12" Bench Drill Press
(Model DP300)

INSTRUCTION MANUAL

PART NO. 905575-04-29-04

DELTA® ShopMaster™

To learn more about DELTA MACHINERY
visit our website at: **www.deltamachinery.com.**

ESPAÑOL: PÁGINA 17

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 below. 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.**

IMPORTANT SAFETY INSTRUCTIONS

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. For additional information please visit our website **www.deltamachinery.com.**

⚠WARNING 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)

GENERAL SAFETY RULES

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

1. **FOR YOUR OWN SAFETY, READ THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learning the machine's application, limitations, and specific hazards will greatly minimize the possibility of accidents and injury.
2. **WEAR EYE PROTECTION. ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses are NOT safety glasses. **USE CERTIFIED SAFETY EQUIPMENT.** Eye protection equipment should comply with ANSI Z87.1 standards, hearing equipment should comply with ANSI S3.19 standards, and dust mask protection should comply with MSHA/NIOSH certified respirator standards. Splinters, air-borne debris, and dust can cause irritation, injury, and/or illness.
3. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
4. **DO NOT USE THE MACHINE IN A DANGEROUS ENVIRONMENT.** The use of power tools in damp or wet locations or in rain can cause shock or electrocution. Keep your work area well-lit to prevent tripping or placing arms, hands, and fingers in danger.
5. **MAINTAIN ALL TOOLS AND MACHINES IN PEAK CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
6. **CHECK FOR DAMAGED PARTS.** Before using the machine, check for any damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, and any other conditions that may affect its operation. A guard or any other part that is damaged **should be properly repaired or replaced.** Damaged parts can cause further damage to the machine and/or injury.
7. **KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
8. **KEEP CHILDREN AND VISITORS AWAY.** Your shop is a potentially dangerous environment. Children and visitors can be injured.
9. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that the switch is in the "OFF" position before plugging in the power cord. In the event of a power failure, move the switch to the "OFF" position. An accidental start-up can cause injury.
10. **USE THE GUARDS.** Check to see that all guards are in place, secured, and working correctly to prevent injury.
11. **REMOVE ADJUSTING KEYS AND WRENCHES BEFORE STARTING THE MACHINE.** Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
12. **USE THE RIGHT MACHINE.** Don't force a machine or an attachment to do a job for which it was not designed. Damage to the machine and/or injury may result.
13. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause damage to the machine or injury to the user.
14. **USE THE 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. See the Extension Cord Chart for the correct size depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
15. **SECURE THE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. Loss of control of a workpiece can cause injury.
16. **FEED THE WORKPIECE AGAINST THE DIRECTION OF THE ROTATION OF THE BLADE, CUTTER, OR ABRASIVE SURFACE.** Feeding it from the other direction will cause the workpiece to be thrown out at high speed.
17. **DON'T FORCE THE WORKPIECE ON THE MACHINE.** Damage to the machine and/or injury may result.
18. **DON'T OVERREACH.** Loss of balance can make you fall into a working machine, causing injury.
19. **NEVER STAND ON THE MACHINE.** Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
20. **NEVER LEAVE THE MACHINE RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave the machine until it comes to a complete stop. A child or visitor could be injured.
21. **TURN THE MACHINE "OFF", AND DISCONNECT THE MACHINE FROM THE POWER SOURCE** before installing or removing accessories, before adjusting or changing set-ups, or when making repairs. An accidental start-up can cause injury.
22. **MAKE YOUR WORKSHOP CHILDPROOF WITH PADLOCKS, MASTER SWITCHES, OR BY REMOVING STARTER KEYS.** The accidental start-up of a machine by a child or visitor could cause injury.
23. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE. DO NOT USE THE MACHINE WHEN YOU ARE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in injury.
24. **TAKE PRECAUTIONS AGAINST DUST INHALATION.** 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 FOR DRILL PRESSES

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

1. **DO NOT OPERATE THIS MACHINE** until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. **OBTAIN ADVICE** from your supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine. Knowledge is safety.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections to prevent shock or electrocution.
4. **SECURE THE MACHINE TO A SUPPORTING SURFACE.** Vibration can cause the machine to slide, walk, or tip over.
5. **NEVER START THE MACHINE BEFORE CLEARING THE TABLE OF ALL OBJECTS** (tools, scrap pieces, etc.). Debris can be thrown at high speed.
6. **NEVER START THE MACHINE** with the drill bit, cutting tool, or sanding drum against the workpiece. Loss of control of the workpiece can cause serious injury.
7. **PROPERLY LOCK THE DRILL BIT, CUTTING TOOL, OR SANDING DRUM IN THE CHUCK** before operating this machine.
8. **REMOVE THE CHUCK KEY BEFORE STARTING THE MACHINE.** The chuck key can be thrown out at a high speed.
9. **TIGHTEN ALL LOCK HANDLES** before starting the machine**.** Loss of control of the workpiece can cause serious injury.
10. **USE ONLY DRILL BITS, CUTTING TOOLS, SANDING DRUMS, OR OTHER ACCESSORIES** with shank size recommended in your instruction manual. The wrong size accessory can cause damage to the machine and/or serious injury.
11. **USE ONLY DRILL BITS, CUTTING TOOLS, OR SANDING DRUMS** that are not damaged. Damaged items can cause malfunctions that lead to injuries.
12. **USE RECOMMENDED SPEEDS** for all operations. Other speeds may cause the machine to malfunction causing damage to the machine and/or serious injury.
13. **AVOID AWKWARD OPERATIONS AND HAND POSITIONS.** A sudden slip could cause a hand to move into the bit.
14. **KEEP ARMS, HANDS, AND FINGERS** away from the bit. Serious injury to the hand can occur.
15. **HOLD THE WORKPIECE FIRMLY AGAINST THE TABLE.** Do not attempt to drill a workpiece that does not have a flat surface against the table, or that is not secured by a vise. Prevent the workpiece from rotating by clamping it to the table or by securing it against the drill press column. Loss of control of the workpiece can cause serious injury.
16. **TURN THE MACHINE "OFF" AND WAIT FOR THE DRILL BIT, CUTTING TOOL, OR SANDING DRUM TO STOP TURNING** prior to cleaning the work area, removing debris, removing or securing work-piece, or changing the angle of the table. A moving drill bit, cutting tool, or sanding drum can cause serious injury.
17. **PROPERLY SUPPORT LONG OR WIDE** workpieces. Loss of control of the workpiece can cause severe injury.
18. **NEVER PERFORM LAYOUT, ASSEMBLY OR SET-UP WORK** on the table/work area when the machine is running. Serious injury can result.
19. **TURN THE MACHINE "OFF",** disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use. Someone else might accidentally start the machine and cause serious injury to themselves.
20. **ADDITIONAL INFORMATION** regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 (www.powertoolinstitute.com). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please 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 (s) 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.

