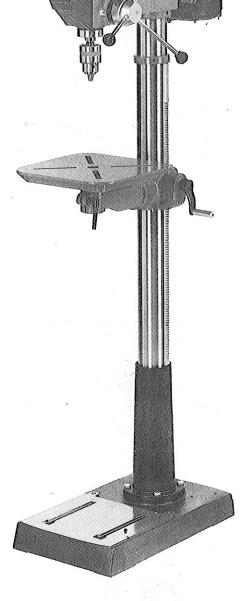


# 14" Bench Drill Press

The Serial No. and Model No. plate is attached to the right side of the drill press head. Locate this plate and record the Serial No. and Model No. in your manual for future reference.

SERIAL NO. R 9150

MODEL NO. 14-040



**∆DELTA** 

161/2" Floor Drill Press

Part No. 1312040 Dated 2-1-90

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# **SAFETY RULES**

As with all machinery there are certain hazards involved with operation and use of the machine. 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.

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 for which it was designed. If you have any questions relative to its application DO NOT use the machine until you have written Delta Machinery and we have advised you.

> DELTA INTERNATIONAL MACHINERY CORP. MANAGER OF TECHNICAL SERVICES 246 ALPHA DRIVE PITTSBURGH, PENNSYLVANIA 15238

## 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. GROUND ALL TOOLS. If tool is equipped with threeprong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.
- 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 foot wear is recommended. Wear protective hair covering to contain long hair.
- 12. ALWAYS WEAR EYE PROTECTION. Refer to ANSI Z87.1 Standard for appropriate recommendations. Also use face or dust mask if cutting operation is dusty.
- 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. Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.
- 18. AVOID ACCIDENTAL 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
- 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 drug, alcohol or any medication.
- 24. MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY while motor is being mounted, connected or reconnected.
- 25. WARNING: 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

- I. BE SURE drill bit or cutting tool is securely locked in the chuck.
- 2. BE SURE chuck key is removed from the chuck before turning on power.
- 3. ADJUST the table or depth stop to avoid drilling into the table.
- 4. SHUT OFF the power, remove the drill bit or cutting tool, and clean the table before leaving the
- 5. CAUTION: When pratical, use clamps or a vise to secure workpiece to keep the workpiece from rotating with the drill bit or cutting tool.
- 6. WARNING: For Your Own Safety Don't wear gloves when operating a drill press.

#### UNPACKING AND CLEANING

Carefully unpack the drill press and all loose items from the carton. 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.

#### ASSEMBLING THE DRILL PRESS

#### 14' BENCH DRILL PRESS ONLY

1. Assemble column (A) to the base (B) using the four screws (C) as shown in Fig. 2. Loosen set screw (D) and remove ring (E) and raising rack (F).

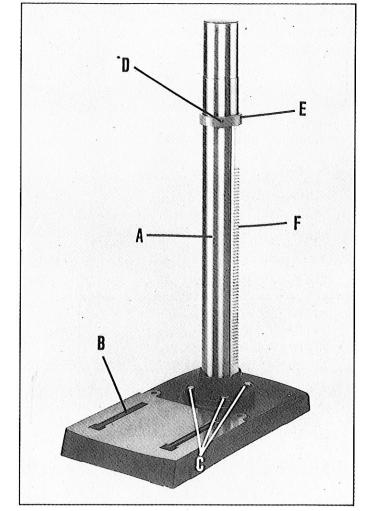
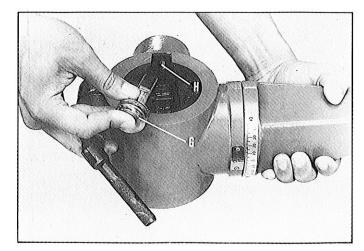
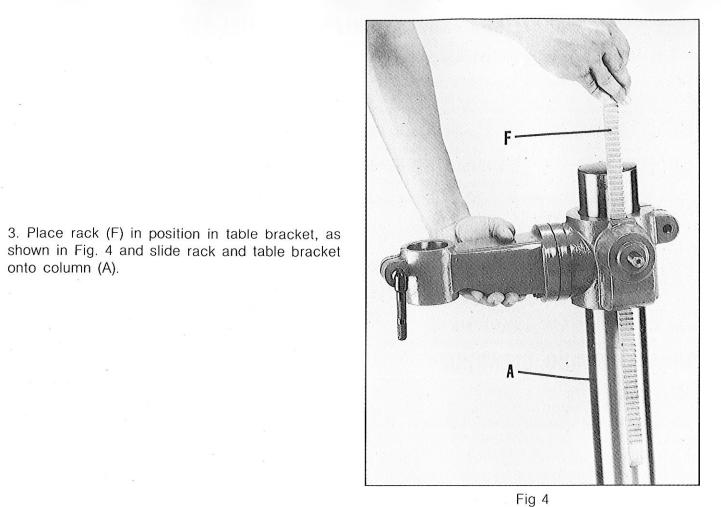
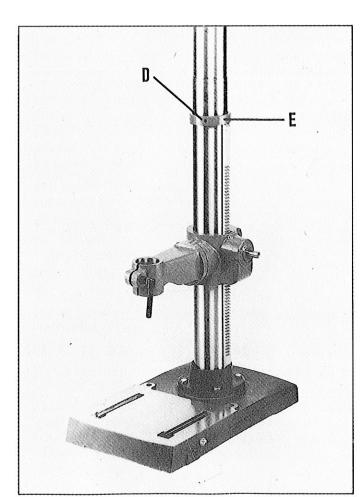


Fig 2

2. Assemble worm gear (G) to hole (H) in table bracket, as shown in Fig. 3.







4. Position table bracket all the way down on the column. Reassemble ring (E) and tighten set screw (D), Fig. 5.

onto column (A).



5. Assemble column (A) to the base (B) using the four screws (C), as shown in Fig. 6. Note: Table bracket (D) is shipped assembled to the column, as shown.

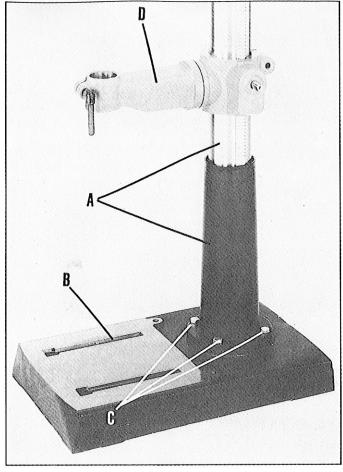
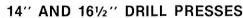


Fig 6



- 14" AND 16½" DRILL PRESSES

  6. Assemble table (G) to table bracket, as shown in Fig. 7, and lock in place using the table rotating lock screw (H).
- 7. Assemble table raising handle (J), and table bracket lock screw (K), as shown in Fig. 7.

8. Place the drill press head (L) onto the column as far as it will go. Align the head and table to the drill press base and tighten the two head locking

screws (M), as shown in Fig. 8.

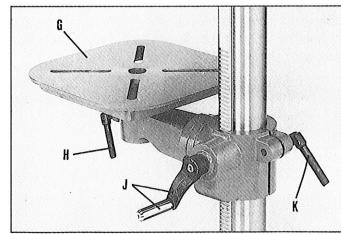


Fig 7

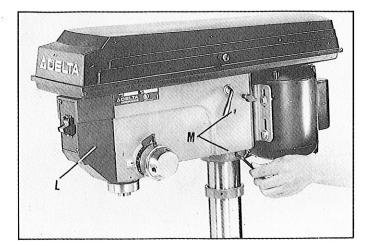


Fig 5

Fig 8

9. Thread the three pinion shaft handles (N) into the three holes located in the pinion shaft, as shown in Fig. 9.

800

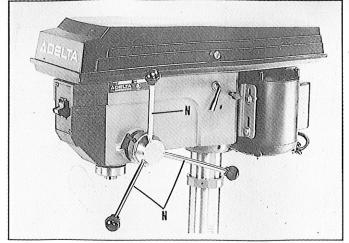


Fig 9

#### 14" BENCH DRILL PRESS ONLY

10. IMPORTANT: Make certain the bottom of spindle (O) Fig. 10 and the tapered hole in chuck (P) are clean and free of any grease, lacquer or rust preventive coatings. NOTE: Household over cleaner can effectively remove any substance from the spindle and chuck, however, carefully follow the manufacturer's safety rules concerning its use.

