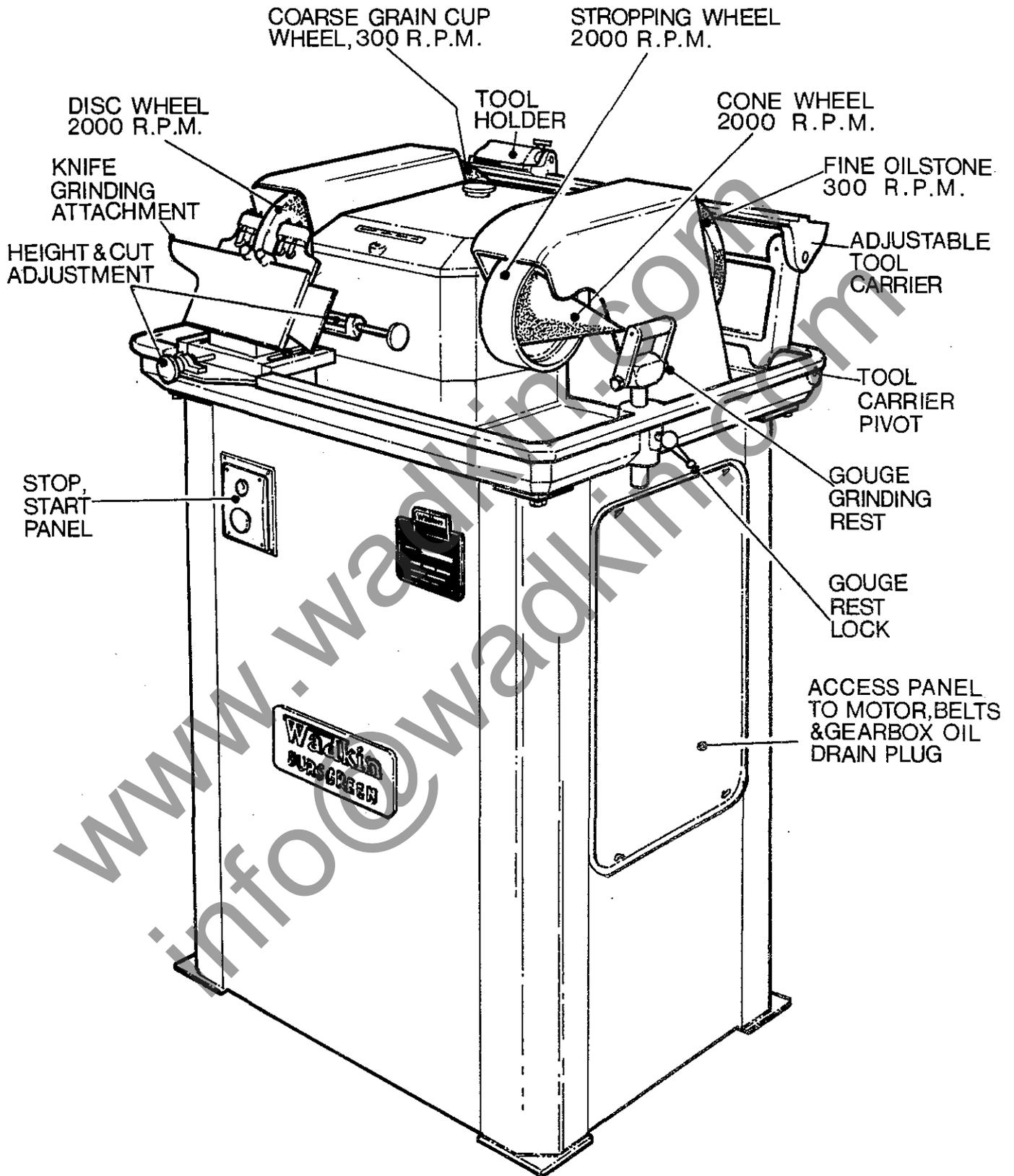


# WOODWORKERS TOOL GRINDER TYPE BZG

FIG A1



SECTIONS:-

|           |                          |
|-----------|--------------------------|
| SECTION A | SPECIFICATION.           |
| SECTION B | INSTALLATION.            |
| SECTION C | DESCRIPTION & OPERATION. |
| SECTION D | MAINTENANCE.             |
| SECTION E | SPARE PARTS LISTS.       |

ILLUSTRATIONS

|           |                        |  |
|-----------|------------------------|--|
| SECTION A | FIG.A1                 | BZG WOODWORKERS TOOL GRINDER.                        |
| SECTION B | FIG. B1                | (3 PHASE) WIRING DIAGRAM.                            |
|           | FIG. B2                | (1 PHASE) WIRING DIAGRAM.                            |
|           | FIG. B3                | FOUNDATION PLAN.                                     |
| SECTION C | FIG. C1                | TOOL CARRIER & CLAMP.                                |
|           | FIG. C2                | THIN KNIFE ATTACHMENT.                               |
|           | FIG. C3                | TOOL REST.   |
|           | FIG. C4                | STROPPING WHEEL.                                     |
|           | FIG. C5                | GOUGE GRINDING.                                      |
| SECTION D | FIG. D1                | TOP UNIT DETAIL.                                     |
|           | FIG. D2                | MOTOR MOUNTING TENSIONING.                           |
|           | FIGs 1-6<br>FIGs 1a-4a | } - METHOD OF FASTENING & UNFASTENING BRAMMER BELTS. |
|           | FIG. D3                | LUBRICATION DIAGRAM.                                 |

SECTION A

SPECIFICATION

|                            |   |                  |
|----------------------------|---|------------------|
| SIZE OF OILSTONE CUP WHEEL | 8" x 2"   | 205mm x 50mm     |
| SIZE OF COARSE WHEEL       | 8" x 2"   | 205mm x 50mm     |
| SIZE OF GRINDING WHEEL     | 8" x $\frac{1}{4}$ "-1"                                   | 205mm x 6.5-25mm |
| SIZE OF CONE               | 3" x 5"   | 75mm x 125mm     |
| SIZE OF STROPPING WHEEL    | 5 $\frac{1}{4}$ " x 2"                                    | 135mm x 50mm     |
| SPEED OF FAST SPINDLE      | 2000 R.P.M.   | -----            |
| SPEED OF SLOW SPINDLE      | 300 R.P.M.  | -----            |
| HORSE POWER OF MOTOR       | 1 H.P.  | -----            |
| SPEED OF MOTOR             | 1000 R.P.M.   |                  |
| CAPACITY OF PATENT KNIFE ) | $\frac{1}{8}$ " THICK x UP TO 1 $\frac{1}{2}$ " WIDE x 9" |                  |
| GRINDING ATTACHMENT )      | TO 24" LONG. (3mm THICK x UP TO                           |                  |
| (BLADE DIMENSIONS)         | 38mm WIDE x 228 TO 610mm LONG).                           |                  |
| FLOOR SPACE                | 31" x 34"   | 790 x 865mm.     |
| NETT WEIGHT                | 504 lbs.  | 230 Kg.          |
| GROSS WEIGHT               | 728 lbs.  | 330 Kg.          |
| SHIPPING DIMENSIONS        | 36 cu.ft.   | 1 m 3.           |

## SECTION B

### 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 with that on the machine.
- 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. (SEE LIST).
- 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.

| <u>VOLTAGE.</u> | <u>PHASE.</u> | <u>CYCLES</u> | <u>HP</u> | <u>S.W.G. TINNED<br/>COPPER WIRE.</u> | <u>AMPS</u> |
|-----------------|---------------|---------------|-----------|---------------------------------------|-------------|
| 220             | 3             | 50            | 1         | 25                                    | 15          |
| 340/420         | 3             | 50            | 1         | 30                                    | 8.5         |
| 200/250         | 1             | 50            | 1         | 23                                    | 20          |
| 220             | 3             | 60            | 1         | 25                                    | 15          |
| 400/550         | 3             | 60            | 1         | 30                                    | 8.5         |

## WIRING FOR 3 PHASE SUPPLY

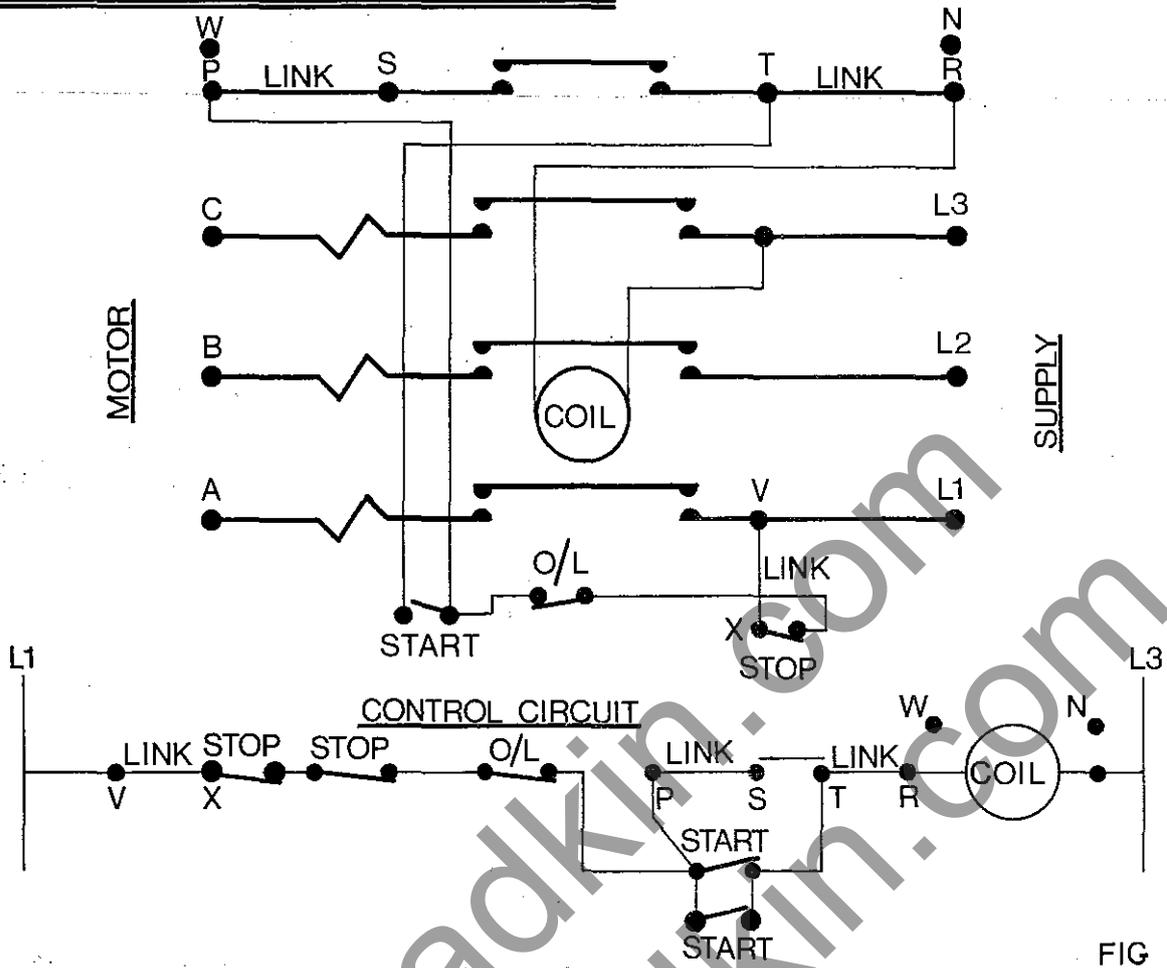


FIG B1

## WIRING FOR 1 PHASE SUPPLY

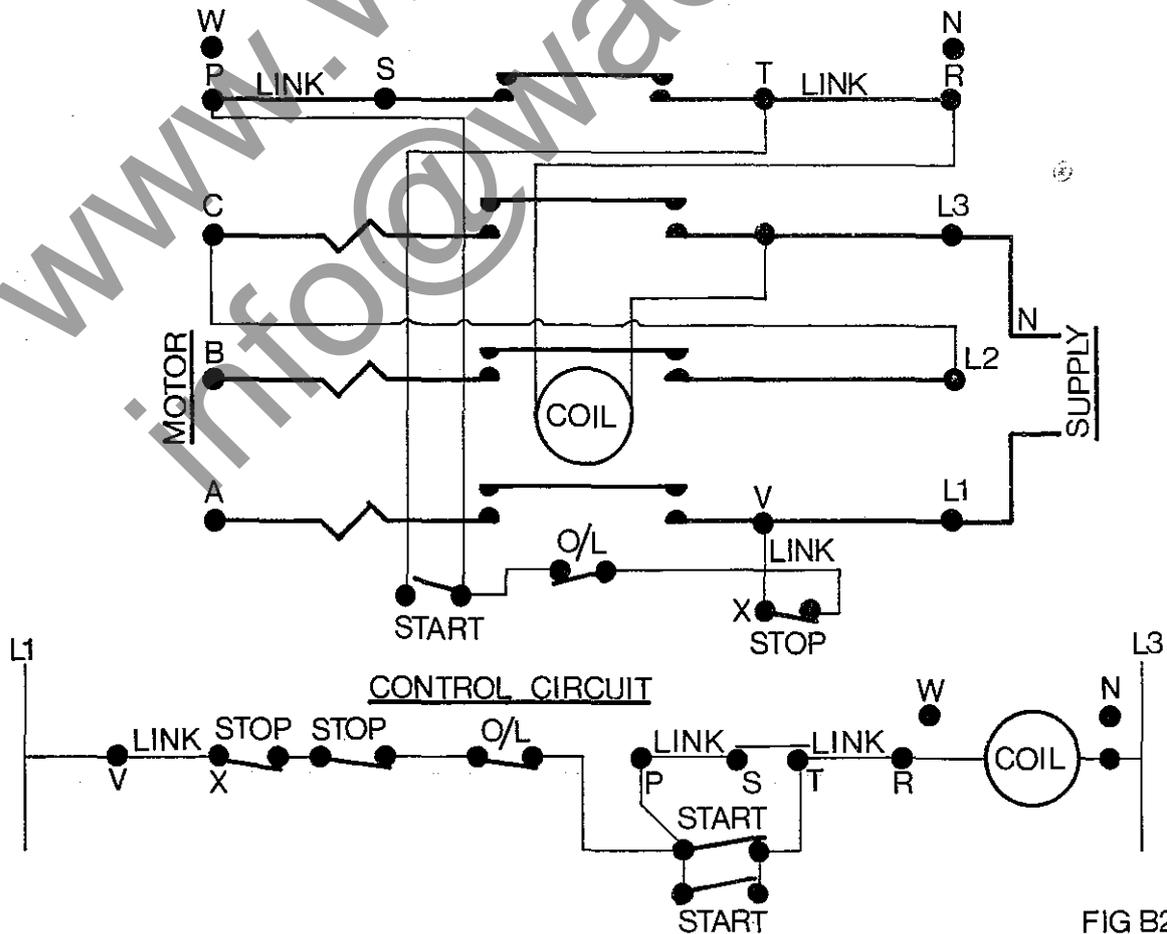


FIG B2

## Foundation:-

The machine should be levelled and bolted down firmly. For mounting into concrete, 6" to 8" square holes should be cut in the floor and rag bolts fitted, after which the holes should be run with cement. For mounting on wood floors coach bolts will be found adequate. (see Fig. B3.)

## SECTION C

### Operation of Tool Carrier:-

The tool carrier is mounted on pivots at point "A" (Fig.C1.) Should wear occur at these points, partially unlock grub screw "B" and with a hammer gently tap the end of the pivot, thus pushing it further into the pivot seating. After doing this, lock grub screw "B" and repeat on pivot at the opposite side of the adjustment plate "C".

The tool carrier fence "D" is also variable in position. Simply by unlocking lever "E" the top plate can be canted to the desired angle for grinding. Also by adjusting screw "F" the whole fence can be brought into, or away from the wheels.

