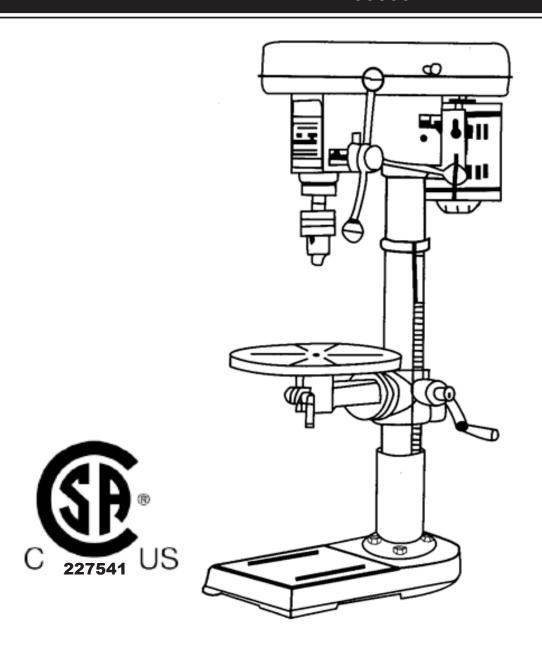


### **16 SPEED DRILL PRESS**

ITEM: 53500



### **OWNER'S MANUAL AND SAFETY INSTRUCTIONS**

SAVE THIS MANUAL: KEEP THIS MANUAL FOR SAFETY WARNINGS, PRECAUTIONS, ASSEMBLY, OPERATING, INSPECTION, MAINTENANCE AND CLEANING PROCEDURES. WRITE THE PRODUCT'S SERIAL NUMBER ON THE BACK OF THE MANUAL NEAR THE ASSEMBLY DIAGRAM (OR MONTH AND YEAR OF PURCHASE IF PRODUCT HAS NO NUMBER).



#### **GENERAL SAFETY WARNINGS**

Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference.

#### **SAFETY**

The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator. Read carefully and understand all ASSEMBLY AND OPERATIONC INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

- DO NOT allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- DO NOT modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. This product will be safer and do a better job at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury.
- Keep children and bystanders away from the work area while operating this product. DO NOT allow children to handle the product.
- Stay alert, watch what you are doing, and use common sense when operating the tool. DO NOT use
  the tool while you are tired or under the influence of drugs, alcohol, or medication.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields. Leather leggings, fire resistant shoes or boots should be worn when using this product This applies to all persons in the work area. Keep clothing free of grease, oil, solvents, or any flammable substances Wear dry, insulating gloves and protective clothing.
- **ALWAYS** keep guards in position, in good working order, correctly adjusted and aligned. Never attempt to use a power tool without any guard supplied with it.
- SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and
  it frees both hands to operate tool.

- USE PROPER EXTENSION CORD. 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. Table 1
  shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use
  the next heavier gauge. The smaller the gauge number, the heavier the cord.
- MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- **DISCONNECT TOOLS** before servicing: when changing accessories, such as blades, bits, cutters, and the like.
- REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.
- **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
- DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
- NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

## SAFETY INSTRUCTION FOR DRILL PRESS

#### When Installing or Moving The Drill Press

To reduce the risk of injury from unexpected drill press movement. If there is any tendency of the drill press to tilt or move during any use, bolt it to the floor. Make sure and leave adequate room to fully open the belt guard. If the workpiece is too large to easily support with one hand, provide an auxiliary support.

- To reduce the risk of injury from electrical shock, make sure your fingers do not touch the plug's metal prongs when plugging in or unplugging the drill press.
- NEVER Stand On Tool. Serious injury could occur if the tool tips or you accidentally hit the cutting tool.
   Do not store anything above or near the tool where anyone might stand on the tool to reach them.

#### **Before Each Use**

- To reduce the risk of injury from accidental starting, turn the switch off, unplug the drill press, and remove
  the switch key before raising the guard, changing the cutting tool, changing the setup, or adjusting
  anything. Make sure switch is in OFF position before plugging in.
- Check for alignment of moving parts, binding of moving parts, breakage of parts, drill press stability, and any other conditions that may affect the way the drill press works.
- If any part is missing, bent or broken in any way, or any electrical part does not work properly, turn the drill press off and unplug the drill press.
- Replace damaged or missing parts before using the drill press again
- Remove adjusting keys and wrenches. Form a habit of checking for and removing keys and adjusting wrenches from table top before turning drill press on.
- Make sure all clamps and locks are tight and no parts have excessive play.

