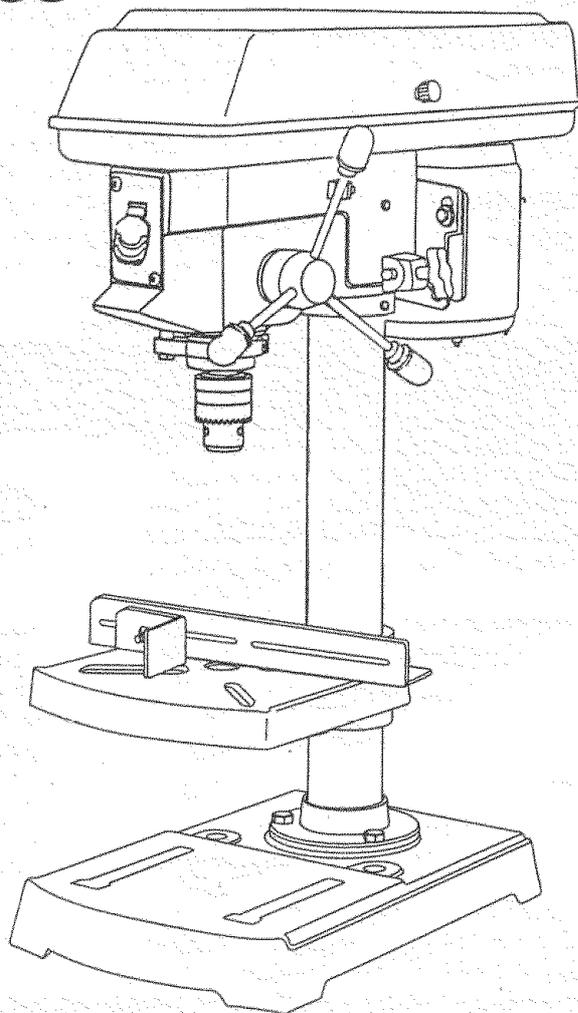


**Owner's Manual**

# **CRAFTSMAN<sup>®</sup>**

## **9-INCH DRILL PRESS**

**Model No.  
137.219090**



**CAUTION:**

Before using this Drill Press, read this manual and follow all its Safety Rules and Operating Instructions.

- Safety Instructions
- Installation
- Operation
- Maintenance
- Parts List

**Customer Help Line  
1-800-843-1682**

Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA  
Part No. 137219090001

## TABLE OF CONTENTS

SECTION	PAGE
Warranty .....	2
Product Specifications .....	2
Safety Instructions .....	3
Carton Contents .....	6
Know Your Drill Press .....	7
Glossary of Terms .....	8
Assembly and Adjustments .....	9
Operation .....	13
Maintenance .....	16
Troubleshooting guide .....	17
Parts .....	18

## PRODUCT SPECIFICATIONS

<b>CHUCK SIZE</b> .....	1/2"
<b>SPEEDS</b> .....	5 (620, 1100, 1720, 2340, 3100 R.P.M.)
<b>MOTOR</b> .....	120V, 60 HZ, 2.2 AMPS,
<b>HORSEPOWER</b> .....	1/3 HP (Max. Developed)
<b>TABLE SIZE</b> .....	7-5/64" X 7-3/4"
<b>TABLE TILT</b> .....	45° RIGHT OR LEFT
<b>SPINDLE TRAVEL</b> .....	.2"
<b>THROAT</b> .....	4-1/2"
<b>BASE SIZE</b> .....	12-1/8" X 7-29/32"
<b>HEIGHT</b> .....	23-1/8"
<b>NET WEIGHT</b> .....	46.2 LBS

### ▲ WARNING

To avoid electrical hazards, fire hazards, or damage to the tool, use proper circuit protection.

Your drill press is wired at the factory for 120V operation. Connect to a 120V, 15 AMP branch circuit and use a 15 AMP time delay fuse or circuit breaker. To avoid shock or fire, replace power cord immediately if it is worn, cut or damaged in any way.

## WARNING

### ▲ WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

## SAFETY

### GENERAL SAFETY INSTRUCTIONS BEFORE USING THE DRILL PRESS

Safety is a combination of common sense, staying alert and knowing how to use your drill press.

#### ⚠ WARNING

To avoid mistakes that could cause serious injury, do not plug the drill press in until you have read and understood the following:

1. **READ** and become familiar with this entire instruction manual. **LEARN** the tool's applications, limitations, and possible hazards.
2. **KEEP GUARDS IN PLACE** and in working order.
3. **DON'T USE IN A DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
4. **DO NOT** use power tools in the presence of flammable liquids or gases.
5. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
6. **KEEP CHILDREN AWAY.** All visitors should be kept at a safe distance from the work area.
7. **DON'T FORCE THE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE THE RIGHT TOOL.** Don't force tool or the attachment to do a job for which it was not designed.
9. **WEAR PROPER APPAREL.** **DO NOT** wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
10. **WEAR A FACE MASK OR DUST MASK.** Drilling operation produces dust.
11. **DISCONNECT TOOLS** before servicing, and when changing accessories, such as blades, bits, cutters, and the like.
12. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure the switch is in "OFF" position before plugging in.
13. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for the recommended accessories. The use of improper accessories may cause risk of injury to persons.
14. **REMOVE ADJUSTING KEYS AND WRENCHES.** From the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning "ON".
15. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN THE POWER "OFF".** Don't leave the tool until it comes to a complete stop.
16. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
17. **DON'T OVERREACH.** Keep proper footing and balance at all times.
18. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
19. **CHECK FOR DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. **MAKE WORKSHOP KID PROOF** with padlocks, master switches, or by removing starter keys.
21. **DO NOT** operate the tool if you are under the influence of any drugs, alcohol or medication that could affect your ability to use the tool properly.
22. Dust generated from certain materials can be hazardous to your health. Always operate the drill press in a well-ventilated area and provide for proper dust removal. Use dust collection systems whenever possible.
23. **ALWAYS WEAR EYE PROTECTION.** Any drill press can throw foreign objects into the eyes which could cause permanent eye damage. **ALWAYS** wear Safety Goggles (not glasses) that comply with ANSI safety standard Z87.1. Everyday eyeglasses have only impact-resistant lenses. They **ARE NOT** safety glasses. Safety Goggles are available at Sears. **NOTE:** Glasses or goggles not in compliance with ANSI Z87.1 could seriously hurt you when they break.



**SAVE THESE INSTRUCTIONS**

## SPECIFIC SAFETY INSTRUCTIONS FOR THE DRILL PRESS

### ▲ WARNING

For your own safety, do not try to use your drill press or plug it in until it is completely assembled and installed according to the instructions, and until you have read and understood this instruction manual:

1. **YOUR DRILL PRESS MUST BE BOLTED** securely to a workbench. In addition, if there is any tendency for your drill press to move during certain operations, bolt the workbench to the floor.
2. **THIS DRILL PRESS** is intended for use in dry conditions, indoor use only.
3. **WEAR EYE PROTECTION.** USE face or dust mask along with safety goggles if drilling operation is dusty. USE ear protectors, especially during extended periods of operation.
4. **DO NOT** wear gloves, neckties, or loose clothing.
5. **DO NOT** try to drill material too small to be securely held.
6. **ALWAYS** keep hands out of the path of a drill bit. Avoid awkward hand positions where a sudden slip could cause your hand to move into the drill bit.
7. **DO NOT** install or use any drill bit that exceeds 175 mm (7") in length or extends 150 mm (6") below the chuck jaws. They can suddenly bend outward or break.
8. **DO NOT USE** wire wheels, router bits, shaper cutters, circle (fly) cutters, or rotary planers on this drill press.
9. **WHEN** cutting a large piece of material make sure it is fully supported at the table height.
10. **DO NOT** perform any operation freehand. **ALWAYS** hold the workpiece firmly against the table so it will not rock or twist. Use clamps or a vise for unstable workpieces.
11. **MAKE SURE** there are no nails or foreign objects in the part of the workpiece to be drilled.
12. **CLAMP WORKPIECE OR BRACE** against the left side of the column to prevent rotation. If it is too short or the table is tilted, clamp solidly to the table and use the fence provided.
13. **IF THE WORKPIECE** overhangs the table such that it will fall or tip if not held, clamp it to the table or provide auxiliary support.
14. **SECURE WORK.** Use clamps or a vise to hold the work when practical. It's safer than using your hand and it frees both hands to operate tool.
15. **WHEN** using a drill press vise, always fasten to the table.
16. **MAKE SURE** all clamps and locks are firmly tightened before drilling.
17. **SECURELY LOCK THE HEAD** and table support to the column, and the table to the table support before operating the drill press.
18. **NEVER** turn your drill press on before clearing the table of all objects (tools, scraps of wood, etc.)
19. **BEFORE STARTING** the operation, jog the motor switch to make sure the drill bit does not wobble or vibrate.
20. **LET THE SPINDLE REACH FULL SPEED** before starting to drill. If your drill press makes an unfamiliar noise or if it vibrates excessively, stop immediately, turn the drill press off and unplug. Do not restart until the problem is corrected.
21. **DO NOT** perform layout assembly or set up work on the table while the drill press is in operation.
22. **USE RECOMMENDED SPEED** for drill accessory and workpiece material. SEE INSTRUCTIONS that come with the accessory.
23. **WHEN DRILLING** large diameter holes, clamp the workpiece firmly to the table. Otherwise, the bit may grab and spin the workpiece at high speed. **DO NOT USE** fly cutters or multiple-part hole cutters, as they can come apart or become unbalanced in use.
24. **MAKE SURE** the spindle has come to a complete stop before touching the workpiece.
25. **TO AVOID INJURY** from accidental starting, always turn the switch "OFF" and unplug the drill press before installing or removing any accessory or attachment or making any adjustment.
26. **KEEP GUARDS IN PLACE** and in working order.
27. **USE ONLY SELF-EJECTING TYPE CHUCK KEY** as provided with the drill press.

