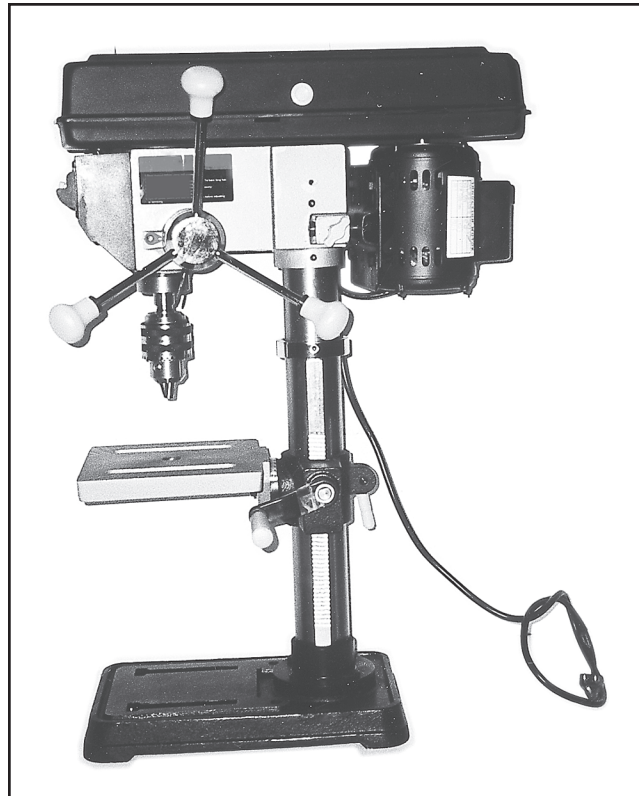


DRILL PRESS

10" BENCH/12 SPEED

Model 44836

ASSEMBLY AND OPERATING INFORMATION



3491 Mission Oaks Blvd., Camarillo, CA 93011
Visit our Web site at <http://www.harborfreight.com>

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For technical questions please call 1-800-444-3353

SPECIFICATIONS

ITEM	DESCRIPTION
Net Weight	132 Lbs.
Overall Height	33 - 1/4"
Column Length (Head to Base)	18 - 1/4"
Table Size	7 - 7/16" x 7 - 3/4"
Speeds (12)	250, 340, 390, 510, 600, 650, 990, 1550, 1620, 1900, 2620, 3100
Swing Diameter	10"
Motor Electrical Specifications	120V/60hz 1/2hp motor-1700rpm single phase Load Amps: 3.5 No Load Amps: 1.6
Spindle Stroke	2 - 3/8"
Spindle Taper	MT-2
Column Diameter	2.355"
Chuck Size	7/64" - 5/8" (3 - 16MM)

SAVE THIS MANUAL

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

1. **KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp or wet work areas invite injuries.
2. **KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product.
3. **STORE IDLE EQUIPMENT.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment and keep out of reach of children.
4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.

5. **USE EYE, HEARING, AND BREATHING PROTECTION.** Wear ANSI approved safety impact eye glasses, ANSI approved hearing protection, and ANSI approved dust mask or respirator when using this product. ANSI approved safety impact eye glasses, hearing protection, and dust masks and respirators are available from Harbor Freight Tools.
6. **DRESS SAFELY.** Non-skid footwear or safety shoes should be used when working with this product. Do not wear loose clothing or jewelry as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.
7. **INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENTS.**
8. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
9. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
10. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
11. **REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
12. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this tool clean and dry, and keep drill bits clean and sharp for better and safer performance.
13. **MAINTENANCE:** For your safety, service and maintenance should be performed regularly by a qualified technician.
14. **USE THE RIGHT PRODUCT FOR THE RIGHT JOB.** There are certain applications for which this product was designed. Do not use small equipment, tools or attachments to do the work of larger industrial equipment, tools or attachments. Do not use this product for a purpose for which it was not intended.

PECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1. **GROUND THIS PRODUCT.** The electrical power cord for this product is equipped with a grounded 3-prong plug. Never remove the grounding prong or modify the plug in any way. Do not use adapter plugs with this product. When in use, make

sure this product is always plugged into a grounded 3-hole electrical receptacle with an appropriate breaker switch in-line.

