

# CLARK®

## METALWORKER



### 12 SPEED DRILL PRESS

Model No's: CDP10B & CDP15F

## OPERATING & MAINTENANCE INSTRUCTIONS



SERIAL No.....

0905

## SPECIFICATIONS

Motor .....	230VAC, 50Hz, 1 Phase	
Power Rating .....	370Watts	
Current Rating .....	1.3Amps	
Speed .....	210 - 2580RPM	
Fuse Rating .....	13Amps	
No. of Speeds .....	12	
Chuck Capacity .....	16mm	
Spindle Taper .....	MT2	
Table Type .....	CDP10B - Square - Dry .....	CDP15F - Round - DRY
Table Dimensions .....	CDP10B - 200x200mm .....	CDP15F - 250mm dia.
Table T-Slot Dimensions .....	CDP10B - 16x130mm .....	CDP15F - 12x70mm
Max. Spindle Travel .....	60mm	
Max. Dist. Chuck to Table .....	CDP10B - 330mm .....	CDP15F - 700mm
Max. Dist. Chuck to Base .....	CDP10B - 445mm .....	CDP15F - 1100mm
Column Dia. ....	60mm	
Dist. Column to Chuck Centre .....	127mm	
Overall Height .....	CDP10B - 840mm .....	CDP15F - 1530mm
Base Size .....	CDP10B - 210x340mm .....	CDP15F - 250x420mm
Belt Type .....	K550	
Gross Weight .....	CDP10B - 42kg .....	CDP15F - 53kg

## OPTIONAL ACCESSORIES

**Drill Press Vices, from 3" to 6", Cross Vices (Cast Iron), and Table Clamps  
are available from your CLARKE dealer**

## DECLARATION OF CONFORMITY

We declare that this product complies with the following standards/directives;

- 73/23/EEC
- 98/37 EEC
- 89/336/EEC

Signed



## SPARE PARTS & SERVICING

Please contact your nearest dealer, or CLARKE International, on one of the following numbers.

**PARTS - 020 8558 6696 : SERVICE - 020 8556 4443**

**PARTS & SERVICE FAX - 020 8558 3622**

or E-MAIL

**PARTS - [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com)**

**SERVICE- [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)**



## INTRODUCTION

Thank you for purchasing your CLARKE 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. Please keep your receipt which will be required 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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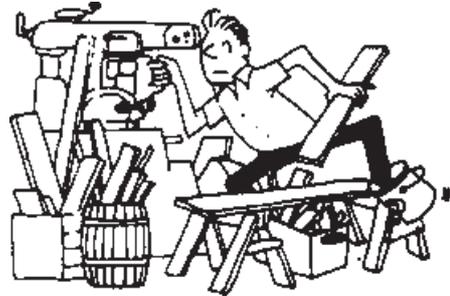
# GENERAL SAFETY RULES FOR OPERATING MACHINERY

## 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.*



- **DISCONNECT the MACHINE** from the power supply before servicing, making adjustments or when changing accessories such as drills, vices etc.



- **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.

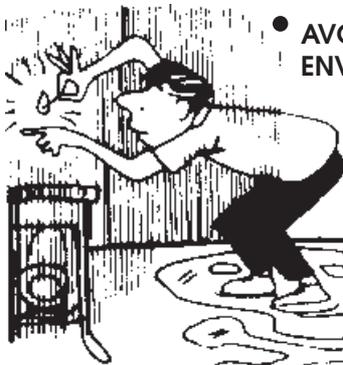
- **DON'T FORCE THE MACHINE.**

It will do a better and safer job at the rate for which it was designed.



- **DON'T OVERREACH.**

Keep your proper footing and balance at all times. For best footing, wear rubber soled footwear. Keep floor clear of oil, scrap wood, etc.



- **AVOID DANGEROUS ENVIRONMENTS**

Don't use power machines in damp or wet locations or expose them to rain.

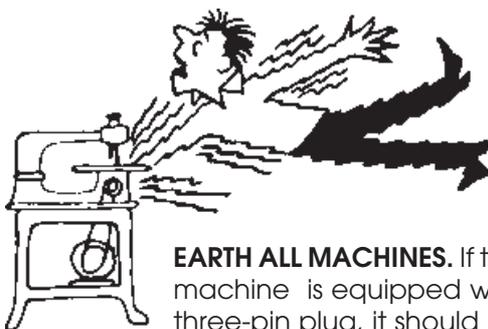
Keep your work area well illuminated.

**DO NOT USE** in explosive atmosphere (around paint, flammable liquids etc.).



**ENSURE THE WORKPIECE IS COMPLETELY SECURE** before switching ON.

**NEVER** hold a workpiece by hand alone.

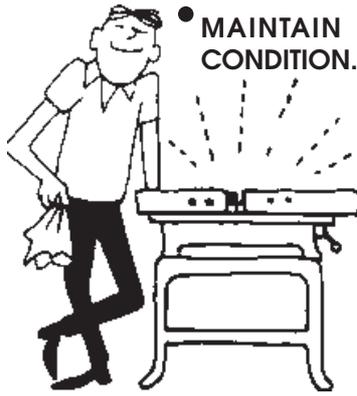


**EARTH ALL MACHINES.** If the machine is equipped with three-pin plug, it should be plugged into a three-pin electrical socket. Never remove the earth pin.



- **ALWAYS WEAR SAFETY GOGGLES,**

manufactured to the latest European Safety Standards. Also use face or dust mask if cutting operation is dusty. Everyday eye glasses do not have impact resistant lenses, they are NOT safety glasses.



- **MAINTAIN MACHINE IN TOP CONDITION.**

Keep tools sharp and clean for the best and safest performance. Follow maintenance instructions.

- **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.

**READ and BECOME FAMILIAR with the entire operating manual.** Learn the machines applications and limitations as well as the specific potential hazards peculiar to it.

- **CHECK for DAMAGE.** Before using the machine, any damaged part, such as a guard etc., should be checked to ensure that it will operate properly, and perform its intended function. Check for alignment of moving parts, breakage of parts, mountings, and any other condition that may affect the machines' operation. Any damage should be properly repaired or the part replaced. If in doubt, DO NOT USE the machine. Consult your local dealer.