# Use Only Accessories Designed For This Drill Press To Reduce The Risk of Serious Injury From Thrown Broken Parts Or Work Pieces

- When cutting large diameter holes:
  - Clamp the workpiece firmly to the table. Otherwise the cutting may grab and spin it at high speed.
  - Use only one piece, cup-type, hole cutters.
  - DO NOT use fly cutters or multi-part hole cutters as they can come apart or become unbalance in use.
  - Keep speed below 1500rpm.
- Drum sanders must never be operated on this drill press at a speed greater than 1800rpm.
- **DO NOT** install or use any drill that exceed 7" in length or extends 6" below the chuck jaws. They can suddenly bend outward or break.
- Do not use wire wheels, router bits, shaper cutters, circle (fly) cutters or rotary planers on this drill press.

#### **Kickback**

- Kickback is the grabbing of the workpiece by the rotating tool. The workpiece can be thrown at a very high speed in the direction of rotation. This Can Cause Serious Injury. To reduce the possibility of injury from kickback:
  - Clamp the workpiece firmly to the table whenever possible.
  - Buffing or sanding wheels or drums should be contacted on the side moving away from you, not the side moving toward you.
  - Use only recommended accessories and follow the instructions supplied with the accessory.

#### This drill press has 16 speeds

220RPM	290RPM	360RPM	430RPM
500RPM	570RPM	630RPM	760RPM
830RPM	920RPM	1430RPM	1620RPM
1850RPM	2260RPM	2580RPM	3600RPM

- See inside of guard for specific placement of belt on pulleys
- If any part of your drill press is missing, malfunctioning, has been damaged or broken...such as the motor switch, or other operating control, a safety device or the power cord, turn the drill press off and unplug it until the particular part is properly repaired or replaced.
- **NEVER** place your fingers in a position where they could contact the drill or other cutting tool if the workpiece should unexpectedly shift or your hand should slip.
- To reduce the risk of injury from parts thrown by the spring, follow instructions exactly as given and shown in adjusting spring tension of quill.
- Turn the motor switch off and put away the switch key when leaving the drill press.
- To reduce the risk of injury from thrown work or tool contact, do not perform layout, assembly or setup work on the table while the cutting tool is rotating.
- Any power tool can throw foreign objects into the eyes. This can result in permanent eye damage. Everyday eyeglasses have only impact resistant lenses. They art not safety glasses.
- **WARNING**: Don't allow familiarity (gained from frequent use of your drill press) to cause a careless mistake. Always remember that a careless fraction of a second is enough to cause a severe injury.
- Noise levels vary widely. To reduce the risk of possible hearing damage, wear ear plugs or muffs when using drill press for hours at a time.

- To prevent the workpiece from being torn from your hands, spinning of the tool, shattering the tool
  or being thrown, always properly support your work so it won't shift or bind on the tool:
  - **ALWAYS** position backup material (use beneath the workpiece) to contact the left side of the column.
  - Whenever possible, position the workpiece to contact the left side of the column If it is too short to the table. Use table slots or clamping ledge around the outside edge of the table.
  - When using a drill press vise, always fasten it to a table.
  - **NEVER** do any work "Freehand" (hand holding workpiece rather than supporting it on the table), except when polishing.
  - Securely lock head to column, table support to column and table to table support before operating drill press.
  - **NEVER** move the head or table while the tool is running.
  - Before starting the operation, jog the motor switch to make sure the drill or other cutting tool does not wobble or cause vibration.

#### **Before Leaving The Drill Press**

□ Wait for tool bit to stop spinning.
☐ Unplug the drill press.
☐ Make workshop child-proof. Lock the shop. Disconnect master switches. Remove the yellow switch key
Store it away from children and others not qualified to use the tool.

#### **Electrical Requirements**

**General Electrical Connections** 

☐ Turn the drill press off.

**DANGER**: To reduce the risk of electrocution:

- 1. Use only identical replacement parts when servicing. Servicing should be performed by a qualified service technician.
- 2. **DO NOT** use in rain or where floor is wet. This tool is intended for indoor residential use only.