**SAVE THESE INSTRUCTIONS**

## GROUNDING INSTRUCTIONS

**IN THE EVENT OF A MALFUNCTION OR BREAKDOWN,** grounding provides a path of least resistance for electric current and reduces the risk of electric shock. This tool is equipped with an electric cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching receptacle that is properly installed and grounded in accordance with ALL local codes and ordinances.

**DO NOT MODIFY THE PLUG PROVIDED.** If it will not fit the receptacle, have the proper receptacle installed by a qualified electrician.

**IMPROPER CONNECTION** of the equipment grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, **DO NOT** connect the equipment grounding conductor to a live terminal.

**CHECK** with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

**USE ONLY 3-WIRE EXTENSION CORDS THAT HAVE 3-PRONG GROUNDING PLUGS AND 3-POLE RECEPTACLES THAT ACCEPT THE TOOL'S PLUG. REPAIR OR REPLACE DAMAGED OR WORN CORD IMMEDIATELY.**

## GUIDELINES FOR EXTENSION CORDS

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The table below shows the correct size to use according to cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

**Be sure your extension cord is properly wired** and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

Use a separate electrical circuit for your tools. This circuit must not be less than #12 wire and should be protected with a 15 Amp time lag fuse. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and the electric current is rated the same as the current stamped on the motor nameplate. Running at a lower voltage will damage the motor.

This tool is intended for use on a circuit that has a receptacle like the one illustrated in FIGURE A.

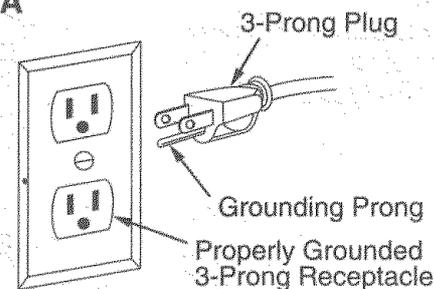
**FIGURE A** shows a 3-prong electrical plug and receptacle that has a grounding conductor. If a properly grounded receptacle is not available, an adapter (**FIGURE B**) can be used to temporarily connect this plug to a 2-contact ungrounded receptacle. The adapter (**FIGURE B**) has a rigid lug extending from it that **MUST** be connected to a permanent earth ground, such as a properly grounded receptacle box. **THE TEMPORARY ADAPTER SHOULD BE USED ONLY UNTIL A PROPERLY GROUNDED OUTLET CAN BE INSTALLED BY A QUALIFIED ELECTRICIAN.** The Canadian Electrical Code prohibits the use of adapters.

**CAUTION:** In all cases, make certain the receptacle in question is properly grounded. If you are not sure have a certified electrician check the receptacle.

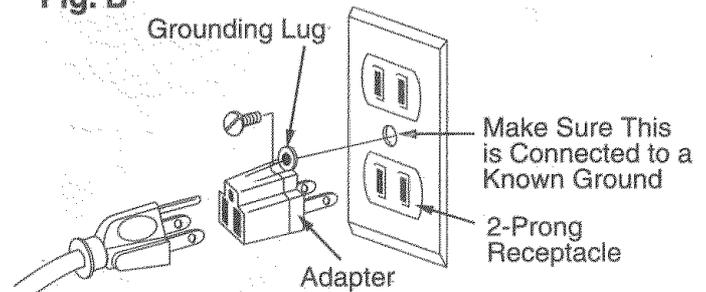
### ▲ WARNING

This drill press is for indoor use only. Do not expose to rain or use in damp locations.

**Fig. A**



**Fig. B**



### ▲ WARNING

This tool must be grounded while in use to protect the operator from electrical shock.

MINIMUM GAUGE FOR EXTENSION CORDS (AWG)					
(when using 120 volts only)					
Ampere Rating		Total length of cord in feet			
more than	not more than	25'	50'	100'	150'
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not recommended	

**SAVE THESE INSTRUCTIONS**

## CARTON CONTENTS

### UNPACKING AND CHECKING CONTENTS

#### ▲ WARNING

If any part is missing or damaged, do not plug the drill press in until the missing or damaged part is replaced, and assembly is complete.

Carefully unpack the drill press and all its parts, and compare against the illustration below.

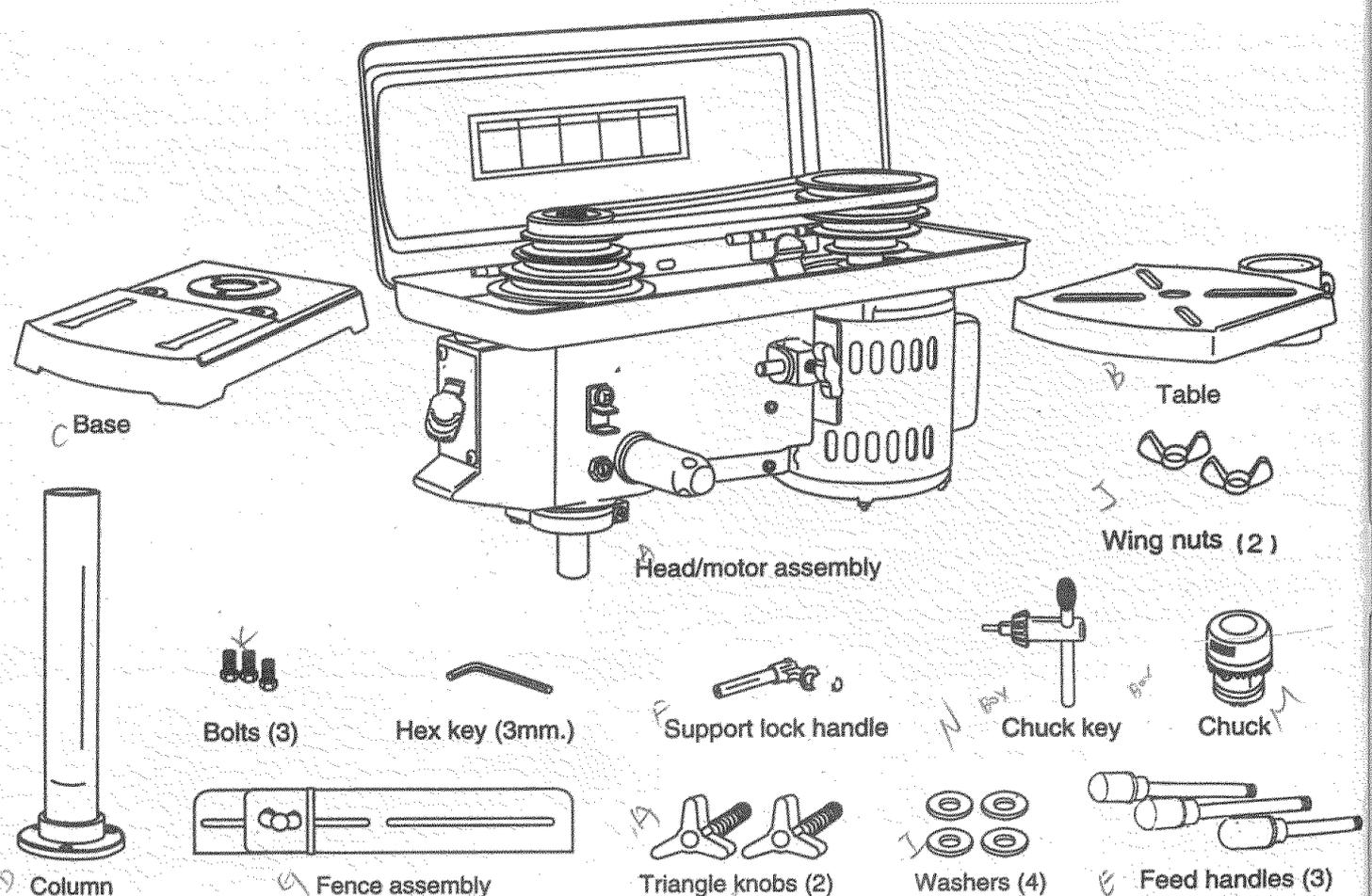
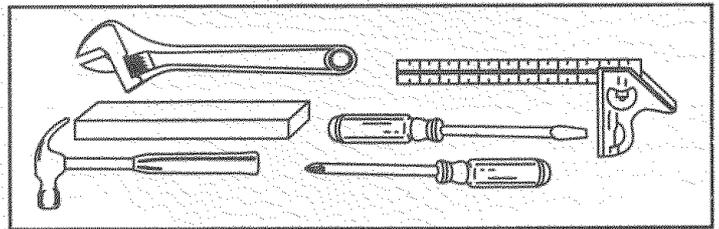
To protect the drill press from moisture, a protective coating has been applied to the machined surfaces. Remove this coating with a soft cloth moistened with kerosene or WD-40.

