Wadkin

30" DOUBLE DISC SANDER, TYPE J.V.A. 36" DOUBLE DISC SANDER, TYPE J.W.A.

PRINCIPAL DIMENSIONS AND CAPACITIES :-

	30" J.V.		36" J.W.	
	English	Metric	English	Metric
Diameter of sanding disc	30"	760 mm	36"	915 mm
Size of work tables	2'10" x 1'5"	860 mm x 430 mm	3'4" x 1'7"	1015 mm x 583 mm
Table cants 45 degrees below and 10 degrees above the horizontal.				
Height of tables from floor level	2'10$\frac{5}{8}$"	880 mm	2'10$\frac{5}{8}$"	880 mm
Horse power of motor	5	5	5	5
Speed of motor in r.p.m. for 50 cycles supply	1,000	1,000	1,000	1,000
Speed of motor in r.p.m. for 60 cycles supply	900	900	900	900
Floor space (machine only)	2'10" x 5'4"	860 mm x 1625 mm	3'4" x 5'8"	1015 mm x 1725 mm
Net weight in cwts (machine only)	18$\frac{3}{4}$ (2,100 lbs.)	952 kilos	20 (2,240 lbs.)	1016 kilos
Shipping dimensions in cubic feet (machine only)	83	2.35 cu. metres	89	2.52 cu. metres

DETAILS INCLUDED WITH THE MACHINE :-

Motor and control gear.
Two sanding discs fitted to machine.
Press with two spare steel discs.
Two universal swivelling fences.
Two dust collecting hoods.
Guards over sanding discs.
Set of spanners.
Lubricating pump and sample tin of lubricant.

INSTALLATION

The machine is despatched from the Works with all bright surfaces greased to prevent rusting. This should be removed by applying a cloth damped in paraffin or turpentine.

FOUNDATIONS.

Foundation bolts are not supplied by Wadkin Ltd. unless specially ordered. Rag bolts $\frac{5}{8}$" (16 mm) diameter should be used to fix the machine to the floor. If the mill floor consists of 4" (100 mm) to 6" (150 mm) solid concrete no special foundation is necessary. Cut 4" (100 mm) to 6" (150 mm) square holes in the concrete. When the machine has been carefully levelled it should be grouted in position with liquid cement.

WIRING.

For complete cabling instructions see wiring diagram D. 191/3A and D. 586 on pages 9 and 10.

DUST EXTRACTION.

The machine has two built in exhaust hoods, one for each disc, with $5\frac{1}{2}$" (140 mm) diameter outlets for piping connections.

LUBRICATION (See Fig. 1)

Every week thoroughly clean down the machine and using Wadkin Machine Oil Grade L. 4. renew the thin film of oil on all bright parts not in constant use to prevent rusting.

A 10 POINTS Give 1 or 2 depressions of the grease gun every month using Wadkin Ball Bearing Grease Grade L. 6.

