

VICEROY

MACHINE TOOLS

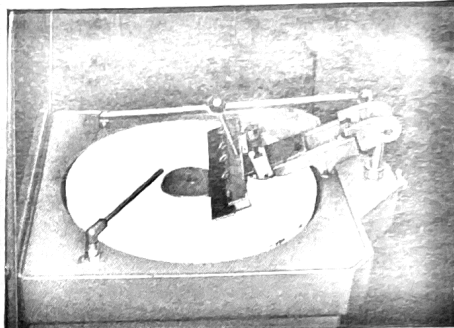
**INSTALLATION
OPERATION AND
MAINTENANCE
INSTRUCTIONS**

TDS 12/16
TDS 12/10

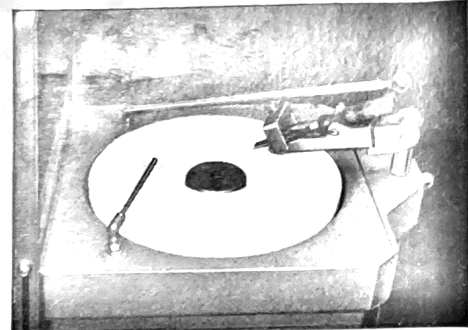
SHARPEGE MACHINES

FOR SHARPENING CARPENTERS EDGE TOOLS

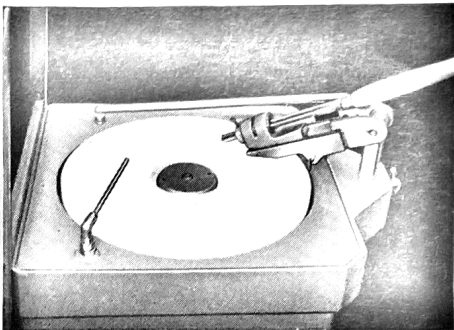
VICEROY



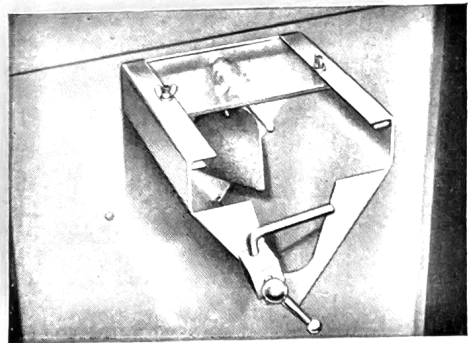
1. Machine Knife Sharpening attachment (254 mm.-10" capacity) in position. (Extra)



2. Master Arm with Chisel in position. (Standard)



3. External Radius Gauge attachment in position. (Extra)



4. Conical wheel for internal Radius Gauge Grinding. (Extra)

A CLOSE UP OF THE 'VICEROY' SHARPEGE MACHINE

THE SPINDLE is Steel running in 'Oilite' sintered sealed bearings, driven through a totally enclosed worm reduction unit by 'Vee' belt through induction motor.

THE MASTER ARM is a precision machined unit fitted accurately into the table casting and can be pre-set to reproduce angles from 10°—30°. It is also designed to take fixtures for other edge tools, i.e. Gouges, Machine Knives etc. etc.

THE STONES are manufactured aloxite giving long and consistent life, supported top and bottom with accurately machined flanges which ensure rigidity when in use and have been specially developed for 'Viceroy' Sharpege Machines.

THE PUMP UNIT is a cam operated diaphragm pump, driven from the motor spindle and is pre-set at works to give correct flow of special honing oil on to and through the stone and into the tank for continuous circulation whilst machine is running.

THE INTEGRAL CABINET OR BASE is of welded steel heavy duty construction which houses a C.I. motor platform, pump unit, honing oil tank and complete with door and safety electric micro-switch which isolates electrics when the door is opened.

VICEROY HONING OIL has been specially developed to give maximum stone life, cooling and cleansing properties and also contains anti-bacteria additives.