#### ▲ WARNING

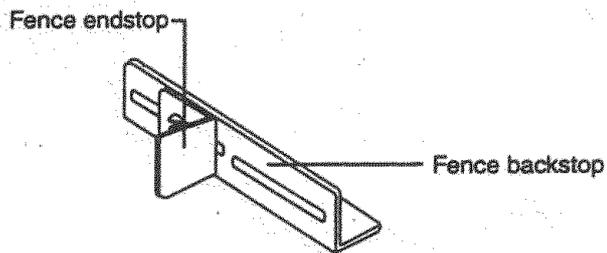
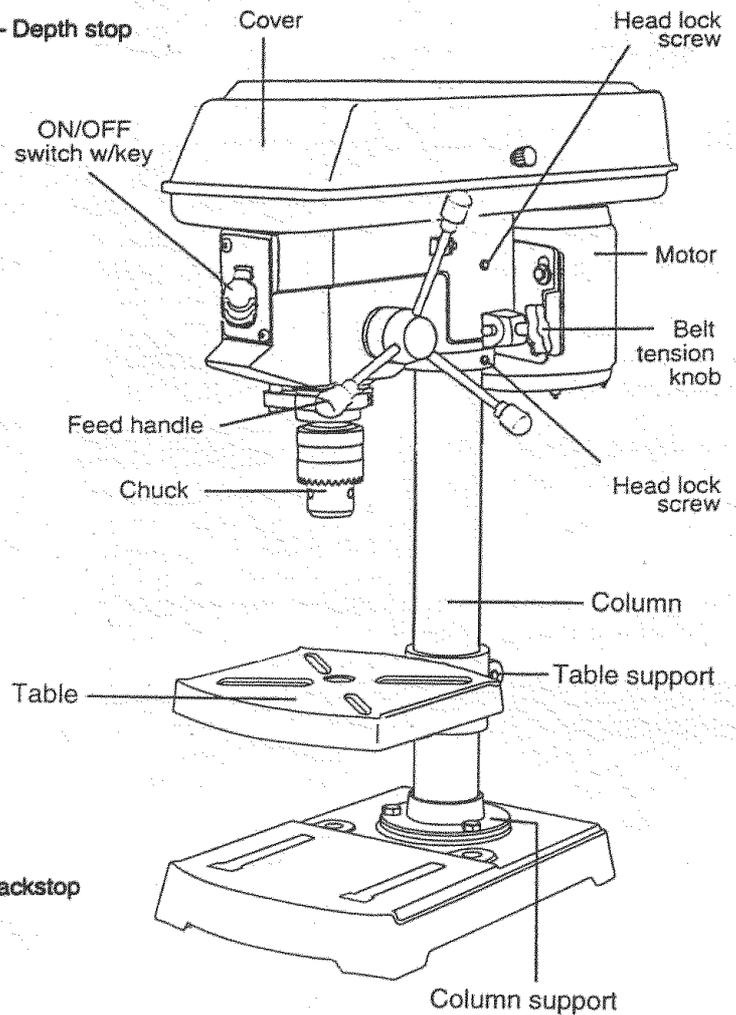
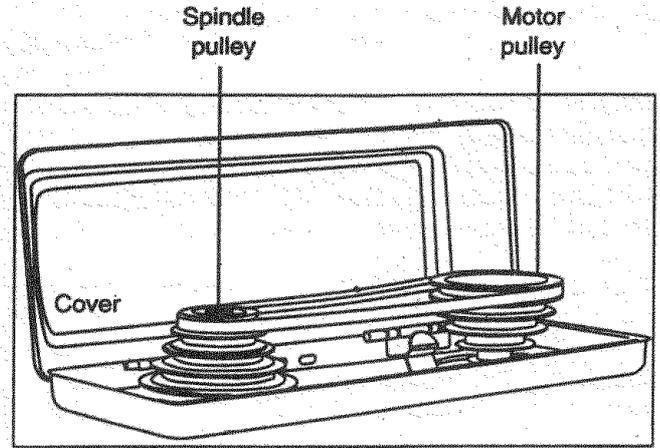
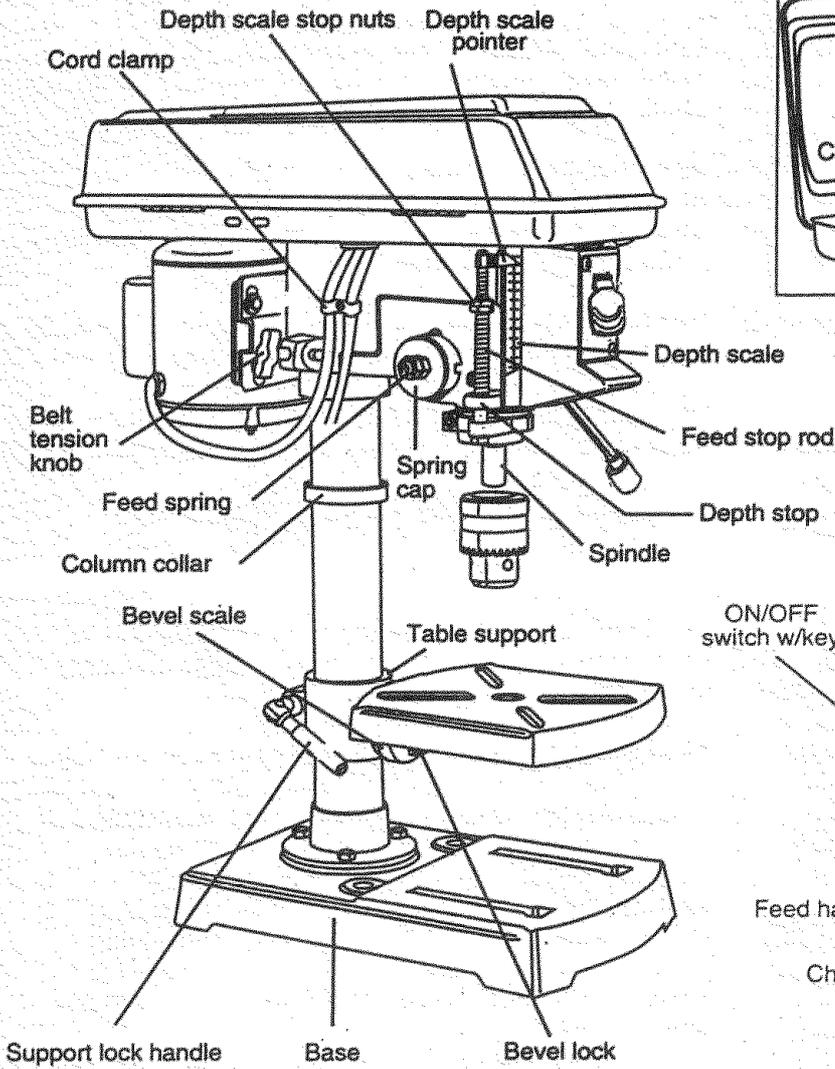
To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner or similar highly volatile solvents to clean the drill press.

### TOOLS NEEDED FOR ASSEMBLY

- Adjustable wrench
- Hammer and block of wood
- Combination square
- Screwdrivers



# KNOW YOUR DRILL PRESS



## GLOSSARY OF TERMS

**BASE** – Supports drill press. For additional stability, holes are provided in base to bolt drill press to floor. (See “Specific Safety Instructions for Drill Presses”.)

**BACKUP MATERIAL** – A piece of scrap wood placed between the workpiece and table. The backup board prevents wood in the workpiece from splintering when the drill passes through the backside of the workpiece. It also prevents drilling into the table top.

**BELT GUARD ASSEMBLY** – Covers pulleys and belt during operation of the drill press.

**BELT TENSION** – Refer to the “Assembly” Section, “Installing and Tensioning Belt.”

**BELT TENSION LOCK KNOB** – Tightening the knob locks the motor bracket support maintaining correct belt distance and tension.

**BEVEL SCALE** – Shows degree of table tilt for bevel operations. Scale is mounted on side of arm.

**CHUCK** – Holds drill bit or other recommended accessory to perform desired operations.

**CHUCK KEY** – A self-ejecting chuck key which will pop out of the chuck when you let go of it. This action is designed to help prevent throwing of the chuck key from the chuck when the power is turned ON. Do not use any other key as a substitute; order a new one if damaged or lost.

**COLUMN** – Connects head, table, and base on a one piece tube for easy alignment and movement.

**COLUMN SUPPORT** – Supports column, and provides mounting holes for column to base.

**DEPTH SCALE** – Indicates depth of hole being drilled.

**DEPTH SCALE POINTER** – Indicates the drilling depth by pointing to the depth scale.

**DEPTH SCALE LOCK** – Locks the depth scale to selected depth.

**DRILL BIT** – The cutting tool used in the drill press to make holes in a workpiece.

**DRILL ON/OFF SWITCH** – Has locking feature. This feature is intended to help prevent unauthorized and possible hazardous use by children and others.

**DRILLING SPEED** – Changed by placing the belt in any of the steps (grooves) in the pulleys. See Spindle Speed inside belt guard.

**FEED HANDLE** – Moves the chuck up or down. One or two of the handles may be removed if necessary whenever the workpiece is of such unusual shape that it interferes with the handles.

**HEAD LOCKS** – Locks the head to the column. ALWAYS lock head in place while operating the drill press.

**REVOLUTION PER MINUTE (R.P.M.)** – The number of turns completed by a spinning object in one minute.

**SPINDLE SPEED** – The R.P.M. of the spindle.

**SPRING CAP** – Adjusts quill spring tension.

**SUPPORT LOCK** – Tightening locks table support to column. Always have it locked in place while operating the drill press.