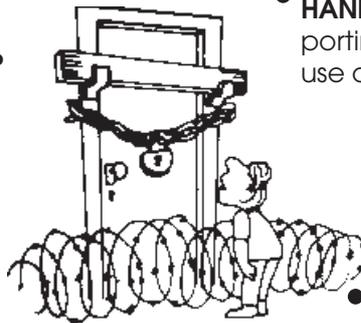
- **WEAR PROPER APPAREL.**

Loose clothing or jewellery may get caught in moving parts. Wear protective hair covering to contain long hair.



- **MAKE YOUR WORKSHOP CHILDPROOF.**

With padlocks, master switches where appropriate, or by removing starter keys



- **HANDLE WITH EXTREME CARE** Whenever transporting or installing machinery, and always use a lifting tool.

- **DRUGS, ALCOHOL, MEDICATION.** Do not operate machine while under the influence of drugs, alcohol or any medication.

- **USE ONLY RECOMMENDED ACCESSORIES.** The use of improper accessories could be hazardous.

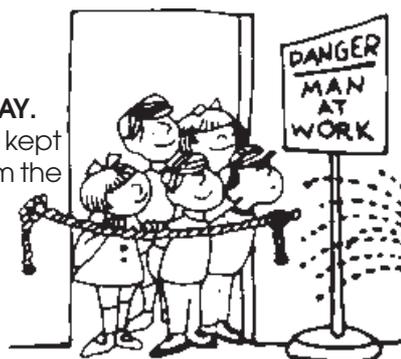
- **ALWAYS KEEP GUARDS in place** and in working order.

- **NEVER STAND ON THE MACHINE.** Serious injury could occur if the machine is tipped or if a cutting tool is accidentally contacted. Do not store materials above or near a machine, such that it is necessary to stand on the machine to reach them.



**AVOID ACCIDENTAL STARTING.** Ensure the switch is OFF before plugging in to mains.

- **KEEP CHILDREN AWAY.** All visitors should be kept a safe distance from the work area, especially whilst operating the machine.



- **BE AWARE** that accidents are caused by carelessness due to familiarity. ALWAYS concentrate on the job in hand, no matter how trivial it may seem.

- **NEVER LEAVE MACHINE RUNNING UNATTENDED.** Turn power OFF. Do not leave machine until it comes to a complete stop

## 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 14).
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 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.

## ELECTRICAL CONNECTIONS

Connect the mains lead to a standard, 230 Volt (50Hz) electrical supply through an approved 13 amp B3S 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

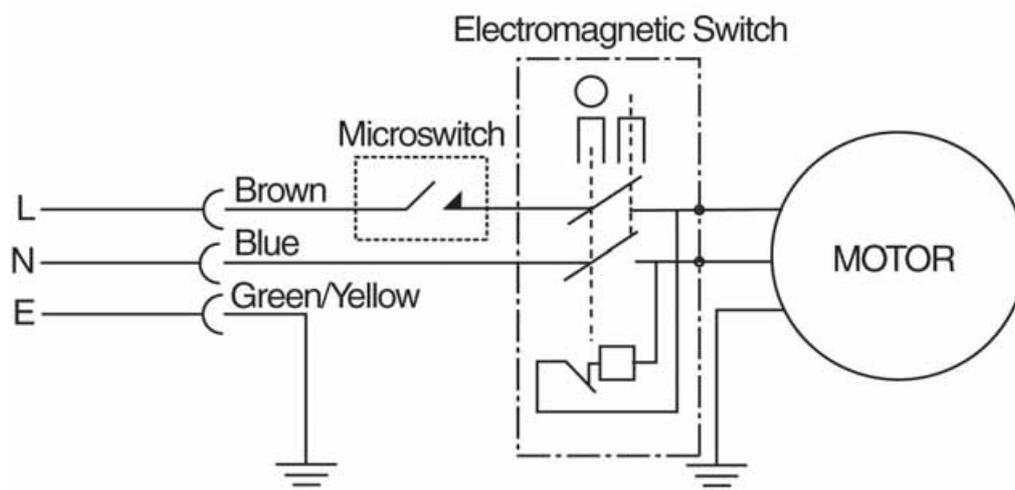
As the colours of the flexible lead of this appliance may not correspond with the coloured markings identifying terminals in your plug proceed as follows:

- Connect GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol  $\text{⏏}$  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