2. **MAKE SURE THE POWER SWITCH IS IN THE “OFF” POSITION BEFORE PLUGGING IN THE POWER CORD.**
3. **DO NOT ABUSE THE POWER CORD.** Do not use the cord to pull the 3-prong plug from a power outlet. Keep cord away from heat, oil, sharp edges, and moving parts. Replace damaged cord immediately. Route the power cord safely. Protect it from being damaged by other equipment in the shop. Do not route the cord where it can be walked on or tripped over.
4. **IF YOU USE AN EXTENSION CORD, MAKE SURE TO USE ONLY UL APPROVED CORDS HAVING THE CORRECT GAUGE AND LENGTH. (SEE FIGURE A.)**

Nameplate Amperes	Extension Cord Length					
	25'	50'	75'	100'	150'	200'
0 - 5	16	16	16	14	12	12
5.1 - 8	16	16	14	12	10	—
8.1 - 12	14	14	12	10	—	—
12. - 15	12	12	10	10	—	—
15.1 - 20	10	10	10	—	—	—

FIGURE A

5. **MAINTAIN A SAFE WORK ENVIRONMENT.** Do not use this product in or near damp or wet areas. Do not expose this product to rain. Keep work area well lit. Use this product in a well ventilated area. Do not operate this product in the presence of flammable liquids, gases, or dust. To avoid accidental electric shock, do not let your body come in contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.
6. **DO NOT FORCE THE EQUIPMENT.** This product will do the work better and safer at the speed and capacity for which it was designed.
7. **KEEP ALL GUARDS IN PLACE AND IN WORKING ORDER.**
8. **REMOVE ALL ADJUSTING WRENCHES FROM THE DRILL PRESS BEFORE TURNING IT ON.**
9. **AVOID UNINTENTIONAL STARTING.** Make sure you are prepared to begin work before turning the START switch on.

10. **CAUTION:** Some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic. When drilling these materials extra care should be taken to avoid inhalation and minimize skin contact.
11. **ALLOW THE DRILL BIT TO SPIN UP TO FULL SPEED BEFORE DRILLING INTO THE WORKPIECE.** When turning off the Drill Press, allow the drill bit to spin down and stop on its own. Do not press the drill bit against the workpiece to stop it.
12. **DO NOT FORCE THE DRILL BIT INTO THE WORKPIECE WHEN DRILLING.** Apply moderate downward pressure, allowing the drill bit to cut without being forced.
13. **NEVER ATTEMPT TO REMOVE MATERIAL STUCK IN THE MOVING PARTS OF THE DRILL PRESS WHILE THE DRILL PRESS IS PLUGGED IN AND RUNNING.**
14. **THE DRILL BIT WILL BECOME HOT WHILE DRILLING.** Allow the drill bit to completely cool before touching.
15. **WHENEVER POSSIBLE, USE CLAMPS OR OTHER SAFE, PRACTICAL WAYS TO HOLD AND SUPPORT THE WORKPIECE.** Do not attempt to drill material that does not have a flat surface, unless a suitable support is used.
16. **ALWAYS DISCONNECT THE DRILL PRESS FROM ITS ELECTRICAL SUPPLY SOURCE BEFORE PERFORMING ANY SERVICES OR MAINTENANCE** such as leaving the work area, moving the tool from one location to another, changing the drill bit, cleaning sawdust from the unit, etcetera.

UNPACKING

When unpacking, check to make sure all parts shown on the Parts Lists (pages 13 through 16) are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

OPERATING INSTRUCTIONS

NOTE: For additional references to the parts listed below, refer to pages 13 through 16 of this manual.

To Assemble The Drill Press:

1. ***To attach the Column Support (part #3A) to the Base (part #4A)***, use the four Hex Head Screws (part #5A) provided. **(See Assembly Diagram A.)**
2. ***To attach the Table (part #9A) to the Drill Press***, insert the collar of the Table (located on the underneath) into the Table Support (part #10A). Then, lock the Table in place, using the Hex Head Screw (part 8A) and the Hex Head Socket Screw (part 17A). **(See Assembly Diagram A.)**

