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CLARKE METALWORKER CDP201B OPERATING AND MAINTENANCE INSTRUCTIONS MANUAL

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Clarke®

METALWORKER



13mm DRILL PRESS

Model Nos. CDP201B & CDP251F

Part Nos. 6505530 & 6505540

OPERATING & MAINTENANCE INSTRUCTIONS

SERIAL No.....

0307

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Clarke®
INTERNATIONAL

DECLARATION OF CONFORMITY

We declare that this product complies to the following standards/directives:

■ **98/37/EC**

Product Description: **DRILL PRESS**

Model Number: **CDP RANGE**

Serial Number: See Front Cover

Signed _____
Engineering Manager

Clarke INTERNATIONAL
Hemnall Street, Epping, Essex CM16 4LG

Clarke International is a trading style of Clarke International Limited

When disposing of this product, do not dispose of with general waste. It must be disposed of according to law at a recognised disposal facility.

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INTRODUCTION

Thank you for purchasing your CLARKE 13mm Drill Press.

Before attempting to operate the machine, please read this instruction manual thoroughly, and follow all directions carefully. By doing so you will ensure the safety of both yourself and others around you, and at the same time, you should look forward to long and trouble free service from your Clarke Drill Press.

GUARANTEE

This product is guaranteed against faults in manufacture for 12 months from date of purchase. Keep your receipt as proof of purchase. This guarantee is invalid if the product has been found to have been abused or tampered with in any way, or not used for the purpose for which it was intended. The reason for return must be clearly stated. This guarantee does not affect your statutory rights.

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GENERAL SAFETY PRECAUTIONS

WARNING

As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked, or ignored, personal injury to the operator, or damage to property may result.

1. KNOW YOUR MACHINE. Read the manual carefully. Learn the machines applications and limitations, as well as the specific potential hazards peculiar to it.
2. KEEP GUARDS IN PLACE and in working order.
3. EARTH ALL MACHINES. If the machine is equipped with three-pin plug, it should be plugged into a three-pin electrical socket. Never remove the earth pin.
4. REMOVE ALL ADJUSTING KEYS AND WRENCHES. Before starting, form the habit of checking to ensure that keys, wrenches and tools are removed from the machine.
5. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
6. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use machinery in damp or wet locations, or expose them to rain. Keep work area well lit.
7. MAKE WORKSHOP CHILDPROOF - with padlocks, master switches etc.
8. KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area
9. DON'T FORCE THE MACHINE. It will do the job better and safer, at the rate for which it was designed.
10. USE THE RIGHT TOOL. Don't force a tool or attachment to do a job for which it was not designed.
11. WEAR PROPER APPAREL. Loose clothing, gloves, neckties, rings, bracelets, or other jewellery may get caught in moving parts. Nonslip footwear is recommended. Long hair should be contained.
12. USE SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
13. USE EAR DEFENDERS.
14. DON'T OVERREACH. Keep proper footing and balance at all times.
15. MAINTAIN TOOLS IN TOP CONDITION. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. ALWAYS DISCONNECT THE MACHINE before servicing or changing accessories.
17. CHECK FOR DAMAGE. If part of the machine (eg. A cover or guard), is damaged, it should be carefully inspected to ensure that it can perform its' intended function correctly. If in doubt, the part should be renewed. Damage to moving parts or major components should be Inspected by a qualified technician before operating the machine. Contact your local dealer for advice.

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19. DO NOT STAND ON THE MACHINE. Serious injury could occur if the machine is tipped over. Do not store materials above or near the machine such that it is necessary to stand on the machine to get to them.
20. NEVER operate a machine when under the influence of alcohol, drugs or medication.
21. ALWAYS ENSURE THAT ADEQUATE LIGHTING is available. A minimum intensity of 300 lux should be provided. Ensure that lighting is placed so that you will not be working in your own shadow.

ADDITIONAL SAFETY RULES FOR DRILL PRESSES

WARNING:

THIS MACHINE MUST NOT BE MODIFIED, OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS DESIGNED.

1. IMPORTANT: You should not operate this machine unless you are thoroughly familiar with drilling machines and drilling techniques. If there is any doubt whatsoever, you should consult a qualified person.
2. Do not operate the machine until it is completely assembled, and you have read, and understood this entire manual
3. Ensure the proper electrical regulations are followed, and that the machine is properly earthed.
4. Before switching the machine ON, ALWAYS:-
   a. Ensure all chuck keys, spanners and wrenches are removed from the machine.
   b. Examine the setup carefully, ensuring that the workpiece is perfectly secure.
   c. Ensure your clothing is properly adjusted.
5. Make all adjustments with the power OFF.
6. Always use the correct drilling speeds for the drill size, and the type of material being drilled (see page 15).
7. NEVER leave the drill unattended whilst it is running. Turn the machine OFF and do not leave until it has come to a complete stop.
8. When you have finished with the machine, always remove and store the drill bits.
9. CAUTION: This Drill Press is designed for use with Drill Bits and Morticing attachments ONLY. The use of other cutting tools or accessories could be hazardous.
10. ALWAYS use clamps, or a drill vice bolted to the table, to hold the work. It should NEVER be held in bare hands.

