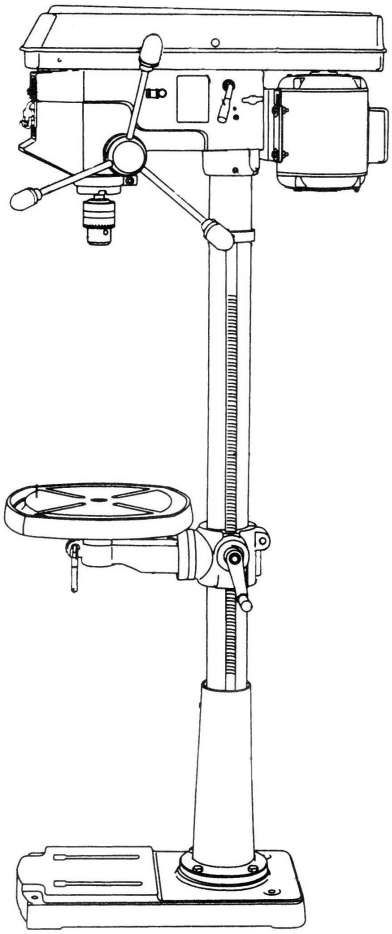
HITACHI

**Model** **B 16RM** **Drill Press**



# INSTRUCTION MANUAL AND SAFETY INSTRUCTIONS

## ⚠WARNING

**Improper and unsafe use of this power tool can result in death or serious bodily injury!**
**This manual contains important information about product safety. Please read and understand this manual before operating the power tool. Please keep this manual available for others before they use the power tool.**

Hitachi Koki

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# HITACHI AUTHORIZED SERVICE CENTERS

Service under this warranty is available from Hitachi Koki U.S.A., Ltd. at :

**IN THE U.S.A.**

3950 Steve Reynolds Blvd. Norcross, GA 30093

9409 Owensmouth Ave. Chatsworth, CA 91311

OR CALL: (800) 546-1666 for a service center nearest you.

**IN CANADA**

6395 Kestrel Road Mississauga, ON L5T 1Z5

OR CALL: (800) 970-2299 for a service center nearest you.

## ⚠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, 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 dust masks that are specially designed to filter out microscopic particles.**

# PRODUCT SPECIFICATIONS

| | |
|---|---|
| Chuck Size | 5/8" |
| Speed | 12 (250 ~ 3,100 $min^{-1}$) |
| Motor | 120V, 60 Hz, 8 Amps |
| Horsepower | 1 HP (Max. Developed) |
| Built-in Light | 60 Watt (Maximum) (Bulb not included) |
| Table Size | 13-15/64" x 13-15/64" |
| Table Tilt | 45° Right or Left |
| Spindle Travel | 3-1/8" |
| Throat | 7-1/2" |
| Base Size | 11" x 20-3/8" |
| Height | 63-1/4" |
| Weight | 156.5 lb (71.0 kg) |

## ⚠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.

# SAFETY

## GENERAL SAFETY INSTRUCTIONS

**BEFORE USING THIS DRILL PRESS**

Safety is a combination of common sense, stay 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 the entire instruction manual. **LEARN** the tool's application, limitations and possible hazards.
2. **KEEP GUARDS IN PLACE** and in working order.
3. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp and 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 invited accidents.
6. **KEEP CHILDREN AWAY.** All visitors should be kept safe distance from 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.** Do not force a tool or an 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. **DISCONNECT TOOLS** before servicing; when changing accessories such as blades, bits, cutters, and the like.
11. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure the switch is in the off position before plugging in.
12. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommend accessories. The use of improper accessories may cause risk of injury to persons.
13. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it ON.
14. **NEVER LEAVE A TOOL RUNNING UNATTEND. TURN THE POWER "OFF".** Don't leave the tool until it comes to a complete stop.
15. **NEVER STAND ON THE TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
16. **DON'T OVERREACH.** Keep proper footing and balance at all times.
17. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
18. **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.
19. **MAKE WORKSHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
20. **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.
21. Dust generated from certain material can be hazardous to your health. Always operate the drill press in a well-ventilated area and provide for proper dust removal. Use a dust collection system whenever possible.


22. **ALWAYS WEAR EYE PROTECTION.** Any drill press can throw foreign objects into the eyes and could cause permanent eye damage. ALWAYS wear Safety Goggles (not glasses) that comply with ANSI Safety standard Z87.1 Everyday eyeglasses have only impact -resistance lenses. They ARE NOT safety glasses. Safety Goggles are available at Store. **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. **THIS DRILL PRESS** is intended for use in dry conditions, indoor use only.
2. **WEAR EYE PROTECTION.** USE A face or dust mask along with safety goggles if drilling operation is dusty. USE ear protectors, especially during extended periods of operation.
3. **DO NOT** wear gloves, neckties, or loose clothing.
4. **DO NOT** try to drill material too small to be securely held.
5. **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.
6. **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.
7. **DO NOT USE** wire wheels, router bits, shaper cutters, circle (fly) cutters, or rotary planers on this drill press.
8. **WHEN** cutting a large piece of material, make sure it is fully supported at the table height.
9. **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.
10. **MAKE SURE** there are no nails or foreign objects in the part of the workpiece to be drilled.
11. **CLAMP THE WORKPIECE OR BRACE IT** against the left side of the column to prevent rotation. If it is too short or the table is tilted, clamp it solidly to the table and use the fence provided.
12. **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.
13. **SECURE THE 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.
14. **MAKE SURE** all clamps and locks are firmly tightened before drilling.
15. **SECURELY LOCK THE HEAD** and table support to the column, and the table to the table support before operating the drill press.
16. **NEVER** turn your drill press on before clearing the table of all objects (tools, scraps of wood, etc.)
17. **BEFORE STARTING** the operation, jog the motor switch to make sure the drill bit does not wobble or vibrate.
18. **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. If do not restart the unit until the problem is corrected.
19. **DO NOT** perform layout assembly or set up work on the table while the drill press is in operation.
20. **USE THE RECOMMENDED SPEED** for any drill press accessory and for different workpiece material. READ THE INSTRUCTIONS that come with the accessory.
21. **WHEN DRILLING** large diameter holes, clamp the workpiece firmly to the table. Otherwise, the bit may grap and spin the workpiece at high speeds. DO NOT USE fly cutters or multiple-part hole cutters, as they can come apart or become unbalanced in use.
22. **MAKE SURE** the spindle has come to a complete stop before touching the workpiece.
23. **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.
24. **KEEP GUARDS IN PLACE** and in working order.
25. **USE ONLY THE 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 shock. This tool is equipped with an electric cord that has an equipment grounding conductor and 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 RECEPTACLE 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 PROPER 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**

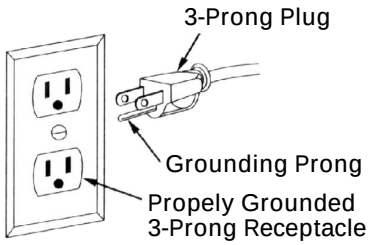
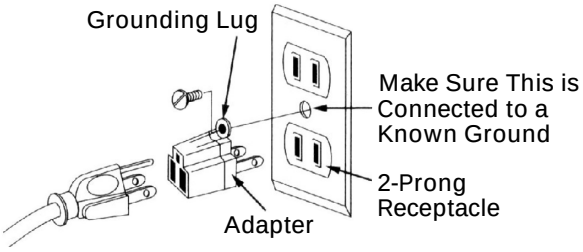



**Fig. B**




## ⚠WARNING

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

| MINMUN 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

# ACCESSORIES AND ATTACHMENTS

## RECOMMENDED ACCESSORIES

**⚠WARNING**

Use only accessories recommended for this drill press. Follow the instructions that accompany the accessories. Use of improper accessories may cause hazards.

Visit your Hardware Department or see the Power and Hand Tools Catalog for the following accessories:

- Drill bits
- Hold-Down Clamps
- Drill press Vises

**⚠WARNING**

Use only accessories designed for this drill press to avoid injury from broken parts or thrown workpieces.

You may recommend other accessories not listed in this manual. See your nearest your store or Power and Hand Tool Catalog for all other accessories.

Do not use any accessory unless you have completely read the instruction or operator's manual for that accessory.