3. **To attach the Head Assembly (part #1B) to the Column (part #1A)**, loosen the Hex Screws (part #13B) to ensure the Screws do not protrude internally in the Column (part #1A), as this would prevent the Head Assembly from sliding downward fully onto the Column. With assistance raise the Head Assembly and slide it fully onto the Column, aligning the Head Assembly with the Base (part #4A). Lock the Head Assembly in place by tightening the Hex Screws (part #13B).
(See Assembly Diagrams A and B.)
4. **To attach the Knobs (part #16B) and Rods (part #17B) onto the Hub Assembly (part #18B)**, screw the three Knobs onto the three Rods. Then, screw the three Rods into the Hub Assembly. **(See Assembly Diagram B.)**
5. **To attach the Chuck (part #8C)**, attach the Table Crank (part #6A) to the Table Support (part #10A). Raise the Table (part #9A) up the Column (part #1A) to within 6" of the Tube Quill (part #10C). Open the jaws of the Chuck (part #8C), using the Key Chuck (part #9C). Place a piece of scrap wood on the Table to protect the nose of the Chuck. Insert the Spindle Shaft (part #7C)-which includes Drill Chuck Arbor (part 30C), firmly into the end of the Chuck. Insert the other end of the Spindle Shaft into the Tube Quill, and turn the Spindle Shaft until the prong on the Spindle Shaft aligns with the slot in the Tube Quill. Lower the Spindle Shaft, and press the nose of the Chuck firmly down onto the scrap wood on the Table until the Chuck is securely seated.
(See Assembly Diagrams A and C.)

To Attach The Remaining Handle:

1. **To attach the Knob (part #1C) to the Pulley Guard (part #5C)**, use the Pan Head Screw (part #2C) provided. **(See Assembly Diagram C.)**

To Mount The Drill Press On A Workbench:

1. When in use, the Drill Press should be securely mounted to a flat, level, sturdy workbench capable of supporting the weight of the Drill Press, accessories, and the material being drilled.
2. The Base (part #4A) of the Drill Press features four 1/2" mounting holes.
(See Assembly Diagram A.)
3. With assistance, set the Drill Press in the desired position on the workbench.
4. Using the mounting holes on the Base (part #4A) as a template, mark the 1/2" holes to be drilled through the top of the workbench.
5. With assistance, set the Drill Press aside.
6. Use a 1/2" drill bit to drill the four holes through the workbench. Reposition the Drill Press on the workbench and secure the Drill Press to the workbench, using four 1/2"

Bolts of appropriate length, Washers and Locknuts (not provided).

To Install/Reposition The Drive Belts:

1. The Drill Press features 12 speed selections from which to choose.
2. The two V-Belts (parts #21C, 26C), when positioned on the three Pulleys (parts #3C, 28C, 19C), will determine the speed at which the Drill Press will run. (See Assembly Diagram C and Figure B.)













250 	340 	390 	510 
600 	650 	990 	1550 
1620 	1900 	2620 	3100 

FIGURE B

3. To install or reposition the two V-Belts (parts #21C, 26C), release the two Motor Adjusting Knobs (part #12B) which are located on both sides of the Head Assembly (part #1B). (See Assembly Diagram B.)
4. Lubricate the Idler Pivot Shaft (part #29C) and Center Pulley (part #28C) with a light grease, and install the Pivot Shaft in the hole located between the Motor Pulley (part #3C) and Spindle Pulley (part #19C). Then, insert the Center Pulley onto the Idler Pivot Shaft. (See Assembly Diagram C.)
5. Consult the *Chart* inside the Pulley Guard (part #5C) or refer to **Figure B**, and install the V-Belts (parts #21C, 26C) in the positions corresponding to the drill speed desired.
6. Secure the V-Belts (parts #21C, 26C) in position by locking the two Motor Adjusting Knobs (part #12B). (See Assembly Diagrams B and C.)

To Obtain The Proper Cutting Speeds:

1. Factors which determine the best speed to use in the Drill Press are:
 - A. The kind of material being drilled.
 - B. The size of the hole.
 - C. The quality of cut desired.

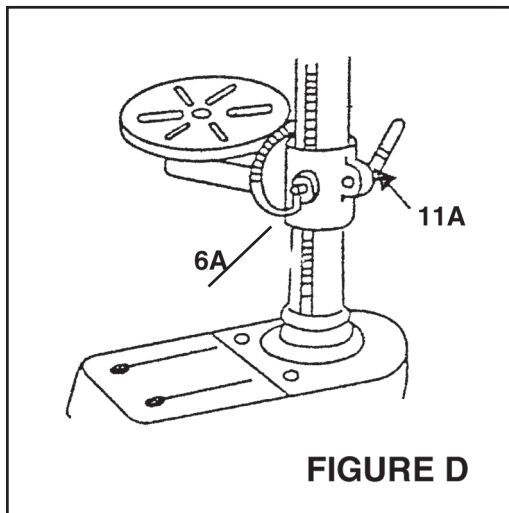
2. Generally, in soft material the speed should be higher than for hard materials. The following guide indicates the proper Drill Press speed (RPM) for a given drill bit size and the material being drilled. **(See Figure C.)**

