

INSTRUCTIONS

WH&B 700 COMBINATION FINISHING MACHINE

Catalogue Reference: 11/18/1

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WH&B MACHINES are designed to operate with the accessories supplied as initial equipment. The Company can accept no responsibility for malfunction if unapproved accessories or spares are used.

Our policy being one of continuing development and improvement, we reserve the right to alter specifications without notice.

WHITFIELD WYLIE LIMITED, WH&B DIVISION
P.O. Box 3, Kettering, Northamptonshire NN16 8YL, England.
Telephone: Kettering (0536) 517070

WH&B 700 COMBINATION FINISHING MACHINE

INSTALLATION

The machine must stand firmly and level, using packing under the corners if necessary. If the machine is positioned against a wall, sufficient space must be left behind it to prevent the Filter Bag, when inflated, from touching the wall. If this were to happen the air could not escape through that part of the bag and dust extraction would be impaired.

Electrical connections must be made through an isolator and fuse of not less than 30 amps capacity, positioned on or near the machine. The machine must be earthed.

ALL ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED ELECTRICIAN.

In the case of 3-phase machines, the scouring bands and bayonet-fitted tools must be removed before initial start-up, until the correct direction of rotation is established, as running in reverse may cause damage.

All shafts run in a clockwise direction, viewed from the left hand end.

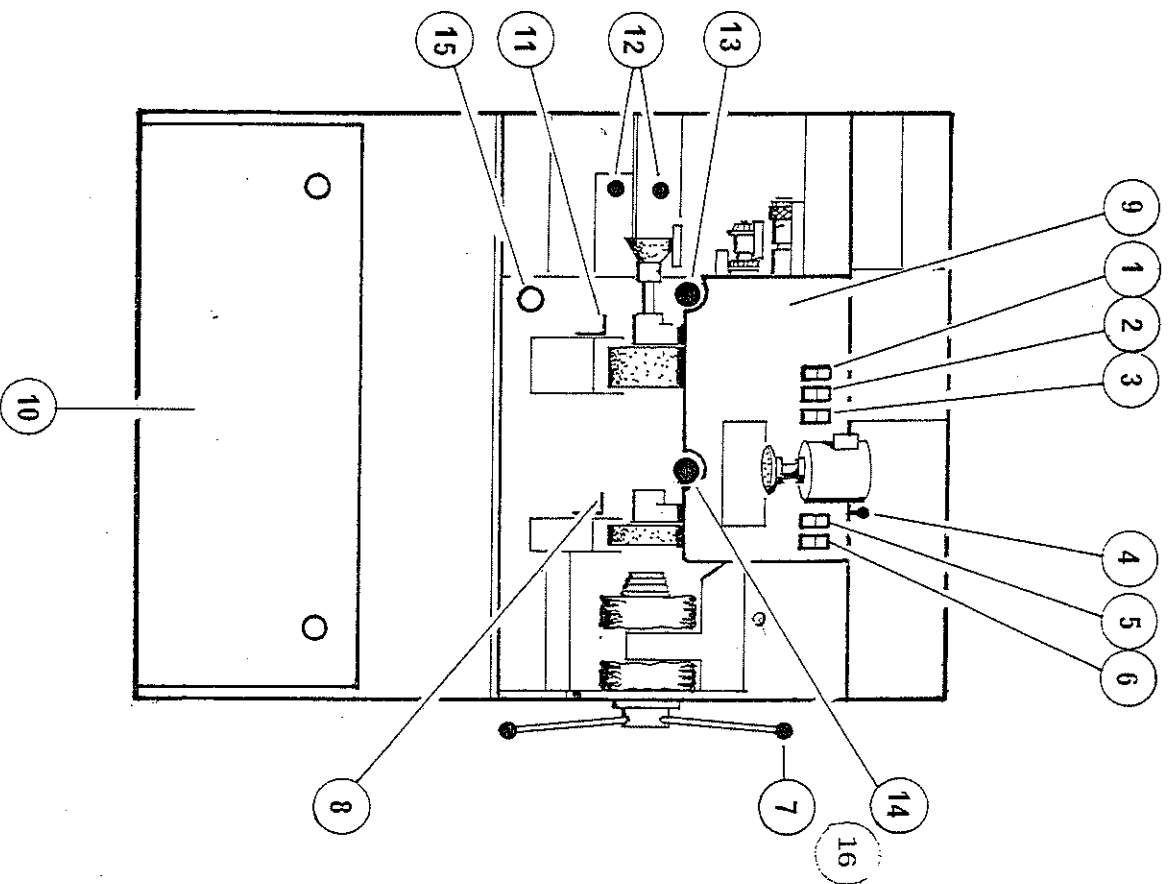
In the case of a 3-phase machine which is fitted additionally with a wax heater, there will be a separate 1-phase input lead for this.

WIRING COLOUR CODE:

Earth	Green (or Green & Yellow)
Neutral (1-phase)	Blue
Live (1-phase)	Brown
Live (3-phase)	Brown/Blue/Black