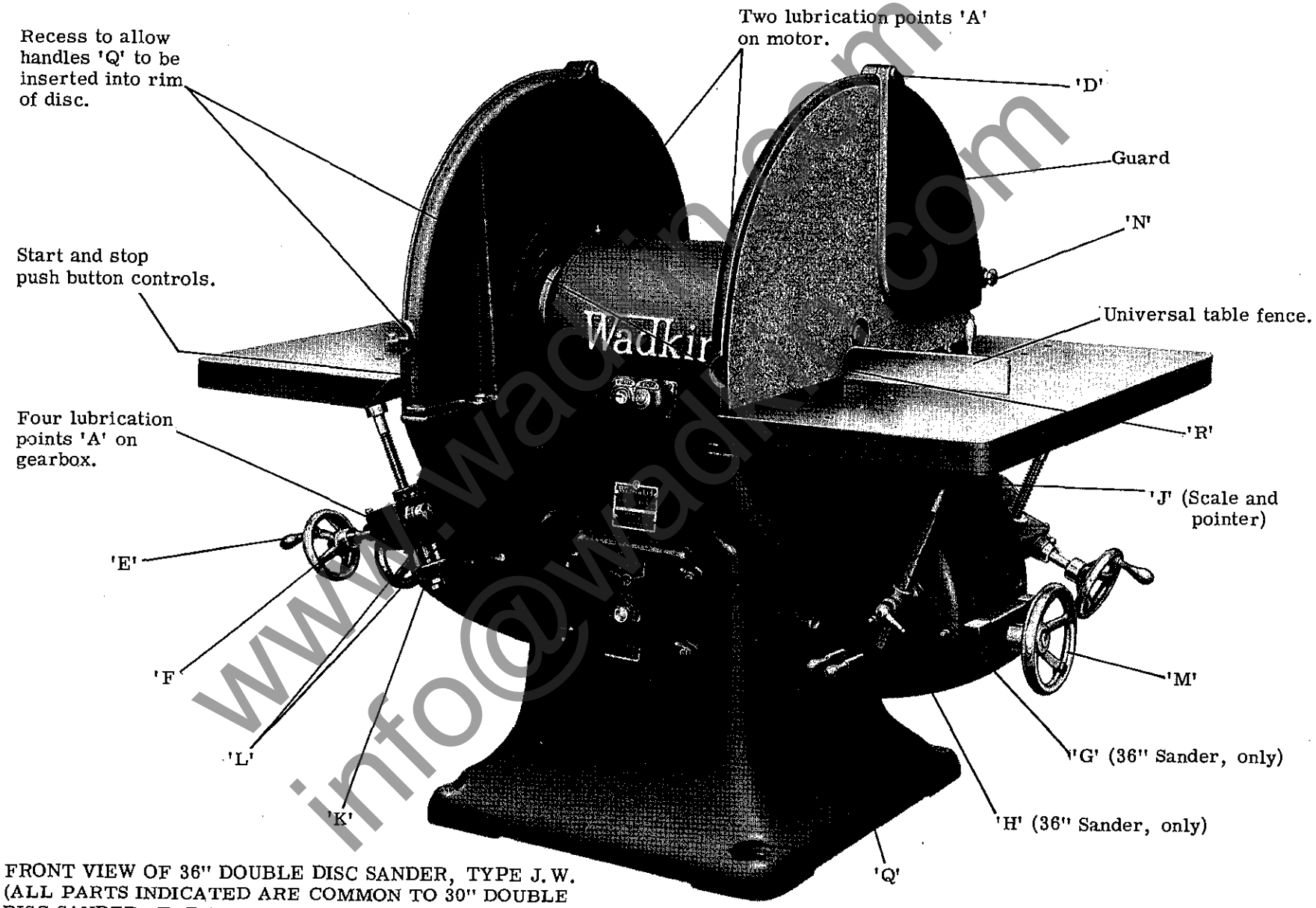
WADKIN RANGE OF OIL AND GREASE LUBRICANTS WITH EQUIVALENTS :-

Wadkin Grade	EQUIVALENT LUBRICANTS		
	Shell Mex and B. P. Ltd.	Vacuum Oil Co. Ltd.	Caltex Lubricants
Machine oil Grade L. 4.	Shell Vitrea Oil 33	"Vactra" Oil (Heavy Medium)	Caltex Aleph Oil.
Ball Bearing Grease Grade L. 6.	Shell Nerita Grease 3	Gargoyle Grease B. R. B. 3.	Regal Starfak No. 2 Grease.

BEARING LIST

Makers' Number	Size			Number Per Machine	Where used on Machine
	Bore	O/D	Width		
Hoff. R. 545	45 mm	120 mm	29 mm	1	Disc spindle
SKF. 1409	45 mm	120 mm	35 mm	1	Disc spindle
Hoff. W. $1\frac{3}{8}$" Single Thrust Bearing.	$1\frac{3}{8}$"	2. 7/32"	23/32"	2	Spiral Gear Shaft

LUBRICATION



FRONT VIEW OF 36" DOUBLE DISC SANDER, TYPE J.W. (ALL PARTS INDICATED ARE COMMON TO 30" DOUBLE DISC SANDER, TYPE J.V. EXCEPT WHERE STATED).

FIG. 1.

SANDING DISC.

