

16½" Floor Model Drill Press

(Model 17-965)



PART NO. 900609 (011)
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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**).

ESPAÑOL: PÁGINA 17

SAFETY RULES

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)



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

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.**

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. **ALWAYS USE SAFETY GLASSES.** 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.

13. **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.

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

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

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

17. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause hazards or risk of injury to persons.

18. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in "OFF" position before plugging in power cord.

19. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

20. **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.

21. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

22. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

23. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol or any medication.

24. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while motor is being mounted, connected or re-connected.

25. **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.

26. **⚠ 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, such as those dust masks that are specially designed to filter out microscopic particles.

ADDITIONAL SAFETY RULES FOR DRILL PRESSES

1. **DO NOT** operate your tool until it is completely assembled and installed according to the instructions.
2. **IF YOU ARE NOT** thoroughly familiar with the operation of drill presses, obtain advice from your supervisor, instructor or other qualified person.
3. **YOUR TOOL MUST** be securely fastened to a stand or workbench. If there is any tendency for the stand or workbench to move during operation, the stand or workbench **MUST** be fastened to the floor.
4. **NEVER** turn the tool “**ON**” before clearing the table of all objects (tools, scrap pieces, etc.).
5. **NEVER** start the drill press with the drill bit or cutting tool in contact with the workpiece.
6. **USE ONLY** drill bits, cutters, sanding drums and other accessories with 1/2" shank or less.
7. **ALWAYS** keep hands and fingers away from the drill bit or cutting tool.
8. **DO NOT ATTEMPT** to drill material that does not have a flat surface, unless a suitable support is used.
9. **AVOID** awkward hand positions where a sudden slip could cause a hand to move into the drill bit or cutting tool.
10. **TO PREVENT ROTATION OF THE WORKPIECE, ALWAYS** clamp work securely to table if it is too short to contact the column (see “**OPERATION**” section of this manual) or when using hole saw or cutting tools larger than 1/2" in diameter.
11. **WHENEVER POSSIBLE** use clamps or vise to keep workpiece from rotating with the drill bit or cutting tool.
12. **USE** recommended speed for drill, accessory or workpiece material.
13. **MAKE CERTAIN** all lock handles are tightened before starting the machine.
14. **NEVER** perform layout, assembly or set-up work on the table while the drill is operating.
15. **BE SURE** drill bit or cutting tool is not damaged and is properly locked in the chuck before operating.
16. **MAKE SURE** chuck key is removed from chuck before starting drill press. **ONLY** use chuck key provided with your drill press. It is equipped with a self-ejecting pin which eliminates the hazard of the key being left in the chuck.
17. **ADJUST** the table or depth stop to avoid drilling into the table.
18. **ALWAYS** stop the drill press before removing scrap pieces from the table.
19. **WHEN** drilling large workpieces, **MAKE SURE** the material is supported at table height.
20. **SHUT OFF** the power, remove the drill bit or cutting tool, and clean the table and work area before leaving the machine.
21. **DON'T** wear gloves, necktie, or loose clothing when operating the drill press.
22. **SHOULD** any part of your tool be missing, damaged or fail in anyway, or any electrical component fail to perform properly, shut off switch and remove plug from power supply outlet. Replace missing, damaged or failed parts before resuming operation.
23. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this product is available from the National Safety Council, 1121 Spring Lake Drive, Itasca, Illinois 60143-3201, in the Accident Prevention Manual for Industrial Operations and also in the Safety Data Sheets provided by the NSC. Please also refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machinery and the U.S. Department of Labor OSHA 1910.212 and 1910.213 Regulations.

UNPACKING AND CLEANING

Carefully unpack the drill press and all loose items from the shipping container(s). Remove the protective coating from the machined surfaces of the drill press. This coating may be removed with a soft cloth moistened with kerosene. Do not use acetone, gasoline or lacquer thinner for this purpose. Figs. 2 and 3 illustrate the components of the drill press. **⚠️WARNING: FOR YOUR OWN SAFETY, DO NOT CONNECT THE TOOL TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU HAVE READ AND UNDERSTOOD THE ENTIRE INSTRUCTION MANUAL.**

1. Drill Press Head
2. Table Bracket and Column
3. Base
4. Table

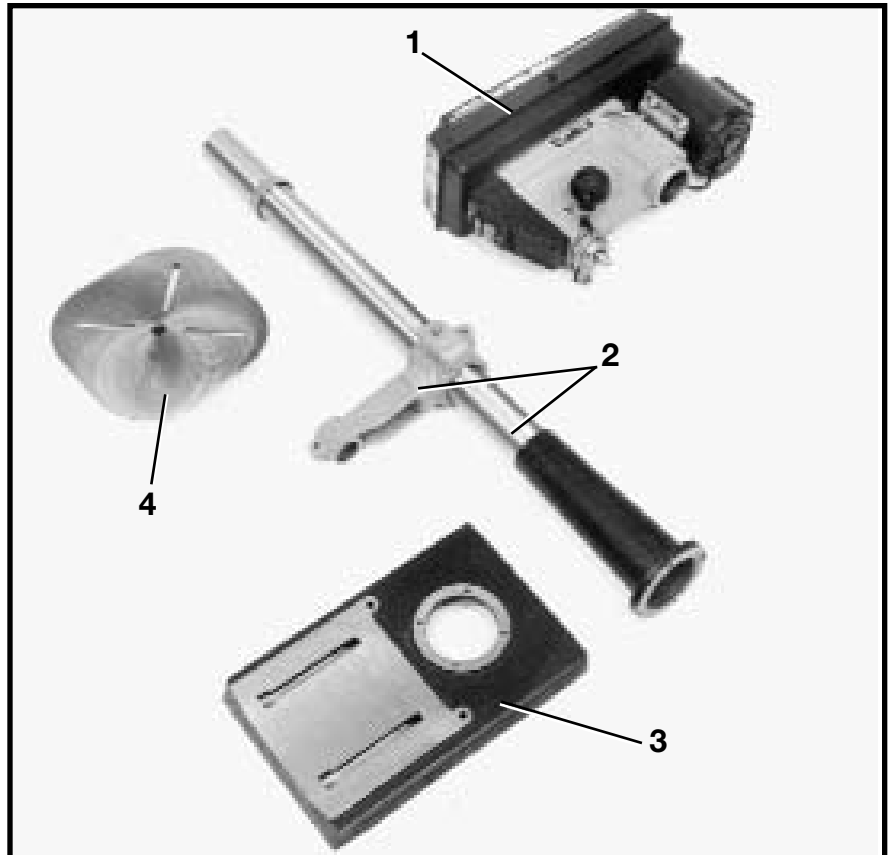


Fig. 2

5. Chuck
6. Handles (3)
7. M8 x 125mm carriage head screws, flat washers, lockwashers, and hex nuts (2 ea.)
8. Locking lever for table bracket
9. Table locking lever
10. Table Raising and Lowering Handle
11. 3mm Hex Wrench
12. 5mm Hex Wrench
13. 7/16-14 x 1-3/4" Hex Head Screws (4)
14. Chuck Key