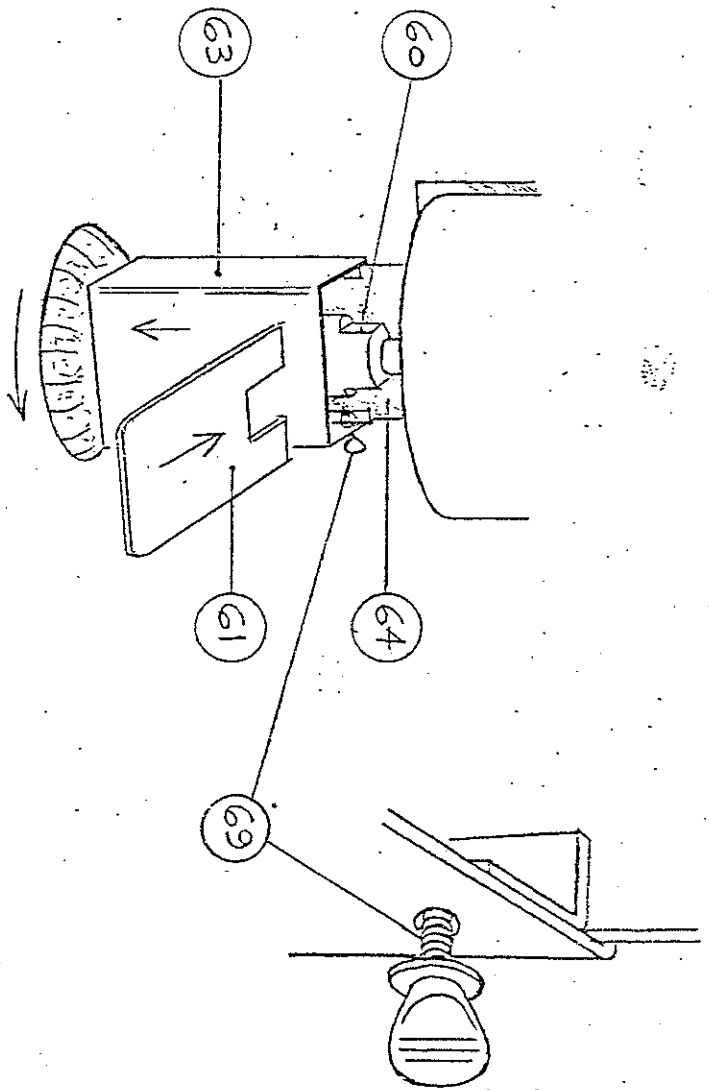
WARRANTY (ON NEW MACHINES ONLY)

All electric motors on this machine are covered by the Manufacturers' Warranty valid for twelve months from the date of installation, provided that the machine has been used in accordance with the instruction manual. This Warranty does not cover motor failure due to overloading by excessive pressure on the tools.



THE CONTROLS

- (1) START/STOP buttons for Trimmers
- (2) START/STOP buttons for Fan
- (3) START/STOP buttons for Scouring
- (4) Naumkeag Flap lever
- (5) START/STOP buttons for Naumkeag
- (6) START/STOP buttons for Brushing/Polishing
- (7) Brushing/Polishing Tool selector
- (8) Dust Port Flap lever
- (9) Front Panel
- (10) Access Panel for dust box
- (11) Dust Port Flap lever
- (12) Trimmer Dust Port Flaps
- (13) Band alignment, left hand band
- (14) Band alignment, right hand band
- (15) Filter Bag Shaker
- (16) Brushing Polishing Tool Section (Power Operated)



DRILL ADAPTOR: FITTING IN PLACE OF NAUMKEAG

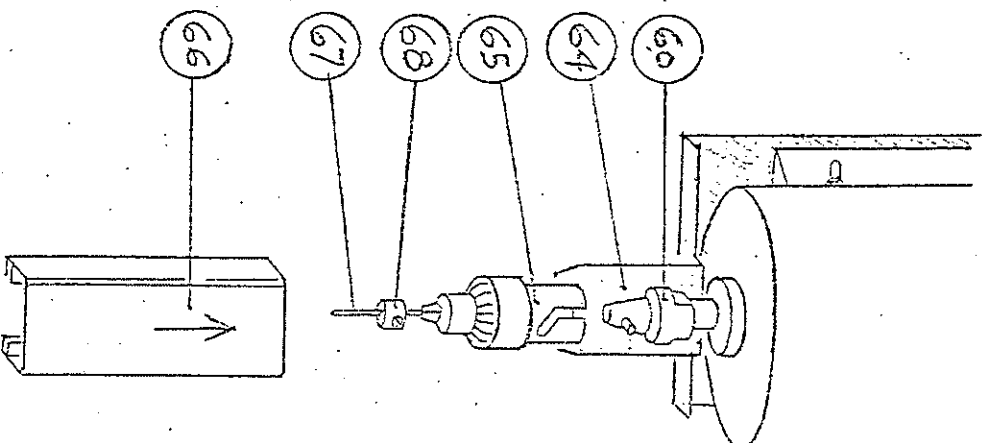
Loosen thumbscrew (69) approx. 5mm as shown. Slide guard (63) down until flats on the shaft adaptor (60) are accessible over the guard.

Use special wrench (61) to hold shaft still, turn Naumkeag approx. quarter turn clockwise to unlock, and withdrawn from shaft.

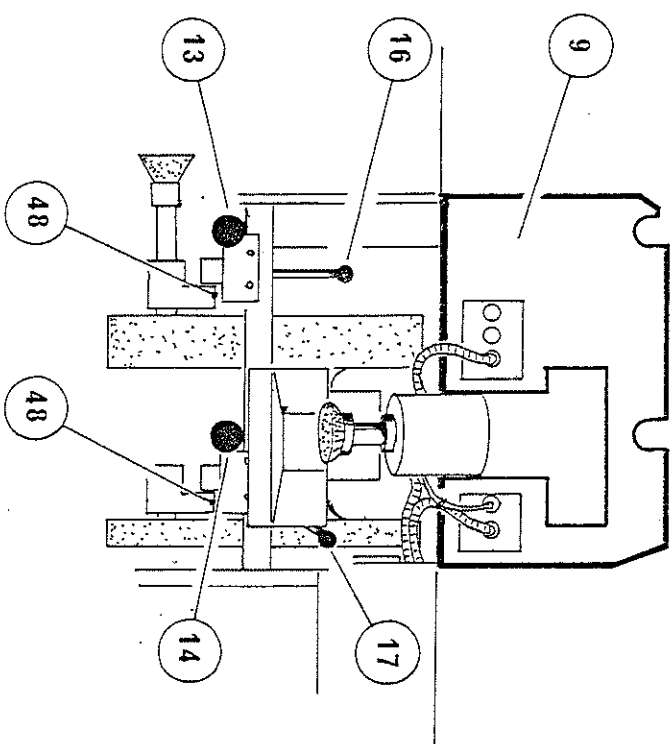
Remove Naumkeag guard by sliding down from tongue(64).

