Rockwell
MANUFACTURING COMPANY
The Rockwell Building · Pittsburgh, Pa.

PM-434-04-651-5001

DATED IM 4-15-67

ROCKWELL/DELTA
12" GAP BED WOOD LATHES

VARIABLE SPEED MODEL

FOUR SPEED MODEL

INTRODUCTION

Like any fine woodworking machine, your Delta 12" Wood Lathe must be installed properly and kept in adjustment.

Although it was test run and adjusted at the factory, it should be thoroughly checked and readjusted if necessary.

PLEASE READ THIS ENTIRE MANUAL BEFORE INSTALLING OR OPERATING THE LATHE, so that you become thoroughly familiar with the adjustments and understand the functions of your lathe.

If you do not understand any portion of these instructions, please write to:

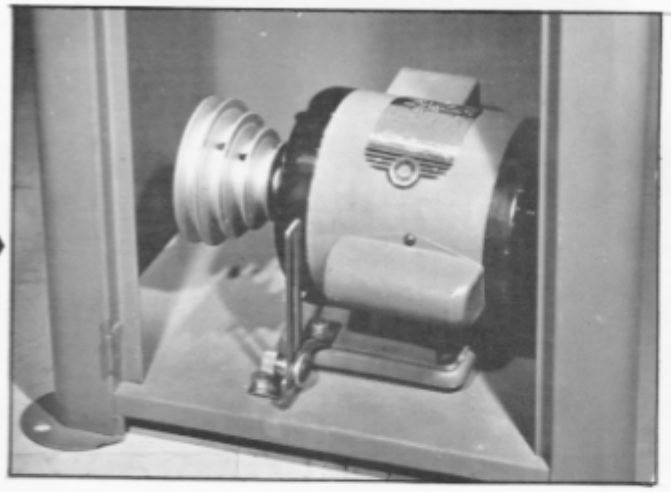
Rockwell Manufacturing Company
Power Tool Division
400 North Lexington Avenue
Pittsburgh, Pennsylvania
ATTENTION: Service Department

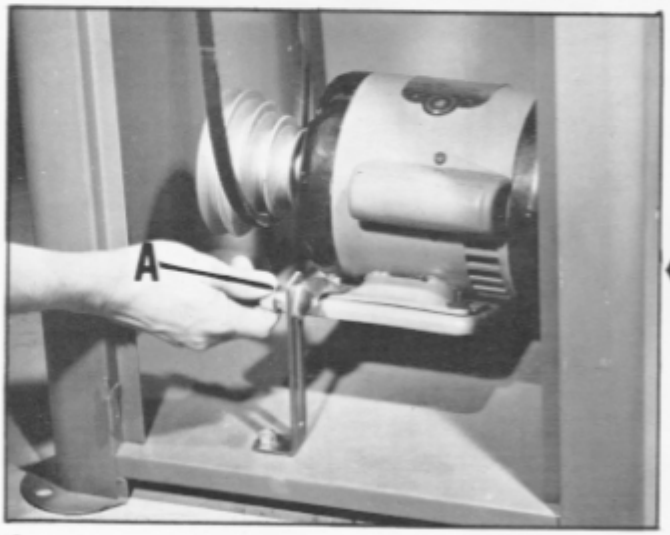
If there are any features you particularly like or any you do not like, we would also appreciate hearing from you. Be sure to tell us whether your lathe is used in a cabinet or pattern shop, school shop, homeworkshop, etc.

ASSEMBLING CABINET STAND

1. If you purchased the Variable Speed Lathe, you may disregard these instructions as your lathe and stand, were shipped completely assembled.
2. If you purchased the Four Speed Lathe, with the Cat. #50-150 Cabinet Stand, assemble the shelves to the leg of the stand, using nuts, screws, and washers provided, as shown in the parts drawing on Page 16.
3. Assemble the chip guard (Ref. #91) Page 16, to the cabinet as shown.