⚠DANGER In all cases, make certain that the receptacle in question is properly grounded. If you are not sure, have a qualified electrician check the receptacle.

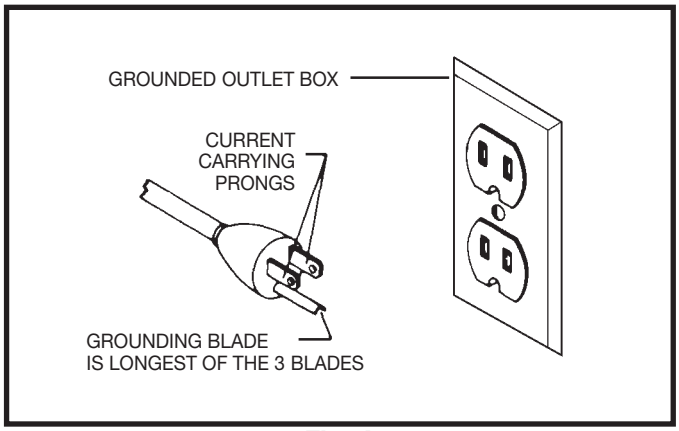


Fig. A

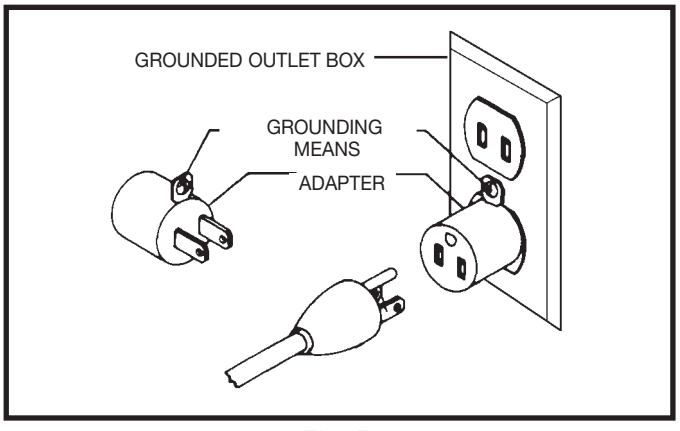


Fig. B

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-1 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
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	

Fig. D-1

FUNCTIONAL DESCRIPTION

FOREWORD

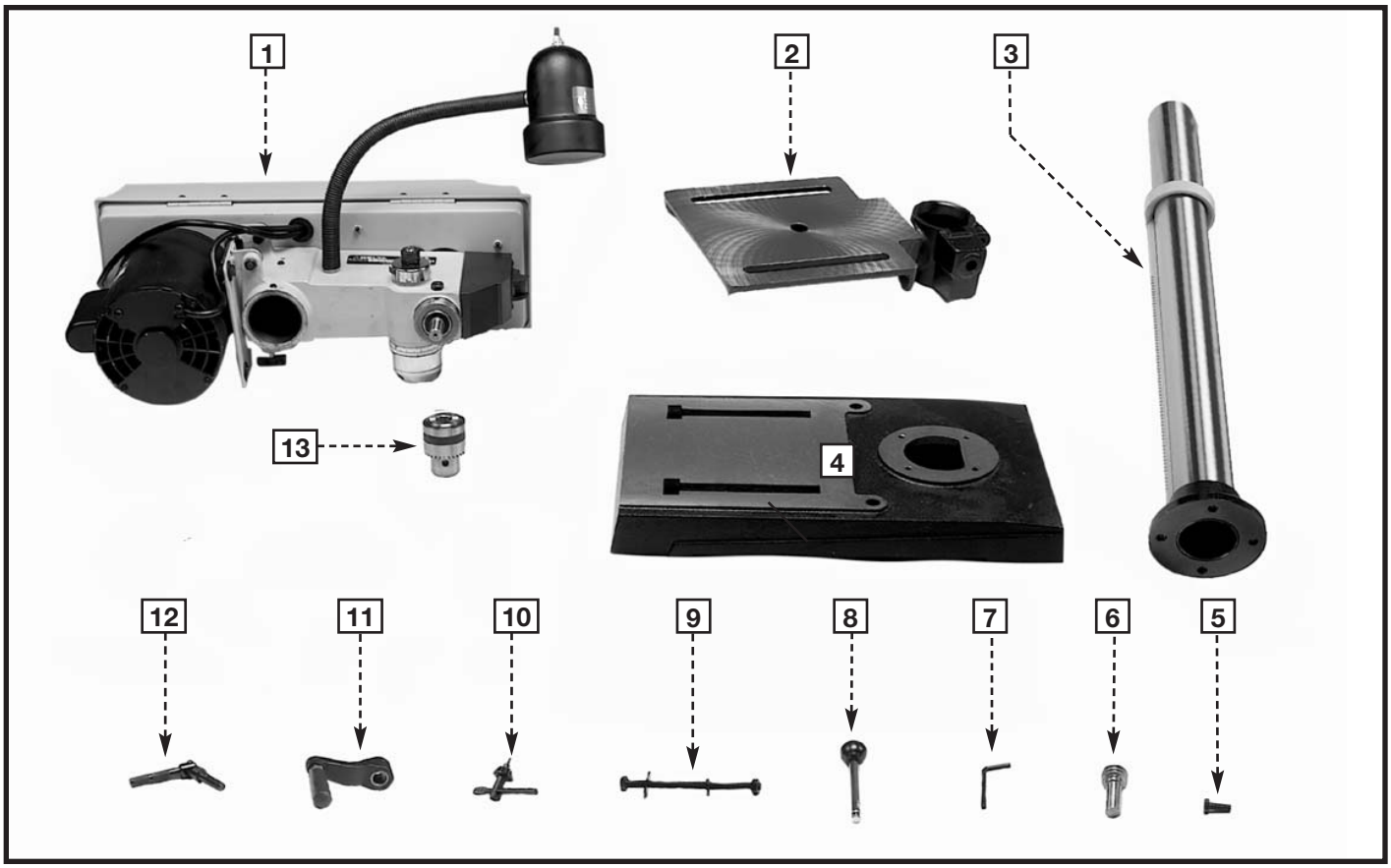
The Delta ShopMaster Model DP300 12" Drill Press comes with a flexible work lamp, and a utility tray for keeping tools within easy reach. This machine has a tilting table for angle drilling and side edges and parallel slots for fast workpiece clamping.