Fit drill adaptor (65) by pushing onto shaft so that the shaft pin engages in the slot in the drill adaptor and turn as far as possible anti clockwise to lock. Fit chuck key into chuck and special wrench (61) onto shaft adaptor and tighten up.

Fit the drill guard (66) - the longer of the two guards - by engaging the two rear channels over tongue(64), ensuring that thumbscrew (69) is unscrewed by approx 5mm. Push guard as far as possible and screw thumbscrew fully in.



TRIMMING & SCOURING SECTION



Breafter/Edge Iron:

These are bayonet-fitted. To remove, hold the contact wheel still and turn the Breafter or Edge Iron as far as it will go (about a quarter turn) in the direction of normal rotation, when it can be withdrawn to the left. Replace by pushing the tool on to the shaft so that the pin in the shaft enters the slot in the tool and turning as far as it will go in the opposite direction to normal rotation.

Naumkeag:

This is adjustable for angle. Grip the Naumkeag with one hand and the top of the motor with the other and tilt to the required angle. The built-in friction in the mounting will hold it in the chosen position.

Removal and replacement of bands:

Switch off and wait until the tools stop, then raise the Front Panel (9).

Pull the Tension Release Lever (16 or 17) forward and slip the band off the driving pulley and contact wheel. Return the Release Lever under control.

To replace, pull the Release Lever forward and place the band centrally on the driving pulley and contact wheel. Ensure that it is the right way round, that is, running in the same direction as the arrow printed on the inside.

Re-apply the tension by returning the Release Lever under control

Lower the Front Panel, switch on and check the band alignment, adjusting if necessary by turning the Alignment Knob (13 or 14) clockwise to move the band to the right or anti-clockwise to move it to the left. This adjustment is made with the band running. It is quite sensitive and must be done with care.

Forepart Trimmer

To remove the Cutter:

Switch off

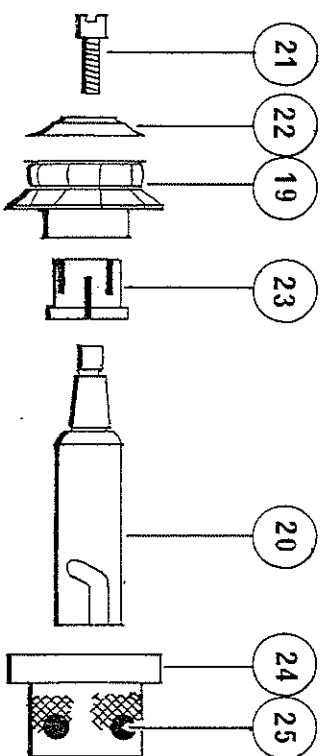
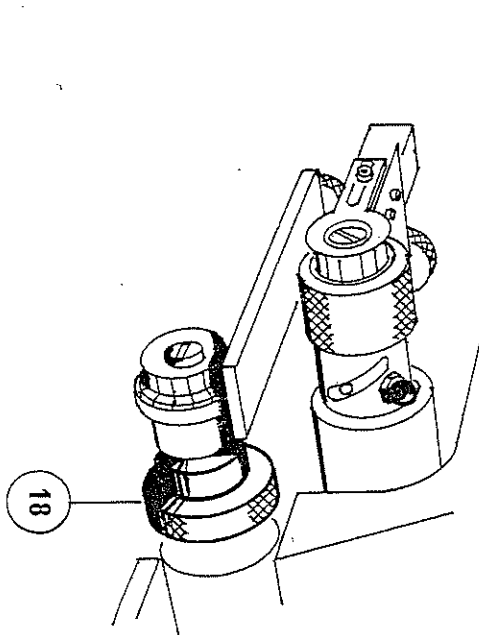
Hold the shaft still by means of the Gripping Collar (18) and turn the Cutter as far as it will go (about a quarter turn) in the direction of normal rotation. The Cutter and Cutter Adaptor Assembly can then be removed by withdrawing to the left.

To replace the Cutter:

Place the Cutter Adaptor Assembly in position on the shaft and, pushing it gently to the right, rotate it until the pin in the shaft enters the slot in the Adaptor. Lock in position by rotating the Cutter as far as it will go (about a quarter turn) in the opposite direction to normal rotation whilst holding the shaft still by means of the Gripping Collar.

Cutter Adaptor Assembly:

The Cutter (19) is dismantled from the Adaptor (20) by removing the Binding Screw (21) THIS SCREW HAS A LEFT HAND THREAD. The Shield (22) and the Cutter then come away from the Adaptor, but may need a light tap from a suitable wooden instrument, such as the handle of a screwdriver, to free them from the taper. The Thimble (23) will remain in the Cutter and must be pushed out. It is not necessary to disturb the Backguard (24) if the same Cutter is to be refitted. If a Cutter of a different width is to be mounted on the Adaptor, it will be necessary to re-adjust the Backguard. Slacken the two Binding Screws (25); push the Thimble fully home into the Cutter and place in position on the Adaptor. NOTE: It is essential that the Thimble be fully home in the Cutter before placing on the Adaptor. Replace the Shield and insert and tighten the Binding Screw. If the Shield is of the type having small projections to fit between the Cutter teeth, ensure that they do so. Slide the Backguard along the Adaptor and, holding it firmly in contact with the Cutter, tighten the two Binding Screws.



Toppiece Trimmer

To adjust the width of the Cutter to suit the thickness of the topiece, rotate the sleeve (26) by means of the knob (30).

Should the sleeve become too free, so that it moves under pressure from the work, it can be tightened by means of the friction device incorporated in the knob (30). Slacken the locknut nearest the sleeve, turn the knob slightly clockwise and tighten the locknut. The best adjustment can be found by trial.

