Modifications are made to these books from time to time and it is important therefore that only the book sent with the machine should be used as a working manual

PLEASE INSERT SERIAL NUMBER OF MACHINE

Operating Instructions

S 400/500

Precision Surface Planers

WADKIN LTD.
Green Lane Works, Leicester LE5 4PF, England
Telephone: 0533 769111 Telex: 34646 (Wadkin G)
Telegrams & Cables: Woodworker, Leicester, Telex

Also York House, Empire Way, Wembley, Middx. HA9 0PA
Telephone: 01-902-7714 (3 lines) Telex: 262210

BURSGREEN (COLNE) LTD.
Lodge Holme, Trawden, Nr Colne, Lancs.
Telephone: (0282) 865310. Telex: 635032

Modifications are made to these books from time to time and it is important therefore that only the book sent with the machine should be used as a working manual

PLEASE INSERT SERIAL NUMBER OF MACHINE

Operating Instructions

S 400/500

Precision Surface Planers

Specification	Super 400		Super 500	
Table width	16in	400 mm	20in	500 mm
Length of infeed table	57in	1440 mm	61in	1540 mm
Length of outfeed table	45in	1138 mm	49in	1238 mm
Overall length of machine	102in	2600 mm	110in	2800 mm
Table height from floor	31½in	800 mm	31½in	800 mm
Length of fence	43in	1100 mm	43in	1100 mm
Height of fence	6⅞in	175 mm	6⅞in	175 mm
Fence will cant to		45°		45°
Overall height of machine	38in	975 mm	38in	975 mm
Cutterblock speed		4200 rev/min		4200 rev/min
Cutting circle diameter	4¾in	120 mm	4¾in	120 mm
Maximum depth of rebate	¾in	20 mm	¾in	20 mm
Motor	4hp	3 kW	5½hp	4 kW
Net weight	1400lb	635 kg	1764lb	800 kg
Gross weight	1543lb	700 kg	1929lb	875 kg
Shipping dimensions	76cu.ft.	2·15m³	91cu.ft.	2·58m³
BELTS	2 — SPZ 1270			
BEARINGS — CUTTERBLOCK	1 — 6207 2RS		1 — 6307 2RS	
MOTOR	1 — 6205 2RS		1 — 6206 2RS	

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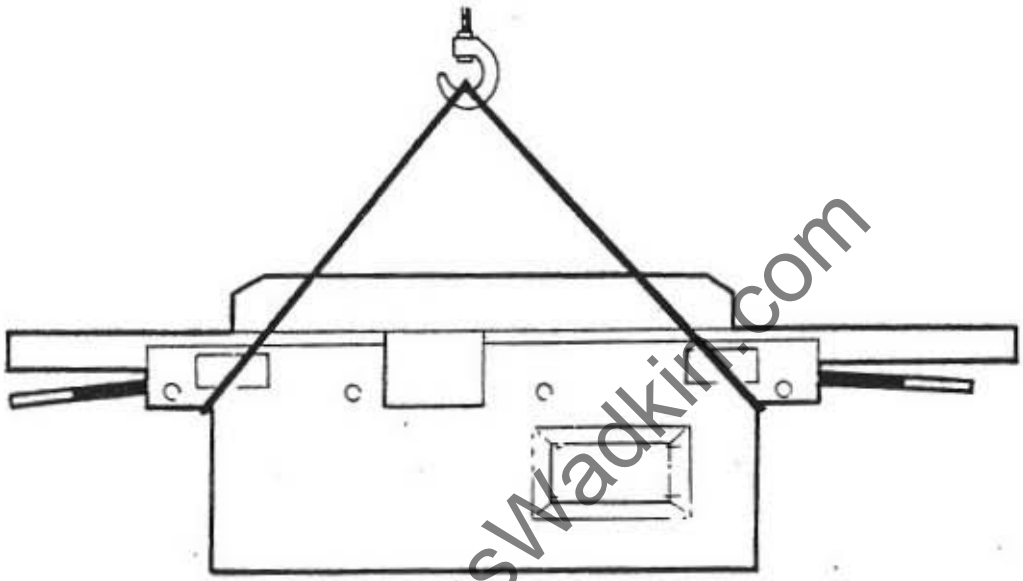
LIFTING

THE MACHINE IS NORMALLY SUPPLIED COVERED IN PLASTIC SHEET WITH SUNDRY ITEMS PACKED IN BOXES AND STRAPPED TO THE MACHINE FRAME. BEFORE LIFTING TO WORK POSITION REMOVE SHEETING AND ALL BOXES ALONG WITH ANY LOOSE ITEMS.

THE MACHINE AS RECEIVED IN THIS FORM WILL WEIGH APPROXIMATELY 1000 kg AND SHOULD THEREFORE BE RAISED WITH STRONG ROPES OR SLINGS WHICH ARE KNOWN TO BE IN SOUND CONDITION. THE SLINGS SHOULD BE PLACED TO GIVE A WIDE SPREAD AND SHOULD BE PROTECTED BY PADDING AT THEIR POINT OF CONTACT WITH THE MACHINE. (ie)



1) WHEN LIFTING WITH ROPE TYPE SLINGS PROTECT AROUND CORNERS OR SHARP EDGES WITH OLD SACKING.

2) WHEN USING POWER HOISTS LIFT SLOWLY FROM GROUND LEVEL TO ASCERTAIN STABILITY OF LIFT. A LOAD SHOULD BE RAISED IN THE AIR TO BE SUSPENEDED AS LEVEL AS POSSIBLE. IF ON LIFTING THE LOAD SHOWS SIGNS OF TILTING LOWER OFF AND READJUST SLINGS.

3) NEVER RAISE A LOAD WITH LOOSE ITEMS UPON IT.

4) WHEN MOVING MACHINE OR CRATE TO FOUNDATION POINT VIA OVERHEAD BLOCK OR HOIST, BEFORE MOVING OFF LOWER LOAD DOWN TO WITHIN A COUPLE OF INCHES OFF GROUND LEVEL.

5) WHERE LIFTING HOOKS EYE BOLTS OR SPECIAL GRABS ARE PROVIDED ENSURE SUCH FITMENTS ARE SECURED TO THE LOAD BEFORE LIFTING.

6) BEFORE USING ANY ROPE, BELT SLING OR CHAINS ENSURE IT IS IN SOUND CONDITION. CUT OR FRAYED ROPES, BELTS OR CHAINS WITH SPRAINED OR SUSPECT LINKS SHOULD NEVER BE USED.

7) WHEN OFF-LOADING MACHINE OR CRATE, STAND WELL CLEAR.

8) KEEP LOAD STATIONARY WHEN SUSPENDED, DO NOT ALLOW LOAD TO SWING.

9) BEFORE LIFTING CHECK MACHINE OR CRATE FOR ANY SPECIAL LIFTING INSTRUCTIONS.

10) IF A CRATE IS DAMAGED TO THE POINT WHERE IT IS INSECURE, UNPACK AND LIFT MACHINE ONLY.

Installation.-

Remove protective anti-rust coating from bright parts by applying a cloth soaked in paraffin or other solvent.

Wiring:-

The motor and control gear have been wired in before despatch, therefore all that is required to be done is to connect the mains supply to the starter, or isolator where fitted.

POINTS TO NOTE WHEN CONNECTING TO POWER SUPPLY:-

1 - Check voltage, phase and frequency.
2 - It is important that the correct cable is used to deliver the correct voltage to the starter. RUNNING ON LOW VOLTAGE WILL DAMAGE MOTOR.
3 - Check main line fuses are of correct capacity.
4 - Connect line leads to correct terminals (SEE WIRING DIAGRAM).
5 - Check all connections are sound.
6 - Check spindle rotates in correct direction. If not reverse any two of the line lead connections.