The sanding discs are recessed at the back for securing to the driving flange plates which are mounted on taper spindles. They are driven by an electric motor, the shaft of which forms the disc spindles. Guards are provided.

DISC WORK TABLES (See Fig. 1).

The movements of both work tables are the same. In Fig. 1 the controls of one table are indicated. The table will cant 45 degrees below and 10 degrees above the horizontal. The canting motion is controlled by handwheel 'E' and screw operating through spiral gears. This movement is locked by tee locking handle 'F'. In the case of the 36" Double Disc Sander only, a stay 'G' is fitted and this has to be free to move whilst the table is being canted. Locking handle 'H' should be locked to prevent further movement of the stay once the required position has been located. The scale 'J' and pointer registers angles in degrees. Sleeve 'K' is secured onto the end of the elevating screw by two locknuts. This sleeve acts as a stop giving the horizontal position on winding up from below the horizontal. When the table is canted above the horizontal the sleeve has to be turned so that the two stops 'L' will pass through the two holes in the sleeve. A horizontal adjustment to and from the disc is provided by operating handwheel 'M' which is used in conjunction with the canting mechanism and also facilitates removal of the disc.

The disc fence is of the universal swivelling type and can be fitted in any of the holes tapped across the length of the table to suit either right or left handed work. This method is preferred to the use of a slot across the table, which can be dangerous if a piece of work is trapped between the near edge of the slot and the disc. Scales are provided for convenience in setting for angular work.

CHANGING OF DISC (See Fig. 1)

Move the table horizontally away from the disc by rotating handwheel 'M'. The small knurled handwheel 'N' holding the guard in position over the face of the disc should be unscrewed. This leaves the guard free to be swung out of the way on the pivot 'P' securing it to the guard covering the back of the disc. Detach the two handles 'Q' from the body of the machine and screw into the holes tapped in the rim of the disc. The guard over the rim of the disc is cut out in two opposite positions to allow the handles to be inserted into the rim of the disc whilst it is still fitted to the machine. Take out the four screws 'R' by unscrewing them from the back of the disc. Using the two handles lift the disc off the driving flange plate and clear of the machine.

Follow the reverse procedure when replacing the disc after a new abrasive has been attached.

NOTE: Care must be taken to remove the handles from the rim of the disc before putting the machine to use.

CHANGING OF ABRASIVE.

To remove a worn abrasive from the sanding disc immerse it in a bath of hot water and leave for ten to fifteen minutes, when the paper will peel off. While the disc is in the bath, scrape and clean off all the old solution. Remove it from the bath and leave it to dry.

When attaching a new abrasive the disc should be laid flat on a bench. Coat the surface with a thin layer of Wadkin Adhesive Cement Grade C. 5. If it is extremely cold the cement should be warmed before use. Spread to an even thickness with a roller or squeegee and leave until tacky. Afterwards put on the sheet of abrasive paper. The disc cementing press as illustrated in Fig. 2 which is supplied compl ete with two sanding discs is now used. Place the newly prepared disc in the press and by the aid of one of the other spare discs clamp and leave for 12 hours or until required whichever is the longer.