The Shield (27) must be set to run as closely as possible to the Cutter without actually touching it. The front edge of the Shield must project very slightly in front of the tips of the Cutter teeth.

To set the Shield:

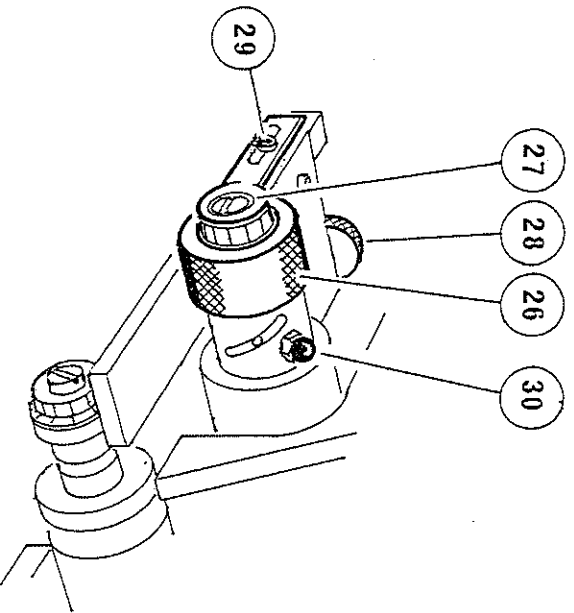
Switch off and isolate the machine from the mains electricity supply.

To adjust the clearance between the Shield and Cutter:

Slacken the knurled screw (28) slightly, which will allow the Shield assembly to be pulled to the left away from the Cutter. Place a double thickness of ordinary writing paper between the Shield and the Cutter and push the assembly in to the right until it just traps the paper. Ensure that the Cutter is central with the Shield (vertically), tighten the screw (28) and withdraw the paper.

To adjust the closeness of trim:

Slacken the screw (29), which will allow the Shield assembly to be moved backwards or forwards on its elongated hole. The amount by which the Shield projects in front of the Cutter regulates the closeness of trim. Tighten the screw (29) securely after making the adjustment.



TOPPIECE SCOURING BAND (Fitted as optional extra).

Controls:

(50) Edge Gauge Adjuster. Turn clockwise to move the Edge Gauge (53) to the left, or anti-clockwise to move it to the right.

(51) Band Alignment Adjuster. Turn clockwise to move the band to the right on the contact wheel or anti-clockwise to move it to the left.

(52) Tension Release Lever. Pull forward to release tension when changing the band.

Operation:

Switch on and check that the band is correctly aligned, that is, with its left hand edge running flush with the edge of the Contact Wheel (54). If it is not, adjust by turning the knob (51). This is a sensitive adjustment and must be done with care.

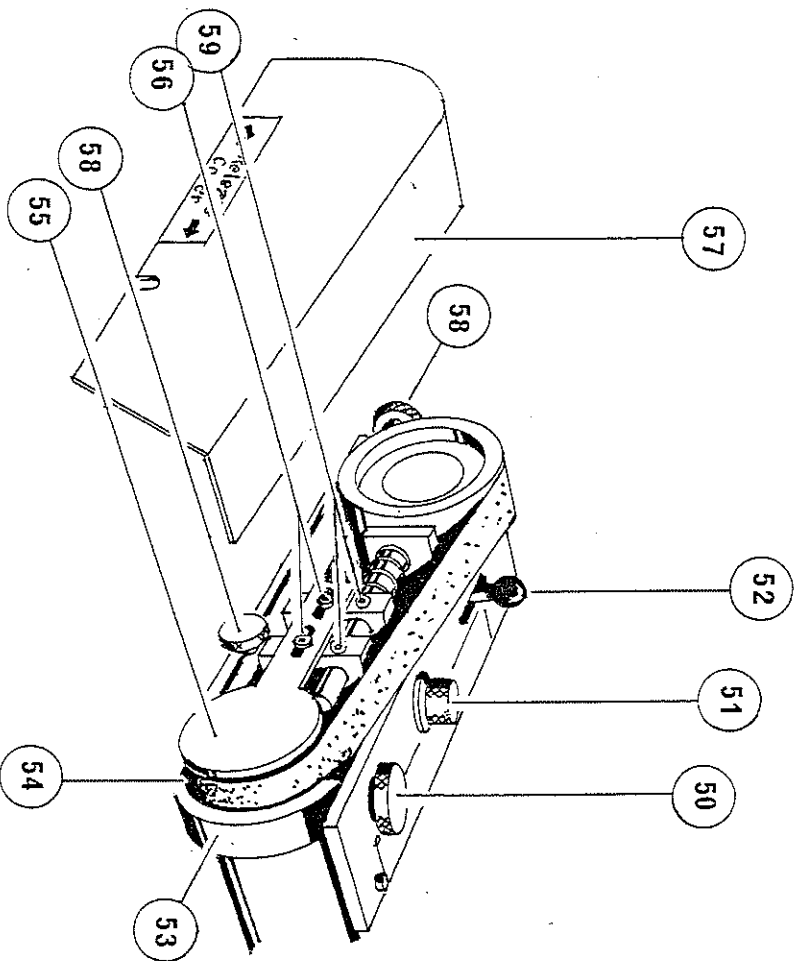
Set the Edge Gauge in accordance with the thickness of the material to be trimmed.

The Shield (55) should be set to protrude very slightly in front of the surface of the band, to prevent undercutting the toppiece. To adjust it, first switch off, then remove the Cover (57) by slackening the two knurled screws (58) and lifting the Cover off. Slacken the two screws (56), which will allow the Shield to be moved into the required position. Re-tighten the screws (56) securely after making the adjustment.

Replace and secure the Cover before switching on.

Do not attempt to scour without the Fan running. Present the work to the band in the normal way and scour with a light even movement, against the movement of the band.

DO NOT USE EXCESSIVE PRESSURE, as this will not speed up the work but will disalign the band and cause overheating and rapid wear of the abrasive.



