BOOK NO. T40

PLEASE INSERT SERIAL NUMBER OF MACHINE

Instruction Manual For

EDA

Chisel Mortiser

INDEX

FOR REPLACEMENT PARTS TOOLS AND ACCESSORIES
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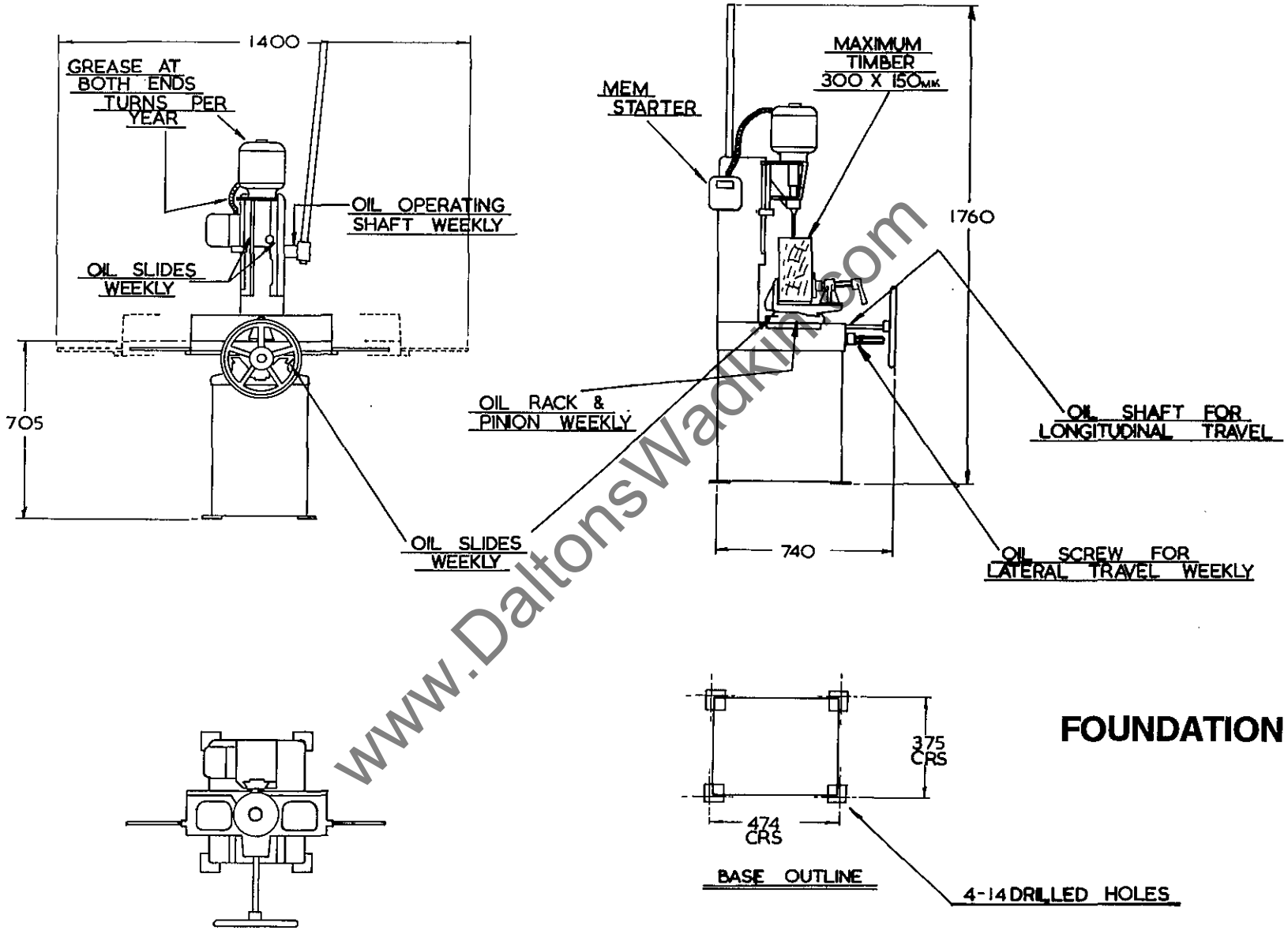
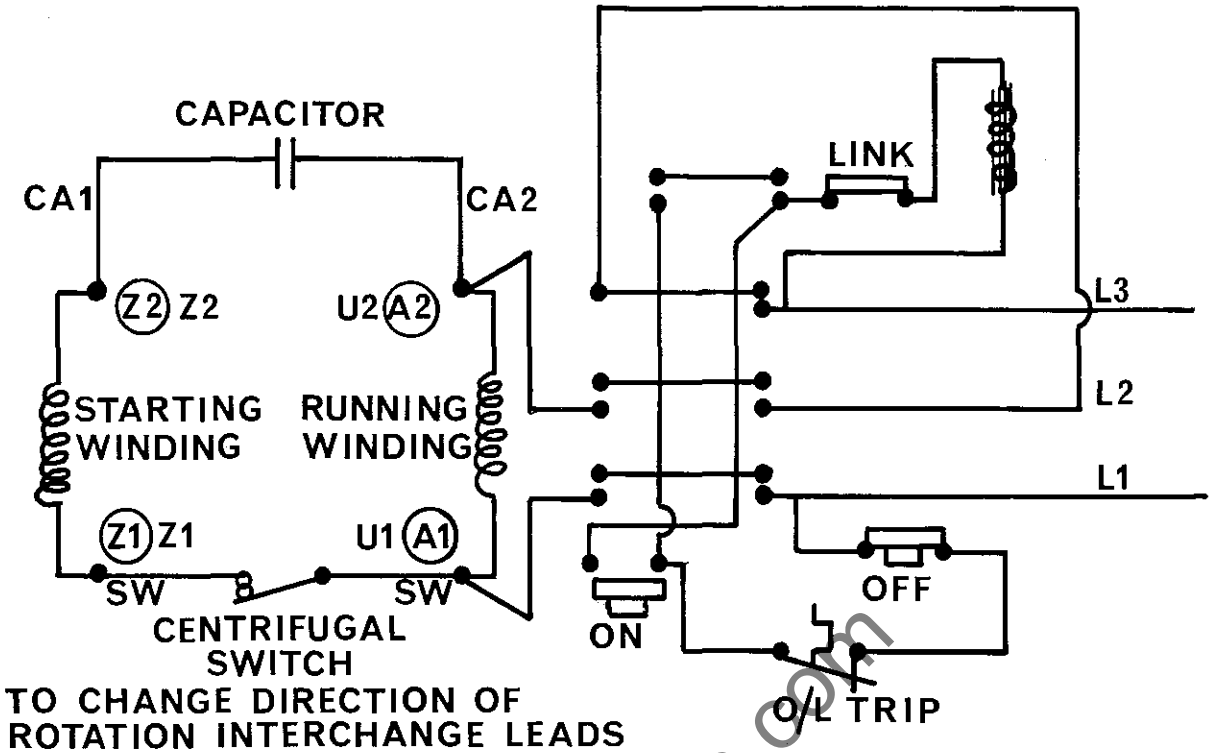
IMPORTANT

It is our policy and that of our suppliers to review constantly the design and capacity of our products. With this in mind we would remind our customers that whilst the dimensions and performance data contained herein are current at the time of going to press, it is possible that, due to the incorporation of latest developments to enhance performance, dimensions and supplies may vary from those illustrated.