SPECIFICATION

	TDS 12/16	TDS 12/10 Bench Model
Overall Dimensions	560 x 560 x 864 mm	380 x 560 x 305 mm
Wheel Size	20" x 20" x 34"	15" x 20" x 12"
Wheel Grade Standard.....	406 x 32 x 32 mm	254 x 32 x 32 mm
Wheel R.P.M.	16" x 1 1/2" x 1 1/2"	10" x 1 1/2" x 1 1/2"
Motor R.P.M.	A80	A80
Motor H.P.	110	140
Spindle Diameter	1425	1425
Reduction Gear250 1/2	.250 1/2
Reduction Ratio	32 mm	32 mm
Main Bearings	1 1/2"	1 1/2"
Cabinet (Fabricated)	28 mm	28 mm
Machine Table	1 1/2"	1 1/2"
Plane Iron Capacity	10-1	10-1
Chisel	Oilite	Oilite
Master Arm Adjustment	3 mm 12 swg	Base (Fabricated)
Honing Oil Tank Capacity...	Aluminium	3 mm 12 swg
Honing Oil Feed Pump Unit	76 mm	Aluminium
Nett Weight	3"	76 mm
Gross Weight	32 mm	3"
	1 1/2"	32 mm
	25°	1 1/2"
	25°	25°
	5 litres 1 gall.	2.5 litres 1/2 gall.
	Mechanical	Mechanical
	90.72 kg 200 lbs.	36.29 kg 80 lbs.
	127 kg 280 lbs.	61.24 kg 135 lbs.

STANDARD EQUIPMENT

TDS 12/16	TDS 12/10 Bench Model
Universal Master Arm, Grinding Wheel, Honing Oil, Pump & Fittings, Wheel Wrench, No-Volt Overload P.B. Starter, 3 PH. Motor and instruction manual.	Universal Master Arm, Grinding Wheel, Honing Oil, Oil Tanks, Wheel Wrench, No-Volt Overload P.B. Starter, 3 PH. Motor, instruction manual.

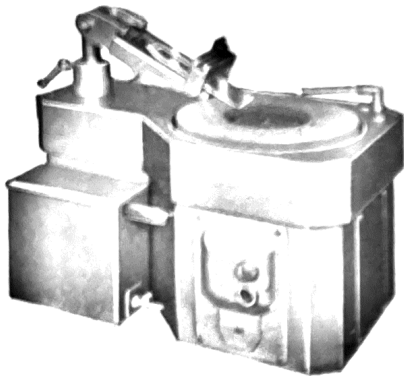
WE RESERVE THE RIGHT TO ALTER DESIGN AND SPECIFICATION WITHOUT NOTICE

CAL/775/1M/HM

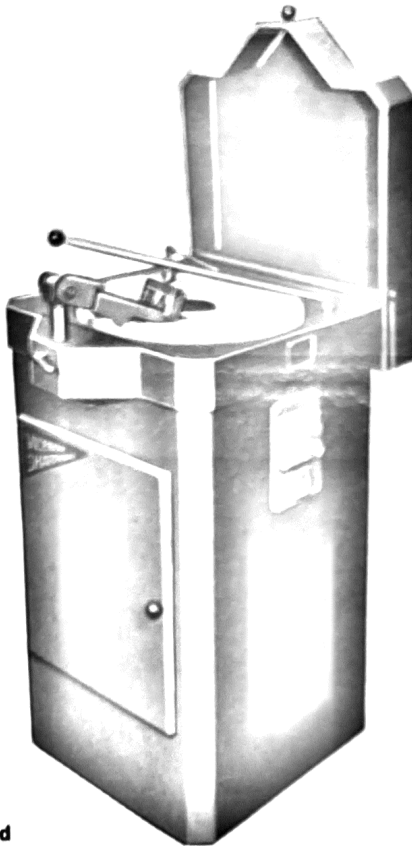
SHARPEGE MACHINES

FOR SHARPENING CARPENTERS EDGE TOOLS

TDS 12/16
TDS 12/10



TDS 12/10 BENCH MODEL



TDS 12/16 PEDESTAL MODEL

NOTE:— The Metal Wheel Cover fitted on TDS 12/16 is extra equipment.