TOPPIECE SCOURING BAND (Continued)

Band replacement:

Switch off and remove the Cover (57).

Pull the lever (52) forward to release the tension and remove the band.

Ensure that the new band is fitted to run in the correct direction, as shown by the arrow printed on its back. Position it centrally on the idler pulley and flush with the left hand edge of the contact wheel. Replace the Cover and test the alignment by pressing the START button followed immediately by the STOP button, in case the band moves violently to one side. It will usually run fairly true and can be finally aligned by means of the adjusting knob (57).

Lubrication:

Once a week, remove the Cover and apply a drop of WH&B Machine Oil to each of the two lubricators (59), pushing the spring-loaded balls in with the spout of the oilcan. Wipe off excess oil to avoid contaminating the band.

CUTTER SHARPENING:

Switch off and isolate the machine from the mains electricity supply.

Remove the Forepart Cutter assembly from the shaft.

Slacken the screw (31), raise the Hood (32) and tighten the screw.

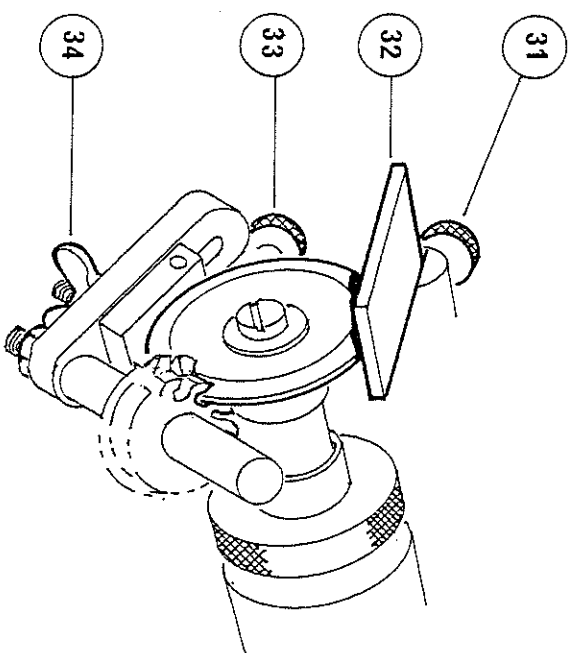
Fit the Grinding Wheel assembly to the shaft in place of the Cutter.

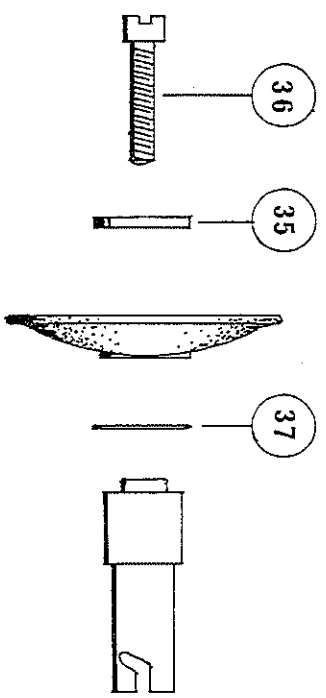
Slacken the screw (33) and fit the Post assembly so that the Post comes in front of the Grinding Wheel. Place a cutter, boss downwards, on the Post and slide it down to the Grinding Wheel. The flat face of the cutter tooth must contact squarely against the flat face of the wheel, with the wheel entering as deeply as possible between the teeth without the back of the wheel touching the next tooth. Adjustment for angle is made by slightly slackening the screw (33) and moving the assembly left or right as required. To adjust for depth, slacken the wing nut (34) which allows the Post to be moved to or from the wheel. Tighten all screws securely after adjusting. Before switching on, re-check the setting, ensuring that the cutter will slide freely up and down the Post. Remove the cutter from the Post and switch on.

Slide the cutter down the Post, pressing the cutting face of the tooth lightly against the flat face of the wheel. Just short of the cutter leaving the wheel at the bottom, reverse the movement, bringing the cutter up until clear of the wheel. Rotate the cutter one tooth and repeat, counting the teeth, until all sixteen teeth have been ground. All movements should be done smoothly and lightly, using the same pressure on each tooth to ensure equal grinding.

Never allow a cutter to become so blunt as to require heavy grinding. If necessary, go round twice or more, lightly, rather than try to grind a lot off in one attempt. Heavy grinding overheats the cutter, spoiling the temper of the cutting edge and damaging the grinding wheel.

The grinding wheel must be replaced when the flat face has lost its shape.





When mounting a new grinding wheel on the adaptor, take note of the correct assembly as shown on the drawing. The steel washer (36) goes under the head of the Binding Screw (35) (which has a left hand thread) and the paper washer (37) between the wheel and the adaptor. This is essential for safety and is a legal requirement under the UK Abrasive Wheels Regulations, 1970. Do not over-tighten the Binding Screw.

Dust extraction:

For maximum extraction, always close the dust ports under the tools not in use.

To maintain efficiency, the dust drawer should be emptied daily.

To empty the dust drawer: With the Tools stopped but the fan running, brush down any accumulation of dust from round the tools and dust ports.

Switch off the fan and, whilst it is slowing down, pull out the shaker knob (see 'Controls', 15) and move it vigorously in and out several times, finishing with it in.