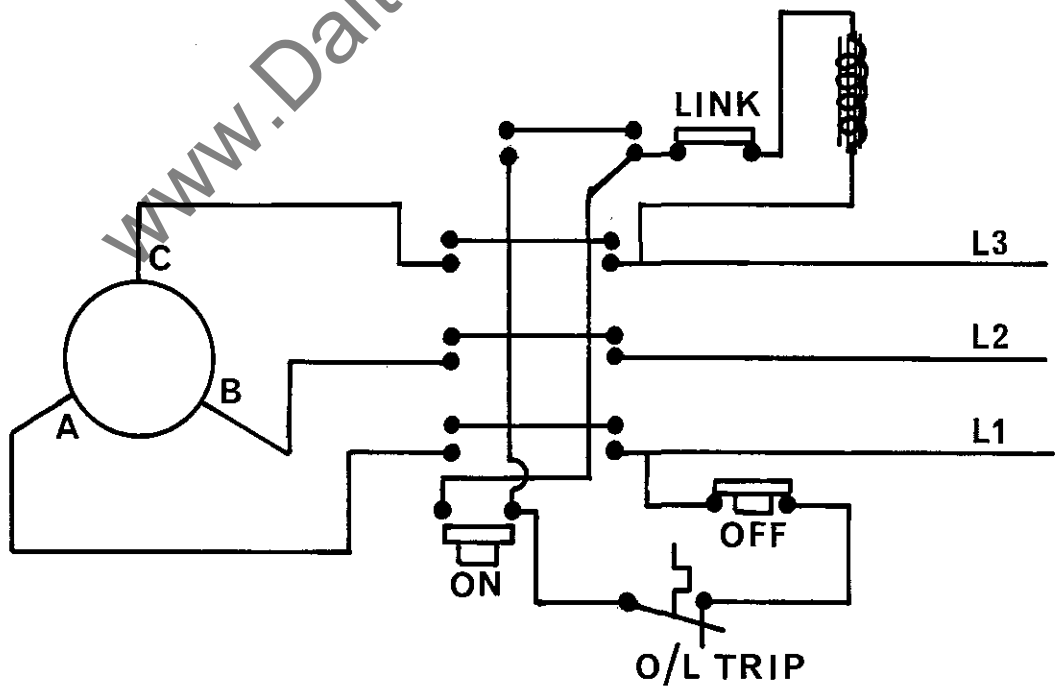
FOUNDATION PLAN



TO CHANGE DIRECTION OF ROTATION INTERCHANGE LEADS ON TERMINALS Z1 & Z2

WIRING DIAGRAM
1 PHASE

FIG.2



WIRING DIAGRAM
3 PHASE

FIG.3

SLINGING

Always use a sling within safe working load of machine weight.
EDA – Approximate net weight – 139kg (306lbs)
EDA – Approximate gross weight – 190kg (418lbs)
Attach sling under chisel holder bracket, Fig. 4, ensuring 2 hexagon head bolts "A" are secure before lifting.

IMPORTANT: DO NOT WALK OR STAND UNDER MACHINE DURING SLINGING OPERATIONS.

INSTALLATIONS

Remove protective coating from all bright parts by applying a cloth soaked in paraffin, turpentine or other solvent.

WIRING DETAILS

The motor and control gear have been wired in before despatch. All that is required is to connect the power supply to the starter or isolator when fitted.

Points to note when connecting to the power supply:–

1 Check that the voltage, phase and frequency correspond to those on the motor plate, also the correct coils and heaters are fitted to starter.

2 It is important that the correct size cable is used to give the correct voltage at the starter. To light a cable will give a voltage drop at the starter and may damage the motor.

3 Check the main line fuses are of the correct capacity. See fuse list inside front cover of instruction manual.

4 Correct the line leads to the appropriate terminals. See page 7 for wiring diagrams (1 Phase supply Fig. 2 or 3 Phase supply Fig. 3).

5 Check all connections are sound.

6 Check the rotation of the motor for the correct direction. If this is incorrect, reverse any two of the line lead connections for 3 phase supply.

LUBRICATION

It is advisable to keep all bright parts covered with a thin film of oil to prevent rusting.
SEE APPROVED LUBRICANTS PAGE 13 AND FOUNDATION DRAWING PAGE 6.

FOUNDATION

See Foundation Drawing Page 6 for bolt positions and clearances required. When installing the machine level the table by packing under the base.

Foundation bolts are not supplied with the machine except by special order.