**TABLE** – Provides working surface to support workpiece.

**TABLE BEVEL LOCK** – Locks the table in any position from 0° – 45°.

**TABLE LOCK** – Locks the table after it is rotated to various positions.

**TABLE SUPPORT** – Rides on column to support table arm and table.

**WORKPIECE** – Material being drilled.

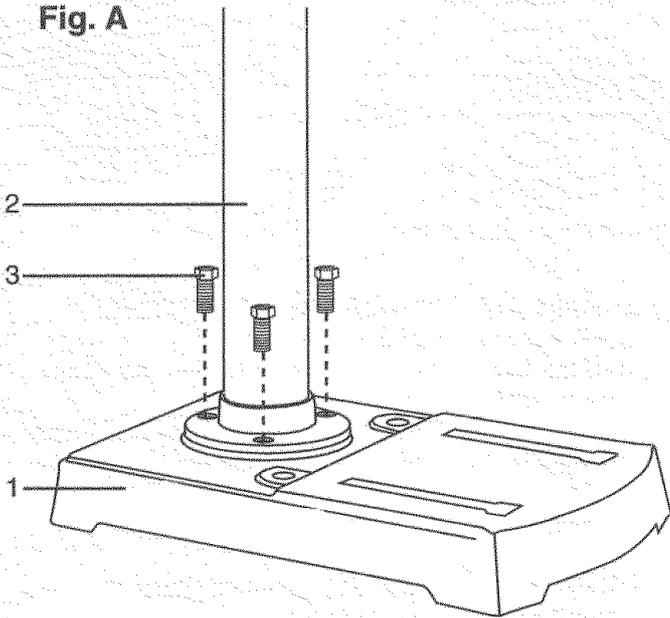
# ASSEMBLY AND ADJUSTMENTS

## ASSEMBLY INSTRUCTIONS

### BASE/COLUMN (FIG. A)

1. Set the base (1) on the floor.
2. Place the column (2) on the base; align the holes in the column support with the base holes.
3. Install a bolt (3) in each column support hole, and tighten with the wrench.

Fig. A

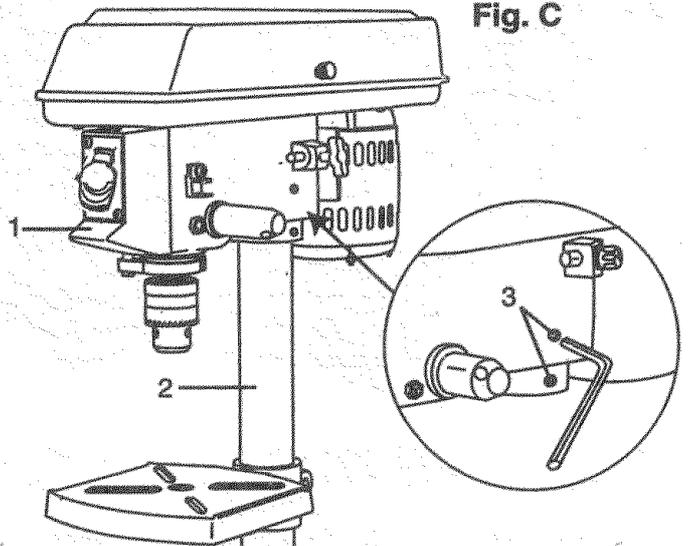


### HEAD/MOTOR ASSEMBLY (FIG. C)

**CAUTION:** The head/motor assembly (1) is heavy. Lift carefully.

1. Lift above the column (2), slide down the column as far as it will go.
2. Line the head up with the base.
3. Tighten the two locking screws (3) with the hex key.

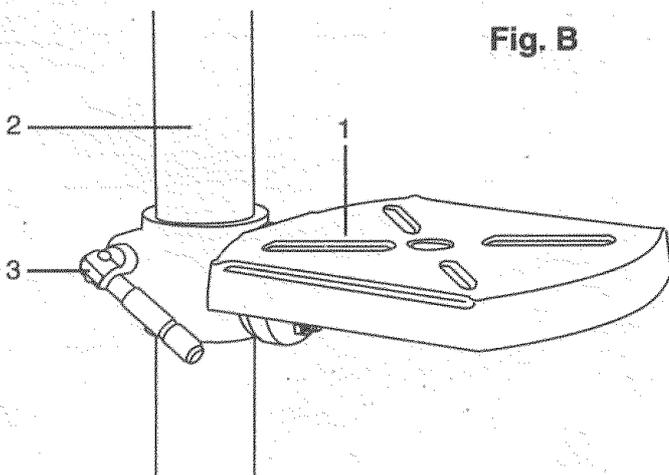
Fig. C



### TABLE (FIG. B)

1. Slide table assembly (1) down the column (2), until it rests on the base.
2. Install the lock handle (3) in the threaded hole.
3. Slide the table up the column to working height and hand tighten the lock handle to secure the table in place.

Fig. B



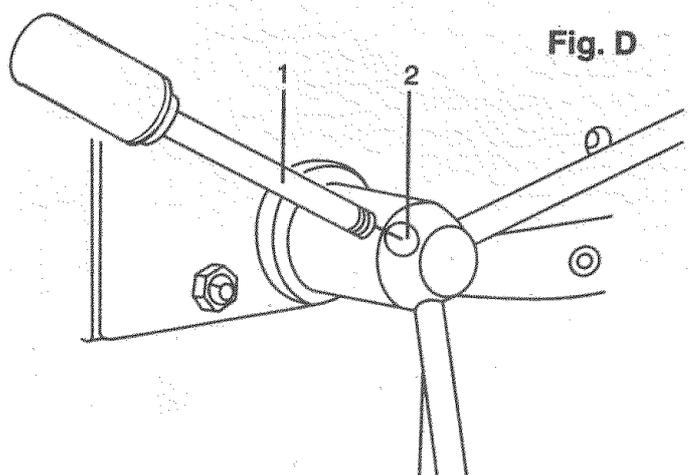
### FEED ASSEMBLY (FIG. D)

1. Thread the feed handles (1) into the holes on the feed hub (2).
2. Hand tighten.

#### **▲ WARNING**

Disconnect the drill press from the power source before installing, adjusting, or removing the chuck.

Fig. D



### CHUCK (FIG. E, F)

1. Inspect and clean the hole in the chuck (1) and the spindle (2).
2. Remove all grease, coatings, and particles from the chuck and spindle surfaces with a clean cloth.
3. Open the chuck jaws (3), by turning the chuck barrel clockwise, and make sure the jaws are completely recessed inside the chuck.
4. Seat the chuck (1) (Fig. F) onto the spindle by placing a block of wood under the chuck, and tapping the wood with a hammer, or tap the chuck with a rubber mallet or plastic-tipped hammer.
5. Do not tap the chuck with a metal hammer.

Fig. E

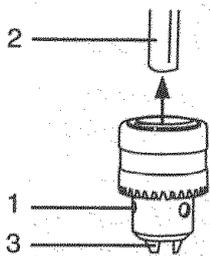
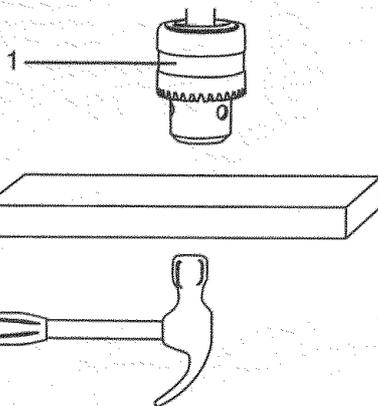


Fig. F



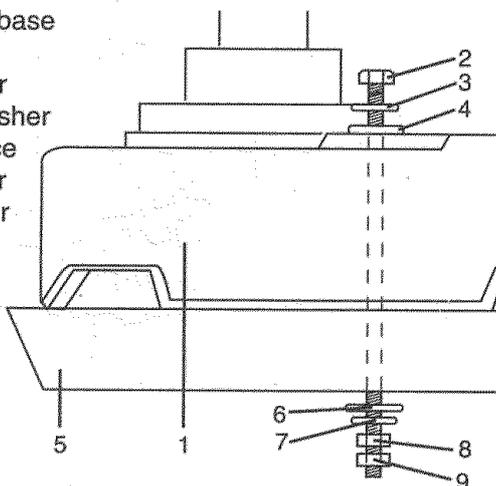
### MOUNTING THE DRILL PRESS (FIG. G)

Your drill press must be securely fastened by the two base holes to a stand or workbench with heavy-duty fasteners. This will prevent the drill press from tipping over, sliding, or walking during operation.

**IMPORTANT:** If the stand or workbench has a tendency to move during operation, fasten it securely to the floor.

Fig. G

1. Drill press base
2. Bolt
3. Flat washer
4. Rubber washer
5. Worksurface
6. Flat washer
7. Lockwasher
8. Hex nut
9. Jam nut



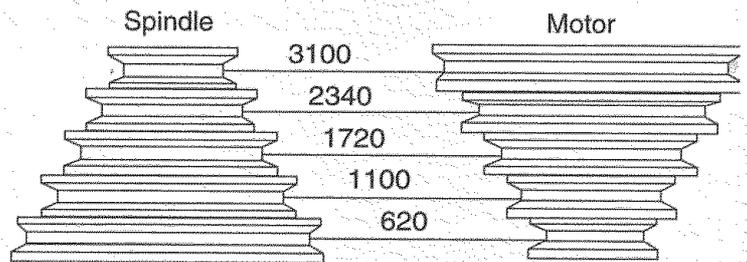
### SPINDLE SPEEDS (FIG. H)

This drill offers 5 spindle speeds from 620 to 3100 R.P.M. The highest speed is obtained when the belt is positioned on the largest motor pulley step and the smallest spindle pulley step.

#### ⚠ WARNING

Disconnect the drill press from the power source before making any adjustments.

Fig. H



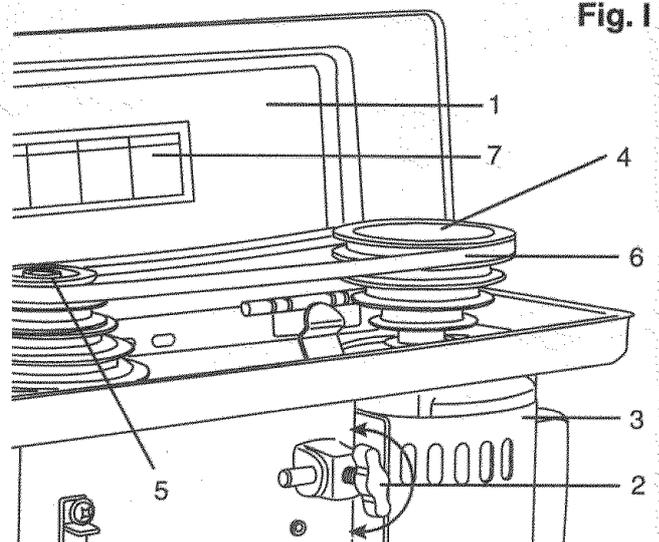
### TO ADJUST AND TENSION THE BELT (FIG. I)

1. Open the belt housing cover (1).
2. Turn the belt tension knob (2) to loosen the motor tension spring.
3. Pull the motor (3) toward the front of the drill press.
4. Hold the motor in this position, and set the belt (6) on the desired steps of the motor (4) and spindle (5) pulleys.