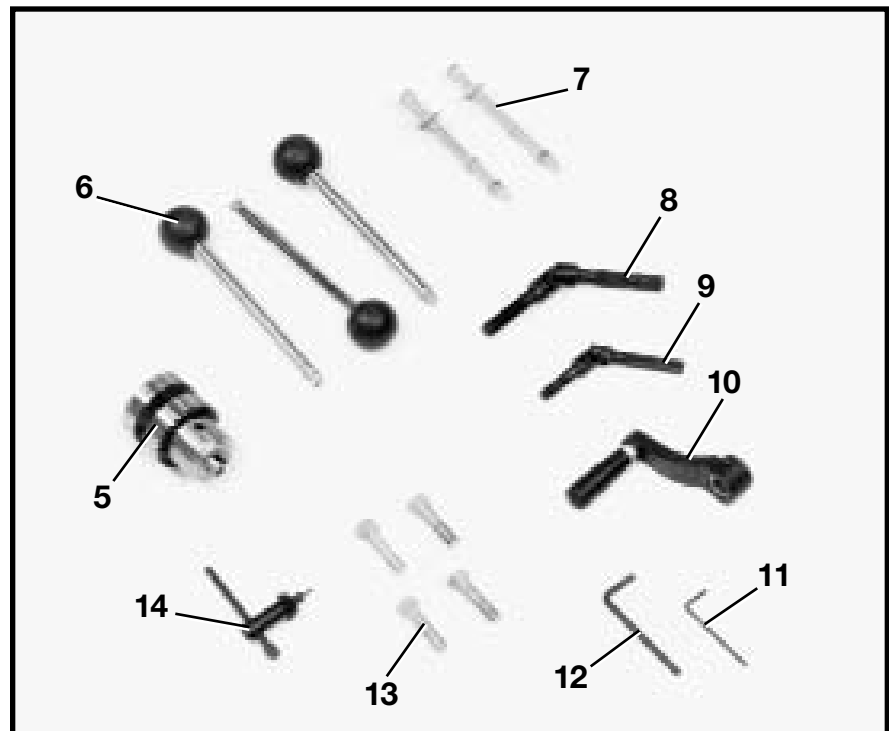


Fig. 3

ASSEMBLY

1. Assemble column (A) Fig. 4, to base (B) using four 1-3/4" long screws (C), three of which are shown. Loosely thread locking lever (D) into table mounting bracket (E), as shown. Loosely thread remaining locking lever (F) Fig. 5, into split of table mounting bracket (E).

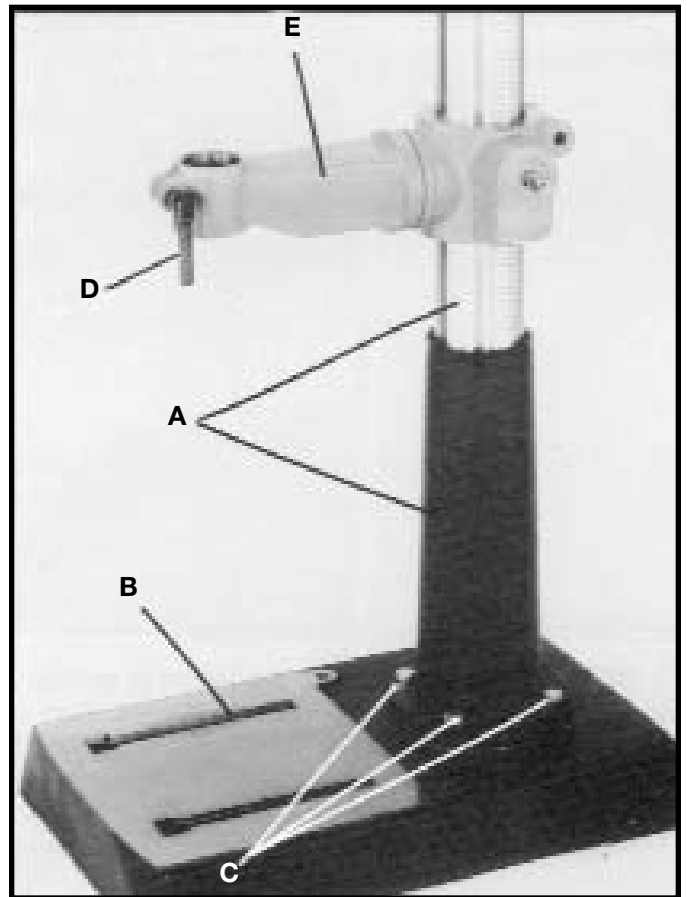


Fig. 4

2. Insert table (G) Fig. 5, into table mounting bracket (E) and tighten lever (D) to lock table in position. Tighten locking lever (F) Fig. 5, to lock table raising mechanism on the column.

3. Assemble table raising and lowering handle (H) Fig. 5, to table mounting bracket (E).

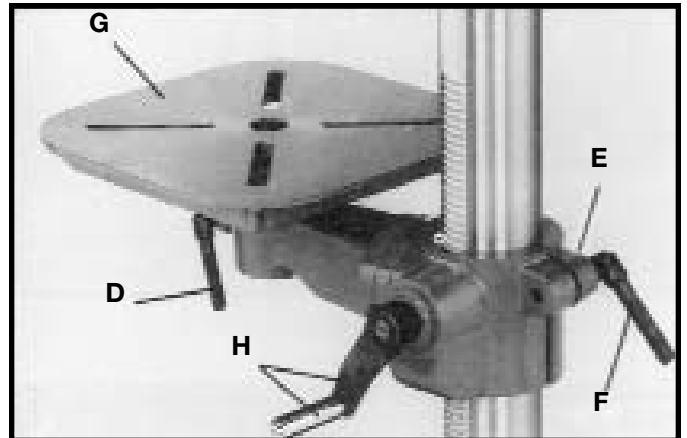


Fig. 5

4. Carefully position drill press head (J) Fig. 6, onto column (A) as far as it will go. Align drill press head (J) Fig. 6, and table (G) Fig. 5, with the base of the drill press, which was assembled in **STEP 1**, and tighten locking lever (K) and set screw (L) with hex wrench (M) supplied.