# 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 list 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.

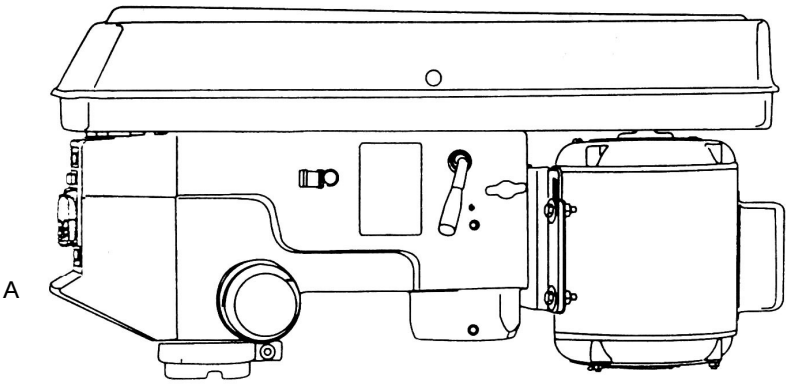
**⚠WARNING**

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

## TABLE OF LOOSE PARTS

| ITEM | DESCRIPTION | QUANTITY |
|---|---|---|
| A. | Head assembly | 1 |
| B. | Table | 1 |
| C. | Base | 1 |
| D. | Column assembly | 1 |
| | Loose parts bag: | |
| E. | Feed handle | 3 |
| F. | Lock handle | 1 |
| G. | Crank Handle | 1 |
| H. | Hex bolts | 4 |
| I. | Batteries | 2 |
| M. | Hex wrenches | 3 |
| N. | Wedge | 1 |
| O. | Arbor | 1 |
| | Box: | |
| P. | Chuck key | 1 |
| Q. | Chuck | 1 |

# CARTON CONTENTS



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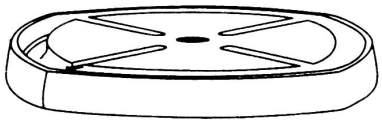

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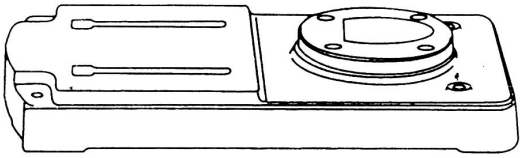

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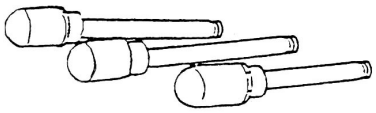

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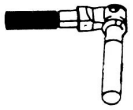

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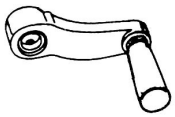

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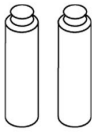

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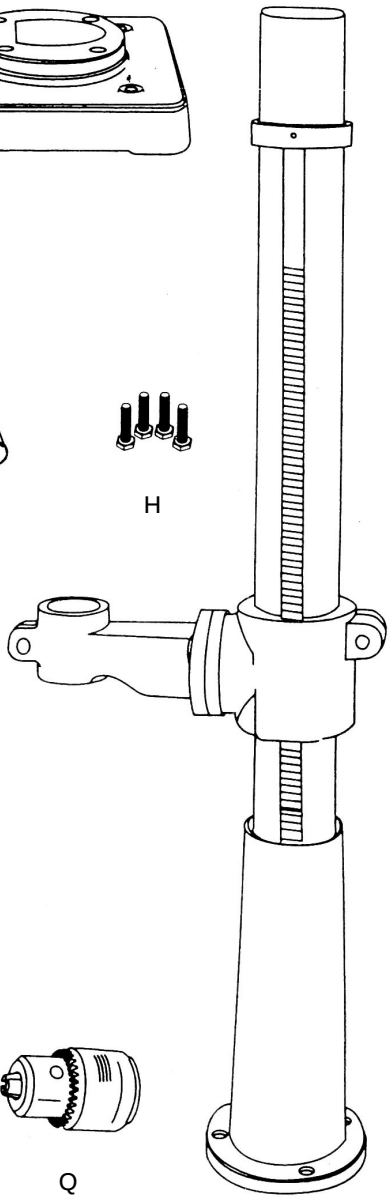

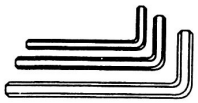

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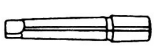

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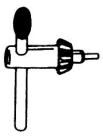
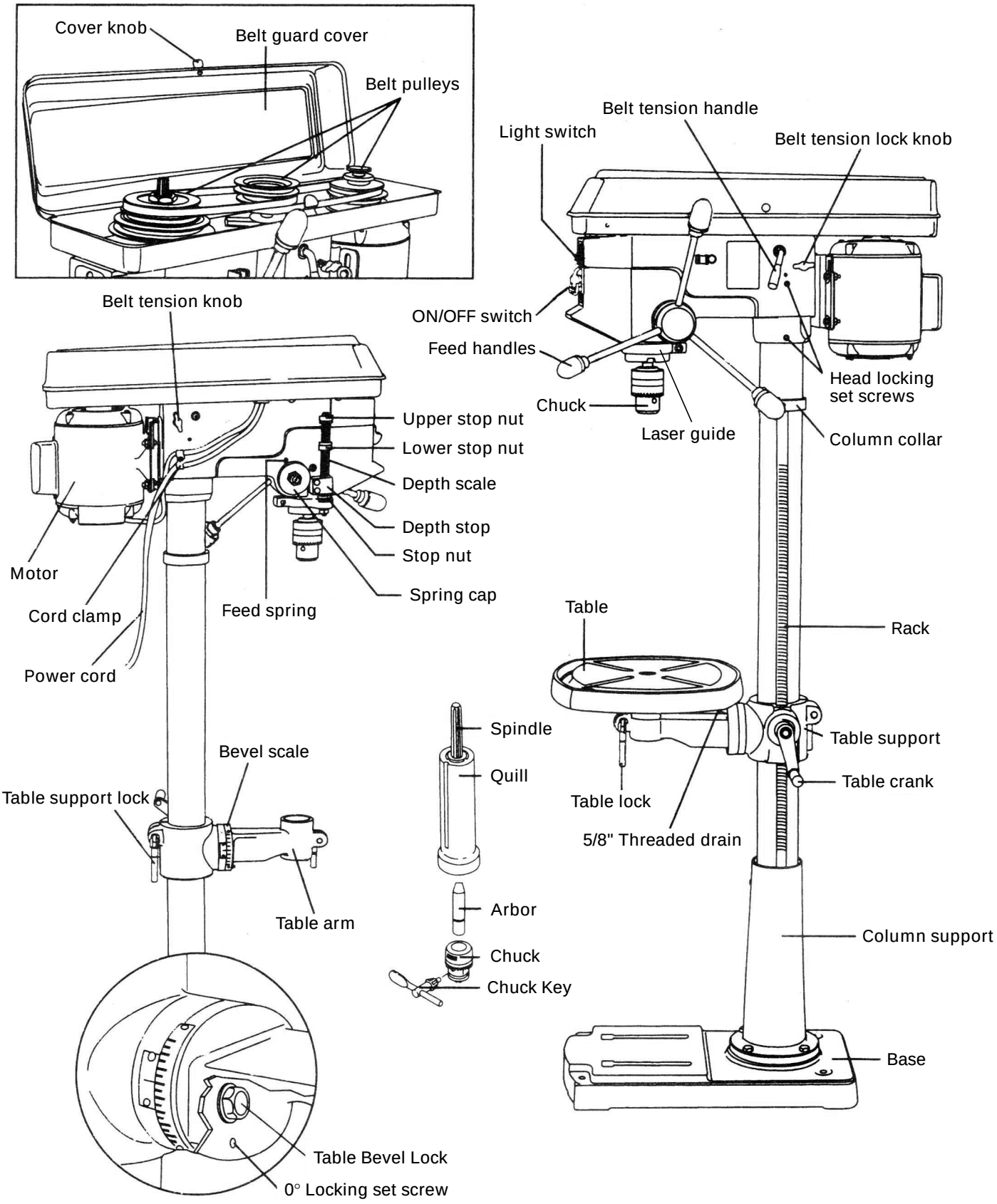


P



Q

# 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.

**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 the pulleys and belt during operation of the drill press.

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

**BELT TENSION HANDLE** – Push the handle toward the motor to apply tension to belt, turn the handle away from the motor to release the belt tension.

**BELT TENSION LOCK KNOBS** – Tightening the knobs locks the motor bracket support and the belt tension handle, maintaining correct belt distance and tension.

**BEVEL SCALE** – Shows degree of table tilt for bevel operations. The scale is mounted on the side of the table bracket.

**CHUCK** – Holds a 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 the head, table, and base on a one piece tube for easy alignment and movement.

**COLUMN COLLAR** – Holds the rack to the column. The rack remains movable in the collar to permit table support movements.

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

**DEPTH SCALE STOP NUTS** – Lock the spindle to a selected depth.

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

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

**DRILL ON/OFF SWITCH** – Has a locking feature. This feature is intended to help prevent unauthorized and possible hazardous use by children and others. Insert the key into the switch to turn the drill press on.

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

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

**RACK** – Combines with gear mechanism to provide easy elevation of the table by the hand operated table crank.

**REVOLUTIONS 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 the quill return spring tension.

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

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

**TABLE ARM** – Extends beyond the table support for mounting and aligning the table.

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

**TABLE CRANK** – Elevates and lowers the table. Turn clockwise to elevate the table. Support lock must be released before operating the crank.

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

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

**THREADED DRAIN (5/8")** – Attach a 5/8" (pipe threaded) metal pipe to the threaded opening for draining excess oil into a quill container. For a non-draining surface, attach a threaded metal plug. Pipe and plug not included.

