Wadkin

6" BELT SANDER, TYPE G. Z.

PRINCIPAL DIMENSIONS AND CAPACITIES.

	English	Metric
Height from floor to sand belt	3'4"	1016 mm
Maximum depth between sand belt and table ...	1'11"	584 mm
Size of table	8'0" x 3'6"	2438 mm x 1067 mm
Length and width of sand belt	24'6" x 6"	7467 mm x 152 mm
Maximum length of material sanded between columns	7'6"	2286 mm
Maximum width of material sanded between columns	3'6"	1067 mm
Maximum width of material sanded above 8'0" (2438 mm) long ...	2'3" (4'6" (1372 mm) if material is turned round)	686 mm
Horse power of motor...	5	5
Speed of motor in r.p.m. on 50 cycle supply ...	1,500	1,500
Speed of motor in r.p.m. on 60 cycle supply ...	1,800	1,800
Surface speed of sand belt in feet per minute ...	3,500	1066.8 metres
Overall height of machine	6'8"	2032 mm
Floor space with maximum movement without dust unit	11'3½" x 7'2¾"	3442 mm x 2203 mm
Net weight in cwts. without dust unit	26½ (2968 lbs.)	1393 kilos
Shipping dimensions in cubic feet	180	5.09 cu. metres
Net weight in cwts. of dust unit	4½ (504 lbs.)	229 kilos
Shipping dimensions of dust unit in cubic feet ...	94	2.66 cu. metres

DETAILS INCLUDED WITH THE MACHINE

Motor and control gear.
Travelling pressure pad.
Hand block.
Set of spanners.
Lubricating pump and tin of lubricant.

Wadkin Ltd., Green Lane Works, Leicester. Telephone: Leicester 0116 2769111

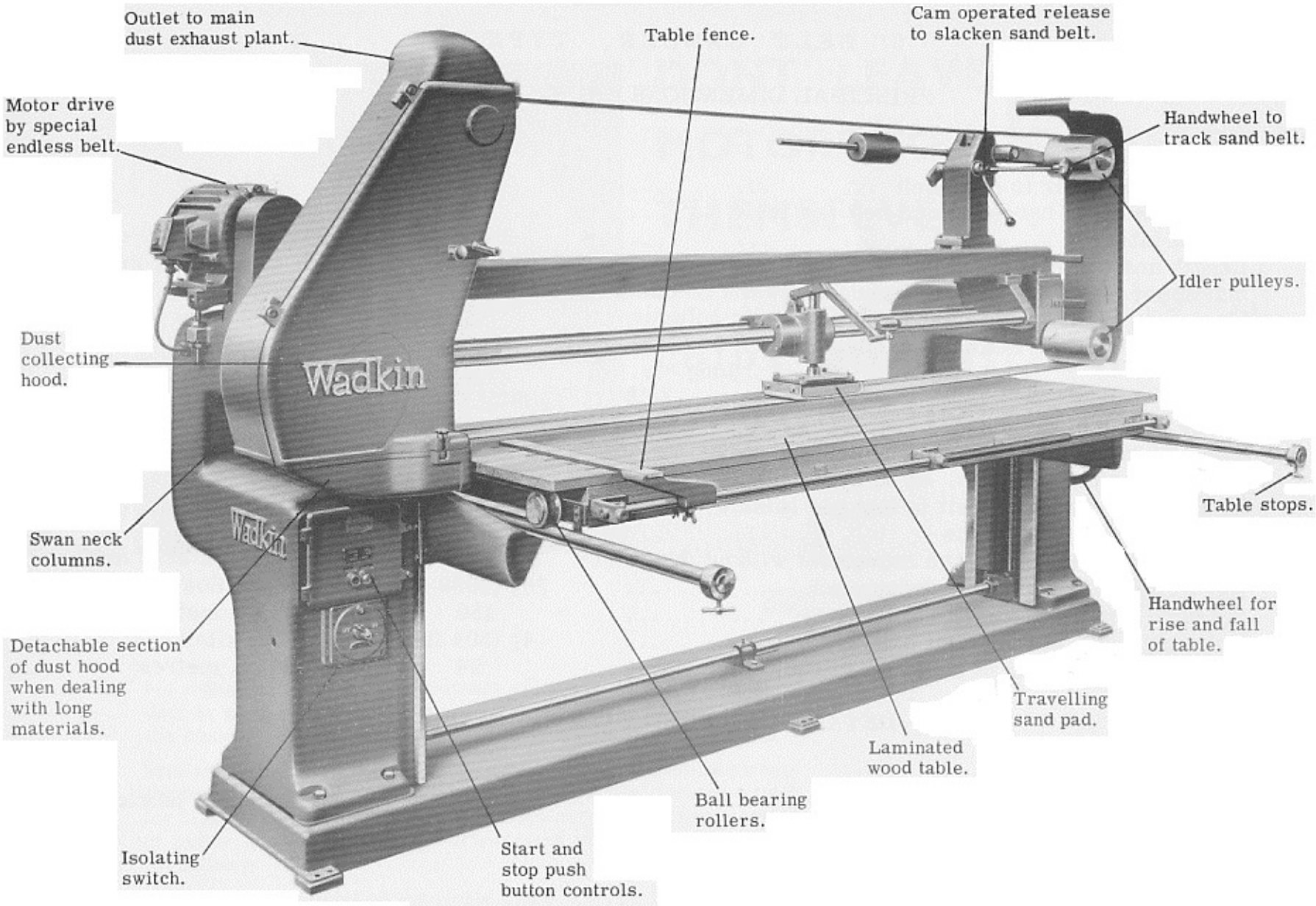


FIG. 1. GENERAL VIEW OF 6" BELT SANDER, TYPE G. Z.