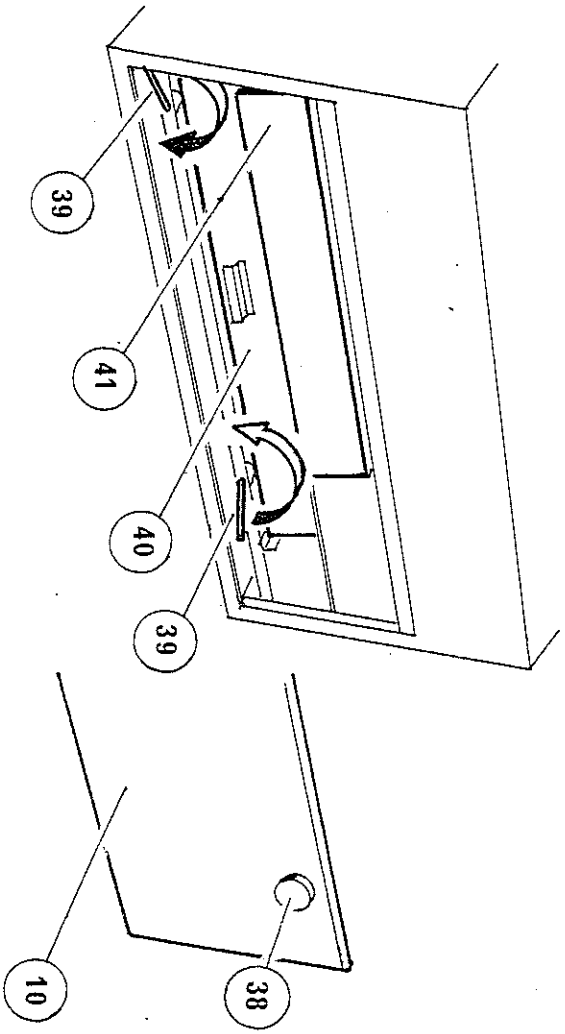
Wait for the fan to stop.

Remove the Access Panel (10) by turning the two fasteners (38) about a half turn anti-clockwise. Lift the Panel out and set it aside.

Turn the two handles (39) inwards, as shown by the arrows, as far as they will go and pull out the Dust Drawer (40).

Before emptying the Drawer, lift out the box (41), which takes the heavy waste from the chute and empty it into the Drawer.

Replacement is the reversal of the above. Ensure that the Drawer is pushed in as far as it will go and that the handles (39) are turned fully outwards. When replacing the Panel (10), first engage the Flange on its inside at the bottom with the bottom of the opening in the base, then close it and lock by turning the fasteners (38) clockwise as far as they will go.



BRUSHING & POLISHING SECTION:

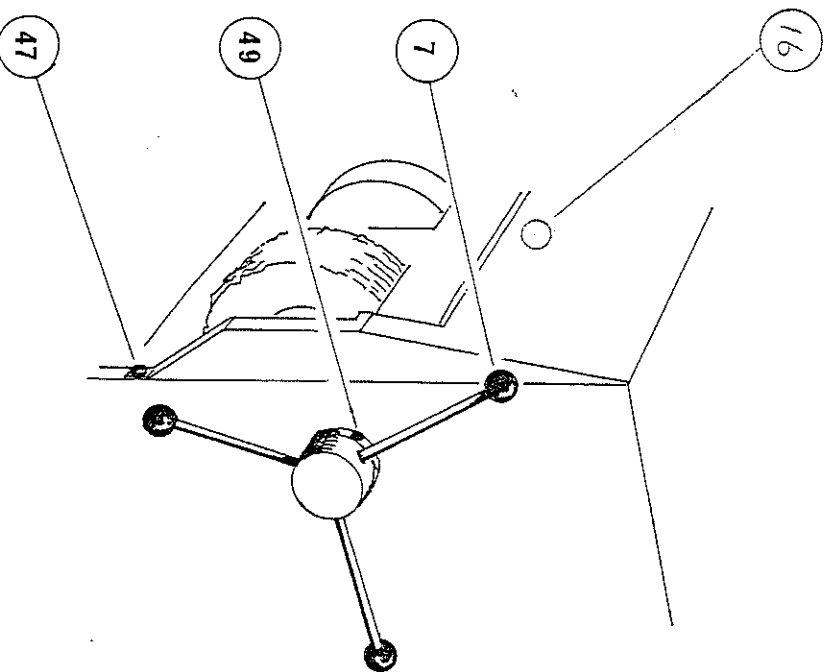
MANUAL

Tool selection:

To bring a different tool shaft into the operating position, pull the lever (7) forward, rotating the mounting until it is felt to 'click' into position.

This is most easily done with the machine running.

Do not turn in the opposite direction.



BRUSHING & POLISHING SECTION (POWER OPERATED)

TOOL SELECTION:

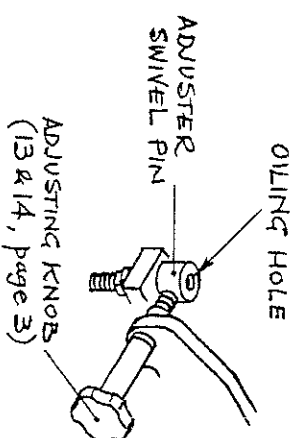
The revolving brush/pad unit carries three shafts, each fitted with different tools. To select a different shaft, press the switch (see "Controls" 16) and release it. The unit will revolve one third of a revolution and lock into position. If pressure is maintained on the switch the unit will continue to revolve, stopping at the next shaft after pressure is released. The unit will revolve whether the brushes are running or not.

LUBRICATION

All driven bearings on this machine are grease packed and sealed for life by the manufacturers and require no further attention.

The motors, although fitted with grease nipples, do not normally require attention, as the initial grease packing usually lasts the life of the motor. Lubrication must, in any case, only be carried out by a qualified engineer, as over-greasing or use of the wrong lubricant will seriously damage the motor.

Once a month, apply a good quality machine oil sparingly to the working surfaces of the Dust Drawer Locking Cams and shaft bearings, the Access Panel Fasteners and the scouring band swinging arm pivots (48, page 3) and apply 2 or 3 drops to the Adjuster Swivel Pins (see below).