FIGURE C

Speed Range (RPM)		3100	1620-2620	990-1550	600-650	340-510	250
Wood	in	3/8	5/8	7/8	1 1/4	1 5/8	2
	mm	9.5	18	22	31.75	41.4	50.8
Zinc Diecast	in	1/4	3/8	1/2	3/4	7/8	1
	mm	6.4	9.5	12.5	19	22	25.4
Alum & Brass	in	7/32	11/32	15/32	11/16	3/4	-
	mm	5.6	8.75	12	17.5	19	-
Plastic	in	3/16	5/16	7/16	5/8	13/16	-
	mm	4.8	7.9	11	16	20.5	-
Cast Iron & Bronze	in	1/8	1/4	11/32	1/2	5/8	-
	mm	3.2	6.4	8.75	12.5	16	-
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	9/16
	mm	1.6	3.2	4.8	7.9	11	14.5
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

To Adjust The Table:

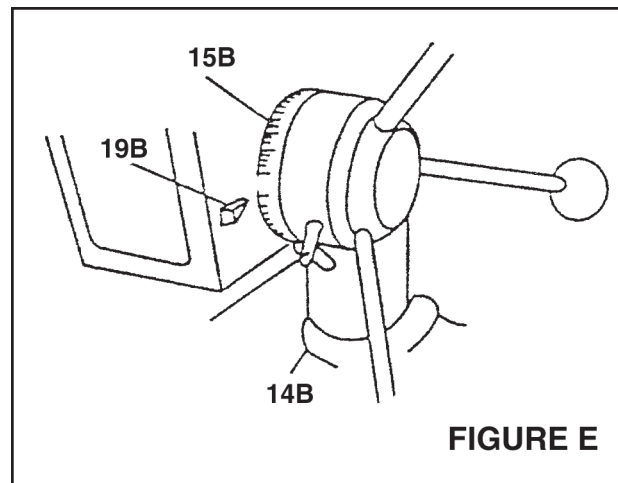
1. The Table (part #9A) may be adjusted in 4 directions.
2. **To raise or lower the Table**, release the Table Clamp (part #11A), and turn the Crank (part #6A) clockwise to raise the Table and counterclockwise to lower the Table. When the desired height of the Table has been reached, secure the Table in place by locking the Table Clamp.
(See Assembly Diagram A and Figure D.)
3. **To move the Table to the right or left**, release the Table Clamp (part #11A) and move the Table left or right to the desired position. Once the desired position has been set, secure the Table in place by locking the Table Clamp. **(See Figure D.)**



To Adjust The Spindle Depth:

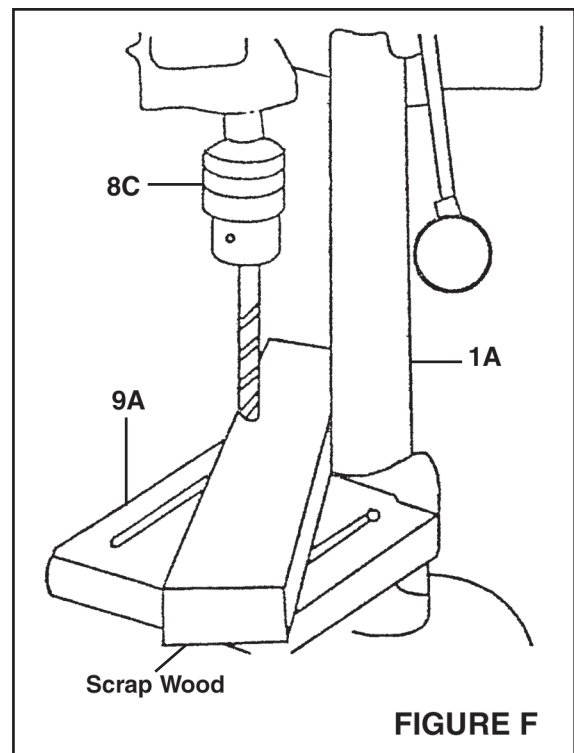
1. Located on the Hub Pinion (part #18B) is a Depth Lock Screw (part #14B) and a Depth Stop Ring w/Scale (part #15B), with depth settings in both inches and metric units. **(See Assembly Diagram B and Figure E.)**
2. To set a drilling depth, insert and secure a drill bit in the Chuck (part #8C).
3. Lower the drill bit (with the power OFF) until it contacts the material to be drilled, and hold in that position.
4. Loosen the Depth Lock Screw (part 14B), and turn the Depth Stop Ring w/Scale (part #15B) so that the measurement for the depth of hole desired is in line the Stop Pin (part #19B). Lock the Depth Stop Ring w/Scale in position, using the Depth Lock Screw (part 14B). **(See Figure E.)**

5. The Drill Press is now set to drill holes to your pre-determined depth, provided the surface of the workpiece is flat and level. You may also drill a series of holes to the same depth.