INSTALLATION

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

FOUNDATIONS. (See Fig. 2).

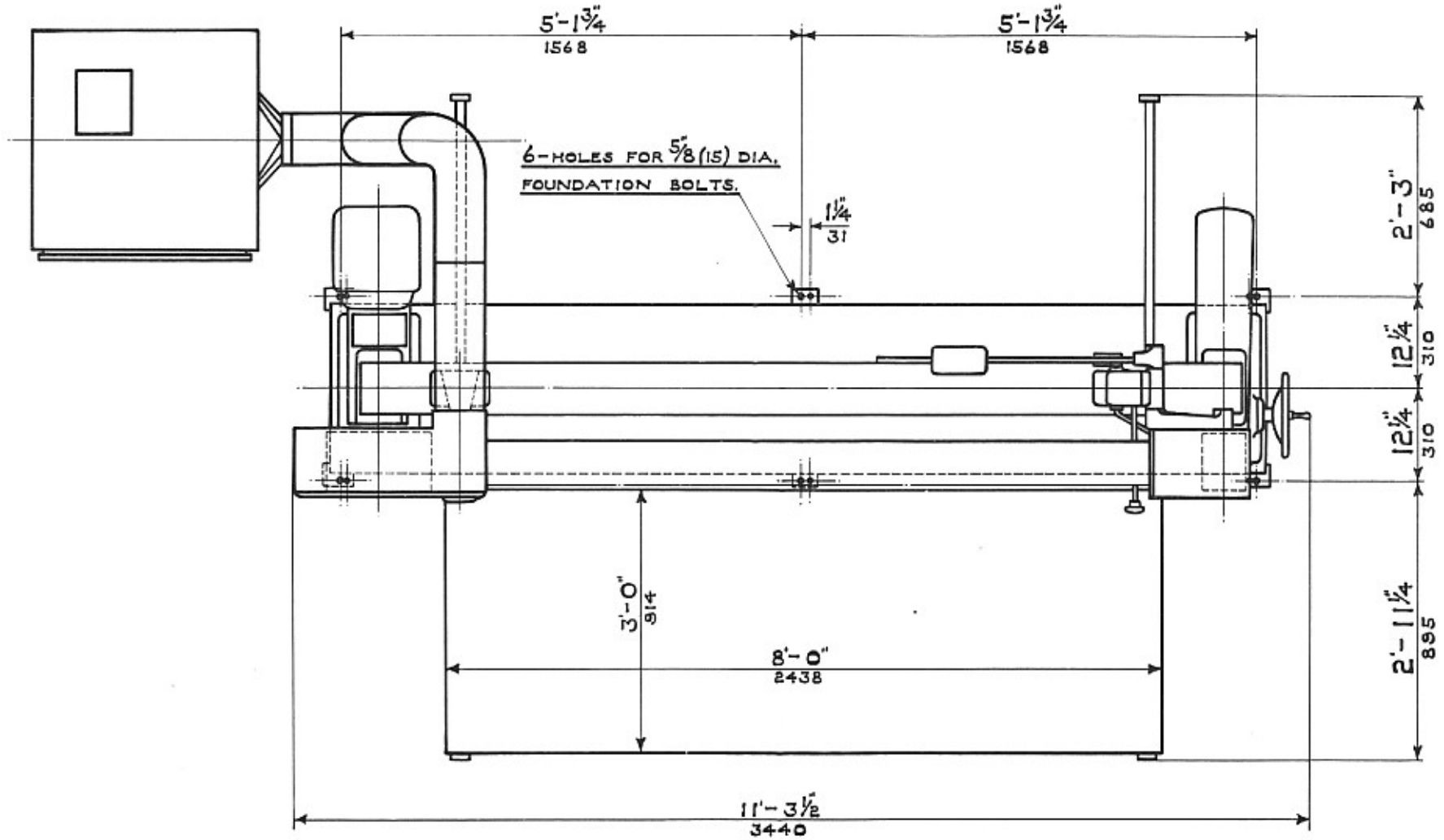
Bolts $\frac{5}{8}$" (16 mm) diameter should be used to fix the machine to the floor, but these are not supplied by Wadkin Ltd. unless specially ordered.
If mill floor consists of concrete no special foundation is necessary and rag bolts or plates and bolts should be used. Cut 4" (100 mm) square holes in the concrete and run with cement to fix. The machine should be carefully levelled by means of jack screws before fixing and checked after final fixing to ensure that no distortion has taken place.