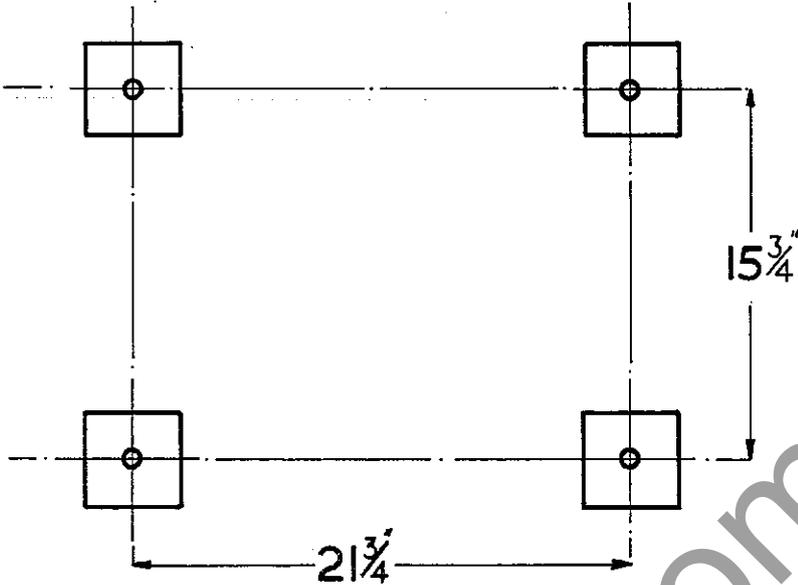
### Tool Clamp:-

The tool clamp "G" allows work to be held rigidly in position and square to the stone. In use, the operation for grinding (i.e.) a chisel would be as follows:-

1. Clamp chisel into holder "G" with chisel point protruding no more than  $1\frac{1}{2}$ " out of clamp jaws.
2. Partially unlock lever "E" allowing the carrier slide "D" to cant. Do not unlock lever "E" fully, as this will only allow the slide plate to fall loosely about its' pivoting points.
3. Place clamp and chisel onto guide strip on carrier slide, ensuring all faces are clean and clamp slides along freely.
4. With chisel and clamp adjacent to wheel on slide, adjust chisel into the correct position for grinding, by varying the angle of the carrier slide "D" and the position of the carrier bracket "C" by feeding it into or away from the wheel with handnut "F".
5. Whilst making the above adjustments, it may be found necessary to decrease or increase the distance the chisel point protrudes from the clamp in order to attain certain positions and rake angles. (this should not exceed  $1\frac{1}{2}$ " protrusion.)
6. After arriving at the correct position ensure handle "E" and screw "H" are locked firmly.
7. Slide chisel clamp "G" clear of wheel and ensure slide "D" has sufficient clearance from the front edge to the wheel face.
8. Start machine, make one pass across the face of the wheel and return across wheel. Place a light cut by feeding in with screw "F" and stroke slowly back and forth across wheel. Repeat above procedure until sharp.

NOTE:- USE ONLY LIGHT CUTS. NEVER FEED CHISEL DIRECTLY INTO A REVOLVING WHEEL.

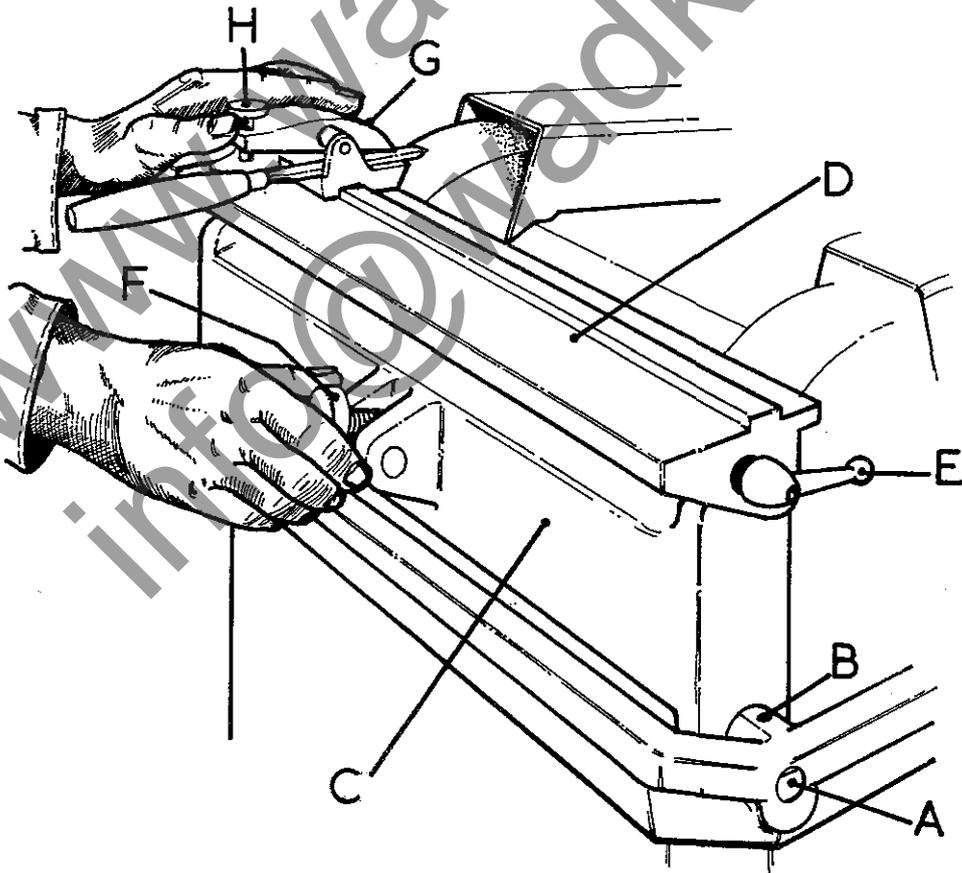
FIG B3



FOUNDATION PLAN

TOOL CARRIER & CLAMP

FIG C1



### Thin Knife Attachment:-

This attachment allows accurate grinding of small planer knives. It requires little setting up other than adjusting the position and angle for use.

With this attachment the cutter is supported on the top, bottom and back faces and is merely passed back and forth across the wheel until sharp.

Fine adjustment is by means of hand screw "A" (see Fig.C2). Height adjustment of blade to wheel by wedge setting screw "B" and angling of the attachment by unlocking nut "C".

### Operation of Knife Attachment:- (see Fig.C2)

1. Ensure attachment is withdrawn clear of wheel by using handnut "A".
2. Lower taper wedge by means of screw "B" and insert knife onto the lower step of the wedge.
3. Lightly raise wedge with screw "B" until spring loaded rollers "D" and wedge take control of the knife. Ensure rollers do not lift more than 1/32" of an inch.
4. The cutter should now be drawn through the attachment from left to right, re-inserted on the left and the operation repeated. Make several passes to ensure efficiency in this operation.
5. Set attachment to correct angle by unlocking nut "C" and pivoting to desired setting. Ensure nut "C" is locked after setting.
6. The motor should now be started and the whole attachment adjusted forward by handnut "A" until the blade touches up on the wheel. Withdraw blade from left to right and re-insert as in step 4.
7. Apply cuts with fine adjustment screw "B" and repeat this adjustment at each pass of the blade until sharp.

NOTE:- It should be noticed that on the Thin Knife Attachment side of the fast spindle an extra adaptor or spacing collar is provided to position the wheel in relation to the Knife Attachment (SEE PAGE 25 PART NO. 102). This adaptor should only be used in conjunction with Knife Attachment and should be removed when undertaking only general purpose grinding using the tool rest illustrated in Fig.C3.

NOTE: AS GRINDING WHEEL WEAR TAKES PLACE THE PRESSURE ROLLERS WILL LIFT MORE THAN THE 1/32" OF AN INCH SPECIFIED. TO RETURN ROLLERS TO THEIR NORMAL WORKING POSITION APPLY A FEW LIGHT CUTS DURING THE ABOVE OPERATION WITH HANDNUT "A".

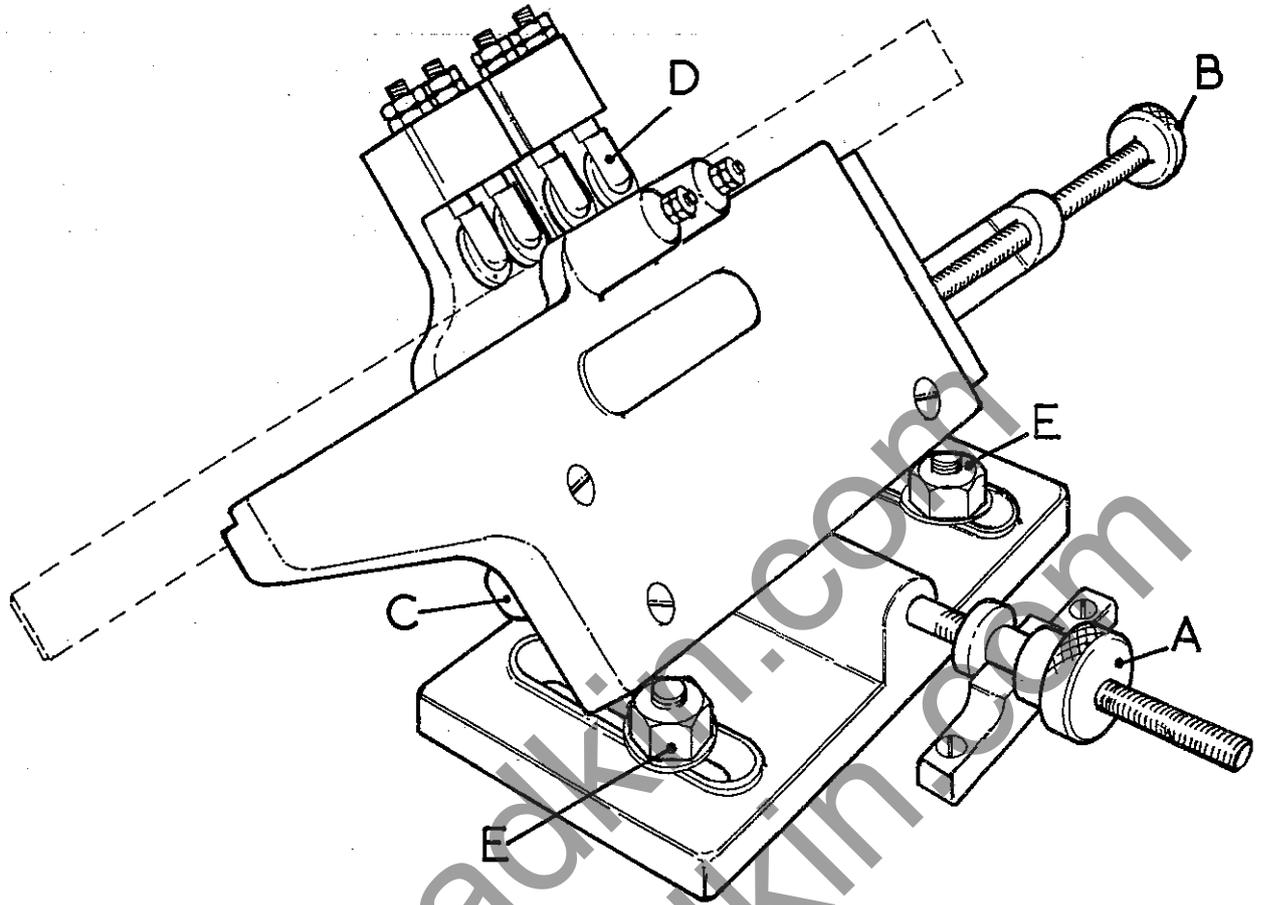
### Tool Rest:-

This rest is supplied as an alternative fitting to the thin knife attachment. To remove the knife attachment screw off nuts "E" (fig.C3) and lift from machine. Replace tool rest onto studs as shown and lock down with nuts "E". To cant the tool rest unlock T-lock handle "A" and set to desired angle, lock handle "A" after setting.

It should be noticed that this tool rest is provided with a replaceable top plate "C". Should this plate become worn simply unscrew the two countersunk screws "B" and remove, substituting with a new plate.

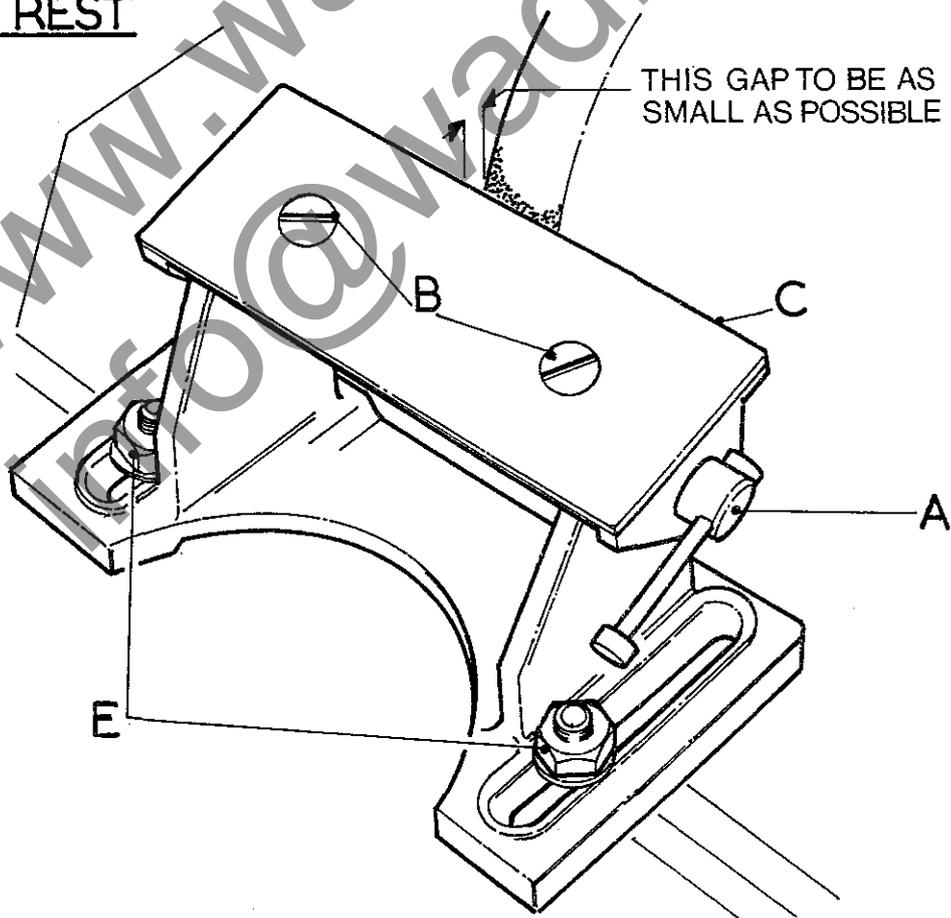
THIN KNIFE ATTACHMENT.

FIG C2



TOOL REST

FIG C3



### Stropping:-

The provision of the stropping wheel allows polishing of cutting edges to remove score marks and burrs thus providing keener blades.

When using the stropping wheel always polish off the underside of the wheel (see Fig.C4) (i.e.) with the cutting edge pointing in the direction of wheel rotation.

WARNING:- IT IS IMPORTANT THAT THE LAPPED JOINT "X" OF THE STROPPING BELT IS POSITIONED IN THE WAY INDICATED IN FIG. C4 IN RELATIONSHIP TO WHEEL ROTATION.

NOTE:- IT IS DANGEROUS TO POLISH OFF THE TOP OF THE WHEEL AS THE BLADE IS POINTING INTO THE DIRECTION OF WHEEL ROTATION WHICH CAN CAUSE THE BLADE TO DIG INTO THE SOFT LEATHER SURROUND

### Finestone & Honeing:-

The finewheel is a rotary oilstone and is used to obtain a fine finish. This stone embodies its own internal lubricant which soaks through the composition of the wheel thus providing ready lubrication at all times. It should be noted that when it becomes necessary to replace the finewheel only stones of the same type should be used as the composition of the wheel embodies special qualities to combat the effects of oil. Other stones may be effected by the introduction of oil thus breaking down in use or giving poor working life.