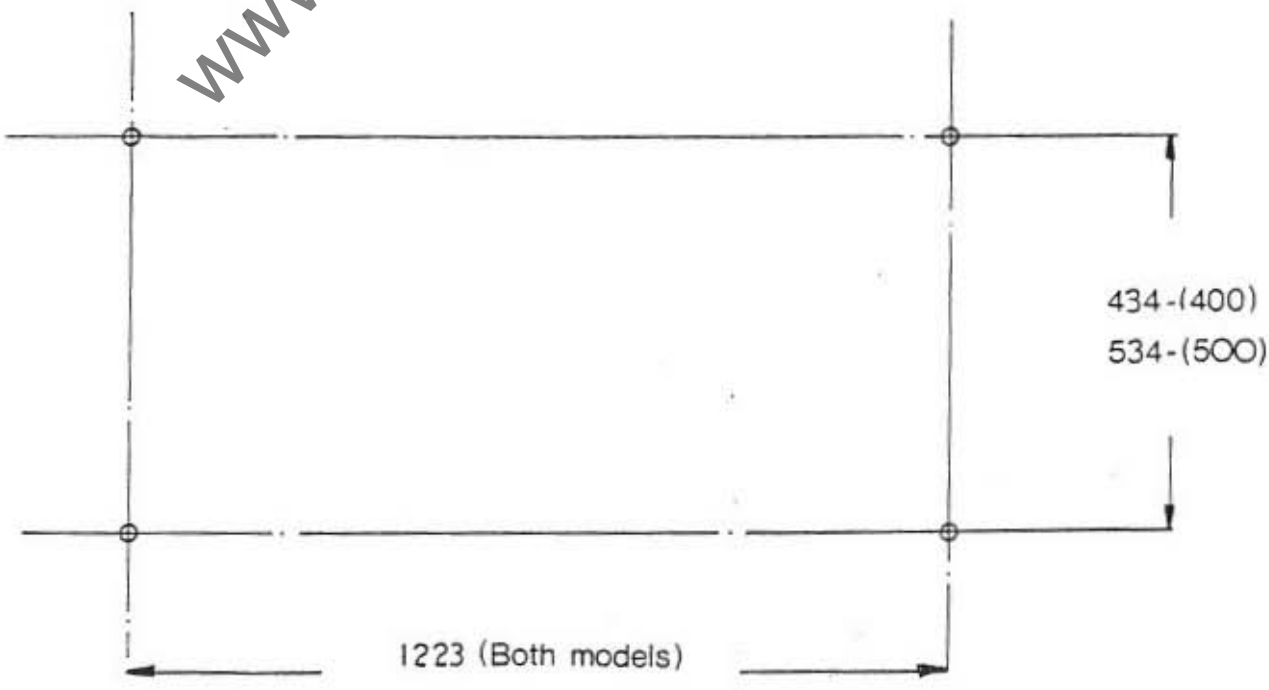
FAILURE TO START:-

1 - Fuses have blown or have not been fitted.
2 - Isolator switch has not been closed.
3 - Lock off or stop button (when fitted) has not been released.
4 - Supply not available at machine.

STOPPAGE DURING OPERATION & FAILURE TO RESTART:-

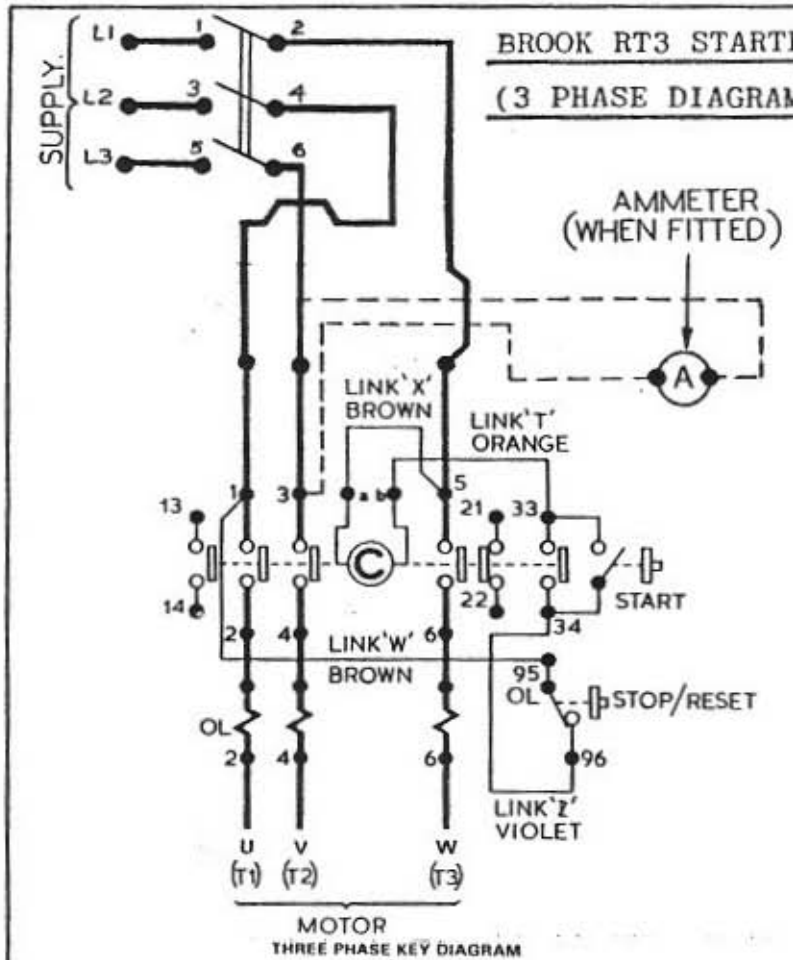
1 - Overloads have tripped. If hand re-set. set by pressing button. If automatic they will re-set after a short period.
2 - Fuses have blown.