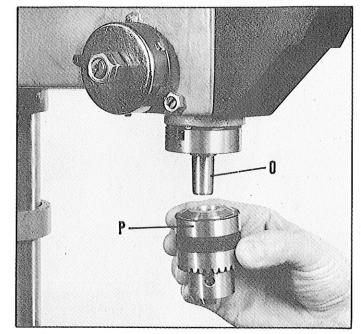


Fig 10

- 11. Open the chuck jaws as wide as possible by turning chuck sleeve (R) Fig. 11.12. Holding chuck (P) Fig. 11, carefully drive the chuck
- 12. Holding chuck (P) Fig. 11, carefully drive the chuck onto the spindle (O) with a block of wood and conventional hammer, or a mallet as shown. This will seat the chuck (P) properly on the spindle (O). IMPORTANT: To avoid damage to the chuck, do not drive the chuck directly onto the spindle with a metal hammer.

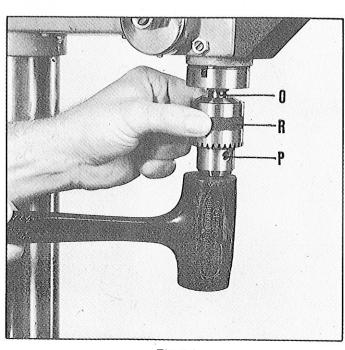


Fig 11

#### 161/2" DRILL PRESS ONLY

13. IMPORTANT: Make certain the tapered hole in the bottom of spindle (T) Fig. 12, and the taper on spindle adapter (U) 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 spindle adapter, however, carefully follow the manufacturer's safety rules concerning its use.

14. Push spindle adapter (U) Fig. 12, up into spindle (T) making certain the tang (V) engages and locks with the mating slot inside spindle (T).

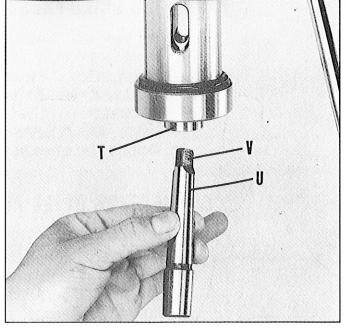


Fig 12

15. Make certain the bottom of spindle adapter (U) Fig. 13, and tapered hole in chuck (W) are cleaned as noted in Step 13, and push chuck (W) up onto the spindle adapter (U) as far as it will go.

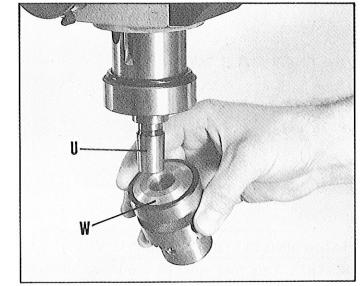


Fig 13

- 16. Open the chuck jaws as wide as possible by turning chuck sleeve (X) Fig. 14.
- 17. Holding the chuck (W) Fig. 14. carefully drive the chuck onto spindle adapter with a block of wood and conventional hammer, or a mallet as shown. This will seat the chuck (W) properly on the spindle. IMPORTANT: To avoid damage to the chuck, do not drive the chuck directly onto the spindle adapter with a metal hammer.

#### 14" AND 161/2" DRILL PRESSES

18. Your drill press is shipped with the belt installed, however the belt must be properly tensioned before use by following the instructions under CHANGING SPINDLE SPEEDS AND ADJUSTING BELT TENSION later on in this manual.

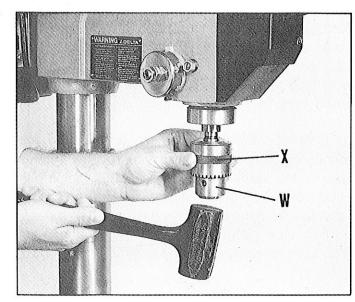


Fig 14

### FASTENING DRILL PRESS BASE TO BENCH OR FLOOR

IF DURING OPERATION THERE IS ANY TENDENCY FOR THE DRILL PRESS TO TIP OVER, SLIDE OR WALK ON THE SUPPORTING SURFACE, THE DRILL PRESS BASE MUST BE SECURED TO THE SUPPORTING SURFACE WITH FASTENERS THROUGH THE TWO HOLES LOCATED IN THE DRILL PRESS BASE.

## CONNECTING DRILL PRESS TO POWER SOURCE

#### **POWER CONNECTIONS**

A separate electrical circuit should be used for your tools. The 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 3-pole receptacles which accept the tools plug. For distances up to 100 feet use #12 wire. For distances up to 150 feet use #10 wire. Have a certified electrician replace or repair damaged or worn cord immediately. Before, connecting the motor 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 stamped on motor nameplate. All line connections should make good contact. Running on low voltage will damage the motor.

#### **GROUNDING INSTRUCTIONS (115 VOLT)**

CAUTION: This tool must be grounded while in use to protect the operator from electric shock. The motor is shipped wired for 115 Volt, Single Phase and is equipped with an approved 3-conductor cord and 3-prong grounding type plug to fit the proper grounding type receptacle, as shown in Fig. 15. The green conductor in the cord is the grounding wire. CAUTION: Never connect the green wire to a live terminal.

An adapter, shown in Fig. 16, is available for connecting 3-prong grounding type plugs to 2-prong receptacles. THIS ADAPTER IS NOT APPLICABLE IN CANADA. The green-colored rigid ear, lug, etc... extending from the adapter is the grounding means and must be connected to a permanent ground such as to properly grounded outlet box, as shown in Fig. 16.

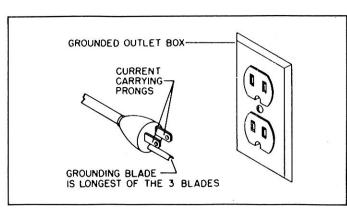
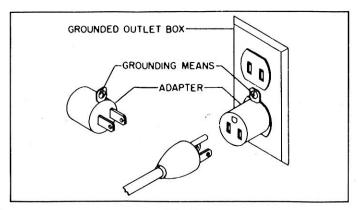


Fig 15



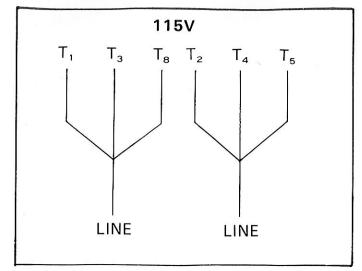


Fig 17

# 230V LINE LINE

Fig 18

#### **GROUNDING INSTRUCTIONS (230 VOLT)**

If it is desired to operate this tool at 230 Volt, single phase operation, the following instructions must be followed:

- 1. Disconnect the machine from the power source.
- 2. This drill press is supplied with six motor leads that are connected for 115 Volts, as shown in Fig. 17. Reconnect these six motor leads for 230 Volt operation, as shown in Fig. 18.
- 3. The 115 Volt, single pole, on/off switch (A) Fig. 18A, must be replaced with a 230 Volt, double pole, on/off switch (B), available from Delta as part no. 438-01-017-0141. The two leads (C) that are connected to the single pole switch (A) must be connected to the two terminals (D) on the double pole switch (B). Remove wire nut (E) and fasten two 1/4" disconnect terminals (available from an electrical supply house) to the two wires (F). Connect the two wires (F) to the two terminals (G) on the double pole switch (B).
- 4. The 115 Volt power cord plug must be replaced with a 230 Volt power cord plug. The 230 Volt plug has two flat current-carrying prongs in tandem, and one round or "U" shaped longer ground prong, as shown in Fig. 19. This plug is used only with the proper mating 3-conductor grounding type receptacle, as shown in Fig. 19.