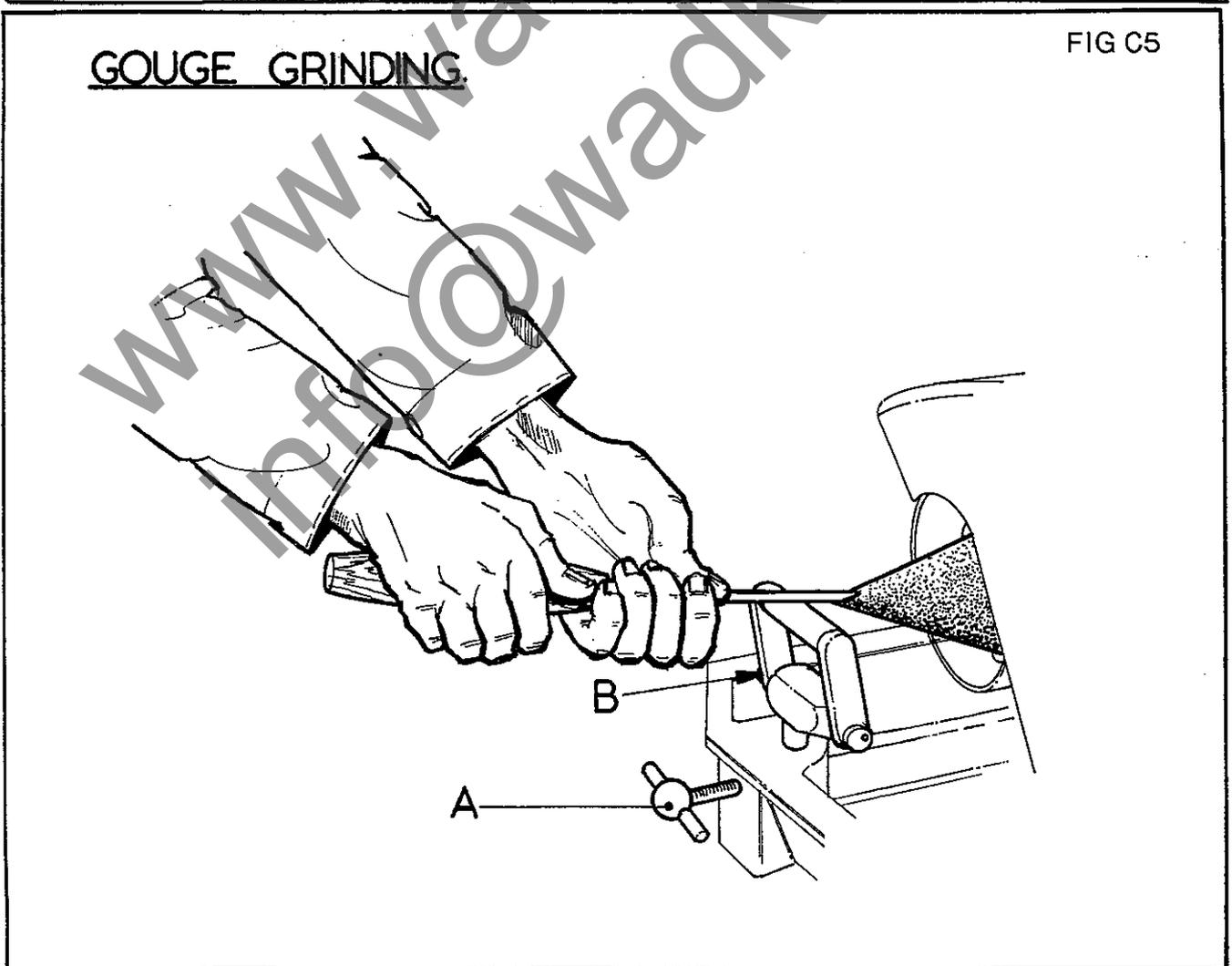
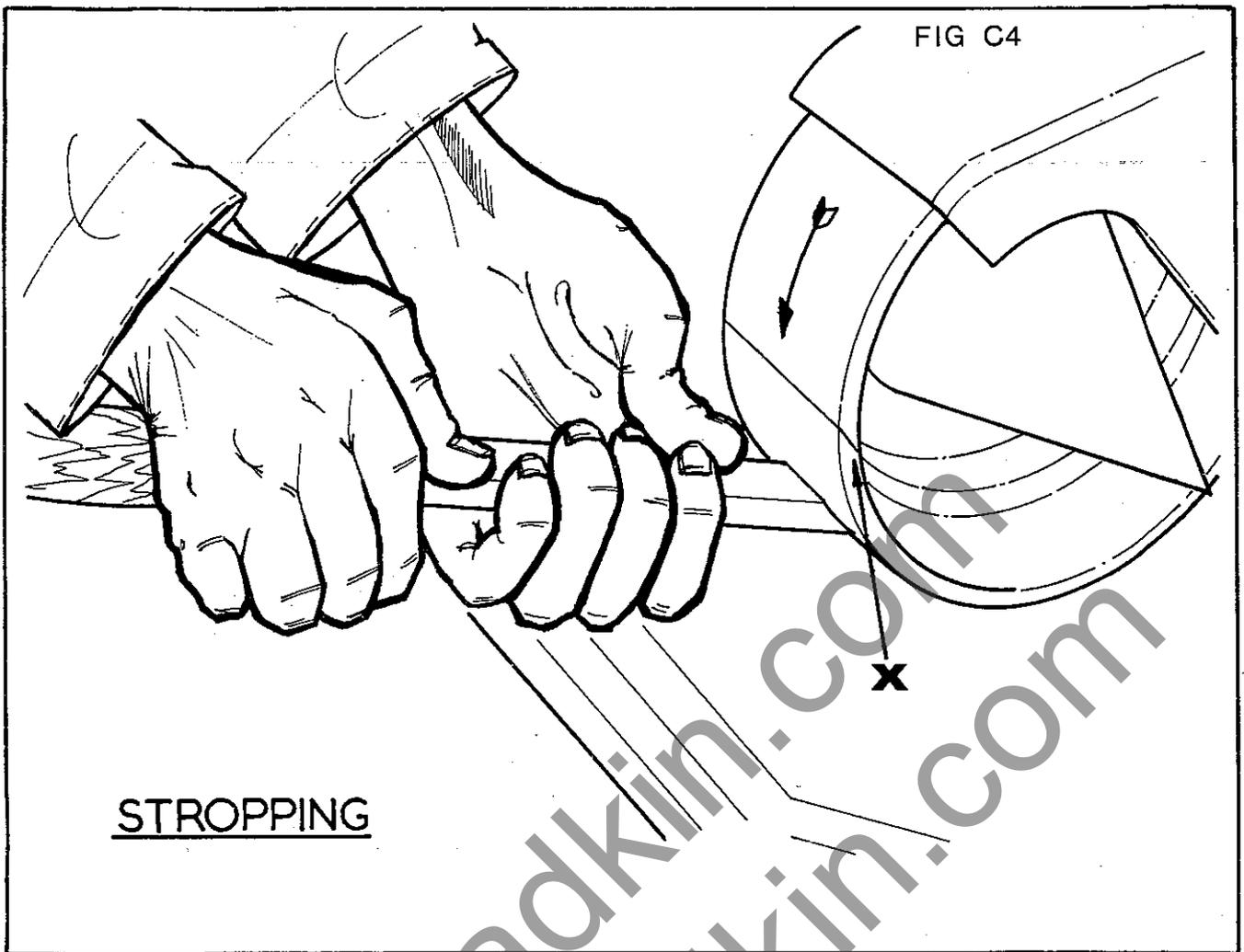
The internal lubricant is made from 1 part good grade machine oil to 2 parts paraffin which can be manufactured by the operator of the machine. To top-up, or refill the wheel remove the guard and rotate the wheel into such a position that the filler plug is at the top of its rotation. With the above mixture fill until the fluid is at a level with the filler plug hole. After filling replace plug.

NOTE:- THE REAR INSIDE FACE OF THE HONEING WHEEL IS COATED WITH OIL BASED RED OXIDE PAINT TO CONTROL THE LUBRICANT FLOW TO THE TOP OUTSIDE FACE OF THE WHEEL ONLY.

### Cone wheel and cone rest:-

The cone wheel is principally used in the grinding of gouge type chisels (see Fig.C5).

The height of the cone wheel rest is adjusted by unlocking the ball ended lever "A" and the position of the rest from the tip of the cone by unlocking nut "B" and canting the rest bar to or from the cone as desired. All movements of the rest are instantly lockable.



## SECTION D

### Drive & Transmission:-

The drive is from a 1HP. T.E.F.C. continuously rated motor via pulleys, belting and reduction gear unit giving two spindle speeds (see Fig.D1).

|                       |             |         |                                 |
|-----------------------|-------------|---------|---------------------------------|
| <u>FAST SPINDLE:-</u> | 2000 R.P.M. | 1 BELT  | 40 LINKS $\frac{1}{2}$ " x 40 ° |
| <u>SLOW SPINDLE:-</u> | 300 R.P.M.  | 2 BELTS | 37 LINKS $\frac{1}{2}$ " x 40 ° |

### Belt Tension:-

Throughout the life of the machine and particularly during the "running-in" period it is essential that the correct belt tension is maintained.

### TO TENSION BELTS FOLLOW THE UNDERMENTIONED PROCEEDURE

1. Isolate machine and remove base side cover.
2. Slacken nut "A" on tension stud "B" (see Fig.D2) this will allow motor to fall under its own weight until slackness is removed from the belts.
3. Check tension of belts to ensure they have not been over-stressed.
4. To secure in tensioned position screw locknuts "C" and domed washer up to motor mounting "D" and lock firmly.

NOTE: IT IS NOT NECESSARY TO REMOVE LINKS TO TENSION BELTS. HOWEVER, THIS MAY BE DONE ONLY IF BELT IS IN GOOD CONDITION.

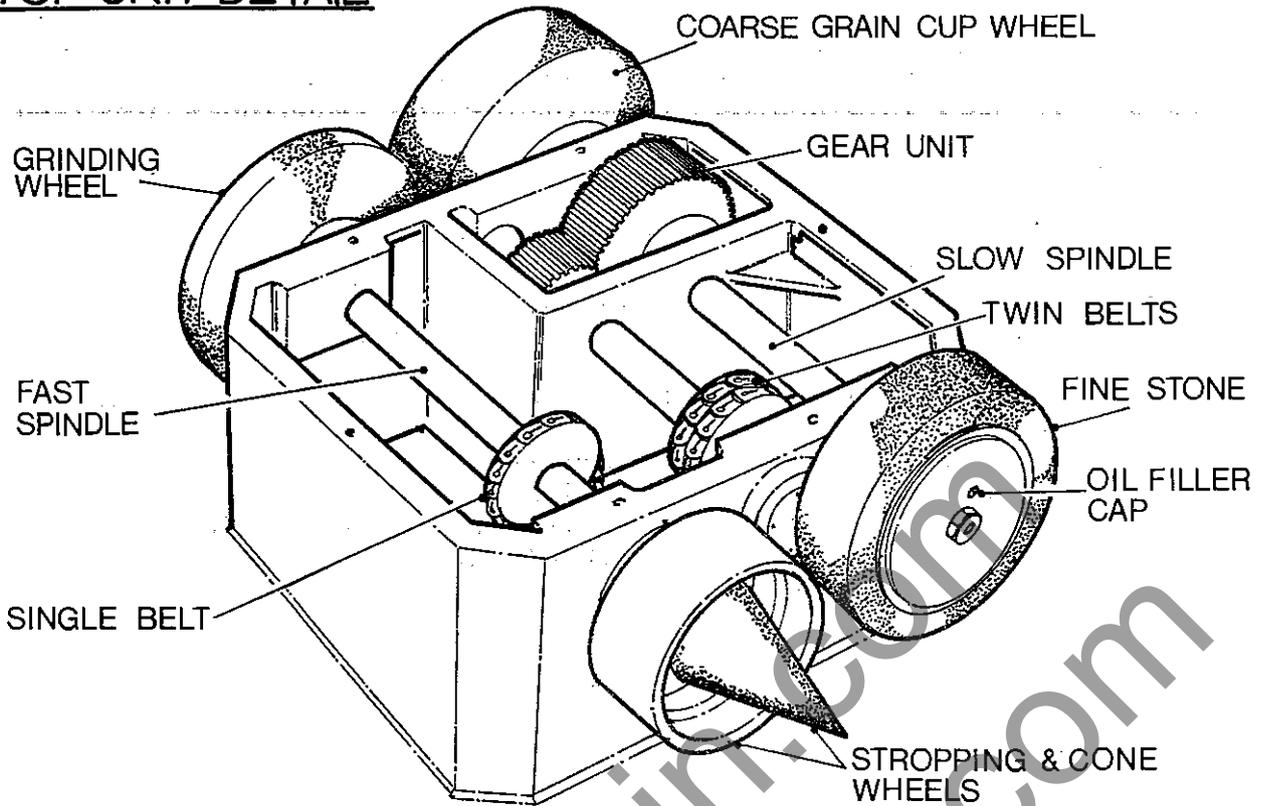
### Belt Removal & Replacement:-

NOTE: FOR BROKEN BELTS THE DAMAGED LINK MAY BE RENEWED ONLY IF THE REMAINDER OF THE BELT IS IN GOOD CONDITION. WORN BELTS SHOULD ALWAYS BE REPLACED.

1. Isolate machine and remove wheel guards, cast top cover and base side cover.
2. Unlock and screw locknut "C" away from motor mounting bracket "D" (see Fig.D2).
3. Push motor upwards to relieve tension on belts and "turn" belt out of pulley groove.
4. With belt removed from pulley disconnect at any link and remove old belt from machine.
5. If only links are to be replaced check overall condition of belt. Before replacing belts check number of links are as given in list above.
6. With new belt disconnected at any stud position place over spindle pulley allowing loose ends to hang down into base.
7. Connect belt together inside base, and pushing up on motor place belt onto correct groove on motor pulley.
8. Ensure belts are on correct pulleys and retension belts following steps 2,3 & 4 as given under belt tensioning section above.
9. Ensure belts run smoothly and are seated properly in grooves by rotating slowly by hand.
10. Replace covers.

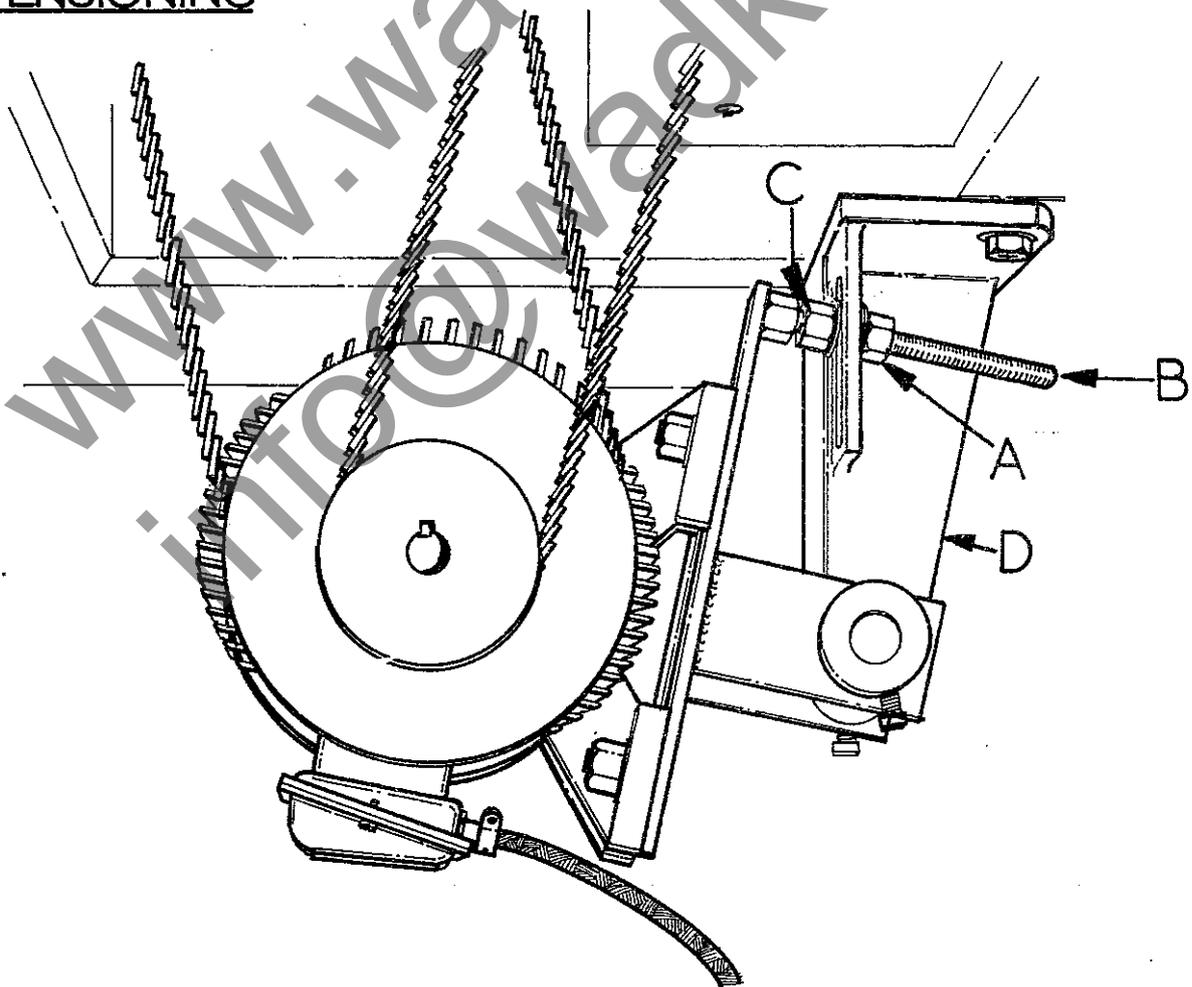
TOP UNIT DETAIL

FIG D1



MOTOR MOUNTING & TENSIONING

FIG D2



## INSTRUCTIONS FOR FITTING BRAMMER BELTS:-

The following notes have been added with the object of providing information on how to correctly fasten and unfasten belts, with step - by step instruction illustrating the techniques involved.

### FASTENING (FIG. 1 - 6)

- FIG.1:- Insert stud head into large hole of link, then move stud to right.
- FIG.2:- Stud pushed back into small holes.
- FIG.3:- Flex belt until the large hole is over head of next stud on left.
- FIG.4:- Apply pressure with left thumb and straighten until stud emerges through oval hole in link.
- FIG.5:- Flex belt opposite way and stud is then eased into its ultimate position at rounded end of link.
- FIG.6:- This is a repetition of step 3, except that when this stud has been inserted and pulled into position the belt is joined together.