FOUNDATION:-

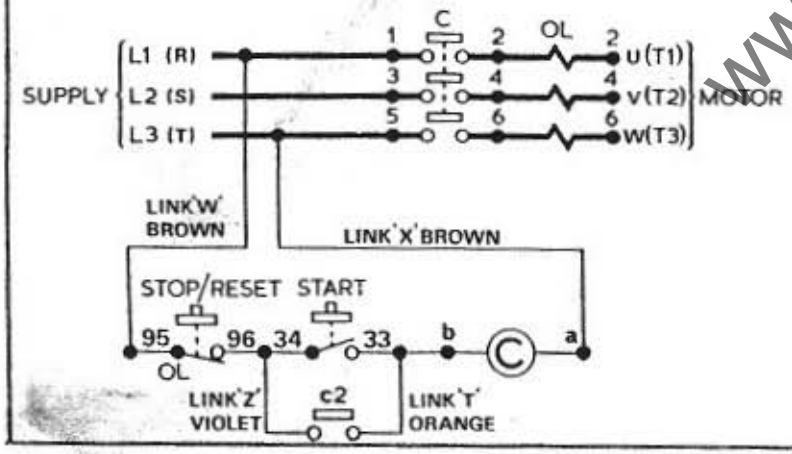


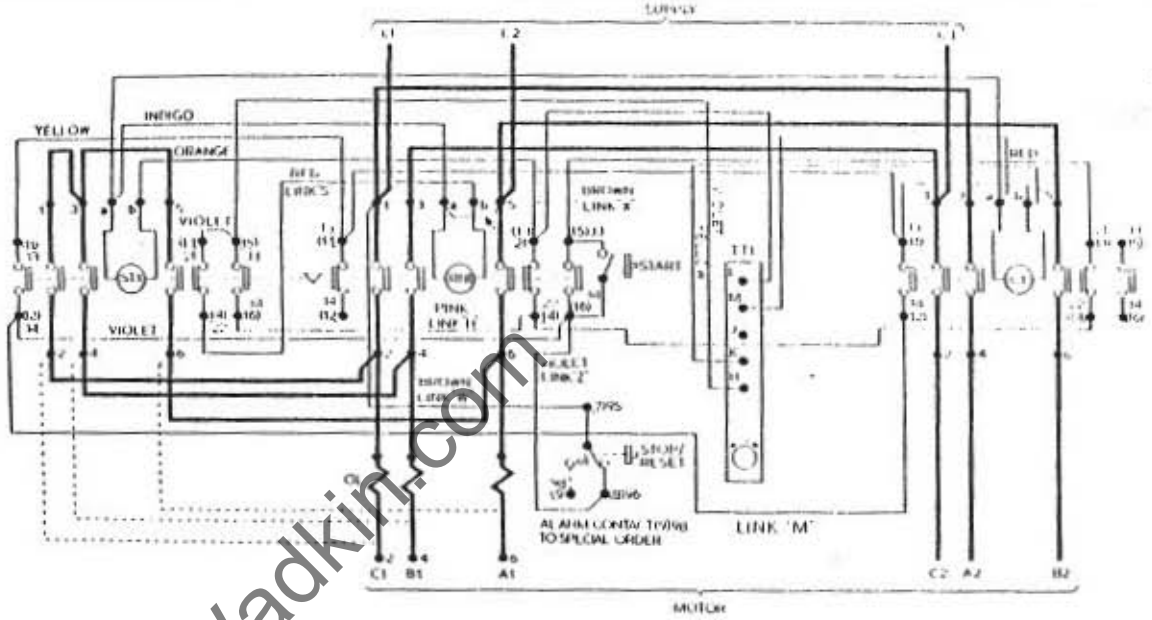
BROOK RT3 STARTER

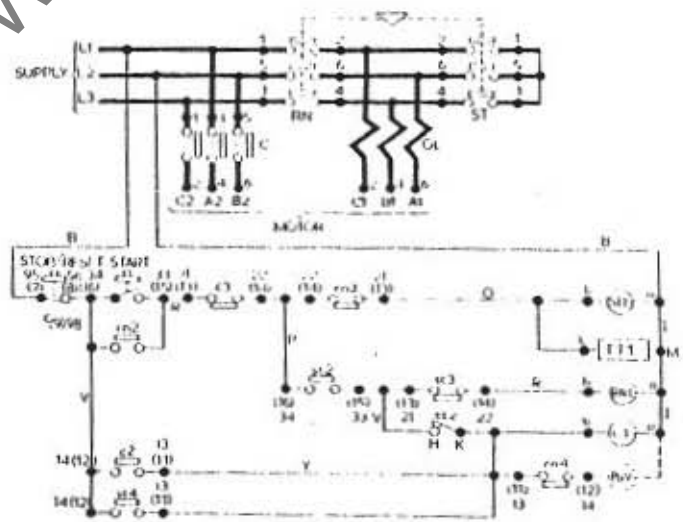
(3 PHASE DIAGRAM)



THREE PHASE KEY DIAGRAM







STANDARD CONNECTION DIAGRAM FOR "RYD" WITH THERMAL OVERLOADS

BROOK RYD STARTER (STAR DELTA)

TABLE ADJUSTMENT (FIG.4)

(INFEED TABLE)

To adjust the infeed table unlock handwheel A and operate hand lever B to bring table into required position. After adjusting re-lock handwheel A.

(OUTFEED TABLE)

The outfeed table is provided with similar adjustment as outlined above, but under normal conditions will remain set level with the cutterblock knives.

DEPTH INDICATOR (FIG.5)

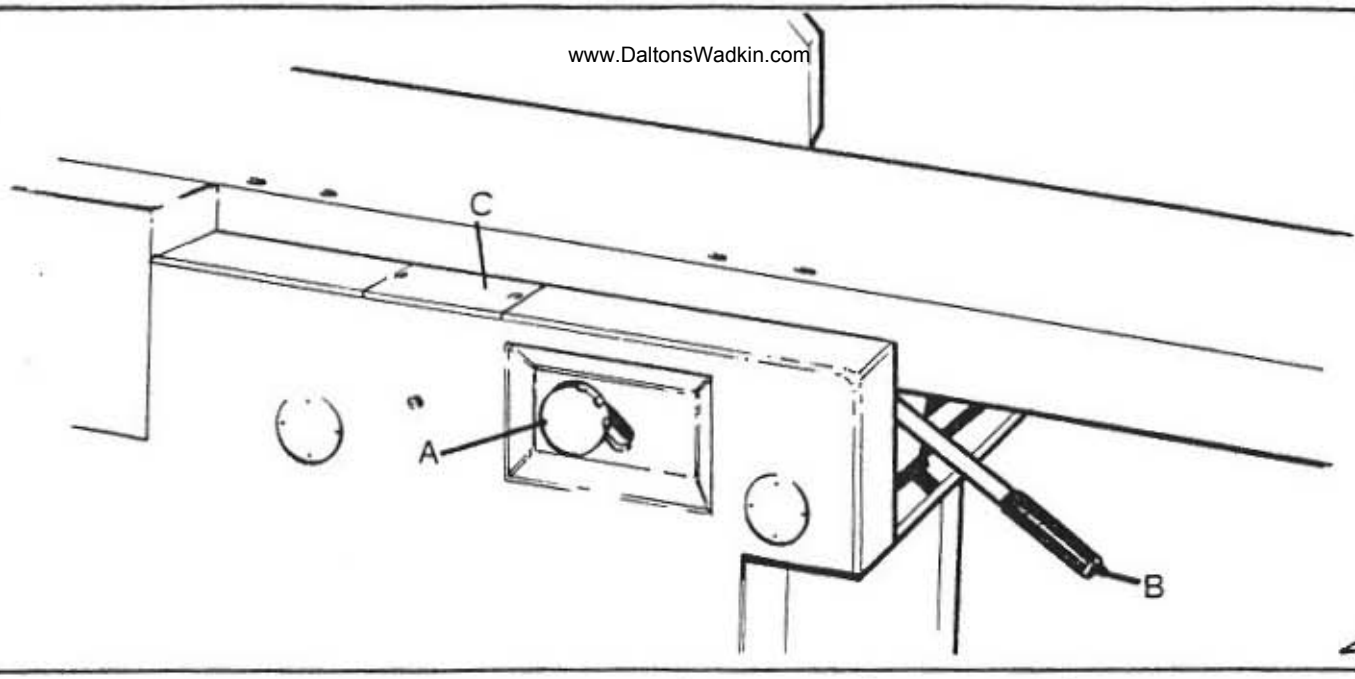
It is recommended that the table depth indicator setting is checked periodically to ensure constant accuracy of work. The procedure is simple and should be undertaken as follows.

1 :- Bring the outfeed table into the top position and lock in place.

2 :- Useing a straight edge off the rear table, check at three or four points along the length of the blade to ensure that the table is level with the cutting circle (FIG.5A).

3 :- Raise the infeed table into the top position and check with straight edge to ensure that both infeed and outfeed tables are parallel and level with the cutting circle (FIG.5B).

4 :- The reading against the datum line on the indicator (with table set in this position) should be ZERO. However, if adjustment is required simply rotate the setting screw in either direction to set the zero mark against datum line (FIG.5), re-lock lock nut after adjusting.



