

16½" Variable Speed Drill Press

(Model 17-925)

(Model 17-990X)



MODEL 17-925 SHOWN

PART NO. 909592 - 03-06-03
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To learn more about DELTA MACHINERY
visit our website at: www.deltamachinery.com.

For Parts, Service, Warranty or other Assistance,

please call **1-800-223-7278** (In Canada call **1-800-463-3582**).

SAFETY GUIDELINES - DEFINITIONS

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols to the right. Please read the manual and pay attention to these sections.

- ▲ DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- ▲ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ▲ CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
- CAUTION** Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

▲ WARNING **SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES** contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- 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, always wear **MSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

GENERAL SAFETY RULES



▲ WARNING **READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT.** Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.

SAVE! IMPORTANT SAFETY INSTRUCTIONS ***SAVE!***

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, featherboards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. Always use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it. Figure out an alternative procedure that feels safer. **REMEMBER:** Your personal safety is your responsibility.

This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, **DO NOT** use the machine until you have first contacted Delta to determine if it can or should be performed on the product.

Technical Service Manager

Delta Machinery
4825 Highway 45 North
Jackson, TN 38305

(IN CANADA: 505 SOUTHGATE DRIVE, GUELPH, ONTARIO N1H 6M7)

1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL.** Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2. **KEEP GUARDS IN PLACE** and in working order.

3. **ALWAYS WEAR EYE PROTECTION.** Wear safety glasses. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty. These safety glasses must conform to ANSI Z87.1 requirements. **NOTE:** Approved glasses have Z87 printed or stamped on them.

4. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "on".

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

6. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

7. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.

8. **MAKE WORKSHOP CHILDPROOF** – with padlocks, master switches, or by removing starter keys.

9. **DON'T FORCE TOOL.** It will do the job better and be safer at the rate for which it was designed.

10. **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.

11. **WEAR PROPER APPAREL.** No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

13. **DON'T OVERREACH.** Keep proper footing and balance at all times.

14. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. **DISCONNECT TOOLS** before servicing and when changing accessories such as blades, bits, cutters, etc.

16. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause hazards or risk of injury to persons.
17. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in "OFF" position before plugging in power cord. In the event of a power failure, move switch to the "OFF" position.
18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.
22. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE WHEN OPERATING A POWER TOOL. DO NOT USE TOOL WHILE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in serious personal injury.
23. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while motor is being mounted, connected or reconnected.
24. **THE DUST GENERATED** by certain woods and wood products can be injurious to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

ADDITIONAL SAFETY RULES FOR DRILL PRESSES

⚠ WARNING FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

1. **DO NOT OPERATE THIS TOOL UNTIL** it is assembled and installed according to the instructions.
2. **OBTAIN ADVICE from your supervisor, instructor, or another qualified person** if you are not familiar with the operation of this tool.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections.
4. **NEVER START THE MACHINE BEFORE CLEARING THE TABLE** of all objects (tools, scrap pieces, etc.).
5. **NEVER START THE MACHINE** with the drill bit, cutting tool, or sander against the workpiece.
6. **TIGHTEN ALL LOCK HANDLES** before starting the machine.
7. **USE ONLY DRILL BITS, CUTTING TOOLS, SANDING DRUMS, OR OTHER ACCESSORIES** that have shanks of 1/2" in diameter or less.
8. **USE ONLY DRILL BITS, CUTTING TOOLS, OR SANDING DRUMS** that are not damaged.
9. **PROPERLY LOCK DRILL BIT, CUTTING TOOL, OR SANDING DRUM IN THE CHUCK** before operating this machine.
10. **USE RECOMMENDED SPEEDS** for all operations.
11. **AVOID AWKWARD OPERATIONS AND HAND POSITIONS** where a sudden slip could cause a hand to move into the cutting tool.
12. **KEEP ARMS, HANDS, AND FINGERS** away from the cutting tool.
13. **HOLD THE WORKPIECE FIRMLY AGAINST THE TABLE.** Do not attempt to drill a workpiece that does not have a flat surface against the table. Prevent the workpiece from rotating by clamping it to the table or by securing it against the drill press column.
14. **TURN THE MACHINE "OFF" AND WAIT FOR THE DRILL BIT, CUTTING TOOL, OR SANDER TO STOP TURNING** prior to cleaning the work area, removing debris, removing or securing workpiece, or changing the angle of the table. A moving drill bit, cutting tool, or sander can be dangerous.
15. **PROPERLY SUPPORT LONG OR WIDE** workpieces.
16. **NEVER PERFORM LAYOUT, ASSEMBLY,** or set-up work on the table/work area when the machine is running.
17. **TURN THE TOOL "OFF", disconnect the tool** from the power source before installing or removing accessories, before adjusting or changing set-ups, or when making repairs.
18. **DISCONNECT THE TOOL** from the power source, and clean the table/work area before leaving the tool. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use.
19. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this tool is available from the Power Tool Institute, 1300 Summer Avenue, Cleveland, OH 44115-2851. Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please also refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor OSHA 1910.213 Regulations.

**SAVE THESE INSTRUCTIONS.
Refer to them often
and use them to instruct others.**

POWER CONNECTIONS

A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug. Before connecting the machine to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. All line connections should make good contact. Running on low voltage will damage the machine.

⚠ DANGER DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

MOTOR SPECIFICATIONS

Your machine is wired for 120 volt, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS

⚠ DANGER THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. All grounded, cord-connected machines:

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 machine is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. 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.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green 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 the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine's plug, as shown in Fig. A.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected machines intended for use on a supply circuit having a nominal rating less than 150 volts:

If the machine is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A, the machine will have a grounding plug that looks like the plug illustrated in Fig. A. A temporary adapter, which looks like the adapter illustrated in Fig. B, may be used to connect this plug to a matching 2-conductor receptacle as shown in Fig. B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded 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. Whenever the adapter is used, it must be held in place with a metal screw.

NOTE: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.

3. Your drill press may be converted for 230 volt operation.

The conversion of your drill press for 230 volt operation must be done by qualified electrical personnel. Should you desire to have your drill press converted for 230 volt operation, take your drill press to your local Authorized Delta Service Center. Call 800-223-7278 for the location of the nearest Authorized Service Center.

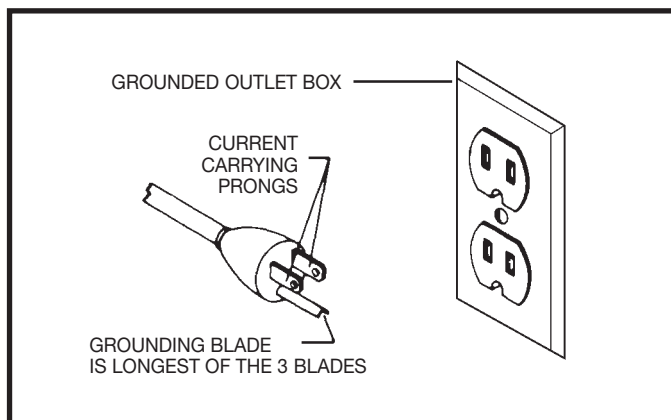


Fig. A

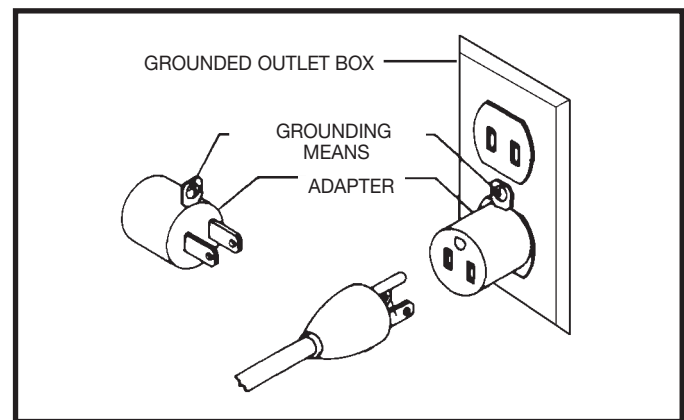


Fig. B

When converted for 230 volt operation, your drill press is intended for use on a circuit that has an outlet like the one illustrated in Fig. C. After conversion for 230 volts, the drill press will have a grounding plug that looks like the plug illustrated in Fig. C.