4. Mount the motor to the motor mounting plate and assemble the motor pulley to the motor as shown.



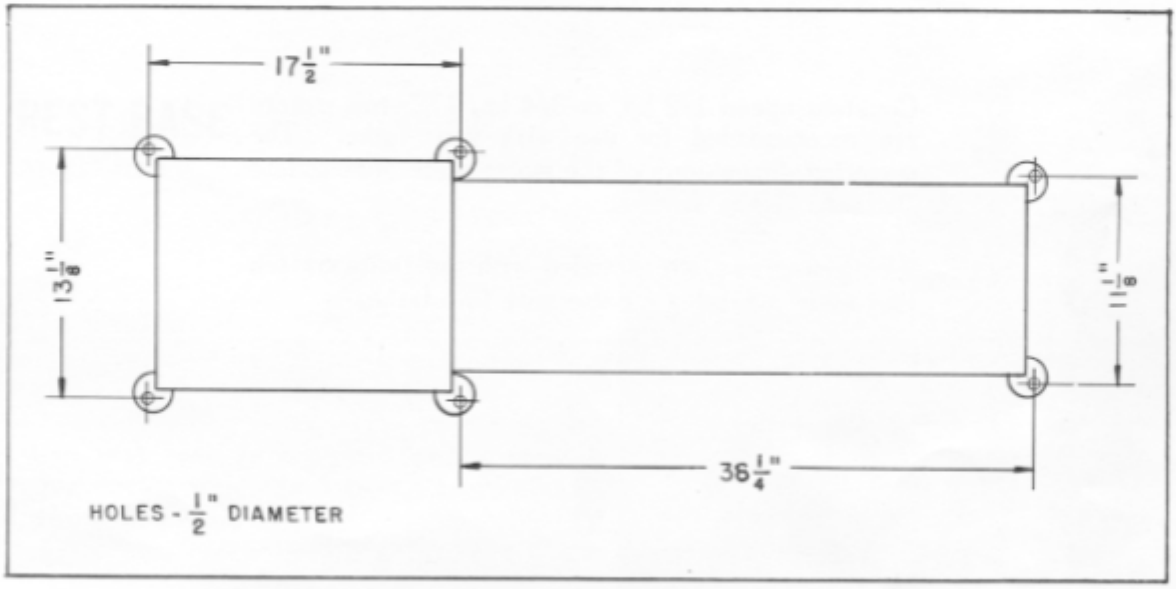


5. When changing speeds on four speed model lathes, merely loosen the knurled hand knob (A) and raise the motor to release belt tension.

Printed in U.S.A.

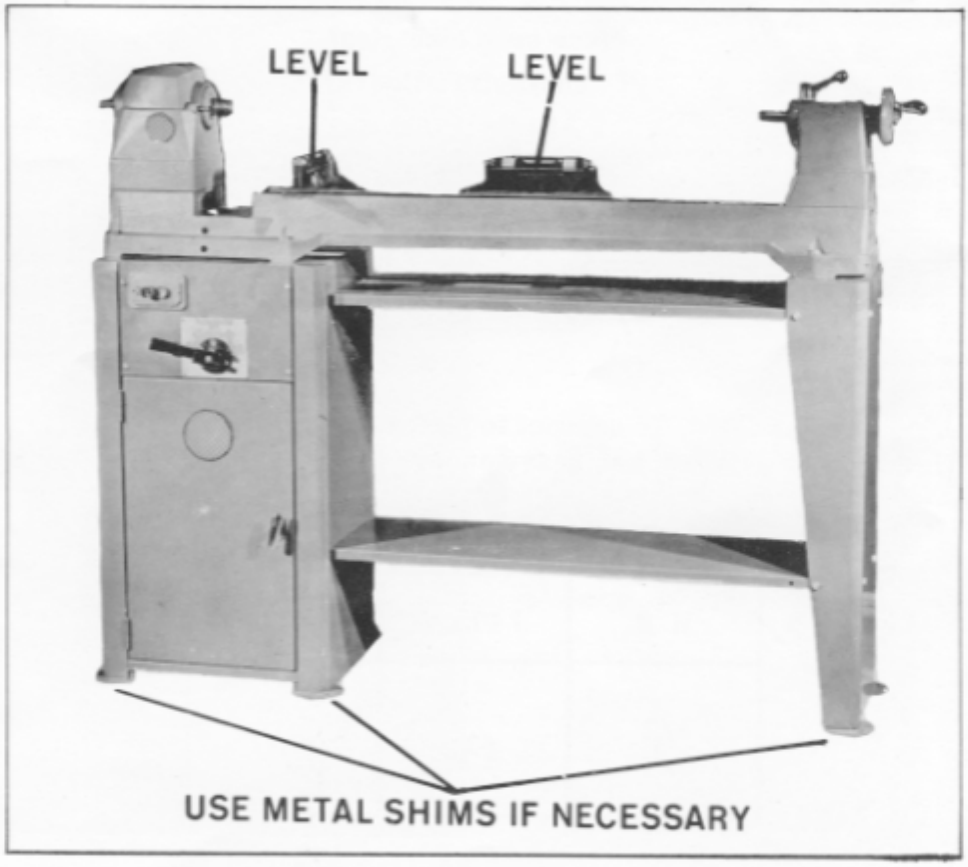
INSTALLATION

1. Select a suitable location and remove wood skids.



LOCATION OF FLOOR MOUNTING HOLES

2. Make sure lathe is level if you wish to fasten it to the floor.

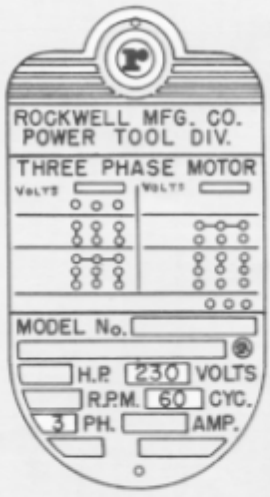


3. Remove the rust preventive from the machined surfaces using kerosene or similar solvent. CAUTION: Do not use acetone, gasoline, or lacquer thinner for this purpose.

ELECTRICALS

Constant speed 1/2 hp, or 3/4 hp, 1725 rpm motors are recommended for use with your lathe. The mounting dimensions of the motor plate accomodate Delta 6" frame motors.

Wiring diagrams are included with the Delta Switch kits made available for use with this lathe.



Nameplate on motor.

Make sure electrical characteristics are the same.

To connect to power source use heavy enough wire.

3 PHASE
230 VOLT
60 CYCLE

POWER SOURCE

Your power source.