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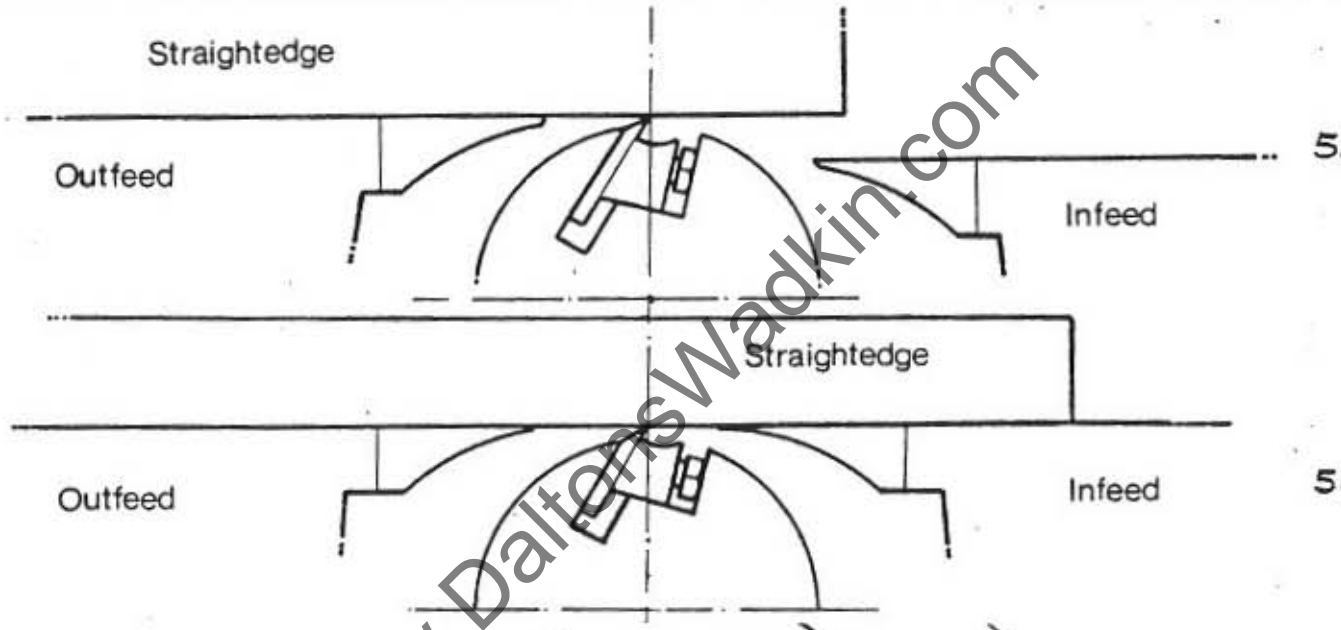
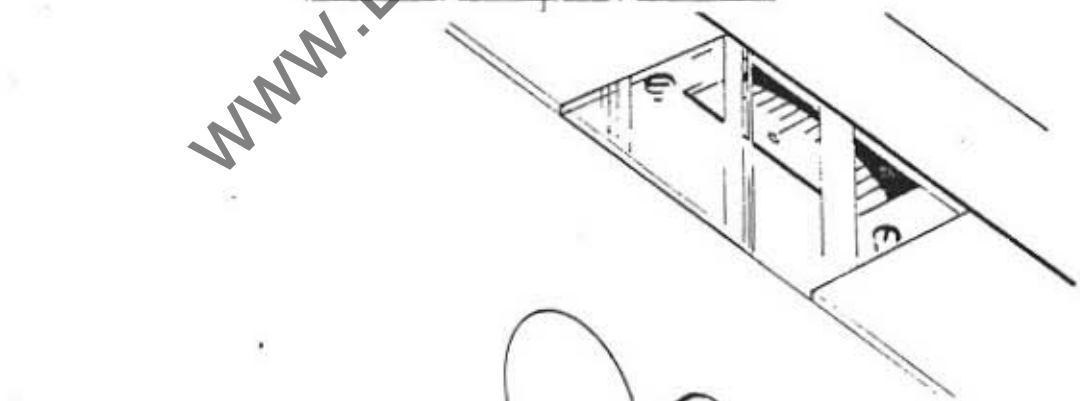
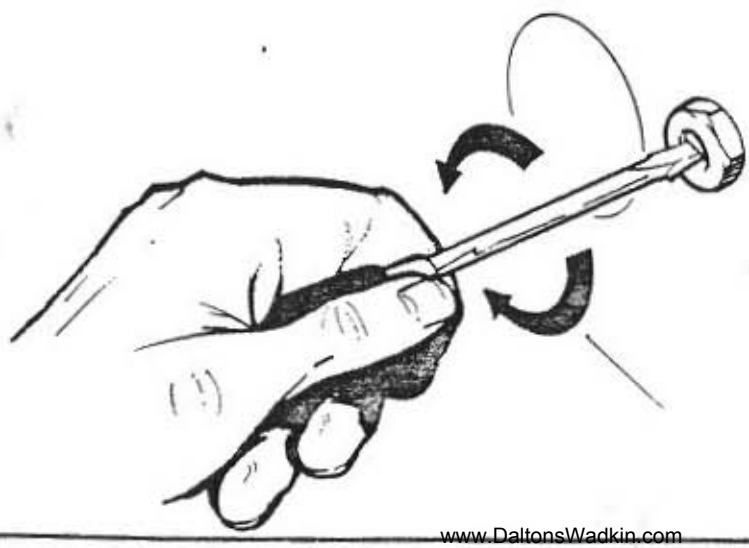


5A

5B





5.

KNIFE SETTING (FIG'S 6-6A & 7)

The following procedure covers the setting of new or re-ground blades being replaced into the cutterblock.

IMPORTANT:- ISOLATE MACHINE BEFORE UNDERTAKING THIS OPERATION.

1 :- Slide canting fence into the back position and remove cutter-block guard to give a clear open work area.

2 :- Lower infeed table to the midway position and lock at this point.

3 :- Insert blade into cutterblock groove and press down into bottom position against the leaf springs. Lightly clamp blade in the bottom position with the wedge screws. It may be found helpful to use a small block of wood to press blades down thereby safe-guarding the hand and fingers: Repeat for each knife in block.

4 :- Place knife setting device on outfeed table ensuring that the two pegs (A) on the underside locate against the lip of the table and that the side plate of the device is pushed firmly against the table side face as illustrated.(FIG.6)

5 :- Slacken thumb screw (B) and lower location pin (C) into cutter-block groove as illustrated. (FIG.6A)

6 :- Place palm of hand on top of setting device to hold firmly in place then carefully slacken the wedge clamp bolts. When slack enough the blade will lift, assisted by the springs, to come up against the underside face of the device. Before locking ensure that the rebate edge of the blade is butted up to the side plate of the setter(D). (FIG.6)

7 :- Carefully re-lock wedge screws starting in the centre as shown and locking in alternate sequence toward the outside edges. (FIG.7)

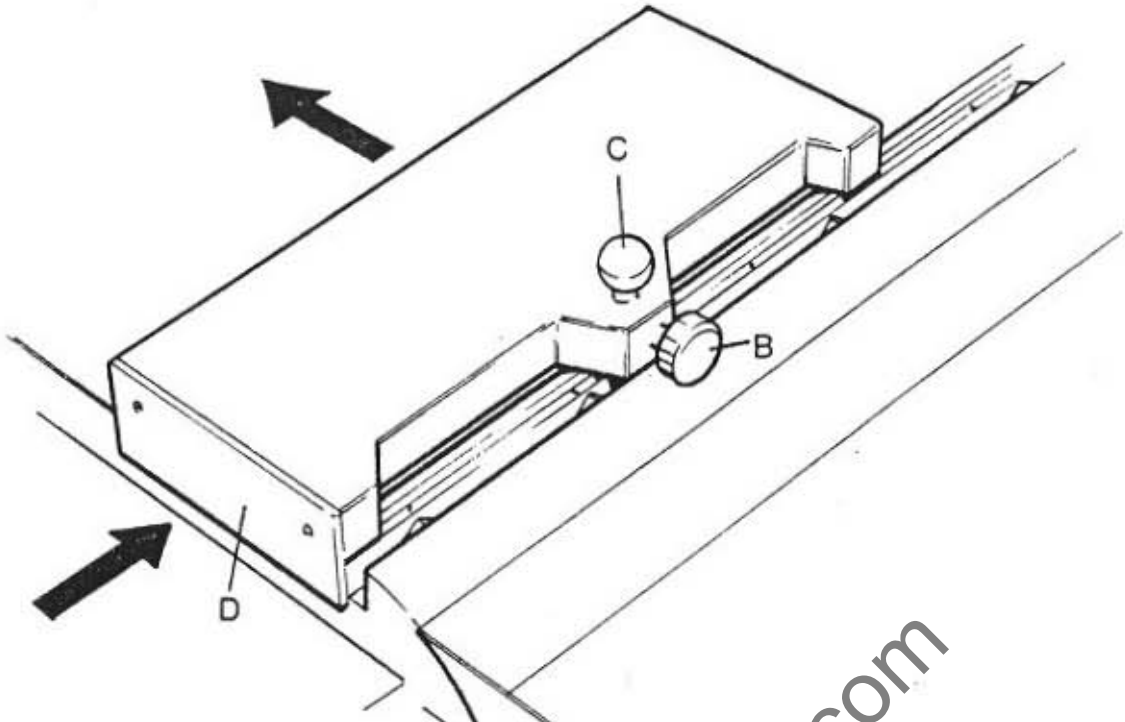
8 :- Repeat the above procedure on each blade ensuring that all wedges, screws and blades are secured firmly.

9 :- ENSURE THAT GUARD IS REPLACED BEFORE OPERATION.