Make sure the drill press is connected to an outlet having the same configuration as the plug. No adapter is available or should be used when the drill press is converted for 230 volts. If the drill press must be reconnected for use on a different type of electrical circuit, the reconnection should be made by qualified service personnel; and after reconnection, the machine should comply with all local codes and ordinances.

⚠ DANGER IN ALL CASES, MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.

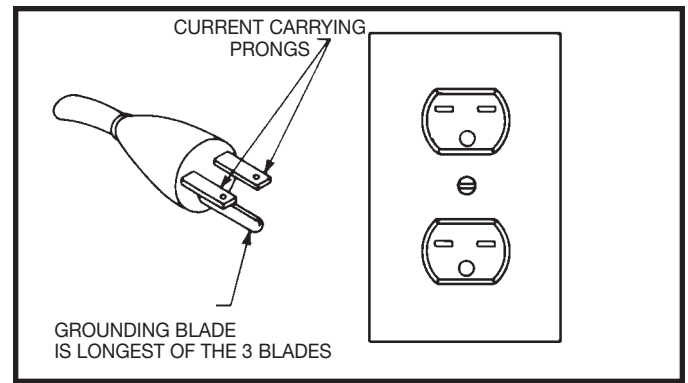


Fig. C

EXTENSION CORDS

CAUTION Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. D, shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
		25-50	16 AWG
		50-100	16 AWG
		100-150	14 AWG
6-10	120	up to 25	18 AWG
		25-50	16 AWG
		50-100	14 AWG
		100-150	12 AWG
10-12	120	up to 25	16 AWG
		25-50	16 AWG
		50-100	14 AWG
		100-150	12 AWG
12-16	120	up to 25	14 AWG
		25-50	12 AWG
		GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. D

OPERATING INSTRUCTIONS

FOREWORD

Delta Models 17-925 and 17-990X are 16½" variable speed drill presses. The Delta Models 17-925 and 17-990X have a powerful ¾ HP motor which provides plenty of power for a variety of drilling jobs.

UNPACKING AND CLEANING

Carefully unpack the machine and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

NOTICE: THE MANUAL COVER PHOTO ILLUSTRATES THE CURRENT PRODUCTION MODEL. ALL OTHER ILLUSTRATIONS ARE REPRESENTATIVE ONLY AND MAY NOT DEPICT THE ACTUAL COLOR, LABELING OR ACCESSORIES AND MAY BE INTENDED TO ILLUSTRATE TECHNIQUE ONLY.

DRILL PRESS PARTS

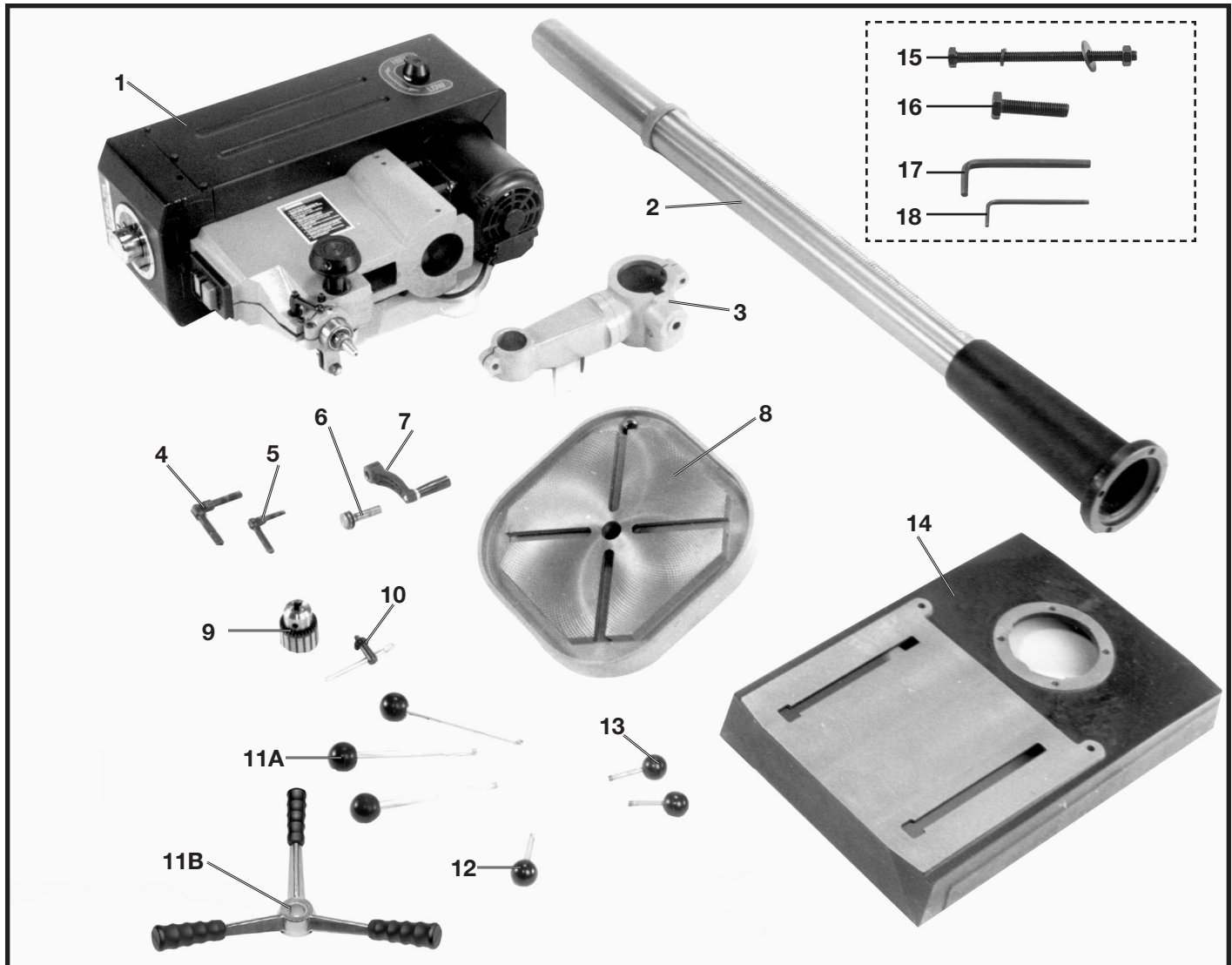


Fig. 2

- | | |
|---|---|
| 1 - Drill Press head | 12 - Speed range changing lever |
| 2 - Column and table raising rack | 13 - Speed changing levers (2) |
| 3 - Table/column bracket | 14 - Base |
| 4 - Lock lever for column bracket 1/2-13x1-1/2" | 15 - M8 x 125mm carriage head screw (2),
M8 Flat washer (2), M8.1 Lock washer (2),
M8 Hex nut (2) |
| 5 - Lock lever for table 3/8-16x1-1/8" | 16 - M10 x 40mm hex head screw (4) |
| 6 - Worm for table raising mechanism | 17 - 5mm hex wrench |
| 7 - Table raising and lowering handwheel | 18 - 3mm hex wrench |
| 8 - Table | |
| 9 - Chuck | |
| 10 - Chuck key | |
| 11A Pinion shaft handles (3) (For model 17-925 ONLY) | |
| 11B Pinion shaft handle (For Model 17-990X ONLY) | |

ASSEMBLY

⚠ WARNING FOR YOUR OWN SAFETY, DO NOT CONNECT THE MACHINE TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU READ AND UNDERSTAND THE ENTIRE INSTRUCTION MANUAL.

