Rockwell
MANUFACTURING COMPANY
The Rockwell Building • Pittsburgh, Pa.

PM-402-04-651-5008

DATED IM 3-25-66

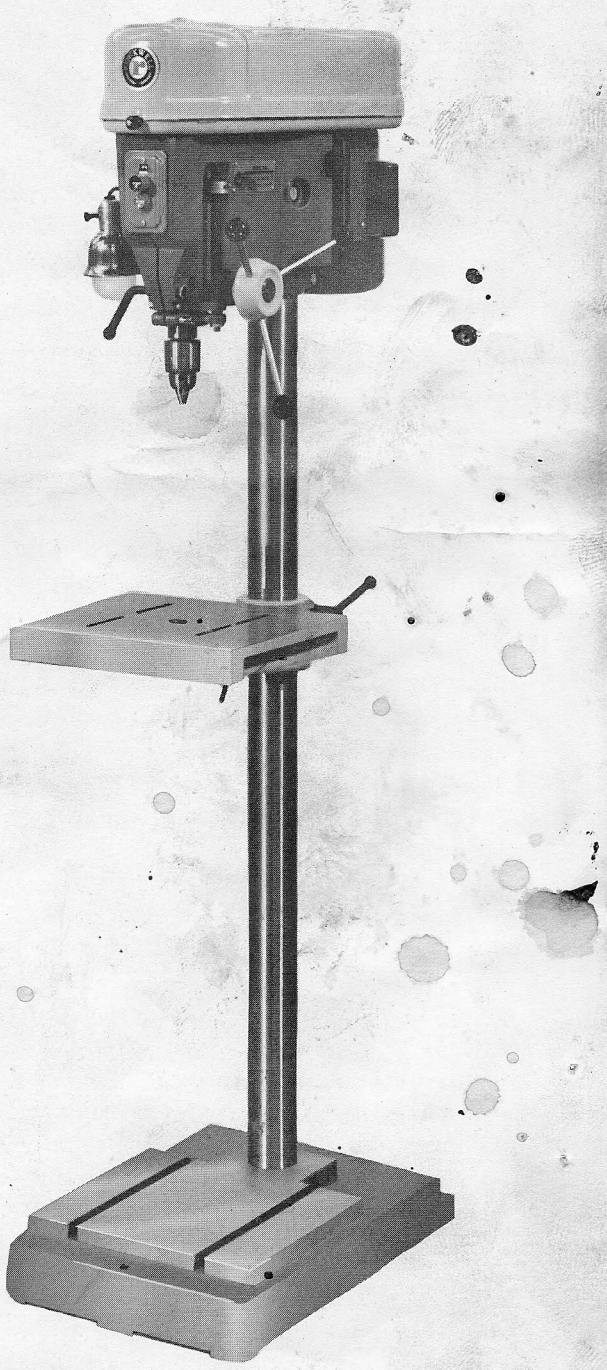
ROCKWELL–DELTA
6 PLUS 6 – 15" DRILL PRESS
(beginning with serial #139–3001)

M.N. 15-665

S.N. 1483563

INTRODUCTION

Your 15" Drill Press has been completely assembled and tested at the factory. All that is necessary for you to do is loosen the clamp nut (A) Fig. 4, on left hand side of head, that holds the head to the column, slide the head up until casting top is level with the top of the column and retighten clamp nut. Then loosen clamp nut (B) Fig. 4, move support collar (C) up against bottom of head, and tighten clamp nut.



MOTORS AND SPEEDS

A 1/2 hp 1140 rpm motor, 1/2 hp 1725 rpm motor, or 3/4 hp 1725 rpm motor is recommended for use on your drill press. The 1725 rpm motor will give spindle speeds of 425, 600, 1100, 2050, 3900, and 5500. Speeds with the 1140 rpm motor will be 280, 395, 725, 1355, 2575, and 3635.

The 1725 rpm motor is correct for most applications, and is less expensive than the 1140 rpm motor. However the 1140 rpm motor may be well worth the difference in cost for drilling holes up to the maximum capacity of the machine. It provides a lower actual spindle speed, and many times allows the smallest step on the motor pulley to be avoided, resulting in better belt life. The highest speed is obtained when the belt is on the largest step of the motor pulley and the smallest step of the spindle pulley.