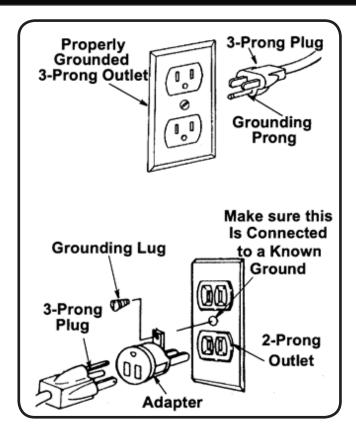
**WARNING: DO NOT** permit fingers to touch the terminals of plug when installing or removing the plug to or from the outlet.

#### 110-120 Volt, 60Hz. Tool Information

**NOTE:** The plug supplied on your tool may not fit into the outlet you are planning to use. Your local electrical code may require slightly different power cord plug connections. If these differences exist refer to and make the proper adjustments per your local code before your tool is plugged in and turned on. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment grounding conductor and a grounding plug, as shown. The plug must be plugged into a matching outlet 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 outlet, have the proper outlet installed by a qualified electrician. A temporary adapter may be used to connect this plug to a 2-prong outlet, as shown, if a properly grounded three prong outlet is not available. This temporary adapter should be used only until properly grounded three prong outlet can be installed by a qualified electrician. The green colored rigid ear, lug and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

WARNING: If not properly grounded, this tool can cause an electrical shock, particularly when used in damp locations, in proximity to plumbing, or out of doors. If an electrical shock occurs there is the potential of a secondary hazard, such as your hands to hit the cutting tool.

### **ELECTRICAL SAFETY INFORMATION**



**NOTE:** The adapter illustrated is for use only if you already have a properly grounded 2-prong outlet.

**NOTE:** In Canada the use of a temporary adapter is not permitted by the Canadian Electrical Code

#### **WIRE SIZES**

**NOTE:** Make sure the proper extension cord is used and is in good condition. The use of any extension cord will cause some loss of power. To keep this to a minimum and to prevent overheating and motor burnout, use the table as below to determine the minimum wire size (A.W.G.) extension cord.

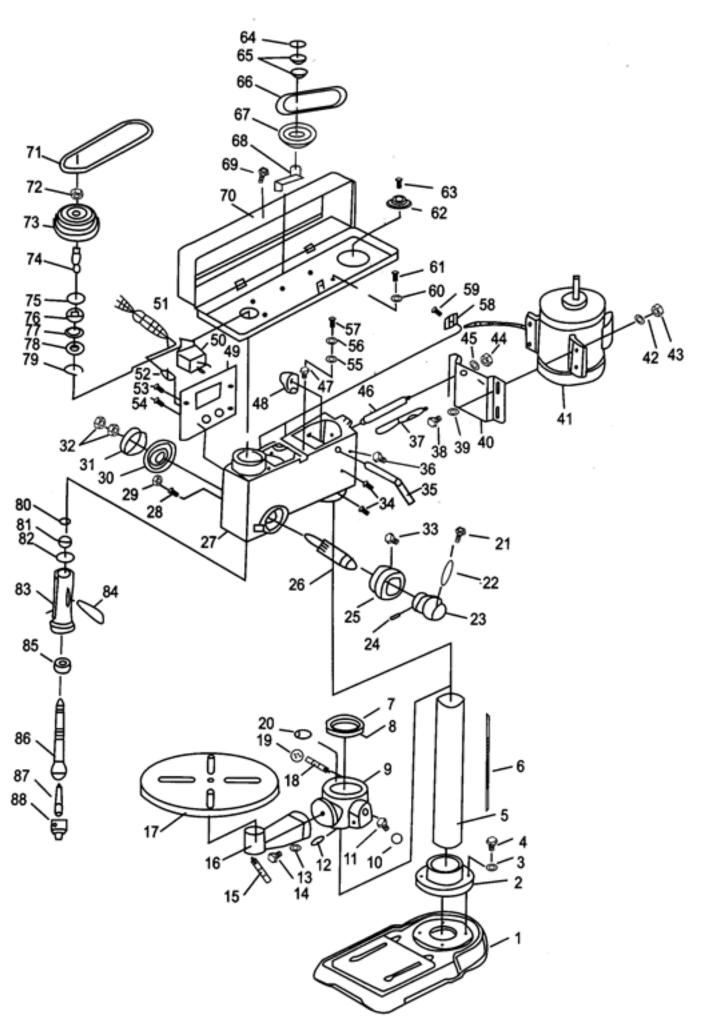
Extension Cord Length(ft)		
0-25		
25-50		

Gauge (A.W.G.)
16
14



A SAVE THESE INSTRUCTIONS.