### POINTS TO OBSERVE WHEN FASTENING:-

- (a) Stud can only be pressed through by thumb when link is well flexed over as in FIG.3.
- (b) A firm grip is essential.
- (c) Any rubber fabric left standing proud should be tucked under the stud - head with the thumbnail.

### UNFASTENING:- (FIG. 1a - 4a)

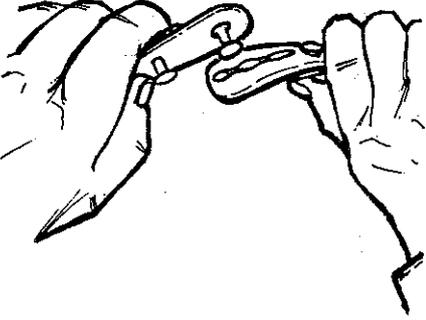
- FIG.1a:- Grip belt firmly in both hands, each thumb pressing on stud head, leaving one stud head uncovered.
- FIG.2a:- Maintaining a firm hold, bring wrists closer together so that uncovered stud head slides into the oval hole in the centre of the link. A wriggling motion of the hands will help in this operation.
- FIG.3a:- Still maintaining firm hold with fingers and keeping belt flexed, with the thumb of the right hand ease the link off the stud head.
- FIG.4a:- Repeat previous operation on adjoining link. The belt will now come apart. Note that in doing this the first link unfastened is held against the disconnected stud to obtain support.

### POINTS TO OBSERVE WHEN UNFASTENING:-

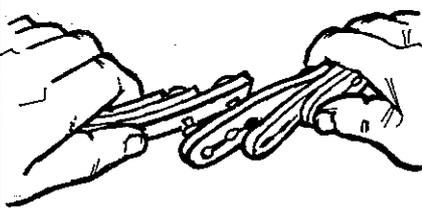
- (a) Grip belt firmly.
- (b) See that the belt is flexed over as far as possible, enabling link to lift over stud easily.

# FASTENING.

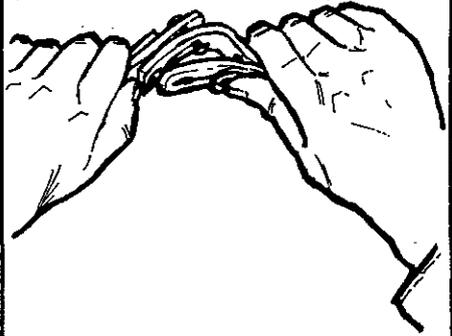
1



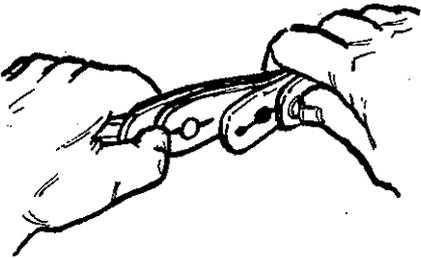
2



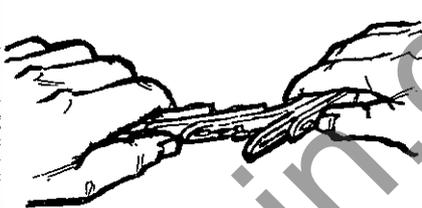
3



4



5

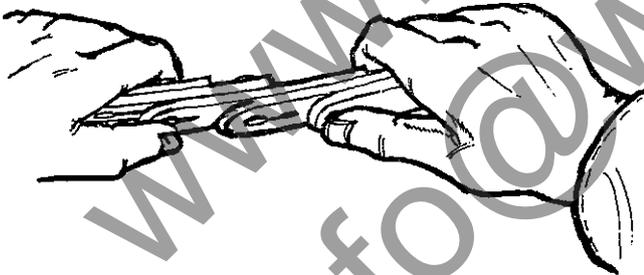


6

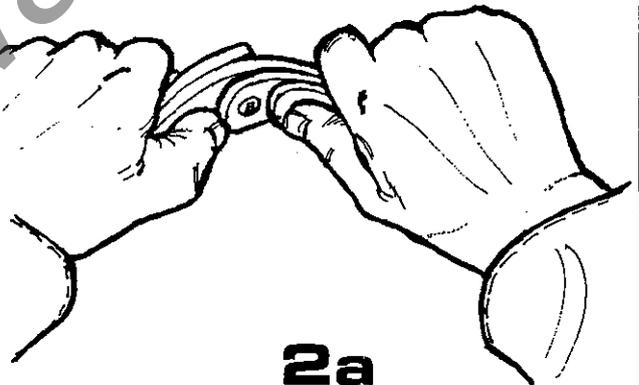


# UNFASTENING.

1a



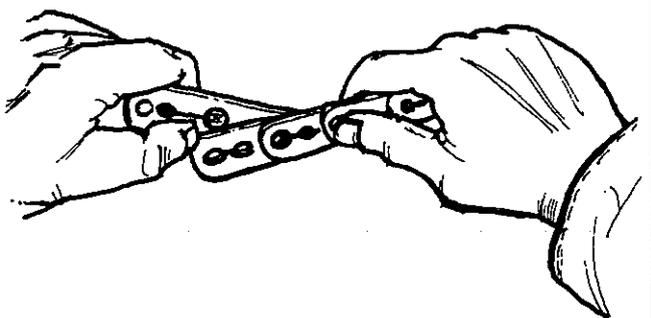
2a



3a



4a

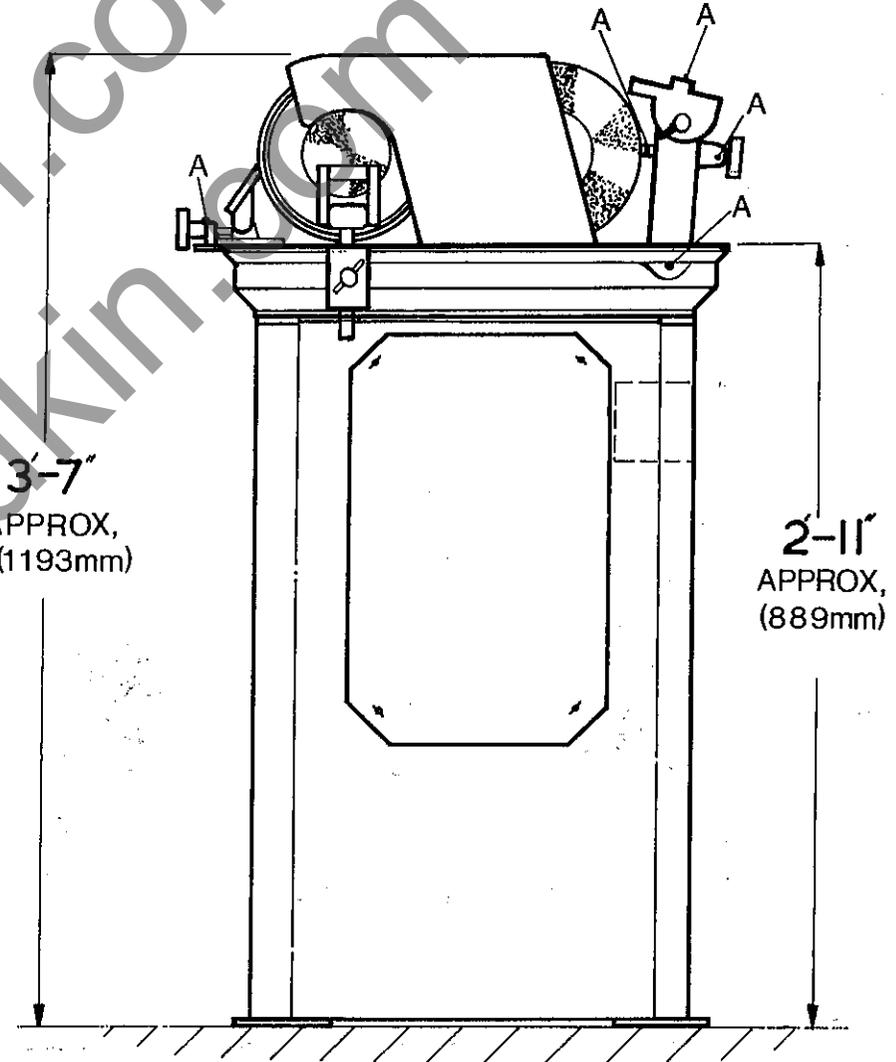
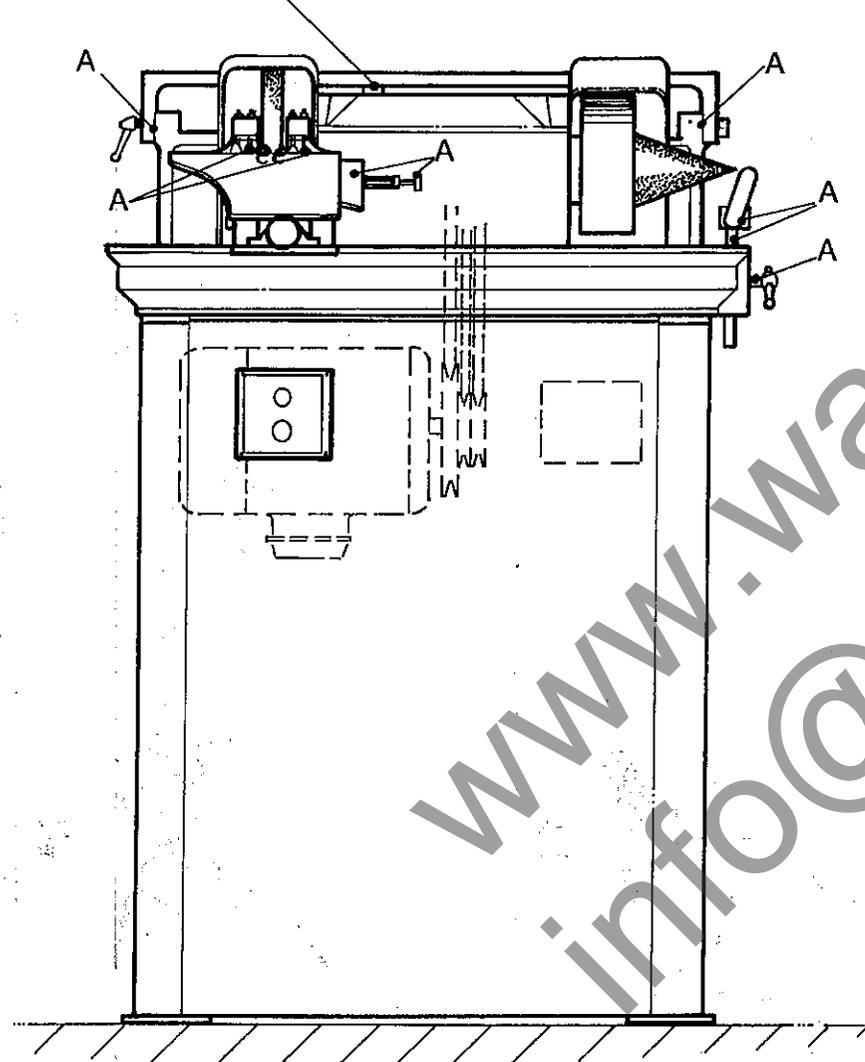


# LUBRICATION DIAGRAM

FIG D3

CHECK LEVEL WEEKLY  
GEARBOX OIL HP-40  
(1 PINT)

POINTS "A" OIL AND CLEAN WEEKLY



# SECTION "E"

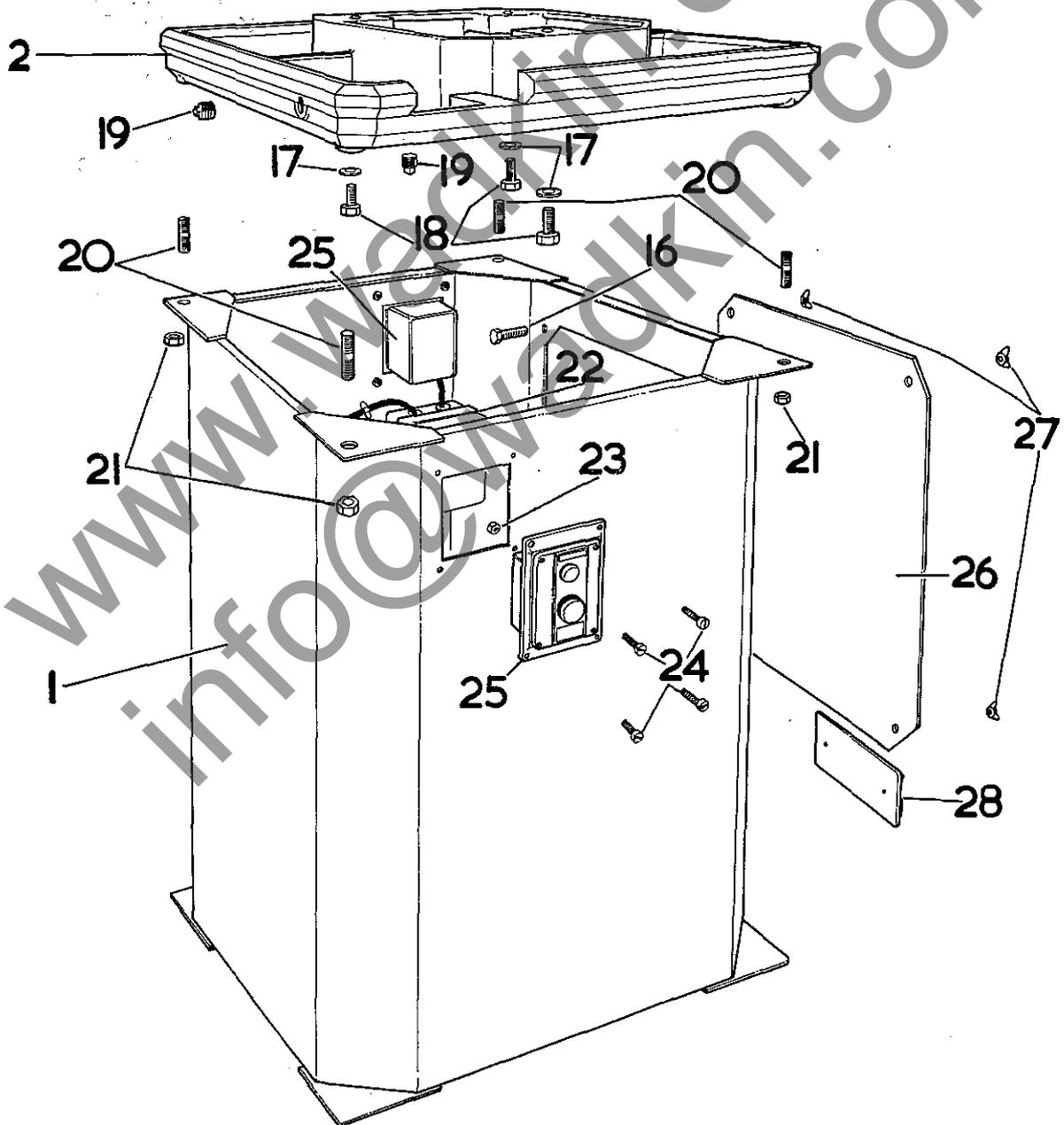
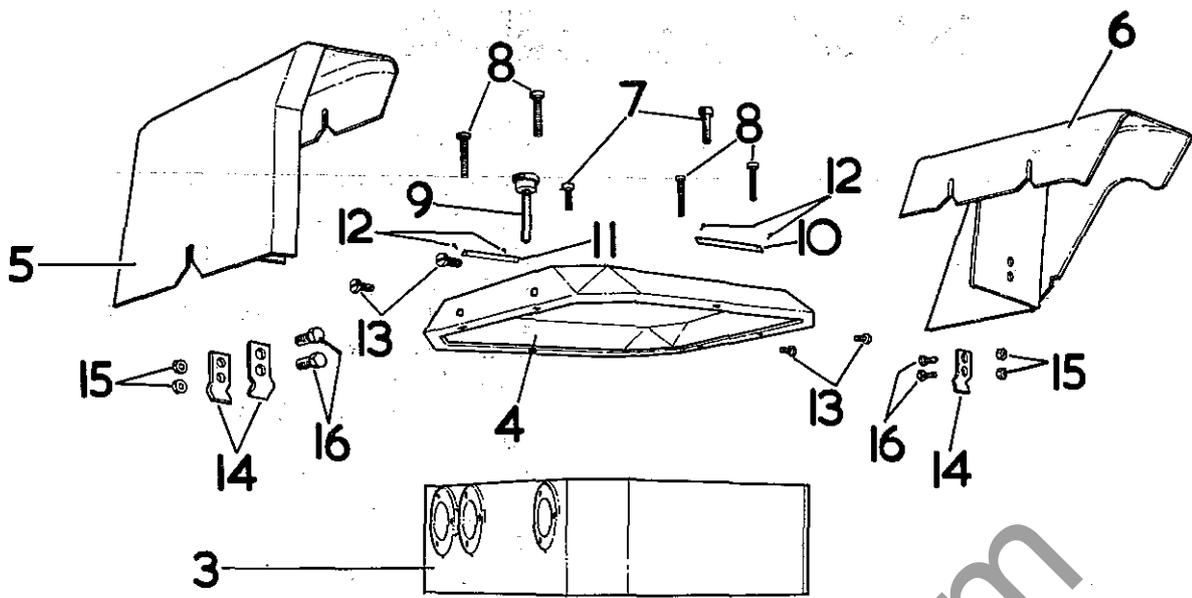
SPARE PARTS LISTS