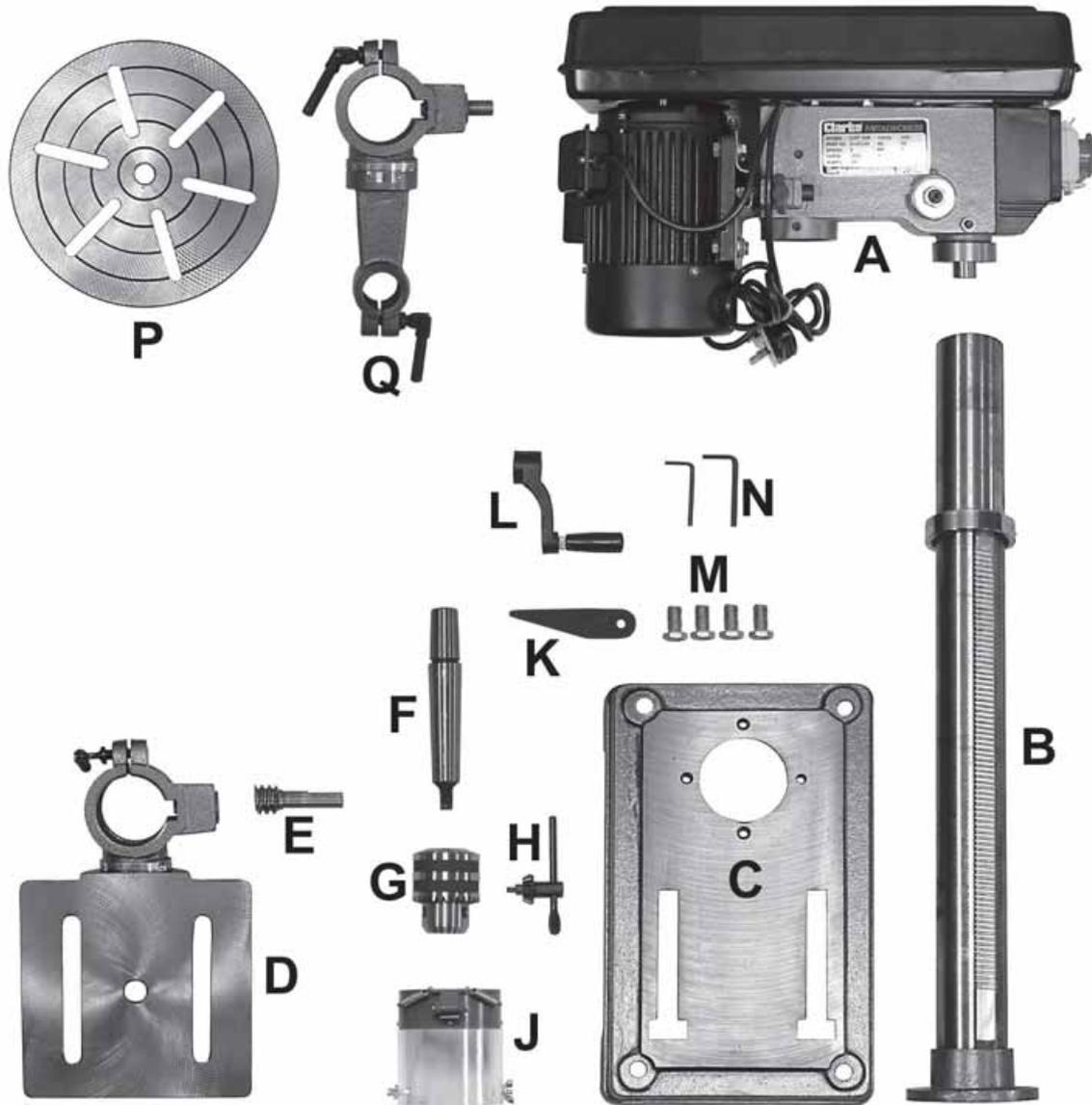


## PREPARATION

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.

Check the parts against the list below. Should there be any deficiencies or damage, you should contact your CLARKE dealer immediately .



- |                               |                               |
|-------------------------------|-------------------------------|
| A. Head Assembly              | J. Chuck Guard                |
| B. Column, complete with rack | K. Drift Wedge                |
| C. Base                       | L. Crank                      |
| D. Square Table (CDP10B)      | M. Bolt M10x25                |
| E. Worm (CDP10B)              | N. 2xAllen Keys               |
| F. Arbor                      | P. Round Table (CDP15F)       |
| G. Chuck                      | Q. Table Support Bkt (CDP15F) |
| H. Chuck Key                  |                               |

# ASSEMBLY

## CAUTION!

IT IS ADVISED THAT ASSISTANCE BE USED WHEN ASSEMBLING THIS MACHINE.

**NOTE:** Ideally, the base should be firmly bolted to a workbench, or floor, prior to the assembly of other components. The mounting surface must flat, level, and capable of supporting the weight of the drill plus anticipated work.

Floor mounting should be by proper foundation bolts, minimum size- M10. If necessary, consult a qualified engineer to ensure installation is sound.

CDP10B - Bench model should be bolted to a suitably constructed workbench, using minimum size M10 bolts.

Before assembly, 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.

### A. Column to the Base.

Bolt the column assembly to the base with the four hex. screws provided.

### B. Mounting the Table Assembly

1. From the box of loose parts, locate the worm, and install it in the gear housing of the table support, liberally greased and pushed fully home - see Fig.1.
2. Push the crank on to the worm spigot, protruding from the gear housing, as far as it will go and tighten the crank's grub screw on to the flat on the spigot.
3. Slacken the grub screw, securing the collar to the column - see Fig.2, and pull collar and rack from off the column completely.
4. Slide the rack into the table support with the long, smooth end uppermost, so that the gear teeth engage with the worm, as shown in Fig.3, and holding in this position, slide the table support, with rack, on to the column.
5. Lower the table support so that the end of the rack sits fully into the groove made by the column support on the base, and the column, then replace the collar on to the column, with the groove, machined on its inner periphery, facing downwards.
6. With the rack sitting snugly in the grooves, top and bottom, tighten the collar grub screw ensuring there is sufficient clearance to allow the complete table assembly to move about the column.

Apply a film of grease to the groove in the base and collar in which the ends of the rack sits.

7. Check to ensure the table moves smoothly from top to bottom of the rack, and if necessary ease off the rack collar by slackening the grub screw and repositioning the collar in order to achieve this.

Fig. 1

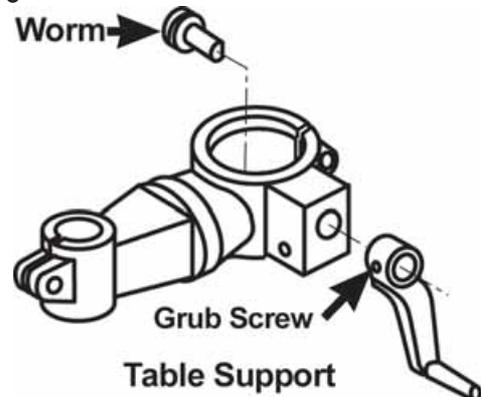


Fig. 2

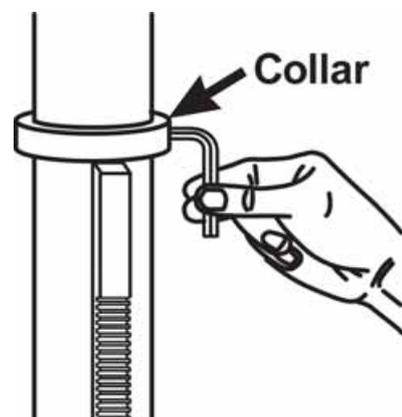
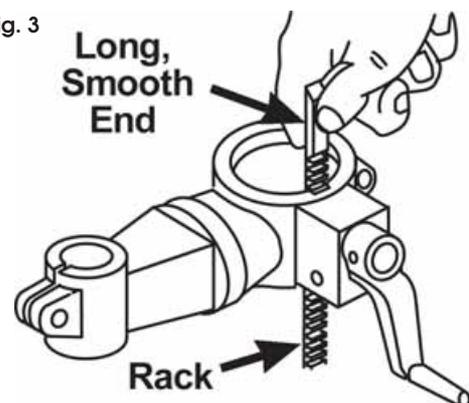


Fig. 3



## C. Head to Column.

**NOTE:** *It may be necessary to unscrew the Head Lock Set Screws (A fig.4), 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 as shown in Fig.6

## 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 A, fig.5). Ensure the Quill Shaft/Spindle is at the top of its travel.