## PARTS DIAGRAM



# PARTS LIST

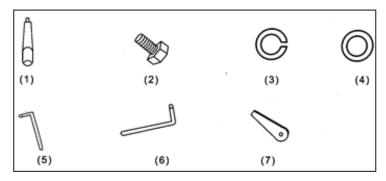
Part No.	Description	Q'ty	Part No.	Description	Q'ty
1	Base	1	45	Washer	2
2	Column Support	1	46	Support	1
3	Washer	4	47	Bolt	1
4	Bolt	4	48	Lever	1
5	Column	1	49	Plate	1
6	Rack	1	50	Key Safety Switch	1
7	Collar	1	51	Cable & Plug	1
8	Screw	1	52	Strain Relief	1
9	Clamping Sleeve	1	53	Screw	2
10	Crank	1	54	Screw	2
11	Bolt	1	55	Star Washer	2
12	Pin Gear	1	56	Washer	2
13	Washer	1	57	Screw	2
14	Bolt	1	58	Clamp Cord	1
15	Clamping Handle	1	59	Screw	1
16	Arm	1	60	Washer	4
17	Table	1	61	Screw	4
18	Clamping Handle	1	62	Motor Pulley	1
19	Gear	1	63	Screw	1
20	Worm	1	64	Retaining Ring	1
21	Knob	3	65	Ball Bearing	2
22	Handle Bar	3	66	Belt	1
23	Feed Shaft	1	67	Middle Pulley	1
24	Pin	1	68	Pulley Adjusting	1
25	Ring	1	69	Knob	1
26	Shaft	1	70	Guard	1
27	Body	1	71	Belt	1
28	Screw	1	72	Nut	1
29	Nut	1	73	Spindle	1
30	Spring	1	74	Internal Spine Sleeve	1
31	Cap	1	75	Retaining Ring	1
32	Nut	2	76	Ball Bearing	1
33	Bolt	1	77	Retaining Ring	1
34	Screw	2	78	Ball Bearing	1
35	Belt Tension Handle	1	79	Retaining King	1
36	Bolt	1	80	Retaining Ring	1
37	Support	1	81	Ball Bearing	1
38	Bolt	4	82	Collar	1
39	Washer	9	83	Spindle Sleeve	1
40	Plate	1	84	Drift Key	1
41	Motor	1	85	Ball Bearing	1
42	Washer	4	86	Spindle	1
43	Nut	4	87	Arbor	1
44	Nut	2	88	Chuck	1
44	INUL		00	UTIUCK	

### **ASSEMBLY**

**WARNING:** For your own safety, never connect plug to power source until all assembly steps are completed.

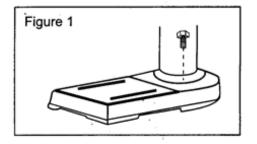
#### **TOOLS NEEDED TO ASSEMBLE**

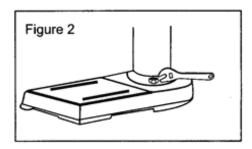
6" or 8" adjustable wrench, #2 Phillips stubby screwdriver, 16 oz rubber mallet and combination square.



#### ASSEMBLY OF BASE/COLUMN

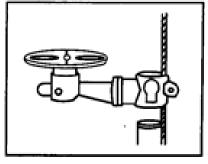
- **1.** Locate base (#4), column support flange (#5) and column (#2). Remove protective covering paper and discard.
- 2. Position base on the floor.
- **3.** Place column support flange on the base and align holes in the support flange with holes in the base. (Fig. 1)
- **4.** Locate four (4) hex bolts, four (4) washers among loose parts in bag.
- **5.** Install a bolt, washer and lock washer in each hole through the support flange and base and tighten with adjustable wrench. (Fig. 2)
- **6.** Slide the column into the column support flange and tighten the set screw furnished on the flange with hex key wrench