When selecting a motor from any other source, be certain it is capable of taking the end thrust due to the weight of the rotor, and that it is protected against loss of lubricant when operated in the vertical position. This is especially important in sleeve bearing motors. Consult your Rockwell Dealer for a six inch frame motor of the correct characteristics to meet your requirements.

The motor should turn in a clock wise direction when it is viewed from the top when installed. Rockwell motors should be bolted to the motor plate so that the switch is on the left-hand side as you face the drill press. If you use another motor and it runs the wrong way, either turn it ar ound or reverse it's rotation.

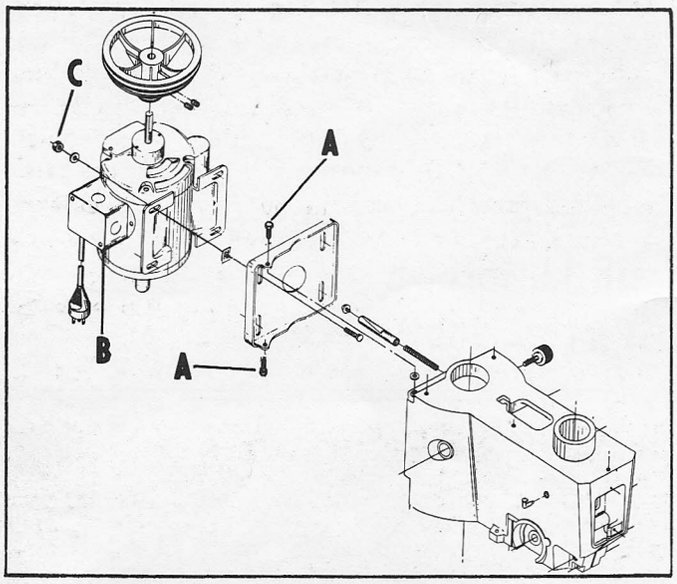


Fig. 2.

MOTOR INSTALLATION

The following procedure is recommended for assembling the motor to the Drill Press head.

1. Insert the key in the keyway of the motor shaft and assemble the motor pulley to the motor making sure that the set screws in the motor pulley are tightened against the key in the motor shaft.

2. Remove the two hexagon head cap screws (A) Fig. 2, and remove motor plate from the drill press head.

3. Mount the motor to the motor plate. Junction box (B) Fig. 2, should be on left hand side as shown.

4. Tighten finger tight the four motor mounting nuts (C) Fig. 2, that fasten motor to motor plate.

5. Lift whole unit to the drill press head and replace the two hexagon head cap screws (A) Fig. 2.

6. Loosen hand knob (A) Fig. 3, and push motor and motor plate in towards Drill Press Head as far as it will go. Then tighten hand knob (A).

7. Visually line up the motor so that it is in parallel alignment with the spindle. In most cases it will be necessary to raise the motor all the way and move it to the extreme right of head when looking from front of Drill Press. Tighten the four motor bolts (C) Fig. 2, and line up the motor pulley with the spindle pulley.

8. To install V-belt (B) Fig. 3, loosen hand knob (A), push motor and motor plate in towards drill press head as far as it will go, as shown in Fig. 3. Then tighten hand knob (A). Assemble belt (B), loosen hand knob (A) and push motor back to desired belt tension and retighten hand knob.

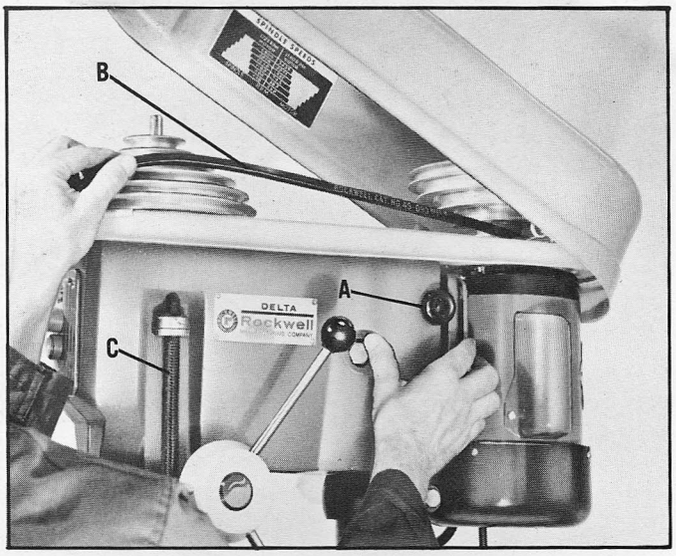


Fig. 3.