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

## E. Installing the Chuck.

1. Slide the work table up the column 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 hard against the piece of scrap wood until the chuck is forced home. Remove the wood.
5. Slacken the chuck guard pinch bolt and turn the chuck guard so the pinch bolt is towards the rear and tighten the pinch bolt.

## F. Belt Tension

Slacken the two belt tension locking screws (A Fig.6), then lever the motor, on its bracket, away from the head, so that tension is applied to the belt.

Tension is correct when the belt deflects by approx. 1/2" at the centre of its run when using reasonable thumb pressure.

Lock the motor in this position by tightening the two locking screws (A).

**NOTE:** *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.***

Fig. 4



Fig. 5

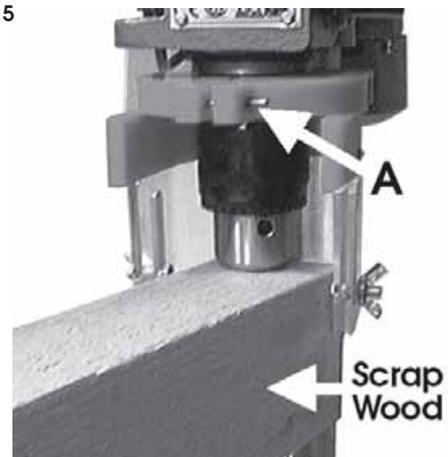
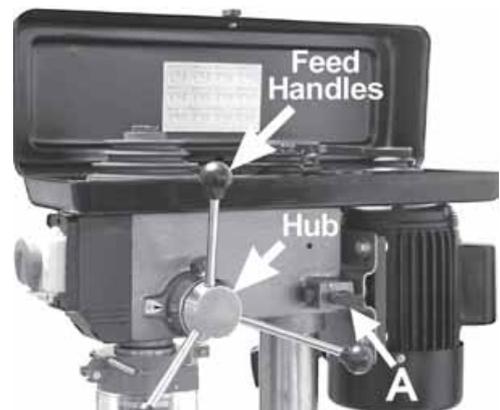


Fig. 6



## SETTINGS and ADJUSTMENTS

### 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 screw, which secures the table to its' mount, beneath the table (see Fig.9), tilting to the required position, and re-tightening the screw.

A bevel scale is provided on the table mounting, measured in degrees, to assist in setting the required angle, see Fig 8.

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

The round table of the floor mounted version may also be swivelled about its axis by slackening the locking lever (see Fig.9). Ensure it is tight before commencing to drill.

To check to ensure the table is entirely square to the drill, 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.7



Fig. 8

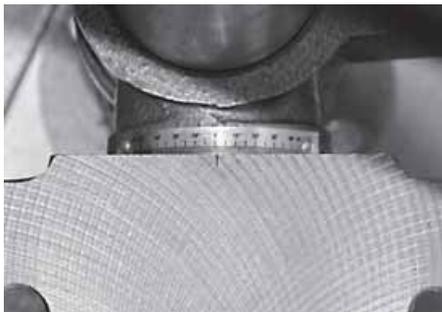


Table Tilt Scale

Fig.9



### 2. Spindle Depth

Located around the Spindle Feed Shaft is a Depth Stop Collar carrying a graduated scale (A, Fig. 10). The Collar is capable of turning about the shaft and may be locked in place by Locking Screw B. The Graduations are Metric (mm).

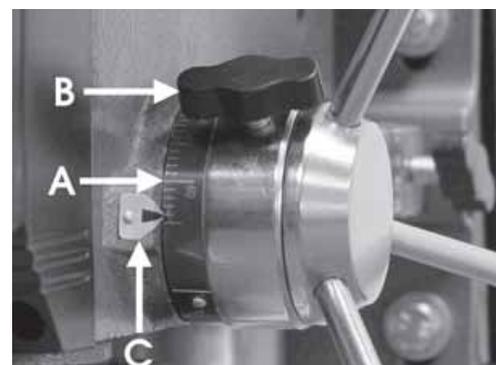
To set a drilling depth:

With the drill bit installed and tightened securely, lower it...WITH THE POWER OFF, so that it lightly contacts the work, and hold in that position with one hand whilst slackening the locking screw (B) and rotating the scale (A) ANTICLOCKWISE until it stops. The zero mark should now be opposite the pointer (C).

Maintaining a light pressure on the drill bit, back off the scale ring until the value of the desired depth of cut (mm), is opposite the pointer, then tighten the locknut (B).

The drill is now set to drill holes to your desired depth. i.e. Providing your workpiece is level and flat, you may drill a series of holes, each to the same depth, quickly and accurately.

Fig. 10



### 3. Changing Drill (Spindle) Speed.

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

1. Slacken off the Belt Tension Locking Screw (see fig.6), to relieve any tension on the drive belt.
2. Open the pulley cover.
3. Consult the chart inside the pulley cover and position the belts on the pulleys according to the spindle speed required.
4. When the belt has been correctly positioned, re-tension by levering the motor away from the head, until the belts deflect by approx. ½" at the middle of their run, when using reasonable thumb pressure. Lock the motor in this position with the Belt Tension Locking Screws. Finally, re-check the operation of the Microswitch (see page 10)

Fig. 11

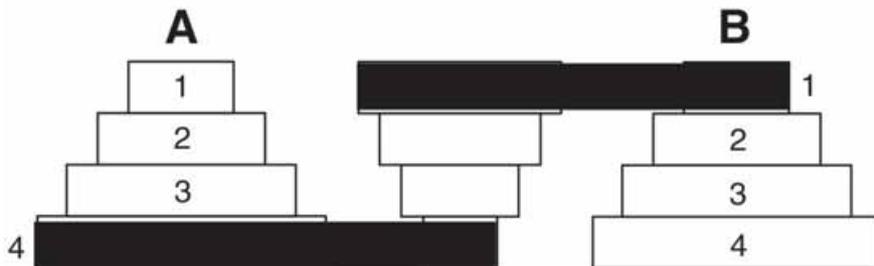


## DRILL SPEED TABLE

The table below gives the belt arrangement for given drill speeds. A full chart is also provided on the inside of the pulley cover.