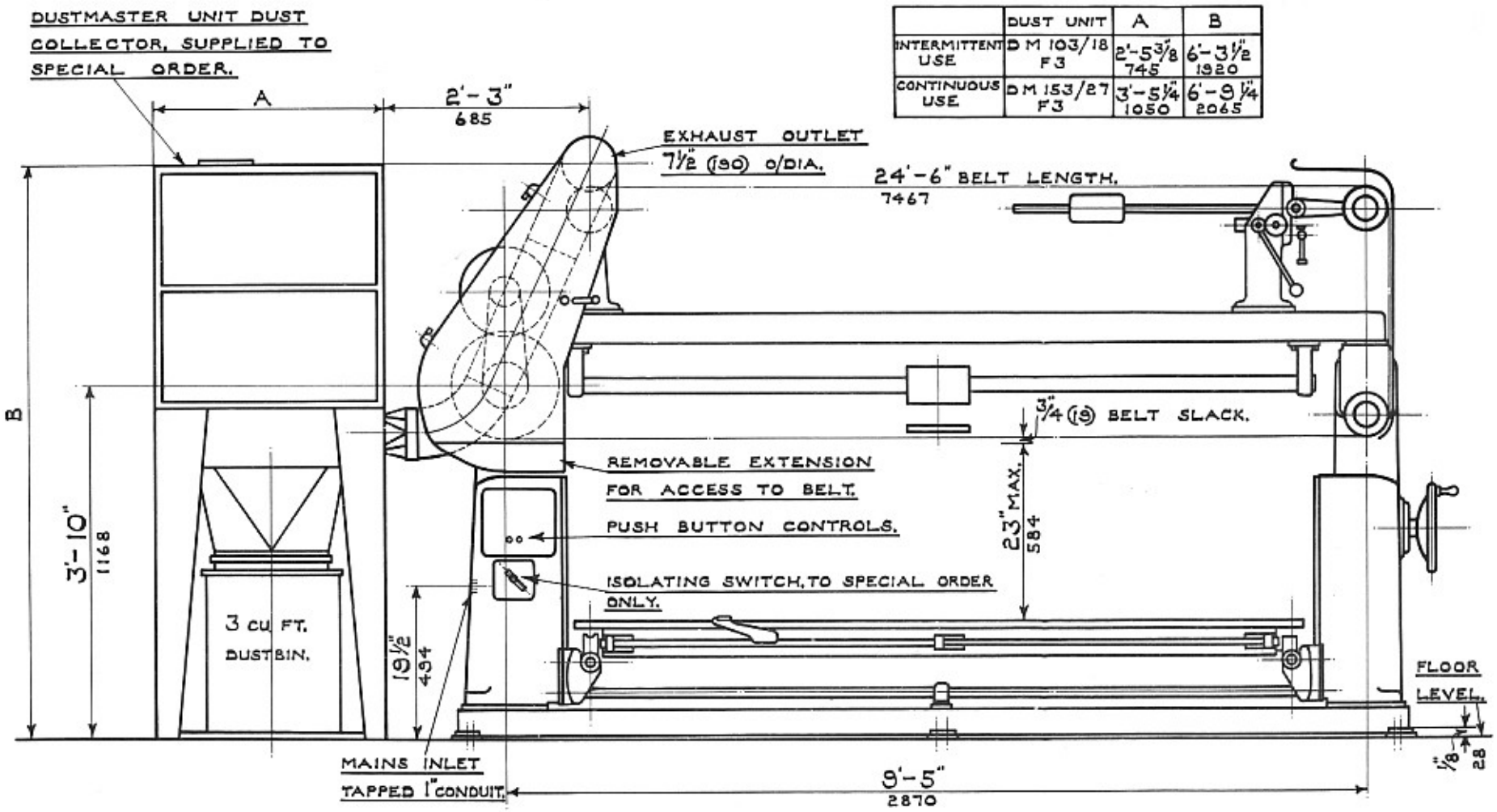
ASSEMBLY.

The following assembly instructions should be followed when the machine has been dismantled for transit purposes. First the bedplate is checked to ensure that it is level. The raising screws should next be placed in position and the gear box lids bolted in position. After this the columns are bolted in position. To lower the table saddles into position place the nut of the saddle over the top of the raising screw. By turning the screw the saddle is lowered in position. When the two saddles are approximately level the table runways should be bolted to the saddles and the table placed in position. Next the cross beam should be bolted in position and to it bolt the assembly of brackets and support rods carrying the floating pad. To level the table one portion of the cross shaft should be turned in the necessary direction to raise or lower the table to the same distance from the support rods (carrying the floating pad) at both ends. When this has been done the coupling and cross shaft should be pegged together. The position of the other parts can easily be seen from Fig. 1.

6" BELT SANDER. TYPE GZ.

DIMENSIONS IN FEET, INCHES & MILLIMETRES.





	DUST UNIT	A	B
INTERMITTENT USE	D M 103/18 F3	2'-5 3/8" 745	6'-3½" 1920
CONTINUOUS USE	D M 153/27 F3	3'-5¼" 1050	6'-9¼" 2065

WIRING.