ADJUSTING SPINDLE RETURN SPRING

For the purpose of automatically returning the spindle upward after the hole has been drilled, a clock spring is provided enclosed in the case (D) Fig. 4. This spring has been properly adjusted at the factory and should not be disturbed unless absolutely necessary. If at any time it is necessary to adjust it proceed as follows:

1. To increase the tension of the spring, turn the screw (E) Fig. 4, which is located underneath the head, clockwise. CAUTION: BE CAREFUL NOT TO BOTTOM RETURN SPRING WHILE TURNING SCREW (E) FIG. 4, CLOCKWISE, THERE SHOULD BE ENOUGH SLACK LEFT IN SPRING TO PERMIT LOWERING THE SPINDLE THE FULL AMOUNT OF TRAVEL.

2. To decrease tension of the spring, turn the screw (E) Fig. 4, counterclockwise.

3. The tension of the spring can be tested by pulling down the hand feed lever (F) Fig. 4, and testing to see if the quill will return to the up position. Be sure the quill locking lever (G) Fig. 4, is loose while testing. NOTE: Before determining if this adjustment is necessary, make sure the stop rod (C) Fig. 3, runs freely up and down and is not twisted in the slot or guide of the head casting.

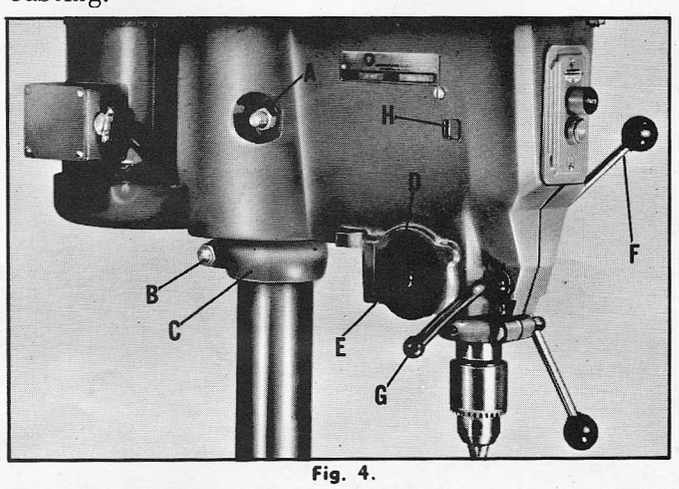


Fig. 4.

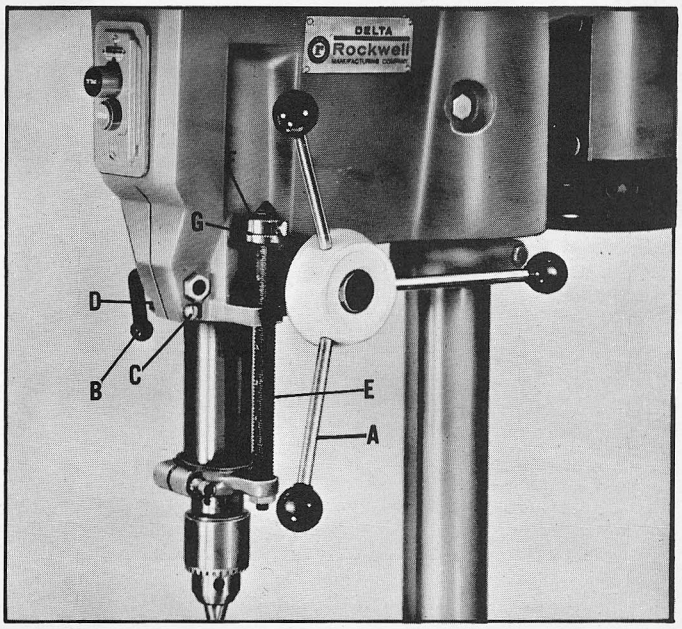


Fig. 5.

DRILLING HOLES TO DEPTH

When drilling one or two holes to a predetermined depth, the calibrations on the face of the depth stop rod (E) Fig. 5, can be used.