	Spindle Pulley A	Motor Pulley B	Drill Speed RPM		Spindle Pulley A	Motor Pulley B	Drill Speed RPM
1	4	1	210	7	1	2	830
2	4	2	280	8	2	3	1290
3	3	1	320	9	3	4	1350
4	2	1	420	10	1	3	1580
5	3	2	500	11	2	4	2180
6	4	3	540	12	1	4	2580

Fig. 12



The diagram shows the belts fitted to step 4 of the Spindle Pulley and 1 of the Motor Pulley, giving a drill speed of 210 RPM.

## 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.

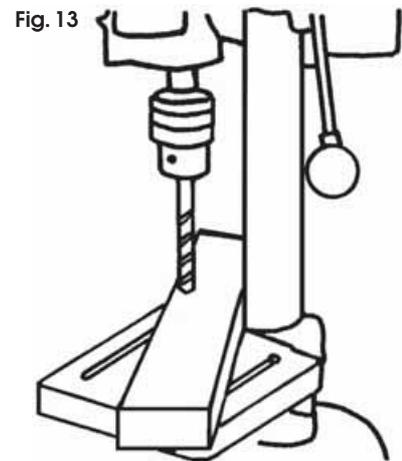
If the piece is of irregular shape and cannot be laid flat on the table, it should be securely blocked and clamped.

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

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

5. If/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 13.

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 at its' centre is directly in line with the drill bit.



6. When completely satisfied that the setup is sound, lower the Chuck Guard and switch the machine ON by pushing the GREEN 'I' button. To switch OFF...push the RED 'O' button, see fig. 14.

In an emergency, hit the large round RED button on the switch cover (arrowed in Fig 14)

If the cover is latched, open it by pushing the red button upwards with the thumb



### 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.**

## MAINTENANCE

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

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

Please refer to the trouble shooting chart on page 15 . If you are unable to rectify any faults, please contact your local dealer or Clarke International Service Division on 020 8988 7400 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.

## CUTTING SPEEDS

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

- Kind of material being worked
- Size of hole
- Quality of cut desired
- Type of Drill

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

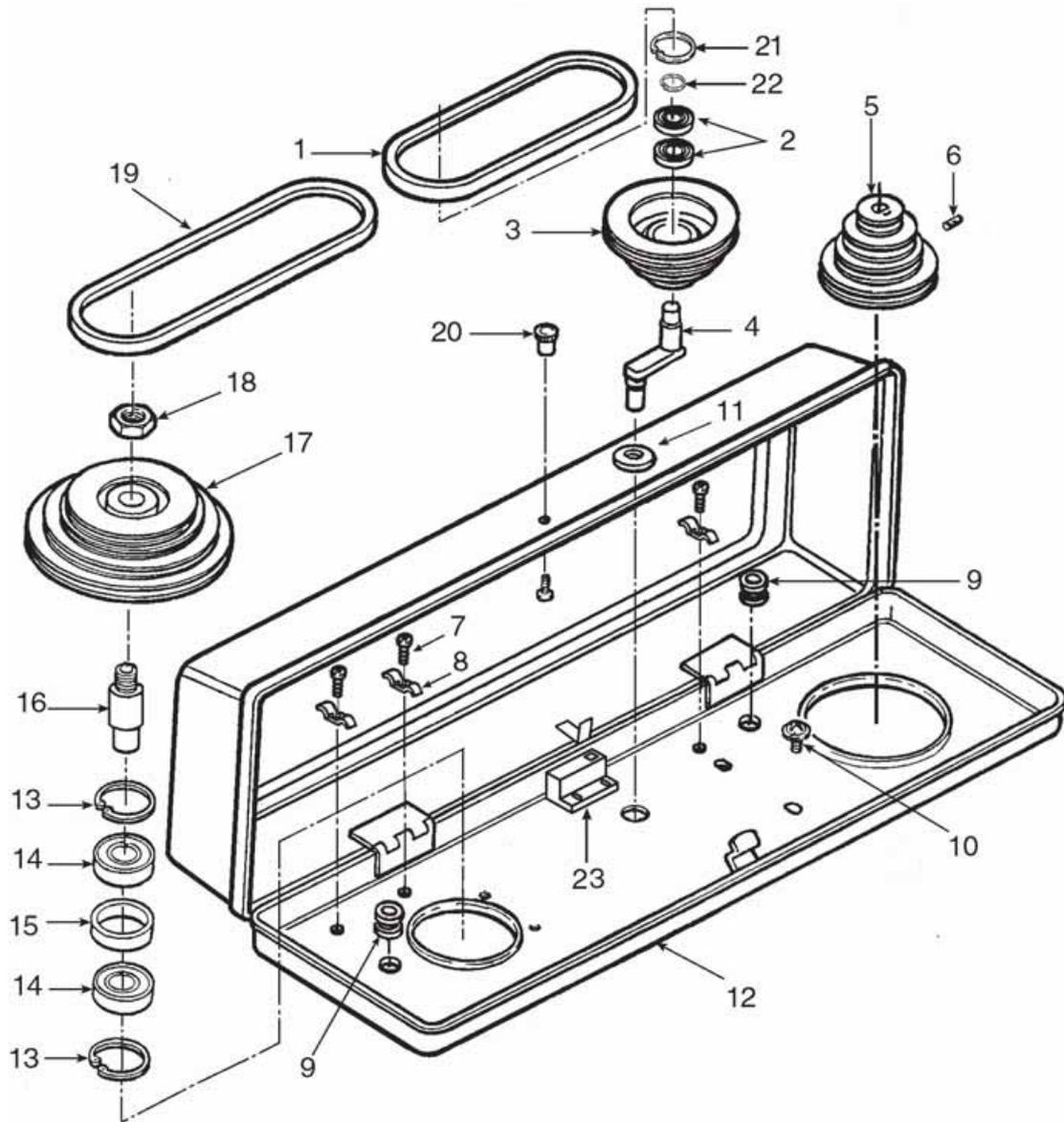
As a general guide, the drill speed for a given drill bit size, is according to the table below.