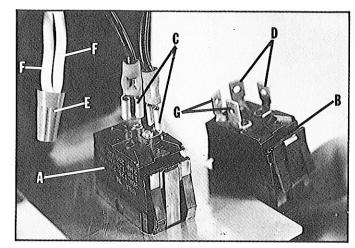


Fig 18 A

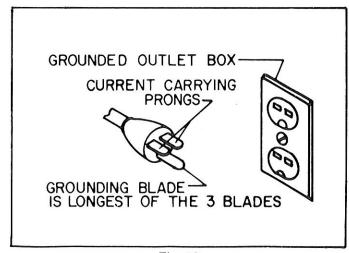


Fig 19

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

#### SPINDLE SPEEDS

Five spindle speeds of 460, 870, 1155, 1670 and 2500 RPM are available with the 14" Bench Drill Press and twelve spindle speeds of 250, 360, 410, 540, 590, 650, 1090, 1280, 1450, 1820, 2180 and 3000 RPM are available with the 16½" Drill Press. Fig. 20 illustrates which steps of the pulleys the belt must be placed to obtain the five speeds available for the 14" Bench Drill Press and Fig. 21 illustrates which steps of the pulleys the belt must be placed to obtain the twelve speeds available for the 16½" Drill Press.

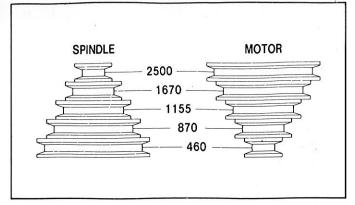


Fig 20

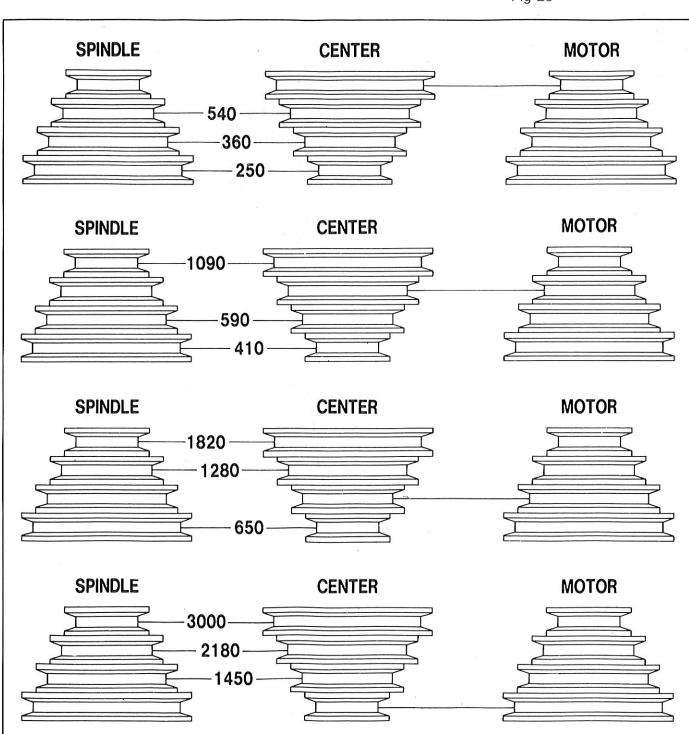
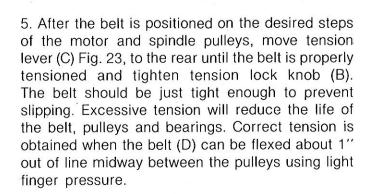


Fig 21

# CHANGING SPINDLE SPEEDS AND ADJUSTING BELT TENSION

#### 14" BENCH DRILL PRESS ONLY

- 1. Disconnect the drill press from the power source.
- 2. Lift up the belt and pulley guard (A) Fig. 22.
- 3. Release belt tension by loosening tension lock knob (B) Fig. 22, and moving tension lever (C) forward.
- 4. Position the belt (D) on the desired steps of the motor and spindle pulleys, as shown in Fig. 22.





- 1. Disconnect the drill press from the power source.
- 2. Lift up the belt and pulley guard (A) Fig. 24.
- 3. Release belt tension by loosening tension lock knob (B) Fig. 24, and moving tension lever (C) forward.
- 4. Position the two belts (D) on the desired steps of the motor, center and spindle pulleys, as shown in Fig. 24.
- 5. After the belt is positioned on the desired steps of the motor, center and spindle pulleys, move tension lever (C) Fig. 25, to the rear until the belts are properly tensioned and tighten tension lock knob (B). 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 about 1" out of line midway between the pulleys using light finger pressure.

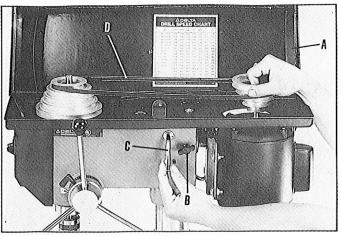


Fig 22

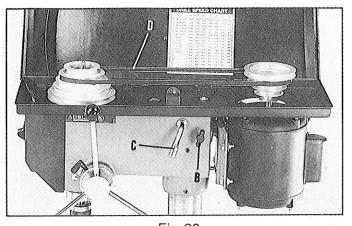


Fig 23

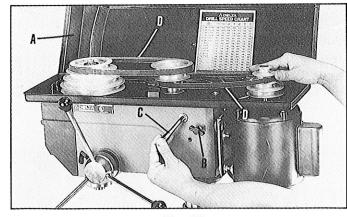


Fig 24

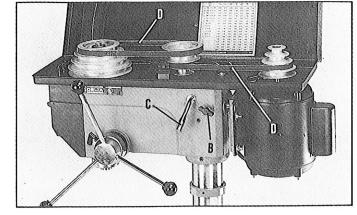


Fig 25

## SWITCH

The switch (A) Fig. 26, is located on the front of the drill press head. To turn the drill press "ON" move the switch to the up position. To turn the drill press, "OFF" move the switch to the down position.

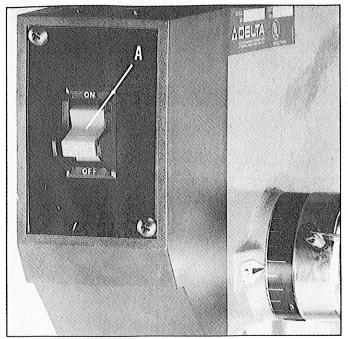


Fig 26

We suggest that when the drill press is not in use, the switch be locked in the "OFF" position. This can be done by grasping the switch toggle (B) and pulling it out of the switch, as shown in Fig. 27, With the switch toggle (B) Fig. 27, 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.

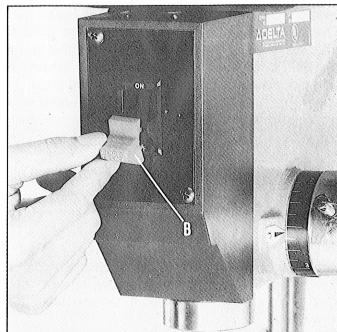


Fig 27

# TABLE ADJUSTMENTS

27.

- 1. The table (G) Fig. 28, 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. 28, can be rotated 360 degrees on the table bracket by loosening lock handle (H).

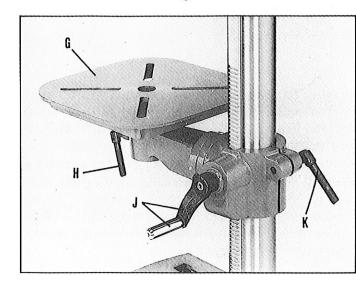


Fig 28

3. The table can be tilted right or left by pulling out and removing table alignment pin (B) Fig. 29. Note: If pin (B) is difficult to remove turn nut (C) clockwise to pull pin out of casting.

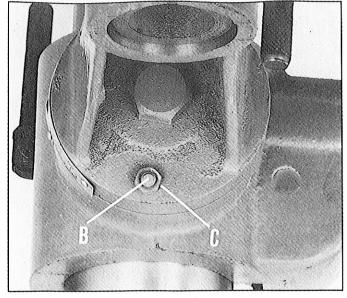


Fig 29

4. Fig. 30, illustrates the table alignment pin (B) removed. Loosen table locking bolt (D) Fig. 30, 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.