When drilling a number of holes to a predetermined depth, or if a more exact setting is required, proceed as follows:

1. Raise the locking sleeve (F) Fig. 5, and turn the micro-nut (G) to the desired position on the stop rod (E).

2. Lower the locking sleeve (F) so it will engage micro-nut (G) Fig. 5. Lock sleeve in place with thumb screw if drill press head is mounted in other than vertical position. When the drill press is mounted with the chuck pointing up, the locking sleeve (F) and Micro-Nut (G) Fig. 5, should be reversed on the stop rod (E).

3. When locking sleeve (F) is in place on the micro-nut (G) Fig. 5, the micro-nut can not be turned. When a change in depth is required, the locking sleeve (F) must be raised and while it is raised, turn the micro-nut (G) the necessary calibration marks. Each mark represents .002".Then lower the locking sleeve.

4. The use of the micro-set stop nut will maintain the same hole depth, no matter how many holes are to be drilled. However, we recommend that the hole depth be checked whenever a drill has to be sharpened or changed.

QUILL ADJUSTMENTS

The spindle is raised and lowered by the hand lever (A) Fig. 5. The quill can be locked at any desired point in its travel by tightening the quill lever (B) Fig. 5. This is an especially desirable feature for router and shaper work.

The adjusting screw (C) Fig. 5 and nut (D) are set at the factory to give the quill the proper sliding fit in the head casting. After long service play between quill and head casting can be removed without the need to replace these parts. The nut (D) Fig. 5 is loosened, adjustment is made with the screw (C), and the nut is again tightened to prevent the screw from turning. Hold the screw with a screwdriver when nut is tightened, and check by moving the quill up and down several times to be sure the quill does not bind. This adjustment should be made with the stop rod (E) Fig. 5 removed.

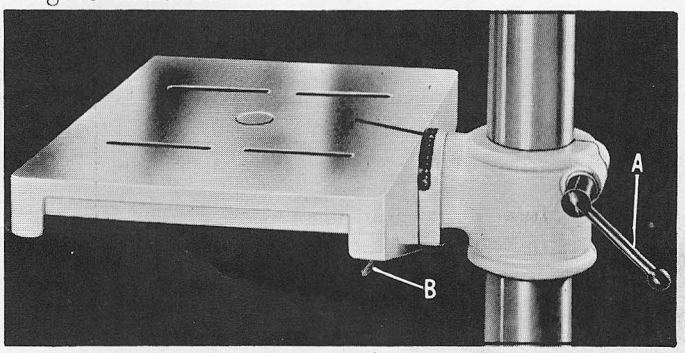


Fig. 6.

TABLE ADJUSTMENTS

To adjust the table up or down loosen the lock bolt (A) Fig. 6, on the table bracket. Hold the table while doing so.

To tilt the table to the right or left, loosen the pivot nut located under the table, remove the pin (B), and tilt the table to the required angle and tighten the pivot nut. To set the table in the vertical position accurately, move the table to a vertical position, insert the pin (B) through one of the side holes in the apron of the table proper, and into the hole in the table bracket. Then tighten the pivot nut. To return the table to the horizontal position, loosen the pivot nut, withdraw the pin (B) Fig. 6, set the table level, then reinsert the pin through the holes and tighten the pivot nut.

The table has been designed with ledges, one on each side, to facilitate the clamping of work pieces.

The table may also be tilted to any degree between horizontal and vertical positions. A scale (C) Fig. 6, is located at the rear of the table and is graduated in degrees. When the table is tilted between horizontal and vertical positions, the pin (B) must be removed. The table can be tilted either right or left.

LUBRICATION

The ball bearings in the quill and spindle pulley are grease-sealed for life. The quill is oiled through oiler (H) Fig. 4, which is on the left side of the drill press head. The head has a groove on the inside to allow the oil from the oiler (H) Fig. 4 to flow down and oil the pinion shaft and rack. The spindle return clock spring should be oiled three or four times a year. This is lubricated through the oil holes provided in the clock spring housing (D) Fig. 4.

HOW TO CHANGE SPINDLE ADAPTERS

One of the unique features of the 6" Stroke, 15" drill press is the ease with which various spindle adapters may be used.

When removing either the chuck or the spindle adapters, we recommend the use of the Cat. No. 15-838 spanner wrench which is supplied with your drill press. Turn the locking collar of the adapter or chuck with the spanner wrench while keeping the spindle from turning by either holding V-belt or holding the chuck with the chuck key in one of the pilot holes in the nose of the chuck, as shown in Fig. 7.