Speed Range (RPM)		2180 - 2580	1580	1290 - 1350	830	500 - 540	320 - 420	210 - 280
Wood	in	1/4	3/8	5/8	-	-	-	-
	mm	6.4	9.5	16	-	-	-	-
Zinc Die-cast	in	3/16	1/4	3/8	1/2	5/8	-	-
	mm	4.8	6.4	9.5	12.5	16	-	-
Alum & Brass	in	1/8	3/16	3/8	1/2	11/16	-	-
	mm	3.2	4.8	9.5	12.5	17.5	-	-
Plastic	in	1/8	3/16	5/16	7/16	1/2	5/8	-
	mm	3.2	4.8	7.9	11	12.5	16	-
Cast Iron & Bronze	in	3/32	1/8	1/4	11/32	1/2	5/8	-
	mm	2.4	3.2	6.4	8.75	12.5	16	-
Mild Steel & Malleable	in	1/16	3/32	5/32	1/4	3/8	1/2	-
	mm	1.6	2.4	4	6.4	9.5	12.5	-
Cast Steel & Med Carbon	in	3/64	1/16	1/8	3/16	5/16	7/16	9/16
	mm	1.2	1.6	3.2	4.8	7.9	11	14.5
Stainless and Tool Steel	in	1/32	3/64	1/16	1/8	1/4	3/8	1/2
	mm	0.8	1.2	1.6	3.2	6.4	9.5	12.5

## TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY
Noisy operation (under load)	<ul style="list-style-type: none"> <li>A) Incorrect belt tension</li> <li>B) Dry spindle</li> <li>C) Loose pulley</li> <li>D) Loose belt</li> <li>E) Worn bearing</li> </ul>	<ul style="list-style-type: none"> <li>A) Adjust tension</li> <li>B) Remove spindle/quill assembly and lubricate</li> <li>C) Tighten pulley</li> <li>D) Adjust belt tension</li> <li>E) Replace bearing</li> </ul>
Excessive drill wobble	<ul style="list-style-type: none"> <li>A) Loose chuck</li> <li>B) Worn spindle, or bearing</li> <li>C) Worn chuck</li> <li>D) Bent drill</li> </ul>	<ul style="list-style-type: none"> <li>A) Tighten by pressing chuck down on to a block of wood against table.</li> <li>B) Replace spindle shaft or bearing</li> <li>C) Replace chuck</li> <li>D) Renew Drill</li> </ul>
Motor won't start	<ul style="list-style-type: none"> <li>A) Power supply</li> <li>B) Motor connection</li> <li>C) NVR Switch connections</li> <li>D) Faulty switch</li> <li>E) Motor windings burned</li> <li>F) Pulley Cover not closed.</li> <li>G) Micro Switch inoperative</li> </ul>	<ul style="list-style-type: none"> <li>A) Check power cord/fuse</li> <li>B) Check motor connections</li> <li>C) Check switch connections</li> <li>D) Replace switch</li> <li>E) Replace motor</li> <li>F) Close pulley cover</li> <li>G) Check operation of micro switch, per instructions Page 10. If switch operates correctly but motor fails to start consult your Clarke dealer</li> </ul>
Drill binds in workpiece	<ul style="list-style-type: none"> <li>A) Excessive feed pressure</li> <li>B) Loose belt</li> <li>C) Loose drill</li> <li>D) Incorrect drill speed.</li> <li>E) Drill angles incorrect for type of material</li> <li>F) Loose Spindle Pulley</li> </ul>	<ul style="list-style-type: none"> <li>A) Apply less pressure</li> <li>B) Check belt tension</li> <li>C) Tighten drill with key</li> <li>D) Refer to Cutting Speed chart, and adjust drill speed accordingly</li> <li>E) Consult an appropriate manual re. Drills and Cutting Angles, and sharpen drill accordingly</li> <li>F) Tighten Pulley grub screw</li> </ul>
Drill burns or smokes	<ul style="list-style-type: none"> <li>A) Incorrect speed.</li> <li>B) Chips are not discharging</li> <li>C) Dull drill or incorrect clearance for material</li> <li>D) Needs coolant</li> <li>E) Excessive feed pressure</li> </ul>	<ul style="list-style-type: none"> <li>A) Refer to Cutting Speed chart, and adjust drill speed accordingly</li> <li>B) Clean drill</li> <li>C) Check sharpness &amp; profile</li> <li>D) Use coolant whilst drilling</li> <li>E) Apply less pressure</li> </ul>
Table difficult to raise	<ul style="list-style-type: none"> <li>A) Needs lubrication</li> <li>B) Table lock tightened</li> </ul>	<ul style="list-style-type: none"> <li>A) Lubricate with light oil</li> <li>B) Loosen clamp</li> </ul>