**WORKPIECE** – Material being drilled.

# ASSEMBLY AND ADJUSTMENTS

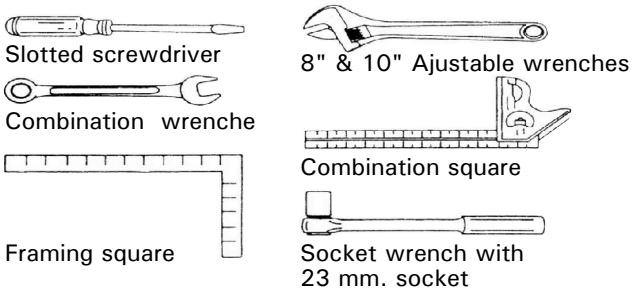
**ESTIMATED ASSEMBLY TIME 20～40MINUTES**

## ASSEMBLY INSTRUCTIONS

### ⚠WARNING

For your own safety, never connect plug to power source outlet until all assembly and adjustment steps are completed, and you have read and understood the safety and operating instructions.

**TOOLS NEEDED**



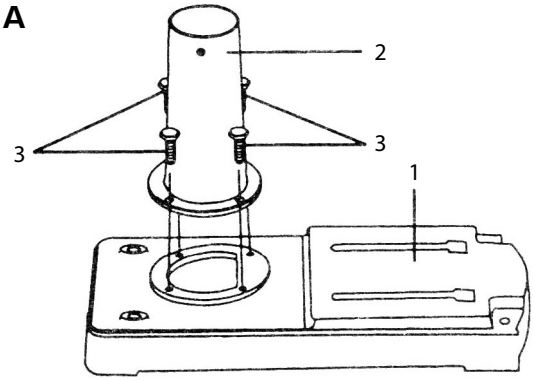

### ⚠WARNING

The Drill Press is very heavy and MUST be assembled with the help of 2 PEOPLE OR MORE, to safely assembly it.

**COLUMN SUPPORT TO BASE (Fig. A)**

1. Position the base (1) on the floor.
2. Place the column (2) on the base, aligning the holes in the column support with the holes in the base.
3. Locate the four long hex bolts (3) from the loose parts bag.
4. Place a bolt in each hole through the column support and the base. Tighten with an adjustable wrench.

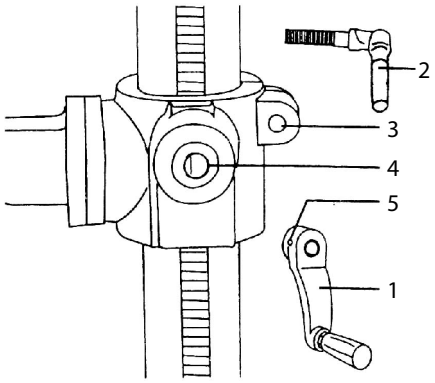
**Fig. A**




**INSTALLING THE TABLE (Fig. B and C)**

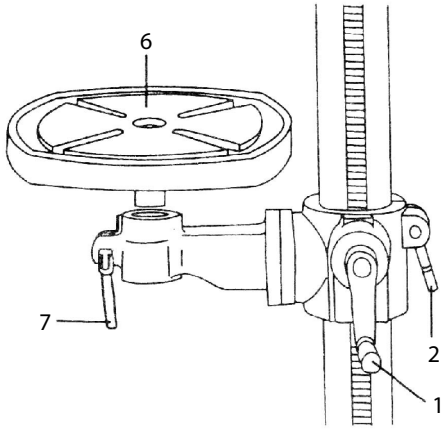
1. Locate the table crank (1) and support lock (2) from the loose parts bag.
2. Insert the support lock handle from the left to right into the hole (3) at the rear of the table support assembly. Tighten by hand.
3. Install the table crank handle (1) onto the small shaft (4), aligning the set screw (5) with the flat surface of the shaft (4). Tighten the set screw with a hex wrench.

**Fig. B**




4. (Fig. C) Loosen the support lock (2). Raise the table arm assembly by turning the crank handle (1) clockwise. Tighten the support lock.
5. Place the table (6) in the table arm assembly. Tighten the table lock handle (7).

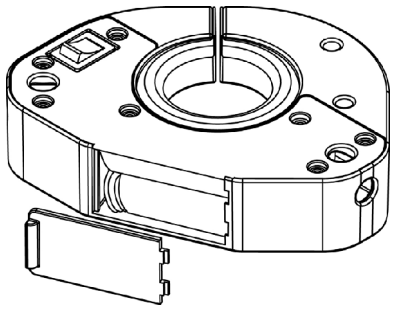
**Fig. C**




**INSTALLING BATTERY FOR LASER GUIDE (Fig. C-1)**

1. Open the cover of battery box.
2. Install 2 pieces of 1.5V 3A batteries into the battery box.
3. Close the cover.
4. Turn on the switch to check the LASER GUIDE.

**Fig. C-1**



**NOTE:** Replace the batteries with batteries that have a rating of 1.5 volts (Number 4 series and AAA size or equivalent). When replacing the batteries, the battery guide should be thoroughly cleaned. Use a soft paintbrush or similar device, to remove all sawdust and debris.

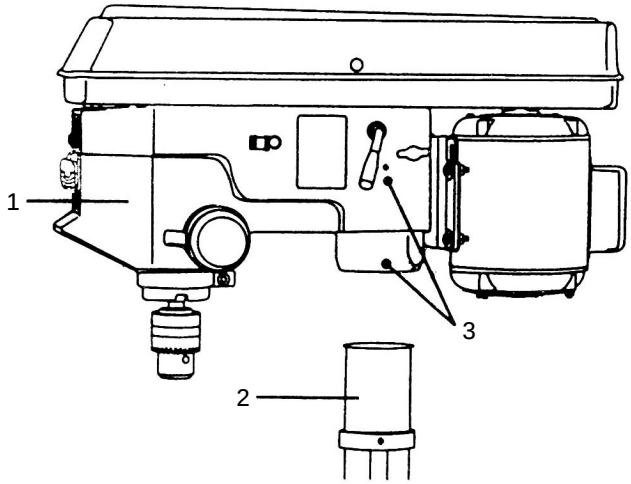
**INSTALLING THE HEAD (Fig. D)**

## ⚠WARNING

The Drill Press head is very heavy and MUST be lifted with the help of 2 PEOPLE OR MORE to safely assemble the Drill Press head on the column.

1. Carefully lift the head (1) above the column (2) and slide it onto the column. Make sure the head slides down over the column as far as possible. Align the head with the base.
2. Using the hex wrench, tighten the two head lock set screws (3) on the right side of the head.

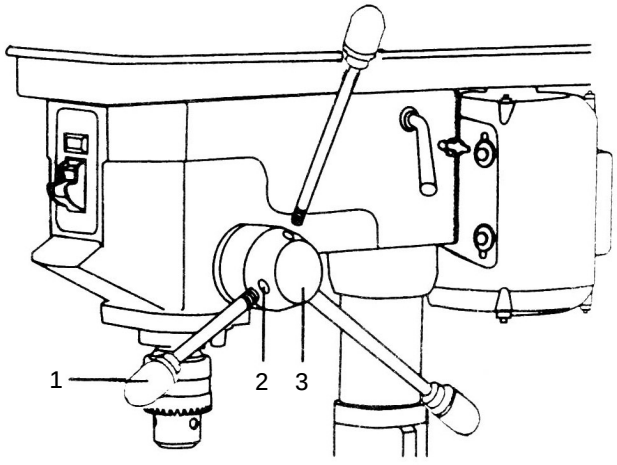
### Fig. D




**INSTALLING FEED HANDLES (Fig. E)**

1. Locate the three feed handles in the loose parts bag.
2. Screw the feed handles (1) into the right or left of threaded holes (2) in the hub (3). Tighten.

### Fig. E



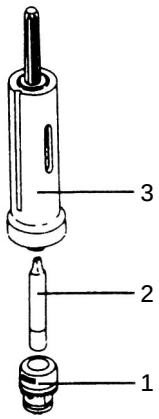

NOTE: This drill Press will allow you to reposition the feed handles onto the left hand side of the drill press head (See Fig. O). Installation is the same procedure as listed above.

**INSTALLING THE CHUCK (Fig. G, H and I)**

## ⚠WARNING

Before any assembly of the chuck and arbor to the drill press head, clean all mating surfaces with a non-petroleum based product; such as alcohol or lacquer thinner. Any oil or grease used in the packing of these parts must be removed otherwise the chuck may come loose during operation.

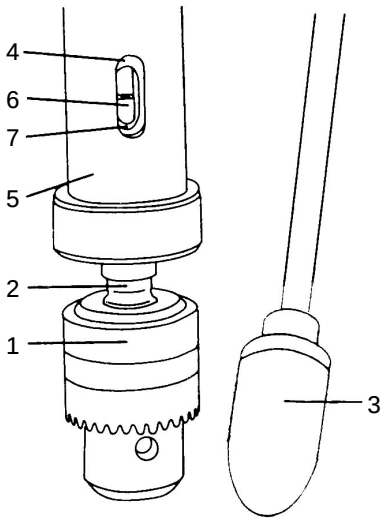
### Fig. G




1. (Fig. H) Push the chuck (1) onto the spindle arbor (2). Tap gently on the arbor with a rubber hammer to ensure a proper seat.
2. Lower the spindle by turning the feed handles (3) counterclockwise, until the slot (4) appears on the quill (5).
3. Push the chuck and spindle arbor up into the spindle, making sure the tang (6) (upper narrow end of the spindle arbor shank) is engaged and locked in the inner slot (7) of the spindle. This can be seen through the outer slot (4) of the quill by rotating the chuck and arbor until the two slots are aligned.
4. Open the jaws of the chuck (1) by rotating the chuck sleeve clockwise. To prevent damage, make sure the jaws are completely receded into the chuck.