VICEROY

The 'Viceroy' Carpenters Edge Tool Sharpening Machines are the result of many years study to meet the exacting requirements of both industrial and educational users of edge tools. This revolutionary method with its compact and clean operation using a manufactured stone in conjunction with a reciprocal master arm and special honing oil ensures the elimination of any inconsistency in the reproduction of accuracy, stone life, and the drawing of temper of edge tools. The 'Viceroy' Sharpedge Machines can be operated with the minimum of skill with little effort but great accuracy and saving of time.

DENFORD MACHINE TOOLS LTD

BRIGHOUSE HD6 1NB., U.K.

Telephone: 04847-2264/5/6. Telegrams: Denmacto Brighthouse



DISTRIBUTORS

INTRODUCTION.

The 'Viceroyn' Sharpedge Machine is the result of many years of study and development to improve the method of sharpening edge tools and has met with the approval of users of edge tools whether for Technical Training Workshops or Industrial Arts. Prior to the Sharpedge being introduced, three alternative methods were available, i.e. High speed - or - Sandstone Grinding Machines, or the time consuming rubbing an oilstone. The high speed grinding machine was not suitable or safe, whether in the hands of skilled or unskilled operators due to the excessive speed of the wheels and the danger of drawing the temper of the edge tools. The sandstone grinding machine was slow and due to the inconsistency of the stones meant many hours of skill and patience to obtain the results desired. The main advantages of the 'Viceroyn' Sharpedge Machine over and above other methods are :-

- a. Guaranteed precision and reproduction accuracy.
- b. Saves time, operated with ease by skilled or unskilled users.
- c. Sharpens efficiently without drawing the temper or burning the edge tool.
- d. Constant flow of special honing oil from built in pump unit ensure maximum tool life with minimum of wheel wear.
- e. Safe totally enclosed IV/OL release electrics, with safety micro-switch fitted to cabinet door.
- f. Special 'Aloxite' manufactured longlife grinding wheel.

The operating action is merely one of placing your edge tools on the master arm against the locating pins setting the angle of the cutting edge desired, then moving the master arm by means of the lever using very light hand pressure, from the centre of the right hand side to the outside of the wheel using the inside of the wheel more than the outside.

OPERATING INSTRUCTIONS FOR PLANE IRON AND CHISELS.

IMPORTANT The TDS 107 Anti Bacteria Honing Oil is as important as correct setting to ensure the machine gives maximum performance and satisfaction. It is essential the oil must flow the full width of the wheel for at least 45 mins. before using, this is the time required to obtain saturation of the wheel which is indicated by a permanent film of oil on the wheel from then on the correct flow of oil should be maintained.

1. Place the plane iron or the chisel on the master arm (A) ensuring that the side of the plane iron or chisel is set squarely against the left-hand locating pins, or shoulder for the chisels.
2. Set the plane iron or chisel approximately $1\frac{1}{2}$ " beyond the end of the master arm (a) clamp the plane iron in position by means of the clamping screw (b).
3. Set the desired angle by referring to dial (c) ensuring pointer refers to the plane iron or chisel position. To obtain the angle required the master arm (a) column can be moved up or down.
4. When satisfied that the angle required is correct in relation to dial (c) be sure the clamping screw (b) used for retaining the plane iron is tight.
5. Start the machine, making sure before contacting the wheel with the plane iron or chisel that the honing oil (TDS 107) is flowing sufficiently to cover the entire wheel area. Under no circumstances should one attempt to sharpen the plane irons or chisels without the oil flowing, and fully covering the wheel.

6. Locate slot in operational lever (f) on to the spigot of the tightening screw (b) then move the operational lever (f) from side to side, against rotation of the wheel (which must run clockwise) using light hand pressure.
7. If not satisfied with the squareness of the plane iron or chisel cutting edge this can be corrected by adjusting the two allen grub screws (g) locating in master arm bracket (h). To adjust the screws, release one and tighten the other alternatively until the squareness desired is achieved, Ensure both grub screws are tightly locked after adjustment. If above instructions have been carried out you should now be in a position to proceed with sharpening.

STANDARD AND OPTIONAL EXTRA EQUIPMENT.

GRINDING WHEEL (standard equipment) This is a manufactured 'Aloxite' wheel designed to give long life with very little dressing, if used correctly. If, however, the occasion should arise that the wheel requires dressing, a dressing stick is available.