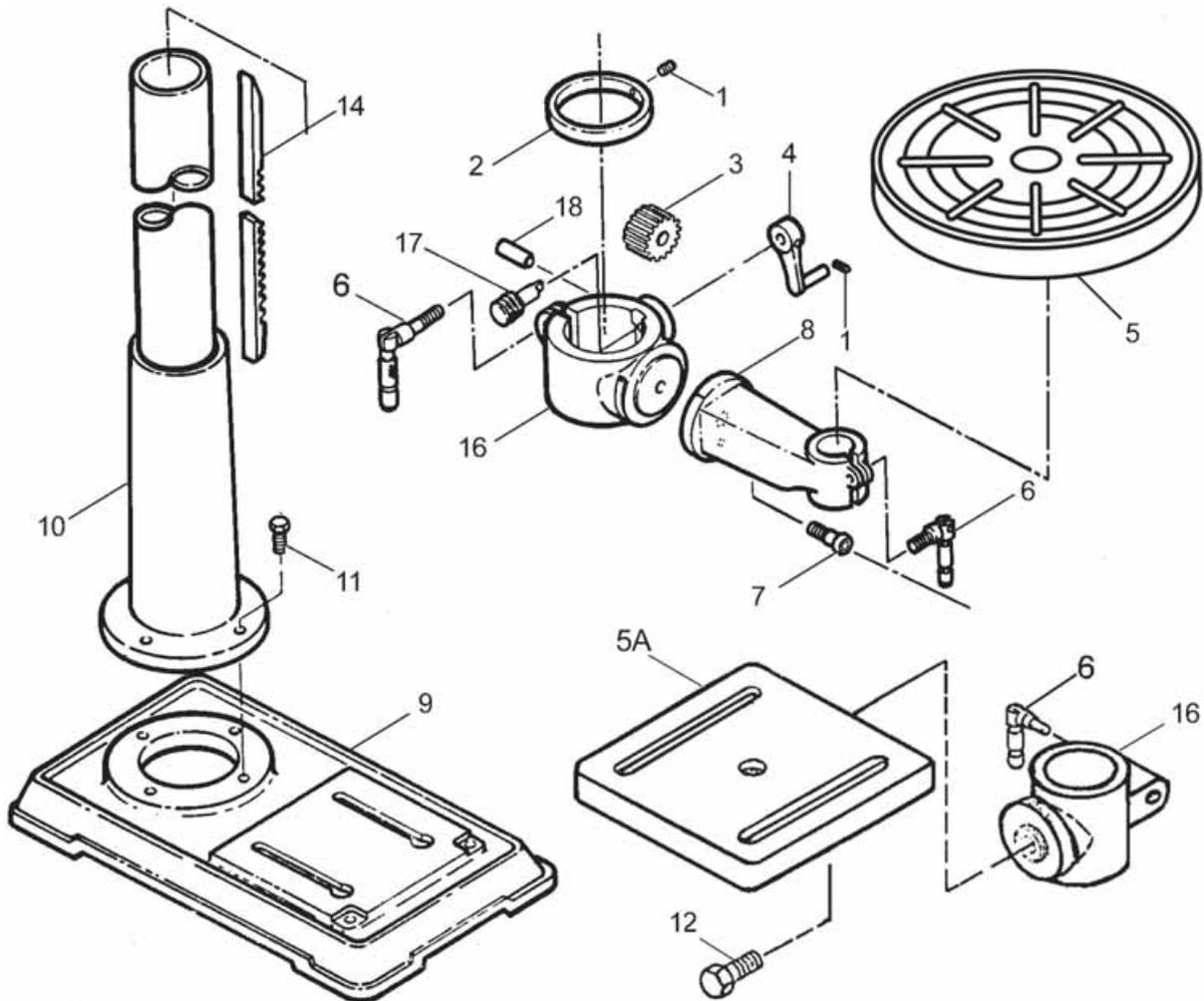
## PULLEY ASSEMBLY



Item	Description	Part No
1/19	Belt	QBCDP10BP01
2	Bearing	QBCDP10BP02
3	Idler Pulley	QBCDP10BP03
4	Idler Shaft	QBCDP10BP04
5	Motor Pulley	QBCDP10BP05
6	Grub Screw	QBCDP10BP06
8	Cable Clamp	QBCDP10BP08
9	Grommet	QBCDP10BP09
10	Screw	N/A
12	Pulley Cover	QBCDP10BP12

Item	Description	Part No.
13	Circlip	QBCDP10BP13
14	Bearing	QBCDP10BP14
15	Spacer	QBCDP10BP15
16	Shaft	QBCDP10BP16
17	Pulley	QBCDP10BP17
18	Securing screw	QBCDP10BP18
20	Cover Knob	QBCDP10BP20
21	Circlip	QBCDP10BP21
22	Circlip	QBCDP10BP22