1. Assemble the column (A) Fig. 3, to the base (B) using the four M10x40mm hex head screws (C), three of which are shown. Loosen set screw (D) with 3mm wrench supplied, and remove ring (E) and raising rack (F).

2. Insert small end of worm gear (G) Fig. 4 and Fig. 5, through hole (H), from the inside of the table bracket. Make certain that the worm gear engages the internal gear in the table bracket.

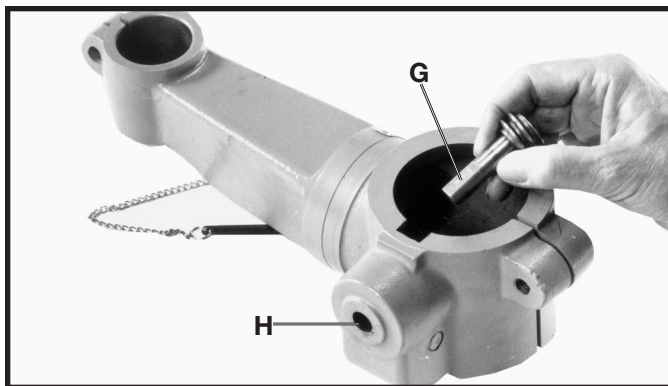


Fig. 4

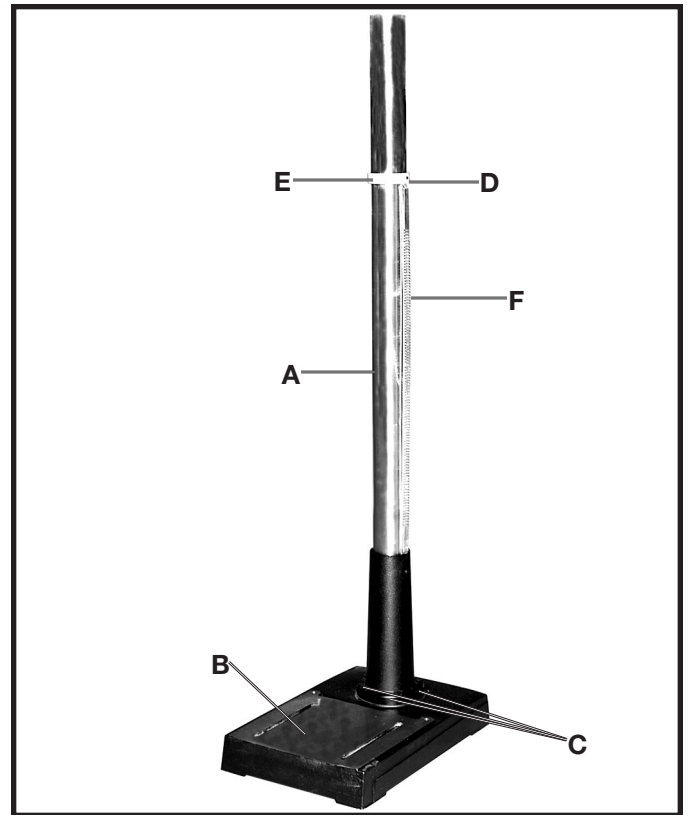


Fig. 3

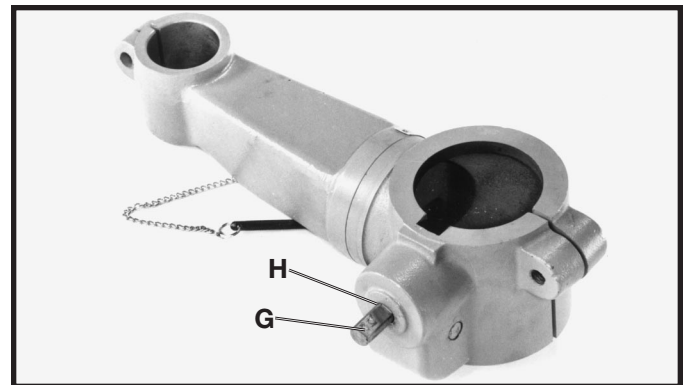


Fig. 5

3. Insert raising rack (F) Fig. 6, which was removed in **STEP 1**, into groove in table bracket (I) making sure teeth of internal gear, located inside table bracket, are engaged with teeth of raising rack (F).

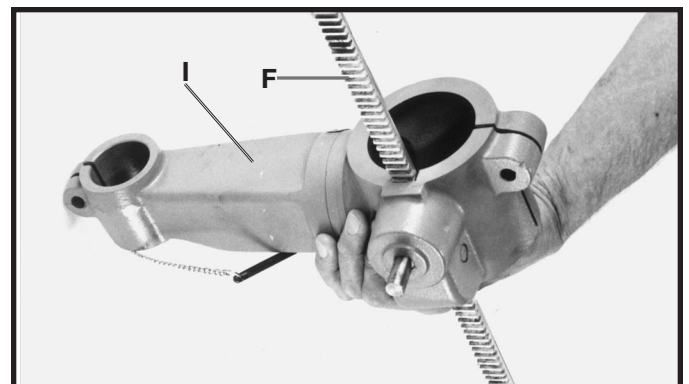


Fig. 6

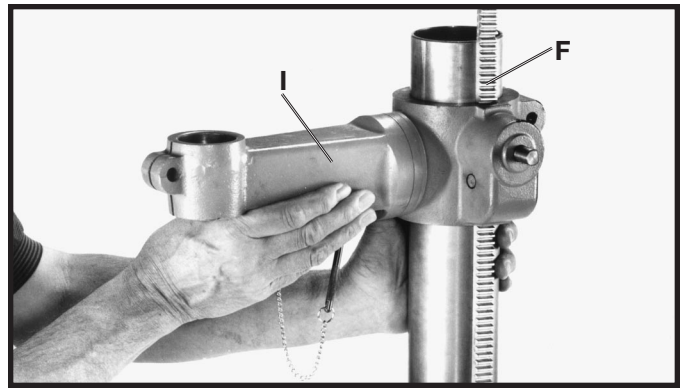


Fig. 7

4. Slide raising rack (F) Fig. 7 and table bracket (I) onto drill press column, as shown. Make sure bottom of raising rack (F) Fig. 8, is engaged with flange (J) on drill press base.

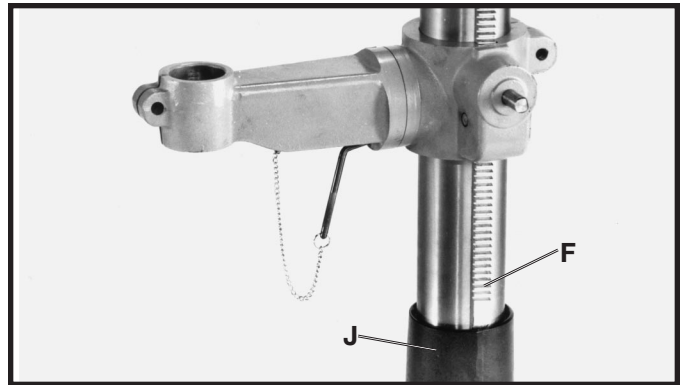


Fig. 8

5. Re-assemble ring (E) Fig. 9, which was removed in **STEP 1. IMPORTANT:** Bottom of ring (E) **MUST NOT** be pushed all the way down onto top of raising rack (F). **MAKE SURE** top of raising rack (F) is under bottom of ring (E) and that there is enough clearance to allow rack (F) to rotate around the column. **THEN TIGHTEN SET SCREW (D) WITH 3mm WRENCH SUPPLIED.**

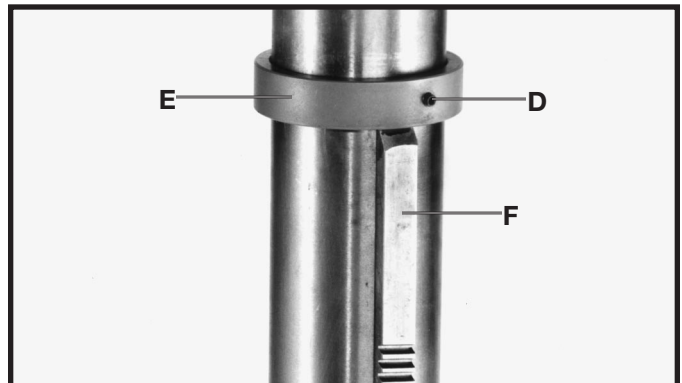


Fig. 9

6. Assemble table raising and lowering handle (K) Fig. 10, to worm gear shaft (G) and tighten screw (L) against flat on shaft with 3mm wrench supplied.