MASTER ARM. (standard equipment) This arm is fitted with a graduated angle index plate using one side for the plane irons, then reversing for chisels. Correct side can be checked by referring to the angle index plate which is marked - plane irons or chisels referred to by the indicator pointer.

PUMP AND FITTINGS (standard equipment) The pump is an A.C. Delco diaphragm type which is pre-set at works to give the correct flow of honing oil onto the wheel. It is important to have the correct flow of oil. Under no circumstances should any attempt be made to sharpen edge tools without adequate flow of honing oil on to the wheel.

Honing Oil (Std. equipment) This oil has been especially developed to give the maximum wheel life, cleanliness, cutting efficiency and is anti-bacterial. We, the manufacturers and Patentees (Pat. No. 19956/58) of the machine and application do not take any responsibility for the performance of the machine should any other type of oil be used.

HONING OIL CONTAINER (standard equipment) This is fitted inside the main cabinet with a capacity of approx. 2 gallons. It should be filled with the use of a funnel until the oil is approx. 1½" from the top.

EXTERNAL GOUGE ATTACHMENT (extra equipment) This attachment is fixed to the plane iron face of the master arm, located for the position against the squareness pins then locked in position by means of an allen cap screw. The operating action is then obtained by inserting the gouge inside the swivel bush, locking in position, adjusting the height of the master arm column to give the angle required and then swivelling evenly and smoothly in one position on the grinding wheel until the required cutting angle is obtained.
DO NOT USE EXCESSIVE PRESSURE

INTERNAL RADIUS GOUGE ATTACHMENT (extra equipment) fitted at works. This attachment consists of a tapered conical wheel mounted on an extension spindle through the reduction gearbox to the outside of the cabinet and revolves at motor speed. This unit is supplied and fitted complete with oil flow control tap, oil returns through pipe to main tank.

MACHINE KNIFE ATTACHMENT EXTRA EQUIPMENT This attachment is located for position against the locating pins of the plane iron side of the master arm, then locked in position by means of an allen cap screw after inserting the blade (or knife) in the attachment move across the wheel using light hand pressure.

WHEEL DRESSING STICK (extra equipment) This is a carborundum stone for cleaning the wheel from time to time. The correct use is by hand traversing across the wheel using the end corners - not flat faces - it is important that the oil is running when dressing the wheel.

METAL WHEEL COVERS FOR TDS 12/16 AND TDS 12/10 EXTRA EQUIPMENT.

The TDS 12/16 wheel cover should be fitted at works although can be supplied for insitu fitting - it is hinged to the side of the wheel casting and is easy to move for either the open or shut position . The TDS 12/10 cover rests on the wheel casting not hinged. For details of other extra equipment see leaflet and information sheet attached.

MAINTENANCE

The spindle runs in 'oilite' sintered bronze bearings - no oil greasing required.

The motor bearings require only occasional oiling through oil caps each end of the spindle. A 'blow out' occasionally through the ventilators will remove any dust which may have entered.

Clean the Honing Oil Container out from time to time (depending on the use of the machine) Drain the tank by removing the screwed cap, drain the oil in to another container. Clean out with paraffin or similar, replace cap, pipes etc., making sure all are tight.

To remove the wheel occasionally for cleansing the swarf underneath, remember the retaining flange in the wheel recess is a left hand thread.

All accessories, bright parts and bearings surfaces should be cleaned and greased weekly.

SERIAL NUMBER AND SPARE PARTS.