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ELECTRICAL CONNECTIONS

Connect the mains lead to a standard, 230 Volt (50Hz) electrical supply through an approved 13 amp BS 1363 plug, or a suitably fused isolator switch.

WARNING! THIS APPLIANCE MUST BE EARTHED

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

Green & Yellow	-	Earth
Blue	-	Neutral
Brown	-	Live

As the colours of the flexible lead of this appliance may not correspond with the coloured markings identifying terminals in your plug proceed as follows:

Connect GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol "⏚" or coloured GREEN or GREEN & YELLOW.

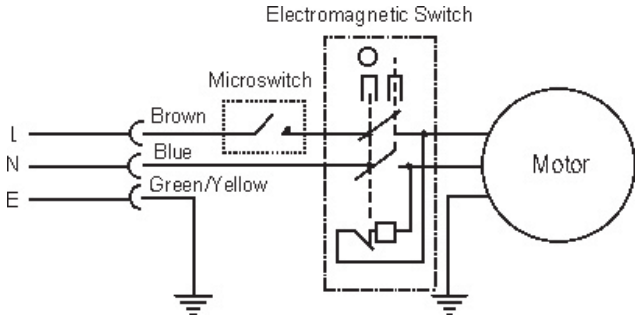
Connect BROWN cord to terminal marked with a letter "L" or coloured RED.

Connect BLUE cord to terminal marked with a letter "N" or coloured BLACK.

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewirable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.
5. The fuse in the plug must be replaced with one of the same rating **(13 amps)** and this replacement must be ASTA approved to BS1363.

WIRING DIAGRAM



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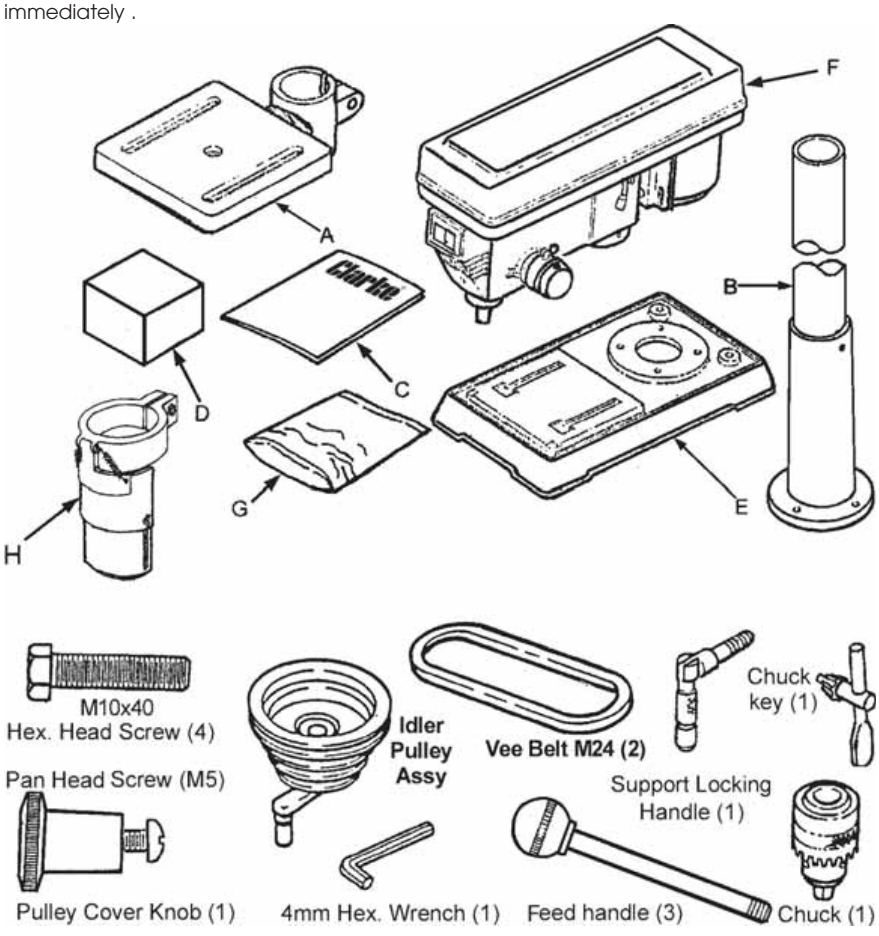
PREPARATION

On receipt, carefully unpack the components, ensuring that no damage was suffered in transit, and that all parts are accounted for.

The following loose items are to be found in the packing case.

A. Table Assy.
B. Column Assy.
C. This Manual
D. Box of loose parts
E. Base.
F. Head Assy.
G. 1 X Bag of loose parts.
H. Chuck Guard Assy.

Check the parts against the above list and refer to the diagrams below.
Should there be any deficiencies or damage, please contact your CLARKE dealer immediately .