[www.wadkin.com](http://www.wadkin.com)  
[info@wadkin.com](mailto:info@wadkin.com)

# MAIN FRAME ASSEMBLY

| <u>REF.NO.</u> | <u>PART NO.</u> | <u>NO.OFF</u> | <u>DESCRIPTION.</u>  |
|----------------|-----------------|---------------|--|
| 1.             | BZG.52.         | 1.            | BASE   |
| 2.             | BZG.1.          | 1.            | TROUGH   |
| 3.             | BZG.2.          | 1.            | HOUSING  |
| 4.             | BZG.3.          | 1.            | COVER  |
| 5.             | BZG49/A         | 1.            | COARSE WHEEL GUARD.  |
| 6.             | BZG.51/A.       | 1.            | FINE WHEEL GUARD.  |
| 7.             | ---             | 2.            | $\frac{1}{4}$ " WHIT x $\frac{3}{4}$ " LONG CHEESE<br>HEAD SCREWS  |
| 8.             | ---             | 4.            | $\frac{1}{4}$ " WHIT x $1\frac{1}{2}$ " LONG CHEESE<br>HEAD SCREWS.  |
| 9.             | BZG38/A/38B.    | 1.            | OIL LEVEL INDICATOR & PLUG   |
| 10.            | BZG.63.         | 1.            | SPINDLE SPEED WARNING PLATE<br>(2000RPM).  |
| 11.            | BZG.62.         | 1.            | SPINDLE SPEED WARNING PLATE<br>(300RPM).   |
| 12.            | ---             | 4.            | $\frac{3}{32}$ " ROUND HEAD RIVETS $\frac{1}{4}$ "<br>LONG.  |
| 13.            | ---             | 4.            | $\frac{1}{4}$ " WHIT X $\frac{1}{2}$ " LONG CHEESE<br>HEAD SCREWS.   |
| 14.            | ---             | 3.            | SPRING GUARD CLIPS.  |
| 15.            | ---             | 4.            | $\frac{1}{4}$ " WHIT NUTS.   |
| 16.            | ---             | 8.            | $\frac{1}{4}$ " WHIT x $\frac{1}{2}$ " LONG HEXAGON<br>HEAD BOLTS.   |
| 17.            | ---             | 3.            | $\frac{1}{2}$ " WASHERS.   |
| 18.            | ---             | 3.            | $\frac{1}{2}$ " WHIT x 2" LONG HEXAGON HEAD<br>BOLTS.  |
| 19.            | ---             | 2.            | $\frac{1}{4}$ " GAS OIL DRAIN PLUGS.   |
| 20.            | ---             | 4.            | $\frac{1}{4}$ " WHIT x $1\frac{1}{4}$ " LONG STUDS.  |
| 21.            | ---             | 4.            | $\frac{3}{16}$ " WHIT NUTS.  |
| 22.            | ---             | 1.            | M.E.M. 446 ADS STARTER<br>(STANDARD).<br>M.E.M. 436 ADS STARTER<br>(380 V - 50 CYCLES).<br>M.E.M. 826 ADS STARTER<br>(220 V - 50 CYCLES).<br>M.E.M. 816 ADS STARTER<br>(200 V - 50 CYCLES).<br>M.T.E. D.L.O. STARTER<br>(C.S.A. CANADIAN). |
| 23.            | ---             | 8.            | $\frac{3}{16}$ " WHIT NUTS.  |
| 24.            | ---             | 8.            | $\frac{3}{16}$ " WHIT x $\frac{3}{4}$ " LONG CHEESE<br>HEADS SCREWS.   |
| 25.            | ---             | 2.            | M.E.M. 2 CSC/FO PUSH BUTTONS   |
| 26.            | BGA.10          | 1.            | BASE SIDE COVER.   |
| 27.            | ---             | 4.            | $\frac{1}{4}$ " WHIT WING NUTS.  |
| 28.            | ---             | 1.            | WADKIN BURSGREEN NAMEPLATE.  |

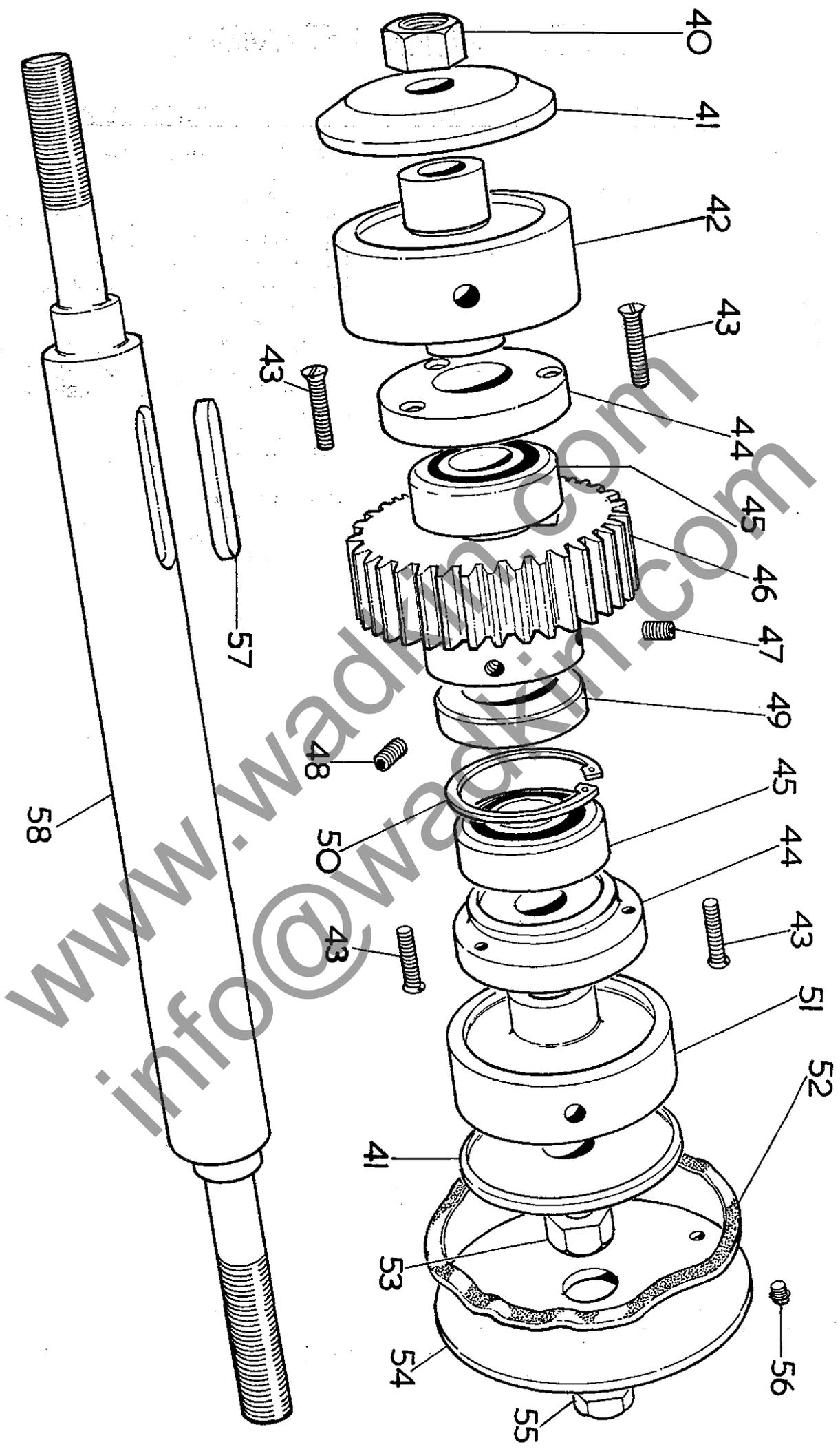
NOTE:- WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF MACHINE



# SLOW SPINDLE ASSEMBLY

| <u>REF. NO.</u> | <u>PART NO.</u> | <u>NO. OFF.</u> | <u>DESCRIPTION.</u>   |
|-----------------|-----------------|-----------------|---|
| 40.             | ---             | 1.              | $\frac{3}{4}$ " BSF RIGHT HAND NUT.                                 |
| 41.             | BZG.14.         | 2.              | WHEEL FLANGE.   |
| 42.             | BZG.12/R.       | 1.              | CUP WHEEL ARBOR.Rt.Hd.<br>THREAD.                                   |
| 43.             | ---             | 6.              | $\frac{1}{4}$ " WHIT x $\frac{3}{4}$ " LONG COUNTER<br>SUNK SCREWS. |
| 44.             | BZG.8.          | 2.              | DUSTCAPS.   |
| 45.             | ---             | 2.              | SKF 6205-2RS SEALED BALL<br>RACE.                                   |
| 46.             | BZG.45.         | 1.              | 50 TOOTH GEAR.  |
| 47.             | ---             | 1.              | $\frac{5}{16}$ " WHIT x $\frac{3}{8}$ " LONG GRUB<br>SCREW.         |
| 48.             | ---             | 1.              | $\frac{5}{16}$ " WHIT x $\frac{1}{2}$ " LONG GRUB<br>SCREW.         |
| 49.             | ---             | 1.              | OILSEAL REF:- 11P/20012537.   |
| 50.             | ---             | 1.              | 52mm (Internal) CIRCLIP REF.<br>1300.                               |
| 51.             | BZG 12/L.       | 1.              | CUP WHEEL ARBOR Lt.Hd.THREAD.                                       |
| 52.             | ---             | 1.              | LAPPING WHEEL GASKET.   |
| 53.             | ---             | 1.              | $\frac{3}{4}$ " BSF LEFT HAND NUT.                                  |
| 54.             | BZG.46.         | 1.              | LAPPING WHEEL COVER.  |
| 55.             | ---             | 1.              | $\frac{3}{4}$ " B.S.F. LEFT HAND LOCK-<br>NUT.                      |
| 56.             | ---             | 1.              | $\frac{1}{8}$ " GAS FILLER PLUG.                                    |
| 57.             | ---             | 1.              | $\frac{5}{16}$ " x $\frac{5}{16}$ " x 2" ROUND<br>END KEY.          |
| 58.             | BZG.41.         | 1.              | SLOW SPINDLE.   |

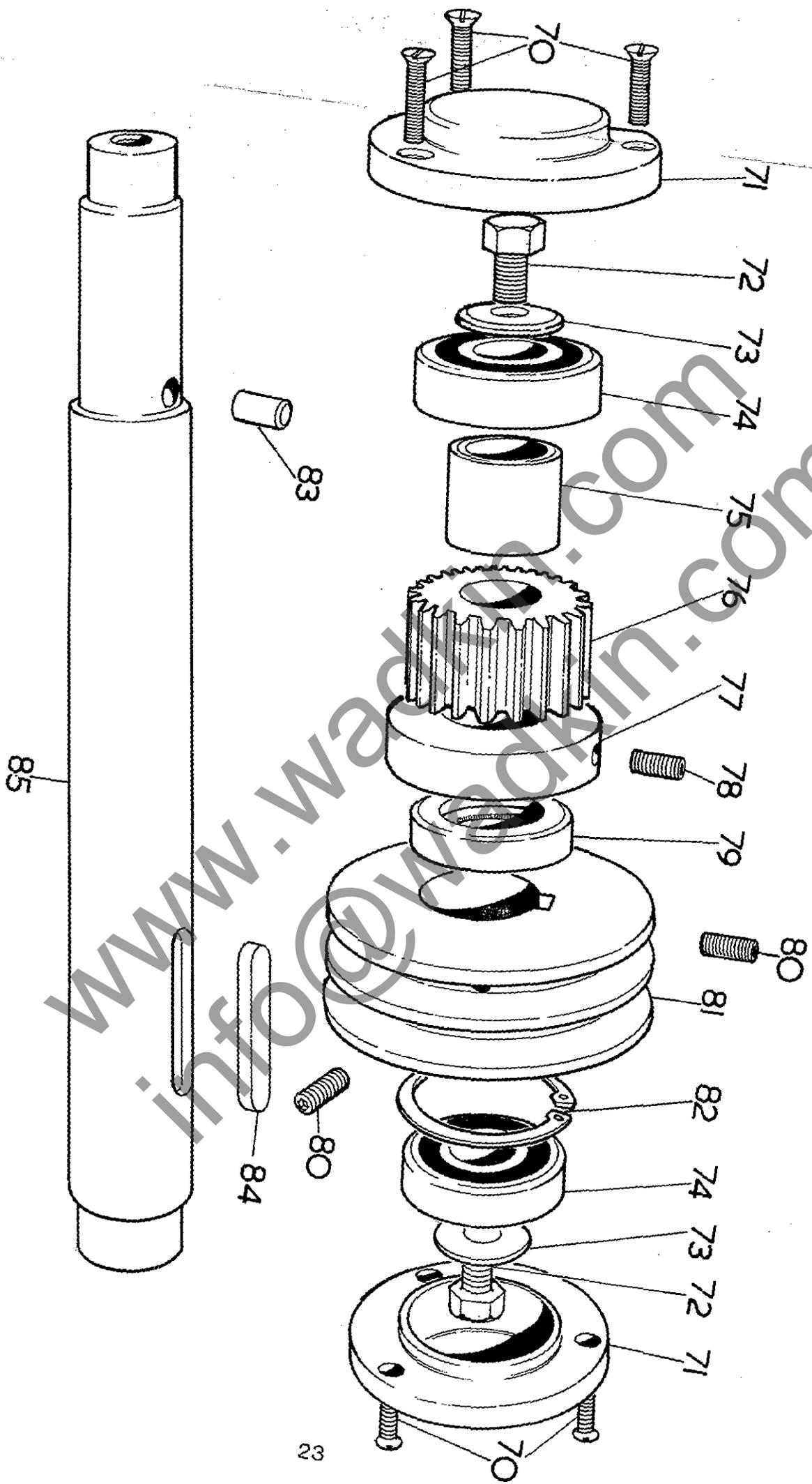
NOTE:- WHEN ORDERING REPLACEMENT PARTS, QUOTE PART NO. AND SERIAL No. OF MACHINE.