UNPACKING AND CLEANING

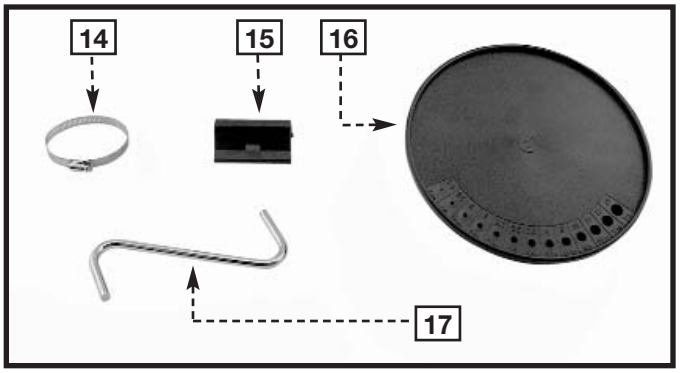
Carefully unpack the machine and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the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

NOTICE: The photo on the manual cover illustrates the current production model. All other illustrations contained in the manual are representative only and may not depict the actual color, labeling, or accessories, and are intended to illustrate technique only.

CARTON CONTENTS



1. Drill Press Head and Motor
2. Table
3. Column, Base Flange and Rack
4. Base
5. M8x1.25x25mm Hex Head Cap Screws (4)
6. Worm Gear for Table Raising and Lowering
7. Hex Wrenches (2)
8. Pinion Shaft Handles (3)
9. M8x1.25x125mm Carriage Head Screws (2), M8 Flat Washers (2), M8.1 Lock Washers (2), M8x1.25 Hex Nuts (2) (for fastening the base to a supporting surface)
10. Chuck Key
11. Table Raising and Lowering Handle
12. Table Clamp
13. Chuck



14. Clamp
15. Mounting bracket
16. Tray
17. Mounting arm

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.**

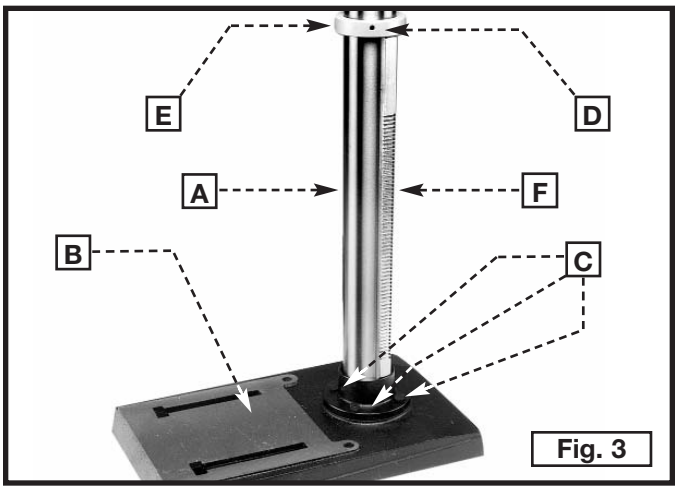


Fig. 3

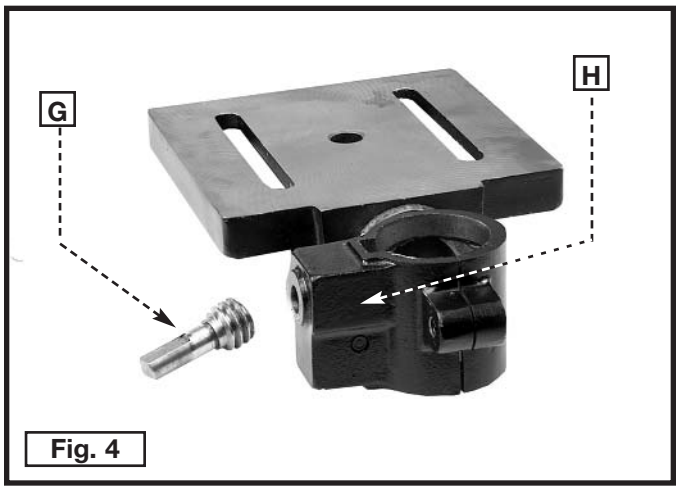


Fig. 4

1. Attach the column (A) Fig. 3 to the base (B) using the four M8x1.25x25mm hex head screws (C), three of which are shown. Loosen the set screw (D) and remove the ring (E) and raising rack (F).
2. Place the worm gear (G) Fig. 4 in the table bracket (H).

NOTE: Place the small end of the worm gear (G) Fig. 5 in the hole (J), then into the hole for the worm gear. The correct placement is shown in Fig. 5.

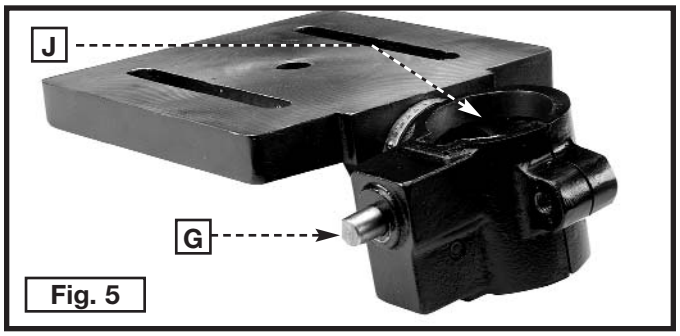


Fig. 5

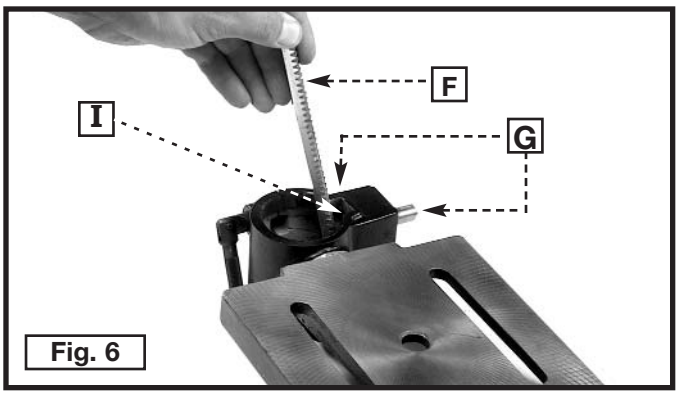


Fig. 6

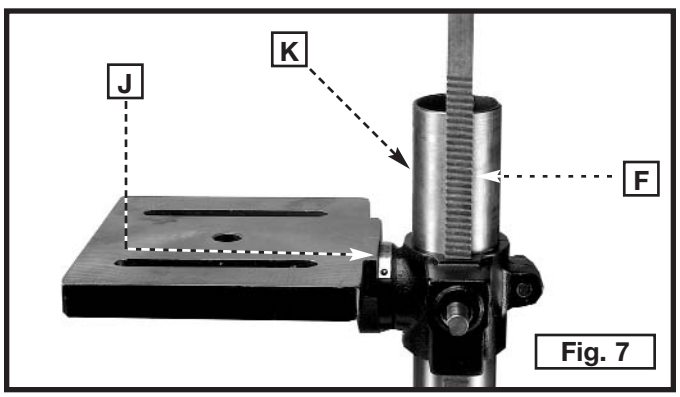


Fig. 7

3. Insert the raising rack (F) Fig. 6 (removed in **STEP 1)** in the table bracket groove (I).

NOTE: Place the teeth of the raising rack (F) in the teeth of the worm gear (G) located inside table bracket.