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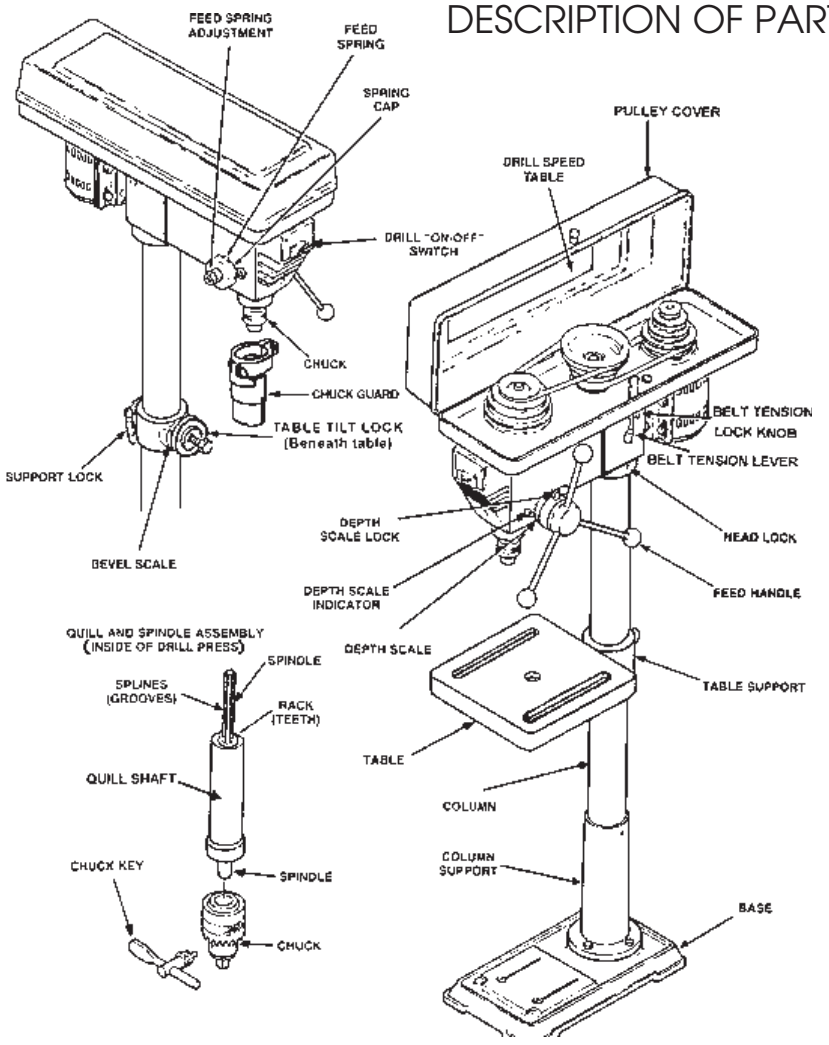
Remove all traces of preservative from the components with paraffin or a good quality solvent, and wipe all parts thoroughly with a clean dry cloth. Apply a coating of wax paste or light oil, to the table, column and base, to prevent rust.

Take the necessary precautions when lifting components, considering their weight. Assistance will be required.

Before use, the machine must be securely bolted to the floor, or, to a strong, heavy workbench of sufficient height so that you do not need to bend your back to perform normal operations.

Ensure the location is adequately lit, and that you will not be working in your own shadow.

DESCRIPTION OF PARTS



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ASSEMBLY

CAUTION!

ASSISTANCE MUST BE USED WHEN ASSEMBLING THIS MACHINE.

A. Column to the Base.

Bolt the column assembly to the base with the four M10 x 40mm hex. screws provided.

NOTE: *Ideally - the base, with column attached, should be firmly bolted to the floor or workbench prior to the assembly of other components.*

Check to ensure the column securing set screws, at the column support, are tight.

Fig. 1



B. Table to Column.

1. Thread the Table Support Locking Handle (see Fig. 7), into the Table Support from the left hand side, and leave it loose at this stage.
2. Slide the Table Support with Table, over the Column and lower it so that it rests against the column support bracket (Fig. 1). Nip up the locking handle to prevent the table from swinging freely during the assembly process.

Fig. 2

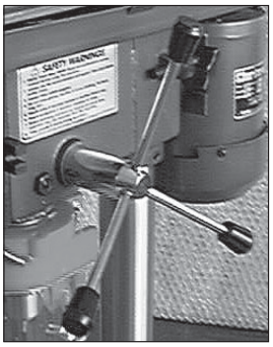


C. Head to Column.

NOTE: I*t may be necessary to unscrew the Head Lock Set Screws, (A -Fig.2), to ensure they do not protrude internally, as this would prevent the head from sliding fully into position.*

1. With assistance, raise the Head and locate it on top of the Column, ensuring it slides home fully.
2. Align the head with the base and tighten down the Head Lock Set Screws using the wrench provided.
3. Locate the three feed handles, and screw them firmly into the hub of the feed shaft Fig.3.

Fig. 3



D. Chuck Guard Assembly

Slide the Chuck Guard over the Quill Shaft and nip up the pinch bolt, temporarily, with the pinch bolt facing the front, (see Fig. 4). Ensure the Quill Shaft/Spindle is at the top of its travel.