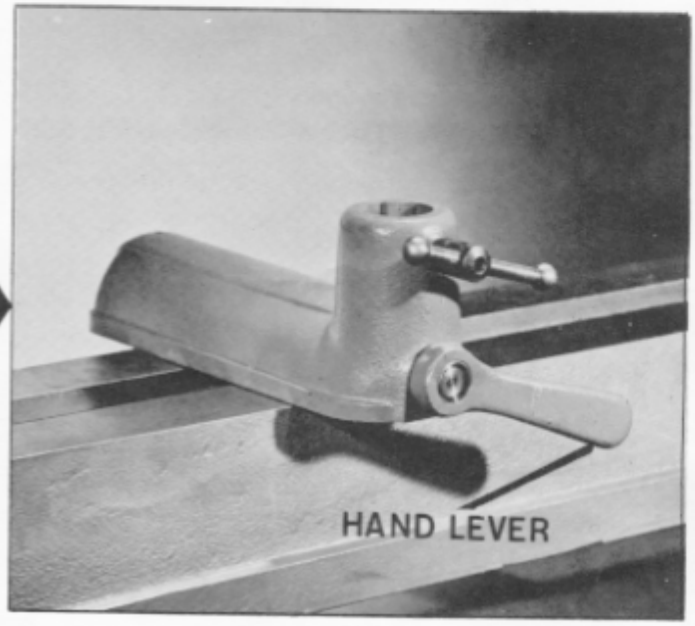
H. P	1 Phase	3 Phase
1/2 3/4	#14	#14

GENERAL ADJUSTMENTS

The following is an explanation of the general adjustments of the Delta 12'' Wood Lathe. The operator should check these adjustments carefully before turning on the power, to avoid damage to the lathe or injury to himself.

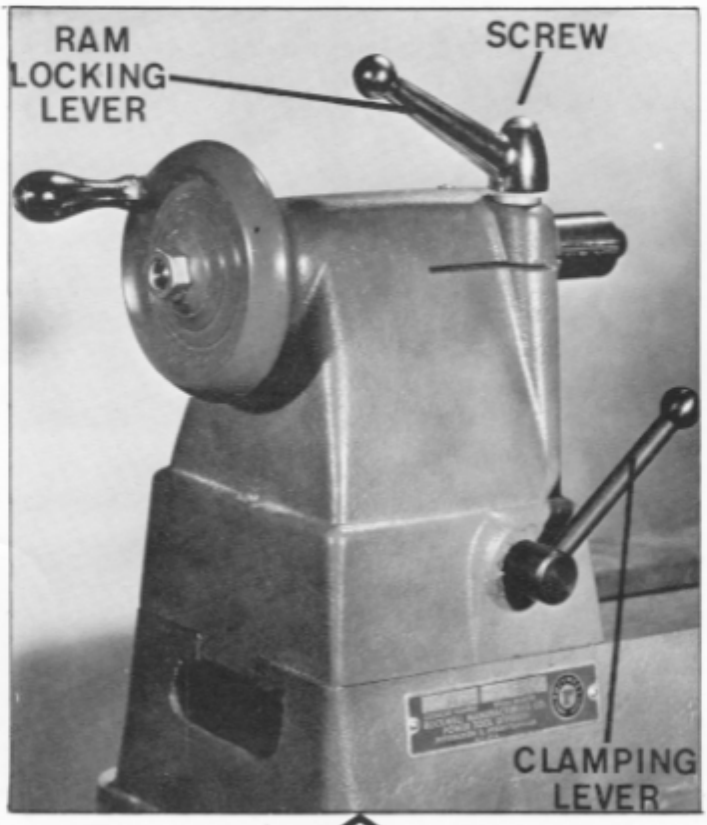
TOOL REST BASE

1. The tool rest base is equipped with a cam type clamping device which is actuated by turning the hand lever downward.



2. The clamping device has been set at the factory, however should it be necessary to reset, adjust the two hexagon nuts accordingly.

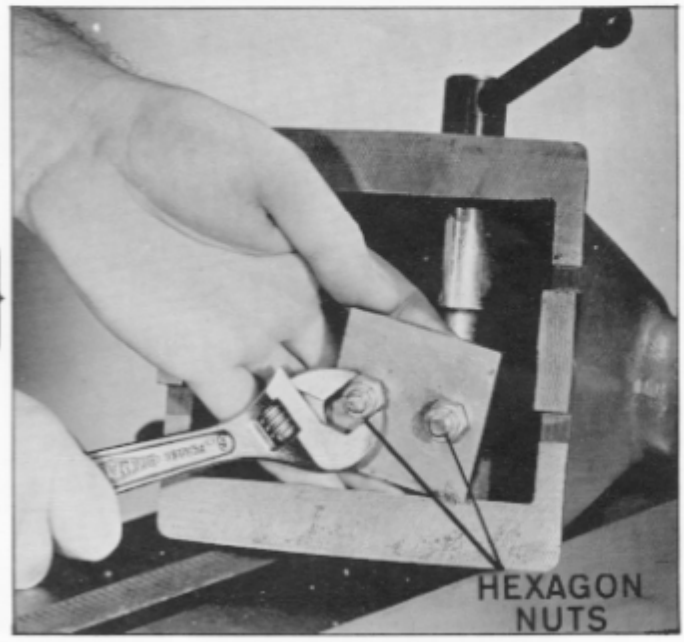
TAILSTOCK



1. The ram is locked by turning the ram locking lever to the right. It has been set at the factory so as to lock in a convenient position. If repositioning becomes necessary, remove screw, lift off handle and reposition.