NOTE :-
THESE CUTTERBLOCKS ARE FITTED WITH ADJUSTABLE HEIGHT WEDGES AND CAN BE REGULATED FOR DIFFERENT TYPES OF TIMBER BY ADJUSTING GRUB SCREWS (E). (FIG.6A)

IMPORTANT:-

DO NOT USE LEVERS OR HAMMERS TO TIGHTEN CUTTERBLOCK BOLTS AS THIS CAN CAUSE BLADE FRACTURE. (FIG.7)



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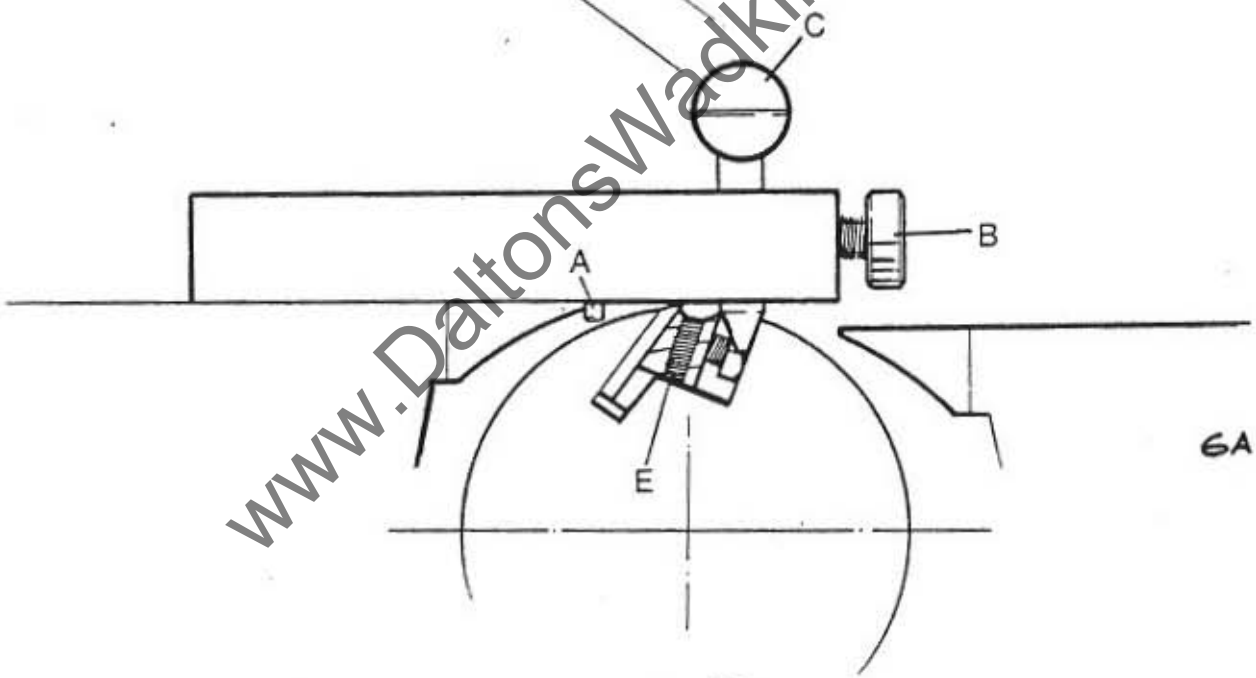
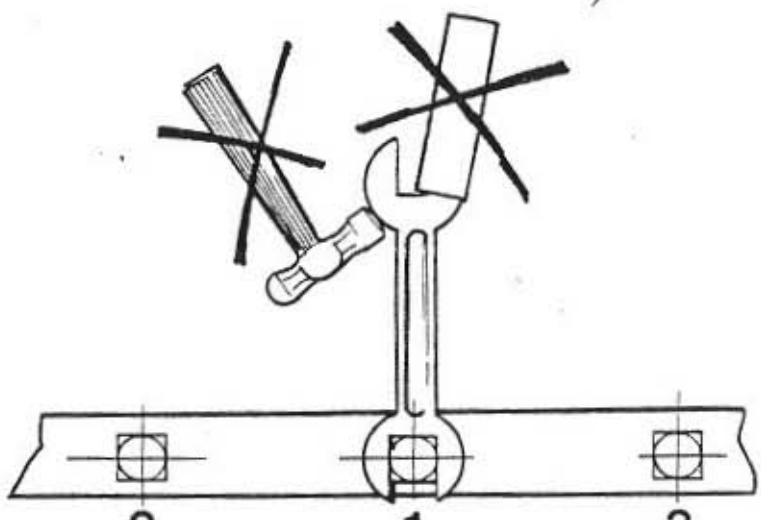


6A



7

CANTING FENCE (FIG.8)

(OPERATION):-

To adjust the fence across the table simply unlock lever (A) and slide fence by hand to desired position.

On machine fitted with rack and pinion slides (drawn inset) turn handwheel B to move fence across machine.

AFTER ADJUSTING FENCE ENSURE ALL LOCKS ARE ENGAGED BEFORE OPERATING MACHINE.

The fence is capable of canting from 90° (upright) down to 45° and can be adjusted to any required angle between these points by simply unlocking lever (C).

The angle of cant is indicated by scale and pointer (D) whilst positive stops register against the fence carrier bracket at both 90° and 45°.

ADJUSTMENT OF POSITION STOPS

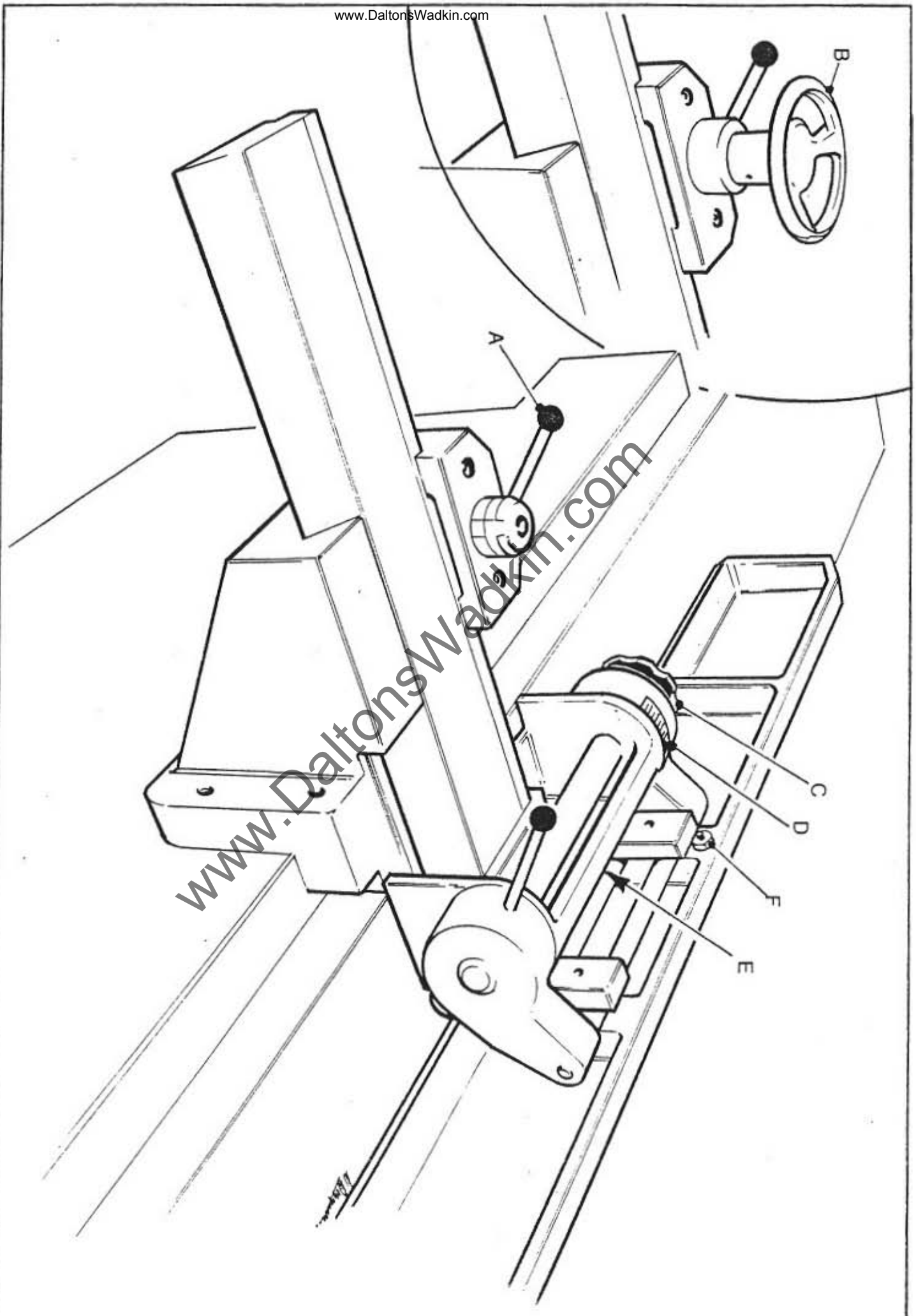
During the working life of the machine it may be required to re-set the cant angle stops (E) (F) in which case the following procedure may be adopted.