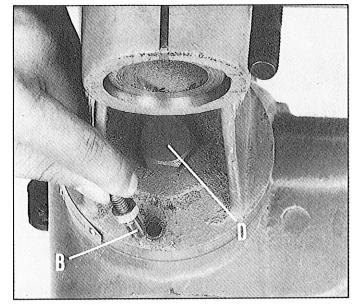


Fig 30

5. A tilt scale (E) and pointer (F) Fig. 31, are provided on the table bracket casting to indicate the degree of tilt.

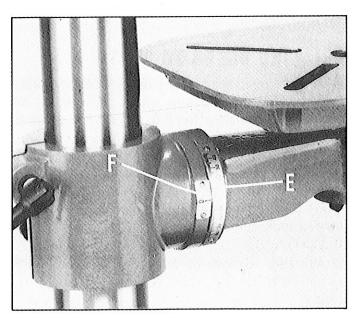


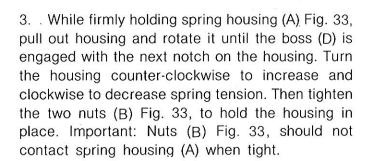
Fig 31

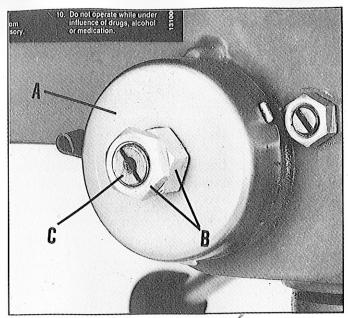
13

#### 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. 32. 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) approximately 1/4". Do not remove nuts (B) from shaft (C) Fig. 32.





Fia 32

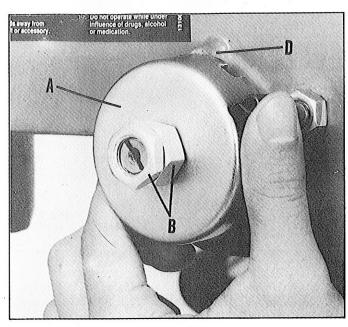


Fig 33

# DRILLING HOLES TO DEPTH

Where a number of holes are to be drilled to exactly the same depth, a depth stop is provided in the pinion shaft housing (A) Fig. 34, and is used as follows:

- 1. Loosen lock handle (B) Fig. 34, and rotate housing (A) until the pointer (C) lines up with the depth you wish to drill on the scale (D). Then tighten lock handle (B).
- 2. All holes will then be drilled to the exact depth as indicated on the scale (D) Fig. 34.

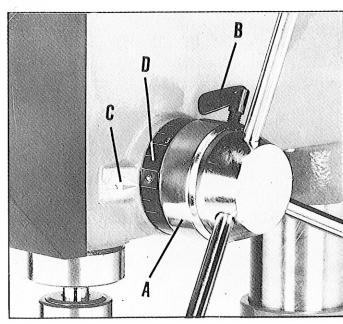


Fig 34

#### **OPERATION**

The following directions will give the inexperienced operator a start on the common drill press operations. Use scrap material for practice to get the feel of the machine before attempting regular work.

#### CORRECT DRILLING SPEEDS

Factors which determine the best speed to use in any drill press operations are: Kind of material being worked, size of hole, type of drill or other cutter, and quality of cut desired. The smaller the drill, the greater the required RPM. In soft materials, the speed should be higher than for hard metals.

#### **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 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. 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 piece is whirled out of the operator's hand, he may be injured. In any case, 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.

A nationwide network of more than 100 authorized Delta Service Stations stand ready to service Delta Machinery should they ever require maintenance and repair. Skilled technicians using the latest approved repair method and genuine Delta parts assure prompt, efficient and economical service.

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ALABAMA

Birmingham 35209

Porter-Cable Corporation 131 W. Oxmoor Rd., Suite 105 Huntsville 35816 Huntsville Equipment Sales and Rental 4728 University Drive Montgomery 36108 430 Airbase Blvd 205-265-9663 Theodore 36590 Mobile Mechanical Services 5787 I-10 Industrial Parkway

205-653-6948 ALASKA

Anchorage 99503 Alaska Tool & Equip. Service 3207 Arctic Boulevard 907-562-6151 Fairbanks 99706 Fairbanks Aero Services, Inc. 907-479-6666

ARIZONA Phoenix 85014

Glenn's Tool Service 4036 North 13th Way 602-264-6203 Tucson 85705 Circle Saw Shop & Ind. Tool, Inc. 602-624-5248 Tucson 85719 Electric Motor Company 1028 Broadway

602-622-8877 ARKANSAS Little Rock 72202

Electric Tool Service 501-374-8180 CALIFORNIA Chula Vista 92011 Ori Services Coro. Suite K, 1031 Bay Blvd. 619-585-9439 City of Industry 91745 Porter-Cable Corporation 1305 John Reed Court Eureka 95501 Electric Tool Co. 707-442-4267 Fresno 93703 R & R Machinery & Electric Inc.

Stanislaus Electric Mtr. Wrks. 504 River Road 209-523-8269 North Hollywood 91605

209-233-1213

Modesto 95351

**Bucknall Power Tool Service** 11910 Vost Street 818-765-0228 Redding 96002

Electric Tool and Motor 915 Wall Street #1 916-222-1131 Sacramento 95814

Service Company 1211 C Street 916-444-2525 San Diego 92110 Best Impact Service

619-276-3887

Morgan's 110 Ann Street 912-234-2271 Savannah 31402 White Hardware 102 E. Lathrop Ave 912-233-5777 980 Suite B Buenos Avenue

San Leandro 94577 Porter-Cable Corporation 3039 Teagarden Street P.O. Box 1913 415-357-9762

Santa Rosa 95401 Acme Electric Tool Repair 742 Wilson Street 707-546-5862 Santa Rosa 95403 H & V Tool Repair

1808 Empire Industrial Court #D 707-528-1111 Torrence 90502 Universal Tool Service 21804 S. Vermont Avenue

213-328-6472 COLORADO

Denver 80204 Porter-Cable Corporation 2561 West 8th Ave. Colorado Springs 80907

Schlosser Tool and Machinery 3970 Sinton Road 719-636-1311 **Grand Junction 81501** Dowdell's Cross Flectric 1755 Main Street, Unit B

303-245-3158 CONNECTICUT

Hartford 06106 Utility Electric Service, Inc. 53 Main Street 203-246-7271 Oakville 06779 Watertown Tool Supply 3 Harvard Street

Jacksonville 32205

& Tool Repair

904-387-4455

407-644-8100

904-433-5492

Tool Depot

407-848-4320

Tampa 33609

813-877-9585

404-363-8000

Savannah 31402

**GEORGIA** 

Pensacola 32581

Orlando 32803

North Florida Machiner

Porter-Cable Corporation

18071/2 Winter Park Road

Electric Motor Service, Inc.

3810 Hopkins Street

Riviera Beach 33404

3705 E. Industrial Way

Porter-Cable Corporation

4538 W. Kennedy Blvd.

Porter-Cable Corporation

4017 Jonesboro Road

Forest Park 30050

230-B Edgewood Ave. South

FLORIDA

Addison (Chicago) 60101 Porter-Cable Corporation Gainesville 32609 311 Laura Drive Florida Fastener and Tool Co., Inc. 2826 N. Waldo Road Springfield 62702 904-377-4587 Hialeah 33014 223 N MacArth Porter-Cable Corporation 217-522-9115 16373-75 NW 57th Ave. 305-624-2523

INDIANA

Elkhart 46516 Thunander Corporation 21861 Protecta Dr. 219-295-4131 Evansville 47711 Tri State Repair Service 1327 N Fares 812-464-9341 607-729-5287 Fort Wayne 46808 Merrick Evans Inc.