2. The tailstock also is equipped with a cam type clamping device which is actuated by moving the clamping lever, in either direction.

3. The clamping device has been set at the factory, however should it be necessary to reset, adjust the two hexagon nuts accordingly.



ADDITIONAL ADJUSTMENTS FOR VARIABLE SPEED MODELS

VARIABLE SPEED CONTROL HANDLE

1. The variable speed control lever pivots and must be pulled out when changing speeds. When the desired speed is obtained, the lever is pushed in and automatically locks in position. It is only necessary to exert slight pressure to push the lever into the locked position.

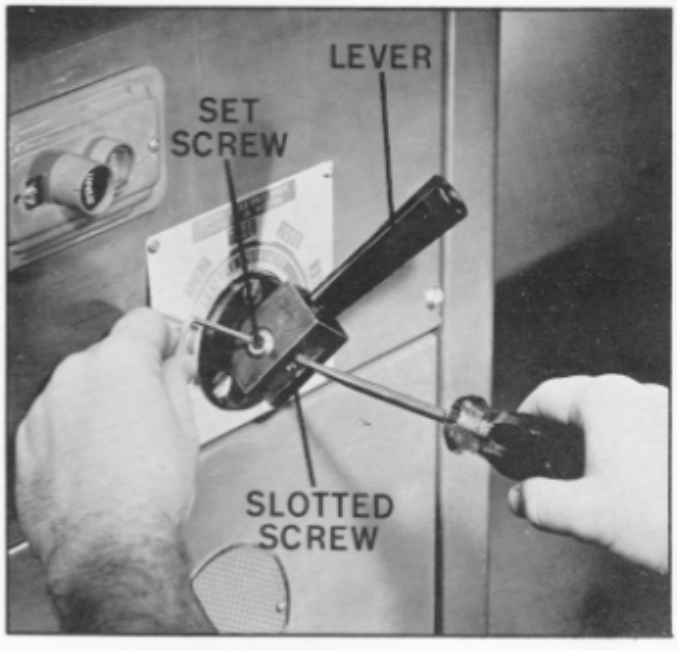
If after a long period of time slight wear may occur on some of the parts, causing the lever not to lock sufficiently, an adjustment can be made.

1. Pull lever out.

2. Loosen set screw with allen wrench.

3. Turn slotted screw slightly to the right.

4. Push lever in, and if it locks sufficiently, tighten set screw. If you are unable to push handle all the way in, back off slotted screw until correct adjustment is made.

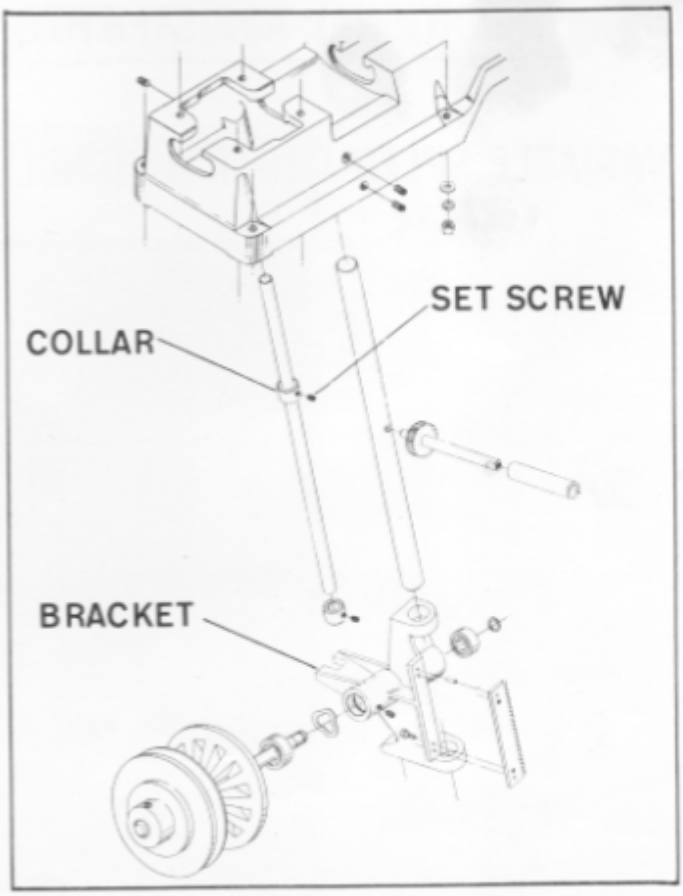


SPEED LIMIT CONTROL

Should you wish to limit the top speed lower than the maximum, an adjustment can be made.

1. Run the machine up to the desired speed and DISCONNECT MOTOR FROM POWER SOURCE.

2. Loosen set screw in top limit collar and lower the collar until it rests on bracket. Then tighten set screw.



SAFETY RECOMMENDATIONS

1. Make sure tailstock is securely locked in position and work is properly supported.

2. Always rotate work by hand to make sure it does not strike tool rest or bed.

3. Always keep tool rest as close to work as possible.

4. Do not use the index pin as a lock to hold the pulley stationary while unscrewing faceplates or other attachments.

5. Do not drive wood into drive center when it is in headstock. Set drive center into wood with a soft mallet prior to installing it in the lathe.