**NOTE:** Refer to the chart (7) located under the pulley cover for set-up pulley speeds.

5. Pivot the motor (3) away from the drill press head to increase the belt tension and tighten the tension knob (2).
6. The belt (6) should be tight enough to prevent slippage. Correct tension is set if the belt flexes about 1/2" when thumb pressure is applied at the midpoint of the belt between the pulleys.

Fig. I



## ▲ WARNING

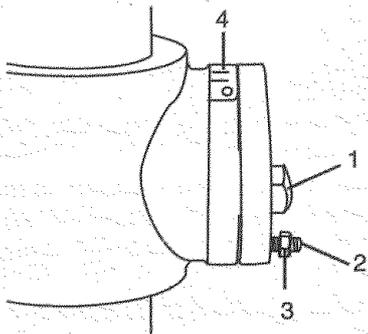
Disconnect the drill press from the power source before making any adjustments.

### TO TILT THE TABLE (FIG. J)

**NOTE:** The table is not shown in Fig. J for clarity of illustration.

1. Loosen the bevel lock (1) with a wrench.
2. Remove the horizontal locking pin (2) by turning the nut (3) clockwise until the pin can be pulled from the hole, far enough to allow the table to move.
3. Tilt the table to the desired angle, using the bevel scale (4) as a basic guide.
4. Tighten the bevel lock.
5. To return the table to its original position, loosen the bevel lock bolt (1). Realign the bevel scale to the 0° setting.
6. Turn the nut (3) on the locking pin (2) counterclockwise to the end of the threads.
7. Gently tap the locking pin until it is seated in the hole. Finger-tighten the nut.
8. Tighten the bevel lock with a wrench.

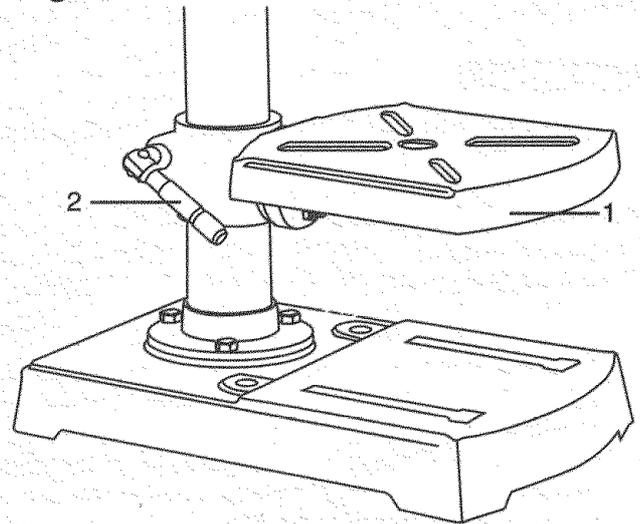
Fig. J



### TO MOVE THE TABLE (FIG. L)

1. Raise or lower the table (1) by loosening the support lock handle (2).
2. Move the table to the desired position and tighten the support lock handle.

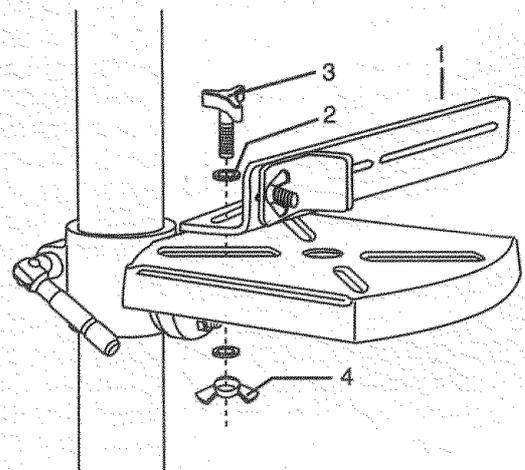
Fig. L



### FENCE ASSEMBLY (FIG. M)

1. Determine the desired location for the fence (1).
2. Align the mounting holes of the fence over the table top slots.
3. Place a washer (2) on the threaded end of the knob (3). Insert the knob through the mounting hole of the fence and the table slot.
4. Place a washer and wing nut (4) on the knob from under the table.
5. Repeat for the other knob and tighten.

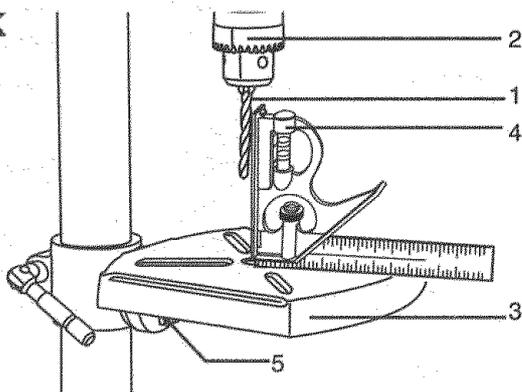
Fig. M



### TO SQUARE THE TABLE TO THE HEAD (FIG. K)

1. Insert a 3" drill bit (1) into the chuck (2), and tighten by turning the chuck barrel counterclockwise.
2. Place a combination square (4) on the table (3) as shown. The drill bit should be parallel to the straight edge of the square.
3. If an adjustment is needed, loosen the bevel lock (5) with a wrench.
4. Square the table to the bit by tilting the table.
5. Tighten the bevel lock when square.

Fig. K



## ADJUSTMENTS

**NOTE:** All necessary adjustments for the proper functioning of your drill press have been made at the factory. Please do not modify them. However, because of normal wear and tear on your tool, some readjustments may be necessary.

### **▲ WARNING**

Always unplug your tool from the power source before any adjustment.

### RETURN SPRING ADJUSTMENT (FIG. N)

It may be necessary to adjust the tension of the return spring if the quill returns either too rapidly or too slowly.

1. Lower the table for additional clearance.
2. Work from the left side of the drill press.
3. Move the stop nuts (1) down to the lowest position and tighten to prevent the quill from dropping while tensioning the spring.
4. Place a screwdriver in the front notch (2) of the spring housing (3), and hold it in place. Loosen the jam (outer) nut (4). Remove the jam nut.
5. With the screwdriver remaining in the front notch, loosen the inner nut (5) until the notch (7) disengages from the boss (6).

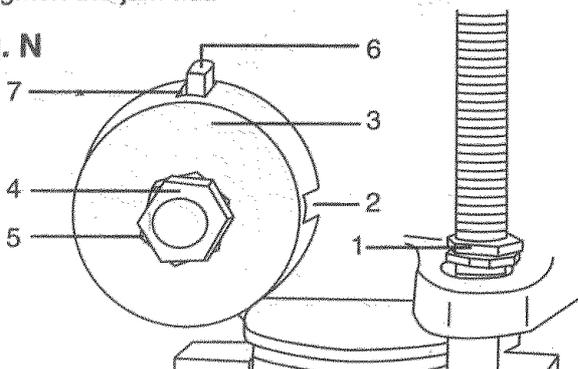
**Do not remove this nut.**

6. Carefully move the screwdriver upward or counterclockwise, engaging the next notch in the spring housing.

**Do not remove the screwdriver.**

7. Tighten the nut (5) with the wrench only enough to engage the boss (6).
8. **Do not overtighten** as this will restrict movement.
9. Move the stop nuts (1) and depth pointer to the upper-most position and check the tension while turning the feed handles.
10. If there is not enough tension on the spring, repeat steps 3–8, moving only one notch each time. Proper tension is achieved when the quill returns gently to the full up position when released.
11. When there is enough tension, replace the jam nut (4) and tighten the inner nut (5), but do not overtighten.
12. Rotate the handle to check the quill for unrestricted movement. If the movement is too tight, loosen the jam nut (4) and slightly loosen the inner nut (5). Retighten the jam nut.

**Fig. N**

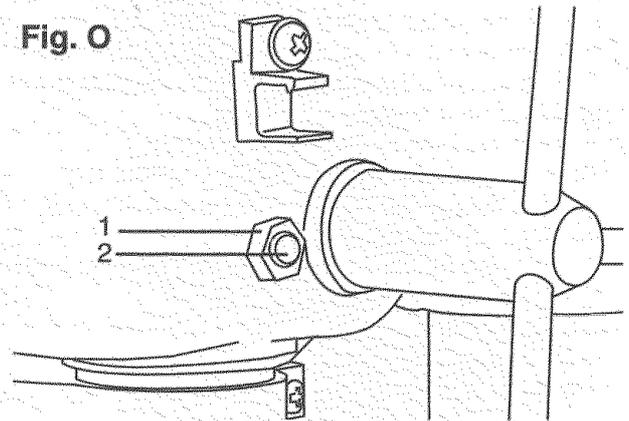


### ANGULAR PLAY OF THE SPINDLE (FIG. O)

Move the spindle to the lowest downward position, take it in your hands, and try to make it revolve about its axis. If there is too much play, proceed as follows:

1. Loosen the lock nut (1).
2. Turn the screw (2) clockwise to eliminate the play but without obstructing the upward and downward motion of the spindle (a little bit of play is normal).
3. Tighten the lock nut (1).