2116 W. Coliseum Blvd. 219-482-4822 Goshen 46526 C & L Electric Motor Repair 1405 Chicago Avenue 219-533-2643

Indianapolis 46241 Macco Equip. Co., Inc. 3129 Kentucky Avenue 317-248-1444

Indianapolis 46220 Standiford Associates, Inc. Suite 6, P.O. Box 20543 5335 N. Tacoma Avenue 317-257-1368

IOWA

Davenport 52803 Industrial Engineering Equipment Co. 319-323-9721

Des Moines 50309 Puckett Electric Tools, Inc. 1011 Ken Way

KANSAS

Wichita 67213 -Richmond Electric Co. 911 Maple 316-264-2344

KENTUCKY Louisville 40219 Ball Bros. Machine 8 8109 Preston Highway

502-969-1626

LOUISIANA Baton Rouge 70806 Baton Rouge Rental Service 5101 Government Street 504-924-2959

Metairie 70011 R.J. Marchand Cont'r. Spec., Inc. P.O. Box 8148 3515 Division Street 504-888-2922 New Orleans 70153-3432 Beerman Precision, Inc. P.O. Box 53432

4206 Howard Avenue 504-486-9391 Shreveport 71101 McClamroch Machinery 939 Louisiana Avenue

318-222-9249 MAINE

Portland 04104 M and W Tool Service 38 Portland Street 207-772-2057

MARYLAND

Baltimore 21205 Porter-Cable Corporation 4714 Erdman Avenue 301-483-3100 Hyattsville 20781 Porter-Cable Corporation 4811 Kenilworth Avenue 301-779-8080

MASSACHUSETTS

Boston (Allston) 02134 Porter-Cable Cornoration 414 Cambridge Street 617-782-1700 Fall River 02721 350 M.S. Bishop Blvd. 617-675-0381 Springfield 01105 Saw Center 413-734-2045

MICHIGAN Grand Rapids 49508

313-569-4333

Porter-Cable Corporation 3755 G Broadmoor S.E. Broadmoor Business Center 616-949-9040 Petoskey 49770 Ed's Electric Appliance Service P.O. Box 505 S.U.S. Hwy. 31 616-347-9599 Southfield (Detroit) 48075 Porter-Cable Corporation 18650 W. Eight Mile Road

MINNESOTA

Minneapolis 55429 Porter-Cable Corporation 4315 68th Avenue North 612-561-9080

MISSISSIPPI Jackson 39202

Flannigan Electric Co., Inc. 1820 S. West Street Ext.

MISSOURI

North Kansas City 64116 Porter-Cable Corporatio 1141 Swift Avenue 816-221-2070 St.Ļouis 63119 Porter-Cable Corporation 7574 Watson Road 314-968-8950

MONTANA

Billings 59101 Allen's Electric Tool Repair 431 St. John's Avenue 406-248-3865 Black Eagle 59414 Mosch Electric Motors 2513 17th Street North 406-453-2481 Missoula 59806 City Electric Electro Service Center Div. 406-549-4115 Missoula 59801 Montana Tool Co.

1908 North Ave. West

**NEBRASKA** 

Omaha 68127 Kel-Welco Distributing Inc. 9447 J Street 402-592-1250 Omaha 68102 Thacker Electric Co. 2209 Cuming Street 402-341-2264 Omaha 68127 Tool Hospital 4630 So. 85 Street 492-592-5220 Omaha 68102

Tool Warehouse 2215 Cuming Street 402-341-6167

NEVADA Las Vegas 89109 Tool Service Inc. 3229 Industrial Road 702-734-9161 Reno 89512 Comstock Electric 425 Fureka Avenue 702-323-5982

**NEW HAMPSHIRE** Nashua 03061 Hammar Industria 175 Amherst St. P.O. Box 1209 603-882-5161

**NEW JERSEY** Jersey City 07304 Rudolf Bass Inc. 45 Halladay Street 201-433-3800 Union 07083 Porter-Cable Corporation

945 Ball Avenue

(continued)

#### **Authorized Service Stations (continued)**

Fargo 58103

701-235-8060

701-746-6481

Minot 58701

701-839-2263

Barberton 44203

1-800-362-0585

110 6th Street F

Power Tool Sales & Service

Electric Tool & Equipment

Porter-Cable Corporation

Sweet Valley Business Park

216-499-3529

Toledo 43606

419-473-0962

Toledo 43613

419-474-7537

216-447-9030

3156 Upton Avenue

Valley View 44125

West Milton 45383

Conken Equipment Co.

2915 New Park Drive

OHIO

525 20th Avenue S.E.

**NEW MEXICO** 

Albuquerque 87123 J-M Tool Repair Co. 320 Florida S.E. 505-255-2304

Albuquerque 87107 Bill's Service Center 2836 Girard N.E. 505-844-7474

Albuquerque 87113 Woodworker's Supply 5604 Alameda 505-821-0500

**NEW YORK** 

Buffalo 14210 SS Electric Repair Shop Inc. 716-823-1232 Flushing 11365 Porter-Cable Corporation 175-25 Horace Harding Expwy. 718-225-2040

Kingston 12401 Miron Bldg, Products, Inc. C.P.O. Box 1598 Rt. #9W North 914-336-6000 New York 10013 Rudolf Bass Inc. 212-226-4000

N. Syracuse 13212 Pratt Power Tool Service 102 Church St. 315-458-8775 Rochester 14608 Jackson Saw & Knife Co 517 State Street

716-546-7485 Rochester 14609 O.G. Schwarz 430 Atlantic Avenue 716-482-9282

Southampton 11968 Richards Tool and Motor Repair County Road 39 and N. Main Street Utica 13502

McQuade and Bannigar 1300 Stark Street 315-724-7119 Vectal 13850 Cascade Electric Inc. 416 Commerce Rd. 607-729-5278

**NORTH CAROLINA** 

Charlotte 28209 Porter-Cable Corporation 4303B South Boulevard 704-525-4410 Greensboro 27415 Bunting Equipment Co. Division National Service Ind., Inc. 2325 Joe Brown Drive 919-375-7511

Greensboro 27407 Tool & Equipment Service OREGON Eugene 97402 919-379-9757 Raleigh 27604

Specialty Tool Service of Raleigh Inc. 2420 Atlantic Ave. 919-833-5903 Rural Hall 27045 Brannock-Lynch Lumber Company P.O. Box 869 8200 Depot Stree 919-969-9501

Wilmington 28405 D. C. Electric Tool Repair 102 Eastwood Road, Suite D9 919-392-5784

Wilmington 28405 M. F. McLean Enterprises Rt. 6, Box 97 Old Wrightsville Road 919-343-1775

NORTH DAKOTA

Bismark 58501 Acme Electric Motor, Inc. 1009 Basin Avenue

Acme Electric Motor, Inc. 3401 Interstate Blvd 717-287-2121 Grand Forks 58201 Acme Electric Motor, Inc 1705 13th Avenue North 412-373-7440 Acme Electric Motor, Inc.