4. Slide the raising rack (F) Fig. 7and the table with the table bracket (J) on the drill press column (K) Fig. 7.

NOTE: Place the bottom of the raising rack (F) Fig. 8 inside the flange (L) on the drill press base.

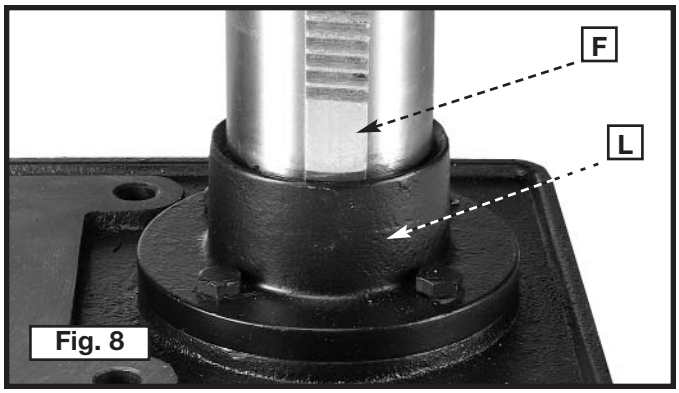
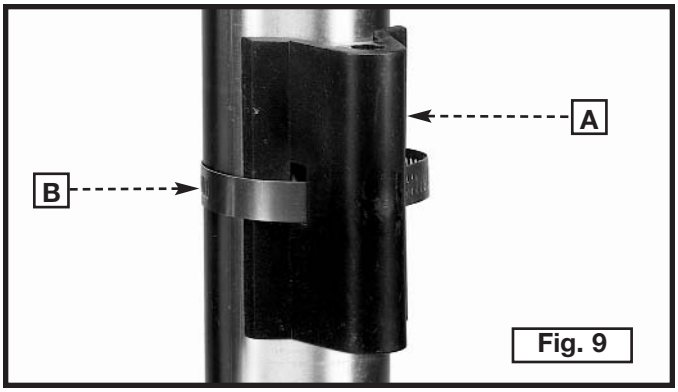
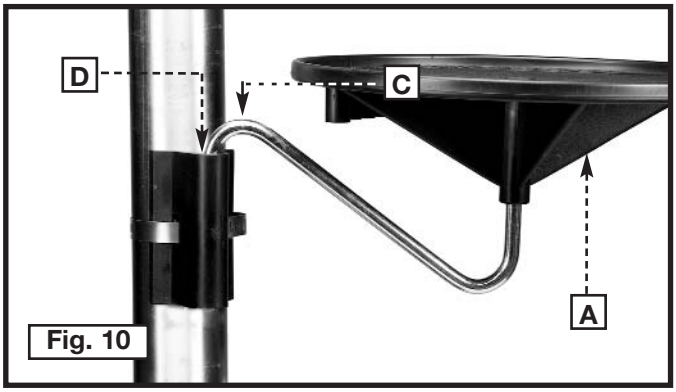


Fig. 8





5. Place the mounting bracket (A) Fig. 9 on the column.

NOTE: To avoid interference with the spindle height adjusting handles (P) Fig. 16, place the mounting bracket on the opposite side of the column from the raising rack.

6. Insert the hose clamp (B) Fig. 9 through the mounting bracket, under the raising rack, and around the column. Tighten the hose clamp securely.
7. Slide the mounting arm (C) with the tray (A) into the bracket (D) (Fig. 10).
8. Install the ring (E) Fig. 11 (removed in **STEP 1)** on the column.

IMPORTANT: Place the raising rack under the bottom of the ring, but allow enough clearance so that the rack (F) can rotate around the column. Tighten the set screw (D) Fig. 11**.**

9. Attach the table raising and lowering handle (K) Fig. 12 on the worm gear shaft (G) and tighten the set screw (L) against the flat on the shaft.

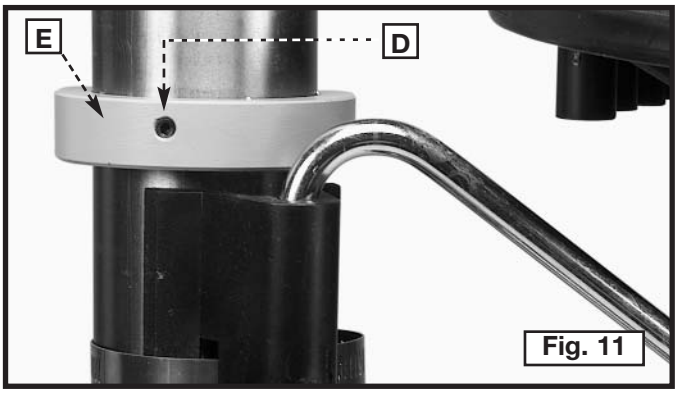


Fig. 11

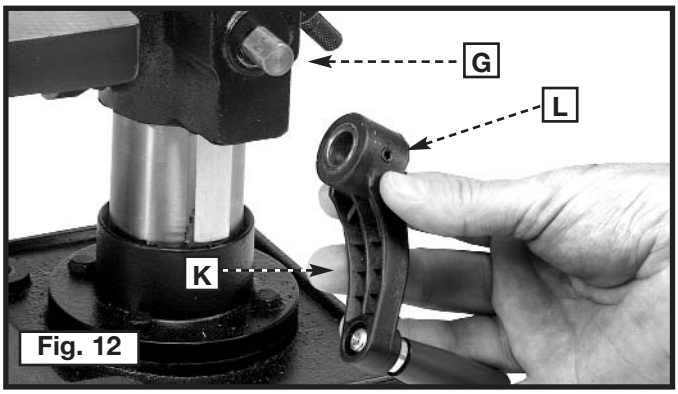


Fig. 12

10. Thread the stud of the clamp handle (M) Fig. 14 in the hole in the rear of the table bracket.
11. Seat the drill press head (N) Fig. 15 on the column. Align the head (A) Fig. 15A, with the table (B) and base (C). Tighten the two head locking screws (O) Fig. 15 with the supplied wrench.
12. Thread the three pinion shaft handles (P) Fig. 16 in the three tapped holes located in the pinion shaft.