#### **INSTALLATION OF BRACKET ASSEMBLY**

- 1. Locate bracket assembly (#3), crane handle (#2) and rack (#6).
- 2. Put bracket assembly over the column, align the hole of table bracket with column and then insert rack with teeth face outside half way through the hole between bracket and column. (Fig. 1).
- 3. Slide the bracket assembly into the rack and column to the position you want. (Fig 2).
- 4. Install crane handle to the shaft and tighten with hex key wrench. (Fig. 3).
- **5.** Adjusting the rack to proper position by turning crane handle until the bottom of rack reach the column support flange edge. (Fig. 4)
- 6. Secure the rack by installing rack ring. (Fig. 5)
- 7. Secure the bracket assembly to the column by tightening lock handle. (Fig 6)





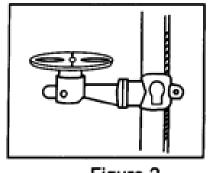


Figure 2

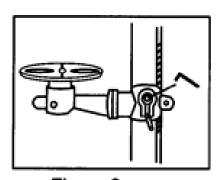
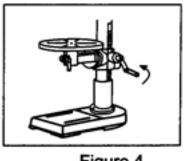


Figure 3

### **ASSEMBLY**





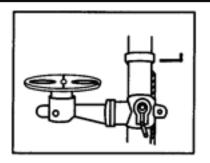


Figure 5

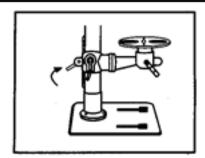


Figure 6

#### **INSTALLING THE TABLE**

- **1.** Locate table (#11) and remove the protective paper.
- 2. Place the table on the arm of bracket assembly (Fig. 1).
- 3. Align the table to base.
- **4.** Secure table to arm by tightening clamp bolt. (Fig. 2)

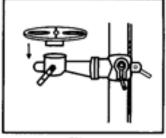


Figure 1

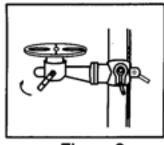


Figure 2

#### **INSTALLING THE HEAD ASSEMBLY**

- **1.** Locate head assembly (#1).
- 2. Put head assembly over column and align the hole on the bottom of the head assembly to the column and slide the head assembly down the column.
- **3.** Align the head frame with the table and base.
- 4. Secure the head assembly to the column by set screws on left side of the head.
- **5.** Tighten with hex key wrench. (Fig 1)

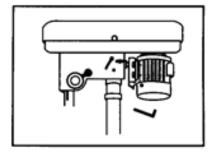
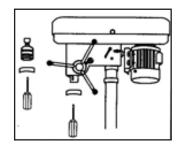
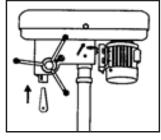


Figure 1

#### **INSTALLING THE FEED HANDLES**

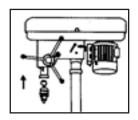
- 1. Locate arbor (#10), chuck (#9) and chuck key among parts bag.
- 2. Remove the protective polyfilm from these and discard.
- **3.** Clean out the tapered hole in the chuck and arbor (Fig. 1)
- **4.** Insert arbor into spindle and turn the arbor around to make it all the way in the spindle. Firmly tap the arbor nose with rubber mallet or a piece of wood (Fig. 2)
- **5.** Open chuck jaws completely by turning chuck sleeve counter-clockwise to the end. (Fig 4)
- 6. Push the chuck up on the arbor nose as far as it will go (Fig 5).
- 7. Firmly tap the nose of chuck with rubber mallet or a piece of wood to insure proper seating of the chuck on the spindle.







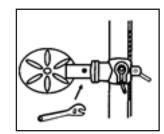


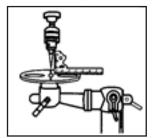


### **ASSEMBLY and OPERATION**

#### ADJUSTING THE TABLE TO HEAD

- **1.** Insert a drill bit (1/4" or larger) approximately 3" in length into chuck and tighten with chuck key.
- 2. With table raised to working height and locked on the column, place combination square flat on the table beside drill bit (Fig. 1).
- **3.** If an adjustment is necessary, remove 90 degree alignment stud and loosen the table bevel lock bolt (located under the table bracket) with adjustable wrench (Fig. 2)
- **4.** Align the table to the drill bit by tilting table and retighten table bevel lock bolt.

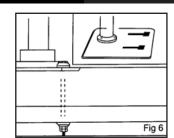




### **ADJUSTMENT**

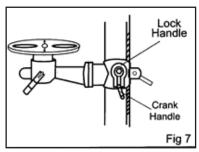
#### MOUNTING THE DRILL PRESS

Your drill press must be securely fastened by the two base holes (1) to a level floor with heavy-duty fasteners. This will prevent the drill press from tipping over, sliding, or walking during operation (Fig. 6).