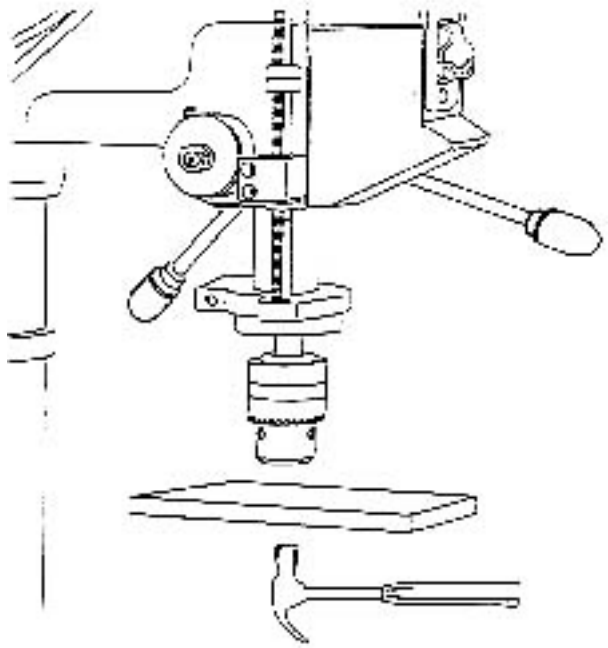
**NOTE:** Clean the taper with a non-alcohol based cleaner before inserting it into the arbor.

### Fig. H



5. Using a rubber mallet, plastic-tipped hammer, or a block of wood and a hammer, firmly tap the chuck upward into position on the spindle shaft.

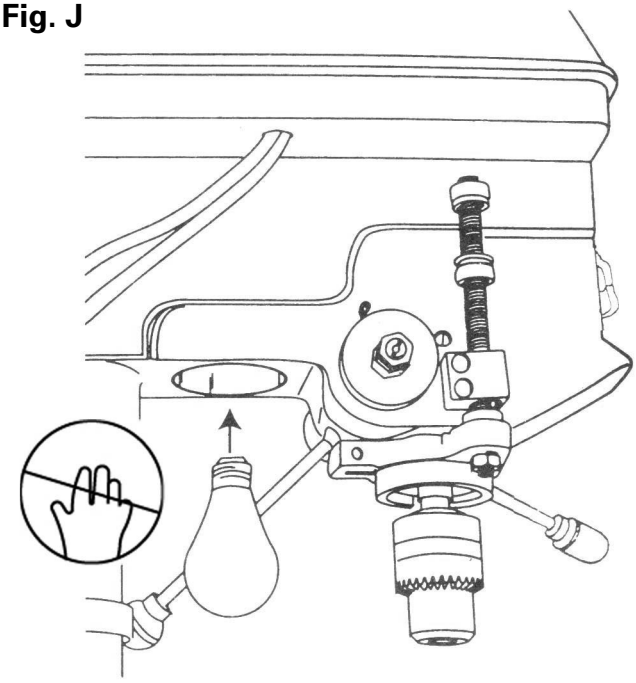
**Fig. I**



**INSTALLING LIGHT BULB (Fig. J) (not included)**

1. Install a light bulb (no larger than 60 watt) into the socket inside the head.

**Fig. J**



## ⚠WARNING

1. To prevent injury resulted from heat of the light bulb. Never touch the light bulb!
2. To prevent electric shock. Never touch the part of the light bulb when the plug from the power source is connected.

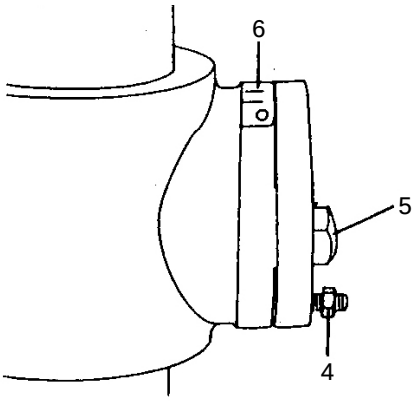
## DRILL PRESS ADJUSTMENTS

**CAUTION:** All the adjustments for the operation of the drill press have been completed at the factory. Due to normal wear and use, some occasional readjustments may be necessary.

## ⚠WARNING

To prevent personal injury, always disconnect the plug from the power source when making any adjustment.

**Fig. L**




**BEVEL SCALE (Fig. L)**

**NOTE:** The bevel scale has been included to measure approximate bevel angles. If precision is necessary, a square or other measuring tool should be used to position the table. To use the bevel scale (6):

1. TIGHTEN the nut (4) on the locking pin in the clockwise direction to RELEASE the pin from the table support.
2. Loosen the large hex head bevel locking bolt (5).

## ⚠WARNING

To prevent injury, be sure to hold the table & table arm assembly, so it will not swivel or tilt.

3. Tilt the table, aligning the desired angle measurement to the zero line scribed on the table opposite the bevel scale (6).
4. Tighten the bevel locking bolt (5).
5. To return the table to its original position, loosen the bevel locking bolt (5). Realign the bevel scale (6) to the 0° scribed line on the table.
6. Loosen by turning counterclockwise the nut (4) on the locking pin to the end of the threads. Tap the pin into its original position.
7. Tighten the bevel locking bolt.

**NOTE:** The table has been removed from the illustration for clarity.

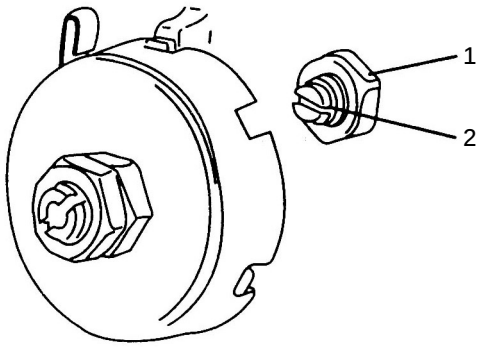
## ⚠WARNING

To prevent personal injury, always disconnect the plug from the power source when making any adjustment.

**SPINDLE / QUILL (Fig. N)**
Rotate the feed handles counterclockwise to lower spindle to its lowest position. Hand support the spindle securely and move it back and forth around the axis. If there is play, do the following:

1. Loosen the lock nut (1).
2. Turn the screw (2) clockwise to eliminate the play, but without obstructing the upward movement of the spindle.
3. Tighten the lock nut (1).

## Fig. N



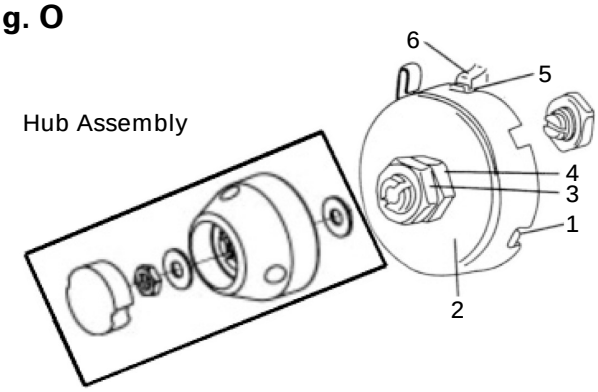

## ⚠WARNING

To prevent personal injury, always disconnect the plug from the power source when making any adjustment.

**QUILL RETURN SPRING (Fig. O)**
The quill return spring may need adjustment if the tension causes the quill to return too rapidly or too slowly.

1. Lower the table for additional clearance.
2. Remove from the Hub Assembly; cap, nut, two washers and hub, as shown in Fig. O.
3. Place a screwdriver in the lower front notch (1) of the spring cap (2). Hold it in place while loosening and removing only the outer jam nut (3).
4. With the screwdriver still engaged in the notch, loosen the inner nut (4) just until the notch (5) disengages from the boss (6) on the drill press head.
   **CAUTION: DO NOT REMOVE THIS INNER NUT**, because the spring will forcibly unwind.
5. Carefully turn the spring cap (2) counterclockwise with the screwdriver, engaging the next notch.
6. Lower the quill to the lowest position by rotating the feed handle in a counterclockwise direction while holding the spring cap (2) in position.
7. If the quill moves up and down as easily as you desire, tighten the inner nut (4) with the adjustable wrench. If too loose, repeat steps 3 through 5 to tighten. If too tight, reverse steps 4 and 5.
   **DO NOT OVERTIGHTEN** and restrict quill movement.
8. Replace the jam nut (3) and tighten against the inner nut (4) to prevent the inner nut from reversing.
9. Replace washers, hub, nut and hub cap in the order shown below.