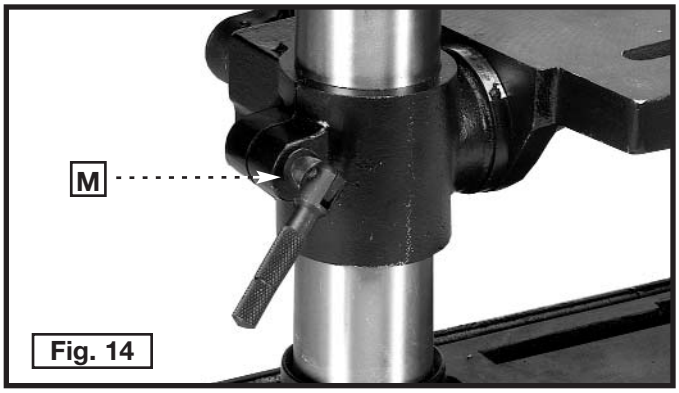


Fig. 14

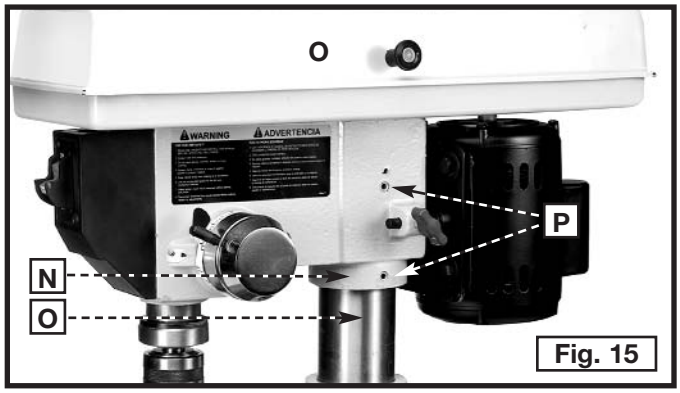


Fig. 15

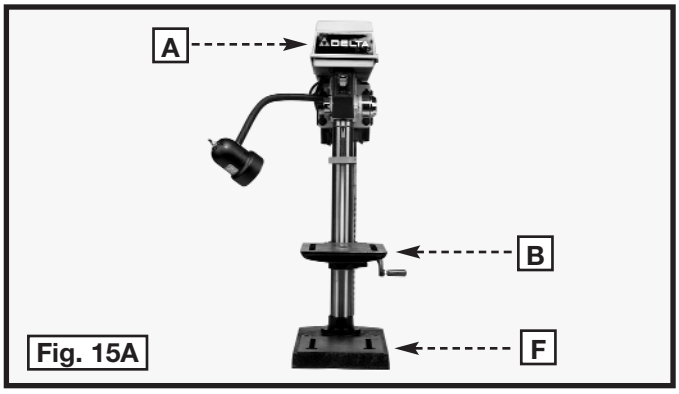


Fig. 15A

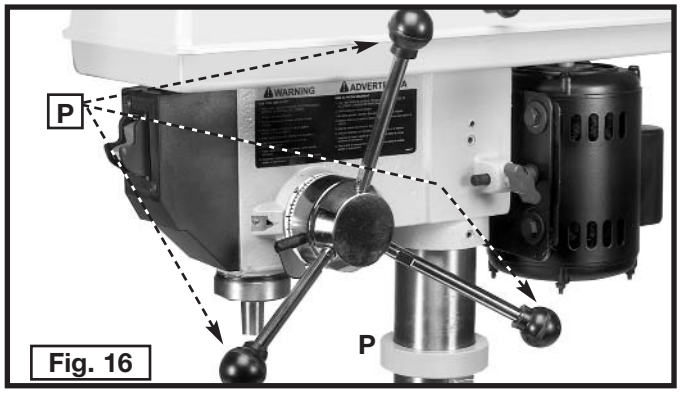


Fig. 16

NOTE: Make certain that the spindle taper (Q) Fig. 17 and the tapered hole in the chuck (R) are clean and free of grease, lacquer, or rust preventive coatings.
NOTE: Household oven cleaner can effectively remove any substance from the spindle and chuck. Carefully follow the manufacturer's safety rules concerning its use.

13. Open the chuck jaws as wide as possible by turning the chuck sleeve (S) Fig. 18. Hold the chuck on the taper of the spindle and tap with a rubber mallet (T) or a block of wood and hammer to set the chuck (Fig. 18).

IMPORTANT: To avoid damage to the chuck, **DO NOT** drive the chuck on the spindle with a metal hammer.

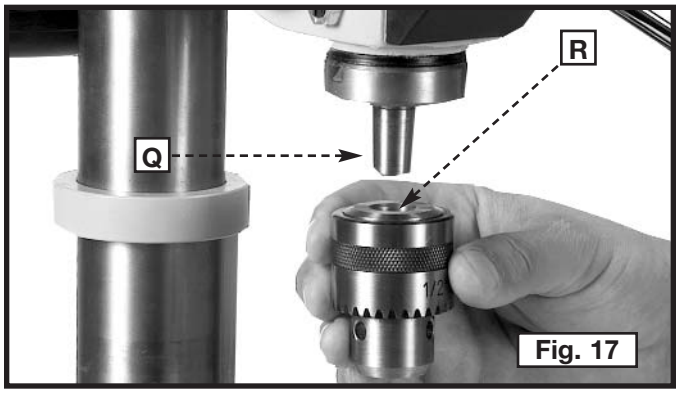


Fig. 17

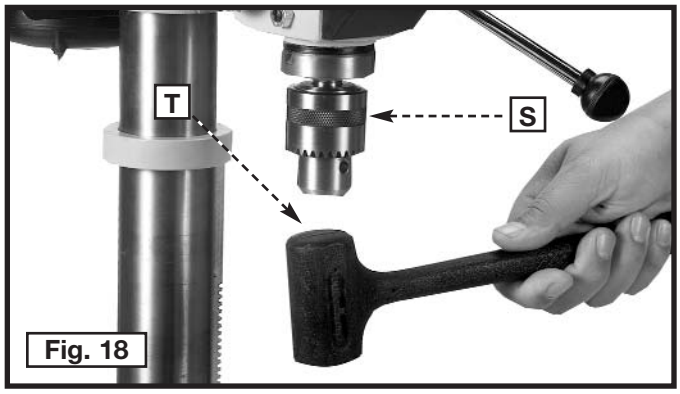


Fig. 18

FASTENING DRILL PRESS TO SUPPORTING SURFACE

If, during operation, the machine has a tendency to tip over, slide, or walk on the supporting surface, secure the machine base to the supporting surface with an M8x1.25x125mm carriage head screw, 8.5mm flat washer, 8.5mm lock washer, M8x1.25 hex nut through the two holes (A) Fig. 19 located in the machine base.

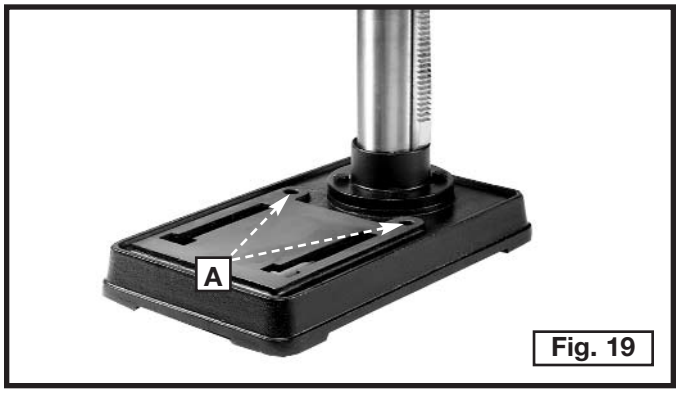


Fig. 19

OPERATING CONTROLS AND ADJUSTMENTS

STARTING AND STOPPING THE MACHINE

The switch (A) Fig. 20 is located on the front of the drill press head. To turn the drill press **"ON",** move the switch up. To turn the drill press **"OFF",** move the switch down.