For complete cabling instructions see wiring diagrams D. 191/3A and D. 586 on pages 12 and 13.

DUST EXTRACTION.

The main sanding drum is enclosed in a hopper, the bottom portion of which forms a collector nozzle. When sanding long work a portion of this nozzle is detached as shown in Fig. 4. The dust is exhausted at the top of the hood immediately behind the top idler pulley. This ensures that the dust embedded in the belt is extracted as the grit on the belt "opens" in passing round the pulley. Where a dust collecting plant is already installed the main suction piping is connected to the main. When a system is not available the compact self-contained dust collecting unit shown in Fig. 3 can be supplied to special order. The dust is collected in a detachable dust storage bin of three cubic feet capacity. An exhaust fan is housed inside the unit which is driven by $1\frac{1}{2}$ h. p. totally enclosed motor. To filter the dust laden air a series of flame proof fabric sleeves are fitted. The handle provided should be used once a day to operate the filter sleeve shaker to prevent accumulation of excessive dust in the flame proof fabric sleeves.

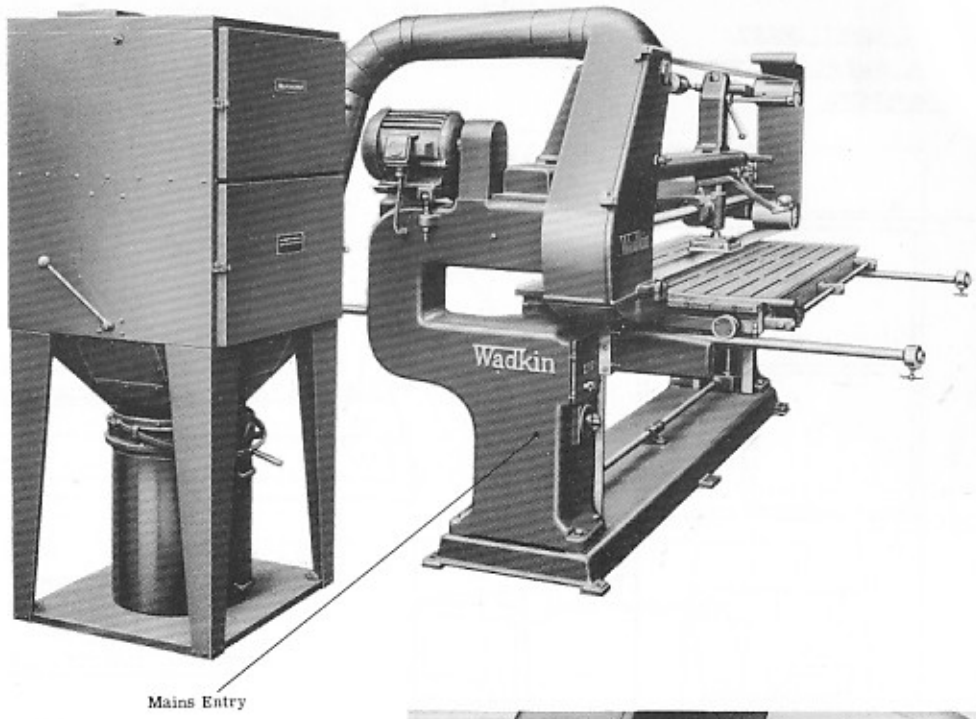


FIG. 3

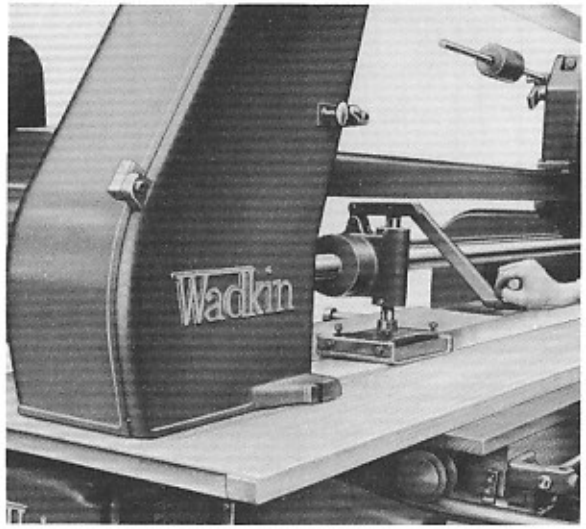


FIG. 4

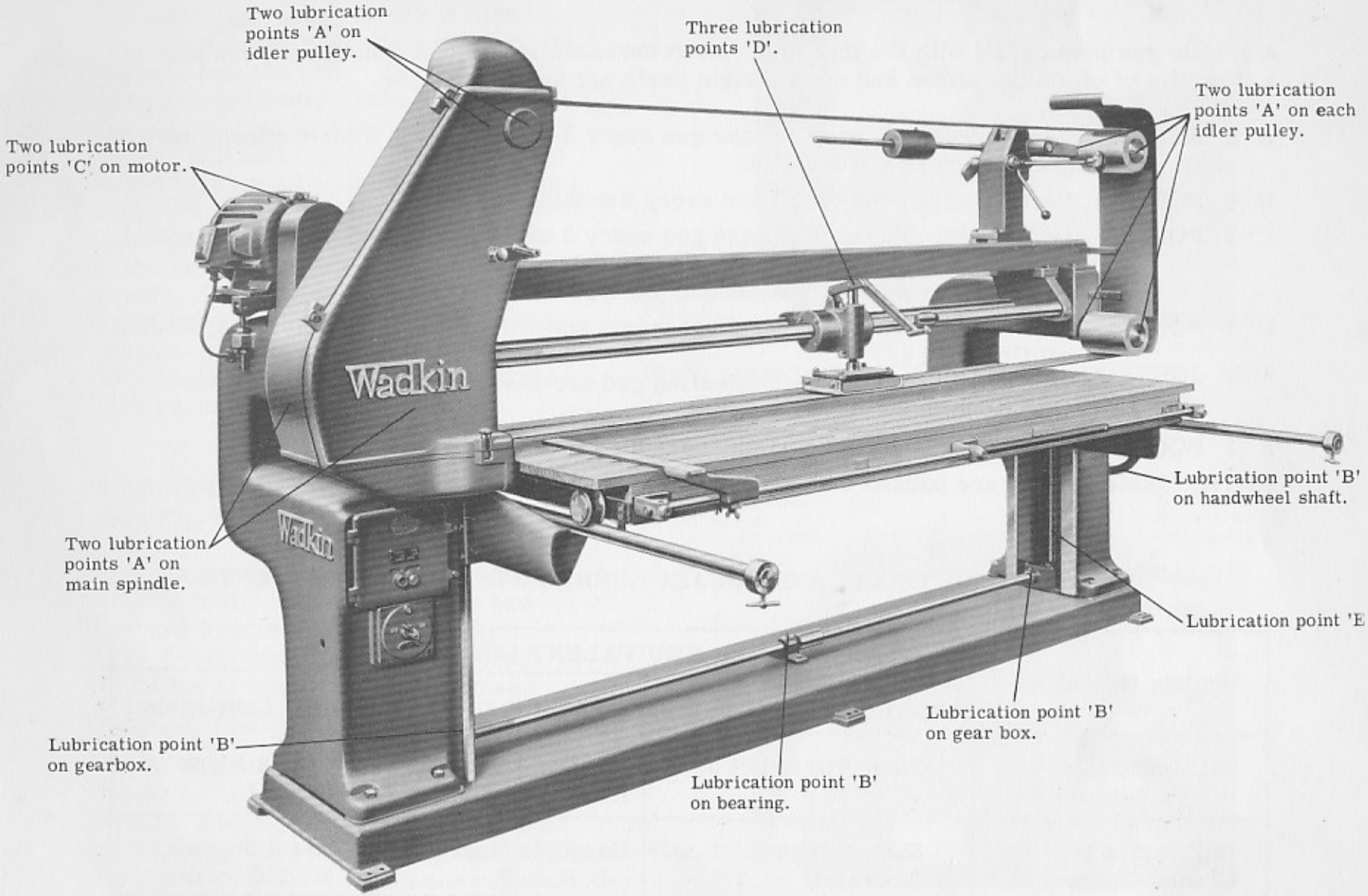


FIG. 5. GENERAL VIEW OF 6" BELT SANDER, TYPE G. Z.

LUBRICATION. (See Figs. 5, 6 and 8)

A grease gun is supplied with the machine. Keep the machine in good condition by maintaining a thin film of oil on the slides and on all bright parts not in constant use.