To Operate The Drill Press:

1. Before starting the Drill Press, make sure all adjustments are properly made and all of the guards are in place.
2. Insert the drill bit about 1" into the jaws of the Chuck (part #8C). Make sure the jaws of the Chuck do not touch the flutes of the drill bit. Before tightening the Chuck, make sure the drill bit is centered within the jaws of the Chuck.
3. Make sure the workpiece is securely clamped, held in a drill press vise, or bolted to the Drill Press Table (part #9A). Never hold the workpiece with bare hands as personal injury and/or damage to the Drill Press may occur.
4. When drilling completely through wooden material, place a piece of scrap wood between the workpiece and the Table to prevent splintering on the underside of the workpiece when the drill bit breaks through. The scrap wood should make contact with the left side of the Column (part #1A) **(See Figure F.)**



5. Set the depth of drill bit travel so that the drill bit cannot come into contact with the Table (part #9A), or align the Table so that the hole in its center is in line with the drill bit.
6. **The Drill Press is now ready to operate.**

CLEANING, INSPECTION, AND MAINTENANCE

1. **Caution:** Always disconnect the Drill Press from its electrical power supply source before performing any cleaning, inspection, or maintenance.
2. Do not introduce water into the electric motor through the motor vents.
3. Do not use solvents to wipe off the Drill Press, as damage may result.
4. With a brush or soft cloth, remove all the metal shavings/sawdust from the Drill Press.
5. If necessary, wipe with a damp cloth. You may use a mild detergent.
6. Once clean, lubricate all moving parts, including the Column (part #1A) with a light oil.
7. When storing, keep the Drill Press covered with a cloth cover.
8. Before each use, inspect the general condition of the Drill Press. Inspect the switch, power plug and cord assembly, and extension cord (if used) for damage.
9. Check for loose screws, misalignment, binding of moving parts, broken, cracked, or improper mounting of drill bit, broken parts and any other condition that may affect its safe operation.
10. Check the V-Belts (parts #21C, 26C) for wear, and replace if frayed or damaged in any way.
11. Blow out any dust that may have accumulated in the motor fan.
12. If abnormal noise or vibration occurs, turn off the Drill Press immediately.
13. **If a problem is apparent refer to Figure G**, and if necessary have the problem corrected by a qualified technician before further use.
Do not use damaged equipment.. (See Figure G on Page 12.)