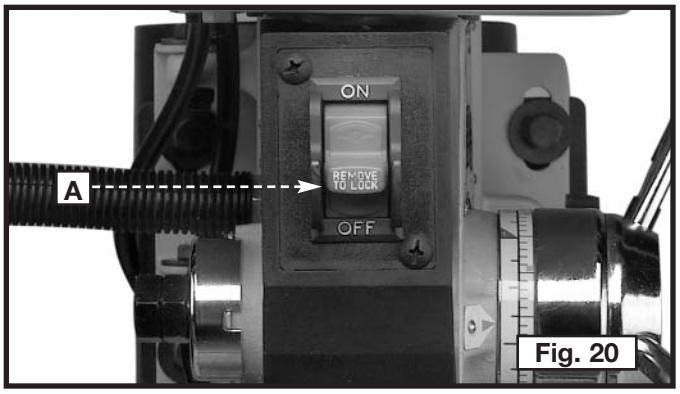


Fig. 20

LOCKING SWITCH IN THE "OFF" POSITION

IMPORTANT: When the machine is not in use, the switch should be locked in the **"OFF"** position to prevent unauthorized use. Grasp the switch toggle (B) and pull it out of the switch (Fig. 21). With the switch toggle (B) removed, the switch will not operate. However, should the switch toggle be removed while the drill press is operating, the switch can be turned **"OFF"** once, but cannot be restarted without inserting the switch toggle (B).

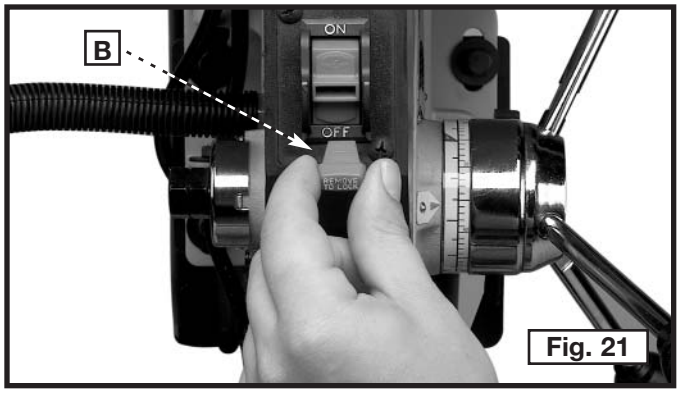


Fig. 21

FLEXIBLE LAMP

The flexible lamp operates independently of the drill press. To turn the lamp **"ON"** and **"OFF"**, rotate switch (A) Fig. 22.

⚠WARNING To reduce the risk of fire, use 40 watt or less, 120 volt, reflector track-type light bulb (not supplied). DO NOT use a standard household light bulb. The reflector track-type light bulb should not extend below the lamp shade.

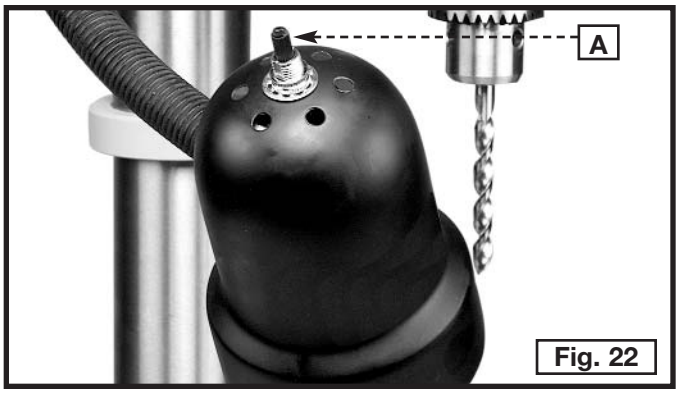


Fig. 22

TABLE ADJUSTMENTS

1. Raise or lower the table on the column by loosening the table clamp (A) Fig. 23, and turning the table raising and lowering handle (B) Fig. 24. After the table is at the desired height, tighten the clamp (A) Fig. 23.

NOTE: Always raise (rather than lower) the table to the final position to allow the gears to mesh and prevent slippage.

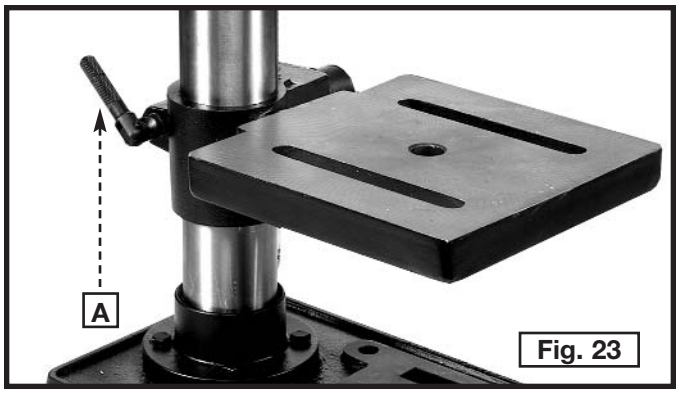


Fig. 23

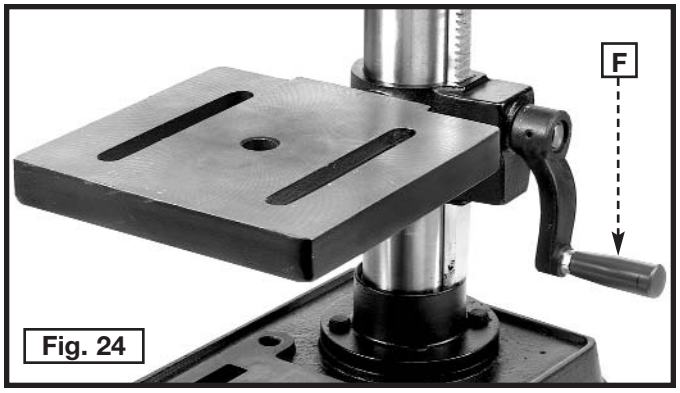


Fig. 24

2. The table can be rotated 360 degrees on the column by loosening the clamp (A) Fig. 23, rotating the table to the desired position, and tightening the clamp (A).