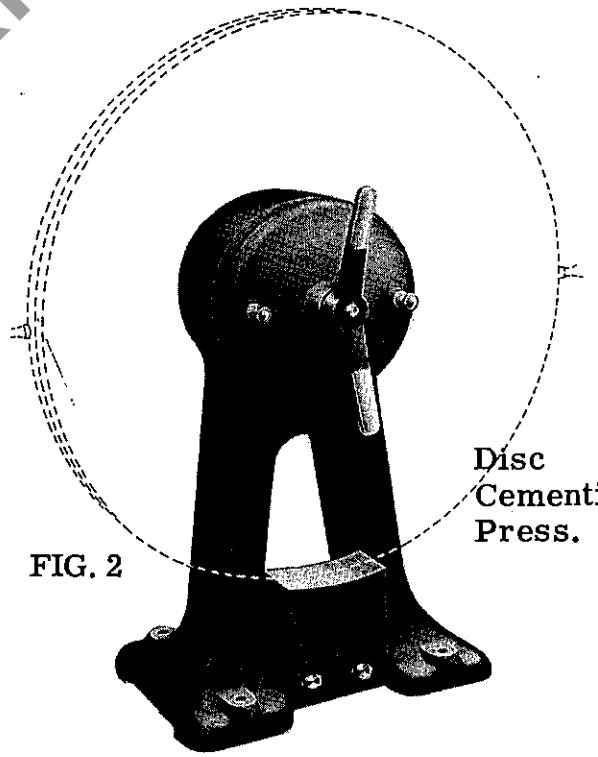


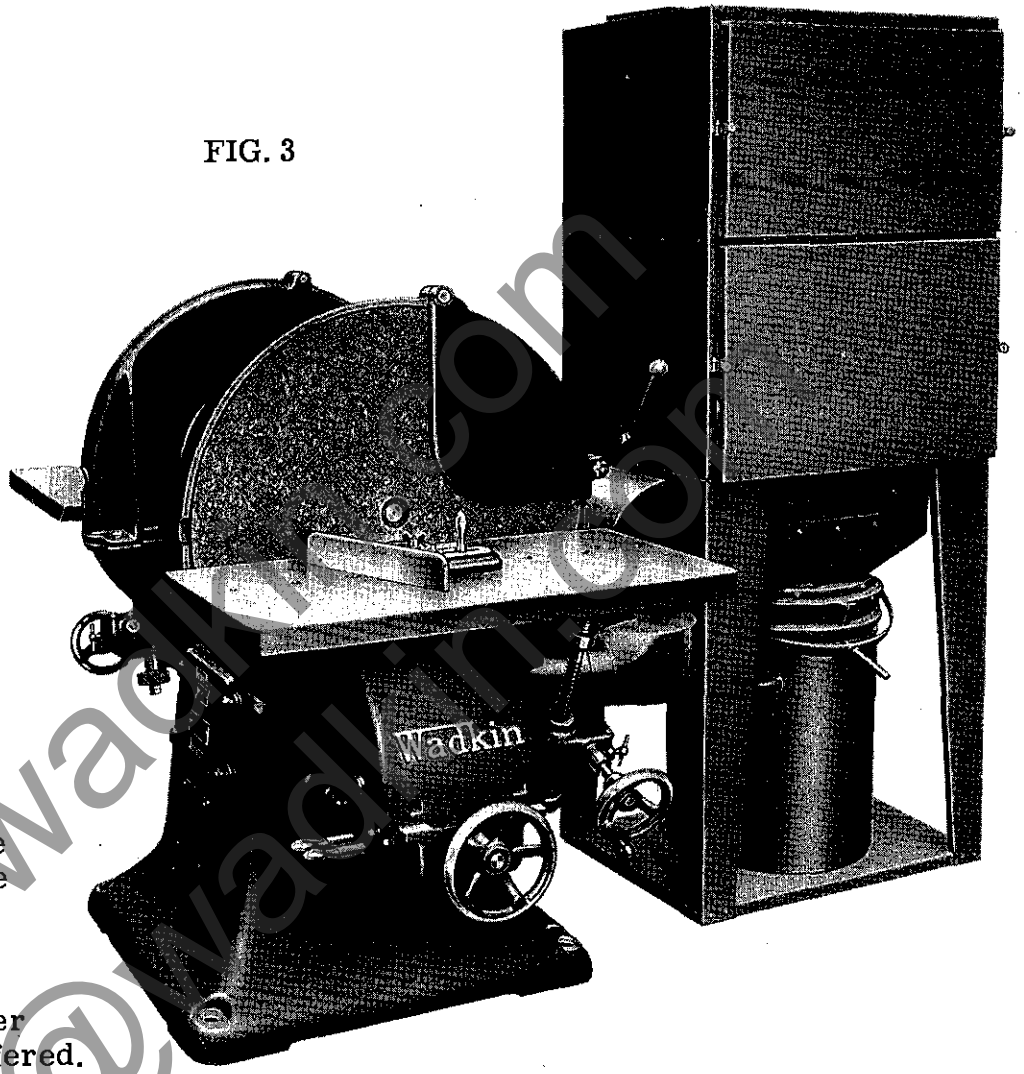
FIG. 2 Disc Cementing Press.