**Fig. O**



### ON / OFF SWITCH (FIG. P)

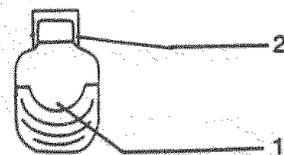
The "ON / OFF" switch has a removable, yellow plastic key. With the key removed from the switch, unauthorized and hazardous use by children and others is minimized.

1. To turn the drill press "ON", insert key (1) into the slot of the switch (2), and move the switch upward to the "ON" position.
2. To turn the drill press "OFF", move the switch downward.
3. To lock the switch in the "OFF" position, grasp the end, or yellow part, of the switch toggle, and pull it out.
4. With the switch key removed, the switch will not operate.
5. If the switch key is removed while the drill press is running, it can be turned "OFF" but cannot be restarted without inserting the switch key.

### **▲ WARNING**

Always lock the switch "OFF" when the drill press is not in use. Remove the key and keep it in a safe place. In the event of a power failure, blown fuse, or tripped circuit breaker, turn the switch "OFF" and remove the key, preventing an accidental startup when the power comes on.

**Fig. P**

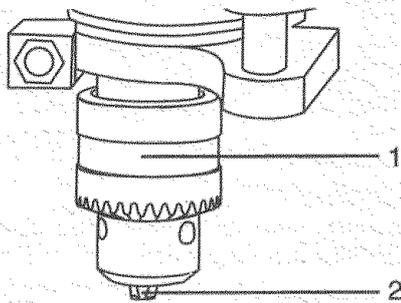


## OPERATION

### INSTALLING DRILL BITS (FIG. Q)

1. Open the chuck jaws by hand, turning the barrel of the chuck (1) clockwise.
2. Insert a drill bit into the chuck far enough to obtain maximum gripping of the chuck jaws (2).
3. Make sure that the drill bit is centered correctly between the chuck jaws before final tightening of the chuck.
4. Turning the chuck barrel counterclockwise, hand tighten the drill chuck sufficiently so the drill bit does not slip while drilling.

Fig. Q



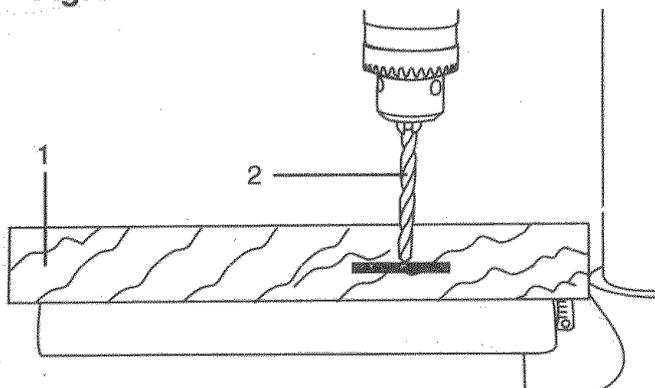
### DRILLING TO A SPECIFIC DEPTH

Drilling a blind hole (not all the way through the workpiece) to a given depth can be done two ways.

#### Workpiece method (FIG. R, S)

1. Mark the depth of the hole on the side of the workpiece (1).
2. WITH THE SWITCH "OFF", bring the drill bit (2) down until the tip is even with the mark.
3. Hold the feed handle at this position.
4. Spin the lower nut (3) down to contact the depth stop lug (6) on the head.
5. Spin the upper nut (5) down and tighten against the lower nut. (3)
6. The drill bit will know stop after traveling the distance marked on the workpiece.

Fig. R

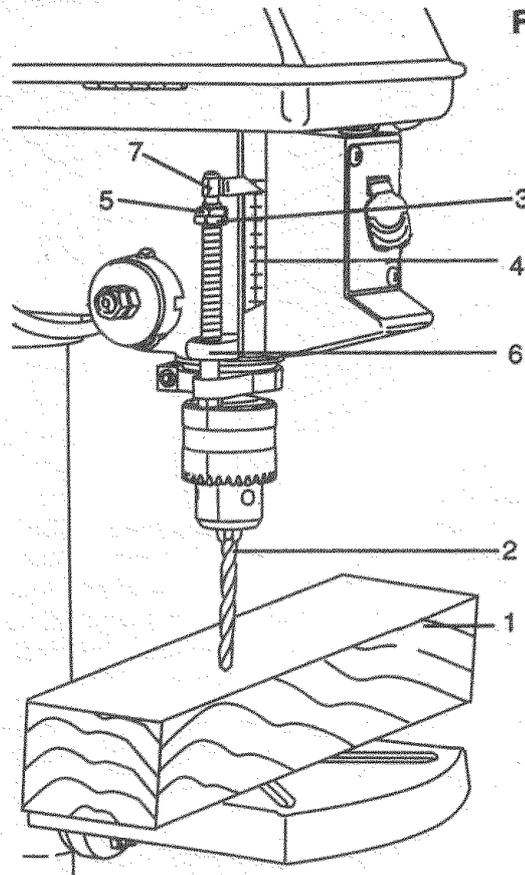


#### Depth scale method (FIG. S)

**NOTE:** For this method, with the spindle in the up position, the drill bit tip (2) slightly touches the top of the workpiece (1).

1. WITH THE SWITCH "OFF", turn the feed handle until the pointer (7) points to the desired depth on the depth scale (4). Hold the feed handles in that position.
2. Spin the lower nut (3) down to contact the depth stop lug (6) on the head.
3. Spin the upper stop nut (5) against the lower stop nut and tighten.
4. The downward progress of the chuck and drill bit will now stop after traveling the distance selected on the depth scale.

Fig. S



#### Drilling a hole

Using a center punch or a sharp nail, dent the workpiece where you want the hole. Before turning the switch on, bring the drill bit down to the workpiece, lining it up with the hole location. Turn the switch on and pull down on the feed handles with only enough effort to allow the drill to cut.

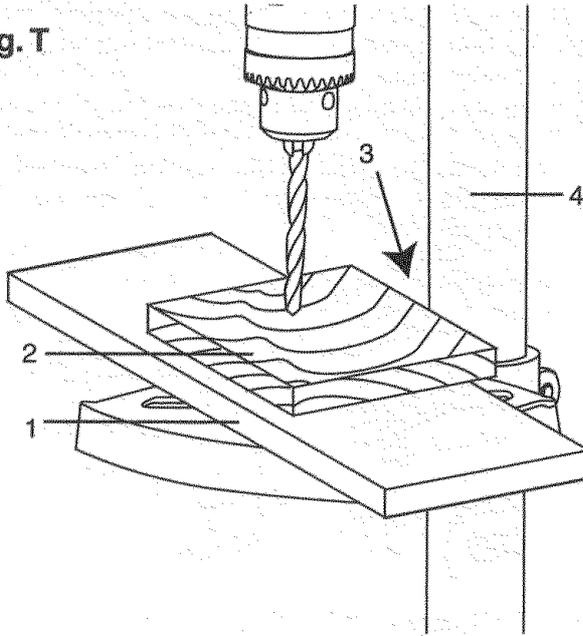
**FEEDING TOO SLOWLY** might cause the drill bit to turn. **FEEDING TOO RAPIDLY** might stop the motor, cause the belt or drill to slip, tear the workpiece loose, or break the drill bit. When drilling metal, it will be necessary to lubricate the tip of the drill bit with oil to prevent it from overheating.

### POSITIONING TABLE AND WORKPIECE (FIG. T, U)

Always place a piece of back up material (1) (wood, plywood) on the table underneath the workpiece (2). This will prevent splintering on the underside of the workpiece as the drill bit breaks through.

To keep the workpiece from spinning out of control, one end of it must touch the left side (3) of the column (4) as illustrated, or the fence provided should be used and the workpiece must be clamped to the table.

Fig. T

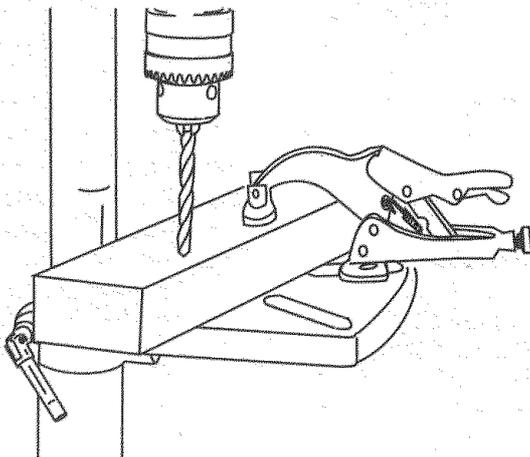


### ▲ WARNING

To prevent the workpiece or the backup material from being torn from your hand while drilling, position them to the left side of the column. If the workpiece or the backup material are not long enough to reach the column, use the fence provided and clamp them to the table. Failure to do this could result in personal injury.

**NOTE:** For small pieces that cannot be clamped to the table, use a drill press vise (optional accessory). The vise must be clamped or bolted to the table to avoid injury.

Fig. U



### GENERAL DRILLING GUIDELINES

**NOTE:** Use scrap material to get the feel of the machine before attempting regular work.

#### Drilling speeds

Important drilling speed factors: Type of material, hole size, type of drill bit or cutter, desired cut quality. Remember, the smaller the drill bit, the greater the required speed. When drilling soft materials, the speed required is greater than that required for hard materials.

#### Metal working

A metal workpiece should be clamped down securely. Never hold it with your bare hands; the drill bit may seize the workpiece and cause you serious injury. The drill bit may also break if the metal workpiece hits the column. Clamp work firmly; any tilting, twisting, or shifting results not only in a rough hole, but increases the potential of drill bit breakage. If the metal piece is flat, place a piece of wood under it to prevent it from turning. If the piece is an irregular shape and cannot be laid flat on the table, it should be securely blocked and clamped.