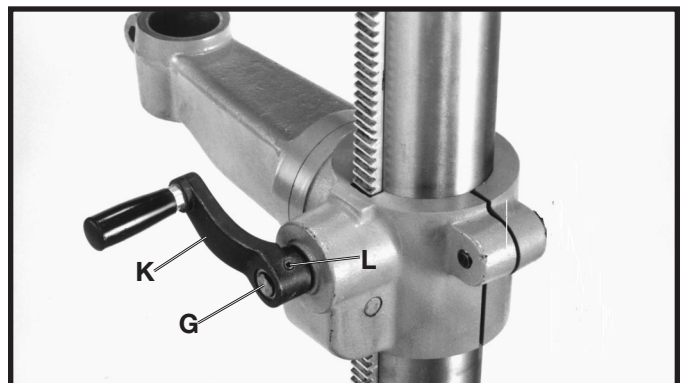


Fig. 10

7. Thread clamp handle (M) Fig. 11, into hole in rear of table bracket, as shown.

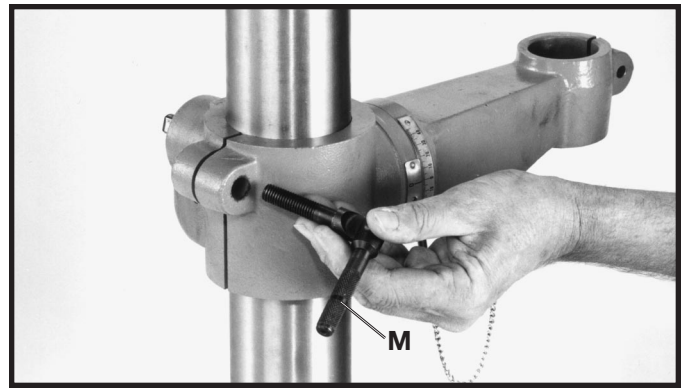


Fig. 11

8. Insert table (P) Fig. 12, into hole in table bracket as shown.



Fig. 12

9. Thread table lock lever (Q) Fig. 13, into hole in front of table bracket as shown.

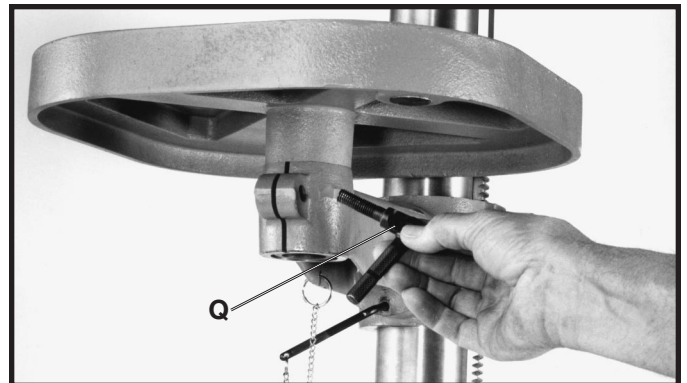


Fig. 13

10. Place the drill press head (N) Fig. 14, onto the column as far as it will go. Align head (N) Fig. 14A, to table (C) Fig. 14A, and base (D) Fig. 14A, and tighten the two head locking screws (O) Fig. 14 with the 5mm wrench supplied.

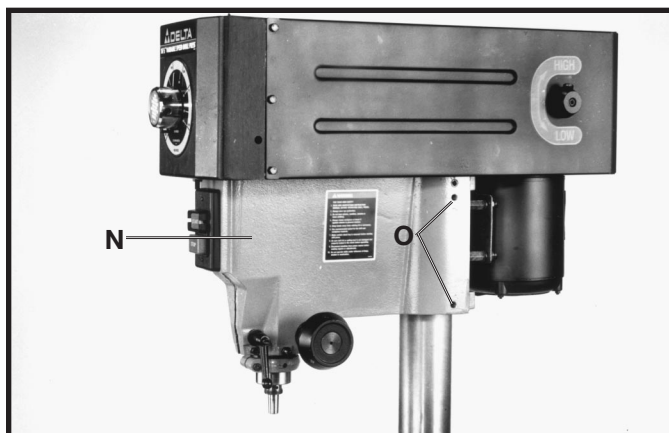


Fig. 14

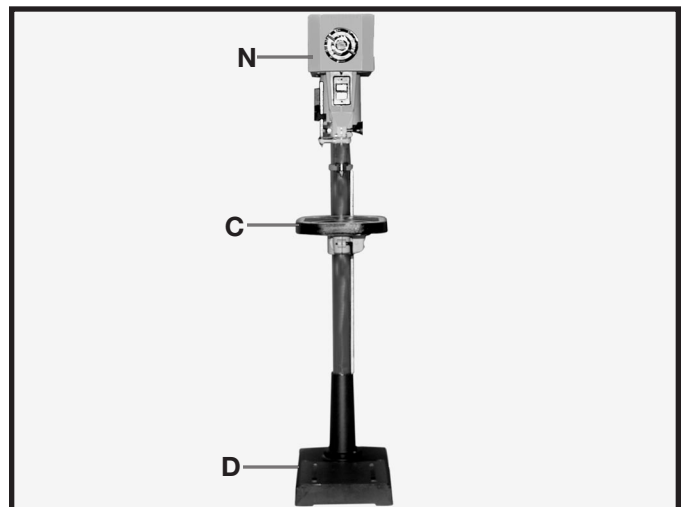


Fig. 14A

11. **IMPORTANT:** Make certain the spindle taper (Q) Fig. 15, and tapered hole in chuck (R) are clean and free of any grease, lacquer or rust preventive coatings. **NOTE:** Household oven cleaner can effectively remove any substance from the spindle and chuck; however, carefully follow the manufacturer's safety rules concerning its use.

12. **IMPORTANT: OPEN THE CHUCK JAWS AS WIDE AS POSSIBLE MAKING SURE THE CHUCK JAWS ARE UP INSIDE CHUCK.**

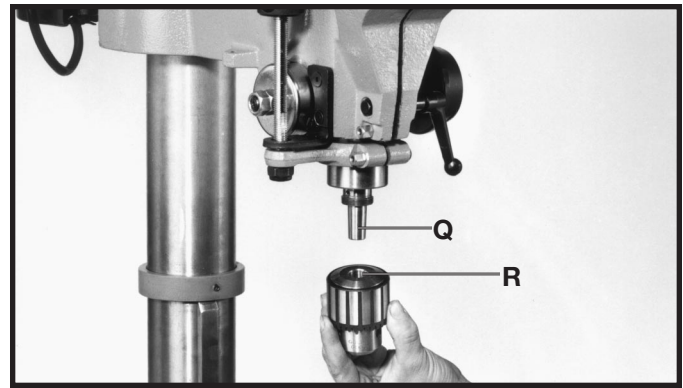


Fig. 15

13. Holding chuck on taper of spindle, tap with a soft tip hammer (T) or a block of wood and hammer to set chuck, as shown in Fig. 16.