When attaching adapters to the spindle, it is very important to wipe clean both the spindle taper and taper hole in adapter. Then place the adapter on the spindle and tighten the locking collar (A) Fig. 7. If in checking the spindle for accuracy, there should be a run out, we suggest that the adapter be removed and turned perhaps one quarter or one-half turn and replaced. This may reduce or eliminate the run out, it may also increase it, in which case, remove the adapter and turn it some more on the spindle.

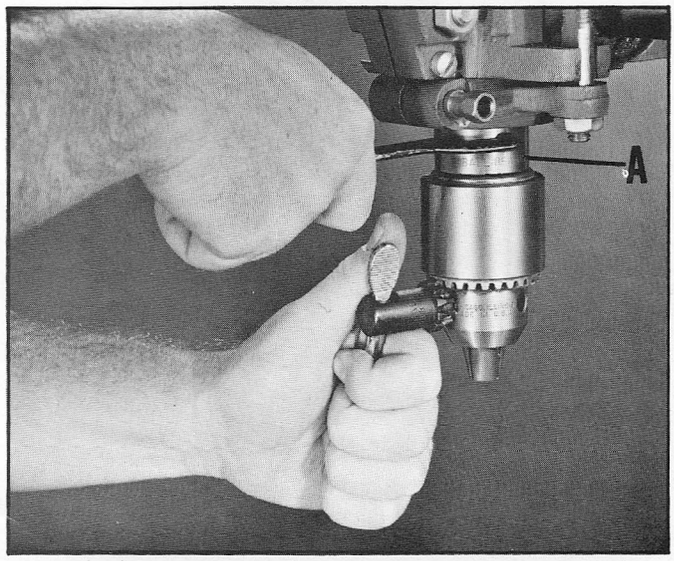


Fig. 7.

ROCKWELL GUARANTEE

Rockwell is proud of the quality of the power tools which it sells. The component parts of our tools are inspected at various stages of production, and each finished tool is subjected to a final inspection before it is placed in its specially designed carton to await shipment. Because of our confidence in our engineered quality, we agree to repair or replace any part or parts of Rockwell Power Tools or Rockwell Power Tool Accessories which examination proves to be defective in workmanship or material. In order to take advantage of this guarantee, the complete portable power tool or accessory, or in the case of machinery, the part must be returned prepaid to the appropriate factory, factory branch, or authorized service station for our examination. This guarantee, of course, does not include repair or replacement required because of misuse, abuse, or normal wear and tear. Repairs made by other than our factory, factory branch, or authorized service station, relieves Rockwell of further liability under this guarantee. This guarantee is made expressly in place of all other guarantees expressed or implied with respect to fitness, merchantability or quality.

MOTORS

Motors are built to Rockwell's specifications by only leading motor manufacturers. A service station list is supplied with your motor and all defective motors (both in and out of guarantee) should be taken to the local authorized repair station when service is desired.

AUTHORIZED DELTA PARTS DISTRIBUTORS

CALIFORNIA

LOS ANGELES, 90007
Rockwell Manufacturing Company
2400 South Grand Avenue
Phone: 213 749-0386

OAKLAND, 94601
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Phone: 303 388-5803

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Rockwell Manufacturing Company
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Phone: 404 351-5434

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4533 North Avenue
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DETROIT, 48220
Waterston's
960 West Eight Mile Road
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MISSOURI

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Rockwell Manufacturing Company
1649 Jarboe Street
Phone: 816 221-2070