# IDLER SPINDLE ASSEMBLY

| <u>REF.NO.</u> | <u>PART NO.</u> | <u>NO.OFF</u> | <u>DESCRIPTION</u>  |
|----------------|-----------------|---------------|---|
| 70.            | ---             | 6.            | $\frac{1}{4}$ "WHIT x $\frac{3}{4}$ "LONG COUNTERSUNK SCREWS.                   |
| 71.            | BZG.10          | 2.            | DUSTCAPS.   |
| 72.            | ---             | 2.            | $\frac{3}{8}$ "WHIT x $\frac{3}{4}$ "LONG HEX.HD BOLTS.                         |
| 73.            | BZG.48          | 2.            | BALL RACE LOCK WASHERS.   |
| 74.            | ---             | 2.            | SKF.6205-2RS SEALED RACES.  |
| 75.            | BZG.43          | 1.            | BALL RACE DISTANCE PIECE.   |
| 76.            | BZG.44          | 1.            | 20 TOOTH GEAR.  |
| 77.            | BZG.25          | 1.            | OIL BAFFLE.   |
| 78.            | ---             | 1.            | $\frac{1}{4}$ "WHIT x $\frac{3}{8}$ "LONG ALLEN GRUB SCREW.                     |
| 79.            | ---             | 1.            | OILSEAL REF:- 11P/20012537.   |
| 80.            | ---             | 2.            | $\frac{5}{16}$ "WHIT x $\frac{1}{2}$ "LONG ALLEN GRUB SCREW.                    |
| 81.            | BZG.7           | 1.            | IDLER PULLEY.   |
| 82.            | ---             | 1.            | (INTERNAL) CIRCLIP.52MM.REF:- 1300.   |
| 83.            | BZG.61          | 1.            | IDLER SPINDLE PIN.  |
| 84.            | ---             | 1.            | $\frac{5}{16}$ " x $\frac{5}{16}$ " x $1\frac{1}{2}$ "LONG ROUND BOTH ENDS KEY. |
| 85.            | BZG.42          | 1.            | IDLER SPINDLE.  |

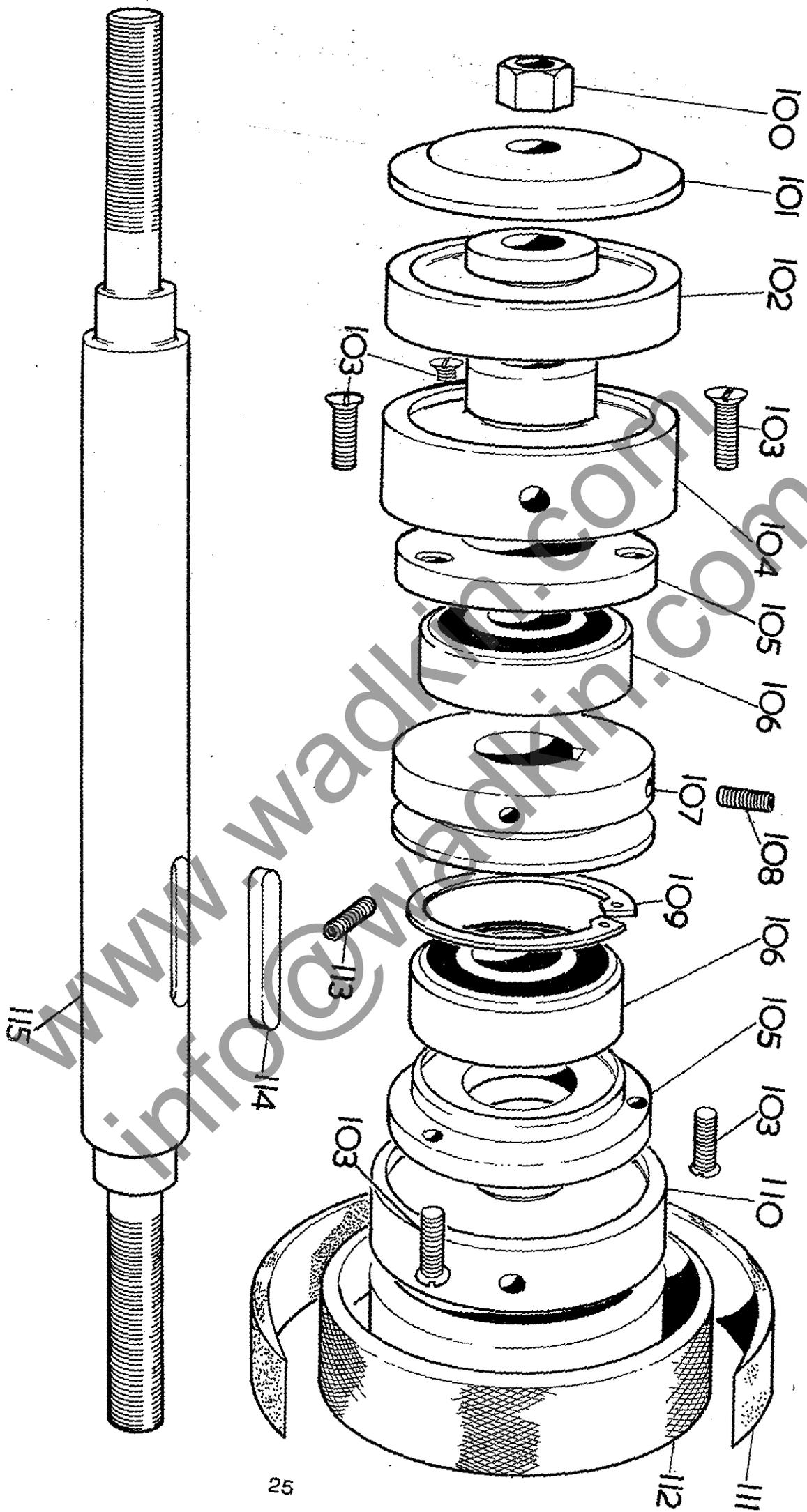
NOTE:- WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF THE MACHINE.



# FAST SPINDLE ASSEMBLY

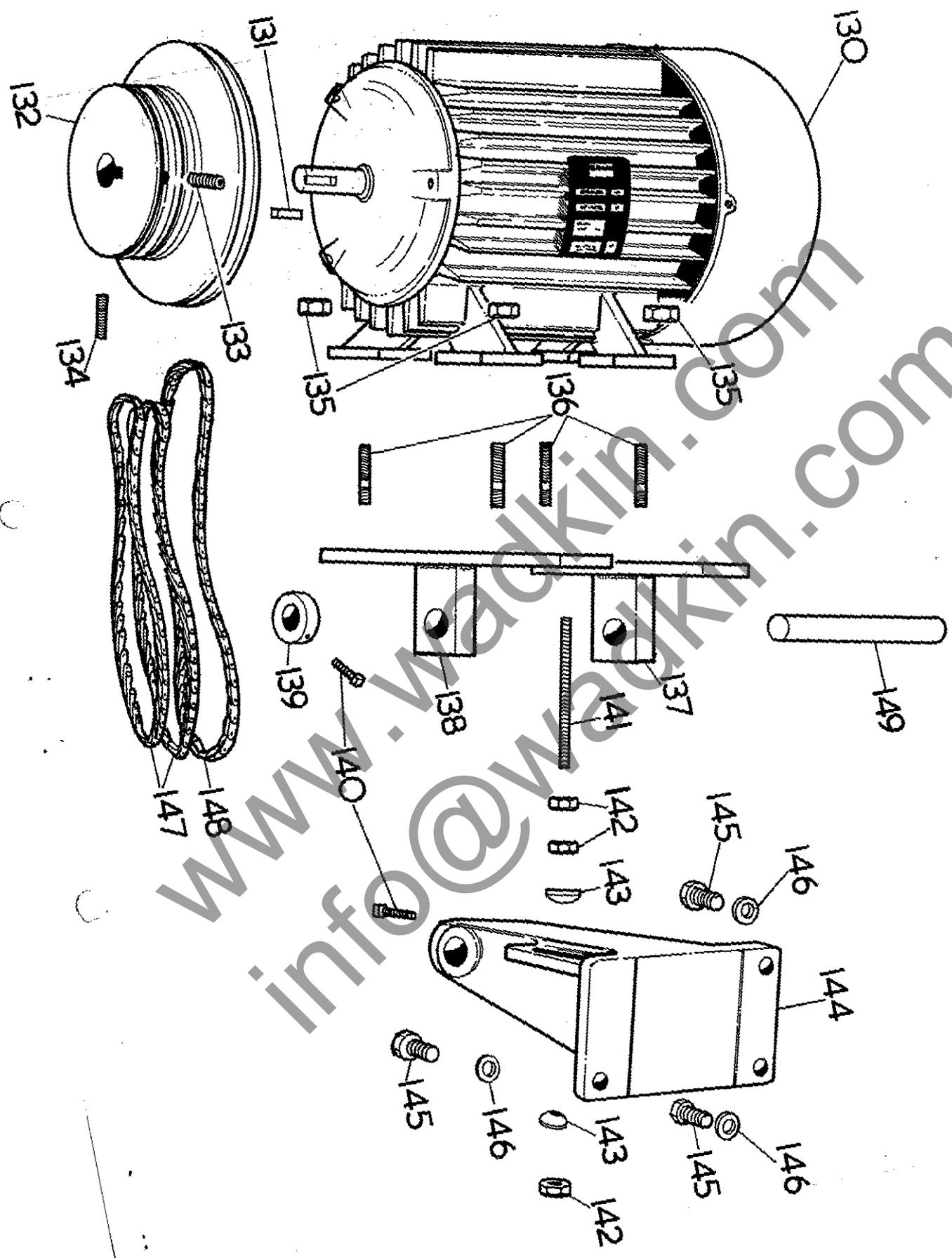
| <u>REF. NO.</u> | <u>PART. NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>   |
|-----------------|------------------|----------------|--|
| 100.            | ---              | 1.             | $\frac{3}{4}$ " BSF LEFT HAND THREAD NUT.                          |
| 101.            | BZG.14           | 1.             | WHEEL FLANGE.  |
| 102.            | BZG.64           | 1.             | ADAPTOR FOR DISC WHEEL ARBOR.                                      |
| 103.            | ---              | 6.             | $\frac{1}{4}$ " WHIT x $\frac{3}{4}$ " LONG COUNTERSUNK<br>SCREWS. |
| 104.            | BZG.13           | 1.             | DISC WHEEL ARBOR.  |
| 105.            | BZG.8            | 2.             | DUSTCAPS.  |
| 106.            | ---              | 2.             | SKF.6205-2RS SEALED RACES.   |
| 107.            | BZG.6            | 1.             | SPINDLE PULLEY.  |
| 108.            | ---              | 1.             | 5/16" WHIT x $\frac{3}{4}$ " LONG ALLEN GRUB<br>SCREW.             |
| 109.            | ---              | 1.             | 52MM (INTERNAL) CIRCLIP REF: 1300.                                 |
| 110.            | BZG.11           | 1.             | CONE WHEEL ARBOR.  |
| 111.            | ---              | 1.             | OAK TANNED STROPPING BELT.   |
| 112.            | BZG.47           | 1.             | STROPPING WHEEL.   |
| 113.            | ---              | 1.             | 5/16" WHIT x $\frac{1}{8}$ " LONG ALLEN GRUB<br>SCREW.             |
| 114.            | ---              | 1.             | 5/16" x 5/16" x 1 $\frac{1}{4}$ " LONG DOUBLE ROUND<br>END KEY.    |
| 115.            | BZG.40           | 1.             | FAST SPINDLE.  |

NOTE:- WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF THE MACHINE.



# MOTOR PLATFORM ASSEMBLY

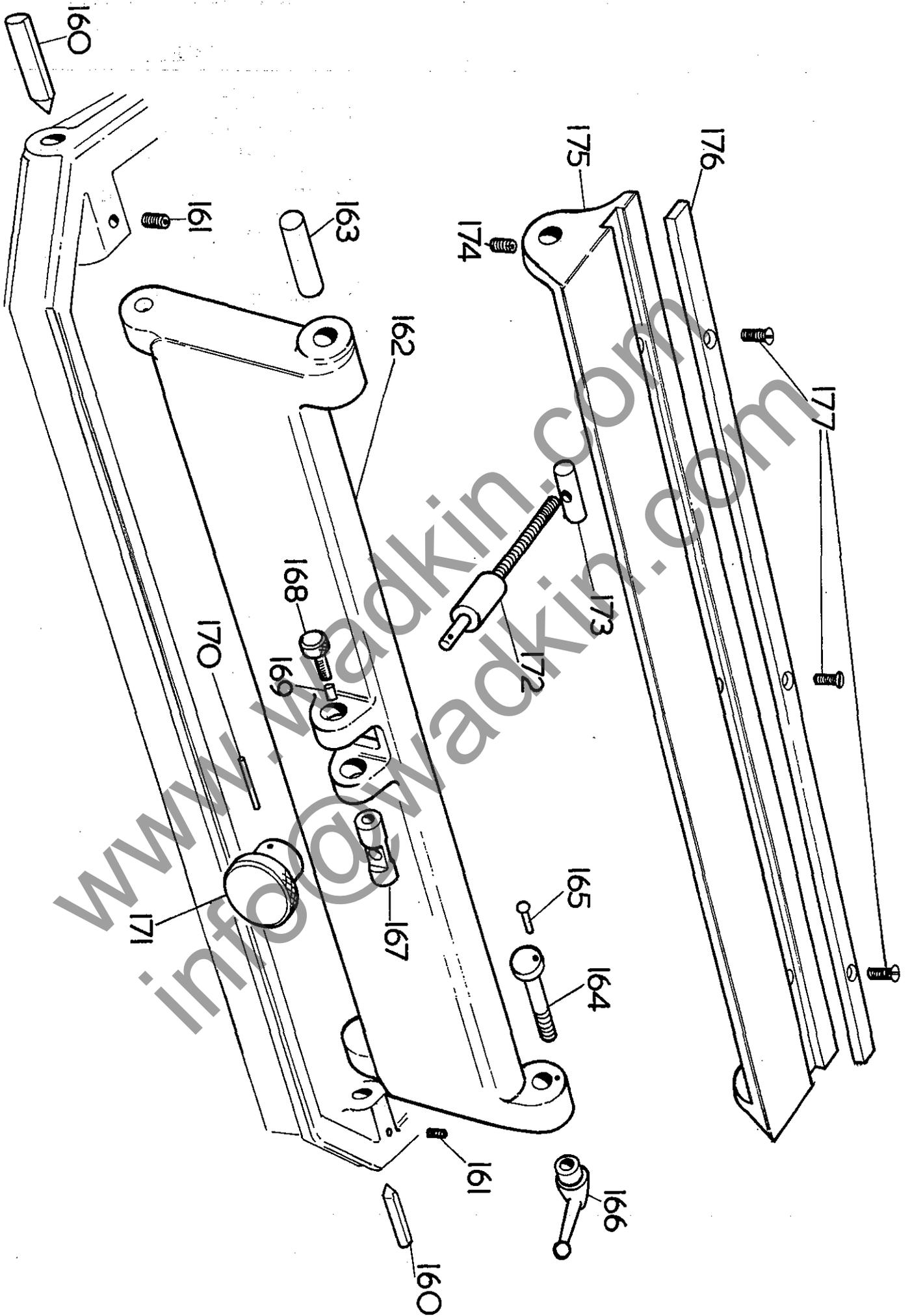
| REF.NO. | PART NO.   | NO.OFF | DESCRIPTION  |
|---------|------------|--------|--|
| 130.    | ---        | 1.     | (BROOKS 1HP (.75KW) 1000RPM TEFC )<br>- (MOTOR 220-380-420 VOLTS, 3 PHASE)<br>(50 CYCLES (FITTED AS STANDARD)) |
|         |            | 1.     | (BROOK CSA APPROVED 1 HP (.75KW)<br>- (1200RPM TEFC MOTOR 220-440 VOLTS)<br>(3 PHASE - 60 CYCLES (CANADA))     |
|         |            | 1.     | (BROOK CSA APPROVED 1HP (.75KW)<br>- (1200RPM TEFC MOTOR 550 VOLTS)<br>(3 PHASE - 60 CYCLES (CANADA))          |
|         |            | 1.     | (NECO 1HP (.75KW) 1000RPM TEFC<br>(MOTOR VOLTAGE AS ORDERED<br>( (SINGLE PHASE, SPECIAL) )                     |
| 131.    | ---        | 1.     | MOTOR SHAFT KEY.   |
| 132.    | - { BZG.5. | 1.     | MOTOR PULLEY (50 CYCLES) STANDARD )  |
|         | BZG.68.    | 1.     | MOTOR PULLEY (SINGLE PHASE) SPECIAL)   |
| 133.    | ---        | 1.     | 5/16" WHIT x $\frac{3}{8}$ " LONG ALLEN GRUB<br>SCREW.   |
| 134.    | ---        | 1.     | 5/16" WHIT x $\frac{1}{2}$ " LONG ALLEN GRUB SCREW   |
| 135.    | ---        | 4.     | 5/16" WHIT NUTS  |
| 136.    | ---        | 4.     | 5/16" WHIT x $1\frac{1}{4}$ " LONG STUDS   |
| 137.    | BZG.37/B   | 1.     | MOTOR FOOT (LEFT HAND).  |
| 138.    | BZG.37/A   | 1.     | MOTOR FOOT (RIGHT HAND).   |
| 139.    | BZG.35.    | 1.     | MOTOR PIVOT SHAFT COLLAR.  |
| 140.    | ---        | 2.     | $\frac{3}{8}$ " WHIT x $\frac{3}{4}$ " LONG SQUARE HEAD BOLTS.   |
| 141.    | BZG.36.    | 1.     | MOTOR PIVOT STUD.  |
| 142.    | ---        | 3.     | $\frac{3}{8}$ " WHIT NUTS.   |
| 143.    | BZG.60.    | 2.     | SPHERICAL WASHERS.   |
| 144.    | BZG.4.     | 1.     | MOTOR PIVOT BRACKET.   |
| 145.    | ---        | 3.     | $\frac{1}{2}$ " WHIT x $1\frac{1}{2}$ " LONG.  |
| 146.    | ---        | 3.     | $\frac{1}{2}$ " WASHERS.   |
| 147.    | ---        | 2.     | LENGTHS $\frac{1}{2}$ " x 40° BRAMMER BELT<br>(37 LINKS EACH).   |
| 148.    | ---        | 1.     | LENGTH $\frac{1}{2}$ " x 40° BRAMMER BELT<br>(40 LINKS EACH).  |
| 149.    | BZG.34.    | 1.     | MOTOR PIVOT SHAFT.   |