Statington 18080 Viking Akron Tool & Supply Co. Doward's Electric 4711 Main Street 215-767-8148

RHODE ISLAND Cincinnati 45215 Pro Tool Service Inc. Providence 02914 1125 Glendale-Milford Road 513-772-1490 401-434-3620

Columbus 43214 Porter-Cable Corporation 4560 Indianola Avenue 614-263-0929 Alpha (Dayton) 45301 676 Orchard Lane 513-429-5593 803-722-8851 Columbia 29203 North Canton 44720 N. Canton Repair Shop

> Greenville 29602 Poe Corporation P.O. Box 168

Sioux Falls 57106 501 S. Marrion Road 605-336-3727

TENNESSEE Chattanooga 37412 F & D Tool Service and Supply 4121 Ringgold Road 615-698-6454

4950 Frederick Garland Road 513-698-3363 Youngstown 44512 Moff Master Power Tools 615-647-5842 216-783-2130

OKLAHOMA

Okłahoma City 73126 Whitton Supply Co. 1419 W. Rend 405-236-5561 Tulsa 74101 Wesche Company 2005 East 7th Place 918-583-7551

Jim's Tool Service 515 Wilson Street Medford 97501 Precision Power Tool 2919 N. Pacific Highway 503-770-5541 Portland 97212 Continental Machine & Tool Inc. 51 N.E. Hancock

**PENNSYLVANIA** Allentown 18103 Curio Electric Repair

215-432-9923 Harrisburg 17105 Stationary Equipment Sales & Service Rear 3605 Ridgeway Rd. 717-545-8043

Kingston 18704 Total Services & Systems, Inc. 166 W Union Street Monroeville 15146 Professional Tool Service 700 Seco Road Monroeville Industrial Parl Philadelphia 19154 Porter Cable Corporation 12285 McNulty Road 215-677-7800 Fax No.: 215-677-9908

Porter-Cable Corporation 1009 Waterman Avenue

SOUTH CAROLINA Charleston 29405 Charleston Supply Co. 1791 King Street Ext. Charleston 29411-0028 Mann Electric Repair Co 3600 Main Street 803-252-7777

SOUTH DAKOTA Stan Houston Fouip, Co.

Clarksville 37042 Opa's Shop 312 Pine Mountain Road Knoxville 37918 Shop Equipment Service Co 4821 N. Broadway

615-688-3574 Memphis 38116 Express Tool Service Inc 1004 East Brooks Road 901-332-1353 Nashville 37210 Allied Tool Benain 1005 Second Ave. S.

615-242-8026 **TEXAS** Abilene 79604

Abilene Lumber Co., Inc. 2025 Industrial B 915-698-4465 Amarillo 79105 G.E. Jones Flectric Co. 204 North Polk St 806-372-5505 Austin 78722 Hamilton Electric Works Inc. 3800 Airport Blvd. 512-472-2428 Austin 78758 The Tool Box 9904C Gray Boulevard 512-836-5483 Corpus Christi 78405 Corpus Christi Power Tool & Repair 3009 Agnes 512-883-1117 Corpus Christi 78405

Otto Dukes Machinery Co.

2588 Morgan Street

Dallas 75220 Porter-Cable Corporation 10714 N. Stemmons Freeway 214-353-2996 El Paso 79905 C. L. North Co. 123 Chelsea Street 915-772-1469 Ft. Worth 76110

Air & Electric Tool Co., Inc. 3301 South Grove 817-921-0231 Houston 77092 Porter-Cable Corporation 5201 Mitchelldale, Suite B-9 713-682-0334

Longview 75601 Eastex Welding Box 3223, 1232 W. Marshall 214-758-7327 Lubbock 79405

Lubbock Electric Co. 1108 34th Street 806-744-2336 San Antonio 78205 Electric Motor Service 1514 E. Commerc

512-226-3462 Sherman 75090 Texoma Tool Repair Co. 309 E. Houston Stree 214-892-1510

Texarkana 75501 Ray's Electric Motor Repair 922 Bowie Street 214-792-7031 Tyler 75702 Mason Machinery

1908 W. Erwin Street 214-592-6581 Weslaco 78596 Weslaco Tool Co 316 E. 4th Street 512-968-9156

UTAH

Salt Lake City 84115 Porter-Cable Corporation 2990 S.W. Temple 801-487-4953

VERMONT

S. Burlington 05403 Burlington Tool Repair 23 San Remo Drive 802-658-4131

VIRGINIA

Roanoke 24013

703-345-8741

Yakima 98902

509-452-9550

205 S. 4th Avenue

Charlottsville 22901 Allen Desper Repair Service P.O. Box 1612 804-293-7913 Norfolk 23517 Bryan Electric Co., Inc. 424 West 25th Street 804-625-0378 Richmond 23230 Porter-Cable Corporation 1705 Dabney Road 804-257-7348

**Roanoke Armature Co** 11081/2 Street S.E.

WASHINGTON Kennewick 99336 Tool Repair Company 419A West Entiat 509-586-6145 **Benton 98055** Porter-Cable Corporation 206-251-6680 Spokane 99202 Spokane Power Tool E. 801 Trent Avenue

Cooper Electric Motor Service

304-233-3600 WISCONSIN

**WEST VIRGINIA** 

Huntington 25701

304-522-8297

Wheeling 26003

Kennedy Hardware

3300 McCulloch Street

202 Adams Avenue

Lawter Electric Motor Co

Green Bay 54301 Power Tool Service Co. 310 N. Webster Ave. 414-437-2594 Janesville 53547 Blain Supply, Inc. P.O. Box 391 3507 East Racine 607-754-2821 LaCrosse 54603 A-Line Machine Tool Co. 800 Monitor St 608-785-1515 Madison 53713

**Electric Motors Unlimited** 1000 Jonathan Drive 608-271-2311 Milwaukee 53222 Porter-Cable Corporation 10700 W. Burleigh Street 414-774-3650 Wausau 54401 R.A. Miller Supply

**PUERTO RICO** 

1109 McCleary Street

Sierra Bayamon 00619 B & M Electric Tool Repair Center Calle 49. Bloque 51 Casa 27 Avenue West Main 809-787-2287

CANADA

Calgary T2H 2L7

403-255-3530 Edmonton T5P 3X6 10632 169th Street 403-489-5587

**British Columbia** Vancouver V5Y 1L4 45 West 7th Avenue

Manitoba

Winnipeg R3H 0H2 204-633-9259

Ontario

Mississauga L4V 1J2 6463 Northam Drive 416-677-5330 Guelph N1H 6M7 644 Imperial Road 519-836-4390 Ottawa K2A 3X2 613-728-1124

Quebec

St. Laurent (Montreal) H4N 1W2 523 Rue Deslauriers 514-336-8772 Ste. Foy G1N 4L5 2202 Rue Lavoisie 418-681-7305

12-1-89

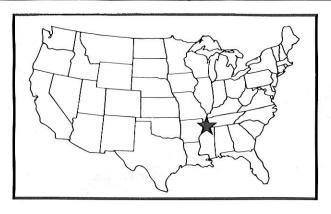


# PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of factory service centers and authorized service stations listed in your owner's manual. To obtain additional information regarding your Delta quality product or to obtain parts, service or warranty assistance, please call Delta's toll-free 'hotline' telephone number.

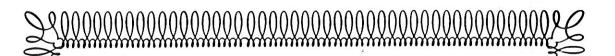
Delta maintains a modern, efficient Parts Distribution Center, maintaining an inventory of over 10,000 parts located in Memphis, Tennessee.

Highly qualified and experienced Customer Service Representatives are standing by to assist you on weekdays from 8:00 A.M. to 5:00 P.M. Memphis time.



Memphis, TN 38118 4290 Raines Road Phone: (901) 363-8800

> HOTLINE 800-223-PART



# ADELTA

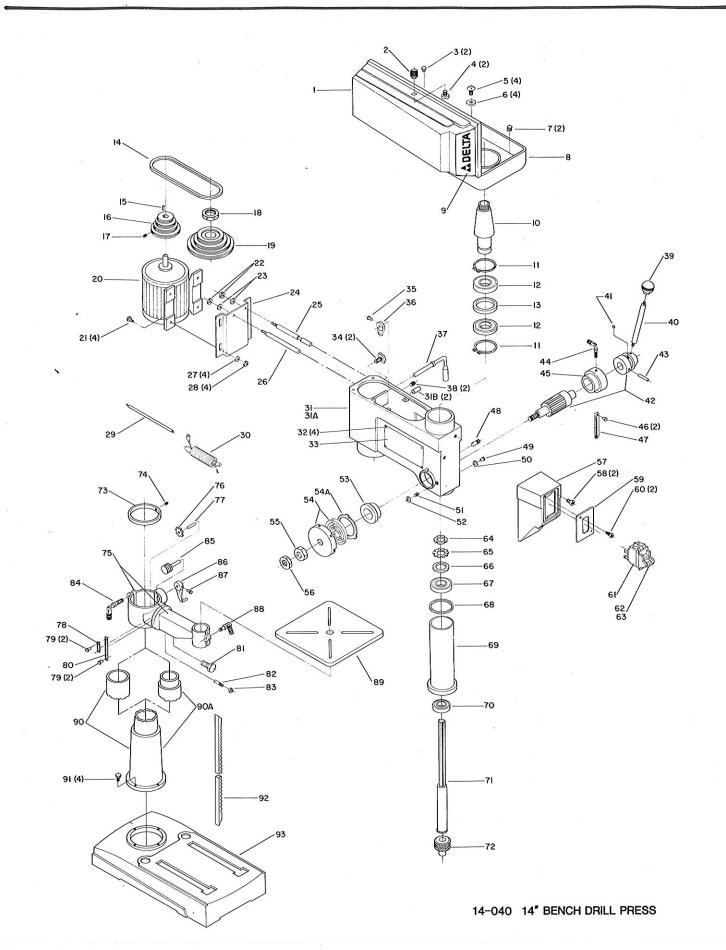
#### Delta Building Trades and Home Shop Machinery Two Year Limited Warranty

Delta will repair or replace, at its expense and at its option, any Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.