#### Wood working

Metal piercing twist drill bits may be used on wood, but brad point bits are preferable. Do not use auger bits: they turn so rapidly that the workpiece is lifted off the table and whirled around. To drill completely through the workpiece, line the table up so the bit will enter the center hole. Feed slowly when the bit is about to cut through the wood to prevent splintering. Use a scrap piece of wood for a base block under the work; it will help to reduce splintering and protect the point of the bit.

#### Feeding

Pull down on the feed handles with enough force to allow the drill to cut. Feeding too rapidly might stall the motor, cause the belt to slip, damage the workpiece, or break the drill bit. Feeding too slowly will cause the drill bit to heat up and burn the workpiece.

## ▲ WARNING

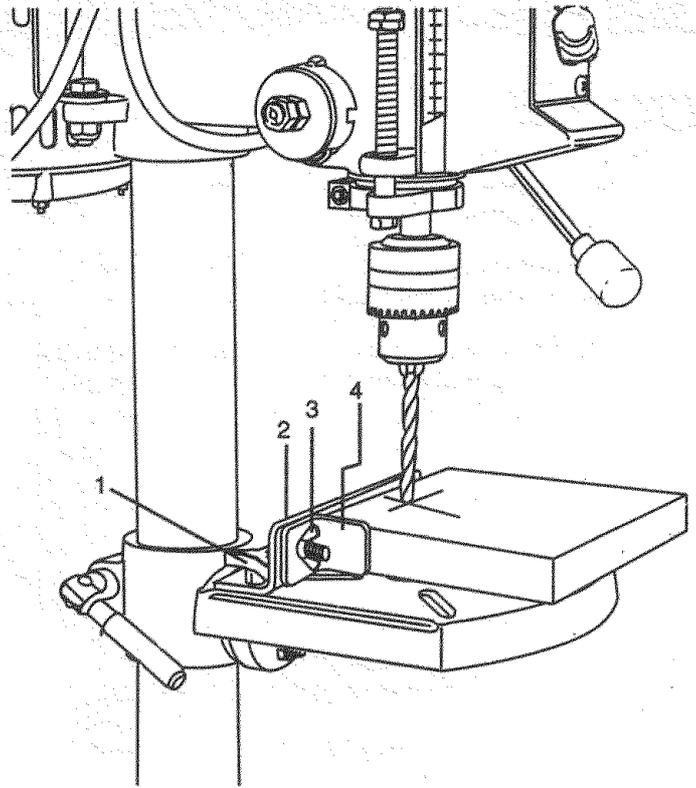
To prevent the workpiece or backup material from being torn from your hands while drilling, you **MUST** position the workpiece against the **LEFT** side of the column. If the workpiece or the backup material is not long enough to reach the column, clamp them to the table, or use the fence provided with the drill press to brace the workpiece. Failure to secure the workpiece could result in personal injury.

### USING THE FENCE (FIG. V)

The fence provides a way of accurately and quickly setting up the workpiece for more precision or repetitive drilling operations.

1. Using the centerpunch or sharp nail, make an indentation in the workpiece where you want to drill.
2. Lower the drill bit to align with the indentation on the workpiece.
3. Loosen the knobs (1) and slide the fence back stop (2) firmly against the long side of the workpiece. Tighten the knobs when in position.
4. Loosen the wing nut (3) and slide the end stop (4) along the fence until it is firmly against the left side of the workpiece. Tighten the wing nut.
5. Check the accuracy by drilling a scrap workpiece. Adjust if needed.
6. Hold with your hand or clamp the top surface of the workpiece firmly to prevent it from lifting off the table when the bit is raised.

Fig. V



## MAINTENANCE

### **▲ WARNING**

For your own safety, turn switch "OFF" and remove plug from power source outlet before maintaining or lubricating drill press.

Blow out or vacuum saw dust or metal shavings that accumulate in and on the motor.

Apply a light coat of paste wax to the column and to the table to help keep these surfaces clean and rust-free.

Lubricate the chuck and quill assembly periodically. Squirt or wipe a thin film of lightweight machine oil on the outside of the spindle shaft and the jaws of the chuck. Raise and lower the quill and jaws to distribute the oil evenly. The ball bearings are grease packed at the factory and require no additional lubrication.

**CAUTION:** All servicing of the drill press should be performed by a qualified service technician.

## TROUBLESHOOTING

### TROUBLESHOOTING GUIDE

#### **▲ WARNING**

To avoid injury from an accidental start, turn the switch "OFF" and always remove the plug from the power source before making any adjustments.

- Consult your local Sears Service Center if for any reason the motor will not run.

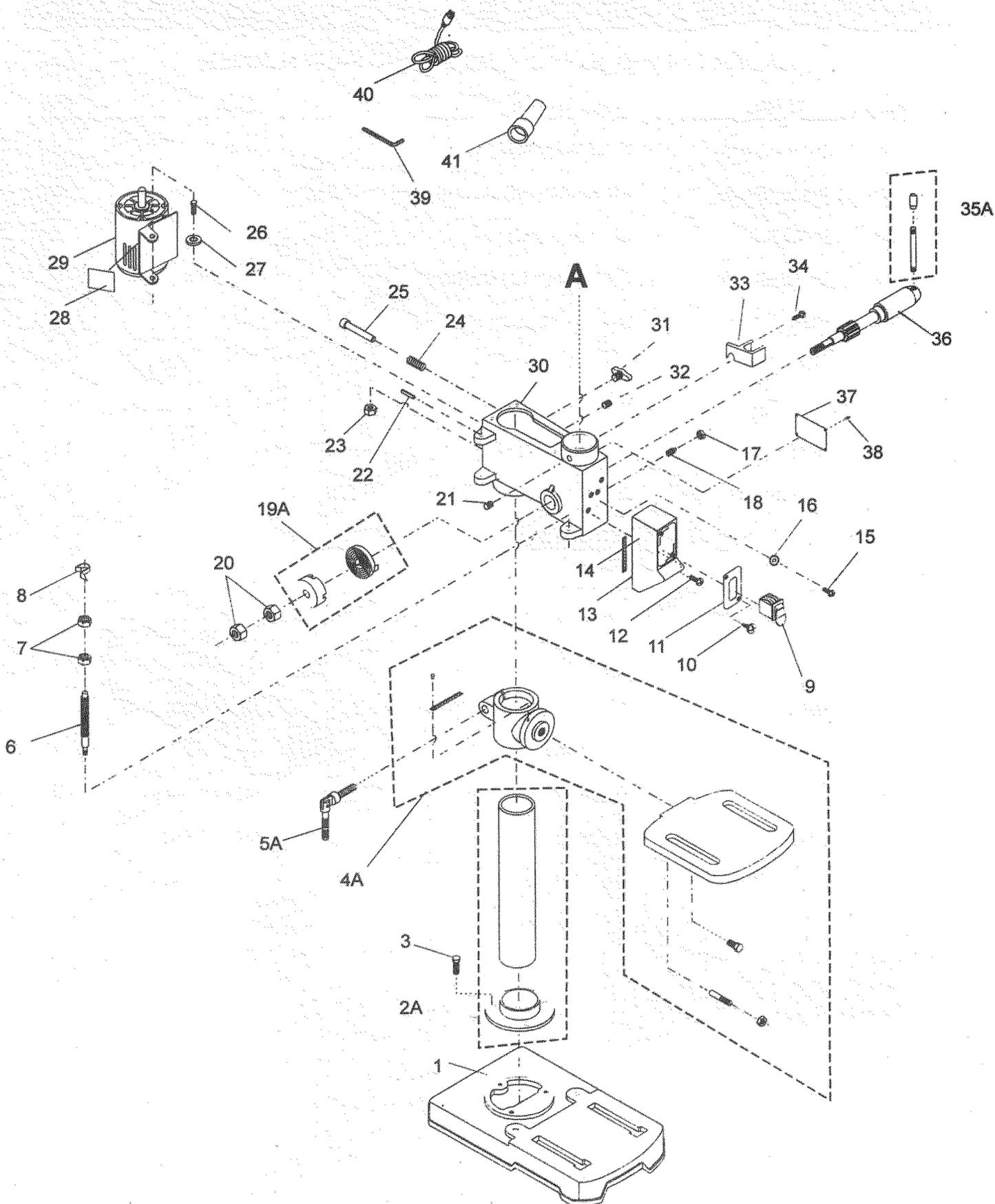
PROBLEM	PROBABLE CAUSE	REMEDY
Noisy operation.	<ol style="list-style-type: none"> <li>1. Incorrect belt tension.</li> <li>2. Dry spindle.</li> <li>3. Loose spindle pulley.</li> <li>4. Loose motor pulley.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tension. See page 10 Section - "ASSEMBLY" (To adjust the tension belt)</li> <li>2. Lubricate spindle. See page 14 Section - "MAINTENANCE".</li> <li>3. Check tightness of retaining nut on pulley, and tighten if necessary.</li> <li>4. Tighten motor pulley set screw.</li> </ol>
Drill bit burns.	<ol style="list-style-type: none"> <li>1. Incorrect speed.</li> <li>2. Chips not coming out of hole.</li> <li>3. Dull drill bit.</li> <li>4. Feeding too slowly.</li> <li>5. Not lubricated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Change speed. See page 10 Section - "ASSEMBLY" (Spindle speeds)</li> <li>2. Retract drill frequently to clear chips.</li> <li>3. Replace drill bit.</li> <li>4. Feed fast enough - allow drill to cut.</li> <li>5. Lubricate drill. See page 13 Section - "OPERATION" (Drilling a hole)</li> </ol>
Run out of drill bit point - drilled hole not round.	<ol style="list-style-type: none"> <li>1. Hard grain in wood or lengths of cutting flutes and/or angles not equal.</li> <li>2. Bent drill bit.</li> </ol>	<ol style="list-style-type: none"> <li>1. Resharpen drill bit correctly.</li> <li>2. Replace drill bit.</li> </ol>
Wood splinters on underside.	<ol style="list-style-type: none"> <li>1. No backup material under workpiece.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use backup material. See page 14 Section - "OPERATION" (Positioning table and workpiece)</li> </ol>
Workpiece torn loose from hand.	<ol style="list-style-type: none"> <li>1. Not supported or clamped properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Support workpiece or clamp it. See page 14 Section - "OPERATION" (Positioning table and workpiece)</li> </ol>
Drill bit binds in workpiece.	<ol style="list-style-type: none"> <li>1. Workpiece pinching drill bit, or excessive feed pressure.</li> <li>2. Improper belt tension.</li> </ol>	<ol style="list-style-type: none"> <li>1. Support workpiece or clamp it. See page 14 Section - "OPERATION" (Positioning table and workpiece)</li> <li>2. Adjust tension. See page 10 Section "ASSEMBLY" (To adjust and tension the belt)</li> </ol>
Excessive drill bit runout or wobble.	<ol style="list-style-type: none"> <li>1. Bent drill bit.</li> <li>2. Worn bearings.</li> <li>3. Drill bit not properly installed in chuck.</li> <li>4. Chuck not properly installed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a straight drill bit.</li> <li>2. Replace bearings.</li> <li>3. Install drill properly. See page 13 Section - "OPERATION" (Installing drill bits)</li> <li>4. Install chuck properly. See page 10 Section - "ASSEMBLY" (Chuck)</li> </ol>
Quill returns too slow or too fast.	<ol style="list-style-type: none"> <li>1. Spring has improper tension.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust spring tension. See page 12 Section - "ADJUSTMENTS" (Return spring adjustment)</li> </ol>
Chuck will not stay attached to spindle. It falls off when trying to install.	<ol style="list-style-type: none"> <li>1. Dirt, grease, or oil on the tapered inside surface of chuck or on the spindle's tapered surface.</li> </ol>	<ol style="list-style-type: none"> <li>1. Using a household detergent, clean the tapered surface of the chuck and spindle to remove all dirt, grease and oil. See page 10 Section - "ASSEMBLY" (Chuck)</li> </ol>