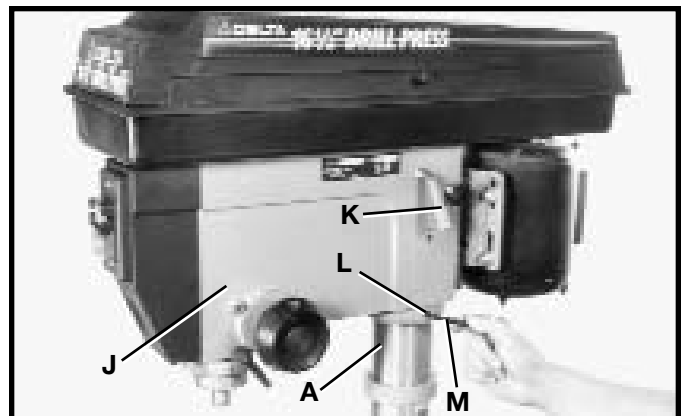


Fig. 6

5. Thread the three pinion shaft handles (N) Fig. 7, into the three holes in the pinion shaft (P) as shown.

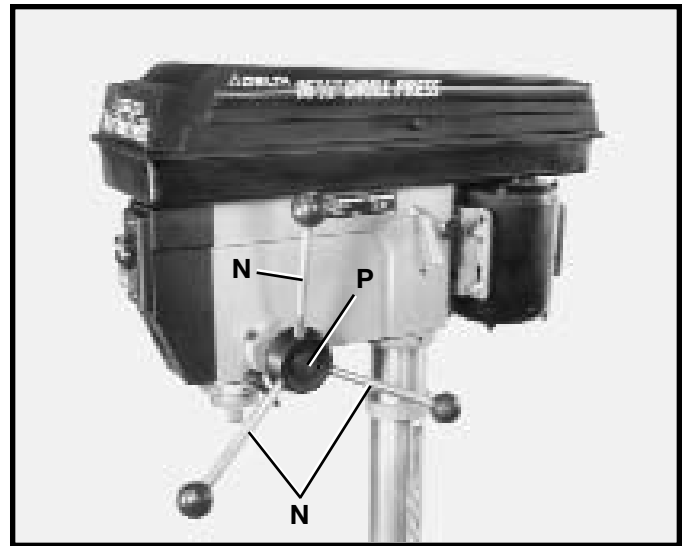


Fig. 7

6. **IMPORTANT:** Make certain the spindle (R) Fig. 8, and chuck (S) are free of any grease, lacquer or rust preventive coatings. **NOTE:** If necessary, household oven cleaner can effectively remove these coatings from the spindle and chuck; however, carefully follow the manufacturer's safety rules regarding its use.

7. Insert chuck (S) Fig. 8, onto spindle (R) as far as it will go.

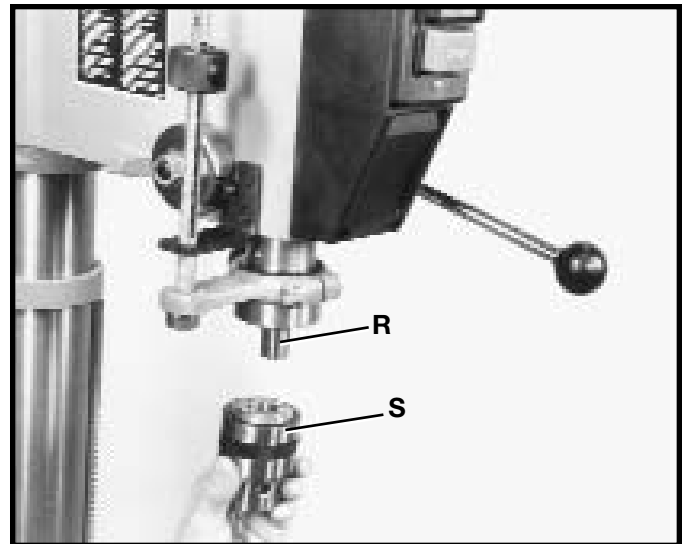


Fig. 8

8. Open chuck jaws as wide as possible by turning chuck sleeve (T) Fig. 9. Holding the chuck (S) Fig. 9, carefully drive the chuck (S) onto the spindle with a rubber mallet as shown, or with a block of wood and hammer. This will seat the chuck (S) properly on the spindle. **IMPORTANT:** To avoid damage to the chuck, do not drive the chuck directly onto the spindle with a metal hammer.

9. The drill press is shipped from the factory with the belts assembled on the pulleys; however, the belts must be properly tensioned before use. Refer to section **“CHANGING SPINDLE SPEEDS AND ADJUSTING BELT TENSION”**.

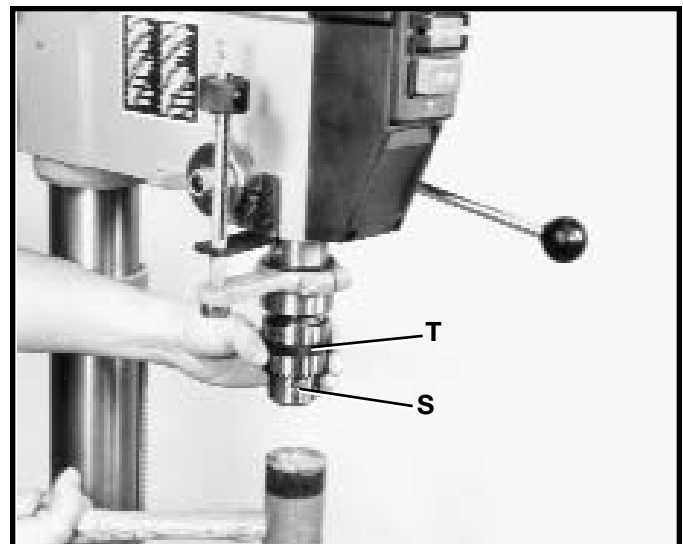


Fig. 9

FASTENING DRILL PRESS BASE TO A SUPPORTING SURFACE

PERMANENT MOUNTING

If your drill press is to be used in one permanent location, the drill press base must be secured to the supporting surface with fasteners through the two mounting holes, (A) Fig. 10, in the drill press base.