NOTE: *This operation should be carried out before the chuck is installed.*

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E. Installing the Chuck.

Fig. 4



1. Slide the table up the column and secure it to within 6" of the spindle.
2. Open the jaws of the chuck to their maximum, using the chuck key supplied.
3. Put a piece of scrap wood on to the table to protect the chuck nose.
4. Ensuring all parts are thoroughly clean, dry, and burr free, place the chuck over the end of the spindle, and pull the spindle down using the feed handles, pressing the chuck jaws hard against the piece of scrap wood until the chuck is forced home. (Fig.4).
5. Turn Chuck Guard through 180° and tighten pinch bolt.

F. Fitting the Drive Belts.

Fig.5



1. Undo the Belt Tension Locking Screws (one either side of the head - A Fig. 5), and turn the Belt Tension Lever (B - Fig. 5), clockwise to bring the Motor Pulley closer to the Spindle Pulley which will allow the belts to be slipped on with ease.
2. Lubricate the Idler Pulley Pivot shaft with light grease and locate in its' mounting between the Motor and Spindle Pulleys.
3. Consult the chart inside the belt cover (duplicated on page 12), and fit the belts in the position corresponding to spindle/drill speed required.

4. Turn the Belt Tension Lever (B) anti-clockwise so that tension is applied to the belts. Tension is correct when the belts deflects by approx. ½" at their centres of run when using reasonable thumb pressure. Lock the motor in this position with the Locking Screws - A.

NOTE:

1. *The idler pulley will 'float' so that tension is applied equally to both belts*
2. *If the belt should slip whilst drilling, adjust the belt tension.*

CHECKING THE OPERATION OF THE MICROSWITCH

IMPORTANT:

When closing the cover, check the operation of the Microswitch. It is important that it operates immediately the cover is pulled open, in order to prevent the machine from operating.....NOT when the cover is opened sufficiently for fingers to be inserted. If necessary, bend the actuating tab, which is attached to the cover, to ensure this.

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1. Table.

The table may be raised, lowered or swivelled about the column, by slackening off the Table Support Locking Handle, (Fig.7), adjusting accordingly, and re-tightening the handle.

It may also be tilted by loosening the M16 Screw, which secures the table to its' mounting, beneath the table, tilting to the required position and re-tightening the Screw.

Fig. 7



Table Support Locking Handle

Fig. 9



Table Tilt Scale

A scale is provided on the table mounting, measured in degrees, to assist in setting the required angle, (Fig.9)

For all normal operations, the table should be set to 0°.

To check to ensure the table is entirely square to the drill bit, insert a piece of straight round bar in the chuck, place a square on the table and bring it up to the round bar. Adjust the table tilt if necessary so that the table is correctly aligned.

Fig. 8



Table shown tilted and swivelled about the column

2. Spindle Depth. (All references are to Fig. 10)

Located around the spindle feed shaft is a Depth Stop Collar, carrying a graduated scale (A). The collar is capable of turning about the shaft, and may be locked in place by a Locking Screw (B).

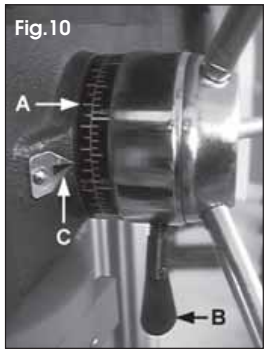
The graduations are imperial (inches) and metric (mm).

To set a drilling depth:

1. With the power OFF, lower the drill bit so that it contacts the work, and hold in that position.
2. Slacken off the locking screw, and turn the collar so that the measurement for the depth of hole required is in line with the pointer (C). Lock the collar in this position with the locking screw.

The drill is now set to drill holes to your pre-determined depth, from that particular start point.

i.e. Providing the surface of your workpiece is flat and level, you may drill a series of holes, each to the same depth.



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2. Changing Drill (Spindle) Speed.

Fig. 11



Before changing the speeds, ensure the machine is switched OFF, and disconnected from the mains supply.

1 Undo the Belt Tension Locking Screws (A - Fig. 11), one either side of the head, and turn lever B - Fig.5 clockwise to relieve any tension on the belts. Referring to the chart inside the belt cover (which is duplicated below), fit the belts in the positions corresponding to the spindle speed required.

2. Lever the motor, on its bracket, away from the head, by turning lever B - Fig.11, anticlockwise so that tension is applied to the belts.

NOTE: *The idler pulley will 'float' so that tension is equally applied to both belts*

Tension is correct, when the belts deflect by approx. ½" at their centre when using reasonable pressure with the thumb and forefinger.

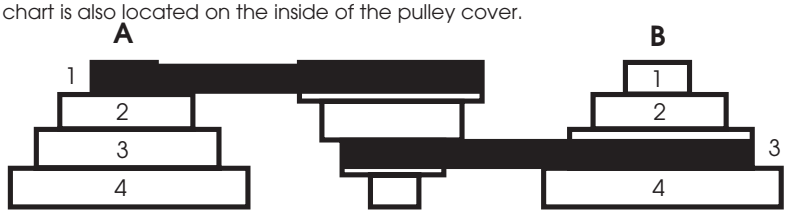
Lock the motor in this position using the two Locking Screws (A - Fig. 11).