NEW YORK

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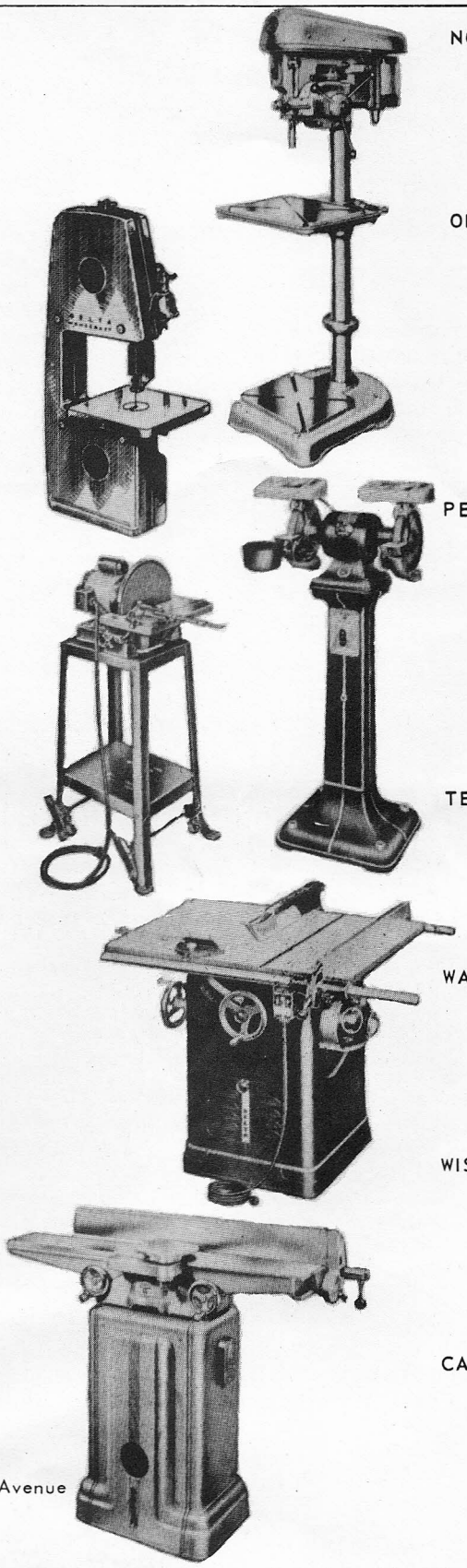
Rudolf Bass, Incorporated
175 Lafayette Street, Cor. Grand Street
Phone: 212 CA 6-4000

BUFFALO, 14204
Karle Saw Company, Incorporated
138-150 Chicago Street, Cor. So. Park Avenue
Phone: 716 853-8053 or 853-8054



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Phone: 414 774-3650

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Rockwell Manufacturing Company
of Canada Limited
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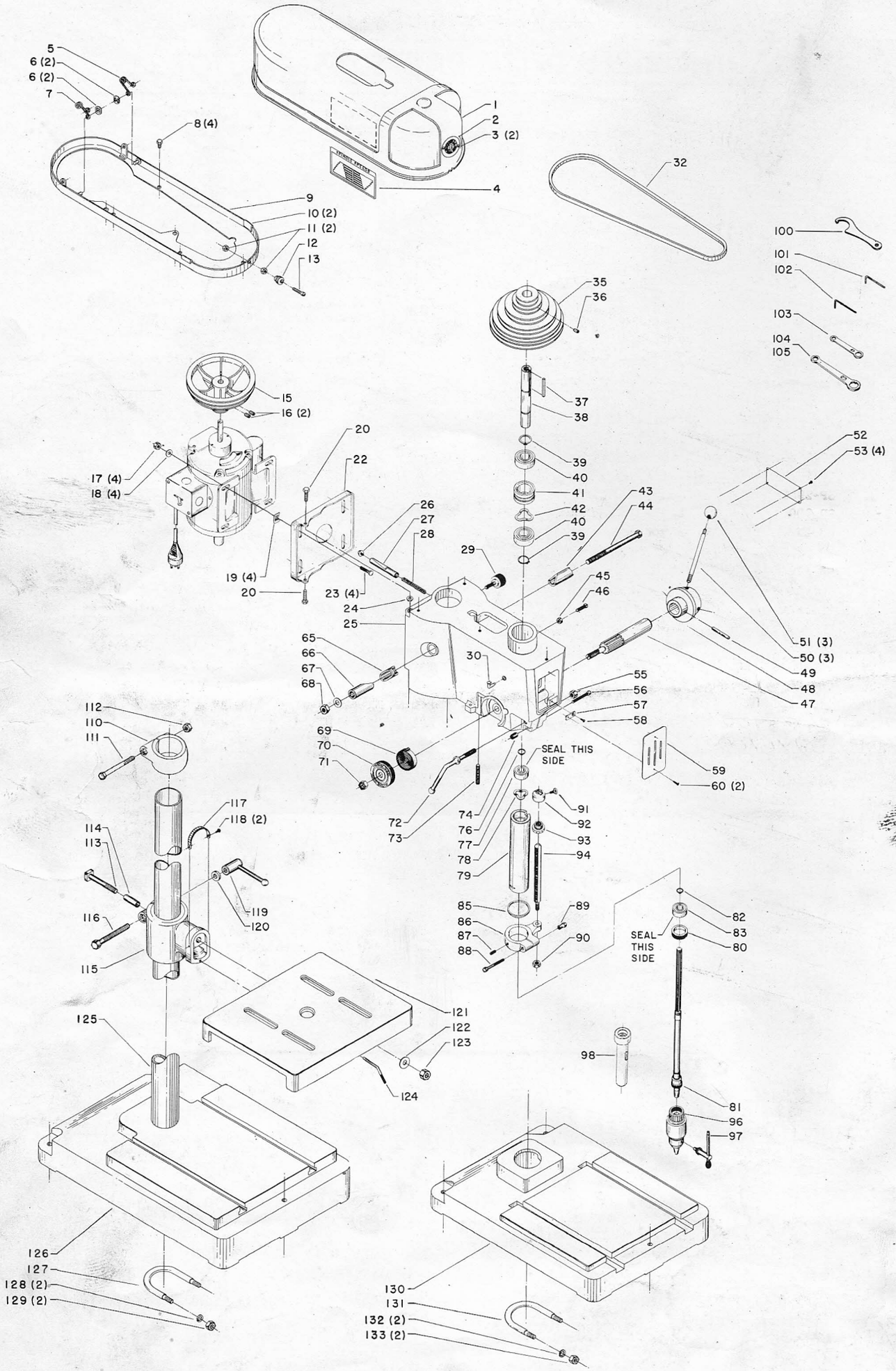
Phone: 807 822-2840