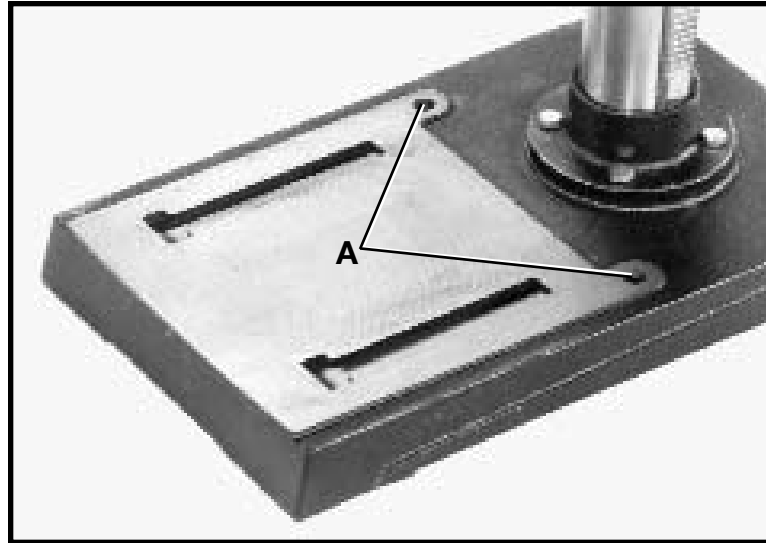


Fig. 10

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. Use a good grade of plywood with a minimum 3/4" thickness. Do not make the mounting board from particle board since particle board can unexpectedly break.

1. Drill two 3/8" diameter holes (B) Fig. 11, corresponding to the mounting holes (A) Fig. 10, of the drill press base in a 21" by 28" minimum size plywood board.

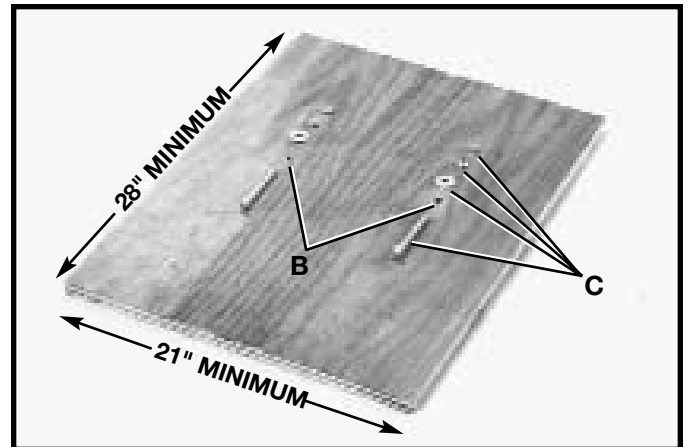


Fig. 11

2. Fasten the drill press base to the mounting board using the carriage bolts, flat washers, lockwashers, and hex nuts (C) Fig. 11, furnished with your drill press. The holes for the carriage bolt heads must be countersunk so that the bolt heads are flush with 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. 12.

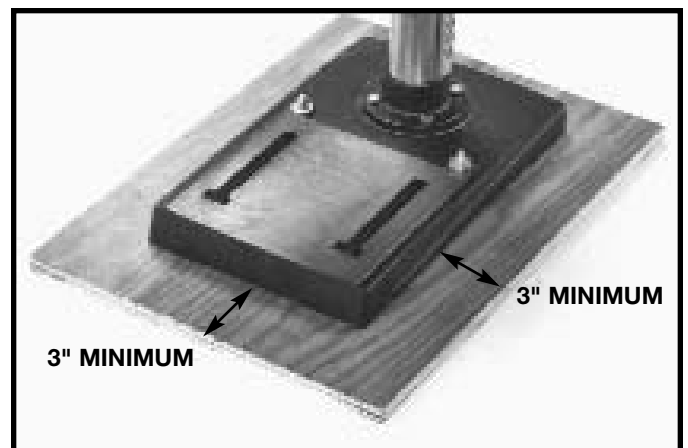


Fig. 12

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.

CONNECTING TOOL TO POWER SOURCE

POWER CONNECTIONS

A separate grounded electrical circuit should be used for your drill press. This circuit should not be less than #12 wire and should be protected with a 20 amp fuse or circuit breaker. Before connecting the drill press to the power line, make sure the switch is in the “OFF” position.

If the power cord is worn, cut or damaged in any way, have it replaced immediately by a certified electrician to avoid electrical shock or fire hazard.

MOTOR SPECIFICATIONS

Your tool is designed to use a 1720 RPM motor. It is wired at the factory for 115 Volts, 60 Hz alternating current. Never use a motor that runs faster than 1720 RPM.

GROUNDING INSTRUCTIONS

⚠️WARNING: THIS TOOL MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

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. The motor 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 tool is properly grounded. Use only 3-wire extension cords that have 3-prong grounding type plugs and 3-hole receptacles that accept the tool’s plug.

Repair or replace damaged or worn cord immediately.

IMPORTANT: IN ALL CASES (115 OR 230 VOLT), MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A REGISTERED ELECTRICIAN CHECK THE RECEPTACLE.

115 VOLT OPERATION

As received, your drill press is ready-to-run for 115 volt operation. This drill press, when wired for 115 volts, is intended for use on a circuit that has an outlet and a plug that looks like the one shown in Fig. 13.

If a properly grounded outlet is not available, a temporary adapter, shown in Fig. 14, may be used for connecting the 3-prong grounding type plug to a 2-prong receptacle. 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, or the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. 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.