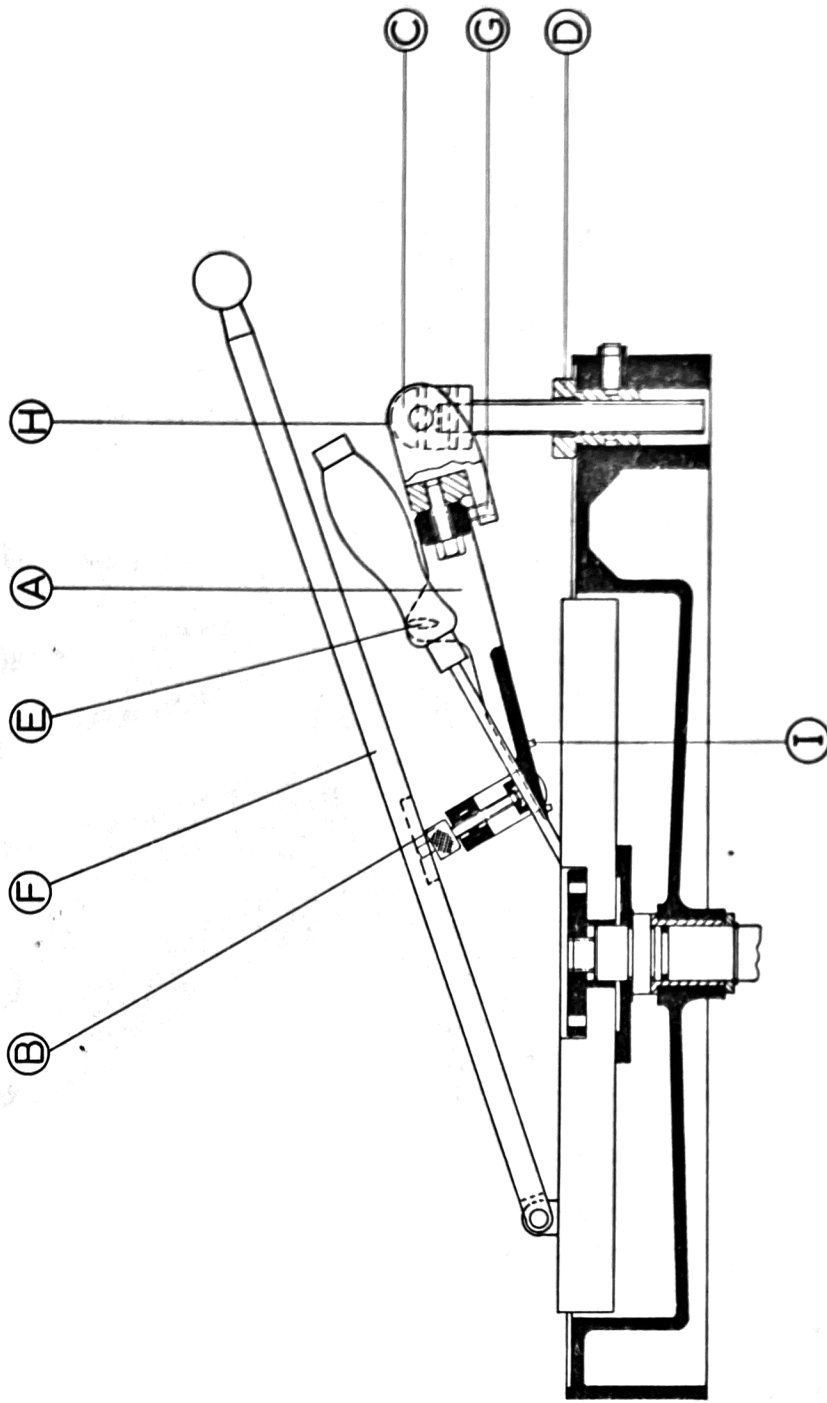
A complete range of spare parts for your 'Viceroy' Sharpedge Machine are available and by quoting machine serial No. when ordering or in correspondence means we shall be able to satisfy your requirements without delay.

In conclusion our main concern is your satisfaction with the performance and services of 'Viceroy' products.

DENFORD MACHINE TOOLS LTD.,
Victoria Works,
Birds Royd,
BRIGHOUSE,
Yorkshire.

Te.: Brighouse 2264-6

Telegrams: DENMACTO BRIGHOUSE



(A) (B) (C) (D) (E) (F) (G) (H) (I)

MASTER ARM.

CLAMPING SCREW.

DIAL.

COLUMN ADJUSTING NUT.