6. Never loosen tailstock ram while work is turning.

7. Never adjust tool rest while work is turning.

8. Never try to move index pin while spindle is turning.

9. Do not wear necktie, loose shirt sleeves or other loose clothing while working on the lathe.

10. Safety glasses or a face shield should be worn while working on lathe.

11. For inboard or outboard face plate turning, be sure material is securely fastened to the faceplate.

12. If you are not thoroughly familiar with the operation of power tools, obtain advice from your supervisor or instructor.

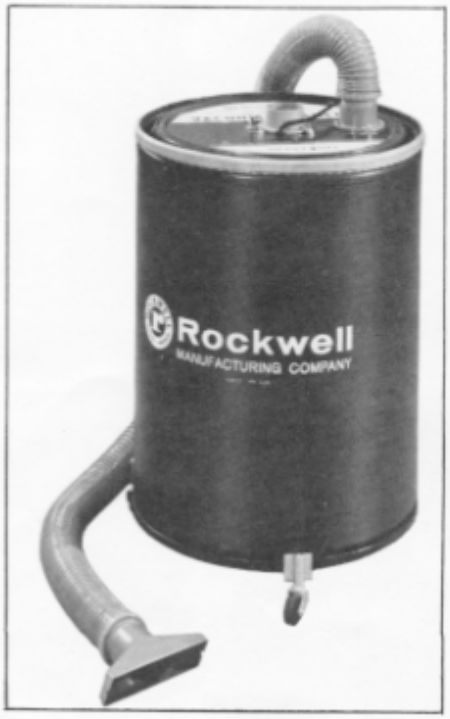
MAINTENANCE

CLEANING

Although the variable speed mechanism and motor are protected from chips and dust, a small amount is bound to filter inside the cabinet. Frequently clean out this accumulation. Rockwell has a fine line of Vacuum Cleaners that are ideal for cleaning out the cabinet and also for cleaning dust and chips that accumulate in your workshop.

Model 49-253
5-gallon capacity
vacuum cleaner
(casters extra).

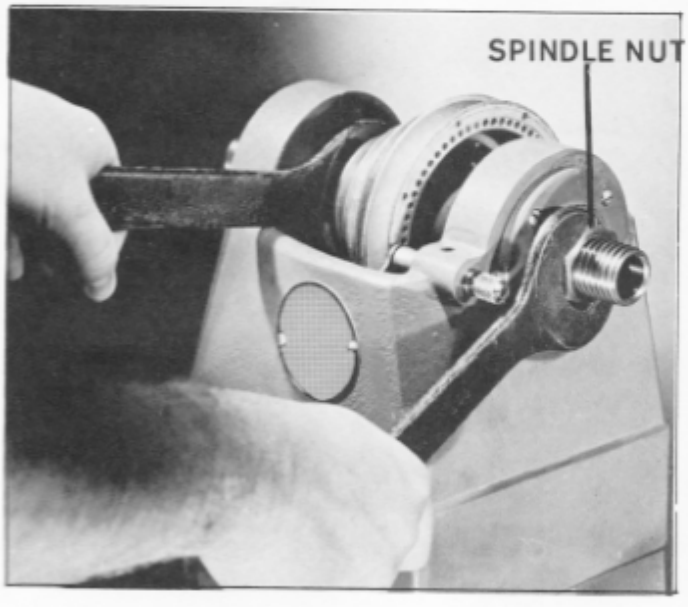
Model 49-254
18-gallon capacity
vacuum cleaner
(casters extra).

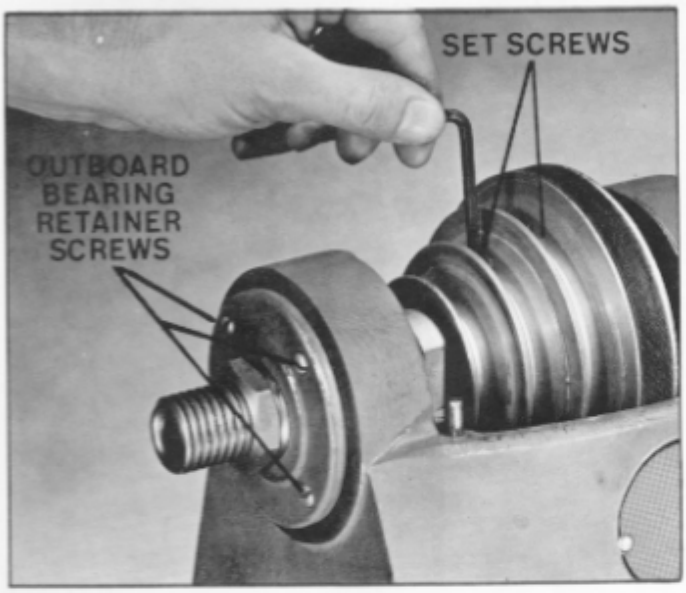


Model 49-255
28-gallon capacity
vacuum cleaner
(casters extra).