CAUTION To avoid damage to the chuck, **NEVER** drive the chuck onto the spindle with a metal hammer.

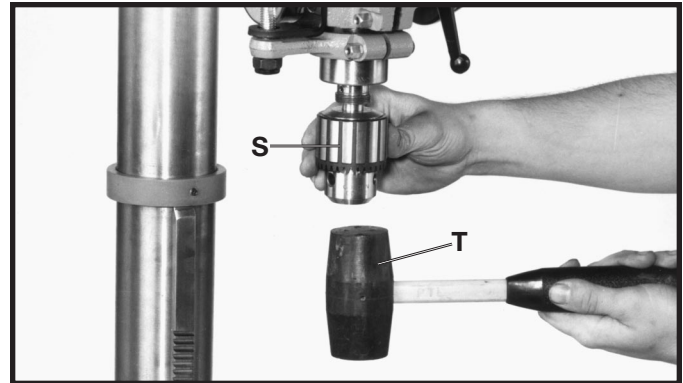


Fig. 16

FOR MODEL 17-925 ONLY

14. Thread the three pinion shaft handles (U) into the three holes located in the pinion shaft hub (V), as shown in Fig. 17.

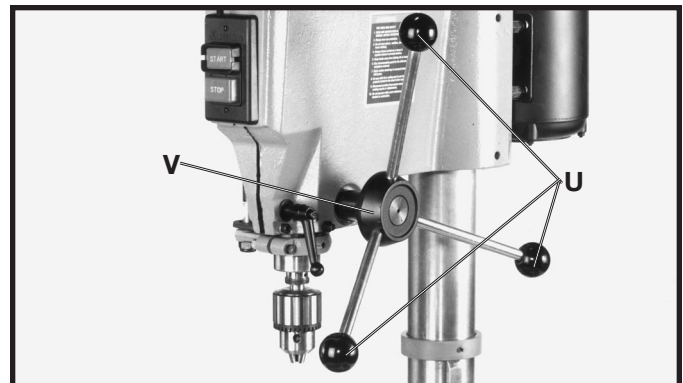


Fig. 17

FOR MODEL 17-990X ONLY

14. Remove screw (A) Fig. 17A, and flat washer (B).

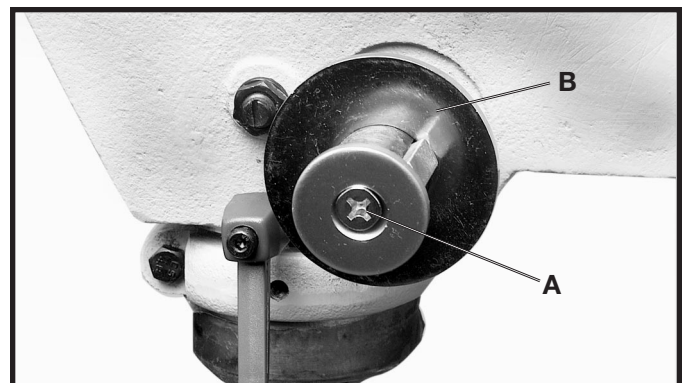


Fig. 17A

FASTENING DRILL PRESS BASE TO A SUPPORTING SURFACE

PERMANENT MOUNTING

If your drill press is to be used in a permanent location, the drill press base must be secured to the supporting surface with fasteners through the two mounting holes, (A) Fig. 20, in the drill press base.

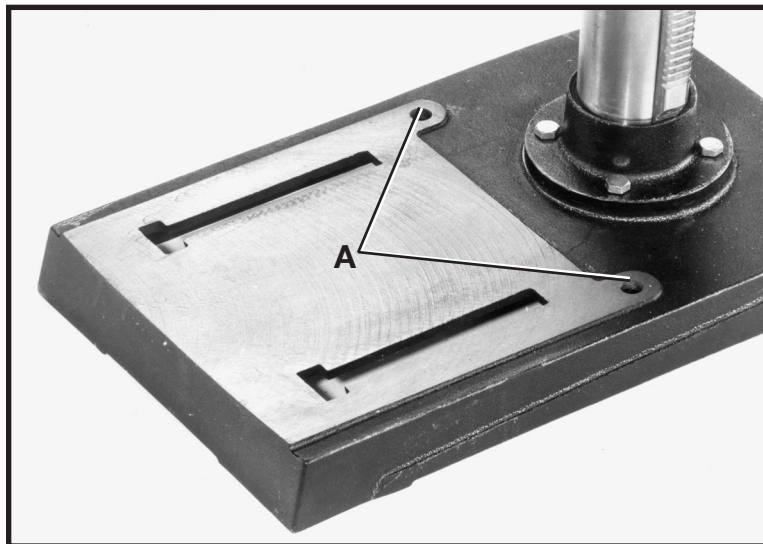


Fig. 20

MOUNTING DRILL PRESS TO A PLYWOOD BASE

If you do not fasten your drill press in a permanent manner, the drill press must be fastened to a plywood mounting board to prevent the drill press from tipping over during normal use. **NOTE: Use a good grade of plywood with a minimum 3/4" thickness. Do not make the mounting board from particle board since particle board breaks easily.**

1. Drill two 3/8" diameter holes 12 1/4" (B) Fig. 21, apart from center, corresponding to the mounting holes (A) Fig. 20, of the drill press base in a 21" by 28" minimum size plywood board.

2. Fasten the drill press base to the mounting board using the carriage bolts, flat washers, lockwashers, and hex nuts (C) Fig. 21, furnished with your drill press. The holes for the carriage bolt heads must be countersunk so that the bolt heads are flush or below the bottom surface of the mounting board in order to guarantee proper stability.

3. When the drill press is mounted to the supporting board, the board must extend a **minimum of 3"** beyond each edge of the drill press base, as shown in Fig. 22.

4. The plywood base must be secured to the floor or supporting surface if there is any tendency of the drill press to vibrate, slide or walk during normal operation.

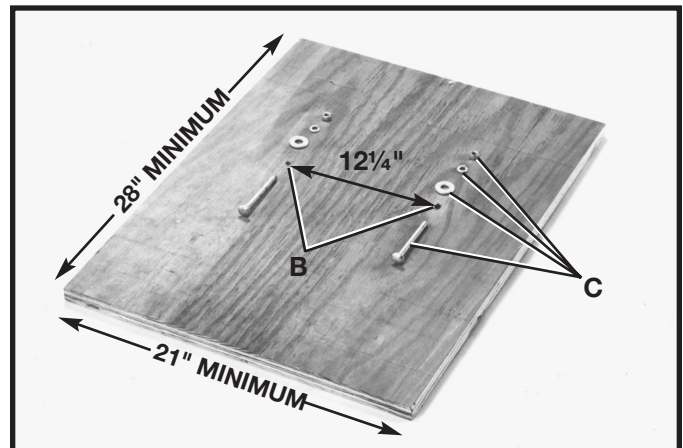


Fig. 21

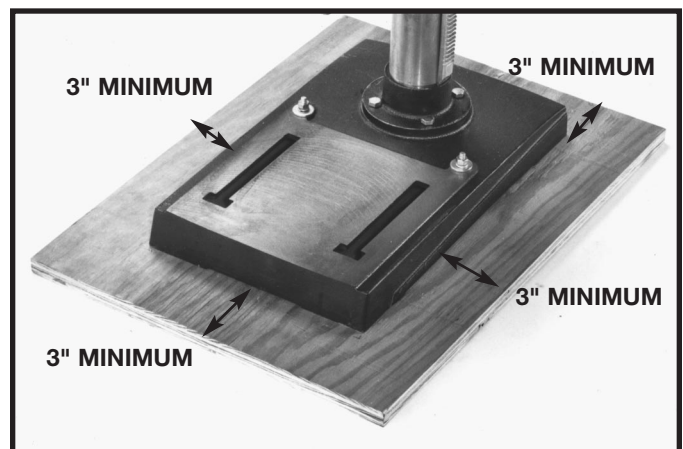


Fig. 22

OPERATING CONTROLS AND ADJUSTMENTS

STARTING AND STOPPING DRILL PRESS

The power switch is located at the front of the drill press head. To turn the machine “ON” press the green start button (A) Fig. 23. To stop the drill press, push the red stop button (B).