RETAINING SCREWS. (CHISELS ONLY)

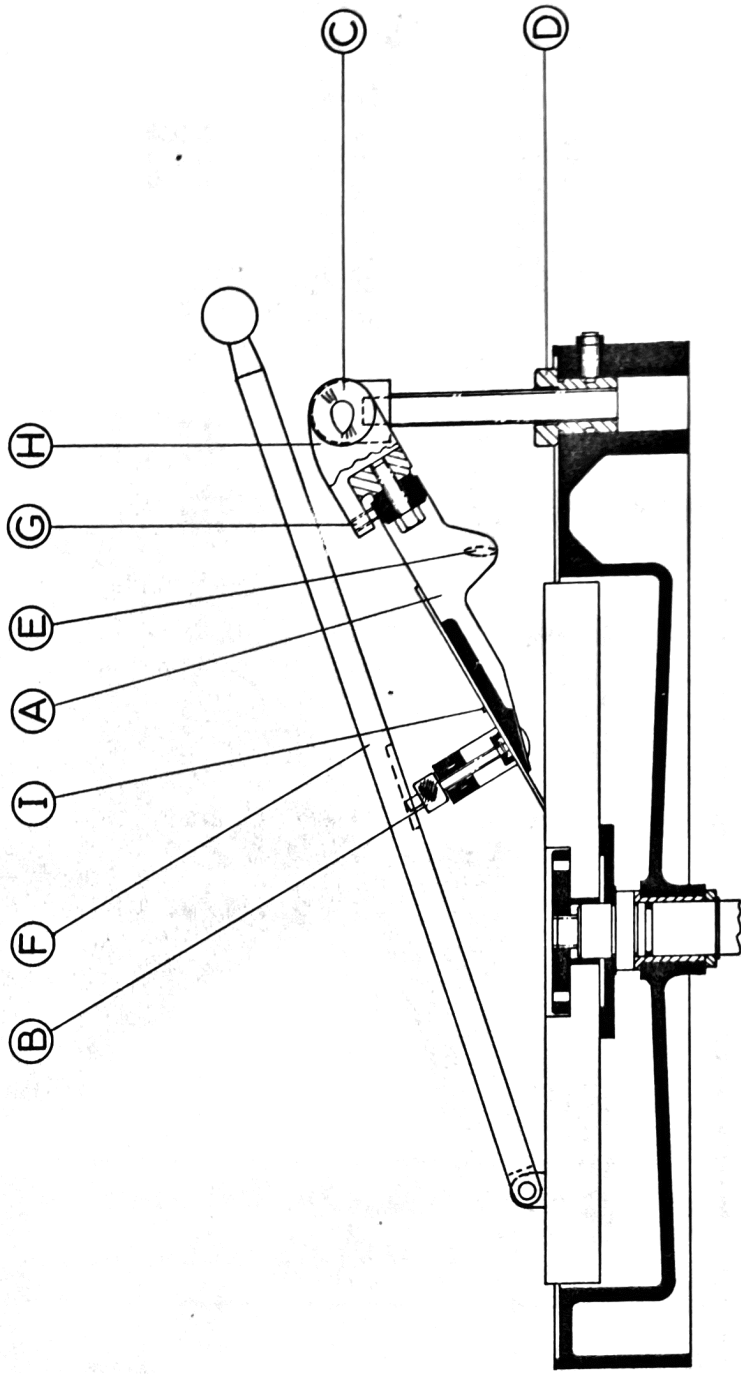
OPERATING LEVER.

SQUARENESS GRUB SCREWS.

MASTER ARM BRACKET.

LOCATING PINS. (PLANE BLADES ONLY)

SETTING DIAGRAM FOR
CHISEL ATTACHMENT



- (A)
- (B)
- (C)
- (D)
- (E)
- (F)
- (G)
- (H)
- (I)

MASTER ARM.

CLAMPING SCREW.

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COLUMN ADJUSTING NUT.

RETAINING SCREWS.(CHISELS ONLY.)

OPERATING LEVER.

SQUARINESS GRUB SCREWS.

MASTER ARM BRACKET.

LOCATING PINS.(PLANE BLADES ONLY.)

SETTING DIAGRAM FOR
PLANE IRON ATTACHMENT

No. IN G.M. No. 1

KENT COUNTY COUNCIL,
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THE HEADMASTER,
THE JUDD SCHOOL,
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TONBRIDGE, KENT.