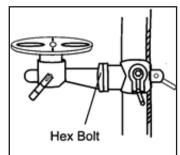
#### **HEIGHT ADJUSTMENT**

To adjust up or down, loosen the column lock handle, then turn crank handle to desired height. Retighten column lock handle before drilling (Fig. 7)



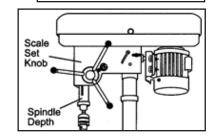
#### **TILTING ADJUSTMENT**

Loosen hex bolt underneath the table arm bracket. Tilt table to desired angle and retighten the bolt. (Fig. 8)



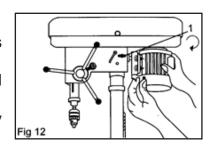
#### **FEED DEPTH ADJUSTMENT**

Loosen scale set knob on feed shaft assembly. Rotate spindle gauge to desired depth and tighten scale set knob.



#### **ADJUSTING SPEED**

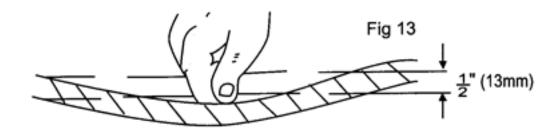
- **1.** Disconnect the drill press from power source.
- 2. Open the pulley cover.
- 3. Release belt tension lock knob (1) located
- on right side of drill press head. Pull right side of motor toward front of drill press to release spring tension on belt (Fig. 12). Tighten the belt tension lock knob.
- **4.** Choose speed for drilling operation and move belt to correct position for desired speed.
- **5.** Loosen belt tension lock knob and move left side of motor backward to apply tension on the belt. Tighten the belt tension knob.



### **OPERATION**

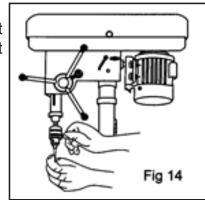
#### **BELT TENSION ADJUSTMENT**

For proper belt tension: Use 10 lbs pressure or hand pressure on the belt as shown below. The distance is 1/2" (13mm)+10%.



#### **INSTALLING DRILL BIT**

Insert bit into chuck jaws about 1" (25mm). When using a small bit do not insert it so far that the jaws touch the arbor of the drill. Make sure that the bit is centered in the chuck before tightening the chuck with the key (Fig. 14)



#### **DRILLING**

Use clamps to hold the work when drilling. The work should never be held in the bare hand, the lips of the drill may seize the work at any time especially when breaking through the stock. If the piece is whirled out of the operator's hand, injury may occur. Also, the drill bit will be broken when the work strikes the column. The work must be clamped firmly while drilling. Any tilting twisting or shifting results not only in a rough hole, but also increases drill breakage. For flat work, lay the piece on a wooden base and clamp it firmly down against the table to prevent it from turning.

#### **Using Vise**

For smaller workpiece that cannot be clamped to the table, use a drill press vise (not included). The vise must be clamped or bolted to the table.

#### **Positioning Workpiece**

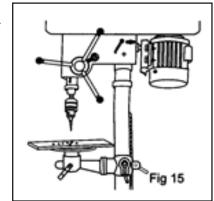
Always place a piece of wood (or plywood) on the table,

this will prevent "splintering" or making heavy burrs on the underside of the workpiece as the drill breaks through. The wood must contact the left side of the column (Fig. 15).

#### **Morse Taper Drill Bits**

To use Morse taper bits remove chuck and taper. To remove taper and chuck adjust stationary depth to 3" (75mm) (see depth instructions). Turn spindle manually lining up spindle and quill key hole.

Place the wedged end of the cotter in the quill key hole and lightly tap until the arbor and chuck fall out. Place tapered bit into the spindle hole, twist and push upwards until bit is snug, place a block of wood on the table and crank up table until the tapered bit is firmly into the spindle.



#### **Round-Out Tolerance**

For drilling operations requiring close tolerances, place drill blank in the chuck and check round out with a dial indicator if the round-out is not within desired tolerance, tap the chuck bottom with a drubber or leather mallet until you get the desired tolerance.

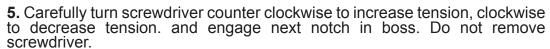
### **OPERATION and MAINTENANCE**

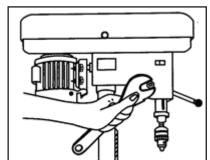
#### **QUILL RETURN SPRING**

may be necessary to adjust your quill return spring if the tension is such that the quill returns either too rapidly or too slowly.