## Fig. O




## ⚠WARNING

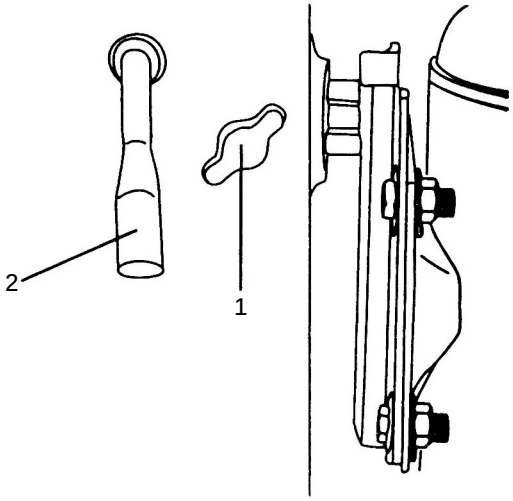
To avoid injury from an accidental start, ALWAYS make sure the switch is in the "OFF" position, the switch key is removed, and the plug is not connected to the power source outlet before making belt adjustments.

**BELT TENSION (Fig. P)**
Make sure pulleys are aligned properly as shown in Figure R.

1. To release the belt tension, turn the belt tension lock knobs (1) on each side of the drill press head counterclockwise.
2. To tighten the belts, push the belt tension handle (2) toward the rear (motor) end.
3. To loosen the belts, pull the belt tension handle (2) toward the front (switch) end.
4. Lock the two belt tension lock knobs (1) by turning clockwise.

   **NOTE:** Belt tension is correct if the belt deflects approximately 1/2 inch when pressed at its center.

## Fig. P




## ⚠WARNING

To avoid injury from an accidental start, ALWAYS make sure the switch is in the "OFF" position, the switch key is removed, and the plug is not connected to the power source outlet before making belt adjustments.

**THE LASER -TRAC™**

Your tool is equipped with our latest innovation, the Laser -Trac™, a battery powered device using Class II laser beams. The laser beams will enable you to preview the drill bit path on the workpiece to be drilled before you begin your operation.

## ⚠WARNING

**AVOID DIRECT EYE CONTACT**

A Laser light is radiated when the laser guide is turned on. Avoid direct eye contact. Always turn off the laser and unplug the drill press from the power source before making any adjustments.

- A laser pointer is not a toy and should not come into hands of children. Misuse of this appliance can lead to irreparable eye injuries.
- Any adjustment to increase the laser power is forbidden.
- When using the laser pointer, do not point the laser beam towards people and /or reflecting surfaces. Even a laser beam of lower intensity may cause eye damage. Therefore, do not look directly into the laser beam.
- If the laser pointer is stored for more than three months without use, please remove the batteries to avoid damage from possibly leaking batteries.
- The laser pointer includes no servicing components. Never open the housing for repair or adjustments.
- On units equipped with the Laser-Trac™ attachment, repairs shall only be carried out by the laser manufacturer or an authorized agent.
- Laser Warning label: Max output <1mW DIODE LASER:630-670nm, Complies with 21CFR 1040.10 and 1040. 11.

**ADJUSTING THE LASER LINES (Fig. Q-1)**

**A. How to check the Laser-beam Alignment?**

1. Adjust the table height so it is 7 inches below the bottom of the chuck
2. Scribe a round circle (approx. 1/8") on a piece of scrap wood.
3. Insert a drill bit into the chuck and tighten.
4. Lower the quill and align the scribed circle with the drill bit & fasten the wood to the table.
5. Turn on the laser and verify the laser lines (x) are centered onto the scribed circle.

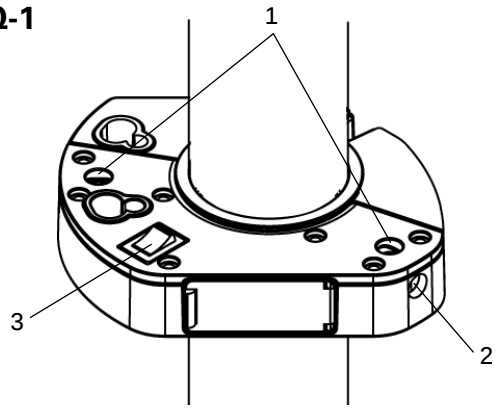
**B. ALIGNING THE LASER-BEAM (Fig. Q-1)**

**To adjust the laser lines:**

**NOTE: Lower the chuck quill and lock it in place by spinning the lower depth stop nut.**

1. Lower the drill press quill One inch and lock into place by spinning the depth stop (see Fig. Y).
2. Adjust the screws (1) and bolts (2) in or out until the laser lines (x) are centered onto the scribed circle.

**Fig. Q-1**




# OPERATIONS

## BASIC DRILL PRESS OPERATIONS

**SPEEDS AND BELT PLACEMENT (Fig. R)**

This drill press has 12 speeds, as listed below:

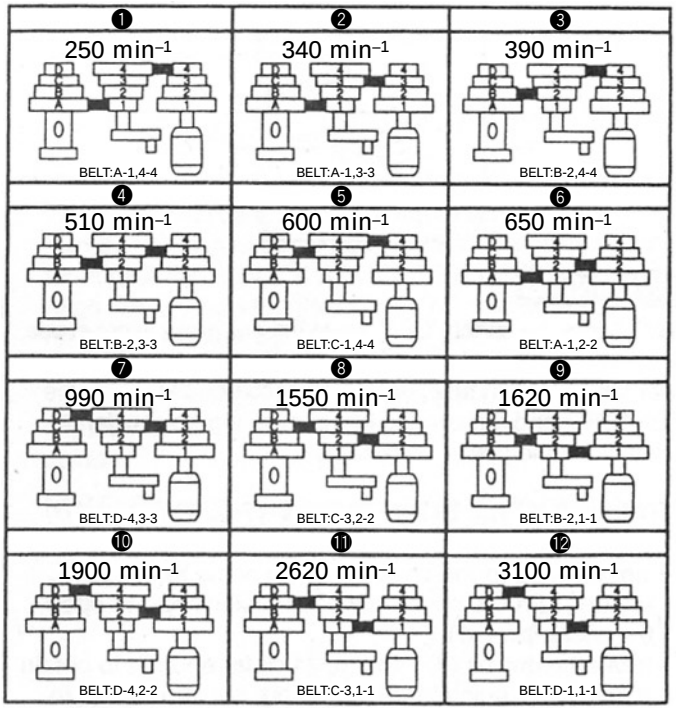
| | | |
|---|---|---|
| 250 min$^{-1}$ | 600 min$^{-1}$ | 1620 min$^{-1}$ |
| 340 min$^{-1}$ | 650 min$^{-1}$ | 1900 min$^{-1}$ |
| 390 min$^{-1}$ | 990 min$^{-1}$ | 2620 min$^{-1}$ |
| 510 min$^{-1}$ | 1550 min$^{-1}$ | 3100 min$^{-1}$ |

See the inside of the pulley guard for same chart as shown in figure R.

## ⚠WARNING

To avoid possible injury, keep the guard closed, in place, and in proper working order while the tool is in operation.

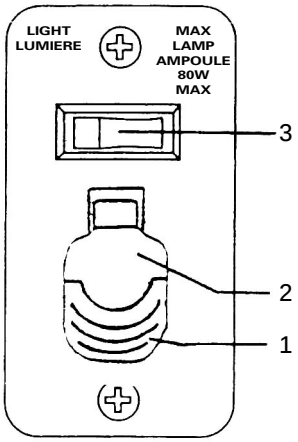
**Fig. R - SPEED CHART**



**ON / OFF SWITCH PANEL (Fig. S)**
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 the key (2) into the slot of the switch (1), 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 yellow key of the toggle switch and pull it out.
4. With the switch key removed, the switch will not operate to power the drill press on.
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.
6. To turn the worklight "ON", press the rocker switch (3) to the on position.
7. Never leave the drill press unattended. Turn the light switch and power switch "OFF" and wait until it comes to a complete stop, and remove the safety key to prevent unauthorized starts.

## Fig. S




## ⚠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 power comes on.

## ⚠WARNING

Laser is radiated when laser guide is turned on. Avoid direct eye exposure. Always un-plug drill pres from power source before making any adjustment.

**LASER ON/OFF SWITCH (Fig. Q-1)**
To turn the laser On or Off, press the rocker switch (3).

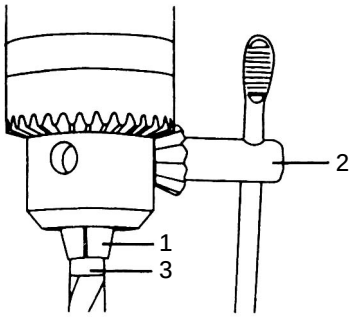
**INSTALLING A DRILL BIT IN THE CHUCK (Fig. T)**

1. With the switch "OFF" and the yellow switch key removed, open the chuck jaws (1) using the chuck key (2). Turn the chuck key counterclockwise to open the chuck jaws (1).
2. Insert the drill bit (3) into the chuck far enough to obtain maximum gripping by the jaws, but not far enough to touch the spiral grooves (flutes) of the drill bit when the jaws are tightened.
3. Make sure that the drill is centered in the chuck.
4. Turn the chuck key clockwise to tighten the jaws.