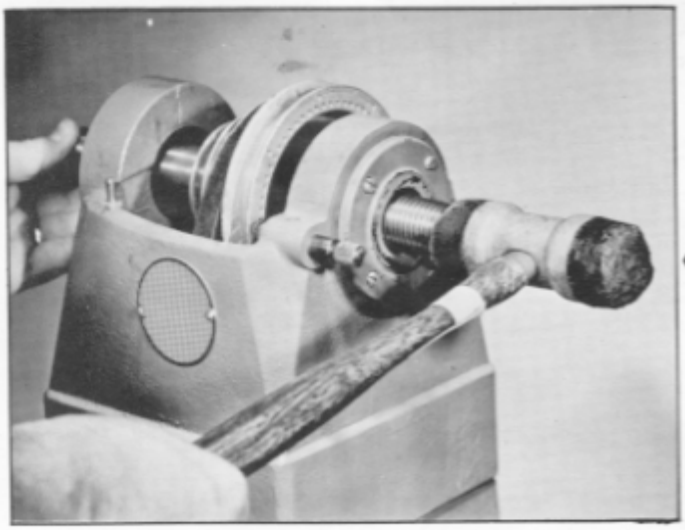
REPLACING BELTS

1. Unscrew spindle nut using two wrenches.

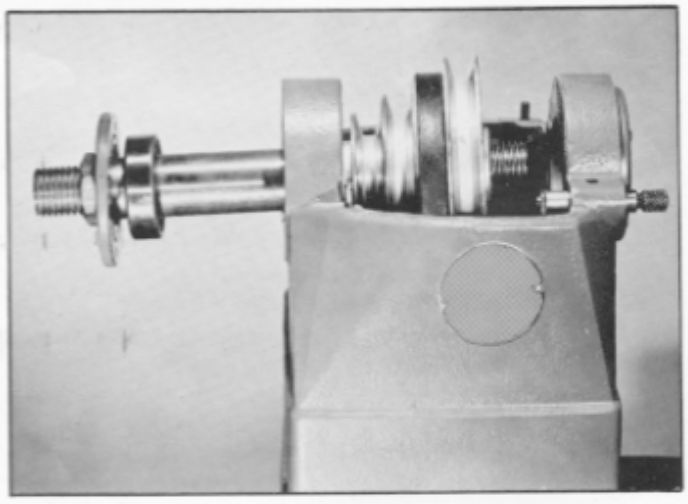




2. Loosen two set screws in pulley and remove four outboard bearing retainer screws.



3. Use soft hammer or block of wood and gently tap spindle.



4. Move spindle to the left far enough to remove and replace the belt.

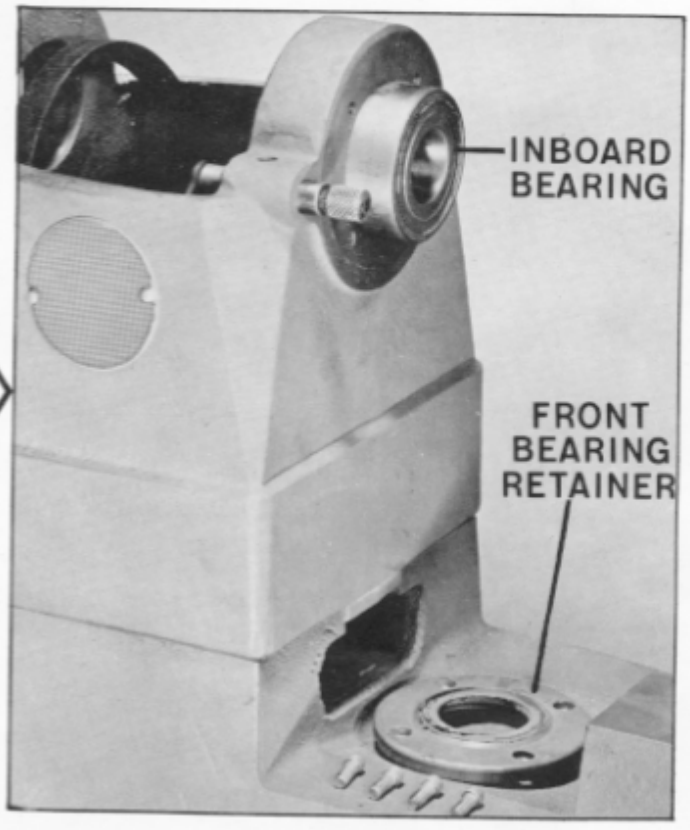
5. When reassembling, make sure the set screws in the spindle pulley are tightened against the flat surface of the spindle. Also recheck pulley aglinment. NOTE: On variable speed models it may be necessary to readjust the limit stops when replacing belts.