# 14-040 14" BENCH DRILL PRESS 17-900 16 1/2" DRILL PRESS

DP-4D

Part No. 1312041 Revised 11-20-89



#### REPLACEMENT PARTS

EF. 0.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION .
	Nach and a few sections		200.00	Manager and the control of the contr	
1	1311076	Upper Pulley Cover (See Service Note A)	55	902-01-010-1208	1/2-20 Hex Nut
2	1310065	Knob	56	1313047	1/2-20 x 6mm Hex Nut
3	1310057	Strain Relief	57	1311075	Switch Box
4	1246045	(DIN 84) M6 x 10mm Slot Cheese Hd Mach Screw	58	1246001	(DIN 84) M5 x 12mm Slot Cheese Hd Mach Screw
5	1246002	(DIN 84) M6 x 12mm Slot Cheese Hd Mach Screw	59	1311084	Switch Cover
6	1310062	Washer	60	1310547	M4 x 12mm Self Tap Screw (Current Models Only)
7	1310056	Rubber Ring	60	1310070	M5 x 15mm Self Tap Screw (Early Models Only)
8	1311085	Lower Pulley w/Hinges (See Service Note A)	61	438-01-017-0140	Power Switch, Incl:
9	1311086	Nameplate	62	400-06-068-0001	Switch Key (See Service Note B)
)	1311057	Spindle Sleeve	63	400-06-068-0002	Switch Key (See Service Note B)
i	1311060	Retaining Ring	64	1311056	Special Lock Nut
	920-04-020-5348	Bearing	65	1311055	Locking Ring
3	1311059	Spacer	66	1311054	Washer
í	1311081	V-Belt	67	920-04-020-5335	Bearing
5	1311071	Key			
	13) 1070		68	1311051	Rubber Washer
5 7		Motor Pulley	69	1311050	Quill
	1246133	(DIN 913) M8 x 8mm Hex Soc Set Screw	70	920-04-020-5335	Bearing
3	1311061	Special Pulley Nut	71	1311052	Spindle
9	1311062	Spindle Pulley	72	1310049	1/2" Chuck, Incl:
)	1311066	Motor	**	1313104	Chuck Key
1	1246034	(DIN 933) M8 x 20mm Hex Hd Cap Screw	73	1311021	Rack Mounting Ring
2	1243476	(DIN 934) M12 Hex Nut	74	1311022	(DIN 916) M6 x 10mm Hex Soc Set Screw
3	904-02-020-1705	1/2" Lockwasher	75	1310080	Table Bracket Assy., Incl:
	1311029	Motor Mount Bracket	76	1311007	Pinion Gear
	1311027	Slide Rod	77	1311008	Shaft
5	1311082	Slide Rod	78	1311016	Zero (0) Indicator
7	1311069	Washer	79	1310016	Rivet
3	1243398	(DIN 934) M8 Hex Nut	80	1311015	Angle Scale
9	1311067	Motor Power Cable	81	1311012	5/8-11 x 1 1/4" Hex Hd Bolt
Ó	1311072	Power Cord	82	1310013	Threaded Pin
ĭ	1311090				
1A	1311023	Head Body (Current Models Only, See Service Note C)	83	902-01-120-1034	1/4-20 Hex Nut
18	1246110	Head Body (Early Models Only, See Service Note C)) (DIN 1481) M6 x 24mm Roll Pin (Current Models Only,	84	1311017	Column Lock Handle
.0	1246110	(DIN 1481) NO X 24MM ROLL PIN (COFFERE Models Unity,	85	1311009	Worm Gear
	1710014	See Service Note C)	86	1311010	Handle
2	1310016	Rivet	87	1246014	(DIN 933) M6 x 12mm Hex Hd Cap Screw
3	1310068	Warning Label	88	1311018	Table Lock Handle
4	1311028	Shifter Lock Screw	89	1311019	Table
	1246139	(DIN 933) M8 x 18mm Hex Hd Cap Screw	90	1310586	Column Assembly (Current Models Only,
5	1311026	Shifter Eccentric			See Service Note C)
7	1311025	Shifter Handle	90A	1310086	Column Assembly (Early Models Only,
3	1.311003	(DIN 916) M10 x 12mm Hex Hd Cap Screw			See Service Note C)
9	1311039	Grip	91	1246019	(DIN 933) M10 x 1.5 x 35mm Hex Hd Screw
)	1311038	Handle Bar			(Current Models Only)
1	1311036	Key	91	901-01-060-0617	3/8-16 x 1 1/2" Hex Hd Screw (Early Models Only
2	1310085	Pinion Assembly, Incl:	92	1311020	Rack
3	1311034	Pin	93	1311001	Base
	1311037	Depth Lock	**	1311073	Cable Connector
5	1311040	Depth Stop Ring	**	1311024	Insulated Female Connector
í	1310016	Rivet	**		3mm Allen Wrench
7	1311041	Depth Scale		428-06-101-0002	45MM - 5JBBBBM (MAN) 44FM
3	1311041		**	432-07-101-0004	5mm Allen Wrench
		Stop Pin	**	1311088	Speed Chart
?	1310016	Rivet	**	1310077	Pulley Chart
) l	1311042	Scale Pointer			
	1311048	M10 x 1.5 x 27mm Hd less Set Screw			
2	1243496	(DIN 934) MlO Hex Nut			
	1311045	Spring Seat			
1	1310082	Spring Assembly	*	NOT SHOWN ASSEMBLE	O .
AA	1311046		**		

#### SERVICE NOTES:

A - Hardware required to assemble upper and lower pulley covers:

YTITMAUÇ	PART NO.	DESCRIPTION
4	1243501	(DIN 84) M4 x 10mm Slot Cheese Hd Mach Screw
4	904-02-010-1701	#8 Lockwasher
4	1243569	(DIN 934) M4 Hex Nut
		•