NOTE: *If the belt should slip whilst drilling, adjust the belt tension.*

DRILL SPEED TABLE

The table below gives the belt arrangements for given drill speeds. The diagram shows the belts fitted to A1 and B3, giving a drill speed of 1540 RPM.

A full chart is also located on the inside of the pulley cover.



	Spindle Pulley A	Motor Pulley B	Drill Speed RPM
1	4	1	180
2	4	2	250
3	3	1	300
4	3	2	400
5	2	1	480
6	4	3	580

	Spindle Pulley A	Motor Pulley B	Drill Speed RPM
7	1	2	970
8	2	3	1280
9	3	4	1410
10	1	3	1540
11	2	4	2270
12	1	4	2740

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OPERATION.

1 . Insert the drill bit into the jaws of the chuck by approx 1", ensuring that the jaws do not touch the flutes of the drill. Before tightening the chuck, ensure that the drill is centred within the jaws.

2. Ensure the table height and position is set so that drill travel is sufficient for the job in hand.

3. Ensure the work is securely clamped, or, held in a drill vice, bolted to the table. Never hold it with bare hands. Severe personal injury may be caused if the workpiece is whipped out of the operator's hand, and, damage to the machine incurred if the work strikes the column.

   If the piece is of irregular shape and cannot be laid flat on the table, it should be securely blocked and clamped.

   Any tilting, twisting or shifting, results not only in a rough hole, but also increases drill breakage.

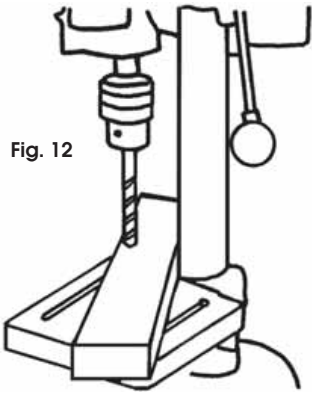


Fig. 12

4. For small workpieces that cannot be clamped to the table, use a Drill Press Vice. The vice must be clamped or bolted to the table.

5. When drilling completely through wood, always position a piece of scrap wood between the workpiece and the table to prevent splintering on the underside of the workpiece as the drill breaks through. The scrap piece of wood must make contact with the left side of the column as shown in Fig 12. In addition, set the depth of drill travel so that the drill cannot possibly come into contact with the table, or, align the table so that the hole in its' centre is directly in line with the drill bit.

6. When completely satisfied that the setup is sound, lower the Chuck Guard into place, and switch the machine ON, by raising the switch cover, as shown in fig. 13, and pushing the GREEN 'I' button.

   To switch OFF, hit the switch cover, which will push the RED s'O' button, turning the machine OFF.

Fig. 13



NOTE:

a. *As a safety feature, the ON/OFF switch is a No Volt Release type. Therefore, if the power is interrupted whilst the machine is switched ON, it will not automatically start when the power is restored.*

b. *A Micro switch is provided within the Pulley Cover, which prevents the machine from operating unless the Pulley Cover is firmly closed.*

Drill Press Vices, Cross Vices and Clamps, are available from your CLARKE dealer.

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MAINTENANCE

For maximum performance, it is essential that the Drill Press is properly maintained. Always inspect the machine for damage, and security of components before use. Any damage should be repaired, and faults rectified.

If the mains lead is worn, cut or damaged in any way, it should be replaced immediately.

Please refer to the trouble shooting chart on page 16. If you are unable to rectify any faults, please contact your local dealer or Clarke International Service Division on 020 8556 4443 for assistance.

Monthly (When in constant use)

1. Check tightness of mounting bolts, and head and column securing set screws.
2. Check belt for wear and replace if frayed or damaged in any way.
3. Blow out any dust that may have accumulated in the motor fan.
4. Apply a thin coat of wax paste or light oil to the table and column for lubrication and to help prevent corrosion.

Lubrication

All bearings are packed with grease at the factory and require no further lubrication.

After use

Remove all swarf from the machine and thoroughly clean all surfaces.

Components should be dry, with machined surfaces lightly oiled.

Always remove drill bits, and store in a safe place.

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CUTTING SPEEDS

Factors which determine the best speed to use in any drill press operation are:

1. Kind of material being worked.
2. Size of hole.
3. Type of drill.
4. Quality of cut desired.

Generally, the smaller the drill, the greater the required RPM. In soft material, the speed should be higher than for hard metals.

As a guide, the drill speed for a given drill bit size, is according to the table below.