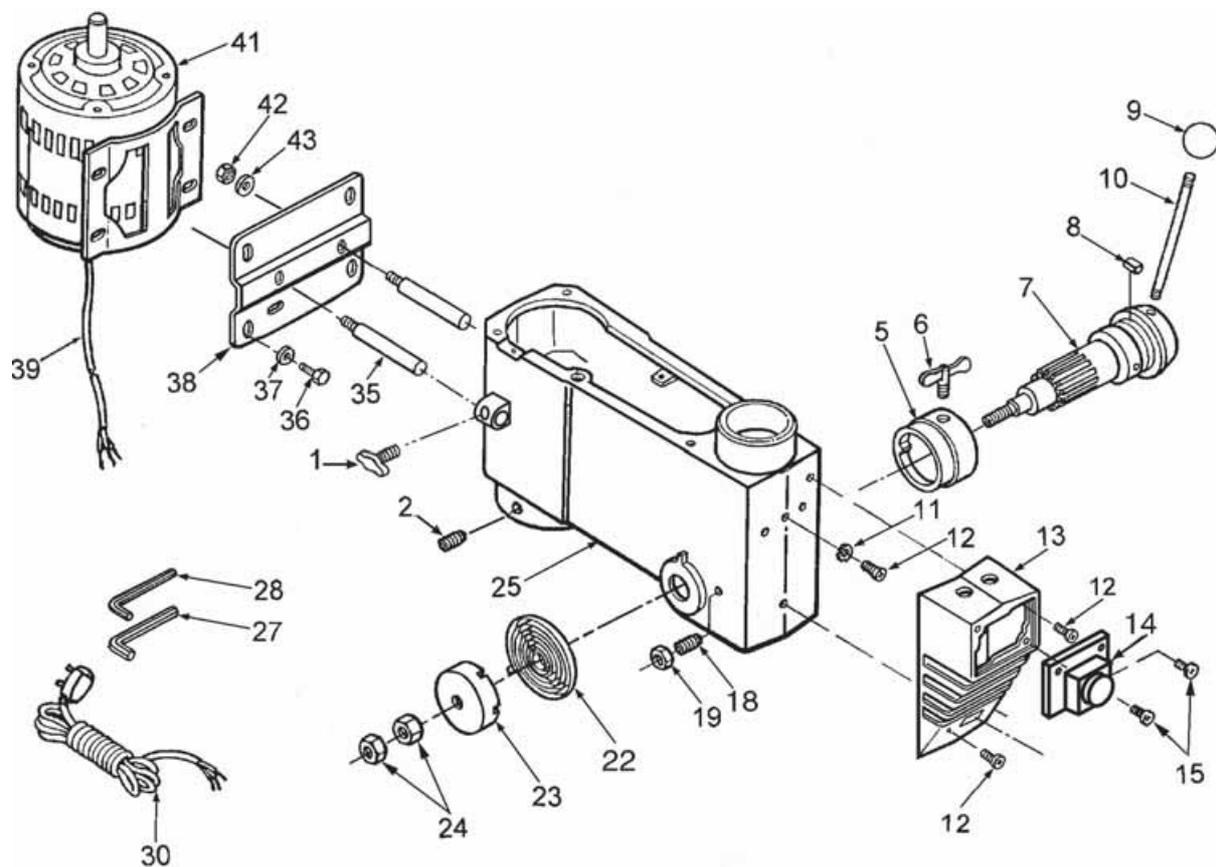
## BASE ASSEMBLY



Item	Description	Part No
1	Grubscrew	QBCDP10BB01
2	Rack Collar	QBCDP10BB02
3	Pinion	QBCDP10BB03
4	Handle Assy.	QBCDP10BB04
5	Round Table (15F)	QBCDP15FB05
5A	Square Table (10B)	QBCDP10BB05
6	Clamp	QBCDP10BB06
7	Table Tilt Bolt (15F)	QBCDP15FB07
8	Table Bracket (15F)	QBCDP15FB08
9	Base (10B)	QBCDP10BB09
9A	Base (15F) not shown	QBCDP15FB09

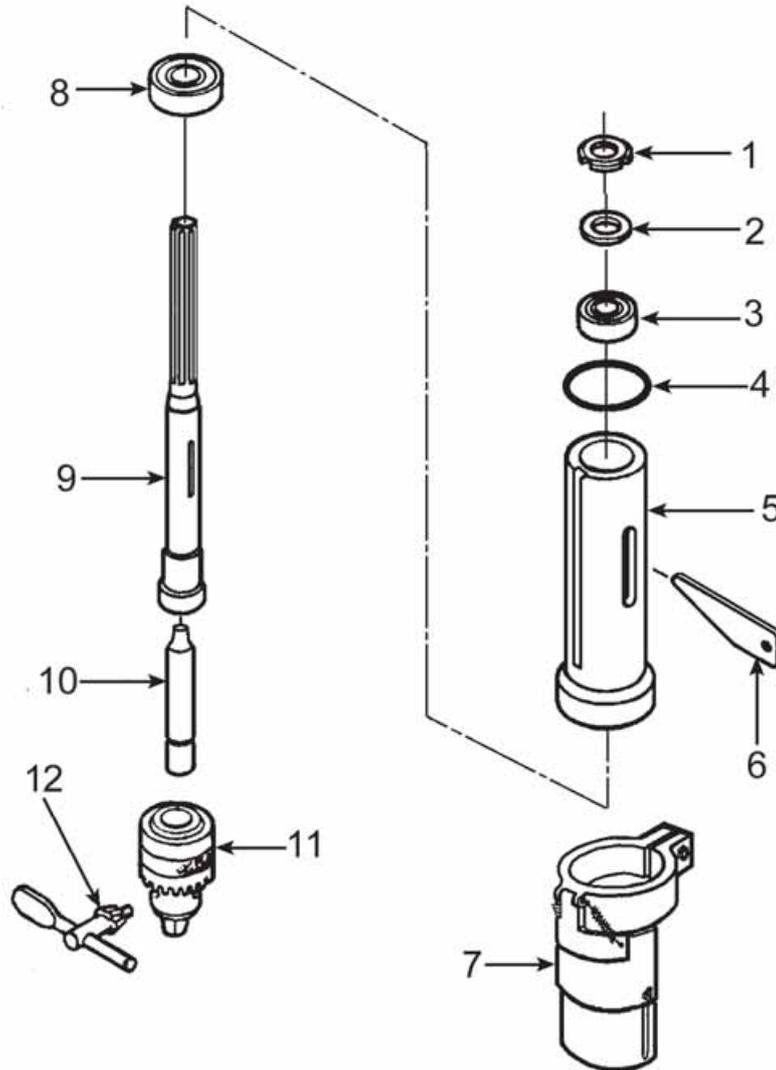
Item	Description	Part No
10	Column (15F)	QBCDP15FB10
10A	Column (10B) not shown	QBCDP10BB10
11	Bolt M8 (10B)	QBCDP10BB11
11A	Bolt M10 (15F) not shown	QBCDP15FB11
12	Table Tilt Bolt (10B)	QBCDP10BB12
14	Rack (10B)	QBCDP10BB14
14A	Rack (15F) not shown	QBCDP15FB14
16	Table Trunnion	QBCDP10BB16
17	Worm	QBCDP10BB17
18	Pinion Pin	QBCDP10BB18

## HEAD ASSEMBLY



Item	Description	Part No	Item	Description	Part No.
1	Locking Screw	QBCDP10HB01	23	Spring Cover/Adjuster	QBCDP10HB23
2	Grub Screw	QBCDP10HB02	24	Nut	QBCDP10HB24
5	Collar	QBCDP10HB05	25	Head Assy	QBCDP10HB25
7	Shaft	QBCDP10HB07	27	Allen Key	QBCDP10HB27
8	Screw	QBCDP10HB08	28	Allen Key	QBCDP10HB28
9	Knob	QBCDP10HB09	30	Cable Assy	QBCDP10HB30
10	Handle	QBCDP10HB10	35	Adjuster Bar	QBCDP10HB35
11	Washer	QBCDP10HB11	36	Bolt	QBCDP10HB36
12	Screw	QBCDP10HB12	37	Washer	N/A
13	Plastic Cover	QBCDP10HB13	38	Motor Adjuster Plate	QBCDP10HB38
14	Switch Assy	QBCDP10HB14	39	Motor Cable	QBCDP10HB39
15	Screw	QBCDP10HB15	41	Motor Assy	QBCDP10HB41
18	Grub Screw	QBCDP10HB18	42	Nut	N/A
19	Locknut	QBCDP10HB19	43	Washer	N/A
22	Spring	QBCDP10HB22			

## QUILL ASSEMBLY



No.	Description	Part No.	No.	Description	Part No.
1	Lock Nut	QBBDP10QB01	7	Chuck Guard	QBBDP10QB07
2	Flat Washer	QBBDP10QB02	8	Bearing	QBBDP10QB08
3	Bearing	QBBDP10QB03	9	Spindle	QBBDP10QB09
4	O-Ring	QBBDP10QB04	10	Arbour	QBBDP10QB10
5	Quill Shaft	QBBDP10QB05	11	Chuck	QBBDP10QB11
6	Wedge Drift	QBBDP10QB06	12	Chuck Key	QBBDP10QB12