1
	34	K05 29 130	Plain Dowels 6mm. dia. x 20mm. long	2
	35	K05 01 123	Socket Head Capscrew 1/4in. whit. x 1/2in. long	1
	36	FB 12956	Collet Locking Screw	1
	37	FB 12960	Bearing Cover	1
	38	K05 08 419	Stud 1/4in. whit x 1.1/4in. long - fitter to shorten to suit	1
*	39	K30 77 125	"FENNER" Belts SPZ 1420	3

* Not Shown



TOP HORIZONTAL CUTTERBLOCK SPINDLE WITH "BUILT-IN" JOINTER