- 1. Disconnect the drill press from power source.
- **2.** Move the stop nuts down to lowest position and lock in place with wrench to prevent quill from dropping while tensioning spring (as figure).
- **3.** Place screwdriver in lower front notch of spring cap and hold it in place while loosening and removing nut (Fig. 15)
- 4. With screwdriver remaining in notch. Loose large nut until notch disengages

from boos on head. Do not remove this nut (Fig. 16)





- **6.** Tighten large nut with wrench only enough to engage boss. Do not over tighten as this with restrict quill movement.
- **7.** Move stop nuts to highest position and check tension while turning feed handle. If there is not enough tension on spring. Repeat steps. 3-6

#### NOTE: ONLY ONE NOTCH EACH TIME AND CHECK TENSION AFTER EACH REPETITION.

**8.** Check quill while feeding to insure smooth and unrestricted movement. If movement is too tight, slightly loosen nuts until unrestricted.

### MAINTENANCE

Frequently blow out any dust that may accumulate inside the motor. A coat of automobile type wax applied to the table and column will help to keep the surface clean. If the power cord is damaged in any way, have it replaced immediately.

#### **LUBRICATION**

All of the Ball Bearing are packed with grease at the factory. They require no further lubrication. Periodically lubricate the gear and rack table elevation mechanism, the splines (groves) in the spindle and the rack on the quill.

#### **Technical Data**

MAX DRILLING CAPACITY	3-1/8"	
SPINDLE TAPER	MT2	
CHUCK	7/64"-5/8"	
MAX SPINDLE STROKE	3-1/8"	
SWING	13"	
NUMBER OF SPEEDS	16	
SPINDLE SPEED (RPM)	220-3600	
MAX DISTANCE FROM SPINDLE TO TABLE	30-11/16"	
MAX DISTANCE FROM SPINDLE TO BASE	47-21/32"	
DIAMETER OF COLIMN	2-34"	
DIAMETER OF TABLE	11"	
SIZE OF BASE	9.5" x 16"	
OVERALL HEIGHT	61-7/8"	
MOTOR	120V ~ 60Hz 6.6A 3/4HP	

# TROUBLESHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
	A) Incorrect belt tension	A) Adjust tension
	B) Dry spindle	B) Remove spindle/quill
Noisy operation		assembly and lubricate
	C) Loose pulley	C) Tighten pulley
	D) Loose belt	D) Adjust belt tension
	E) Bad bearing	E) Replace bearing
	A) Loose chuck	A) Tighten by pressing
		chuck down against table
Excessive drill wobble	B) Worn spindle shaft or	B) Replace spindle shaft
	bearing	or bearing
	C) Bad chuck	C) Replace chuck
	A) Power supply	A) Check power cord
	B) Motor connection	B) Check motor connection
Motor won't start	C) Switch connections	C) Check switch connections
	D) Motor windings burned	D) Replace motor
	E) Bad switch	E) Replace speed
	A) Excessive pressure	A) Apply less pressure
	on feed handle	
Drill binds in workpiece	B) Loose belt	B) Check belt tension
	C) Loose drill	C) Tighten drill with key
	D) Speed too fast	D) Change speed
	A) Incorrect speed slow	A) Refer to speed chart
	down RPM	
	B) Chips are not	B) Clean drill
	discharging	
Drill burns or smokes	C) Dull drill or not cut	C) Clean sharpness and
	properly for material	taper
	D) Needs lubrication	D) Use lubrication while
		drilling
	E) Feed pressure wrong	E) Apply less pressure
Table difficult to raise	A) Needs lubrication	A) Lubricate with light oil
	B) Bent rack	B) Straighten rack
	C) Table lock tightened	C) Loosen clamp

### **WARRANTY**

#### PLEASE READ THE FOLLOWING CAREFULLY

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Record	Product	's Serial	Number	Here:
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**Note**: If product has no serial number, record month and year of purchase instead.

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



### Questions, problems, missing parts?

Before returning to your retailer, our exceptional customer service is available.

Call us Tel: 909 628 4900

Hour: 9am To 3pm PST (Monday to Friday)

Email: info@starktoolsusa.com

PRODUCT MADE IN CHINA