Authorized Delta Parts Distributors stock a complete line of replacement parts. To save time and shipping cost send your parts orders to your nearest distributor and in most cases they will be filled and shipped within 48 hours. We do not fill any parts orders direct from the factory.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Replacement Parts

Ref. No.	Part No.	Description
	Cat. #15-825	Belt Guard Complete, Consisting of:
1	402-04-354-5024	Belt Guard, Including:
2	960-02-012-0028	Nameplate
3	SP-2252	#2 x 3/16"Drive Screw
4	960-03-012-0414	Speed Chart
5	928-03-011-8878	Spring - R. H.
6	902-03-010-2971	Tinnerman Nut
7	928-03-011-8879	Spring - L. H.
8	SP-629	5/16-18 x 3/8"Hex. Hd. Screw
9	402-04-354-5014	Guard Pan, Including:
10	DP-906	Bumper
11	SP-1203	#10-32 Hex. Nut
12	DP-544	Lock Knob
13	SP-749	#10-32 x 7/8"Fil. Hd. Screw
15	Cat. #41-832	Motor Pulley, 1/2"Bore, Including:
16	901-04-150-6215	1/4-20 x 3/8"Soc. Set Screw
15	Cat. #41-833	Motor Pulley, 5/8"Bore, Including:
16	901-04-150-6215	1/4-20 x 3/8"Soc. Set Screw
17	SP-1300	5/16"-18 Hex. Nut
18	SP-1620	11/32 x 11/16 x 1/16"Washer
19	SP-2951	Speed Nut
20	SP-606	5/16-18 x 5/8"Hex. Hd. Screw
22	DP-515	Motor Plate
23	SP-834	5/16-18 x 3/4"Carriage Bolt
24	SP-1620	11/32 x 11/16 x 1/16"Washer
25	402-04-057-5005	Head Casting
26	SP-2851	Bumper
27	DP-874	Motor Plate Plunger
28	DP-519	Spring
29	931-03-991-9032	Hand Knob
30	907-01-050-5239	Oiler
32	Cat. #49-093	V-Belt (44 1/2" O. C.)
35	926-07-992-0588	Spindle Pulley Assy., Including:
36	901-04-150-6215	1/4-20 x 3/8"Soc. Set Screw
37	SP-2668	3/16 x 3/16 x 1 3/4"Key
	402-04-405-5006	Sleeve Assembly, Consisting of:
38	402-04-105-5006	Sleeve
39	SP-7025	Retaining Ring
40	SP-5360	Bearing
41	DP-514	Retainer
42	SP-7352	Spring Washer
43	SDP-22	Clamp Sleeve
44	SP-621	1/2-13 x 5 1/2"Hex. Hd. Screw
45	SP-5435	5/16-18 Hex. Jam Nut
46	SP-378	5/16-18 x 7/8"Sq. Hd. Set Scr.
47	402-04-051-5008	Pinion
48	402-04-107-5002	Hub
49	905-01-010-6745	3/16 x 1 7/8"Roll Pin
50	402-04-108-5008	Rod
51	FJ-324	Knob
52	960-02-012-0038	Nameplate
53	SP-2250	#4 x 3/16"Drive Screw
55	SP-1232	7/16"-20 Hex. Nut
56	SP-703	1/4-20 x 1 3/4"Fil. Hd. Screw
57	438-01-021-0081	Switch Bracket
58	SP-3016	#6 x 7/16"Rd. Hd. Self-Tapping Screw
59	DP-572	Switch Opening Cover
60	SP-3015	#6 x 1/4"Rd. Hd. Self-Tapping Screw