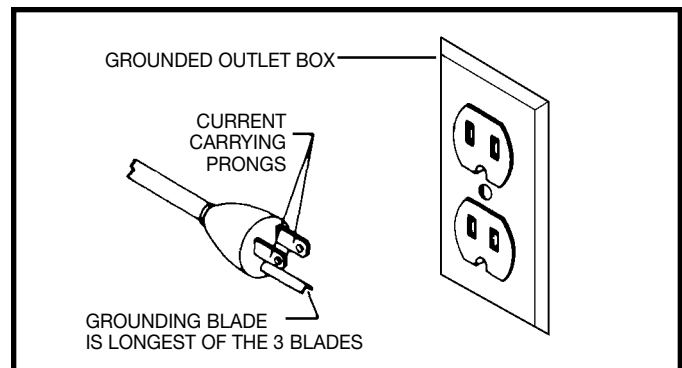


Fig. 13

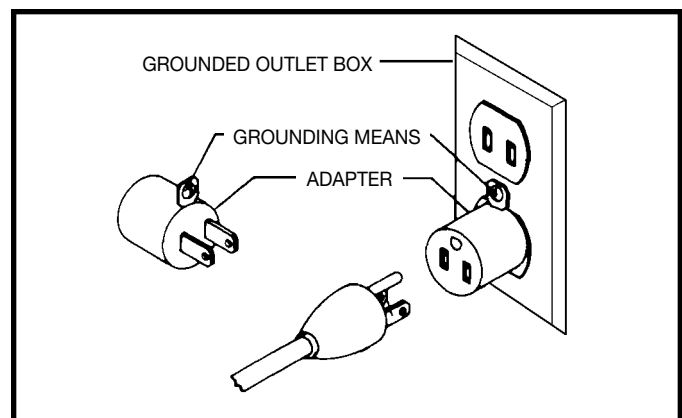


Fig. 14

230 VOLT OPERATION

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. You can call 800-223-7278 for the location of the nearest Authorized Service Center.

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. 15. After conversion for 230 volts, the drill press will have a grounding plug that looks like the plug illustrated in Fig. 15.

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 re-connection should be made by qualified service personnel; and after re-connection, the tool should comply with all local codes and ordinances.

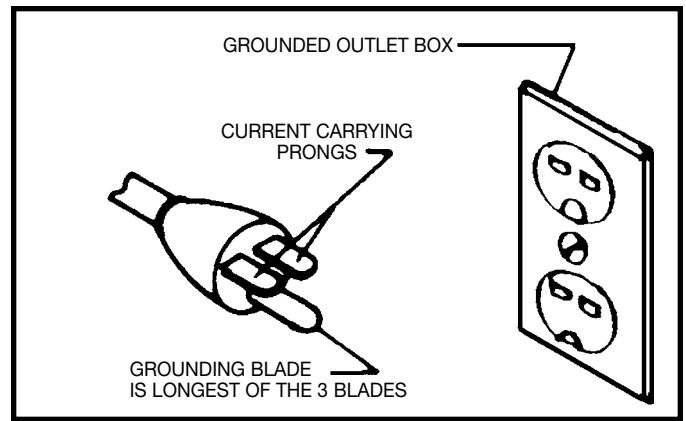


Fig. 15

EXTENSION CORDS

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 a 3-hole receptacle which will accept the tool's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the drill press. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Fig. 16, shows the correct gauge to use depending on cord length and voltage. 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 TOOLS			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC TOOLS			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	240	up to 50	18 AWG
0-6	240	50-100	16 AWG
0-6	240	100-200	16 AWG
0-6	240	200-300	14 AWG
6-10	240	up to 50	18 AWG
6-10	240	50-100	16 AWG
6-10	240	100-200	14 AWG
6-10	240	200-300	12 AWG
10-12	240	up to 50	16 AWG
10-12	240	50-100	16 AWG
10-12	240	100-200	14 AWG
10-12	240	200-300	12 AWG
12-16	240	up to 50	14 AWG
12-16	240	50-100	12 AWG
12-16	240	GREATER THAN 100 FEET NOT RECOMMENDED	

Fig. 16

STARTING AND STOPPING DRILL PRESS

The power switch is located at the front of the drill press head. To activate the drill press, press the green start button (A) Fig. 17. To stop the drill press, push the red button (B).

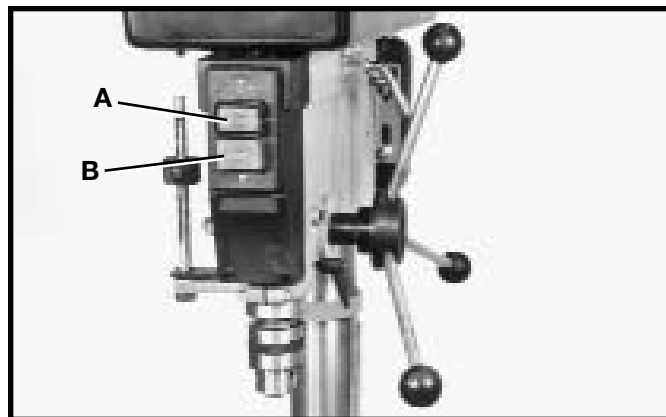


Fig. 17

LOCKING SWITCH IN THE “OFF” POSITION

IMPORTANT: When the tool is not in use the switch should be locked in the “OFF” position using a padlock (C) Fig. 18, to prevent unauthorized use of the tool. .



Fig. 18

TABLE ADJUSTMENTS

1. The table (G) Fig. 19, can be raised or lowered on the drill press column by loosening the table clamp handle (K) and turning the table raising and lowering handle (J). After the table is at the desired height, tighten handle (K).

2. The table (G) Fig. 19, can be rotated 360 degrees on the table bracket by loosening lock handle (H).



Fig. 19

3. The table can be tilted right or left by pulling out and removing table alignment pin (B) Fig. 20. **NOTE:** If pin (B) is difficult to remove, turn nut (C) clockwise to pull pin out of casting.

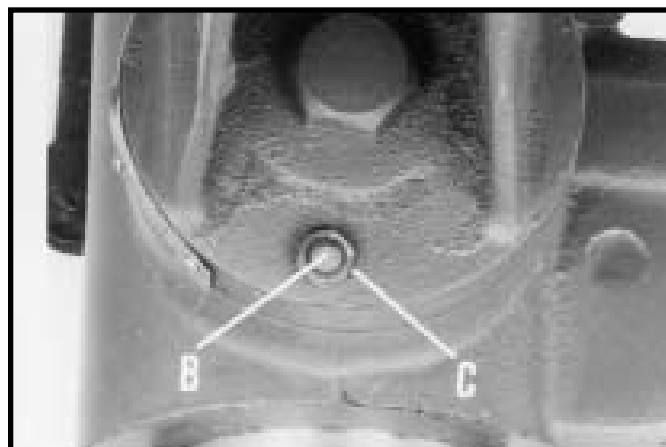


Fig. 20

4. Fig. 21, illustrates the table alignment pin (B) removed. Loosen table locking bolt (D) Fig. 21, tilt table to the desired angle and tighten bolt (D). When returning table to the level position, replace table alignment pin (B). This will automatically position the table surface at 90 degrees to the spindle.