## ⚠WARNING

To avoid injury or accident by the chuck key ejecting forcibly from the chuck when the power is turned "ON", use only the self-ejecting chuck key supplied with this drill press. ALWAYS recheck and remove the chuck key before turning the power "ON".

## Fig. T




## ⚠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.

**DRILLING TO A SPECIFIC DEPTH (Fig. V)**
Drilling a blind hole (not all the way through workpiece) to a given depth can be done two ways:

**Workpiece method**

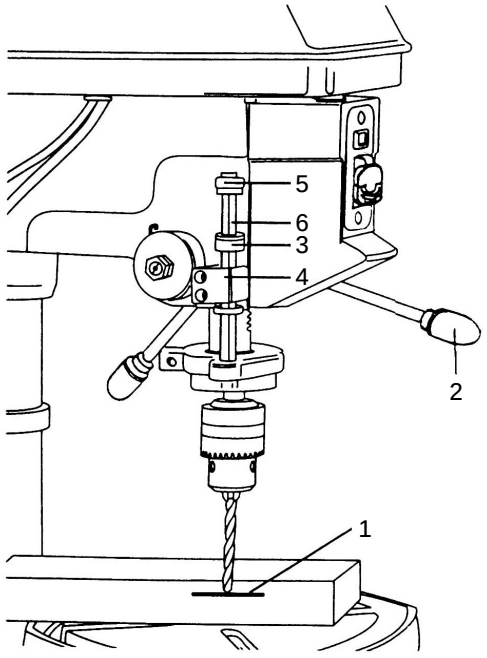
1. Mark the depth (1) of the hole on the side of the workpiece.
2. With the switch "OFF", bring the drill bit down until the tip is even with the mark.
3. Hold the feed handle (2) at this position.
4. Spin the lower nut (3) down to contact the depth stop (4) on the head.
5. Spin the upper nut (5) down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

**Depth scale method**

**Note:** With the chuck quill assembly fully retracted the tip of the drill bit must be just slightly above the top of the workpiece.

1. With the switch "OFF", turn the feed handle (2) until depth stop (4) points to the desired depth on the depth scale (6) and hold the feed handle in that position.
2. Spin the lower nut (3) down to contact the depth stop (4).
3. Spin the upper nut (5) against the lower stop nut (3) and tighten.
4. The drill bit will stop after traveling the distance selected on the depth scale.

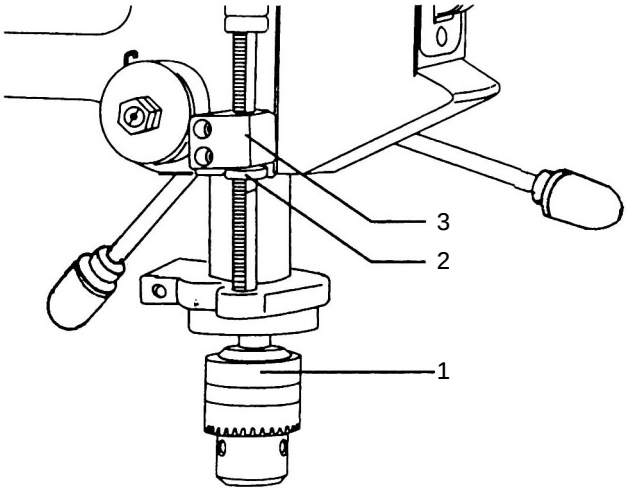
## Fig. V




**LOCKING THE CHUCK AT THE DESIRED DEPTH (Fig. W)**

1. With the switch "OFF", turn the feed handles until the chuck (1) is at the desired depth. Hold the feed handles at this position.
2. Turn the stop nut (2), located under the depth stop (3), counterclockwise and upwards, until it is against the depth stop.
3. The chuck will now be held at this position when the feed handles are released.

## Fig. W

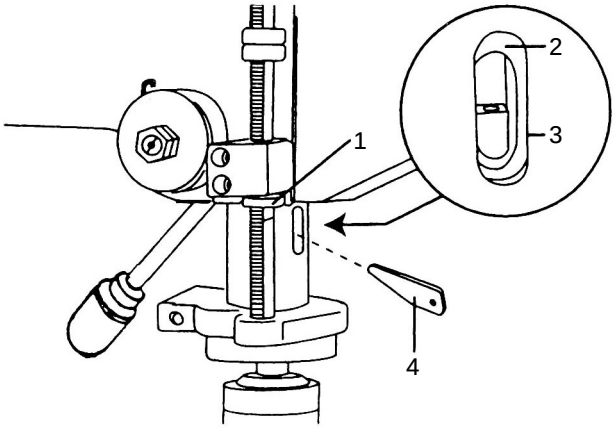



**REMOVING CHUCK AND ARBOR (Fig. X)**

1. With the switch "OFF" and the unit unplugged, adjust the depth stop nut (1) to hold the drill at a depth of three inches. (See instructions for "LOCKING CHUCK AT DESIRED DEPTH").
2. Align the key holes in the spindle (2) and quill (3) by rotating the chuck by hand.
3. Insert the key wedge (4) into the key holes (2 & 3).
4. Tap the key wedge (4) lightly with a plastic tipped hammer, until the chuck and arbor fall out of the spindle.

   **NOTE:** Place one hand below the chuck to catch it when it falls out.

## Fig. X



## BASIC OPERATION INSTRUCTIONS

To get the best results and minimize the likelihood of personal injury, follow these instructions for operating your drill press.

**⚠WARNING**

For your own safety, always observe the SAFETY INSTRUCTIONS listed here and on pages 3, 4 & 5 of the instruction manual.

## YOUR PROTECTION

**⚠WARNING**

To avoid being pulled into the power tool, do not wear loose clothing, gloves, neckties, or jewelry. Always tie back long hair.

1. If any part of your drill press is missing, malfunctioning, damaged or broken, stop operation immediately until that part is properly repaired or replaced.
2. Never place your fingers in a position where they could contact the drill bit or other cutting tool. The workpiece may unexpectedly shift, or your hand could slip.
3. To avoid injury from parts thrown by the spring, follow instructions exactly when adjusting the spring tension of the quill.
4. To prevent the workpiece from being torn from your hands, thrown, spun by the tool, or shattered, always properly support your workpiece as follows:
   a. Always position BACKUP MATERIAL (used beneath workpiece ) so that it contacts the left side of the column, or use the fence provided and a clamp to brace a small workpiece.
   b. Whenever possible, position the WORKPIECE to contact the left side of the column. If it is too short or the table is tilted, use the fence provided or clamp it solidly to the table, using the table slots.
   c. When using a drill press vise, always fasten it to the table.
   d. Never do any work freehand (hand-holding the workpiece rather than supporting it on the table), except when polishing.
   e. Securely lock the head and support to the column, the table arm to the support, and the table to the table arm, before operating the drill press.
   f. Never move the head or the table while the tool is running.
   g. Before starting an operation, jog the motor switch to make sure the drill or other cutting tool does not wobble or cause vibration.
   h. If a workpiece overhangs the table so it will fall or tip if not held, clamp it to the table or provide auxiliary support.
   i. Use fixtures for unusual operations to adequately hold, guide, and position workpieces.
   j. Use the SPINDLE SPEED recommended for the specific operation and workpiece material. Check the panel on the inside pulley cover or the chart below for drilling speed information. For accessories, refer to the instructions provided with each accessory.
5. Never climb on the drill press table, it could break or pull the entire drill press down on you.
6. Turn the motor switch “OFF”, and put away the switch key when leaving the drill press.
7. To avoid injury from thrown work or tool contact, do not perform layout, assembly, or set up work on the table while the cutting tool is rotating.

**DRILLING SPEED TABLE ($min^{-1}$)**

| Drill Bit Diam. (Inches) | Material | | | | |
|---|---|---|---|---|---|
| | Wood | Alumi-num | Plastic | Mild steel | Stain-less |
| 1/32 | 3100 | 3100 | 3100 | 3100 | 3100 |
| 1/16 | | | | | 1620<br>2620 |
| 1/8 | | | | 1620<br>2620 | 990<br>1550 |
| 3/16 | | | | 990<br>1550 | 600<br>650 |
| 1/4 | | 1620<br>2620 | 1620<br>2620 | | |
| 5/16 | | | | 600<br>650 | 340<br>510 |
| 3/8 | | 990<br>1550 | 990<br>1550 | | |
| 7/16 | 1630<br>2620 | | | 340<br>510 | 250 |
| 1/2 | | 600<br>650 | 600<br>650 | | |
| 9/16 | | | | | |
| 5/8 | | | | | |

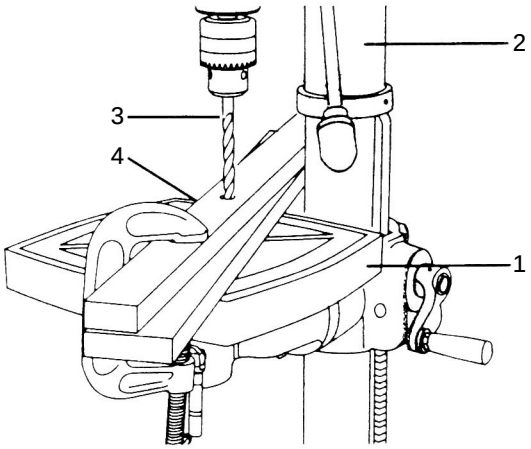
**POSITIONING THE TABLE AND WORKPIECE (Fig. Y and Z)**

1. Lock the table (1) to the column (2) at a position so the tip of the drill bit (3) is just above the top of the workpiece (4).
2. ALWAYS place BACK-UP MATERIAL (scrap wood) on the table beneath the workpiece. This will prevent splintering or heavy burring on the underside of the workpiece. To keep the back-up material from spinning out of control, it MUST contact the LEFT side of the column.