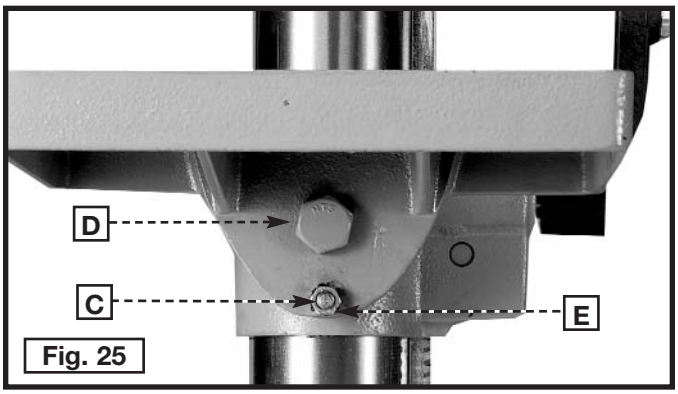


Fig. 25

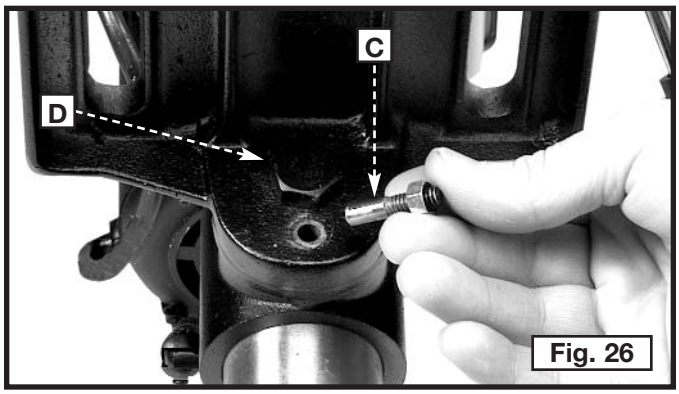


Fig. 26

3. The table can be tilted right or left by removing the table alignment pin (C) Fig. 25.

NOTE: If the pin (C) is difficult to remove, turn the nut (E) clockwise to pull the pin out of the casting.

4. Loosen the table locking bolt (D) Fig. 26, tilt the table to the desired angle, and tighten the bolt (D). When you return the table to the level position, replace the table alignment pin (C) Fig. 25 to position the table surface 90 degrees to the spindle.

5. A tilt scale (E) Fig. 27 is provided on the table bracket casting to indicate the degree of tilt. A witness line and zero mark (F) are also provided on the table to align with the scale (E).

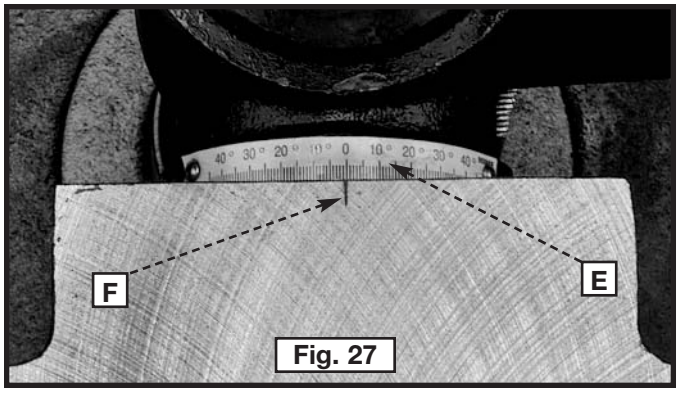


Fig. 27

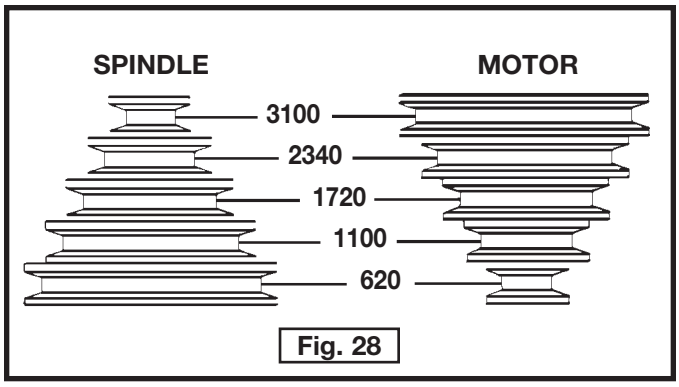


Fig. 28

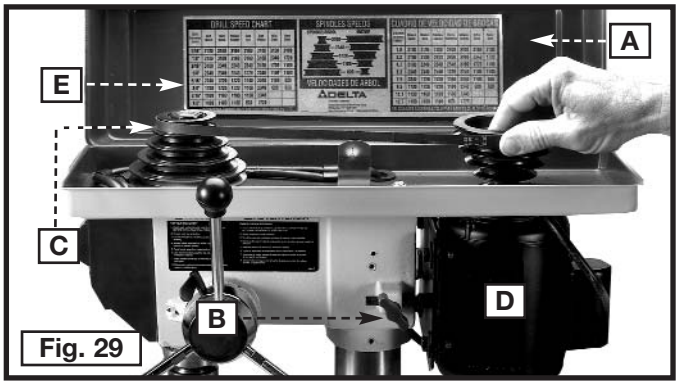


Fig. 29

SPINDLE SPEEDS

Five spindle speeds (620, 1100, 1720, 2340, and 3100 RPM) are available with your drill press. See the chart in Fig. 28 to select the correct belt placement for your project.

CHANGING SPEEDS AND ADJUSTING BELT TENSION

NOTE: A belt-positioning speed chart (E) Fig. 29 is located on the inside top cover of the drill press.

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Open the top cover (A) Fig. 29.
2. Loosen the tension lock knob (B) Fig. 29 to release belt tension. Pivot the motor (D) toward the front of the drill press.
3. Hold the motor in this position and place the belt (C) on your selected speeds according to the chart in Fig. 28.
4. Move the motor to the rear until the belt has proper tension.

NOTE: The belt 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 belt (C) can be flexed about 1" out of line midway between the pulleys using light finger pressure.

5. Tighten the tension lock knob (B).

DRILLING HOLES TO DEPTH

A depth stop is provided in the pinion shaft housing to allow you to drill any number of holes to the same depth. To use:

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Insert the bit into the chuck.
2. Lower the spindle until the pointer (C) Fig. 30 aligns with the your selected mark on the scale (D).
3. Tighten the lock screw (A).
4. Return the spindle to the up position.
5. Place the workpiece on the drill press table. Raise the drill press table until the workpiece touches the drill bit.
6. Drill a test hole to check the depth.

NOTE: Scale (D) is calibrated in both inches and millimeters.