A 8 POINTS Give 3 depressions of grease gun every 3 months using Wadkin special ball bearing grease Grade L. 6.

B 6 POINTS Give 1 depression of oil gun every 2 months.

C 2 POINTS Give 3 depressions of grease gun every 3 months or give 5 complete turns of grease cups every 3 months using Wadkin grease Grade L. 6.
Form of lubrication is dependent on type of motor.

D 3 POINTS Travelling pad. Oil lever pivot points and vertical shaft weekly using Wadkin oil Grade L. 4.
NOTE: Other bearings in floating pad are sealed for life and require no lubrication.

E 1 POINT Grease chain inside column every 6 months.

NOTE: Table rollers are packed with grease on assembly and need no lubrication.

WADKIN RANGE OF OIL AND GREASE LUBRICANTS WITH EQUIVALENTS.

Wadkin Grade	EQUIVALENT LUBRICANTS		
	Shell Mex and B. P. Ltd.	Mobil Oil Co. Ltd.	Caltex Lubricants
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.

TENSIONING AND TRACKING OF BELT.
(See Fig. 6)

The belt tension mechanism acts on the top right hand pulley which is also connected to the swivelling mechanism for tracking the belt. To replace belt open exhaust door. Take tension off the belt by raising handle 'F'. Remove the old belt and replace with prepared belt 6" (152 mm) wide 24'6" (7315 mm) long, gently lower handle 'F' and close exhaust hood door. Run machine and if the belt is running off centre unlock handle 'G' and screw handle 'H' in required direction to bring belt central. When belt is running central lock handle 'G'. Balance weight 'J' is adjustable to give various tensions on the belt.