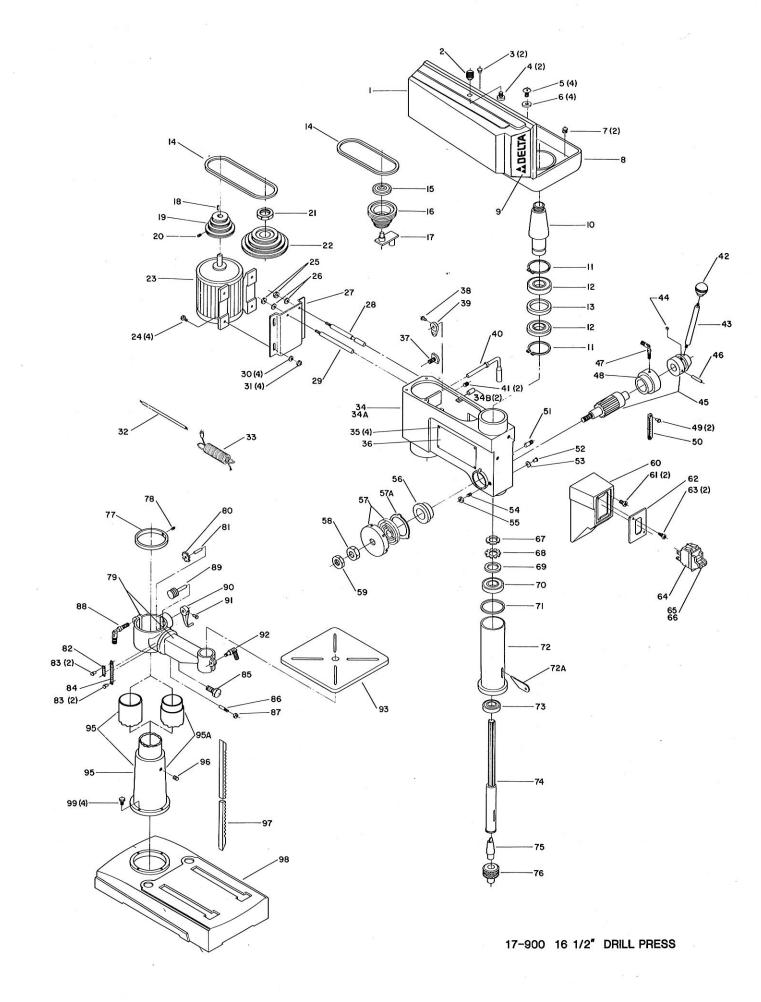
8 - Switch Key 400-06-068-0001 has 8-teeth.

Switch Key 400-06-068-0002 has 2-teeth.

C - Early model heads were bored to accept 71mm column (Ref No. 90A). Current style heads are bored to accept 73mm columns (Ref No. 90). Early columns (Ref No. 90A) are stepped at the top, current columns (Ref No 90) are straight at the top. Early and current model components are not interchangeable.

> This parts list is provided to aid in obtaining service parts. Operational and maintenance information is contained in a separate owner's manual which is available through your local service outlet.

Doc. No. 1974G



#### REPLACEMENT PARTS

EF. O.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	1311076	Upper Pulley Cover (See Service Note D)	56	1311045	Spring Seat
2	1310065	Knob	57	1310082	Spring Assembly
3	1310057	Strain Relief	57A	1311046	Spring Retainer
	1246045	(DIN 84) M6 x 10mm Slot Cheese Hd Mach Screw	58	902-01-010-1208	1/2-20 Hex Nut
,	1246002	(DIN 84) M6 x 12mm Slot Cheese Hd Mach Screw	59	1313047	1/2-20 x 6mm Hex Nut
	1310062	Washer	60	1312025	Switch Box
	1310056	Rubber Ring	61	1310016	Rivet
ě	1312032	Lower Pulley Cover w/Hinges (See Service Note D)	62	1311084	Switch Cover
	1311086	Nameolate	63	1310547	M4 x 12mm Self Tap Screw (Current Models Only)
	1312016	Spindle Sleeve	63	1310070	M5 x 15mm Self Tap Screw (Early Models Only)
	1312019	Retaining Ring	64	438-01-017-0140	Power Switch, Incl:
	1312017	Bearing	65		
	1312018	Spacer	66	400-06-068-0001	Switch Key (See Service Note E)
				400-06-068-0002	Switch Key (See Service Note E)
	1312030 1312028	V-Belt	67	1311056	Special Lock Nut
		Bearing	68	1311055	Locking Ring
	1312027	Center Pulley	69	1311054	Washer
	1312029	Pulley Shaft	70	920-04-020-5335	Bearing
	1311071	Key	71	1312014	Rubber Washer
	1312024	Motor Pulley	72	1312013	Quill
	1246133	(DIN 913) M8 x 8mm Hex Soc Set Screw	72A	1311065	Drill Shifter
	1311061	Special Pulley Nut	73	1312053	Bearing
	1312020	Spindle Pulley	74	1312015	Spindle
	1312023	Motor	75	1312021	Arbor
	1246034	(DIN 933) M8 x 20mm Hex Hd Cap Screw	76	1312022	5/8" Chuck, Incl:
	1243476	(DIN 934) M12 Hex Nut	**	1313105	Chuck Key
	904-02-020-1705	1/2" Lockwasher	77	1312009	Rack Mounting Ring
	1311029	Motor Mount Bracket	78	1311022	(DIN 916) M6 x 10mm Hex Soc Set Screw
	1312012	Slide Rod	79	1310079	Table Bracket Assy., Incl:
	1312031	Slide Rod	80	1311007	Pinion Gear
	1311069	Washer	81	1311008	Shaft
	1243398	(DIN 934) M8 Hex Nut	82	1311016	Zero (O) Indicator
	1311067	Motor Power Cable	83	1310016	
	1311072	Power Cord	84	1311015	Rivet
	1312090				Angle Scale
١.	1312010	Head Body (Current Models Only, See Service Note F)	85	1311012	5/8-11 x 1 1/4" Hex Hd Bolt
3		Head Body (Early Models Only, See Service Note F)	86	1313013	Threaded Pin
,	1246110	(DIN 1481) M6 x 24mm Roll Pin (Current Models Only,	87	902-01-120-1034	1/4-20 Hex Nut
	1710014	See Service Note F)	88	1311017	Column Lock Handle
	1310016	Rivet	89	1311009	Worm Gear
	1310068	Warning Label	90	1311010	Handle
	1311028	Shifter Lock Screw	91	1246014	(DIN 933) M6 x 12mm Hex Hd Cap Screw
	1246139	(DIN 933) M8 x 18mm Hex Hd Cap Screw	92	1311018	Table Lock Handle
	1311026	Shifter Eccentric	93	1312007	Table
	1312011	Shifter Handle	95	1310595	Column Assy., Incl: (Current Models Only,
	1311003	(DIN 916) M10 x 12mm Hex Soc Set Screw			See Service Note F)
	1311039	Grip	95A	1310095	Column Assembly, Incl: (Early Models Only,
	1311038	Handle Bar			See Service Note F)
	1311036	· Key	96	1311003	(DIN 913) M10 x 12mm Hd'less Set Screw
	1310085	Pinion Assy., Incl:	97	1312008	Rack
	1311034	Pin	98	1312001	Base
	1311037	Depth Lock	99	1246029	(DIN 933 M10 x 1.5 x 40mm Hex Hd Screw
	1311040	Depth Stop Ring	• •		(Current Models Only)
	1310016	Rivet	99	901-01-060-0615	7/16-14 x 1 3/4" Hex Hd Cap Screw (Early Models
	1312033		**	1311073	Cable Connector
	1311035	Depth Scale Stop Pin	**	1311075	Insulated Female Connector
	1310016	Rivet	**		
			**	428-06-101-0002	3mm Allen Wrench
84	1311042	Scale Pointer		432-07-101-0004	5mm Allen Wrench
	1311048 1243496	M10 x 1.5 x 27mm Hd'less Set Screw (DIN 934) M10 Hex Nut	**	1310088	Speed Chart w/Speed Steps
			*	NOT SHOWN ASEMBLED NOT SHOWN	

#### SERVICE NOTES:

O - Hardware required to assemble upper and lower pulley covers:

QUANTITY	PART NO.	DESCRIPTION	
4	1243501	(DIN 84) M4 x 10mm Slot Cheese Hd Mach Screw	
4	904-02-010-1701	#8 Lockwasher	
4	1243569		

E - Switch Key 400-06-068-0001 has 8 teeth:

Switch Key 400-06-068-0002 has 2 teeth:

F - Early model heads were bored to accept 78mm column (Ref No. 95A).

Current style heads are bored to accept 80mm columns (Ref No. 95). (Early columns (Ref No. 95A) are stepped at the top, current columns (Ref. No. 95) are straight at the top. Early and current model components are not interchangeable.

This parts list is provided to aid in obtaining service parts. Operational and maintenance information is contained in a separate owner's manual which is available through your local service outlet.