65	SDP-49	Column Clamp
66	SDP-21	Clamp Sleeve
67	CBL-447	33/64 x 7/8 x 1/16"Washer
68	SP-1282	1/2"-13 Hex. Nut
69	928-08-011-8868	Pinion Clock Spring
70	DP-528	Clock Spring Housing
71	902-01-281-7295	1/4"-20 Hex. Lock Nut
72	DP-875	Ball Crank
73	DP-527	Adjusting Screw
74	SD-18	1/4"-20 Hex. Nut
	402-04-377-5003	Quill Assembly, Consisting of:
76	SP-7411	Retaining Ring
77	SP-5384	Bearing
78	NL-306	Spring Washer
79	402-04-077-5002	Quill
80	BG-12	Bearing Nut
81	402-04-385-5006	Spindle Assembly, Including:
82	SP-7410	Retaining Ring
83	SP-5384	Bearing
85	SP-3769	Special Gasket
86	DP-524-R	Stop Collar, Including:
87	SP-112	#10-32 x 1/2"Headless Set Scr.
88	SP-622	1/4-20 x 2"Hex. Hd. Screw
89	DP-221	1/4"-20 Special Nut
90	SP-1005	3/8"-16 Hex. Nut
	402-04-408-5005	Stop Rod Assembly, Consisting of:
91	DP-561	Holding Nut
92	SP-1534	#6-32 x 1/4"Thumb Screw
93	402-04-088-5005	Micro Nut
94	402-04-108-5007	Stop Rod
96	Cat. #15-830	Chuck, Including:
97	DP-597	Key
98	Cat. #15-833	#2 Morse Taper Spindle Adapter
100	Cat. #15-838	Spanner Wrench
101	Cat. #1534	1/8"Hex. Socket Wrench
102	Cat. #194	5/32"Hex. Socket Wrench
103	Cat. #1526	Double End Wrench
104	Cat. #1524	Double End Wrench
105	Cat. #1538	Double End Wrench
110	Cat. #1010	Support Collar, Including:
111	SP-641	7/16-14 x 3 1/2"Hex. Hd. Screw
112	SP-1004	7/16"-14 Hex. Nut
	Cat. #15-809	Table Complete, Consisting of:
113	SP-2360	1/2-13 x 3 1/4"Sq. Hd. Bolt
114	402-04-105-5005	Sleeve
115	DP-204-A	Bracket Assembly, Including:
116	SP-618	1/2-13 x 3 1/2"Hex. Hd. Scr.
117	DP-560	Scale
118	SP-2849	#6 x 1/4"Drive Screw
119	DP-205-S	Lock Bolt
120	DP-6	Special Washer
121	402-04-091-5004	Table
122	SP-1636	17/32 x 1 1/16 x .095"Washer
123	SP-1028	1/2"-13 Hex. Nut
124	DP-8	Index Pin
125	Cat. #15-804	2 3/4"Dia. x 33 3/4"Column (Bench Model)
125	Cat. #15-805	2 3/4"Dia. x 38 3/4"Column (Bench Model)
125	Cat. #15-806	2 3/4"Dia. x 65 1/4"Column (Floor Model)
125	Cat. #15-810	2 3/4"Dia. x 78"Column (Floor Model)
126	402-04-005-5006	Base (Floor Model)
127	402-04-027-5003	Column Clamp
128	SP-1716	7/16"Split Lockwasher
129	SP-5437	7/16"-14 Hex. Nut
130	402-04-005-5008	Base (Bench Model)
131	402-04-027-5003	Column Clamp
132	SP-1716	7/16"Split Lockwasher
133	SP-5437	7/16"-14 Hex. Nut

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