REPLACING BEARINGS

1. Repeat STEPS 1, 2, 3, and 4 under REPLACING BELTS.

2. Remove spindle, outboard bearing, spring washer, and spindle pulley completely from headstock.

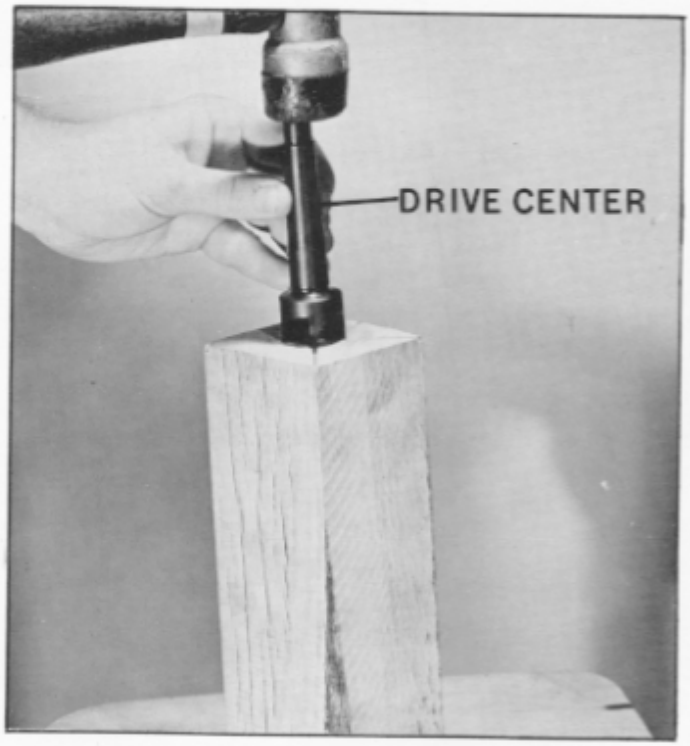
3. Remove front bearing retainer and inboard bearing.



4. When replacing bearings, make sure to replace required spring washer removed in STEP 2.

BASIC OPERATING INSTRUCTIONS

DRIVE CENTER



The drive center should be driven into the workpiece with a soft hammer or a block of wood. NEVER pound the drive center with a steel hammer. On hard woods, diagonal saw cuts should be made to receive the spurs.

LARGE FACEPLATE WORK

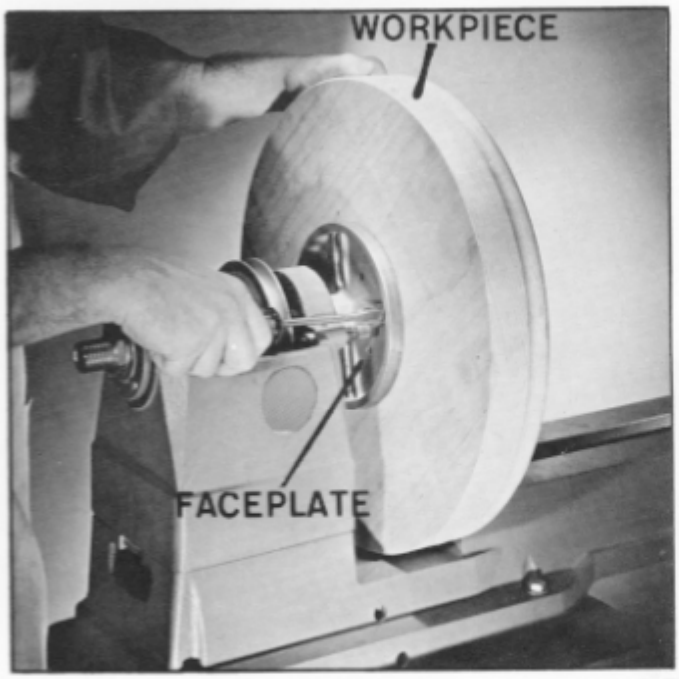
The maximum capacity for faceplate turnings in the gap is 16" dia. x 2 1/2" thick.

1. Bandsaw the workpiece accurately round.

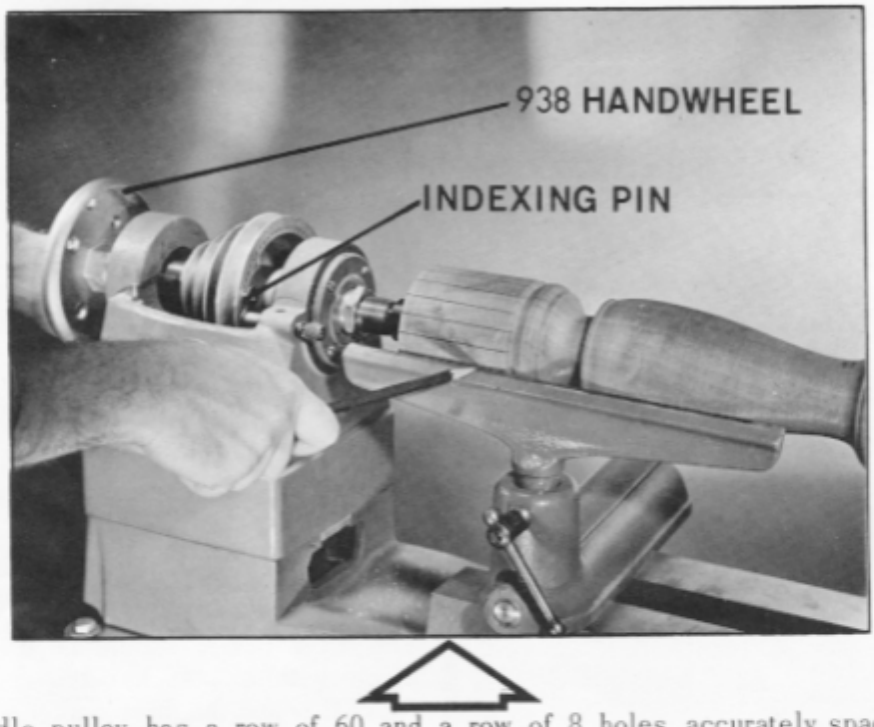
2. Mark the location of the faceplate on the workpiece and drill the holes for the screws.