Speed Range (RPM)		2740	1410 - 2270	970 -1280	480 - 580	250 - 400	180
Wood	in	3/8	1/2	-	-	-	-
	mm	9.5	12.5	-	-	-	-
Zinc Diecast	in	1/4	3/8	1/2	-	-	-
	mm	6.4	9.5	12.5	-	-	-
Alum & Brass	in	7/32	11/32	15/32	-	-	-
	mm	5.6	8.75	12	-	-	-
Plastic	in	3/16	5/16	7/16	-	-	-
	mm	4.8	7.9	11	-	-	-
Cast Iron & Bronze	in	1/8	1/4	11/32	1/2	-	-
	mm	3.2	6.4	8.75	12.5	-	-
Mild Steel & Malleable	in	3/32	5/32	1/4	3/8	1/2	-
	mm	2.4	4	6.4	9.5	12.5	-
Cast Steel & Med Carbon	in	1/16	1/8	3/16	5/16	7/16	1/2
	mm	1.6	3.2	4.8	7.9	11	12.5
Stainless and Tool Steel	in	3/64	1/16	1/8	1/4	3/8	1/2
	mm	1.2	1.6	3.2	6.4	9.5	12.5

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TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY
Noisy operation (under load)	A) Incorrect belt tension B) Dry spindle C) Loose pulley D) Worn bearing	A) Adjust tension B) Remove spindle/quill assembly and lubricate C) Tighten pulley D) Replace bearing
Excessive drill wobble	A) Loose chuck B) Worn spindle, or bearing C) Worn chuck D) Bent drill	A) Tighten by pressing chuck down on to a block of wood against the table. B) Replace spindle shaft or bearing C) Replace chuck D) Renew Drill
Motor won't start	A) Power supply B) Motor connection C) NVR Switch connections D) Faulty switch E) Motor windings burned F) Pulley Cover not closed G) Micro Switch inoperative	A) Check power cord/fuse B) Check motor connections C) Check switch connections D) Replace switch E) Replace motor F) Close pulley cover. G) Check operation of micro switch, See P10 - and renew if faulty
Drill binds in workpiece	A) Excessive feed pressure B) Loose belt C) Loose drill D) Incorrect drill speed. E) Drill profile incorrect for type of material	A) Apply less pressure B) Check belt tension C) Tighten drill with key D) Refer to Cutting Speed chart, and adjust drill speed accordingly E) Consult an appropriate manual re. Materials, Drills and Cutting Angles, and sharpen drill accordingly.
Drill burns or smokes	A) Incorrect speed. B) Chips are not discharging C) Dull drill or incorrect profile for material D) Lack of coolant E) Excessive feed pressure	A) Refer to Cutting Speed chart, and adjust drill speed accordingly B) Clean drill C) As 'E' above D) Use coolant whilst drilling E) Apply less pressure
Table difficult to raise	A) Needs lubrication B) Table lock tightened	A) Lubricate with light oil B) Loosen clamp

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SPECIFICATIONS

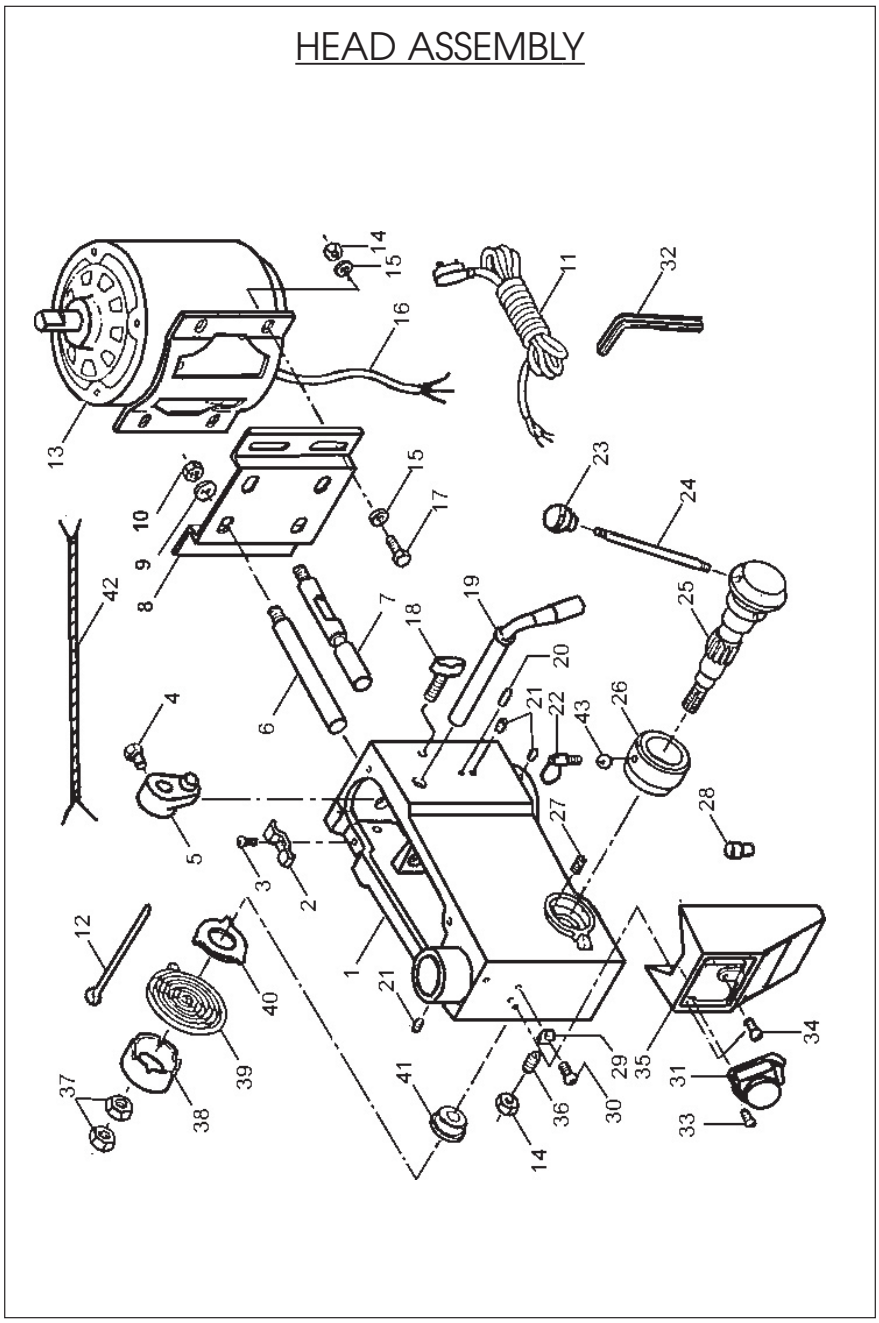
Motor	230VAC, 50Hz, 1 Phase
Power Rating	370Watts
Current Rating	1.8Amps
Speed	1400RPM
Fuse Rating	13Amps
No. of Speeds	12
Chuck Capacity	13mm
Spindle Taper	JT33
Table Type	Square - Dry
Table Dimensions	250x250mm
Table T- Slot Dimensions	14x155mm
Max. Spindle Travel	80mm
Max. Dist. Chuck to Table (201B)	435mm
Max. Dist. Chuck to Table (251F)	745mm
Max. Dist. Chuck to Base (201B)	640mm
Max. Dist. Chuck to Base (251F)	1195mm
Column Dia.70mm	
Quill Collar Dia.	55mm
Dist. Column to Chuck Centre	170mm
Overall Dimensions(201B)	1062x330x580mm
Overall Dimensions (251F)	1610x330x580mm
Belt Type	M24 - 610 x2
Weight (201B)	52.5 kg
Weight (251F)	57 kg