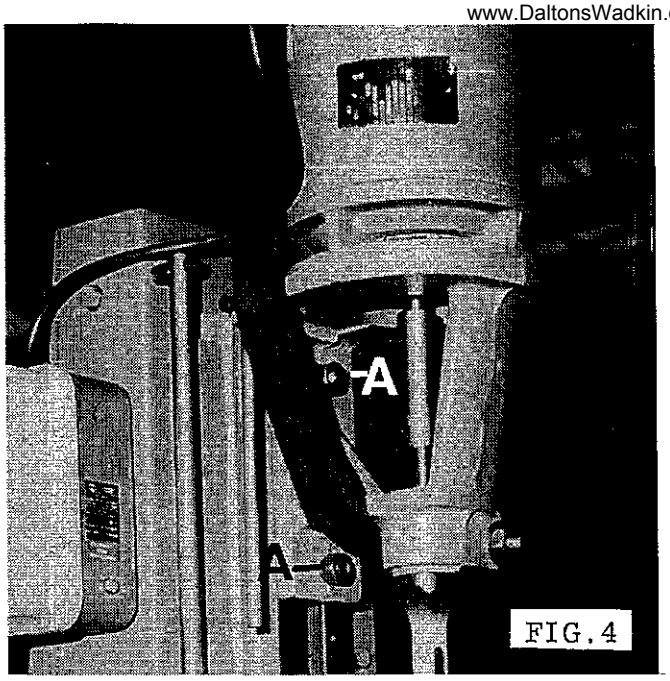


FIG.4

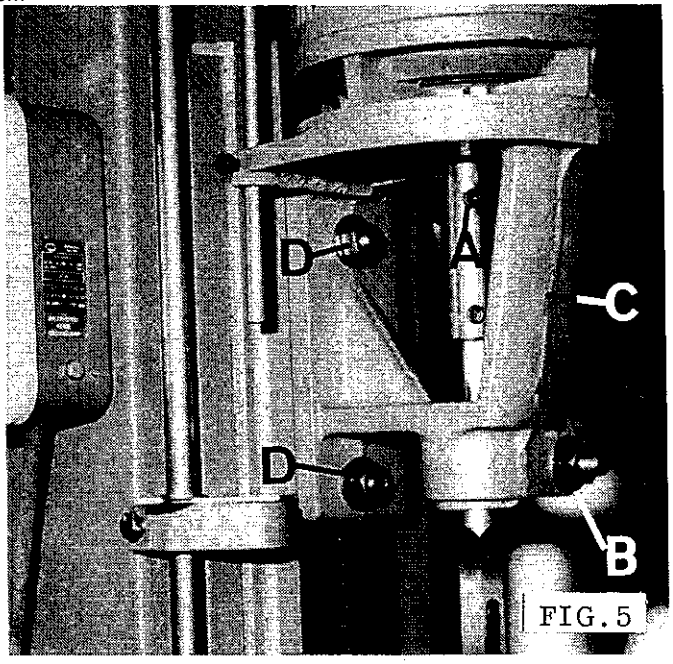


FIG.5

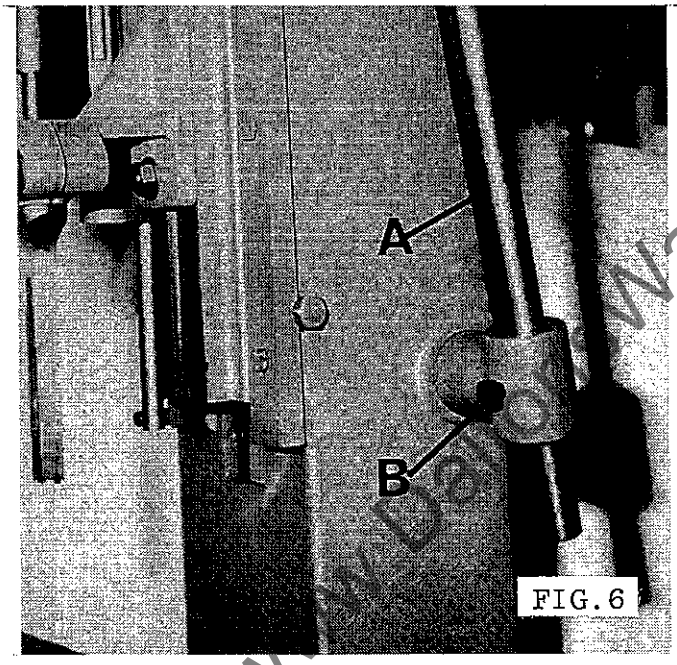


FIG.6

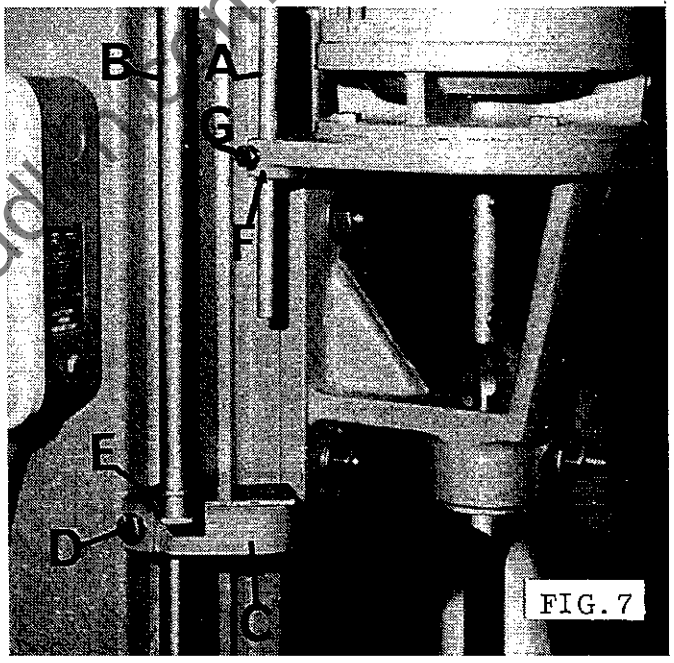


FIG.7

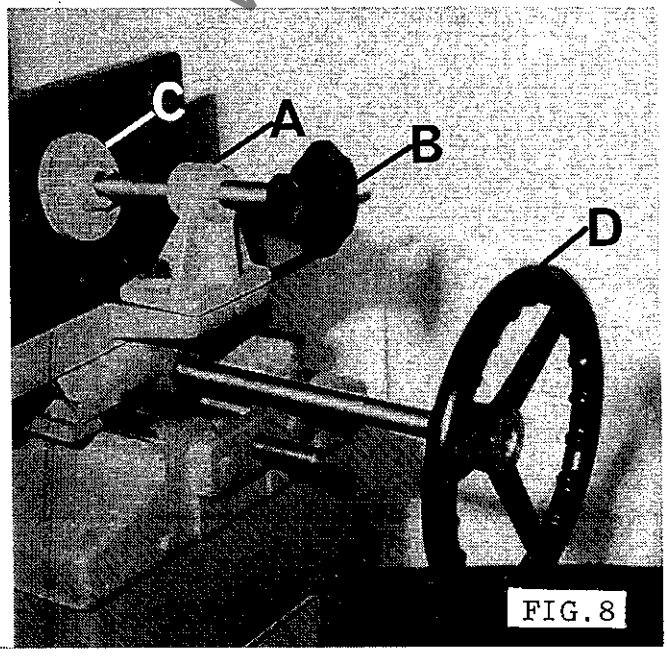


FIG.8

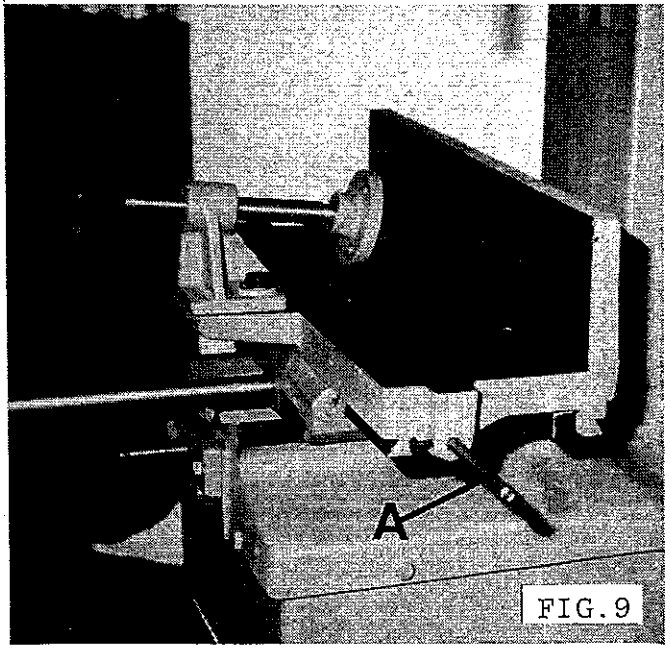


FIG.9

MORTISING, HOW TO SET CHISEL

The lips or spurs of the bit should not be allowed to touch the cutting edge of the chisel but should be set as shown in Fig. 10, so that the bit cuts before the chisel.