## ⚠WARNING

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

### Fig. Y

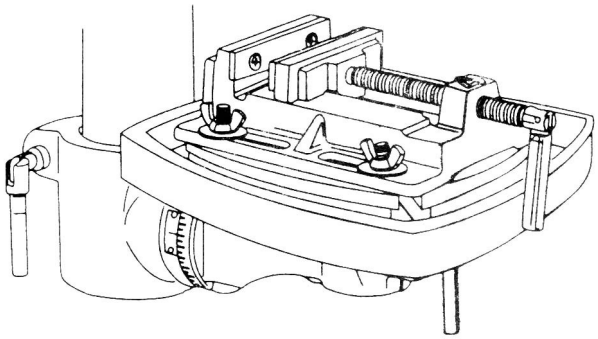



3. For small pieces that cannot be clamped to the table, use a drill press vise (optional accessory).

## ⚠WARNING

The drill press vise MUST be clamped or bolted to the table to avoid injury from a spinning workpiece, or damaged vise or bit parts.
Remove the drill press fence when it interferes with other drill press accessories.

### Fig. Z



**TILTING THE TABLE (Fig. AA)**

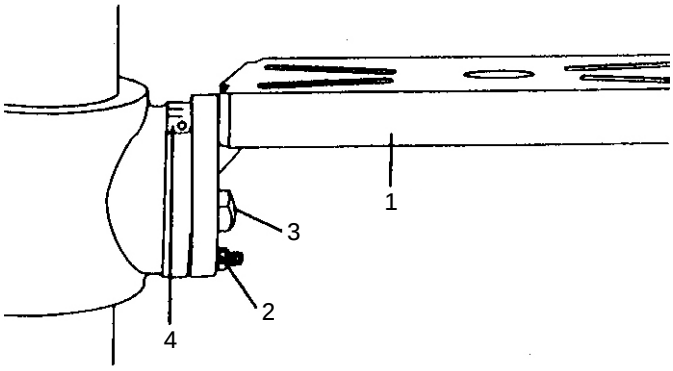
**NOTE:** The table arm and support (1) has a predrilled hole with a locking set screw inserted for locking the table into a predetermined 0° horizontal position.

1. TIGHTEN the nut (4) on the locking pin in the clockwise direction to RELEASE the pin from the table support.
2. LOOSEN the large hex head bevel locking bolt (3).

## ⚠WARNING

To prevent injury, be sure to hold the table & table arm assembly, so it will not swivel or tilt.

### Fig. AA




1. Tilt the table, aligning the desired angle measurement to the zero line opposite the scale (4). Tighten the bevel locking bolt.
2. To return the table to its original position, loosen the bevel locking bolt (3). Realign the bevel scale (4) to the 0° position.
3. Loosen the nut (2) on the locking pin to the end of the pin. Gently tap the locking pin until it is seated in the mating hole on the table bracket. Tighten the bevel locking nut against the bracket to hold position.

## ⚠WARNING

To avoid injury from spinning work or tool breakage, always clamp workpiece and backup material securely to the table before operating the drill press with the table tilted.

**FEEDING**

1. Pull down the feed handles with only enough effort to allow the drill bit to cut.
2. Feeding too slowly might cause the drill bit to burn. Feeding too rapidly might stop the motor, cause the belt or drill to slip, or tear the workpiece loose and break the drill bit.
3. When drilling metal, it may be necessary to lubricate the drill bit tip with motor oil, to prevent burning.

# MAINTENANCE

## MAINTAINING YOUR DRILL PRESS

**⚠WARNING**

For your own safety, turn the switch “OFF” and remove the plug from the power source outlet before maintaining or lubricating your drill press.
Frequently blow out, using an air compressor or dust vacuum, any dust that accumulates inside the motor.
A coat of automotive paste wax applied to the table and column will help to keep the surface clean & help to avoid rust.

**To avoid shock or fire hazard, if the power cord is worn or cut in any way, have it replaced immediately.**

### LUBRICATION

All of the drill press ball bearings are packed with grease at the factory. They require no further lubrication.
Periodically lubricate the gear and rack for table elevation, and the mechanism of the spindle the rack (teeth) of the quill.

# 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 adjustment.

- Consult Hitachi Authorized Service Center if for any reason the motor will not run.

| PROBLEM | POSSIBLE CAUSES | REMEDY |
|---|---|---|
| Noisy operation | 1. Incorrect belt tension.<br>2. Loose spindle pulley.<br>3. Loose motor pulley. | 1. Adjust tension. See Section “ASSEMBLY - TENSIONING BELT”<br>2. Check tightness of retaining nut on pulley, and tighten if necessary.<br>3. Tighten set screw in motor pulley. |
| Drill bit burns | 1. Incorrect speed.<br>2. Chips not coming out of hole.<br>3. Dull drill bit. | 1. Change speed. See Section “BASIC DRILL PRESS OPERATION - SPINDLE SPEEDS”<br>2. Retract drill frequently to clear chips.<br>3. Resharpen drill bit. |
| Run out of drill bit point - drilled hole not round. | 1. Hand grain in wood or lengths of cutting flutes and/or angles not equal.<br>2. Bent drill bit. | 1. Resharpen drill bit correctly.<br>2. Replace drill bit. |
| Wood splinters on underside. | 1. No backup material under workpiece. | 1. Use backup material. See Section “BASIC DRILL PRESS OPERATION”. |
| Workpiece torn loose from hand. | 1. Not supported or clamped properly. | 1. Support workpiece or clamp it. See Section “BASIC DRILL PRESS OPERATION”. |
| Drill bit binds in workpiece. | 1. Workpiece pinching drill bit, or excessive feed presure.<br>2. Improper belt tension. | 1. Support workpiece or clamp it. See Section “BASIC DRILL PRESS OPERATION”.<br>2. Adjust tension. See Section “ASSEMBLY - TENSIONING BELT”. |
| Excessive drill bit runout or wobble. | 1. Bent drill bit.<br>2. Worn bearings.<br>3. Drill bit not properly installed in chuck.<br>4. Chuck not properly installed. | 1. Replace drill bit.<br>2. Replace bearings.<br>3. Install drill properly. See Section “INSTALLING DRILL BIT”.<br>4. Install chuck properly. See Section “ASSEMBLY - INSTALLING THE CHUCK”. |
| Quill returns too slow or too fast. | 1. Spring has improper tension. | 1. Adjust spring tension. See Section “ASSEMBLY - ADJUSTMENTS -QUILL RETURN SPRING”. |
| Chuck will not stay attached to spindle. It falls off when trying to install. | 1. Dirt, grease, or oil on the tapered inside surface of chuck or on the spindle’s tapered surface. | 1. Using a household detergent, clean the tapered surface of the chuck and spindle to remove all dirt, grease and oil. See Section “ASSEMBLY - INSTALLING THE CHUCK”. |
| The LASER GUIDE will not turn on. | 1. The batteries are broken. | 1. See INSTALLING BATTERY FOR LASER GUIDE section. |