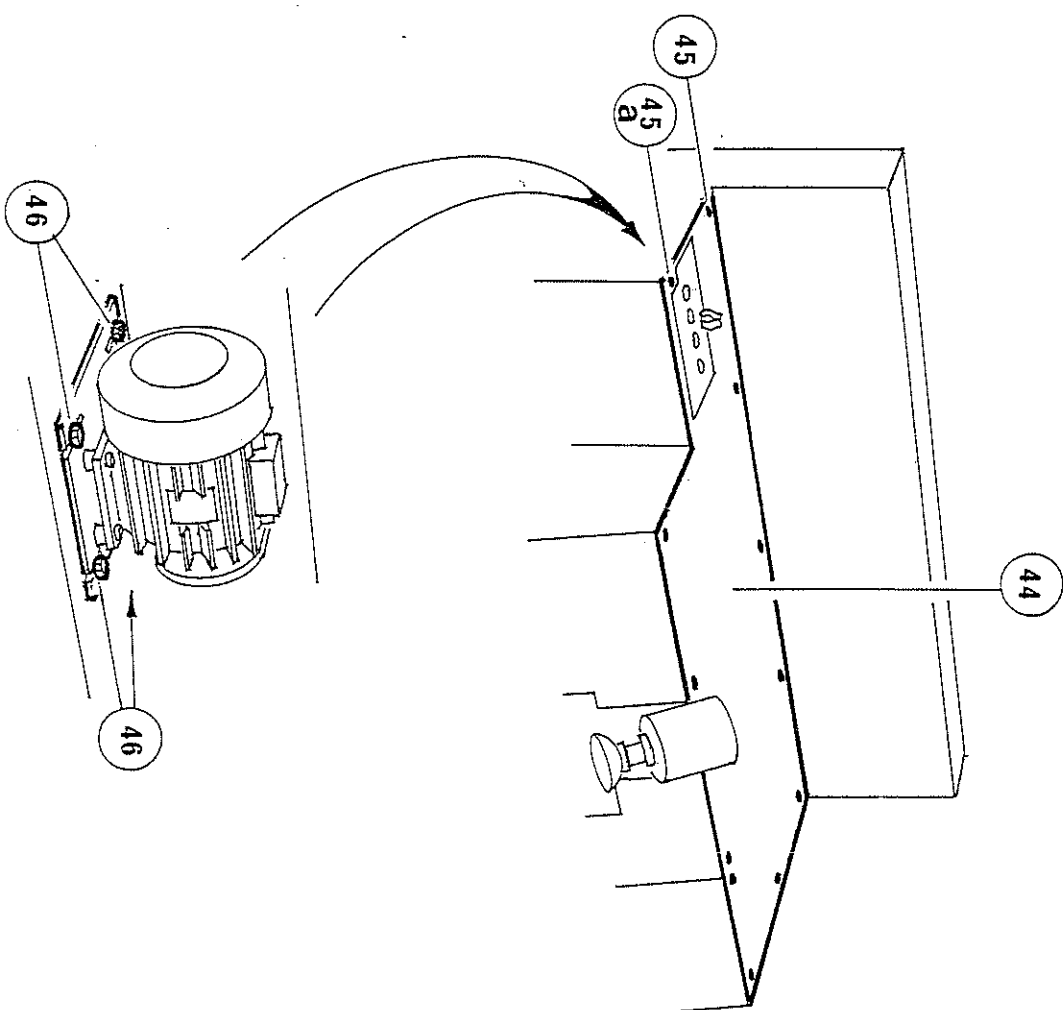


Adjustable Forepart Trimmer (when fitted): the sliding keyway should be lubricated monthly. Turn adjusting sleeve fully back (maximum cutter width). Remove cutter binding screw (NOTE THIS HAS A LEFT HAND THREAD) and cutter shield. Using a rag to protect the hand, withdraw inner cutter from shaft. The keyway will now be visible. Turn shaft to bring keyway to top and add a few drops of oil to the front end of the keyway. Replace cutter, shield, and screw. Turn adjusting sleeve fully forward (minimum cutter width) to expose helical slot in barrel (behind adjusting sleeve). Add a few drops of oil to shaft through this slot.

Once a week, apply a drop of oil to each of the joints in the scouring band tension release linkage and also to the oil hole (49, page 8) in the edge of the brush selector capstan bearing plate.

MAINTENANCE

THE MACHINE MUST BE ISOLATED FROM THE MAINS POWER SUPPLY BEFORE CARRYING OUT ANY MAINTENANCE OPERATIONS.



Driving Belts

Moulded 'V' belts must not be over-tightened, as this overloads both belts and bearings, leading to early failure. An over-tight belt will also cause excessive noise and vibration. The belt should be just tight enough to drive without slipping.

The Brushing & Polishing Section: The belt is self-adjusting by means of a spring loaded jockey pulley and needs no attention in this respect.

The Trimming Section: If the belt shows signs of slipping, by the cutters slowing down under normal working load, it can be tightened as follows:

Switch off and isolate the machine.

Remove the Top Panel (44) by removing the six round-headed screws (45) at the back and right hand side and the six countersunk screws (45a) at the front. Lift the Panel off.

Slacken the four screws (46) in the Motor Plate (not those in the Motor foot) and move the motor back to tighten the belt. Be sure to keep the motor square, that is, parallel with the Trimmer Shafts. Tighten the four screws securely and replace the Panel.

Replacement belts:

These are ordered under the following Part Numbers:

- Trimmer Belt WBVB 42.5M
- Brush Belt WBVB 69A
- Brush Rotation Belt.... WDFM 3478

Brushing & Polishing Section - tool replacement

Switch off and isolate the machine.

Raise the Front Panel (9).

Remove the screw (47) (see illustration on page 8) and raise the front panel of the Brush Section.

Tools on the left hand side:

Remove the Edge Iron (if fitted) by slackening the two socket-headed screws, accessible through the holes in the second step and withdrawing the Iron from the shaft.