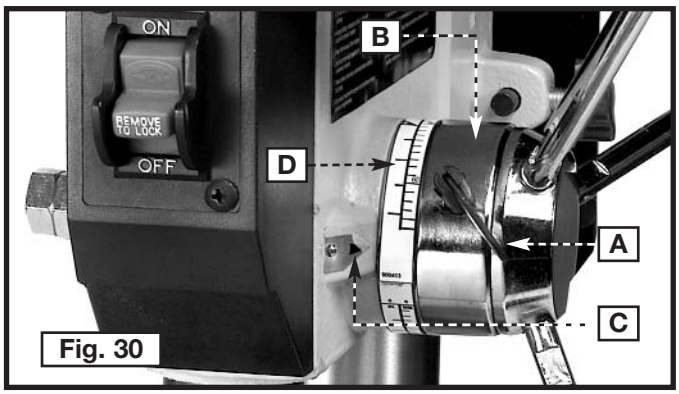


Fig. 30

ADJUSTING SPINDLE RETURN SPRING

The spindle will automatically return slowly to its upper position when the handle is released. The spindle return spring was properly adjusted at the factory. However, to adjust, if necessary:

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Loosen the nuts (B) and (E) Fig. 31. Make sure that the spring housing (A) remains engaged with head casting (C).
2. While firmly holding the spring housing (A) Fig. 32, pull out the housing and rotate it (counter-clockwise to increase or clockwise to decrease the spring tension) until the boss (D) is engaged with the next notch on the housing. Turn the nut (E) until it contacts the spring housing (A), then back the nut (E) out 1/4 turn from the spring housing (A). Tighten the nut (B) against the nut (E) to hold the housing in place.

IMPORTANT: The inside nut (E) should not contact spring housing (A) when tightened.

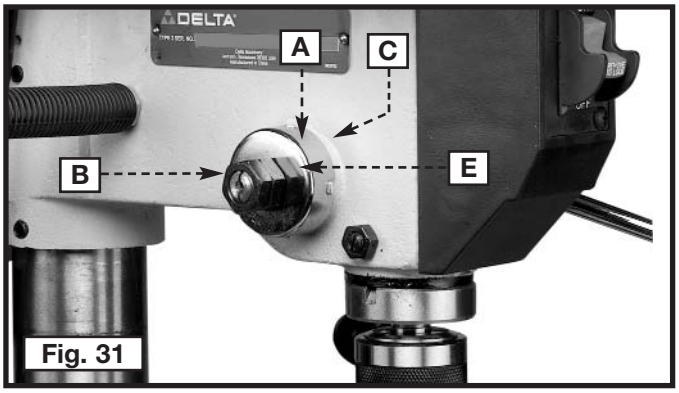


Fig. 31

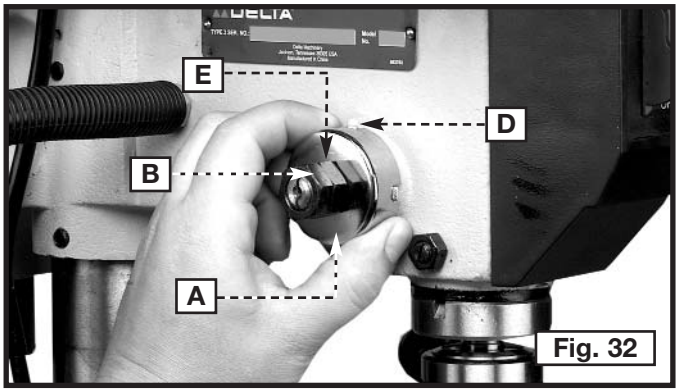


Fig. 32

OPERATION

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

IMPORTANT: When the workpiece (A) Fig. 33 is long enough, position it on the table with one end against the left side of the column (B) to prevent the workpiece from rotating. If it is not possible to support the workpiece against the column, clamp the workpiece to the table.

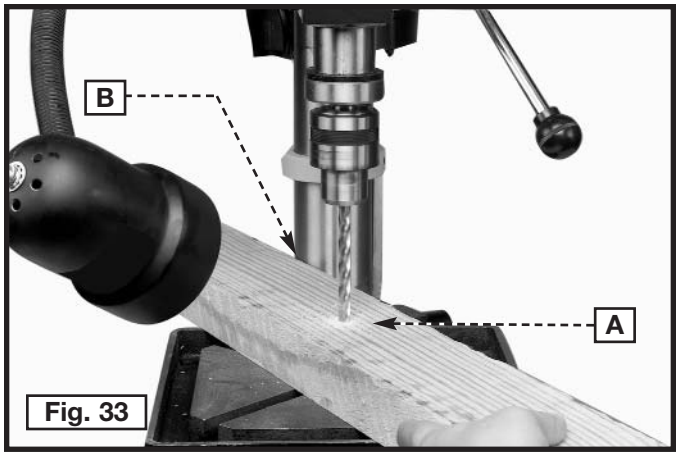


Fig. 33

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

INSTALLING AND REMOVING DRILL BITS

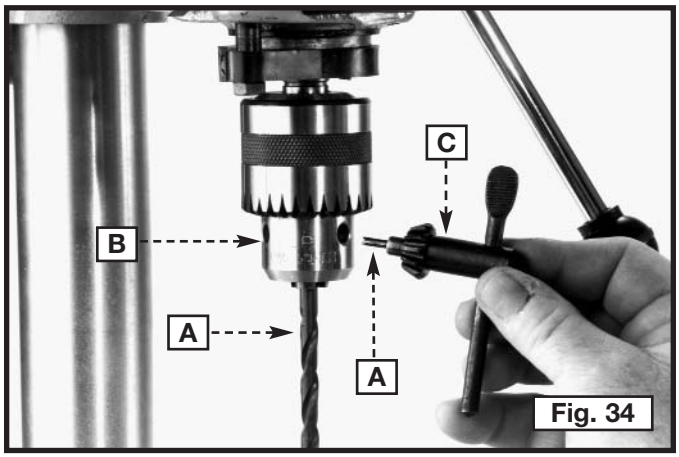


Fig. 34

NOTE: Use drill bits with a shank of 1/2" or less in diameter.

⚠WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Insert the smooth end of drill bit (A) Fig. 34 in the 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. Center the drill bit (A) Fig. 34 in the chuck (B) before tightening the chuck with the key (C).
3. Turn the chuck key (C) Fig. 34 clockwise to tighten and counterclockwise to loosen the chuck jaws.
4. Tighten all three chuck jaws to secure the drill bit sufficiently to prevent slipping.
5. **Remove the chuck key** (C) Fig. 34 from the chuck before starting the drill press. The chuck key (C) is equipped with a self-ejecting pin (D) which helps minimize the potential for the key to be left in the chuck.

CORRECT DRILLING SPEEDS

Factors that determine the correct speed are: the workpiece, the size of the hole, the type of bit or other cutter, and the quality of cut.

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

DRILLING WOOD

Twist drills, usually intended for metal drilling, can also be used for boring holes in wood. However, machine spur bits are generally preferred for working in wood. These bits 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 will lift and rotate the workpiece.

For through boring, align the workpiece so that the bit will go through the center hole in 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 the workpiece slowly when the bit is close to cutting 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 workpiece 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 workpiece strikes the column.

The workpiece 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 workpiece on a wooden base and clamp it firmly down against the table to prevent it from turning. If the workpiece 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.

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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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