FIGURE G

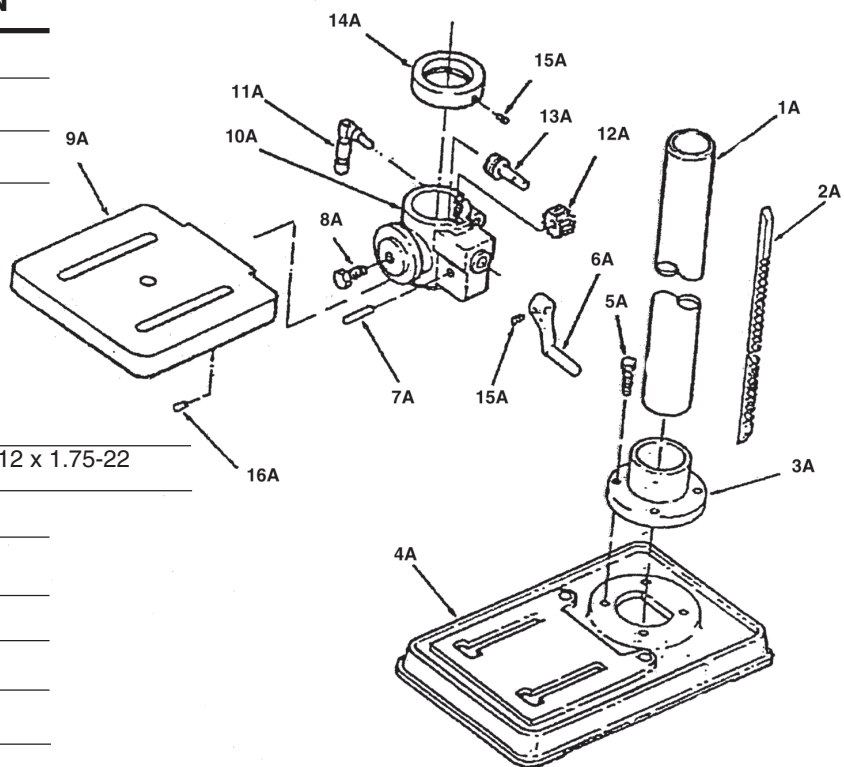
PROBLEM	PROBABLE CAUSE	REMEDY
Noisy operation (under load)	<ul style="list-style-type: none"> A) Incorrect belt tension B) Dry spindle C) Loose pulley D) Loose belt E) Worn bearing 	<ul style="list-style-type: none"> A) Adjust tension B) Remove spindle/quill assembly And lubricate C) Tighten pulley D) Adjust belt tension E) Replace bearing
Excessive drill wobble	<ul style="list-style-type: none"> A) Loose chuck B) Worn spindle, or bearing C) Worn chuck D) Bent drill 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> A) Power supply B) Motor connection C) Faulty switch D) Motor windings burned 	<ul style="list-style-type: none"> A) Check power cord B) Check motor connections C) Replace switch D) Replace motor
Drill binds in workpiece	<ul style="list-style-type: none"> A) Excessive pressure on feed handle B) Loose belt C) Loose drill D) Incorrect drill speed E) Drill angles incorrect for type of material 	<ul style="list-style-type: none"> 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 i.e. Drills, materials and cutting angles, and sharpen drill accordingly
Drill burns or smokes	<ul style="list-style-type: none"> A) Incorrect speed B) Chips are not discharging C) Dull drill or not proper clearance for material D) Needs coolant E) Feed pressure wrong 	<ul style="list-style-type: none"> A) Refer to Cutting Speed chart, and adjust drill speed accordingly B) Clean drill C) Check sharpness & taper D) Use coolant whilst drilling E) Apply less pressure
Table difficult to raise	<ul style="list-style-type: none"> A) Needs lubrication B) Table lock tightened 	<ul style="list-style-type: none"> A) Lubricate with light oil B) Loosen clamp

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST/ASSEMBLY DIAGRAM A

PART #	DESCRIPTION
1A	Column
2A	Rack
3A	Column Support
4A	Base
5A	Hex Head Screw M8 x 1.25-20
6A	Crank
7A	Shaft - Gear
8A	Hex Head Screw M12 x 1.75-22
9A	Table
10A	Support with Scale
11A	Clamp, Table
12A	Clamp - Table
13A	Helical Gear
14A	Worm Gear
15A	Collar - Rack
16A	Hex Head Screw M6 x 1.0-10
17A	Hex Head Socket Screw M6 x 1.0-10