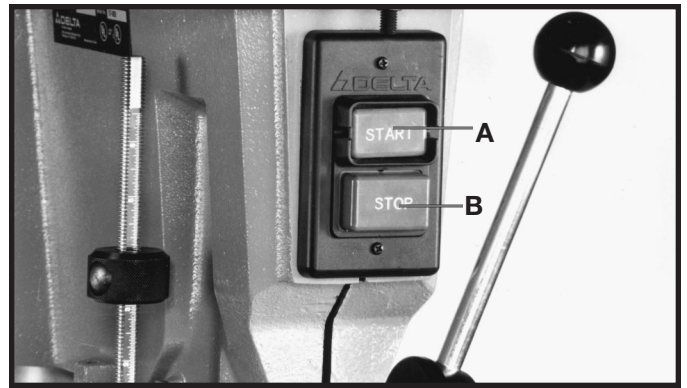


Fig. 23

LOCKING SWITCH IN THE “OFF” POSITION

IMPORTANT: When the machine is not in use, the switch should be locked in the OFF position using a padlock (C) Fig. 24, with a 3/16" diameter shackle to prevent unauthorized use.

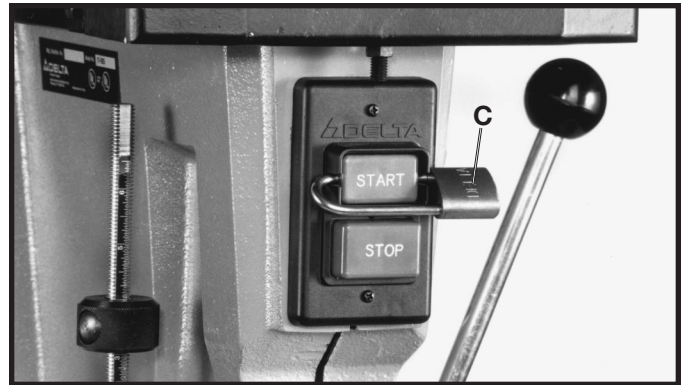


Fig. 24

TABLE ADJUSTMENTS

1. The table (A) Fig. 25, can be raised or lowered on the drill press column by loosening the table clamp handle (B) and turning the table raising and lowering handle (C). After the table is at the desired height, tighten handle (B).
2. The table (A) Fig. 26, can be rotated 360 degrees on the table bracket by loosening lock handle (D).
3. The table can be tilted right or left by pulling out and removing table alignment pin (E) Fig. 27. Loosen table locking bolt (F), tilt table to the desired angle and tighten bolt (F). When returning table to the level position (90 degrees to the spindle), replace table alignment pin (E) and tighten bolt (F).
4. A scale and pointer is provided on the table bracket to indicate the degree of tilt.

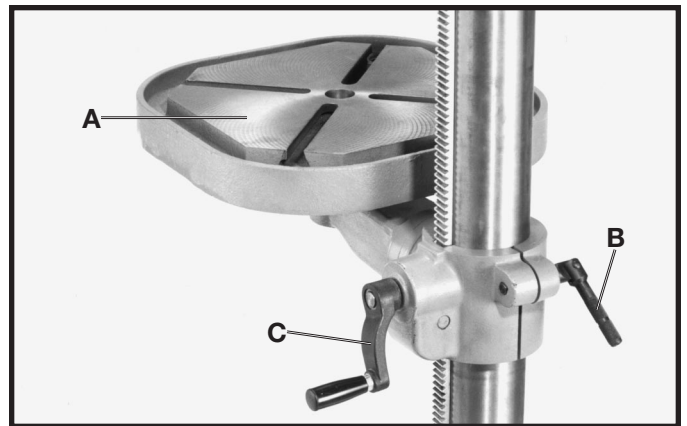


Fig. 25

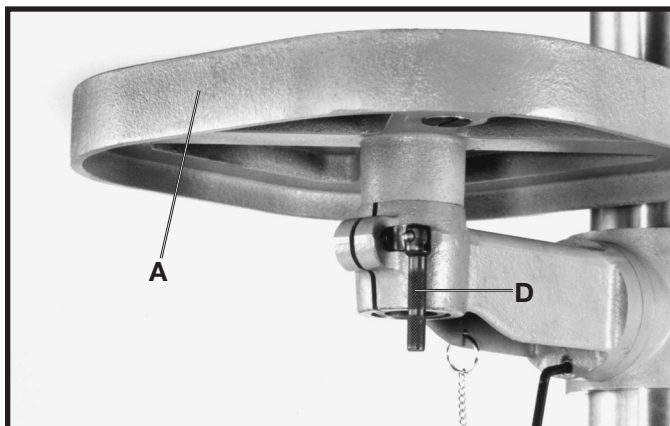


Fig. 26

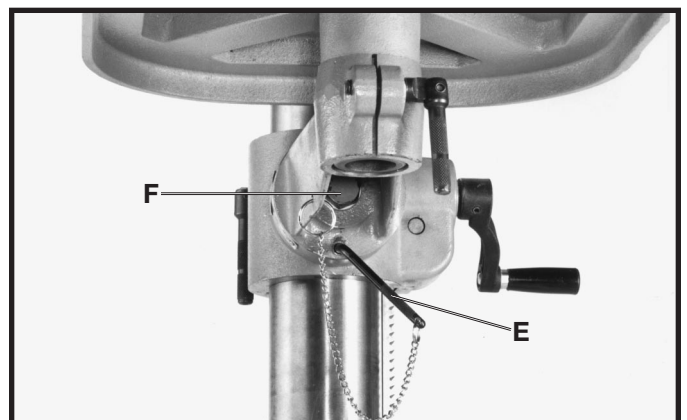


Fig. 27

VARIABLE SPEED CONTROL

DO NOT turn variable speed pilot wheel handles (A) Fig. 28, unless motor is running to avoid putting unnecessary strain on the drive belts and pulleys. The pilot wheel handles (A) are turned clockwise to increase speed and counterclockwise to decrease speed. When changing speeds, the pointer (B) will indicate the speed of the drill press.

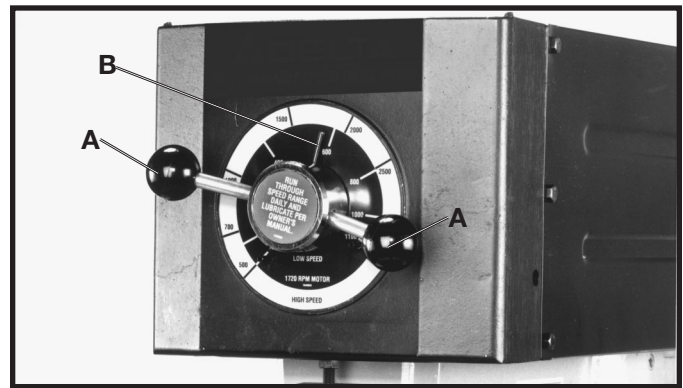


Fig. 28

SPEED RANGE CONTROL

The speed range control lever (A) Fig. 29, **MUST NOT** be moved except when the motor is running. When the handle (A) is in the up “**HIGH**” position, the speed range is 500 to 3200 RPM; and when the handle (A) is in the “**LOW**” position, the speed range is 150 and 1100 RPM.