OPTIONAL ACCESSORIES

Morticing Attachments, Mortice Chisels,
Drill Press Vices, Cross Vices (Cast Iron),
and Table Clamps
are available from your CLARKE dealer

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HEAD ASSEMBLY



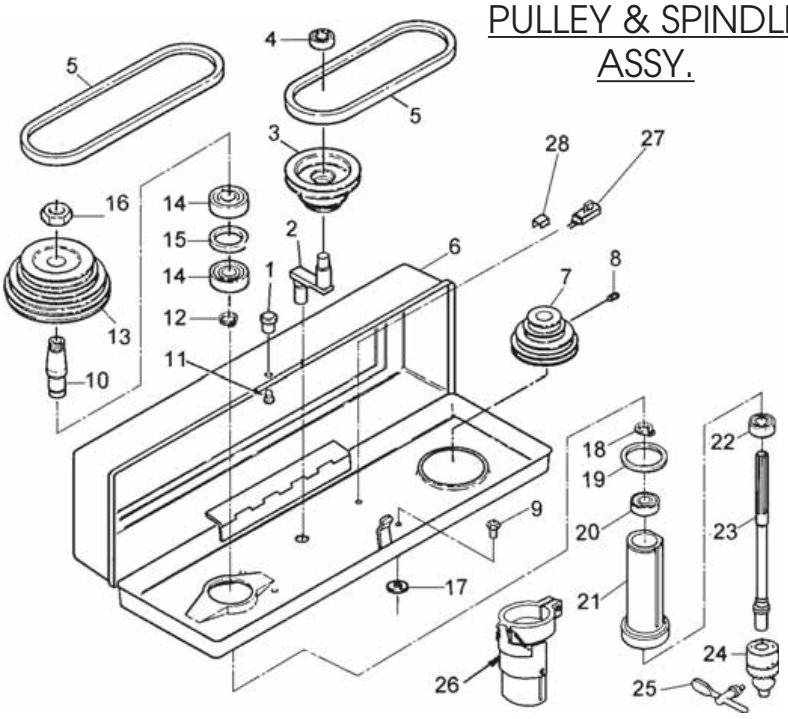
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HEAD ASSEMBLY PARTS LIST