DUST COLLECTION.

As already mentioned hoods are provided below the tables for collecting the dust with outlets arranged to connect to an exhaust system. If a main dust extracting system is available the machine hoods may be connected direct to the main suction piping.

Alternatively a compact self-contained dust collector can be supplied as illustrated in Fig. 3. This unit very efficiently handles the fine dust and is recommended where one machine only is installed. It embodies a dust storage bin of four cubic feet capacity made quickly detachable for emptying purposes. The dust laden air is filtered through a series of flame-proofed fabric sleeves, while a motorised shaking mechanism for periodic shaking prevents accummulation of excessive dust. Full details for operating and maintenance of the unit are given on an Instruction Sheet inside the top lid of the unit.

FIG. 3



If the work consists of radio and television cabinets it is advisable to inform us in order that the correct type of dust collector is offered. Where a number of sanding machines are installed a separate system of dust collection quite distinct from the main suction plant is recommended. Advice on this will be given on request.

ABRASIVES.

Garnet Paper Discs of varying grits and grades can be supplied to suit the class of work and the desired finish on woodwork. Discs of either 30" or 36" diameter with a $2\frac{1}{4}$" diameter centre hole are available. Where it is desired to use the machine for metal working, suitable discs can be supplied in the following grades:- Aluminous oxide, Standard emery cloth, Silicon carbide and Corundum.

ELECTRICAL INSTALLATION INSTRUCTIONS.

The cabling between the motor and the control gear has been carried out by Wadkin Ltd., and it is only necessary to bring the line leads to the machine for it to be put into service. This should be done as follows :

1. Fit triple pole isolating switch near the machine unless it has been supplied to special order by Wadkin Ltd. when it will be fitted and connected to the machine.
2. Connect the line lead to the appropriate terminals. See diagram of connections. The cables should be taken to the machine in conduit and secured to the control gear by locknuts.
3. Connect solidly to earth.
4. Close isolating switch and press start button. If motor does not rotate in the right direction, interchange any two incoming line leads.

FAILURE TO START.

1. Electric supply is not available at the machine.
2. Fuses have blown or have not been fitted.
3. Isolating switch has not been closed.
4. Lock-off or stop button has not been released.

STOPPAGE DURING OPERATION AND FAILURE TO RESTART.

1. Fuses have blown.
2. Overloads have tripped. They will reset automatically after a short time and the motor can be restarted in the usual manner.

ADJUSTMENTS.

For a finer overload setting, set the load indicator to a lower value and vice-versa for a less fine setting.