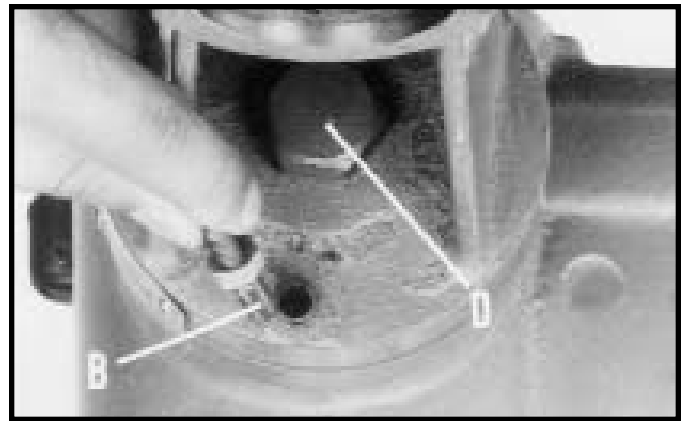


Fig. 21

5. A tilt scale (E) and pointer (F) Fig. 22, are provided on the table bracket casting to indicate the degree of tilt.

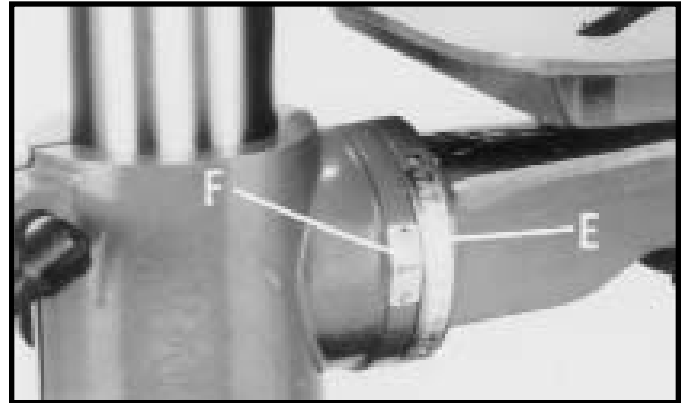


Fig. 22

SPINDLE SPEEDS

Twelve spindle speeds are available on the drill press. Fig. 23, illustrates the speeds and which steps of the pulleys the belts must be positioned to obtain the 12 speeds.

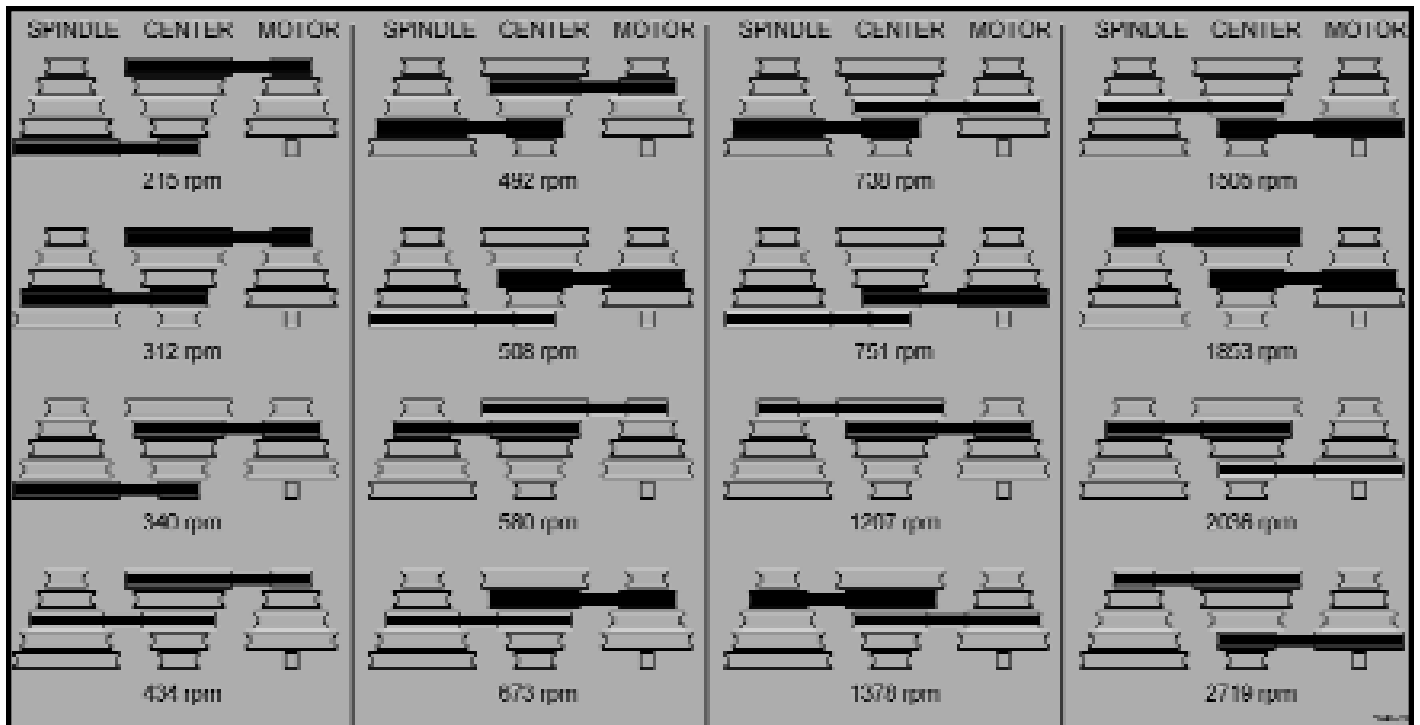


Fig. 23

CHANGING SPINDLE SPEEDS AND ADJUSTING BELT TENSION

1. **DISCONNECT THE DRILL PRESS FROM THE POWER SOURCE.**

2. Raise the belt and pulley guard (A) Fig. 24.

3. Release tension on the belt by loosening lock knob (B) Fig. 24, and the tension knob located on the other side of the head casting and moving tension lever (C) forward.

4. Position both belts (D) Fig. 24, on the desired steps of the spindle, center, and motor pulleys as shown. Refer to chart (E) Fig. 24, which is conveniently located on the underside of the belt and pulley guard (A) for belt position and speed charts.