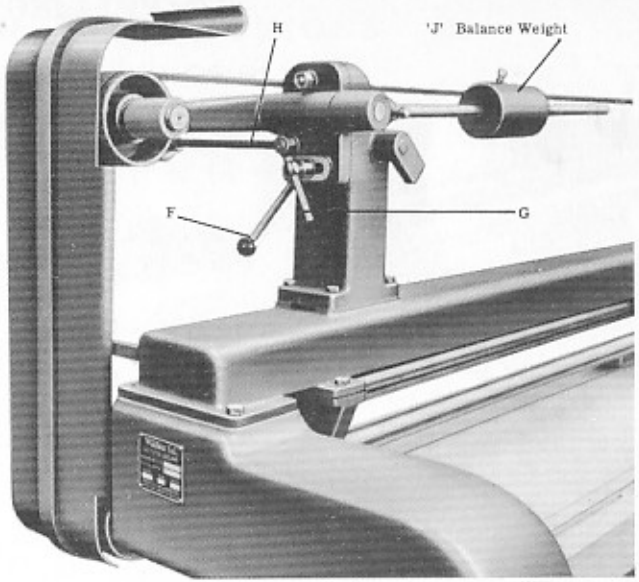


FIG. 6.

VIEW SHOWING BELT TRACKING CONTROL AND CAM OPERATED TENSION RELEASE.

MAIN SPINDLE DRIVE.
(See Fig. 7)

The main spindle drive is by endless driving belt. The driving belts are marked with two lines spaced $5\frac{7}{8}$" (149.2 mm) apart before tensioning. After the correct tension is applied the dimension is increased to 5. 15/16" (150.8 mm). Should the tensioning fail due to belt slip further use of the motor adjusting screw should be applied. NOTE: Clean inside of exhaust hood and driving pulley to prevent accumulation of dust and out of balance running of driving pulley.

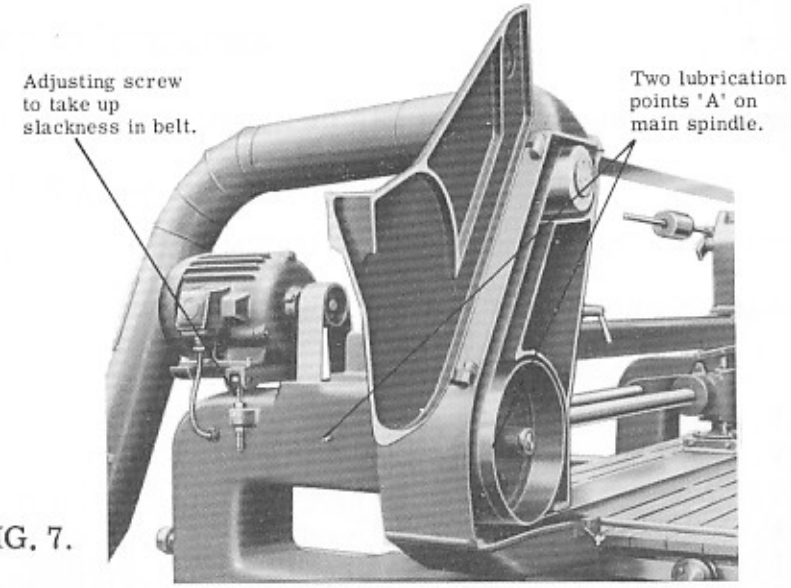
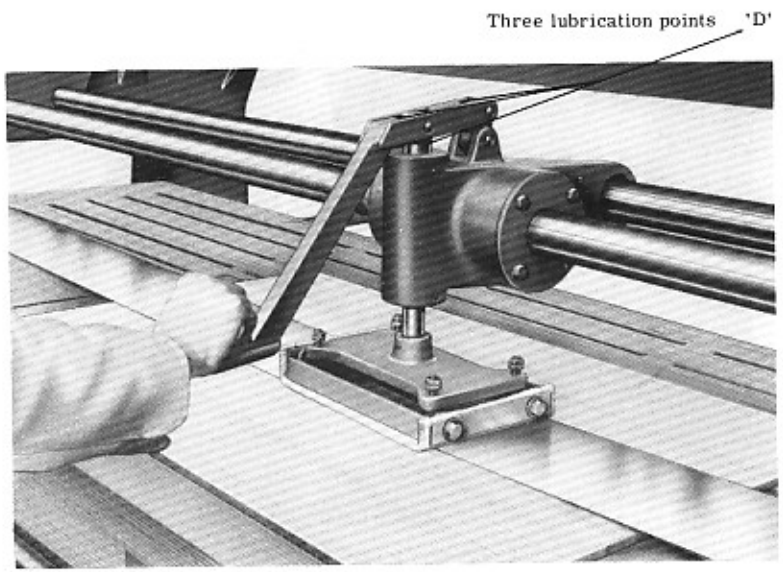


FIG. 7.

VIEW SHOWING EXHAUST DOOR OPEN AND BELT GUARD REMOVED.

TRAVELLING PRESSURE PAD



VIEW SHOWING TRAVELLING PRESSURE PAD.
FIG. 8.