The bit is held in the machine spindle by means of the hollow set screw "A", in Fig. 5. The bore of the spindle is 16mm (5/8") and the machine is supplied with a bush so that all sizes of bits can be fit up to the maximum sizes required for 25mm (1") square chisel. The chisel is held in a special bracket below the machine spindle and is locked in position by means of the hexagon nut "B" in Fig. 5. The bore of the bracket is 30mm (1.3/16") and one bush is supplied so that all sizes of chisel can be used up to maximum size of 25mm (1").

To set the chisel correctly, fit large chisel directly into chisel holder bracket, for small chisel use bush supplied. Fit bush to chisel, push the chisel complete with bush into the chisel holder bracket until the shoulder comes into contact with the chisel bracket. The chisel should also be positioned square to the rear of the table. When correctly positioned, lock securely into position by means of the hexagon nut "B".

Position the bit so that the lips protrude below the chisel points, see Fig. 10, and lock the bit tightly in position. Care should be taken to ensure that the bit is securely locked so that it cannot be forced against the cutting edge of the chisel resulting in a fractured tool.

HANDLEVER

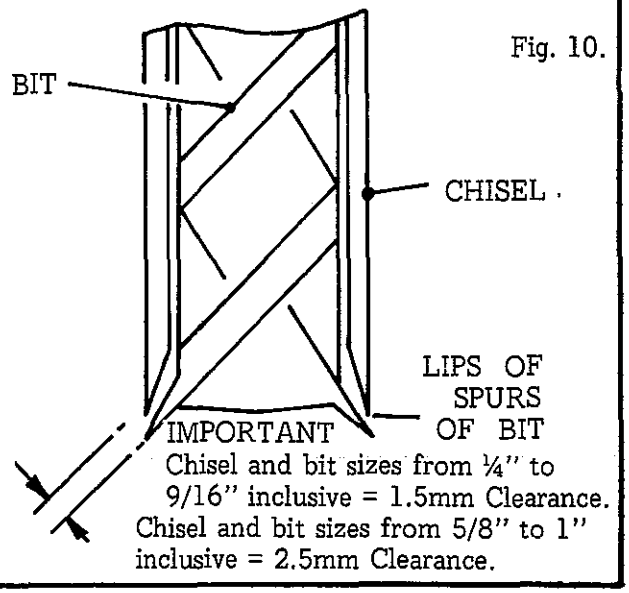
The handlever "A" Fig. 6, is used to control movement of the head. To obtain the correct leverage, loosen hexagon bolt "B", position lever to suit operator then relock bolt "B".

Unnecessary head movement after chisel has cleared work can be eliminated by the following procedure:–

1 Isolate machine electrically.
2 Manually support head unit "C" Fig. 5, and loosen the 2 hexagon nuts "D".
3 Position head unit "C" just clear of the work.
4 When position as required, relock 2 hexagon nuts "D".

MORTISING, HOW TO SET CHISEL

Fig. 10.



DEPTH STOP

A stop assembly, FIG.7 to control head travel, is fitted to left side of headstock. Incorporated in the stop assembly is an adjustable stop bar "A", a support bar "B" and an adjustable haunching stop "C".

To control mortise depth, proceed as follows:-

1 Loosen hexagon bolt "D" and move haunch stop "C" to bottom of support bar "B".
2 Move head unit by handlever to required mortise depth and hold in position.
3 Move haunching lever "E" to uncover hole which allows stop bar "A" to pass through.
4 Move haunch stop "C" up support bar "B" until it contacts stop bar mounting bracket "F" then lock hexagon bolt "D".

To control haunch depth, proceed as follows:-

1 Loosen hexagon bolt "G" and position stop bar "A" for required depth of haunch, ie the distance from lower tip of stop bar to lower face of stop bar mounting bracket "F". When set, re-lock bolt "G".
2 When haunching, the haunch lever "E" should be moved to the hole closed position.

WORK CRAMP

The work cramp "A", FIG.8, can be secured in either of 2 positions on the main table allowing a maximum timber width of 150mm (6in) between cramp face and rear of table.

Lever "B" controls cramp pressure. Cramp face "C" is drilled to receive a wood pad so preventing possible marking of the workpiece.

TABLE CONTROL

The table has both longitudinal and lateral movements. Both table movements are operated by handwheel "D", FIG.8.

For longitudinal movement, push handwheel forward then turn handwheel.

For lateral movement, pull handwheel out then turn handwheel.

TABL STOPS

The table is fitted with 2 longitudinal positive stops "A", FIG.9, one stop fitted to each end of table. These can be set to control length of mortise to be cut.

WOOD TABLE

The wood table is not supplied with machine. Make table from sizes shown on FIG.11.