5. After the belts are positioned on the desired steps of the spindle, center, and motor pulleys, move tension lever (C) Fig. 25, to the rear until the belts are properly tensioned and tighten two tension lock knobs (B), one of which is shown. **NOTE:** The belts should be just tight enough to prevent slipping. Excessive tension will reduce the life of the belt, pulleys, and bearings. Correct tension is obtained when the belts (D) can be flexed approximately one inch at the center of the pulleys using light finger pressure.

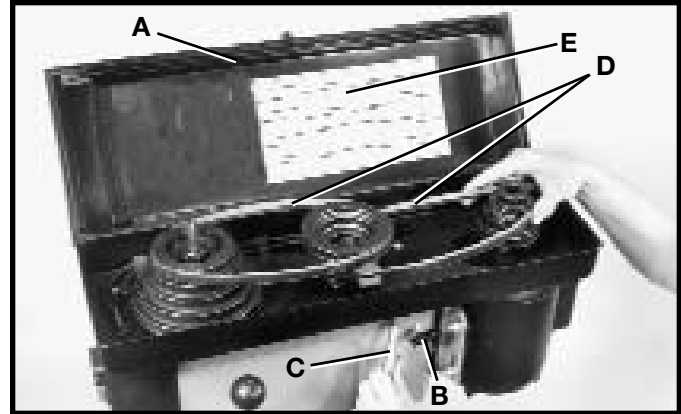


Fig. 24

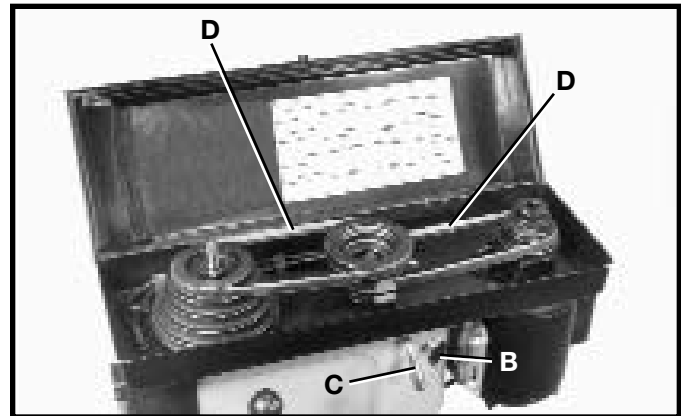


Fig. 25

DRILLING HOLES TO DEPTH

Where a number of holes are to be drilled to exactly the same depth, the stop nut (A) Fig. 26, on the threaded stop rod (B) is used as follows:

1. Lower the chuck (C) Fig. 26, 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. 26, and rapidly move stop nut (A) until bottom of nut (A) contacts stop (G). Then loosen quill locking lever (E) and chuck and drill bit will return to the up position.

3. Drill a test hole to check the adjustment and readjust if necessary by rotating stop nut (A) Fig. 26, for fine adjustment. It is not necessary to depress button (F) while rotating stop nut (A) for fine adjustment.

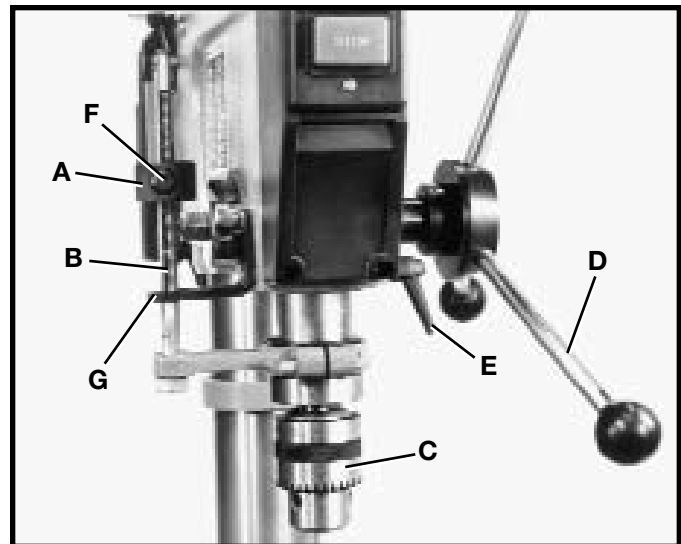


Fig. 26

ADJUSTING SPINDLE RETURN SPRING

For the purpose of automatically returning the spindle upward after a hole has been drilled, a spindle return spring is provided in the spring housing (A) Fig. 27. 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 the drill press from the power source.
2. Loosen the two nuts (B) Fig. 27, approximately 1/4". **DO NOT REMOVE NUTS (B) FROM SHAFT.**

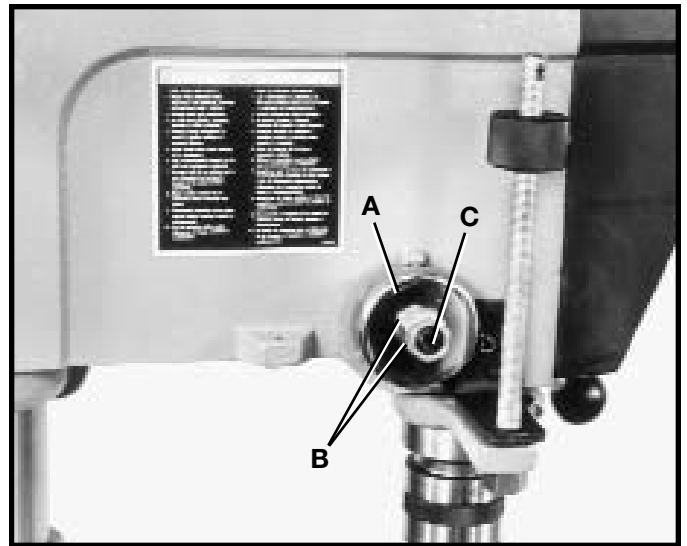


Fig. 27

3. While firmly holding spring housing (A) Fig. 28, pull out housing and rotate it until the boss (D) is engaged with the next notch on the housing. Turn the housing counterclockwise to increase and clockwise to decrease spring tension. Then tighten the two nuts (B) Fig. 28, to hold the housing in place. **IMPORTANT:** Nuts (B) Fig. 28, should not contact spring housing (A) when tight.