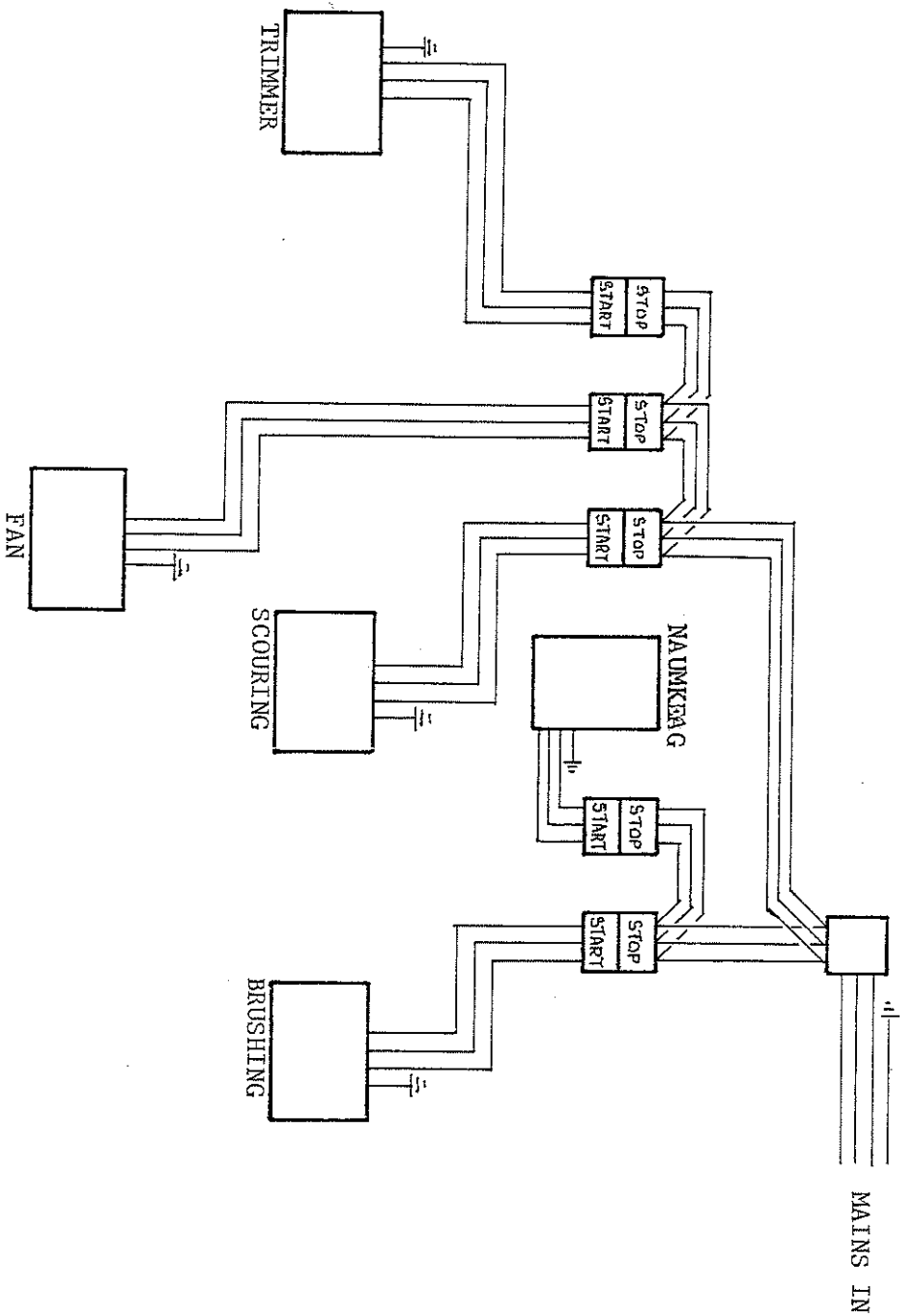
Slacken the screw in the boss of the tool collar and withdraw the tool from the shaft.

The steel collar must be taken from the old tool, where it is held by the three countersunk woodscrews and transferred to the new tool. Clearance holes for the screws must be drilled through the side plate of the tool. This is most easily done by pushing the collar into position in the tool and "spotting through" one of the holes with a 3.5mm ($\frac{1}{8}$ ") drill, just deeply enough to penetrate the side plate. Insert one screw, but do not fully tighten; this will prevent the collar from turning whilst drilling the other two holes. Tighten the three screws evenly and check that the flange is tight up to the tool all round.

The tool is mounted on the shaft with the boss to the left.

Tools on the right hand side:

The procedure is similar to that for the left hand side, except that the tools are mounted on the pulleys instead of on collars. Lift the belt off the pulley, slacken the two screws in the pulley boss and withdraw from the shaft. Transfer the pulley to the new tool and replace. Rotate the tool several times by hand, to ensure that the belt is running properly in the pulley grooves, before closing and securing the front panel.



See separate diagram RS/WD/38
for details of Starters and
Push Buttons

MANUAL

WH&B 700 COMBINATION FINISHING MACHINE
WIRING DIAGRAM (GENERAL)
Drg. No: RS/WD/37

FIRE PRECAUTIONS - FINISHING MACHINES AND SCOURING MACHINES

Where shoe bottom materials are scoured there must always be some small degree of fire hazard from sparks struck from grindery imbedded in heels etc.

WHERE THERE IS A RISK OF SPARKS BEING GENERATED, THE DUST FLAP AT THE RELEVANT DUST EXTRACTION PORT SHOULD BE CLOSED.

This hazard can be minimised by THOROUGH DAILY CLEANING OF THE FILTER SYSTEM, PARTICULARLY IN THE AREA OF THE DUST PORTS AND THE FILTER SLEEVES (if fitted), since it is initially the dust which catches fire, not the machine.

In the event of a fire, the following points are of utmost importance, pending the arrival of the Fire Service:-

- (1) Switch off the fan immediately and isolate the machine from the power supply.
- (2) DO NOT open or remove any panels or guards on the machine.
- (3) Direct a fire extinguisher, preferably of the dry powder type, into the dust ports under the scouring tools.
- (4) Avoid as far as possible inhaling fumes.