90° STOP:-

Set fence to 90° against the scale and check that angle is correct with a steel square from fence to table surface. To adjust stop simply unlock locknut, and screw setting stud inward until tight. Re lock lock nut and operate fence in normal manner to check that adjustment is correct.

45° STOP:-

To re-set the 45° stop (F) firstly set fence over to 45° against the scale then set in same way as outlined above.



GUARDING:-

TELESCOPIC CUTTERBLOCK GUARD (FIG.9):-

The telescopic type guard gives complete coverage of the cutterblock and is adjustable both horizontally and vertically.

For vertical adjustment unlock tee-lever (A) and raise or lower as required. Ensure tee-lever is locked firmly after adjustment.

The vertical pillar (B) is fitted with a safety screw at point (C). This ensures that the guard will not drop onto the cutters if accidentally released.

Horizontal adjustment of the guard is by unlocking tee-lever (D) whilst unlocking handwheel (E) will allow the outer guard top cover (F) to slide as required over the inner guard cover (G). The horizontal travel of the inner cover is controlled at either end of the slide by positive stops.

ALWAYS ENSURE ALL POINTS ARE FULLY LOCKED.

NEVER RUN MACHINE WITHOUT GUARDS IN PLACE.

REAR FENCE GUARDING:-

The rear fence cutterblock guard of this machine is provided by the fence slide and gives total protection in this area without the need for adjustment of any kind.

BOOMERANG GUARD (EXPORT ONLY):-

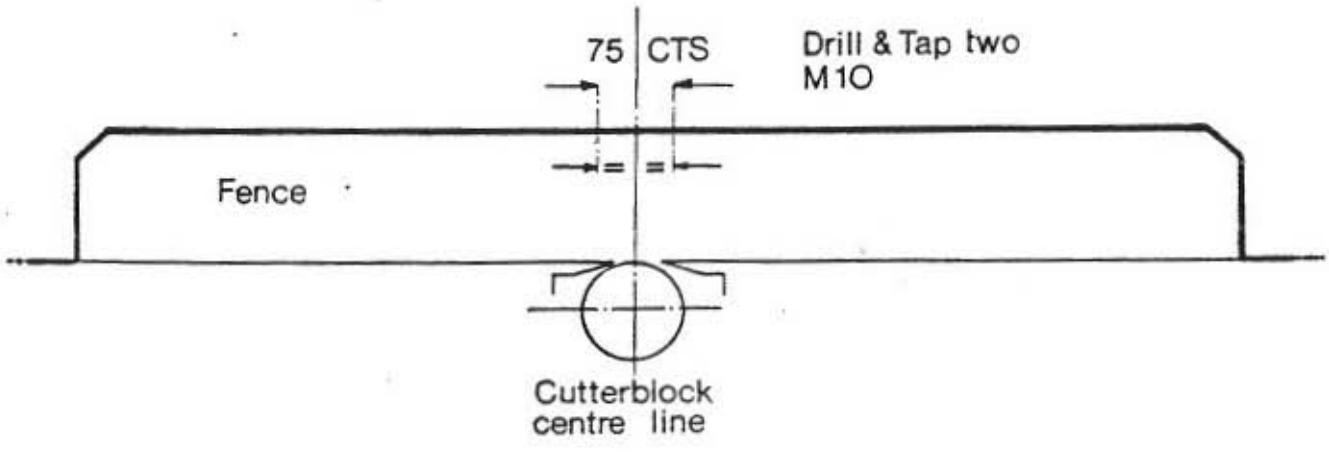
This unit gives full coverage of cutterblock and has built-in spring loaded self return after stock has passed the guard leading edge.

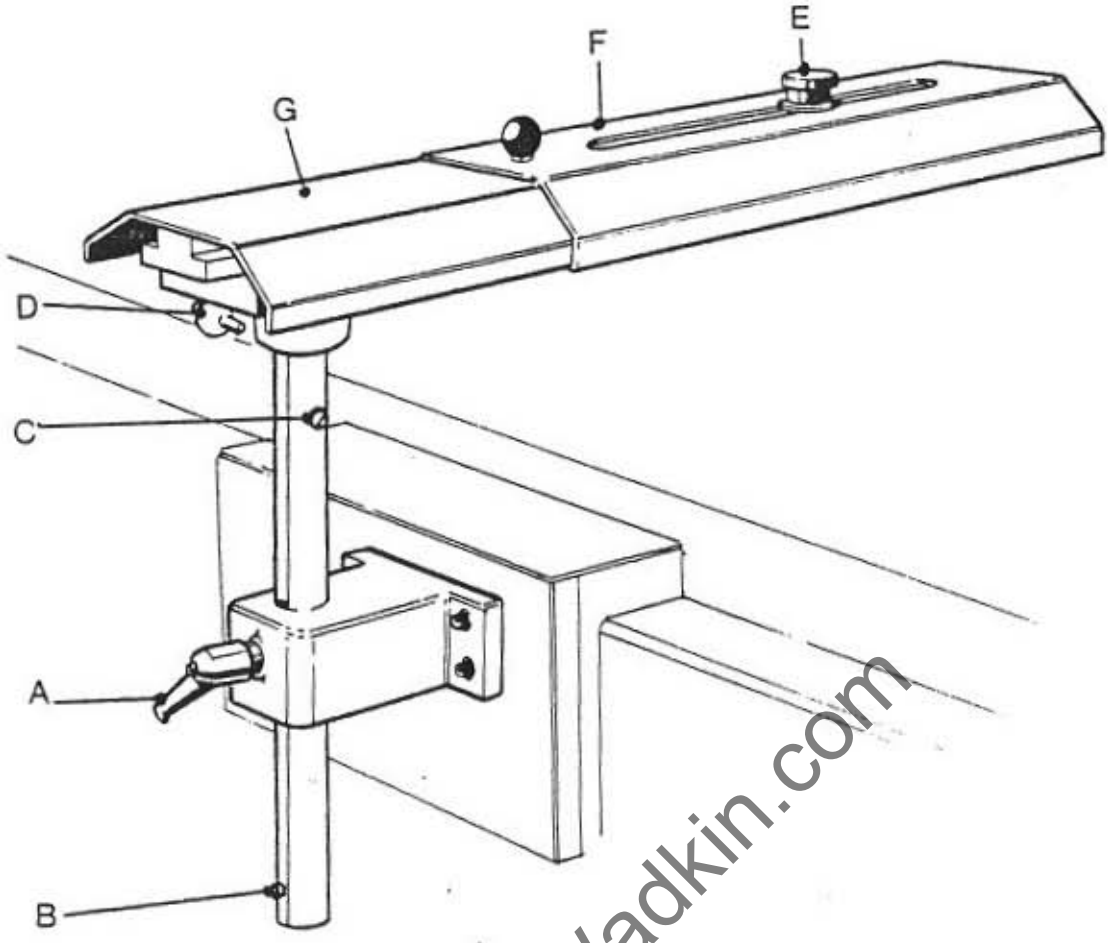
To safeguard against damage during transportation the machine may be supplied with this unit removed, in which case the guard should be re-fitted as shown with the long bolt (A) provided. After re-fitting it may be required to re-tension the spring loading device. This operation is simply undertaken by unlocking grub screws (B) then rotating collar (C). Afterwards re-lock grub screws and check return action of guard before running machine.

SHAW GUARD (COMPULSORY FOR U.K. WHEN REBATING):-

A shaw type guard can be provided for use when rebating and is thoroughly recommended as an additional safety device when undertaking form of work.

For fence fixing positions see illustration.