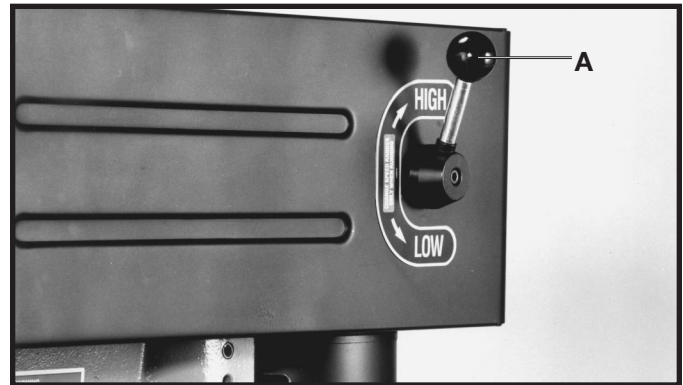


Fig. 29

DRILLING HOLES TO DEPTH

When a number of holes are to be drilled to exactly the same depth, the stop nut (A) Fig. 30, on the threaded stop rod (B) is used as follows:

1. Lower the chuck (C) Fig. 30, and drill bit to the depth you wish the drill bit to be by rotating the pinion shaft handles (D). Then lock the quill in position by tightening quill locking lever (E). **NOTE:** Quill locking lever (E) is spring-loaded and can be repositioned by pulling out on the handle and repositioning the hub of the handle on the nut located underneath the hub.
2. Depress spring-loaded button (F) Fig. 30, and rapidly move stop nut (A) until bottom of nut (A) contacts stop (G). While holding the pinion shaft handle (D) Fig. 30, loosen the quill locking lever (E), allow the chuck (C) and the quill, to return to the up position by gradually allowing the pinion shaft handles to rotate to the up position.
3. Drill a test hole to check the adjustment and readjust if necessary by rotating stop nut (A) Fig. 30, for fine adjustment. It is not necessary to depress button (F) while rotating stop nut (A) for fine adjustment.

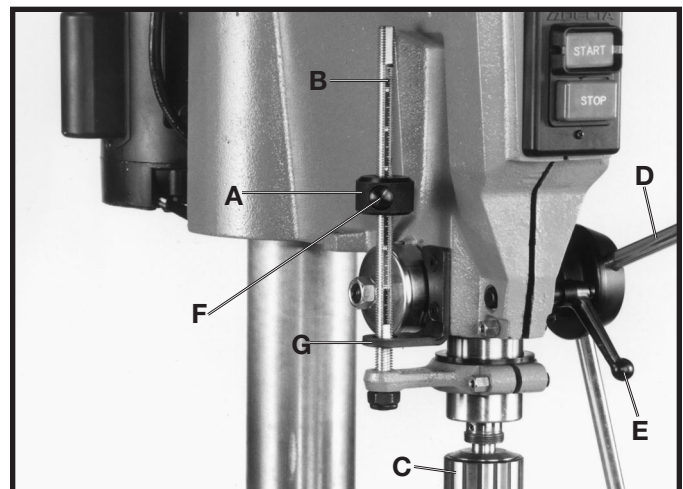


Fig. 30

QUILL ADJUSTMENTS

The spindle is raised and lowered by turning the pilot wheel (A) Fig. 31. The quill (B) can be locked at any desired point in its travel by tightening the quill locking lever (C). **NOTE:** The quill locking lever (C) is spring-loaded and the handle can be repositioned by pulling out on the handle (C) and repositioning the hub (D) of the handle on the nut located underneath the hub.

The adjusting screw (E) Fig. 31, and nut (F) Fig. 32, have been adjusted at the factory to give the quill (B) Fig. 31, the proper sliding fit in the head casting. After a long period of time, “play” between the quill and head casting may develop and can be removed. The nut (F) Fig. 32, is loosened and adjustment is made by tightening screw (E) Fig. 31, with the hex wrench supplied. The nut (F) Fig. 32, is tightened to prevent the screw (E) Fig. 31, from turning. Hold the screw (E) Fig. 31, with wrench when nut (F) Fig. 32, is tightened and check by moving the quill up and down several times to be sure the quill does not bind.

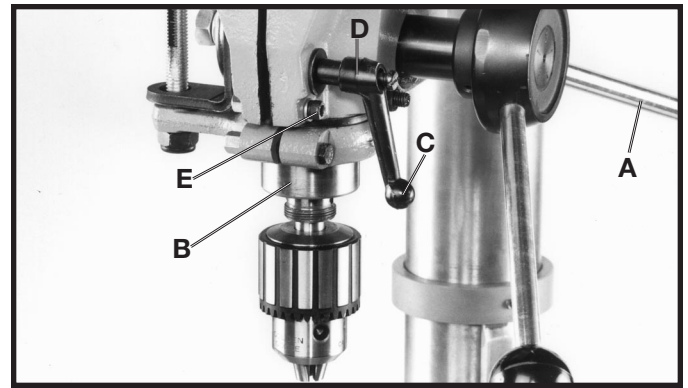


Fig. 31



Fig. 32

ADJUSTING SPINDLE RETURN SPRING

The spindle is automatically returned to its upper most position upon release of the handle. It is recommended that the handle be allowed to slowly return to the top position after all holes have been drilled in the material. This spring has been properly adjusted at the factory and should not be disturbed unless absolutely necessary. To adjust the return spring, proceed as follows:

1. **DISCONNECT MACHINE FROM POWER SOURCE.**

2. Remove nut (B) Fig. 33. Loosen nut (E) approximately 1/4 turn, making sure spring housing (A) stays engaged with head casting.

3. While **FIRMLY HOLDING** spring housing (A) Fig. 33 pull out housing and rotate it until boss (D) is engaged with the next notch on the housing. Turn the housing counterclockwise to increase or clockwise to decrease spring tension. Then tighten nut (E) and then nut (B), to hold the housing in place. **IMPORTANT: Inside nut (E) should not contact spring housing (A) when tightened.**

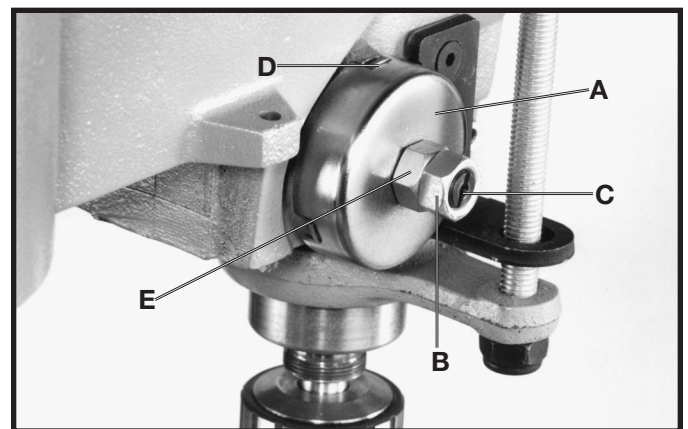


Fig. 33

OPERATIONS

Your drill press is to be used with drill bits with a shank of 1/2" or less in diameter. The following will give the inexperienced operator a start on common drill press operations. Use scrap material for practice to get a feel of the machine before attempting regular work.

⚠ WARNING The use of accessories and attachments not recommended by Delta may result in risk of injury.

IMPORTANT: When the workpiece is long enough it should always be positioned on the table with one end against the left side of the column, as shown in Fig. 34. This prevents the workpiece from rotating with the drill bit or cutting tool, causing damage to the workpiece or personal injury to the operator. If it is not possible to support the workpiece against the column, the workpiece should always be fastened to the table using clamps or a vise.