The pressure pad is so designed that on movement to and from the belt the face of the pad remains always in line with the belt and in the same plane as the surface being sanded. The pad is controlled by built-in spring and the felt covering pad shoe is also spring controlled. Movement of the pad along the work is obtained by mounting it on two steel circular runways as shown in Fig. 8. The movement is on four sealed for life dust proof ball bearings enclosed in the housing carrying the pad.

NOTE: Daily clean the dust from the travelling pad mechanism especially inside the pivot casting (from underneath) to ensure easy sliding on the runways. Use an air jet if available.

A hand pad may be used to apply pressure to the belt when it is not practicable to use the travelling pad.

ABRASIVE BELTS.

Garnet paper sanding belts can be supplied to instructions.

BALL BEARING LIST

Makers Number	Size			Number per Machine	Where used on Machine
	Bore	Outside Diameter	Width		
SKF. 1308	40 mm	90 mm	23 mm	2	Driving spindle.
SKF. 1206	30 mm	62 mm	16 mm	6	Idler pulleys.
SKF. RLS5	$\frac{5}{8}$"	1. 9/16"	7/16"	8	Table rollers.
SKF. O. 8 Thrust	1"	$1\frac{3}{4}$"	$\frac{5}{8}$"	2	Raising screw.
SKF. 6200/2Z	10 mm	30 mm	9 mm	8	Travelling Pressure Pad.
Hoffmann 135	35 mm	72 mm	17 mm	1	Non Drive End of E. E. C. B. 225 Motor.
Hoffmann 135	35 mm	72 mm	17 mm	1	Drive End of E. E. C. B. 225 Motor.

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 this has been supplied to special order by Wadkin Ltd., when it will be fitted and connected up at the machine.

(2) Connect the line lead to the appropriate terminals, see diagram. The cables should be taken to the machine in conduit and secured to the control gear by means of locknuts.

(3) Connect solidly to earth.

(4) Close isolating switch and press start button. If machine 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 machine can be restarted in the usual manner.