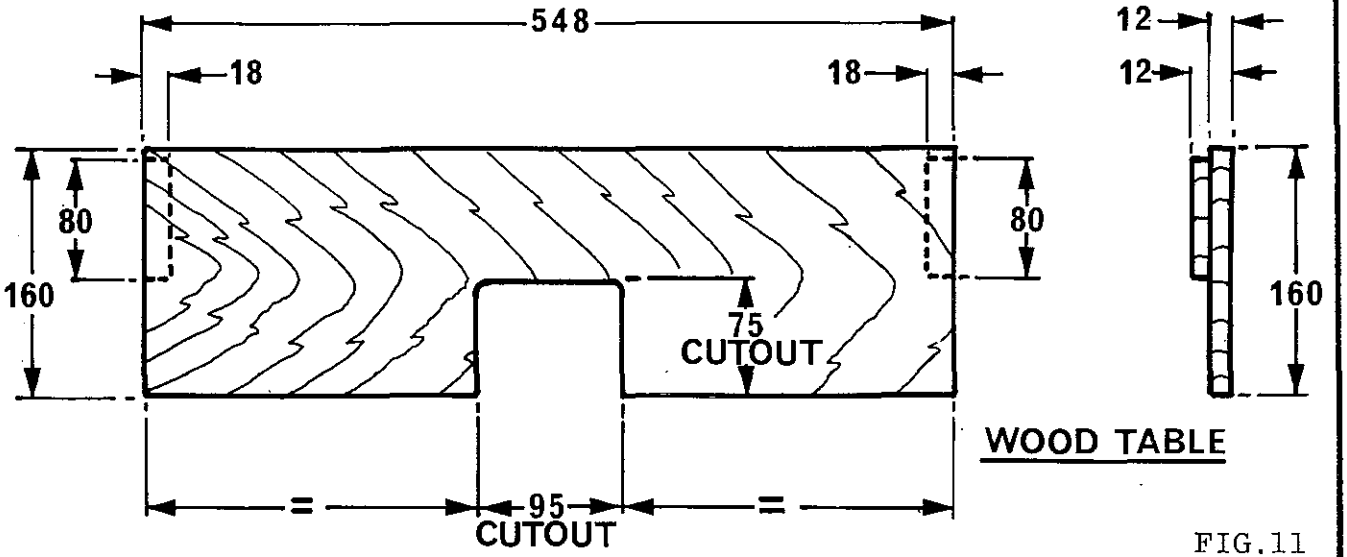


FIG.11

SHARPENING SQUARE CHISELS AND BITS

This chisel must be sharpened on the inside only and the cutting edges should be shaped to give a curve, as shown in FIG.12(b) and maintained in shape as new. The bevels of the cutting edges must meet exactly at the corners. The depth "A", ie the distance from the corner point to the curve at the centre should be about one-eigth the diameter of the size of the chisel. The cutting edges must be as short as possible and fitted to an angle of about 35 degrees, as shown in FIG.12(b).

The angle behind the cutting edge must then taper off at an angle of 25 degrees. It is recommended that the special tool which can be supplied should be used to ensure the correct angle on all four cutting edges of the chisel.

It is most important that the outside of the chisel is never filed as this will reduce the size of the mortise and tend to bind in the timber.

The bit is sharpened by filing about the cutting edges "B", as shown in FIG.12(a), keeping the file at an angle of 15 degrees. They must be kept in a straight line with the inside points extending past the centre as shown. Sharpen the spurs "C" on the top and front only, never on the outside. Keep them in line with the cutting edges "B".

When the bit has been worn away by frequent resharpening, replace it by a new one. Using a short bit may lead to the chisel being split at the cutting edges. Use a file of very fine grade for sharpening both chisels and bit.

FIG.12(a)

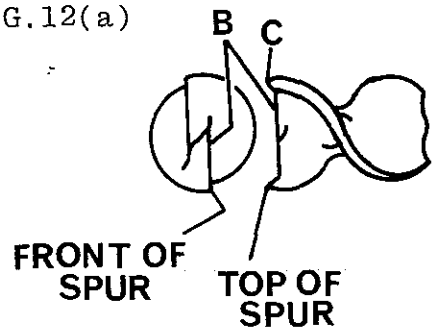
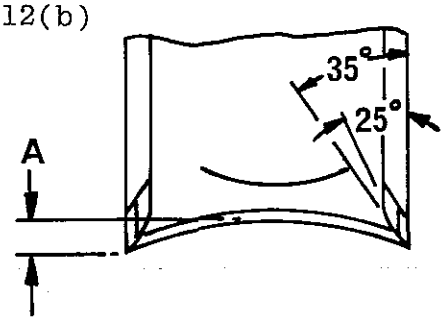


FIG.12(b)



SHARPENING SQUARE CHISELS AND BITS

APPROVED LUBRICANTS

Application	APPROVED LUBRICANTS					
	Castrol	B.P.	Shell	Esso	Texaco/Caltex	Wadkin
Worm Boxes	ZN220	Energol CS320	Vitrea 320	Spartan EP220	Regal Oil 320	L2
General Lubrication	Magna 68	Energol HP68	Vitrea 68	Nuray	Ursa Oil P68	L4
Pneumatic Lubricators	Hyspin AWS32	Energol HL32	Tellus 37	Nuto H32	Rando Oil HD32	
Grease	Spheerol AP3	Energrease L58	Alvania R3	Beacon 3	Regal Starfak Premium 3	L6
Brake Cables	Brake Cable grease	Energrease L21M	Alvania R3	Esso Multi-purpose grease		

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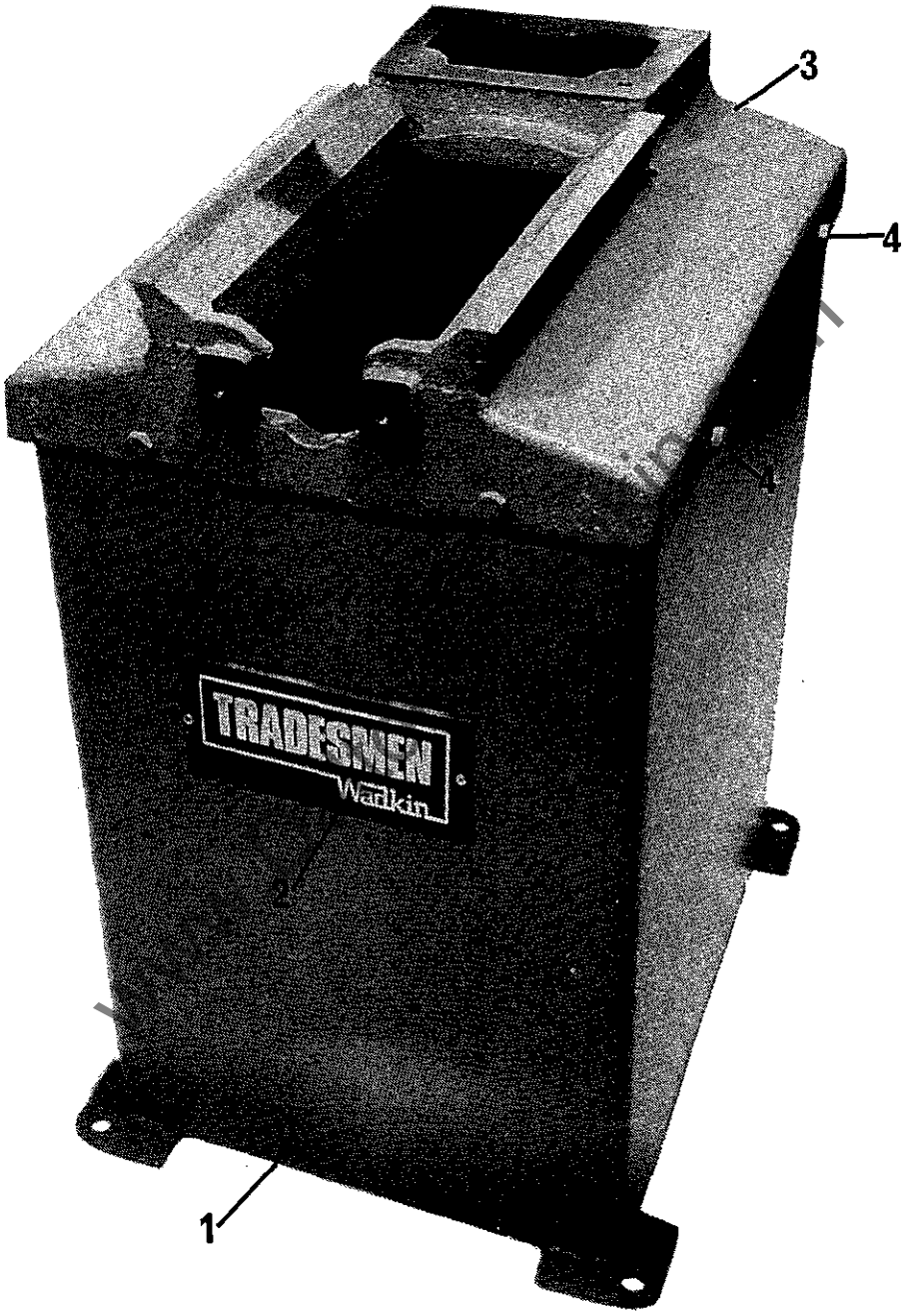
ILLUSTRATED PARTS LIST