No.	Description	Part No.
1	Head w/pointer & trim	DD13302001
2	Cable Clamp	DD16102014
3	Pan Head Screw M5	3040656
4	Hex. Screw M8	30404500
5	Adjusting Lever	DD16102006
6	Motor Support Rod	DD16102003
7	Motor Support Rod	DD16102002
8	Motor Mount	DD16102007A
9	Lockwasher 12mm	DDGB93-87
10	Nut Hex. M12	3040603
11	Power Cable	DD13302015L
12	Cable Tie	DD16102017
13	Motor	DDYL7114-03
14	Hex. Nut M8	3040601
15	Washer M8	DDGB972-85
16	Motor Cable	DD13302016B
17	Hex. Screw M8	DDGB5781-86
18	Belt Tension Locking Screw	DD16102005
19	Belt Tension Lever	DD16102004
20	Roll Pin	DDGB879-86
21	Head Lock Set Screw M8	DDGB80-85
22	Depth Screw Lock	DD16104012
23	Knob	DD13204011
24	Feed Handle	DD13304005
25	Spindle Feed Shaft	DD13304000
26	Depth Stop Collar w/Scale	DD13304003
27	Stop Pin	DD13304010
28	Connector Wire	DD13302019
29	Ext. Lockwasher 5mm	DDGB8621-87
30	Pan Head Screw M5	DDGB818-85
31	No Voltage Switch	DDKJD12A
32	Allen Key 4mm	DDGB5356-86
33	Pan Head Screw	DDGB845-85
34	Pan Head Screw M5	3040495
35	Switch Box	DD13302008
36	Screw - Special Set M8	DD13302021
37	Hex. Nut M12	3040603
38	Quill Spring Cap	DD16104008
39	Quill Spring	DD16104009
40	Quill Spring Retainer	DD16104007
41	Quill Spring Seat	DD16104006
42	Lead	DD13302029

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PULLEY & SPINDLE ASSY.

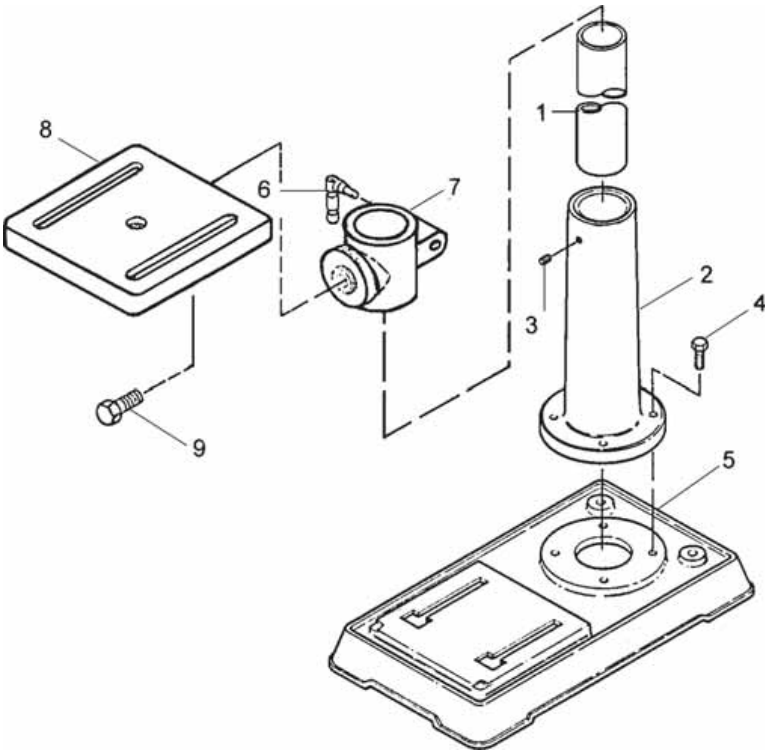


PARTS LIST

No.	Description	Part No	No.	Description	Part No.
1	Knob	DD16105008	15	Spacer	DD13302023
2	Idler Pivot	DD16105007	16	Pulley Nut	DD13302025
3	Idler Pulley	DD16105006	17	Foam Washer	DD13105009
4	Ball Bearing 60202	BG60202	18	Retaining Ring 11mm	DDGB8941-86
5	'V' Belt M24	DD16105011	19	Quill Gasket	DD13303006
6	Pulley Cover w/labels	DD13305000	20	Ball Bearing 60201	BRG60201
7	Motor Pulley	DD16105005	21	Quill	DD1302002
8	Hex Skt Screw Set M8	DDGB80-85	22	Ball Bearing 80202	BRG80202
9	Washer Head Screw	3040650	23	Spindle	DD1303001
10	Pulley Insert	DD13302022	24	Chuck JT33	DDJ2613
11	Pan Head Screw	3040656	25	Chuck Key	DD13303010
12	Retaining Ring 17mm	DDGB8941-86	26	Chuck Guard	DD16108001
13	Spindle Pulley	BRG60203	27	Micro switch	DDXN2
14	Ball Bearing 60203	DDGB278-89	28	Micro switch Cover	See dealer

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BASE ASSEMBLY



No.	Description	Part No. CDP201B	Part No. CDP251F
1	Column	DD16101003B	DD16101003
2	Column Support	DD16101002B	DD16101002
3	Hex. Socket Screw Set	3040430	3040430
4	Hex. Head Screw M10M10	3044518	3044518
5	Base	DD13301001	DD13301001
6	Table Support Locking Handle	DD16101012	DD16101012
7	Table Support w/indicator	DD16101004B	DD16101004B
8	Square Table - Dry	DD1301014A	DD13301014A
9	Screw Hex. Head M16	DDGB54781-86	DDGB5781-86

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