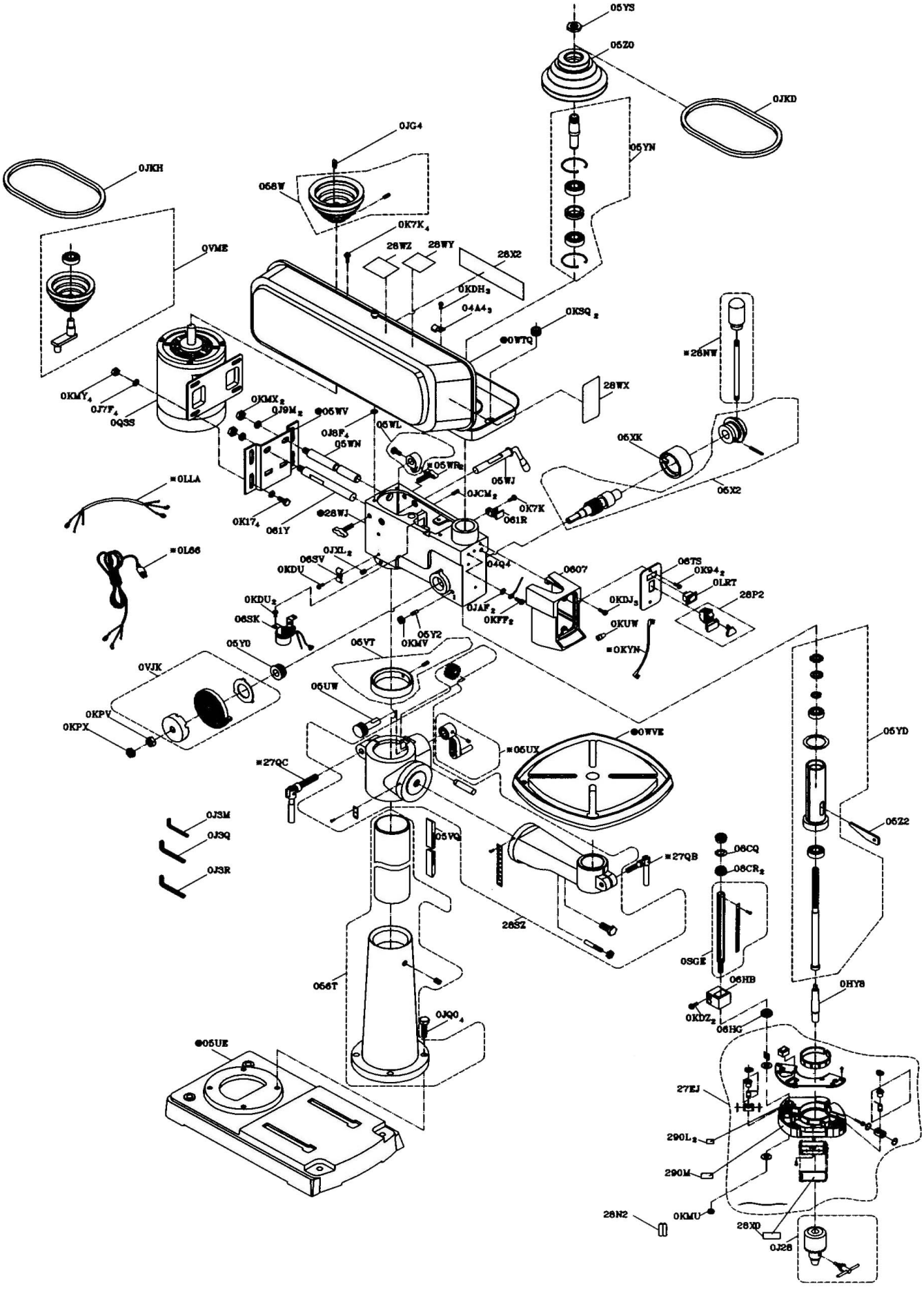
# PARTS LIST

**15" DRILL PRESS** **MODEL NO. B16RM**

**Always order by I.D. Number.**

## PARTS LIST FOR SCHEMATIC A

| I.D. | Description | Size | Qty |
|---|---|---|---|
| 04A4 | CLAMP-CORD | | 3 |
| 04Q4 | STICKER | | 1 |
| 056T | COLUNM ASS'Y | | 1 |
| 058W | MOTOR PULLEY ASS'Y | | 1 |
| 05UE | BASE | | 1 |
| 05UW | WORM | | 1 |
| 05UX | CRANK HANDLE ASS'Y | | 1 |
| 05VQ | RACK | | 1 |
| 05VT | RACK RING ASS'Y | | 1 |
| 05WJ | HANDLE SHIFTER | | 1 |
| 05WL | MOTOR BAR SHIFTER ASS'Y | | 1 |
| 05WN | MOTOR ROD | | 1 |
| 05WR | SHIFTER BOLT | | 2 |
| 05WV | MOTOR BASE | | 1 |
| 05X2 | FEED SHAFT ASS'Y | | 1 |
| 05XK | SCALE RING | | 1 |
| 05XW | SPRING CAP ASS'Y | | 1 |
| 05Y0 | SHAFT SEAT | | 1 |
| 05Y2 | QUILL SET SCREW | M10*1.5-28 | 1 |
| 05YD | SPINDLE ASS'Y | | 1 |
| 05YN | DRIVING SLEEVE ASS'Y | | 1 |
| 05YS | PULLEY SET NUT | Dia22.5 -16 | 1 |
| 05Z0 | SPINDLE PULLEY | | 1 |
| 05Z2 | WEDGE SHIFTER | | 1 |
| 0607 | SWITCH BOX | | 1 |
| 061R | CHUCK KEY HOLDER | | 1 |
| 061Y | MOTOR ROD | | 1 |
| 06HB | PLUNGER HOUSING | | 1 |
| 06HG | CIRCULAR NUT | | 1 |
| 06SK | BULB SOCKET ASS'Y | | 1 |
| 06SV | CLAMP-CORD | | 1 |
| 06TS | SWITCH COVER | | 1 |
| 08CQ | WASHER | Dia24 T=1/16" | 1 |
| 08CR | NUT | | 2 |
| 0HY8 | DRILLING ARBOR | | 1 |
| 0J28 | CHUCK & KEY | | 1 |
| 0J3M | WRENCH HEX. | | 1 |
| 0J3Q | WRENCH HEX. | | 1 |
| 0J3R | WRENCH HEX. | | 1 |
| 0J7F | FLAT WASHER | 5/16*7/8-5/64 | 4 |
| 0J8F | FLAT WASHER | 1/4*3/4-3/16 | 4 |
| 0J9M | SPRING WASHER | Dia 1/2" | 2 |
| 0JAF | EXTERNAL TOOTH LOCK WASHER | Dia 5 | 2 |
| 0JCM | SPRING PIN | | 2 |
| 0JG4 | PARALLEL KEY | | 1 |
| 0JKD | V-BELT | | 1 |
| 0JKH | V-BELT | | 1 |
| 0JQ0 | HEX. HD. BOLT | M10*1.5-40 | 4 |
| 0JXL | HEX. SOC. SET SCREW | M10*1.5-12 | 2 |
| 0K17 | HEX. HD. SCREW AND WASHER | M8*1.25-20 | 4 |
| 0K7K | CR. RE. ROUND WASHER HD. SCREW | M6*1.0-12 | 4 |
| 0K7K | CR. RE. ROUND WASHER HD. SCREW | M6*1.0-12 | 1 |
| 0K94 | CR. RE. TRUSS HD. TAPPING SCREW | M5*12-16 | 2 |
| 0KDH | CR. RE. PAN HD. SCREW | M5*0.8-8 | 3 |
| 0KDJ | CR. RE. PAN HD. SCREW | M5*0.8-12 | 3 |
| 0KDU | CR. RE. PAN HD. SCREW | M6*1.0-12 | 2 |
| 0KDU | CR. RE. PAN HD. SCREW | M6*1.0-12 | 1 |
| 0KDZ | CR. RE. PAN HD. SCREW | M6*1.0-35 | 2 |
| 0KFF | CR. RE. PAN HD. SCREW | M5*0.8-8 | 2 |
| 0KMU | HEX. NUT | M10*1.5 T=8 | 1 |
| 0KMV | HEX. NUT | M10*1.5 T=8 | 1 |
| 0KMX | HEX. NUT | M12*1.75 T=10 | 2 |
| 0KMY | HEX. NUT | M8*1.25 T=6.5 | 4 |
| 0KPV | HEX. NUT | 1/2*20UNF T=10 | 1 |
| 0KPX | HEX. NUT | 1/2*20UNF T=6.5 | 1 |
| 0KSQ | STRAIN RELIEF | | 2 |
| 0KUW | TERMINAL | | 1 |
| 0KYN | LEAD WIRE ASS'Y | | 1 |
| 0L66 | POWER CABLE | | 1 |
| 0LLA | MOTOR WIRE | | 1 |
| 0LRT | ROCKER SWITCH | | 1 |
| 0Q3S | MOTOR | | 1 |
| 0SGE | SET BOLT ASS'Y | | 1 |
| 0VJK | PALTE SPRING ASS'Y | | 1 |
| 0VME | CENTER PULLEY ASS'Y | | 1 |
| 0WTQ | PULLEY COVER ASS'Y | | 1 |
| 0WVE | TABLE | | 1 |
| 27EJ | LASER ASS'Y | | 1 |
| 27QB | TABLE LOCK HANDLE | | 1 |
| 27QC | COLUMN LOCK HANDLE | | 1 |
| 28N2 | BATTERY ASSEMBLY | | 1 |
| 28NW | HANDLE BAR ASS'Y | | 1 |
| 28P2 | ROCKER SWITCH | | 1 |
| 28SZ | TABLE BRACKET ASS'Y | | 1 |
| 28WJ | HEAD | | 1 |
| 28WX | TRADE-MARK LABEL | | 1 |
| 28WY | LABEL | | 1 |
| 28WZ | WARNING LABEL | | 1 |
| 28X0 | LASER LABEL | | 1 |
| 28X2 | LABEL | | 1 |
| 290L | LASER LABEL | | 2 |
| 290M | CAUTION LABEL | | 1 |



Issued by
**Hitachi Koki Co., Ltd.**
Sinagawa Intercity Tower A, 15-1, Konan 2-chome,
Minato-ku, Tokyo 108-6020, Japan

Distributed by
**Hitachi Koki U.S.A., Ltd.**
3950 Steve Reynolds Blvd.
Norcross, GA 30093

**Hitachi Koki Canada Co.**
6395 Kestrel Road
Mississauga ON L5T 1Z5

407
Code No. C99134761
Printed in China