ASSEMBLY:- BASE

FIG ITEM	PART NO. *	UNITS PER ASSEMBLY	DESCRIPTION
1	EDA 52	1	BASE
2		1	TRADESMAN NAMEPLATE
3	EDA 2	1	TOP FOR BASE
4		7	M8 x 20 LONG HEXAGON SET SCREWS & FULL NUTS

– ITEM NOT ILLUSTRATED

* PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES



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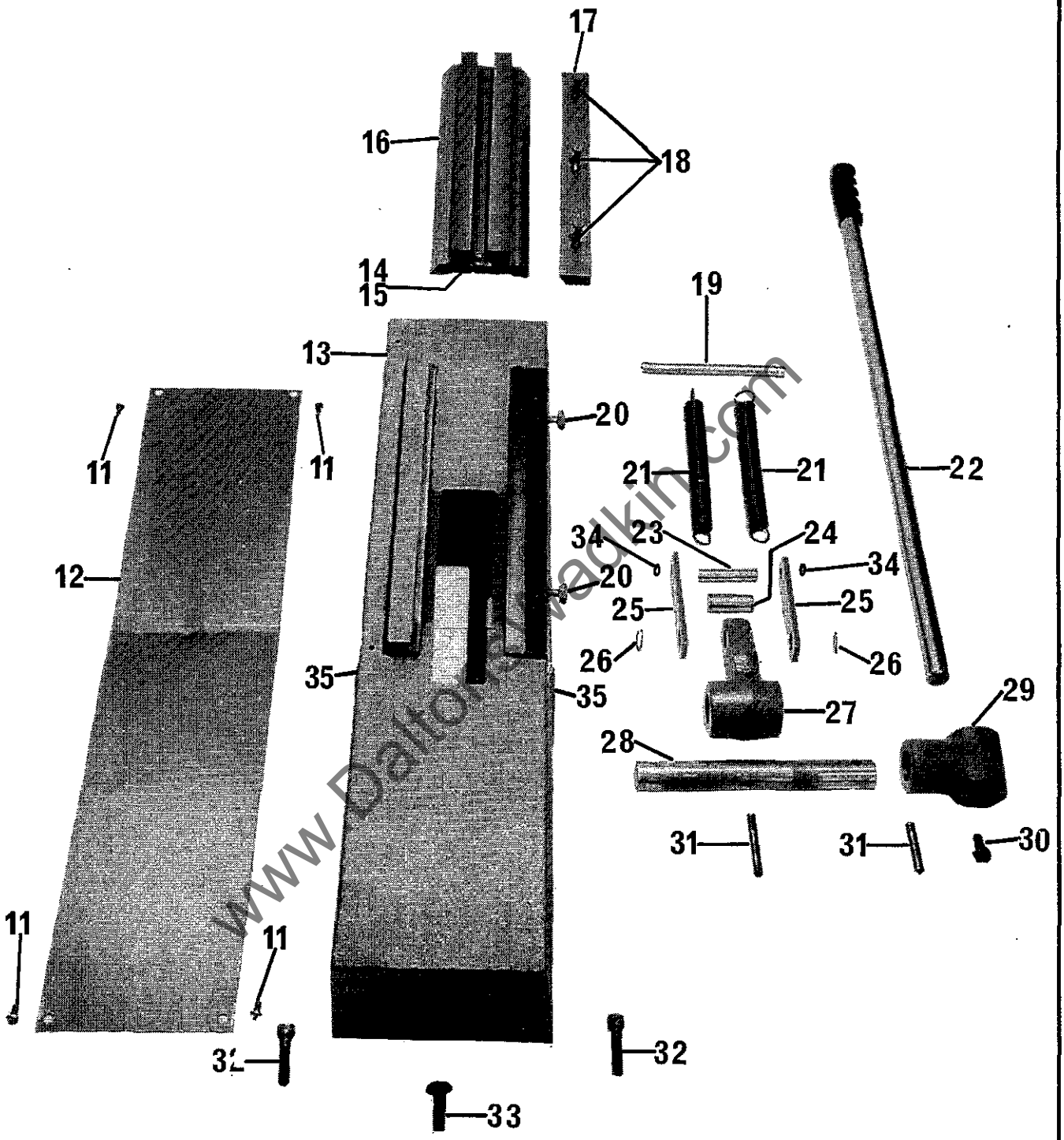
ILLUSTRATED PARTS LIST

ASSEMBLY:- TRUNK

FIG ITEM	PART NO. *	UNITS PER ASSEMBLY	DESCRIPTION
11		4	M6 x 10 LONG PAN HEAD MACHINED SCREWS
12	EDA 49	1	COVER FOR TRUNK
13	EDA 1	1	TRUNK
14		1	M6 FULL NUT
15		1	M6 x 20 LONG SOCKET CAPSCREW
16	EDA 5	1	HEAD SLIDE BRACKET
17	EDA 34	1	SLIDE STRIP FOR HEAD
18		3	M8 x 25 LONG HEXAGON SET SCREWS
19	EDA 26	1	SPRING ROD
20	EDA 15	2	SLIDE STRIP ADJUSTING SCREW
21	ETS 620	2	HEAD RETURN SPRINGS
22	EDA 25	1	HANDLEVER
23	EDA 39	1	LINK PIN
24	EDA 18	1	HEAD SLIDE BOTTOM PIVOT PIN
25	EDA 28	2	CONNECTOR LINK
26	7100-020	2	20mm EXTERNAL CIRCLIPS
27	EDA 9	1	HANDLEVER LINK
28	EDA 31	1	HANDLEVER PIVOT SHAFT
29	EDA 10	1	BRACKET FOR HANDLEVER
30		1	M10 x 25 LONG HEXAGON SET SCREW
31		2	10 DIA x 50 LONG SPIROL PINS
32		2	M12 x 45 LONG SOCKET CAPSCREWS
33		1	M12 x 30 LONG HEXAGON SET SCREW
34	5133-50	2	'E' RETAINERS
35		2	OILITE BUSHES