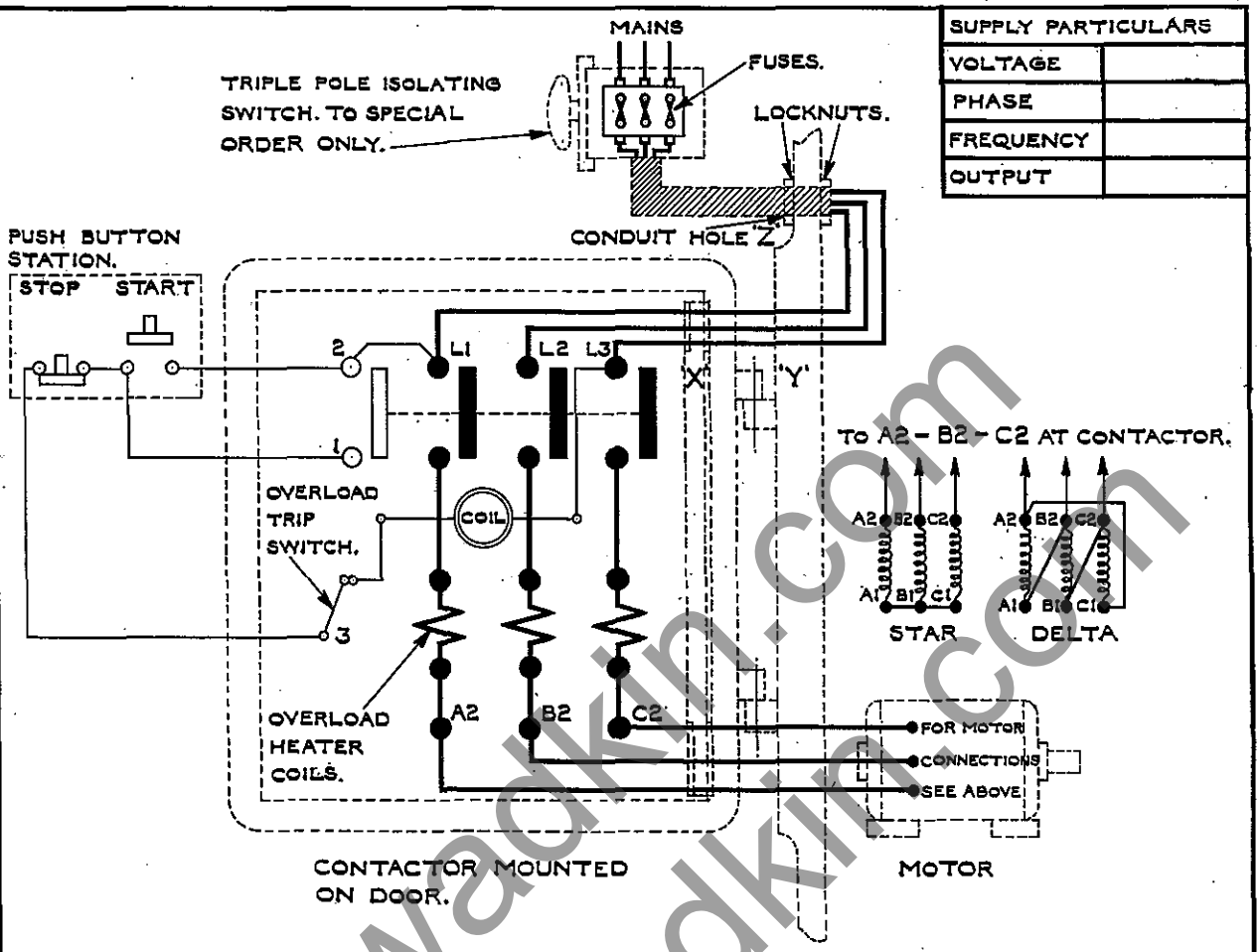
GENERAL.

Check the earth connection from time to time. Users are recommended to display in an appropriate position in the maintenance department a Wadkin Electrical Maintenance Instruction Card, No. 356, which is issued gratis on application.

RETAIN THIS DIAGRAM FOR FUTURE REFERENCE.

FOR PARTICULARS OF WADKIN PORTABLE ELECTRIC BLOWER FOR CLEANING M/C. & ELECTRICAL GEAR SEE LEAFLET No. 687.

SUPPLY PARTICULARS	
VOLTAGE	
PHASE	
FREQUENCY	
OUTPUT	



INSTALLATION INSTRUCTIONS.

FIT TRIPLE POLE ISOLATING SWITCH NEAR MACHINE UNLESS SUPPLIED BY WADKIN LTD. TO SPECIAL ORDER, SO THAT THE ELECTRICAL GEAR MAY READILY BE ISOLATED FOR INSPECTION PURPOSES. BRING LINE CABLES TO ISOLATING SWITCH AND TO L1 - L2 - L3 AT CONTACTOR THROUGH CONDUIT WHICH SHOULD BE SCREWED INTO THE MACHINE AND SECURED BY MEANS OF LOCKNUTS. A HOLE IS PROVIDED IN THE MACHINE FRAME AT 'Z' FOR THE CONDUIT CARRYING THE LINES TO THE CONTACTOR.

OPERATING INSTRUCTIONS.

TO START MOTOR, CLOSE ISOLATING SWITCH AND PRESS START BUTTON. TO STOP MOTOR PRESS STOP BUTTON. TO LOCK OFF MACHINE PRESS AND TURN STOP BUTTON. THIS MUST BE RELEASED BEFORE A START CAN BE MADE.