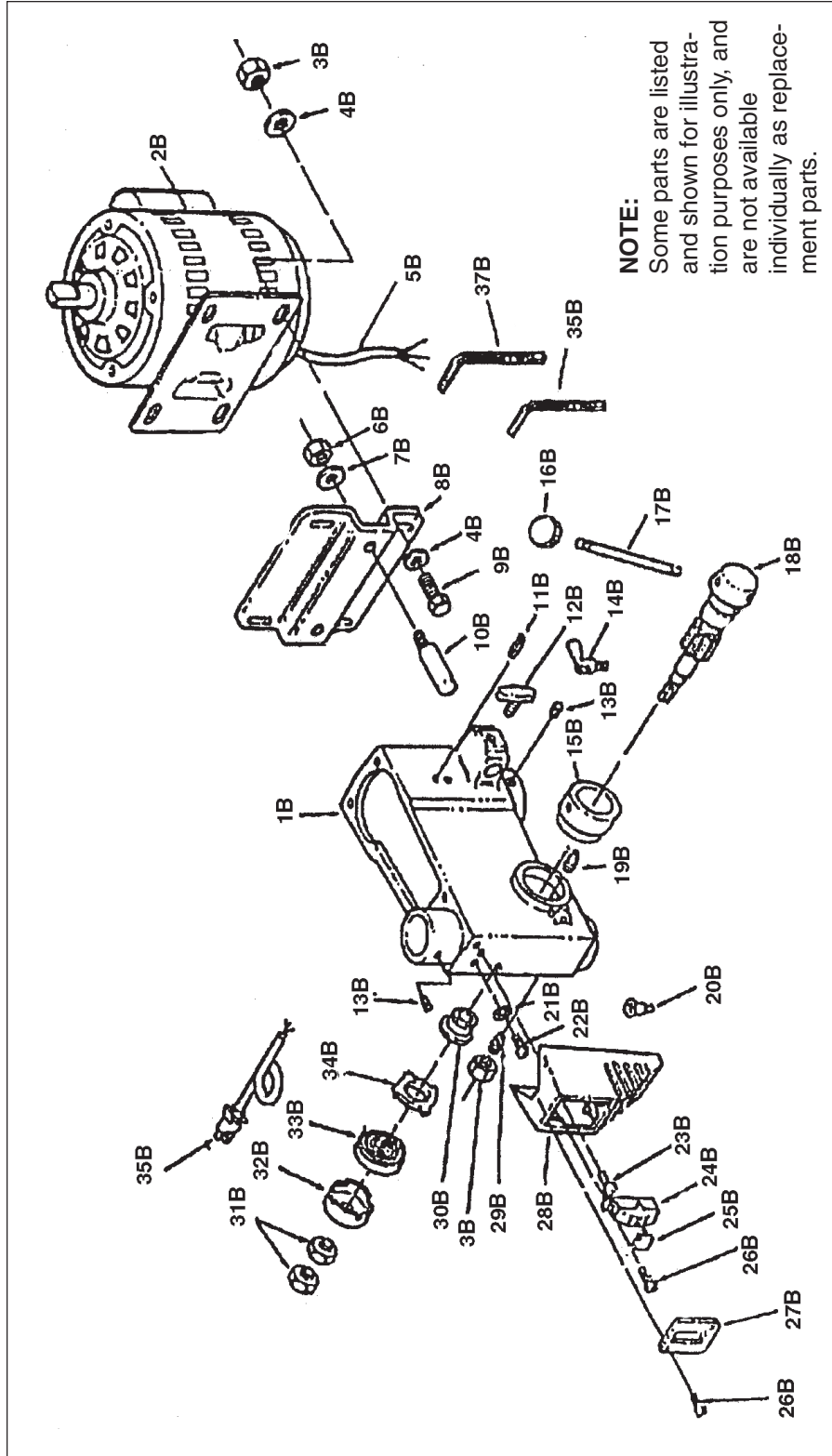
NOTE:

Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

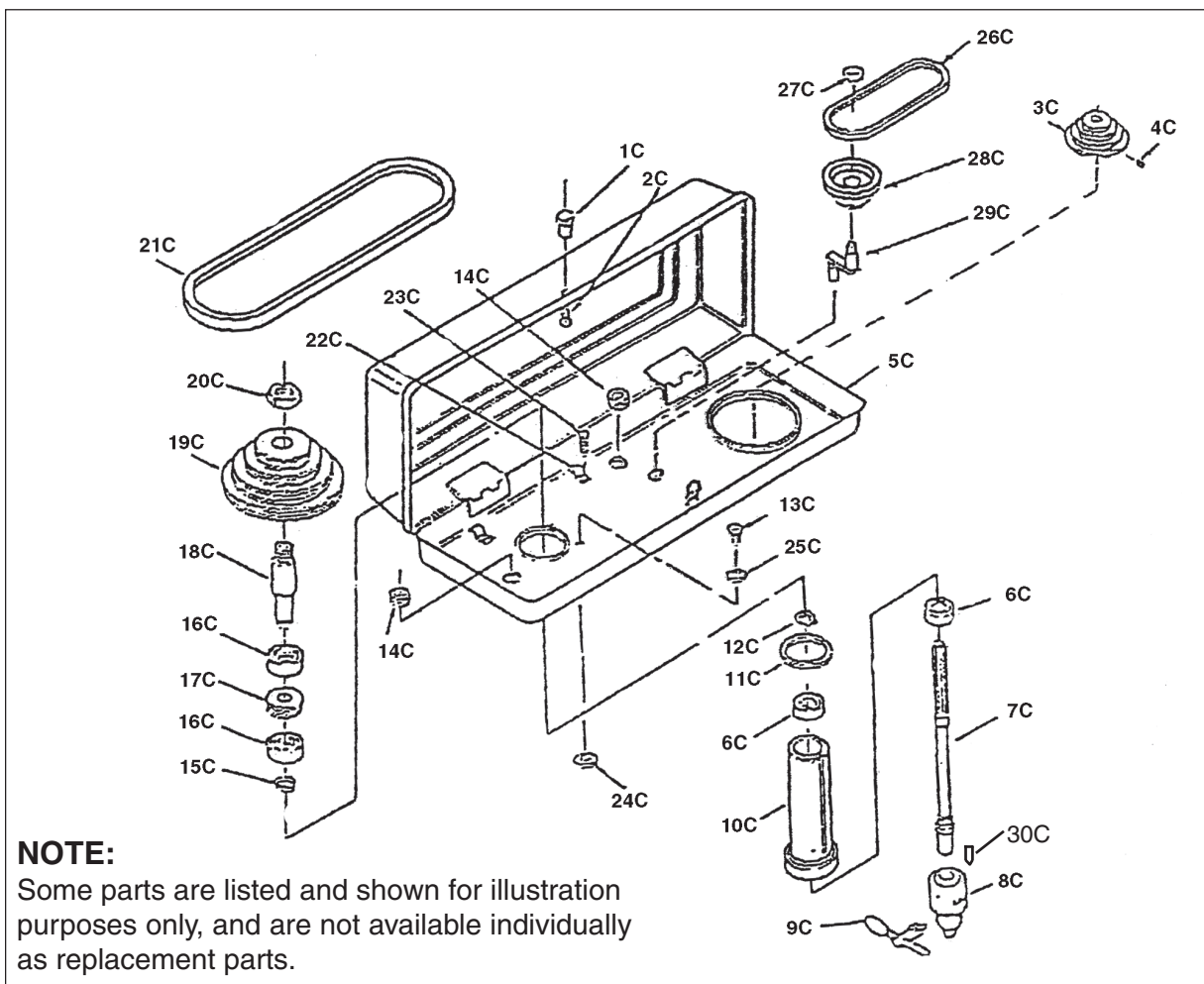
PARTS LIST B

PART #	DESCRIPTION
1B	Head w/Pointer & Trim
2B	Motor
3B	Hex Nut M8
4B	Washer 8
5B	Cord - Motor
6B	Hex Nut M10
7B	Lockwasher 10
8B	Bracket - Motor
9B	Hex Head Screw M8 x 1.25-20
10B	Support - Motor Bracket
11B	Roll Pin 6 x 16
12B	Knob - Motor Adjusting
13B	Hex Screw Socket Set M8 x 1.25-8
14B	Lock - Depth Screw
15B	Ring - Depth Stop w/Scale
16B	Knob
17B	Rod
18B	Hub - Pinion
19B	Pin - Stop
20B	Connector - Wire
21B	Lockwasher Ext. 5mm
22B	Pan Head Screw M5 x 0.8-8
23B	Pan Head Screw M5 x 0.8-12
24B	Switch - Locking
25B	Key - Switch
26B	Self Tapping Pan Head Screw M4 x 16-8
27B	Cover - Switch Plate
28B	Box - Switch
29B	Special Set Screw M8 x 1.25-18
30B	Seat - Spring
31B	Hex Nut M12 x 1.5-8
32B	Cap - Spring
33B	Spring - Torsion
34B	Retainer - Spring
35B	Cord - Power
36B	Hex "L" Wrench 3mm
37B	Hex "L" Wrench 4mm
	Owner's Manual (Not Shown)

ASSEMBLY DIAGRAM B



PARTS LIST/ASSEMBLY DIAGRAM C



PART #	DESCRIPTION
1C	Knob
2C	Pan Head Screw M5 x 0.8-12
3C	Pulley - Motor
4C	Screw - Hex Socket Set
5C	Guard - Pulley w/Labels
6C	Bearing - Ball 12mm
7C	Shaft - Spindle
8C	Chuck
9C	Key Chuck
10C	Tube Quill
11C	Gasket Quill
12C	Ring - Retaining
13C	Screw - Wash. Hd. M6 x 1.0-12
14C	Bushing - Rubber
15C	Ring - Retaining

PART #	DESCRIPTION
16C	Bearing - Ball 17mm
17C	Spacer
18C	Insert - Pulley (includes Key)
19C	Pulley - Spindle
20C	Nut - Pulley
21C	Belt - "V" M19
22C	Clamp - Cord
23C	Pan Head Screw M5 x 0.8-10
24C	Washer - Foam
25C	Lockwasher 6
26C	Belt - "V" M18
27C	Bearing - Ball 60201
28C	Pulley - Center
29C	Pivot - Idler
30C	Drill Chuck Arbor

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