– ITEM NOT ILLUSTRATED

* PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES



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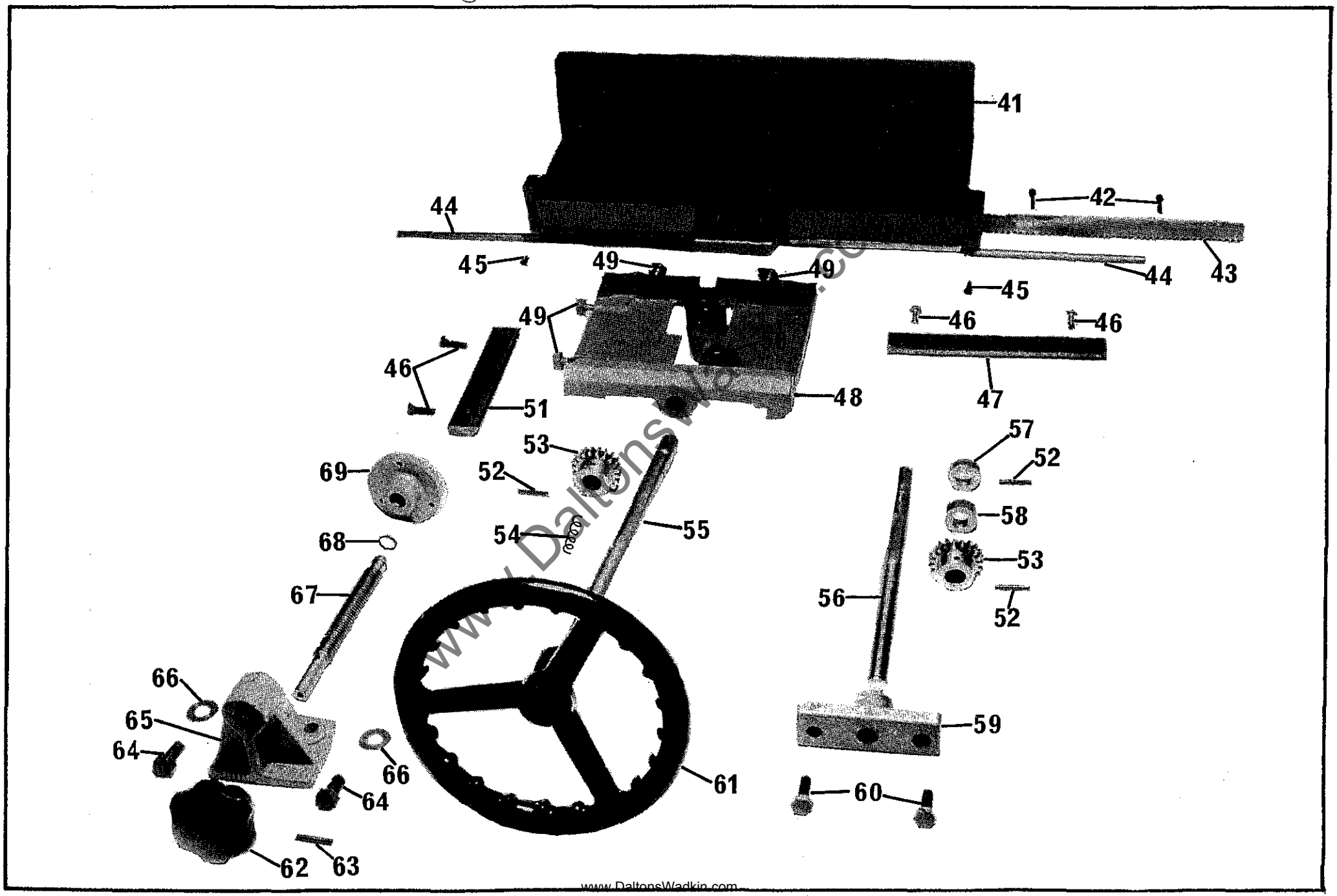
ILLUSTRATED PARTS LIST

ASSEMBLY:– TABLE AND CROSS SLIDE

FIG ITEM	PART NO.*	Units Per Assembly	DESCRIPTION
41	EDA 4	1	TABLE
42		2	M6 x 30 LONG SOCKET CAP SCREWS
43	EDA 36	1	RACK FOR TABLE
44	EDA 21	2	TABLE STOP RODS
45		2	M6 x 20 LONG SOCKET CAPSCREWS
46		4	M8 x 20 LONG HEXAGON SET SCREWS
47	EDA 33	1	SLIDE STRIP FOR TABLE
48	EDA 11	1	INTERSLIDE FOR TABLE
49	EDA 15	4	SLIDE STRIP ADJUSTING SCREWS
50		1	M12 x 16 LONG SOCKET CAPSCREW
51	EDA 32	1	SLIDE STRIP FOR BASE
52		3	5 DIA x 36 LONG GROVERLOK DOWELS
53	EDA 35	2	GEARS FOR TABLE ADJUSTMENT
54	LC 072L–11	1	SPRING
55	EDA 22	1	TABLE ADJUSTMENT SHAFT
56	EDA 30	1	CROSS TRAVERSE SCREW
57	KO5–28–211	1	COLLAR FOR CROSS TRAVERSE SCREW
58	KO5–28–211	1	DISTANCE COLLAR FOR GEAR
59	EDA 13	1	TRAVERSE NUT
60		2	M10 x 30 LONG HEXAGON SET SCREWS
61	30120	1	20mm BORE HANDWHEEL
62	6888	1	12mm BORE HANDWHEEL
63		1	5 DIA x 30 LONG GROVERLOK DOWEL
64		2	M12 x 30 LONG HEXAGON SET SCREWS
65	EDA 6	1	CLAMP BRACKET
66		2	12 DIA WASHERS
67	EDA 29	1	CLAMP SCREW
68	RMO 146/24	1	'O' RING
69	EDA 8	1	CLAMP PAD