NOTE :-

CABLING SHOWN THUS ▨ TO BE CARRIED OUT BY CUSTOMER UNLESS ISOLATING SWITCH HAS BEEN FITTED BY WADKIN LTD.

IMPORTANT.

SECURE LINE CABLES AT 'X' BY MEANS OF THE CLEAT PROVIDED. LEAVE SUFFICIENT SLACK IN LINES AT 'Y' TO ALLOW THE DOOR TO OPEN FREELY.

WHEN DUAL VOLTAGE MOTORS ARE EMPLOYED THE FOLLOWING CONNECTIONS SHOULD BE MADE 200/250 VOLT CIRCUITS CONNECT MOTOR IN 'DELTA', 340/440 VOLT CIRCUITS CONNECT MOTOR IN 'STAR', THE CONNECTIONS BEING MADE EITHER WITHIN THE CONTROL GEAR CAVITY OR AT THE MOTOR TERMINAL BLOCK.

ENSURE THAT THE MACHINE IS ADEQUATELY 'EARTHED' AND THAT THE DIRECTION OF ROTATION IS CORRECT BEFORE PUTTING INTO SERVICE. TO REVERSE ROTATION INTERCHANGE L1 & L2.

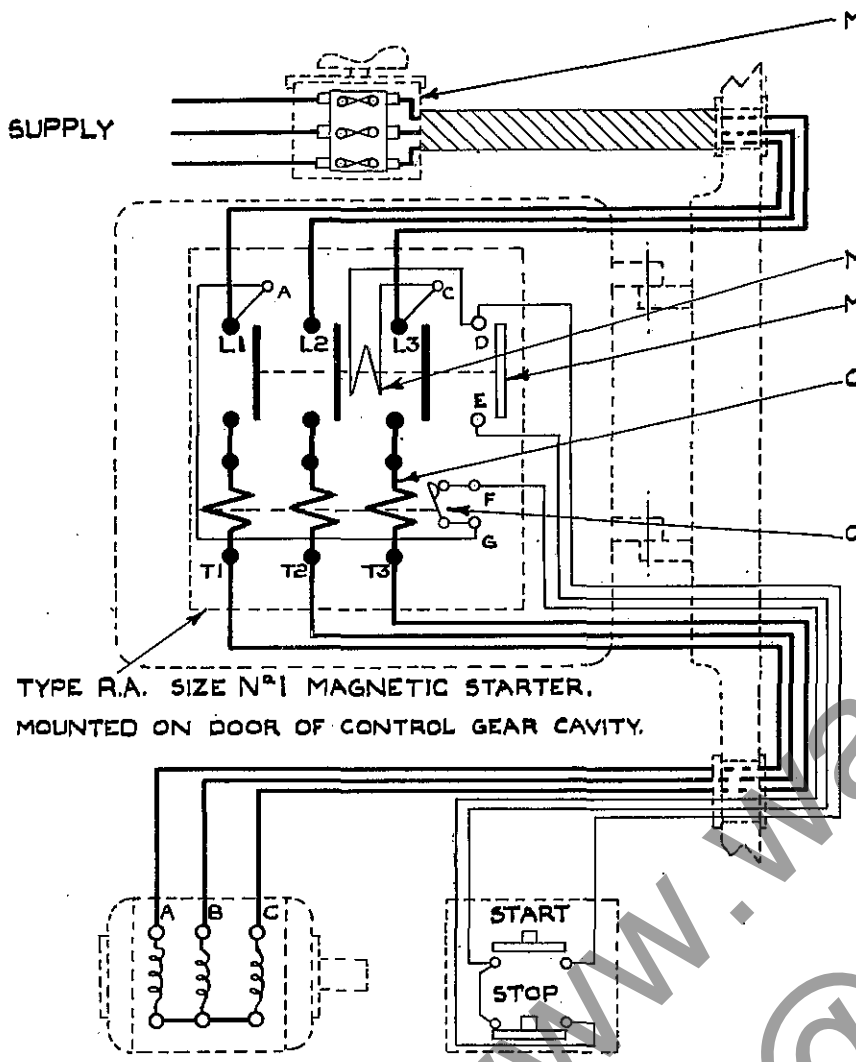
OVERLOAD.