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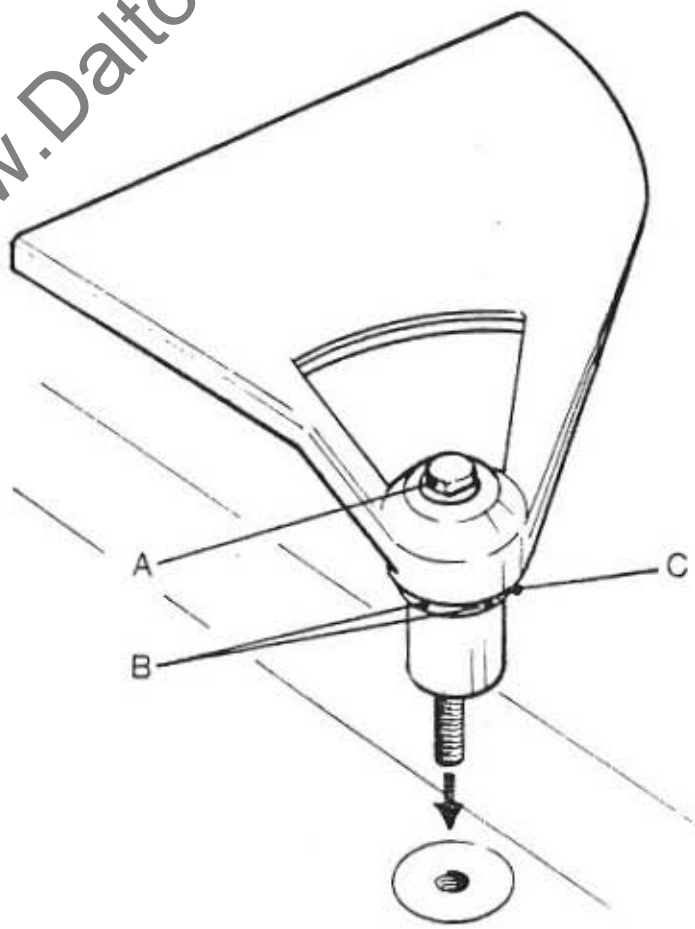

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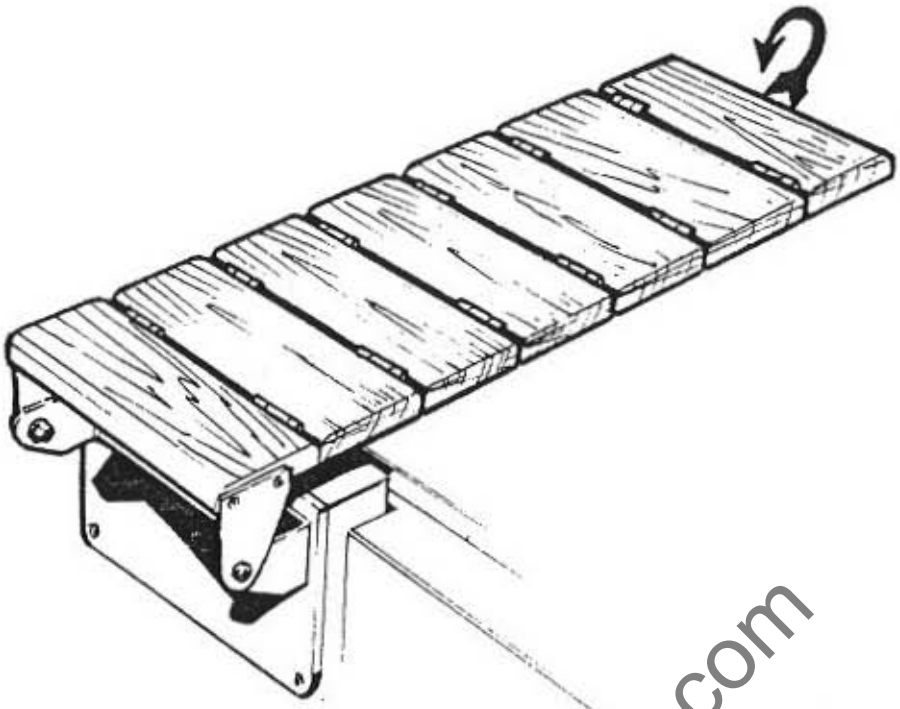
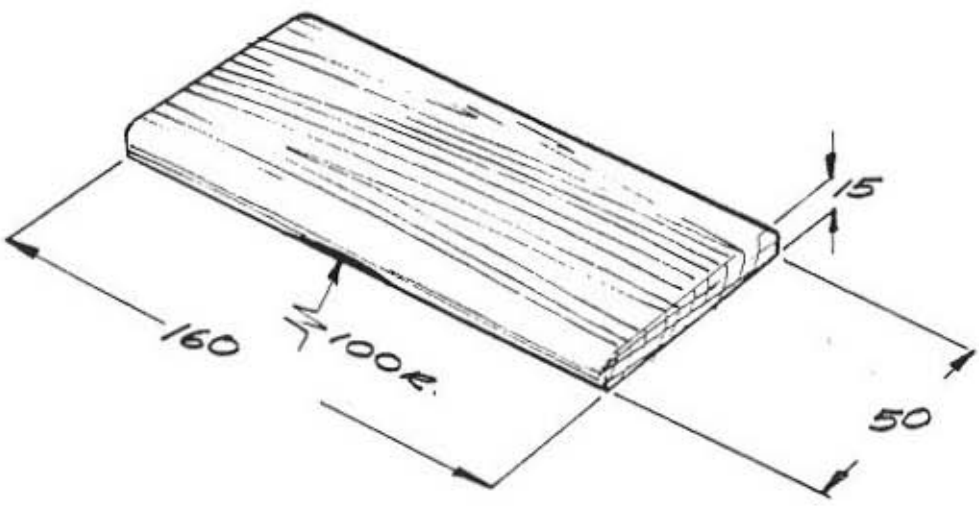


SEGMENTED ROLL-UP GUARD

On certain export models a special segmented guard can be fitted. Each piece of this unit is hinged separately and as such can be opened to expose the required ammount of cutter for individual jobs.

Where required replacement sections can be made from suitable hardwood to the following dimensions.



BELT DRIVE & TENSIONING:-

The drive from the motor to the cutterblock is via two ALPHA 500 vee belts, access to which may be gained by removing the louvered cover at the rear of the machine.

For efficient performance and prolonged belt life it is important to maintain correct belt tension, especially when "running-in" new belts.

A guide to correct belt tension is illustrated in (FIG.12)

To adjust tension simply slacken nut A off two or three turns then slacken nut B in same manner. Carefully screw down nut A until tension is attained as shown in (FIG.11) then lock in this position by tightening nut B against motor foot.

To remove belts slacken nut A off six or seven turns then lift motor by means of a lever placed under motor feet. Withdraw belts over pulley and remove from cutterblock pulley. Place new belts on cutterblock pulley and over motor pulley. Lower motor onto belts and re tension as outlined above.