# TOOL CARRIER ASSEMBLY

| <u>REF.NO.</u> | <u>PART NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>  |
|----------------|-----------------|----------------|---|
| 160.           | BZG.28.         | 2.             | TOOL CARRIER PIVOT PINS.  |
| 161.           | ---             | 2.             | $\frac{1}{4}$ " WHIT x $\frac{3}{8}$ " LONG ALLEN GRUB SCREWS.  |
| 162.           | BZG.17.         | 1.             | TOOL CARRIER BRACKET.   |
| 163.           | BZG.29.         | 1.             | TOOL CARRIER CANTING PIN.                                       |
| 164.           | BZG.54.         | 1.             | TOOL CARRIER LOCKING BOLT.                                      |
| 165.           | ---             | 1.             | $\frac{1}{8}$ " DIA SELF LOCKING RIVET.                         |
| 166.           | ---             | 1.             | $\frac{1}{2}$ " WHIT LEVER - LOCK HANDLE.                       |
| 167.           | BZG.26.         | 1.             | TOOL CARRIER TRUNION.   |
| 168.           | BZG.50.         | 1.             | TOOL CARRIER LOCK SCREW.  |
| 169.           | BZG.59.         | 1.             | TOOL CARRIER LOCK SCREW PAD.                                    |
| 170.           | ---             | 1.             | No.1. TAPER PIN.  |
| 171.           | BZG.33.         | 1.             | TOOL CARRIER ADJUSTMENT HANDWHEEL.                              |
| 172.           | BZG.24.         | 1.             | TOOL CARRIER ADJUSTING SCREW.                                   |
| 173.           | BZG.27.         | 1.             | TOOL CARRIER NUT.   |
| 174.           | ---             | 1.             | $\frac{5}{16}$ " WHIT x $\frac{1}{2}$ " LONG ALLEN GRUB SCREW.  |
| 175.           | BZG.18.         | 1.             | TOOL CARRIER SLIDE.   |
| 176.           | BZG.32.         | 1.             | TOOL CARRIER SLIDE STRIP.                                       |
| 177.           | ---             | 3.             | $\frac{1}{4}$ " WHIT x $\frac{3}{4}$ " LONG COUNTERSUNK SCREWS. |

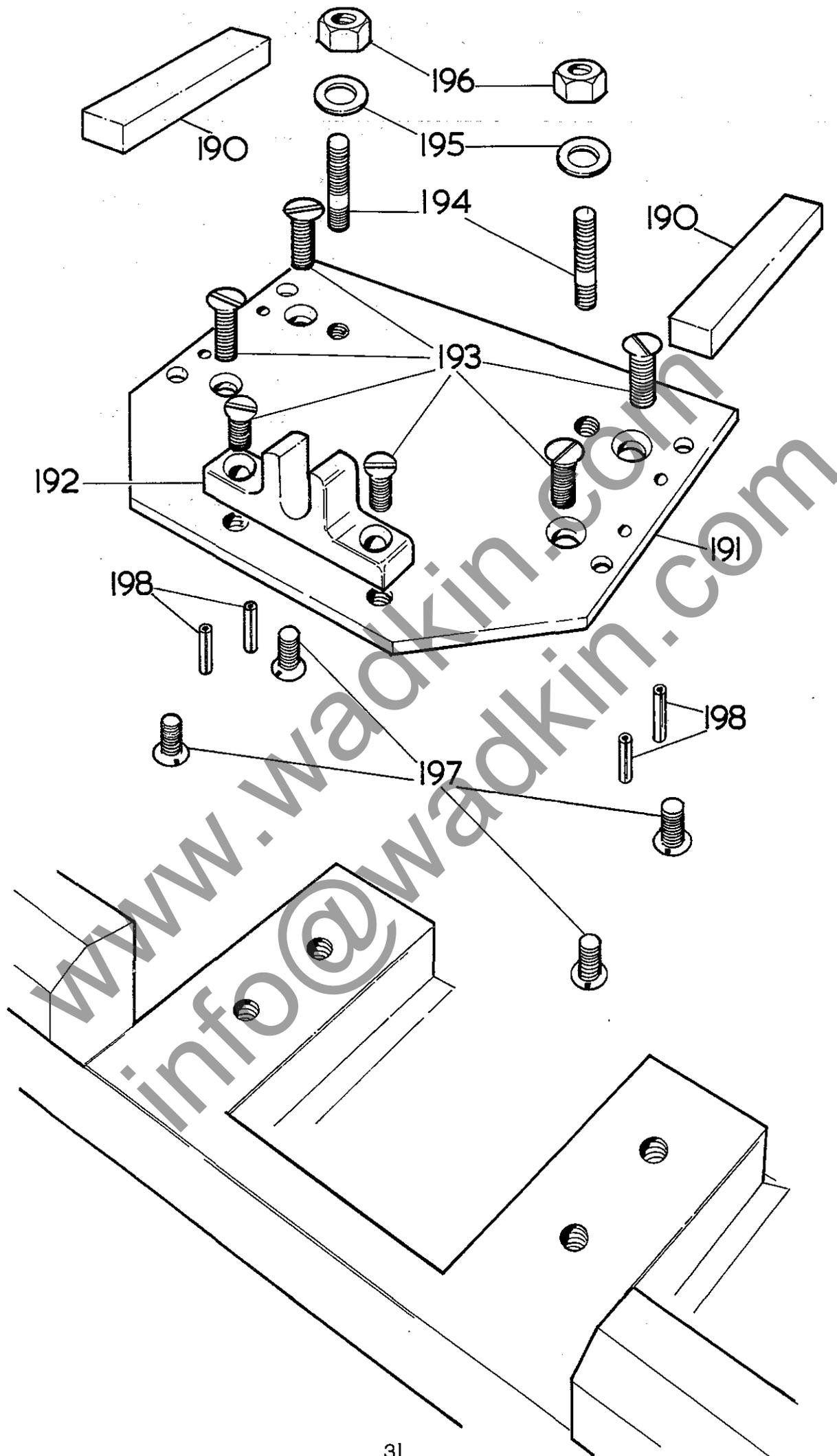
NOTE:- WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF MACHINE.



# KNIFE ATTACHMENT MOUNTING ASSEMBLY

| <u>REF. NO.</u> | <u>PART NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>  |
|-----------------|-----------------|----------------|---|
| 190.            | BZG.66          | 2.             | SIDE STRIPS.  |
| 191.            | BZG.65          | 1.             | PLATE FOR KNIFE ATTACHMENT.                                     |
| 192.            | BES.12          | 1.             | ADJUSTMENT BEARING.   |
| 193.            | ---             | 6.             | $\frac{1}{4}$ " WHIT x $\frac{3}{4}$ " LONG COUNTERSUNK SCREWS. |
| 194.            | ---             | 2.             | $\frac{3}{8}$ " WHIT x $1\frac{1}{4}$ " LONG STUDS.             |
| 195.            | ---             | 2.             | " WASHERS.  |
| 196.            | ---             | 2.             | " WHIT NUTS.  |
| 197.            | ---             | 4.             | $\frac{1}{4}$ " WHIT x $\frac{1}{2}$ " LONG COUNTERSUNK SCREWS. |
| 198.            | ---             | 4.             | $\frac{1}{8}$ " GROOVELOCK DOWELS $\frac{1}{2}$ " LONG.         |

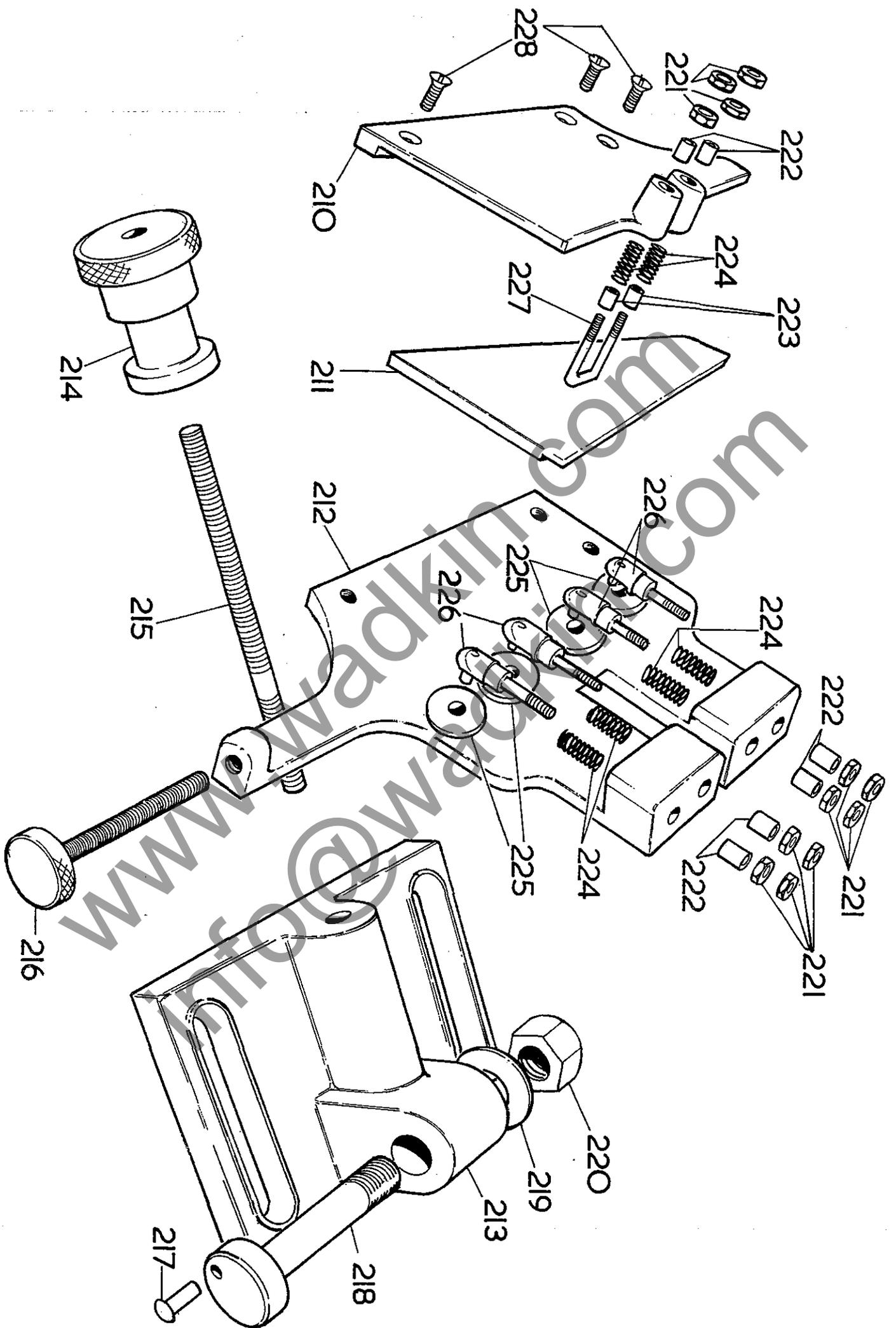
NOTE:- WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF THE MACHINE.



# KNIFE ATTACHMENT ASSEMBLY

| <u>REF. NO.</u> | <u>PART NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>                                |
|-----------------|-----------------|----------------|---|
| 210.            | BES.14          | 1.             | FRONT PIECE.                                      |
| 211.            | BES.13          | 1.             | WEDGE.  |
| 212.            | BES.16          | 1.             | BASE PLATE.                                       |
| 213.            | BES.15          | 1.             | KNIFE ATTACHMENT BRACKET.                         |
| 214.            | BES.26          | 1.             | ADJUSTMENT NUT.                                   |
| 215.            | BES.27          | 1.             | ADJUSTMENT SCREW.                                 |
| 216.            | BES.28          | 1.             | ADJUSTMENT SCREW FOR WEDGE.                       |
| 217.            | ---             | 1.             | $\frac{1}{8}$ "DIA. x $\frac{1}{2}$ "LONG RIVET.  |
| 218.            | BES.35          | 1.             | BOLT FOR BASE PLATE.                              |
| 219.            | ---             | 1.             | $\frac{1}{2}$ " WASHER.                           |
| 220.            | ---             | 1.             | $\frac{1}{2}$ " WHIT NUT.                         |
| 221.            | ---             | 12.            | $\frac{3}{16}$ " WHIT LOCK NUTS.                  |
| 222.            | BES.32          | 6.             | SPRING BUSHES.                                    |
| 223.            | BES.31          | 2.             | SPRING BUSHES FOR FRONT PIECE.                    |
| 224.            | BES.25          | 6.             | PRESSURE SPRINGS.                                 |
| 225.            | BES.30          | 4.             | GUIDE ROLLERS.                                    |
| 226.            | BES.29          | 4.             | GUIDE ROLLER SHAFTS.                              |
| 227.            | BES.33          | 1.             | TOP PRESSURE SPINDLE.                             |
| 228.            | ---             | 3.             | $\frac{1}{4}$ "WHIT x 1" LONG COUNTERSUNK SCREWS. |

NOTE: WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF THE MACHINE.



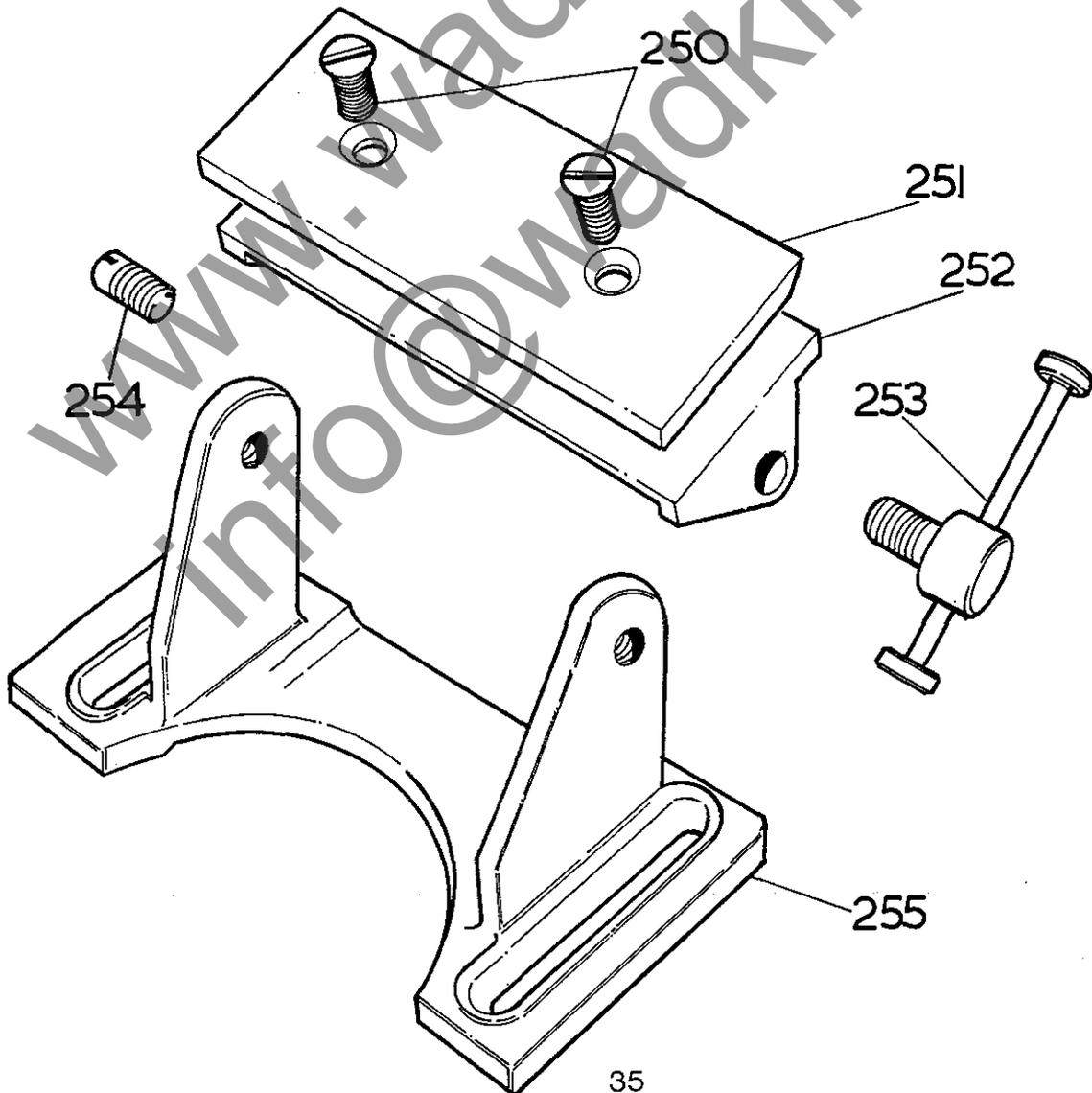
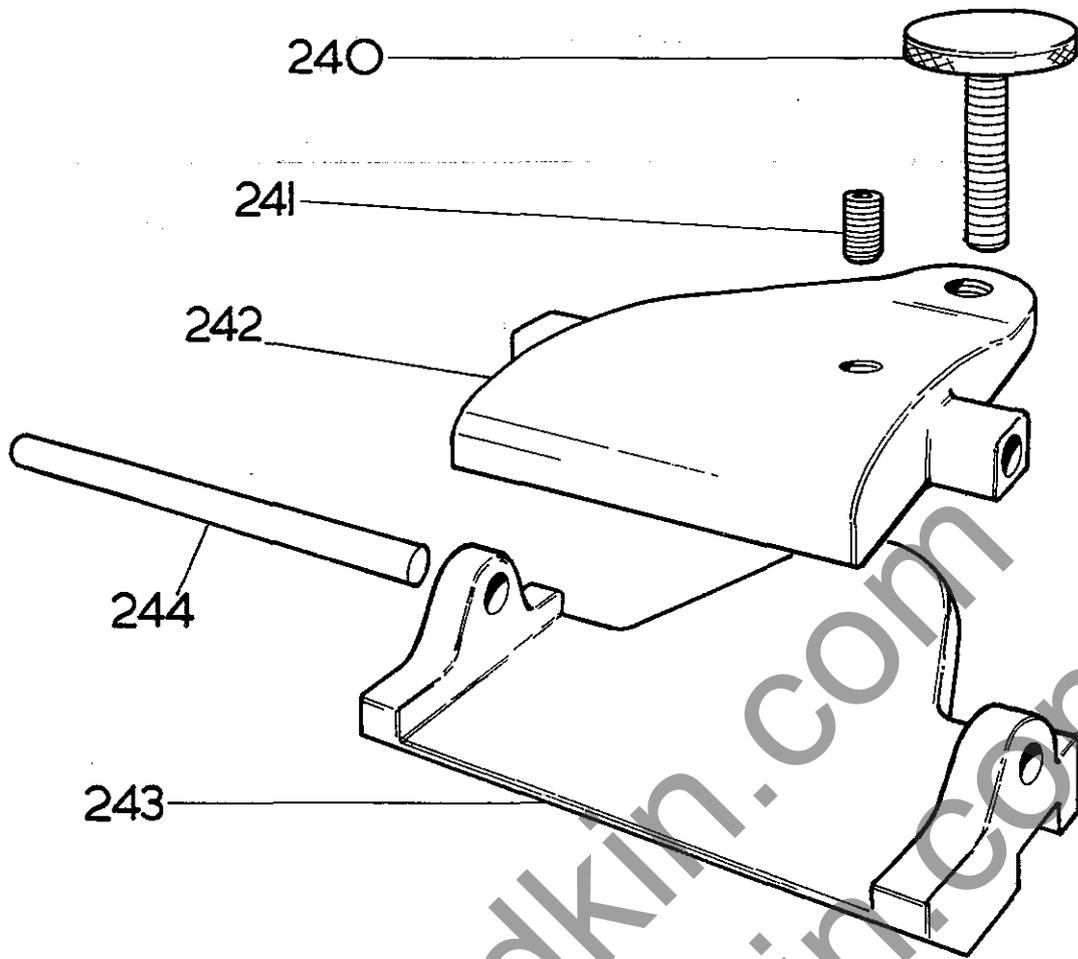
## TOOL CLAMP ASSEMBLY