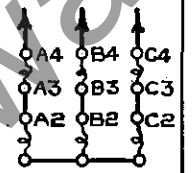
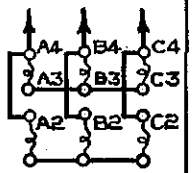
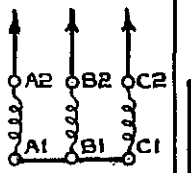
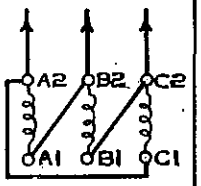
SHOULD THE MOTOR STOP DUE TO OVERLOAD, WAIT FOR A SHORT TIME TO ALLOW THE HEATER COILS TO COOL AND THEN START IN THE USUAL MANNER.

EARTH MACHINE.

WADKIN LTD.
LEICESTER.

DIAGRAM OF CONNECTIONS. D.191/3A.



DUAL VOLTAGE MOTOR CONNECTIONS.			
WHEN DUAL VOLTAGE MOTORS ARE SUPPLIED WITH 9 LEADS THE CONNECTIONS SHOWN BELOW ARE NECESSARY. SERIES/STAR - 440 VOLTS. PARALLEL/STAR - 220 VOLTS.		WHEN DUAL VOLTAGE MOTORS ARE SUPPLIED WITH 6 LEADS THE CONNECTIONS SHOWN BELOW ARE NECESSARY. STAR - 340/440 VOLTS. DELTA - 200/250 VOLTS.	
TO T1-T2-T3 AT STARTER.	TO T1-T2-T3 AT STARTER.	TO T1-T2-T3 AT STARTER.	TO T1-T2-T3 AT STARTER.
			
SERIES/STAR	PARALLEL/STAR	STAR	DELTA
9 LEAD MOTORS.		6 LEAD MOTORS.	

INSTALLATION INSTRUCTIONS.

FIT MAIN DISCONNECT SWITCH NEAR MACHINE SO THAT THE ELECTRICAL GEAR MAY READILY BE ISOLATED FOR INSPECTION PURPOSES. BRING SUPPLY CABLES TO DISCONNECT SWITCH AND TO L1-L2-L3 AT MAGNETIC STARTER THROUGH CONDUIT WHICH SHOULD BE SCREWED INTO THE MACHINE FRAME AND SECURED BY MEANS OF LOCKNUTS. ENSURE THAT THE DIRECTION OF ROTATION OF THE MOTOR IS CORRECT BEFORE PUTTING THE MACHINE INTO SERVICE. TO REVERSE ROTATION INTERCHANGE L1 AND L3 AT MAGNETIC STARTER.

OPERATING INSTRUCTIONS.

TO START MACHINE: CLOSE MAIN DISCONNECT SWITCH AND PRESS 'START' BUTTON. TO STOP MACHINE: PRESS 'STOP' BUTTON. TO LOCK OFF MACHINE: PRESS AND TURN 'STOP' BUTTON, THIS MUST BE RELEASED BEFORE A START CAN BE MADE.

OVERLOAD.

SHOULD THE MACHINE STOP DUE TO OVERLOAD, THE OVERLOAD TRIP SWITCH SHOULD BE RESET BY DEPRESSING THE PLUNGER ON THE OVERLOAD ASSEMBLY, THEN START IN THE USUAL MANNER.

. . . blow away harmful dust, chips and dirt with a Wadkin Electric Blower

No motor can run at its maximum efficiency with its ventilating duct or control gear covered with dust and dirt. Sooner or later the resultant overheating will cause serious trouble.

Similarly, accumulations of chips and dust, in the mechanical parts of the machine can interfere with its efficiency. A few minutes a week for blowing down all Woodworking Machinery will be amply repaid in better and easier running, in increased life, and freedom from breakdown.

Blowers can be supplied for single phase A.C. or Direct Current for any voltage up to 250.

Please state voltage when ordering.