## PARTS LIST

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Key	Part No.	Description	Size	Qty
1	10200129	BASE		1
2A	10200201B2	COLUMN HOLDER ASS'Y		1
3	2601BBDA90	HEX. SOC. SET SCREW	M8x1.25-25	4
4A	10202105A11	TABLE BRACKET ASS'Y		1
5A	10602003	TABLE LOCK HANDLE		1
6	10201004	SET BOLT		1
7	10518401	NUT	M10x1.5	2
8	10201201	POINTER		1
9	2898D08G24	ROCKER SWITCH		1
10	2661MBDE11	CR. RE. TRUSS HD.SCREW	M4x16-12	2
11	10212705	SWITCH COVER		1
12	2668BBDA24	CR. RE. PAN HD. SCREW	M5x0.8-12	2
13	10208810	SWITCH BOX		1
14	10204608	SCALE		1
15	2668BZDA23	CR.RE.PAN HD.SCREW	M5x0.8-8	2
16	2504MZC005	EXTERNAL TOOTH LOCK WASHER	Φ 5	2
17	2701FBD113	HEX. NUT	M8x1.25 T=6.5	1
18	10205405	QUILL SET SCREW		1
19A	10205010A1	COIL SPRING ASS'Y		1
20	2701QBD609	HEX. NUT	3/8x24UNF T=8	2
21	2603BBLA52	HEX.SOC.SET SCREW	M8x1.25-8	1
22	2536MBE606	SPRING PIN	4-18	1
23	2705FBD108	HEX. NUT	M8x1.25 T=8	2
24	10303101	SPRING		1
25	10203215	MOTOR BAR		1
26	2601BBDA90	HEAD BOLT	M8x1.25-25	2
27	2501NBDN32	FLAT WASHER	3/8x29/32-5/64	2
28	10216419	MOTOR LABEL		1
29	8F15A20204A1	MOTOR		1
30	10202516	HEAD		1
31	10604204	SHIFTER BOLT		1
32	2603BBLA52	HEX.SOC.SER SCREW	M8x1.25-8	2
33	10511201	CHUCK KEY HOLDER		1
34	2641BBDA39	CR.RE.PAN HD.SCREW	M6x1.0-12	1
35A	10204306A5	HANDLE BAR ASS'Y		3
36	10203803	FEED SHAFT		1
37	10216238	WARNING LABEL		1
38	2658MZDU36	DRIVE SCREW	Φ 2.3-5	4
39	2138MBL704	WRENCH HEX	4-64	1
40	2807BB06H2	POWER CABLE		1
41	2805U5HN16	TERMINAL		1

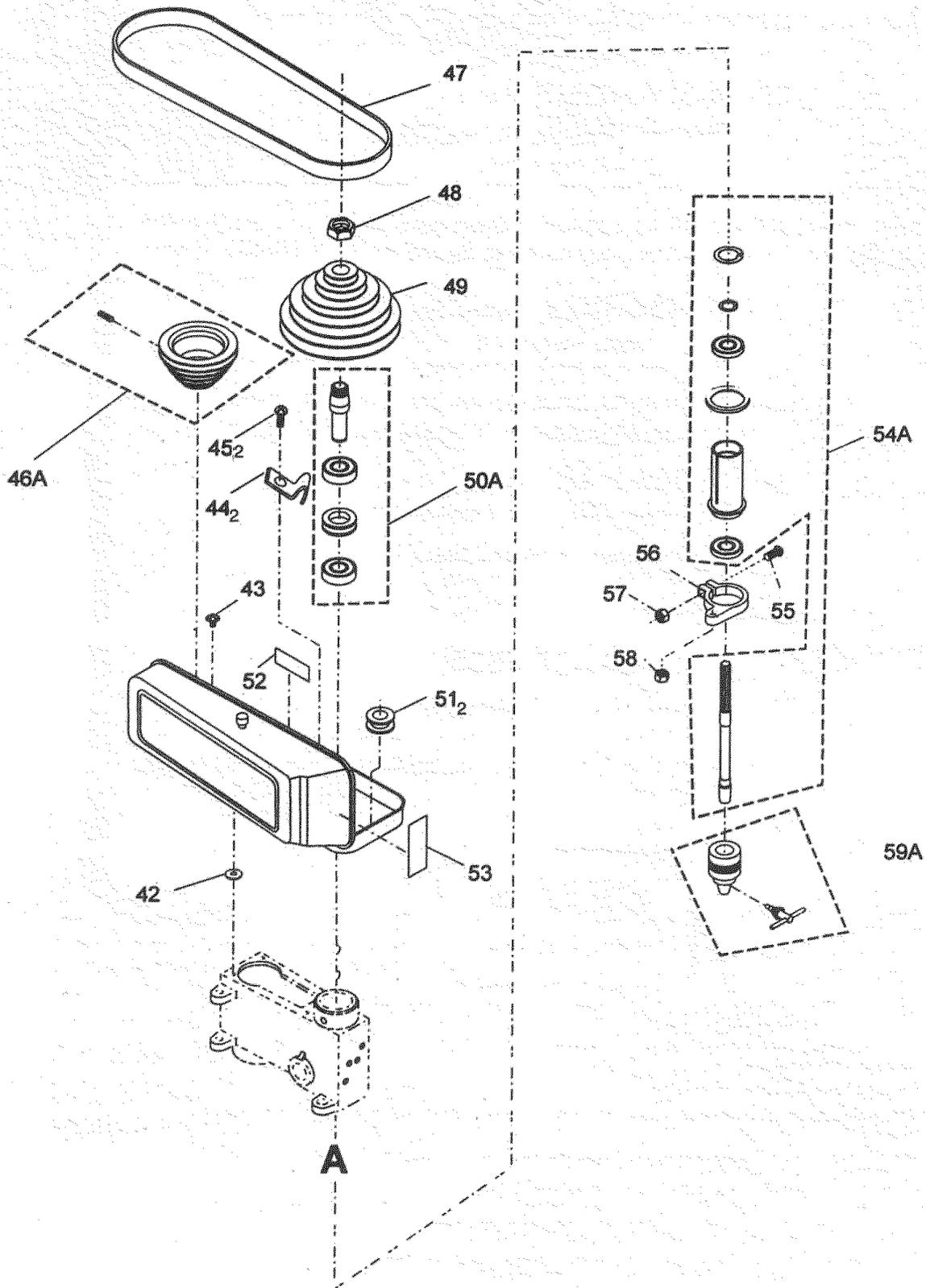


## PARTS LIST

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Key	Part No.	Description	Size	Qty
42	2501NNVN11	FLAT WASHER	1/4x3/4-3/1	4
43	2641BBDA39	CR.RE.ROUND WASHER HD.SCREW	M6*1.0-12	4
44	10208302	CLAMP-CORD		2
45	2668BBDA23	CR.RE.PAN HD.SCREW	M5x0.8-8	2
46A	10207905A1	MOTOR PULLEY		1
47	2572ARK270	V-BELT		1
48	10306901	PULLEY SET NUT		1
49	10207003	SPINDLE PULLEY		1
50A	10306512A1	DRIVING SLEEVE ASS'Y		1
51	2801ABRF04	STRAIN RELIEF		2
52	10216608	SPEED DIAGRAM		1
53	10216929	TRADE-MARK LABEL		1
54A	10205601A11	QUILL ASS'Y		1
55	2668BBDA27	CR.RE.PAN HD.SCREW	M5x0.8-20	1
56	10200905	SET RING		1
57	2701FBD105	HEX.NUT	M5x0.8 T=4	1
58	2701FBD106	HEX.NUT	M6x1.0 T=5	1
59A	2137132108	CHUCK & KEY		1



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