ADJUSTMENT

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

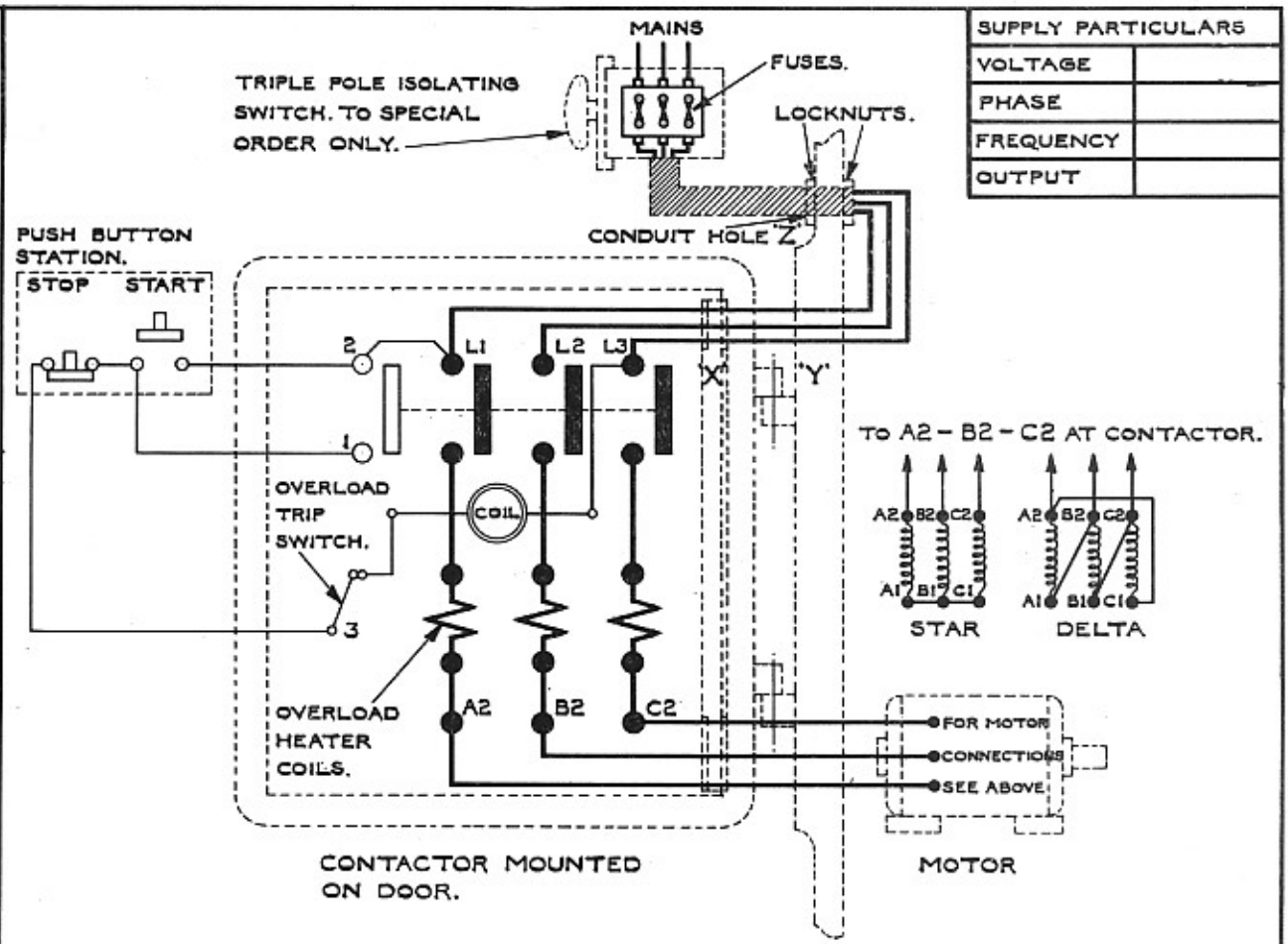
GENERAL

Check the earth connection from time to time. Users are recommended to display in an appropriate position in the maintenance department 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.

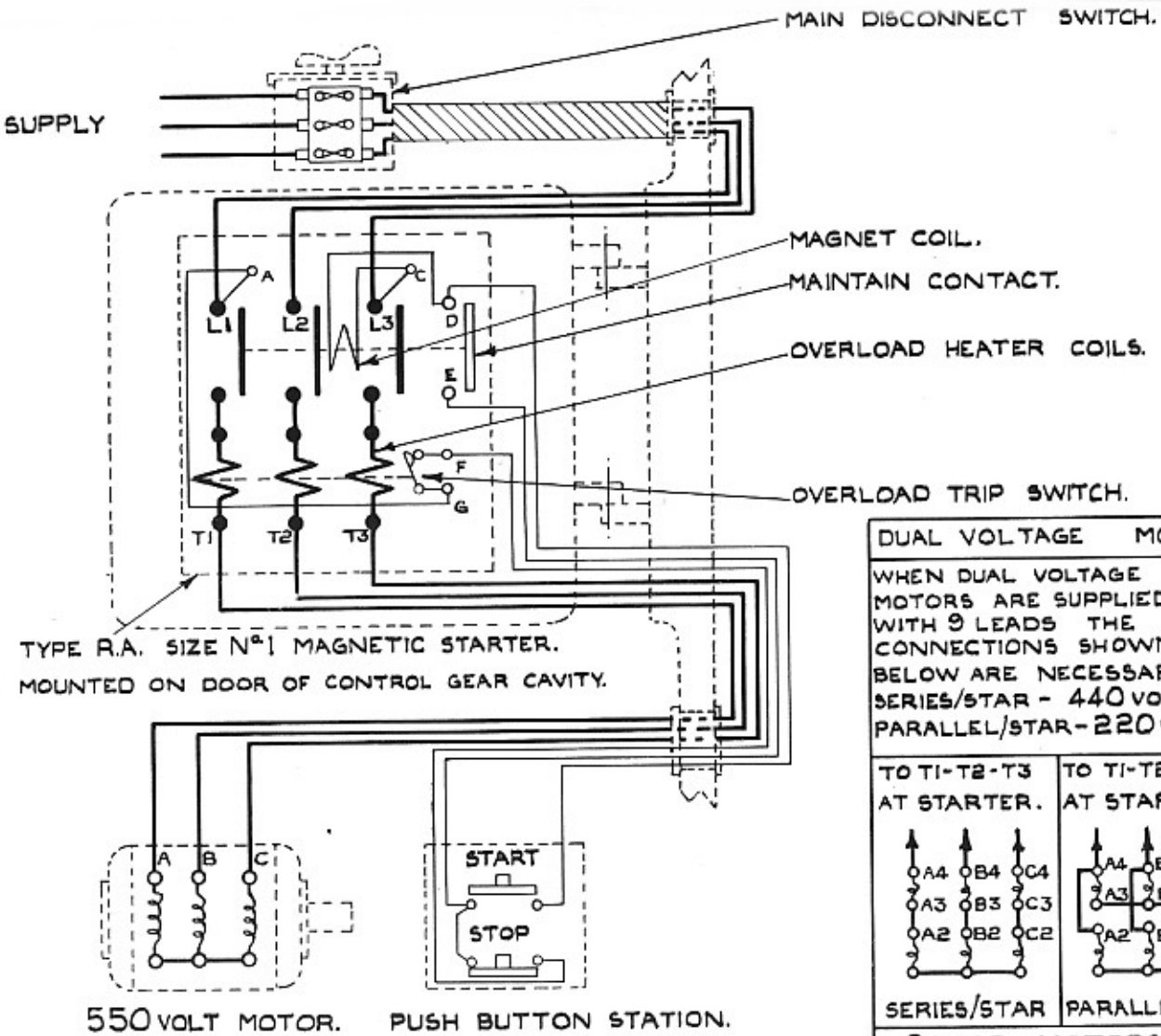
OVERLOAD.

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.
A4 B4 C4 A3 B3 C3 A2 B2 C2	A4 B4 C4 A3 B3 C3 A2 B2 C2	A2 B2 C2 A1 B1 C1	A2 B2 C2 A1 B1 C1
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.