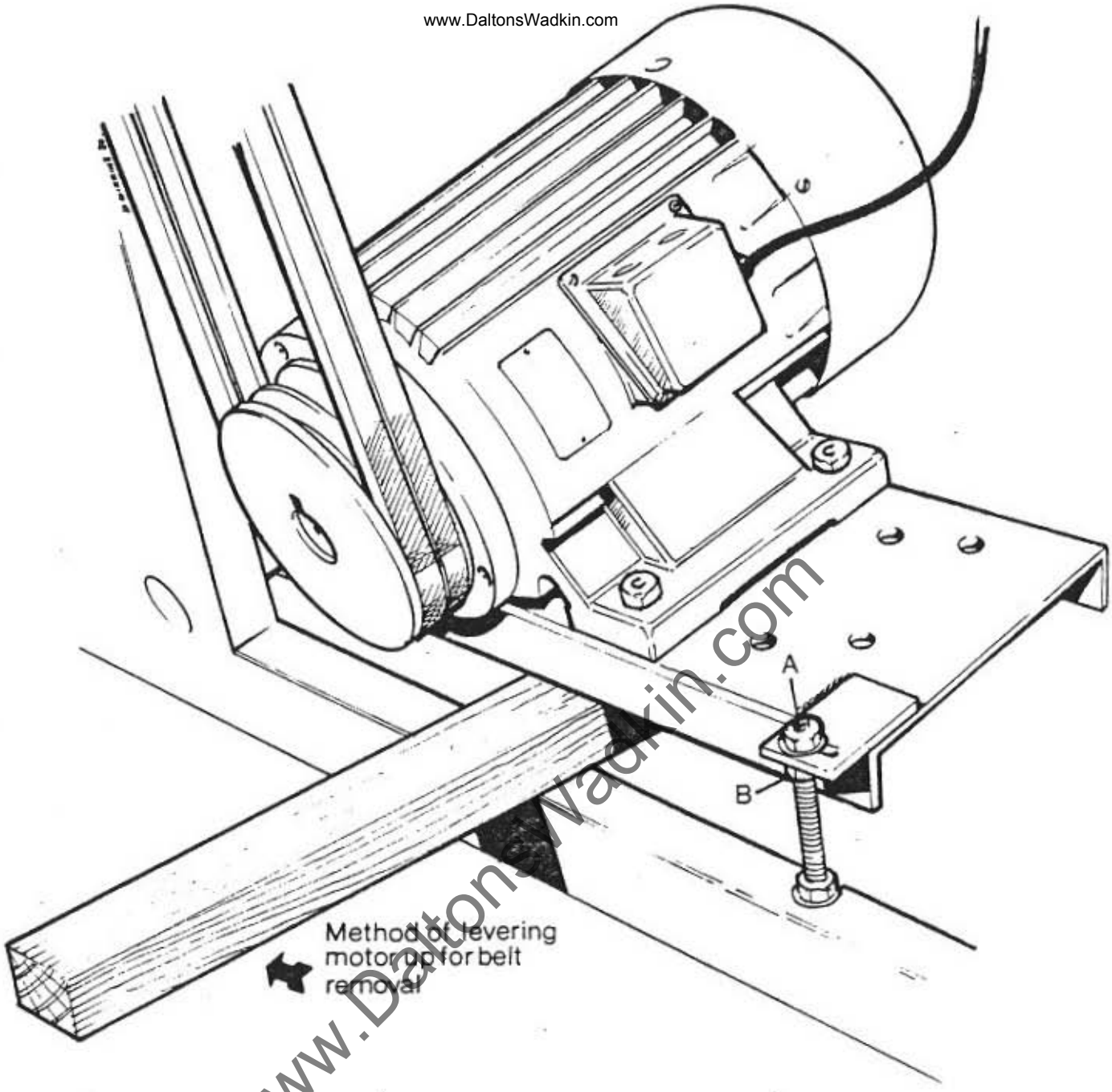
TREAT DRIVE BELTS WITH CARE:-

Never lever belts from pulleys with sharp implements but use tension facility provided.

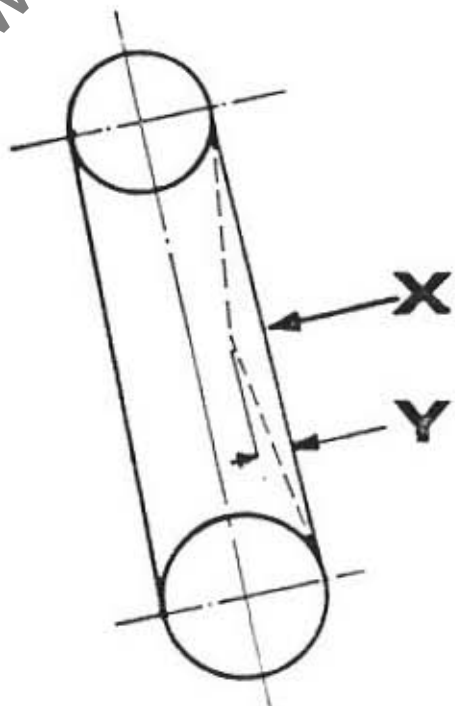
Replace any drive belt which is worn or damaged.

Do not over tension belts.

Inspect belts frequently to determine condition.

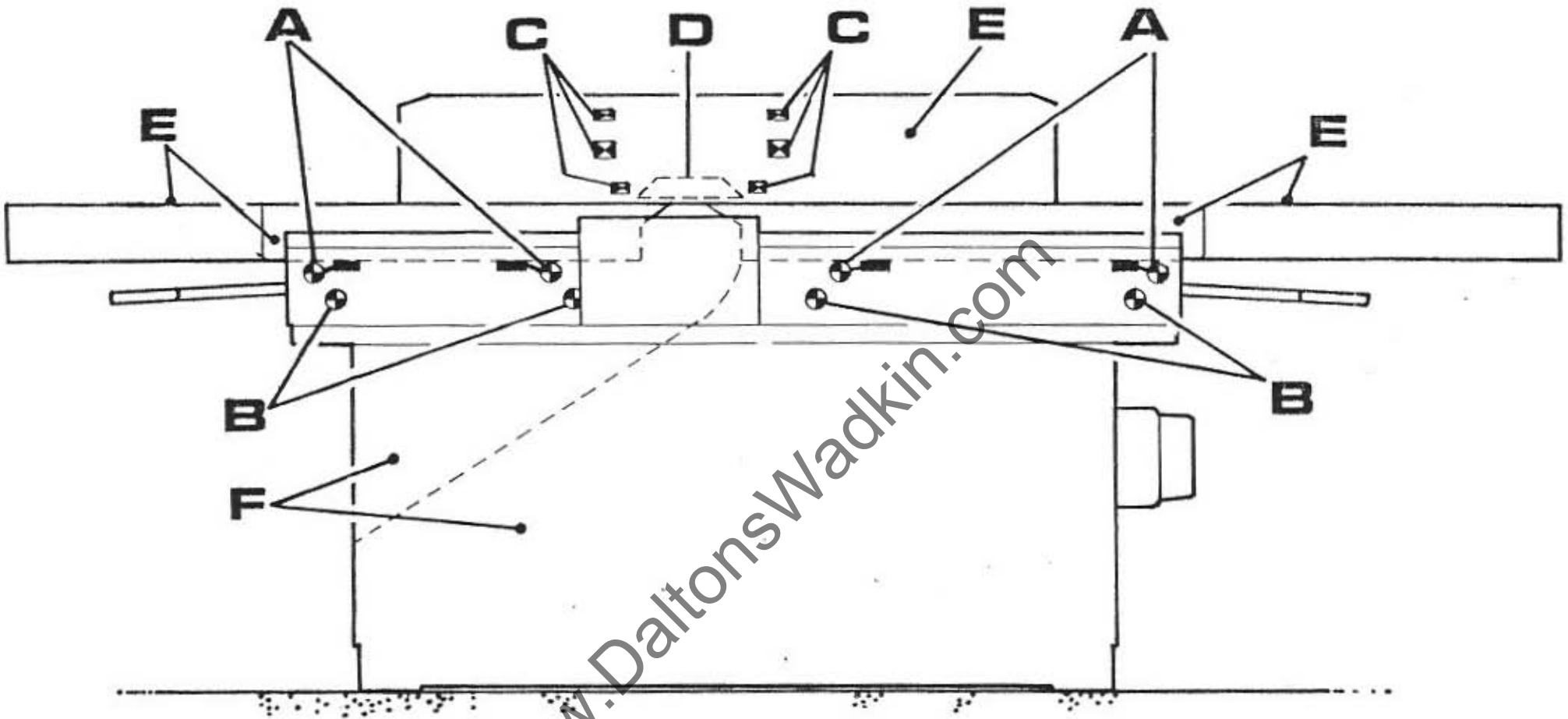


Method of levering motor up for belt removal



When hand pressure is applied at point X in direction shown by arrow, deflection distance Y should be 6 to 10 mm when correctly tensioned.

LUBRICATION.



A UPPER TABLE PIVOTS• Lubricated from oil reservoir, requires attention at major service period only.

B LOWER TABLE PIVOTS•Inject a few drops of oil from the outside MONTHLY.

C FENCE CANTING LINKS & PIVOTS•Oil MONTHLY.

D FENCE SLIDE•Oil & clean slide faces WEEKLY, keep rack gear clean and smeared with GREASE.

E BRIGHT SURFACES•Oil & clean WEEKLY.

F BLOW DUST & CHIPS•from inside base & dust chute, also blow machine down DAILY.
DO NOT REMOVE CHIPS FROM CHUTE BY HAND.