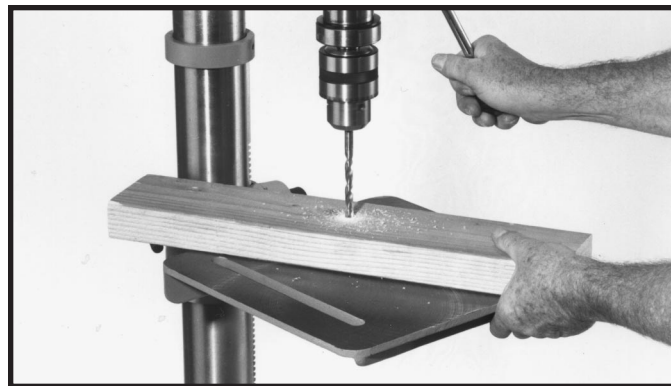


Fig. 34

INSTALLING AND REMOVING DRILL BITS

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Insert smooth end of drill bit (A) Fig. 35, into chuck (B), as far as it will go, and then back the bit out 1/16", or up to the flutes for small bits.
2. Make certain that the drill bit (A) Fig. 35, is centered in the chuck (B) before tightening the chuck with the key (C).
3. Turn the chuck key (C) Fig. 35, clockwise to tighten and counterclockwise to loosen the chuck jaws.
4. Tighten all three chuck jaws to secure the drill bit sufficiently so that it does not slip while drilling.
5. **⚠ CAUTION** MAKE SURE chuck key (C) Fig. 35, is removed from chuck before starting drill press. Your chuck key (C) is equipped with a self-ejecting pin (D) which helps minimize the hazard of the key being left in the chuck.

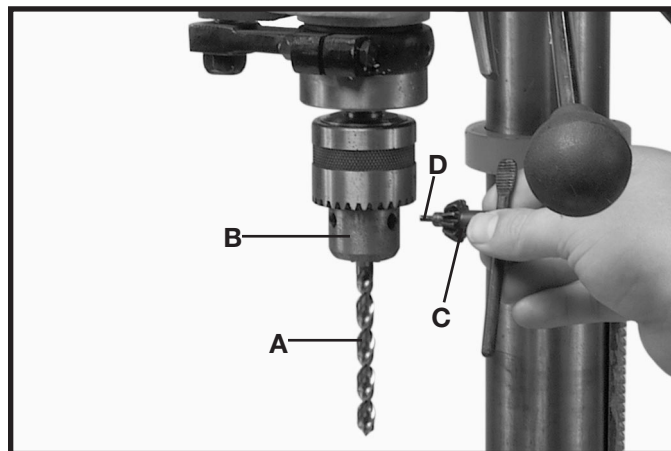


Fig. 35

CORRECT DRILLING SPEEDS

Factors which determine the best speed to use are: kind of material being worked, size of hole, type of drill or other cutter, and quality of cut desired.

⚠ WARNING Use the recommended speed for the drill press bit and workpiece material.

BORING IN WOOD

Twist drills, although intended for metal drilling, may also be used for boring holes in wood. However, machine spur bits are generally preferred for working in wood; they cut a flat bottom hole and are designed for removal of wood chips. Do not use hand bits which have a screw tip; at drill press speeds they turn into the wood so rapidly as to lift the work off the table and whirl it.

For through boring, line up the table so that the bit will enter the center hole to avoid damage to the table. Scribe a vertical line on the front of the column and a matching mark on the table bracket and the drill press head, so that the table and drill press head can be clamped in the center position at any height.

Feed slowly when the bit is about to cut through the wood to prevent splintering the bottom face. Use a scrap piece of wood as a base block under the work; this helps to reduce splintering and protects the point of the bit.

DRILLING METAL

Use clamps to hold the work when drilling metal. The work should never be held in the bare hand; the drill bit may seize the work at any time, especially when breaking through the stock. If the piece is whirled out of the operator's hand, the operator may be injured. The drill bit will be broken if 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 bit breakage. For flat work, lay the piece on a wooden base and clamp it firmly down against the table to prevent it from turning. If the piece is of irregular shape and cannot be laid flat on the table, it should be securely blocked and clamped.

MAINTENANCE

LUBRICATION

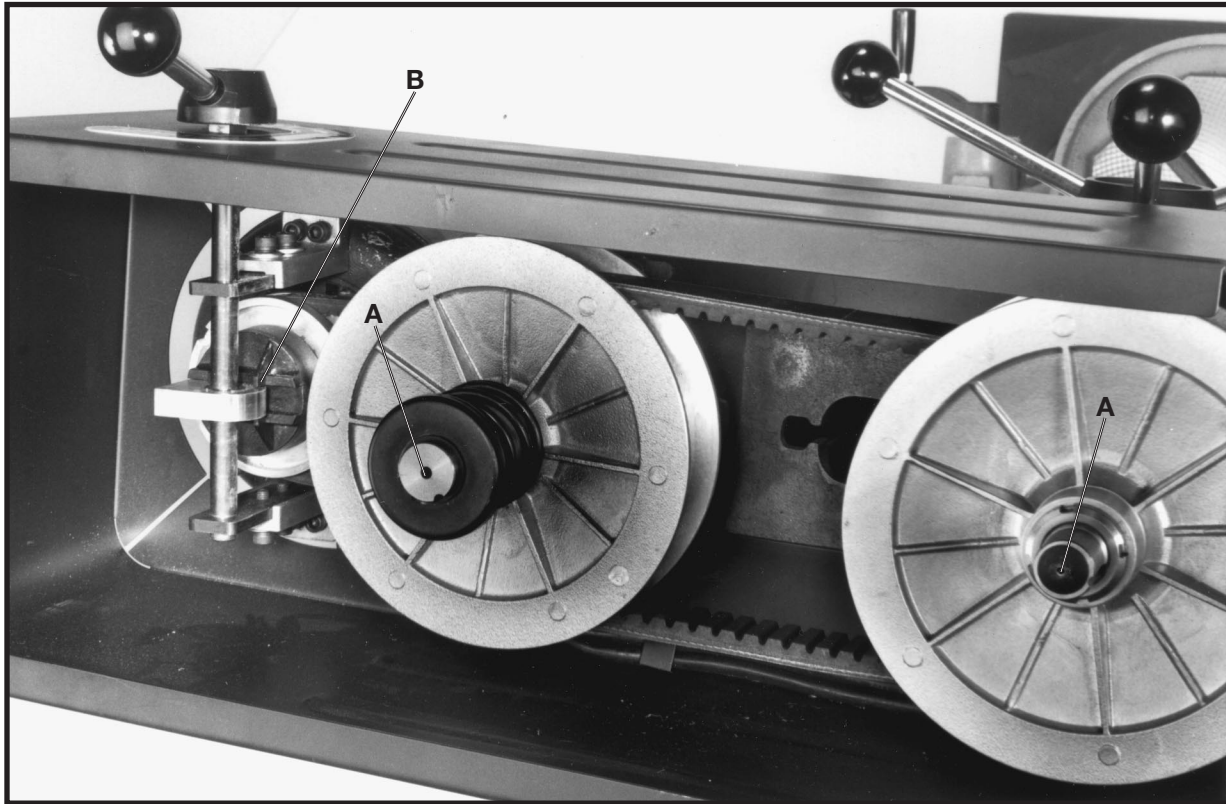


Fig. 36

The variable speed pulleys and the speed range shifter mechanism should be oiled weekly with a few drops of light machine oil in the two oil holes (A) Fig. 38, located on top of the variable speed pulleys and the hole (B) located on top of the shifter mechanism.

IMPORTANT: Oil the holes when the drill press is turned OFF. Then turn the machine ON and run through the low and high speed ranges a few times.

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.

▲ WARNING Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.



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