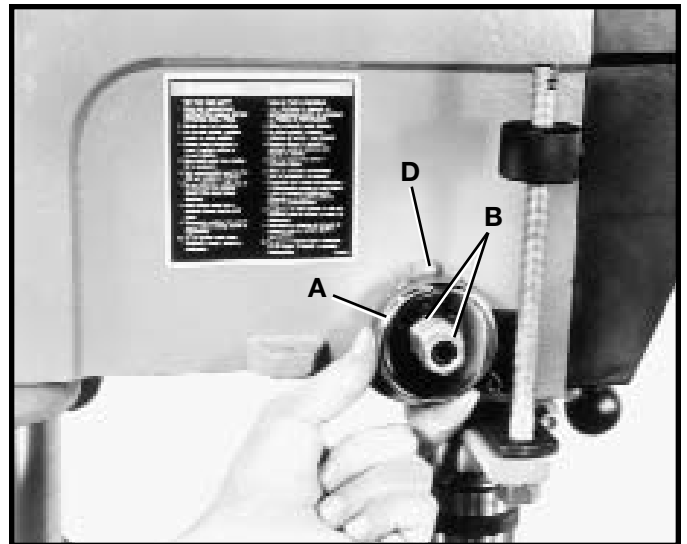


Fig. 28

RAISING AND LOWERING THE SPINDLE

The spindle is raised and lowered by means of the pinion handles (A) Fig. 29. The quill (B) Fig. 29 can be locked at any desired point in its travel by tightening locking lever (C). **NOTE:** The quill locking lever (C) is spring-loaded and the handle can be repositioned by pulling outward on handle (C) and repositioning it on the hub (D) of the handle.

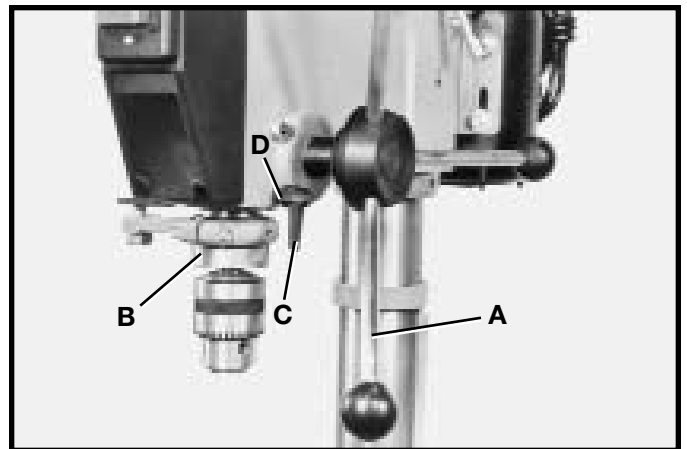


Fig. 29

OPERATIONS

Your Drill Press should be used with drill bits that have shank diameters of 5/8" or less.

The following directions 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. **IMPORTANT:** After installing a drill bit into the chuck, always tighten the jaws of the chuck using the key supplied in all three locations of the chuck, two of which are shown at (E) Fig. 30.

IMPORTANT: When the workpiece is long enough, it should always be positioned on the table with one end against the column, as shown in Fig. 30. 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.

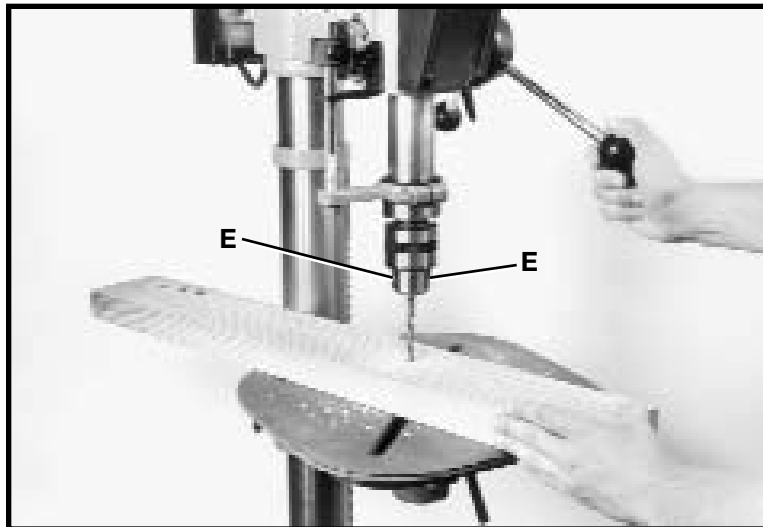


Fig. 30

INSTALLING AND REMOVING DRILL BITS

1. Insert smooth end of drill bit (A) Fig. 31, as far as it will go into the chuck (B), 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. 31, is centered in the chuck (B) before tightening the chuck with the key (C).
3. Turn the chuck key (C) Fig. 31, 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. **MAKE SURE** chuck key (C) Fig. 31, is removed from chuck before starting drill press. Your chuck key (C) is equipped with a self-ejecting pin (D) which eliminates the hazard of the key being left in the chuck.

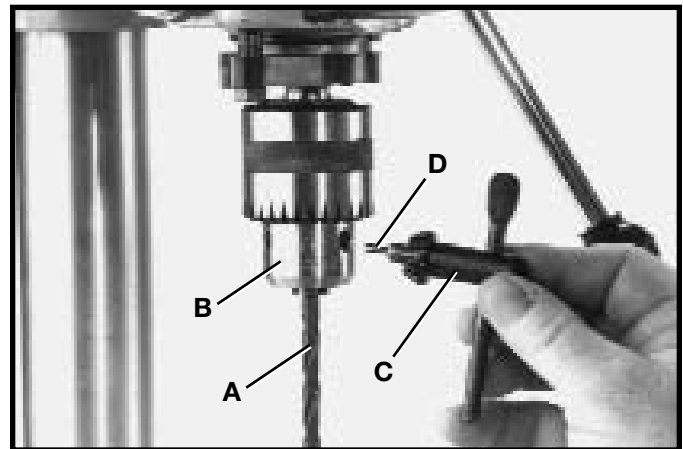


Fig. 31

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 square bottom hole and are designed for removal of woodchips. 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. Scribe a vertical line on the front of the column and a matchmark on the table bracket, so that the table 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 for 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 in metal. 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 workpiece is whirled out of the operator's hand, he may be injured. The drill 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. If the piece is of irregular shape and cannot be laid flat on the table, it should be securely blocked and clamped.

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.



All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of Porter-Cable/Delta Factory Service Centers and Delta Authorized Service Stations. To obtain additional information regarding your Delta quality product or to obtain parts, service, warranty assistance, or the location of the nearest service outlet, please call 1-800-223-7278 (In Canada call 1-800-463-3582).



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