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512105 22

ED 4439

TDS 12/16 SHARPEDGE MACHINE 1/4HP
230/250/1/50 WITH STD EQUIP

070200 01

CARRIAGE

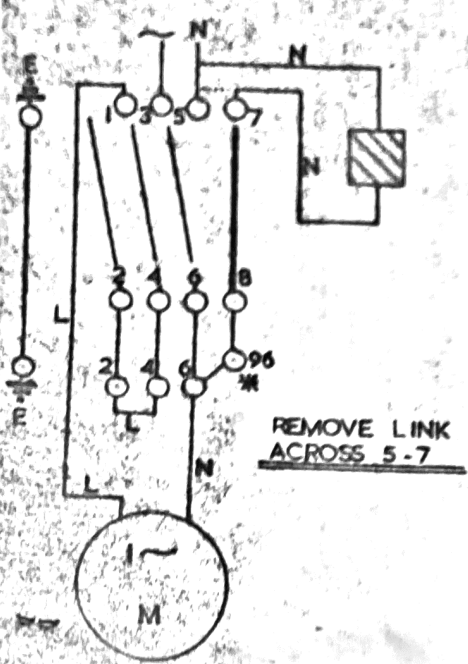
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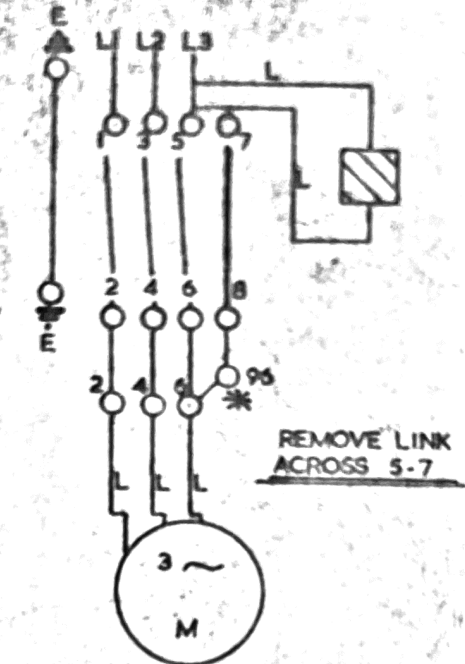
INSPECTED BY: *S. Buck* DATE: *21.2.1946*
SERIAL No. *TDS 12/16/33013*

ALTERATIONS

1 ~ CONTACTOR



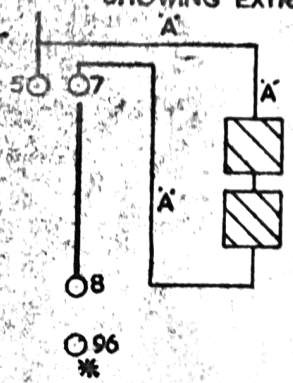
3 ~ CONTACTOR



PEDESTAL GRINDER

PEDESTAL GRINDER - 16" SHARPEDGE

SHOWING EXTRA MICRO SWITCH ADDED TO ABOVE CIRCUITS FOR FOOT KNOCK OFF WHEN REQUIRED.



WHEN SINGLE ~ 'A' WIRES MUST BE BLUE AS 5-7 TERMINALS ARE THE NEUTRAL CIRCUIT.

WHEN THREE ~ 'A' WIRES MUST BE BROWN AS 5-7 TERMINALS ARE THE L3 CIRCUIT.

LIMITS ON DIMENSIONS UNLESS OTHERWISE STATED.

ANGULAR ± 1° 3 PLACE DECIMAL ± .005°
FRACTIONAL ± .010" 4 PLACE DECIMAL ± .0005"

S.7.8 & 12. PEDESTAL GRINDERS & 16" SHARPEDGE. WIRING DIAGRAM.

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DENFORD SMALL TOOLS (BRIG) LTD.
BRIGHOUSE,
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DRAWN	<i>[Signature]</i>
CHECKED	
PASSED	
DATE	7.10.71

MAT.	
MAT. SIZE	
No. REQD.	SCALE
DRAWING No.	SK360/1



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