–ITEM NOT ILLUSTRATED

* PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES



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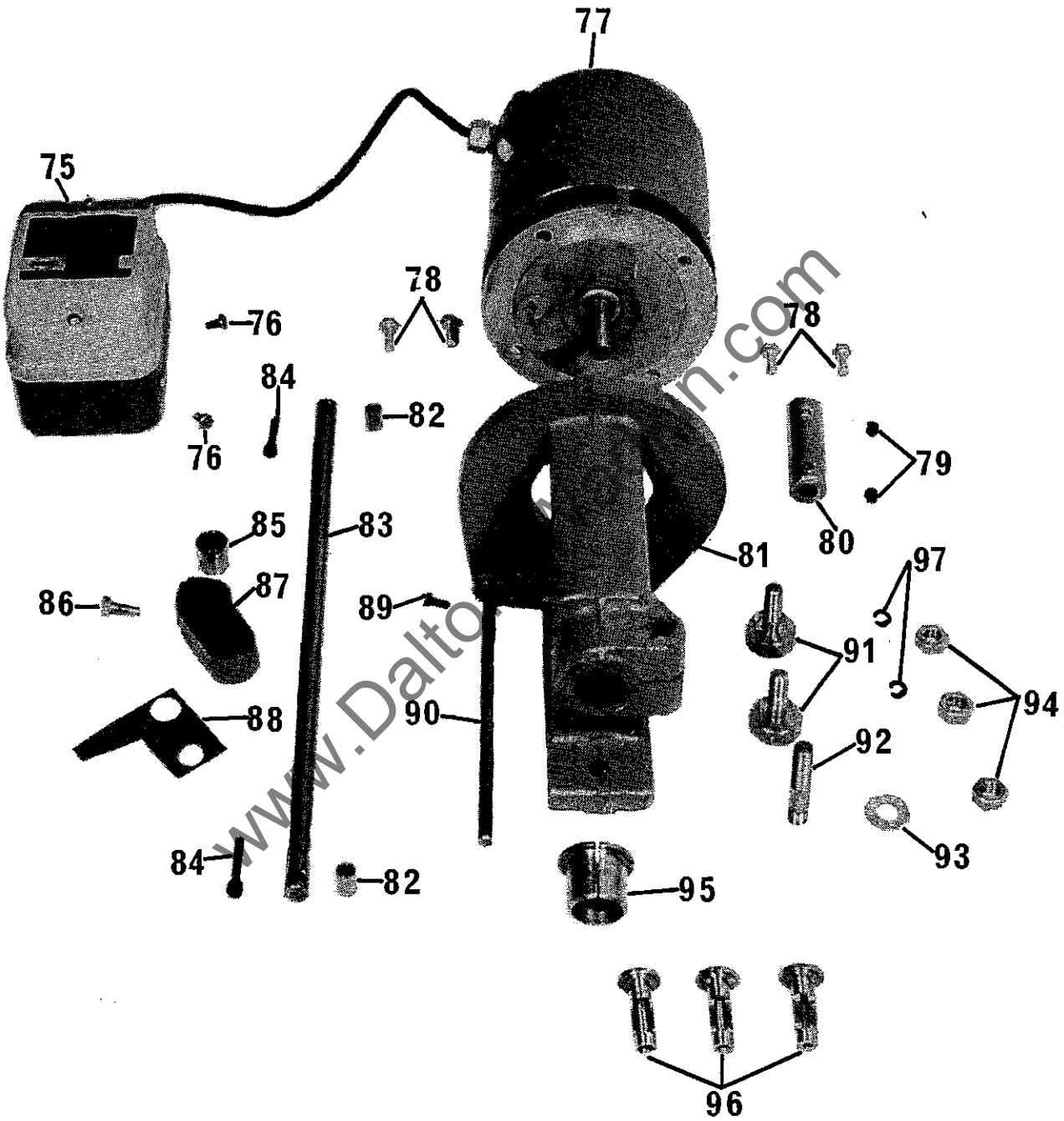
ILLUSTRATED PARTS LIST

ASSEMBLY:- MORTISE HEAD

FIG ITEM	PART NO. *	UNITS PER ASSEMBLY	DESCRIPTION
75	247 ADS	1	MEM STARTER 3 PHASE 50 CYCLE
	617 ADS	1	MEM STARTER 1 PHASE 50 CYCLE
76		2	M6 x 20 LONG PAN HEAD MACHINED SCREWS
77		1	BROOKS MMF BS532 FLANGE MOUNTED T.E.F.C., 3000 RPM, 3 PHASE, 50 CYCLE, CONTINUOUS RATED MOTOR
		1	BROOKS MMF BS562 FLANGE MOUNTED, T.E.F.C., 3000 RPM, 1 PHASE, 50 CYCLE, CONTINUOUS RATED MOTOR
78		4	M8 x 20 LONG HEXAGON SET SCREWS
79		2	M10 x 10 LONG GRUBSCREW
80	EDA 23	1	MOTOR ADAPTOR
81	EDA 7	1	CHISEL HOLDER BRACKET
82	EDA 16	2	DEPTH STOP SPACER
83	EDA 27	1	HAUNCHING STOP BAR
84		2	M6 x 35 LONG SOCKET CAPSCREWS
85	EDA 17	1	DEPTH STOP LOCATOR
86		1	M10 x 16 SOCKET SET SCREW
87	EDA 12	1	HAUNCHING STOP
88	EDA 45	1	DEPTH STOP PLATE
89		1	M10 x 12 SOCKET SET SCREW
90	EDA 21	1	HEAD STOP ROD
91	EDA 14	2	HEAD SLIDE LOCKING BOLTS
92	EDA 19	1	STUD FOR CHISEL HOLDER BRACKET
93		1	12 DIA WASHER
94		3	M12 FULL NUTS
95	EDA 40	1	BUSH FOR CHISEL HOLDER
96	1014/181	1	3/16" ADAPTOR BUSH FOR AUGER
	1014/207	1	1/4" ADAPTOR BUSH FOR AUGER
	1014/208	1	3/8" ADAPTOR BUSH FOR AUGER
97		2	12 DIA SPRING WASHERS

– ITEM NOT ILLUSTRATED

* PLEASE QUOTE PART & MACHINE NUMBER WHEN ORDERING SPARES



STANDARD ITEMS DESPATCHED WITH MACHINE

1 - Instruction manual
3 - Stop bars EDA21
1 - Ejector Spanner 1014/57
1 - 10 & 11 A/F D.E.Spanner
1 - 13 A/F S.E. Spanner
1 - 17 & 19 A/F D.E. Spanner
1 - Set of bushes (3/16"-1014/181, 1/4"-1014/207 & 3/8"-1014/208)
1 - Chisel bush EDA 40
1 - 5 A/F hex wrench