| <u>REF. NO.</u> | <u>PART NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>  |
|-----------------|-----------------|----------------|---|
| 240.            | BZG.31          | 1.             | TOOL CARRIER CRAMP SCREW.                                     |
| 241.            | ---             | 1.             | $\frac{1}{4}$ " WHIT x $\frac{3}{8}$ " LONG ALLEN GRUB SCREW. |
| 242.            | BZG.20          | 1.             | TOOL CARRIER CRAMP.   |
| 243.            | BZG.19          | 1.             | TOOL CARRIER.   |
| 244.            | BZG.30          | 1.             | TOOL CARRIER CRAMP PIN.                                       |

## TOOL REST ASSEMBLY

| <u>REF. NO.</u> | <u>PART NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>  |
|-----------------|-----------------|----------------|---|
| 250.            | ---             | 2.             | $\frac{1}{4}$ " WHIT x $\frac{1}{2}$ " LONG COUNTERSUNK SCREWS. |
| 251.            | BZG.67          | 1.             | CANTING REST TOP PAD.   |
| 252.            | BES.9           | 1.             | CANTING REST TOP.   |
| 253.            | BES.36          | 1.             | CANTING REST LOCK HANDLE.                                       |
| 254.            | BES.34          | 1.             | CANTING REST PIVOT PIN.   |
| 255.            | BES.8           | 1.             | CANTING REST BASE.  |

NOTE:- WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF THE MACHINE.



## CONE REST

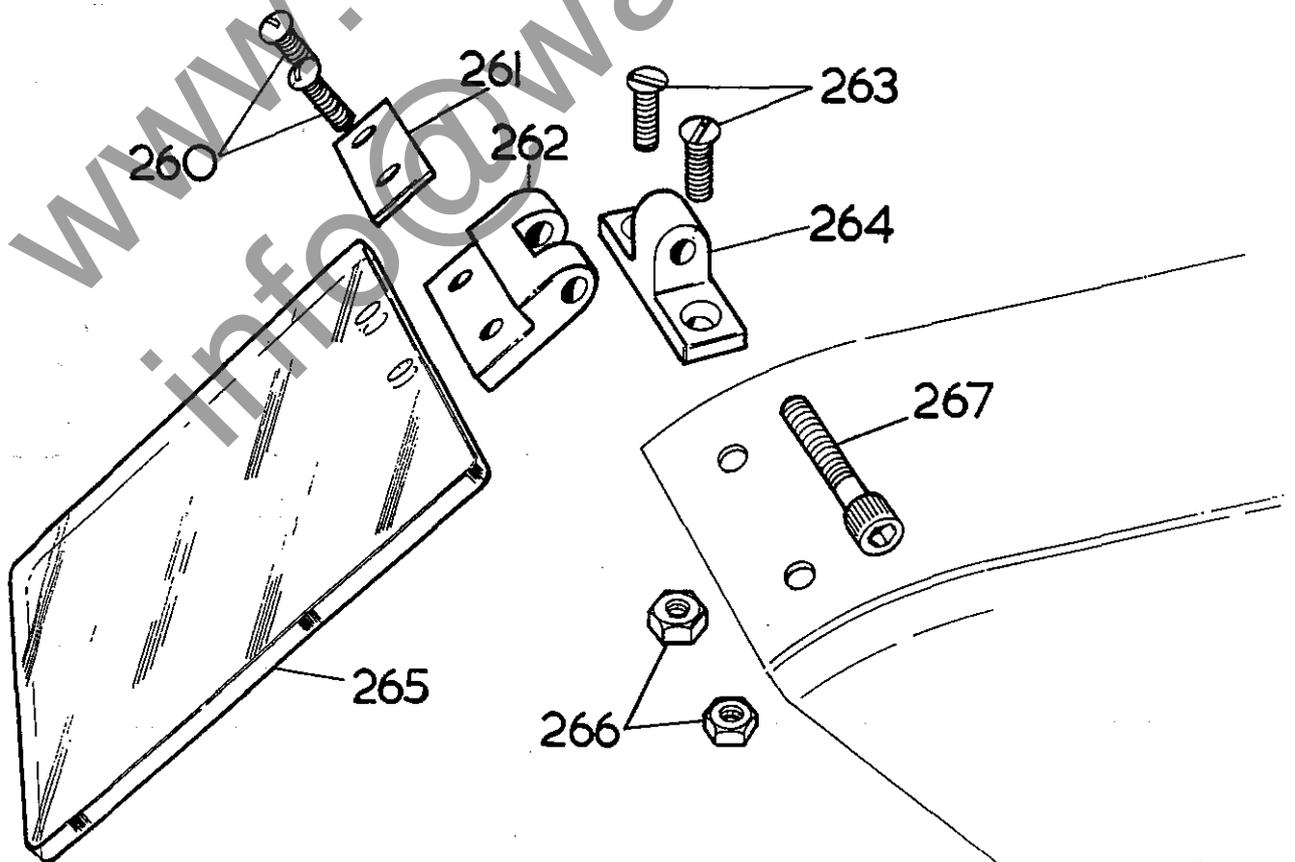
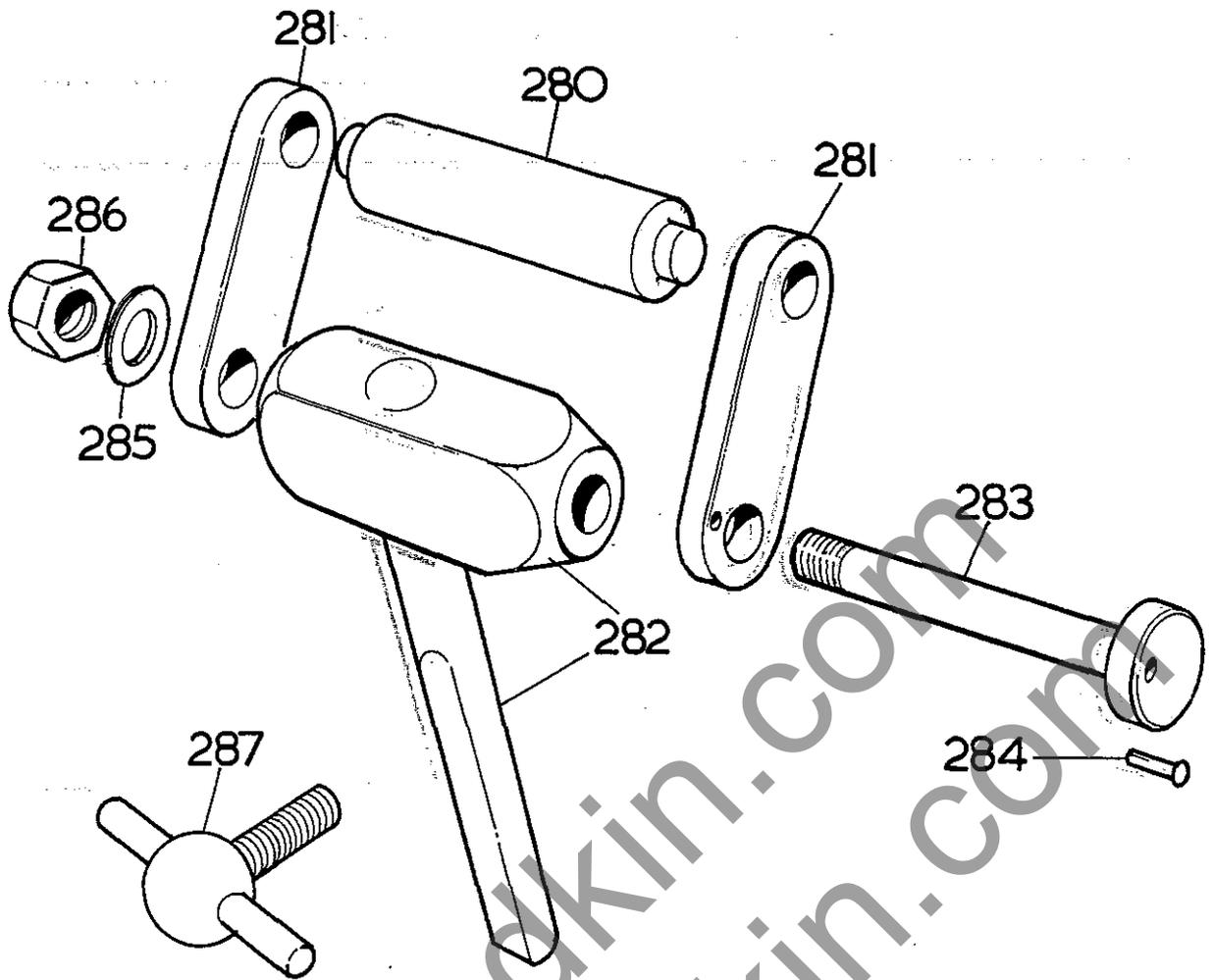
| <u>REF. NO.</u> | <u>PART NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>  |
|-----------------|-----------------|----------------|---|
| 280.            | BZG.56.         | 1.             | CONE TOOL REST.   |
| 281.            | BZG.57.         | 2.             | CONE REST LINKS.  |
| 282.            | BZG.55.         | 1.             | CONE REST PILLAR.   |
| 283.            | BZG.58.         | 1.             | CONE REST BOLT.   |
| 284.            | ---             | 1.             | $\frac{1}{8}$ "DIA x $\frac{1}{2}$ "LONG SELF LOCK RIVET. |
| 285.            | ---             | 1.             | 5/16" WASHER.   |
| 286.            | ---             | 1.             | 5/16" WHIT NUT.   |
| 287.            | STOCK ITEM      | 1.             | $\frac{3}{8}$ "WHIT TEE LOCK HANDLE.                      |

---

## WHEEL VISOR (EXTRA)

| <u>REF.No.</u> | <u>PART NO.</u> | <u>NO. OFF</u> | <u>DESCRIPTION</u>  |
|----------------|-----------------|----------------|---|
| 260.           | ---             | 2.             | 3/16"WHITx $\frac{3}{8}$ "LONG ROUND HEAD SCREWS.             |
| 261.           | BGY.315.        | 1.             | VISOR TRAPPING STRIP.   |
| 262.           | BGY.312.        | 1.             | VISOR HINGE.  |
| 263.           | ---             | 2.             | $\frac{1}{4}$ "WHIT x $\frac{1}{2}$ "LONG COUNTERSUNK SCREWS. |
| 264.           | BGY.314.        | 1.             | VISOR HINGE BOSS.   |
| 265.           | BGY.313.        | 1.             | VISOR (PERSPEX).  |
| 266.           | ---             | 2.             | $\frac{1}{4}$ " WHIT NUTS.                                    |
| 267.           | ---             | 1.             | $\frac{1}{4}$ "WHIT x 2"LONG ALLEN SCREW.                     |

NOTE:- WHEN ORDERING REPLACEMENT PARTS QUOTE PART NO. AND SERIAL NO. OF MACHINE.



WHEELS AVAILABLE FOR BZG MACHINE.

| WHEEL DIA. | WHEEL WIDTH.    | BORE.            | REFERENCE NO. OF WHEEL. | REMARKS.                             |
|------------|-----------------|------------------|-------------------------|--------------------------------------|
| 8"         | $\frac{1}{4}$ " | $1\frac{3}{8}$ " | BGW 8211A.              |                                      |
| 8"         | $\frac{3}{8}$ " | $1\frac{3}{8}$ " | BGW 8311A.              |                                      |
| 8"         | $\frac{1}{2}$ " | $1\frac{3}{8}$ " | BGW 8411A.              |                                      |
| 8"         | $\frac{1}{2}$ " | $1\frac{3}{8}$ " | BGW 8411(SPEC.F)        | WHITE WHEEL (THIN KNIFE ATTACHMENT.) |
| 8"         | $\frac{5}{8}$ " | $1\frac{3}{8}$ " | BGW 8511A.              |                                      |
| 8"         | $\frac{3}{4}$ " | $1\frac{3}{8}$ " | BGW 8611A.              |                                      |
| 8"         | $\frac{7}{8}$ " | $1\frac{3}{8}$ " | BGW 8711A.              |                                      |
| 8"         | 1"              | $1\frac{3}{8}$ " | BGW 8811A.              |                                      |
| 8"         | 2"              | $1\frac{3}{8}$ " | BGW 8"                  | CUPWHEEL (FINE.)                     |
| 8"         | 2"              | $1\frac{3}{8}$ " | BGW 8"                  | CUPWHEEL (COARSE.)                   |
| 3"         | 5"              | $\frac{3}{4}$ "  | BGW 3".                 | CONEWHEEL (COARSE.)                  |

RECOMMENDED SPARE PARTS LIST.

| DESCRIPTION.   | QTY.      | REMARKS.         |
|--|-----------|------------------|
| FAST SPINDLE BEARINGS.   | 2         | SKF 6205 - 2RS.  |
| IDLER SPINDLE BEARINGS.  | 2         | SKF 6205 - 2RS.  |
| SLOW SPINDLE BEARINGS.   | 2         | SKF 6205 - 2RS.  |
| BRAMMER ROPE - $\frac{1}{2}$ " x 40°.  | 2 Lengths | (37LINKS EACH.)  |
| BRAMMER ROPE - $\frac{1}{2}$ " x 40°.  | 1 Length. | (40 LINKS.)      |
| ELECTRICS:- 200/440 VOLTS, 3 PHASE, 50 CYCLES.   |           |                  |
| FIXED AND MOVING CONTACTS. RP4.  | 1set      | MEM ADS STARTER. |
| NO VOLT COIL.  | 1         | MEM ADS STARTER. |
| OVERLOAD HEATER.   | 1set      | MEM ADS STARTER. |
| <p><u>NOTE:- FOR MACHINES WITH M.T.E. CONTROL GEAR OR SINGLE PHASE ELECTRICS CONSULT <u>BURSGREEN (COLNE) LTD.</u></u></p> |           |                  |

OTHER EXTRAS WHICH CAN BE SUPPLIED TO SPECIAL ORDER:-

SPOT LIGHTING EQUIPMENT, ISOLATOR, SINGLE PHASE ELECTRICS, PERSPEX WHEEL VISORS, GRANBY TYPE WHEEL DRESSERS.