3. Screw the face plate on the spindle and fasten the workpiece with the necessary screws.

NOTE: Illustrated is Delta Cat. #937 face plate, 6" in diameter, available as an accessory. It contains double threads both right hand and left hand and can be used on either end of the spindle.



INDEXING

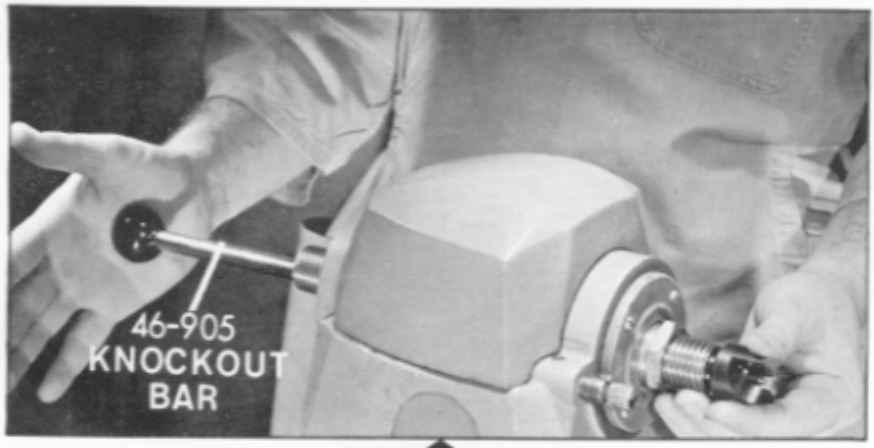


The spindle pulley has a row of 60 and a row of 8 holes accurately spaced around the rim of the pulley. This feature makes it possible to make evenly spaced divisions on turnings which could be fluted, grooved, or holes drilled at these points.

The 60 holes are spaced 45 degrees apart. The indixing pins on the side of the headstock has a short lever on the end which can be turned to engage any hole in either inner or outer row.

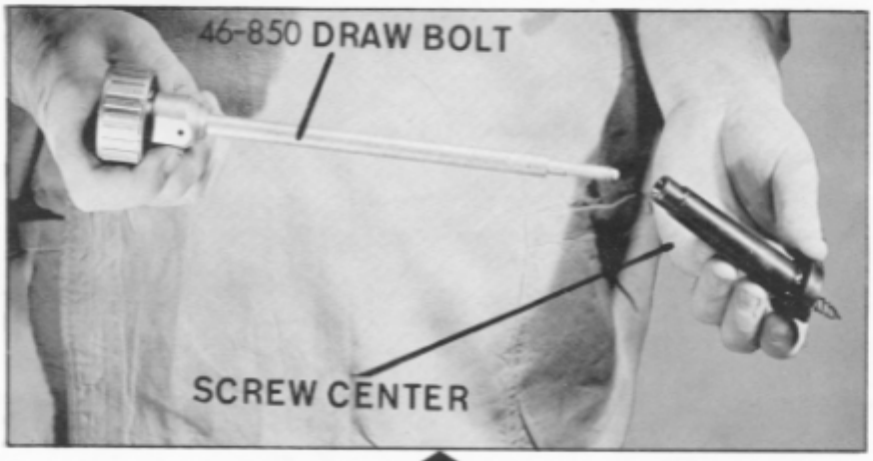
Illustrated is Delta Cat. #938 handwheel, available as an extra accessory. It is ideal for turning the lathe by hand while inspecting the work, or for bringing the lathe to a quick stop after the power has been turned off.

#46–905 KNOCKOUT BAR

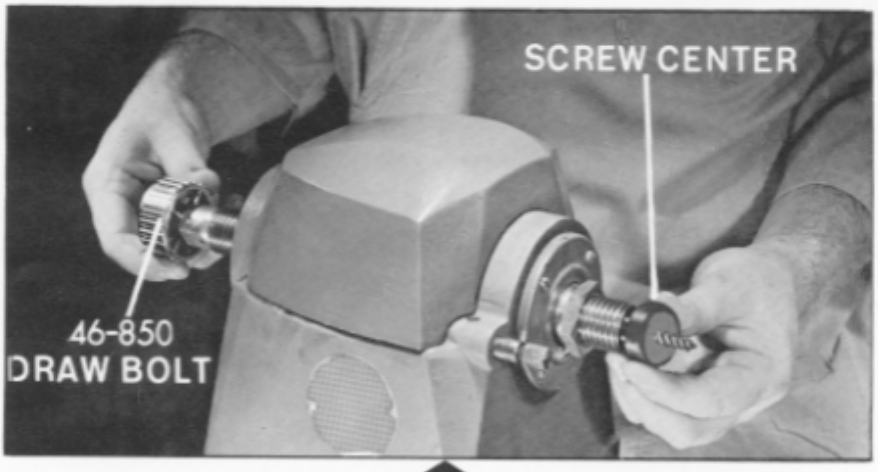


To remove tapered shank accessories from the headstock spindle, use a dowel rod 1/2" diameter or a piece of soft metal rod. The Delta Cat. #46-905 Knockout Bar illustrated is ideal for this purpose. It is available as an extra accessory. It is equipped with a brass plug on one end and a comfortable plastic knob on the other.

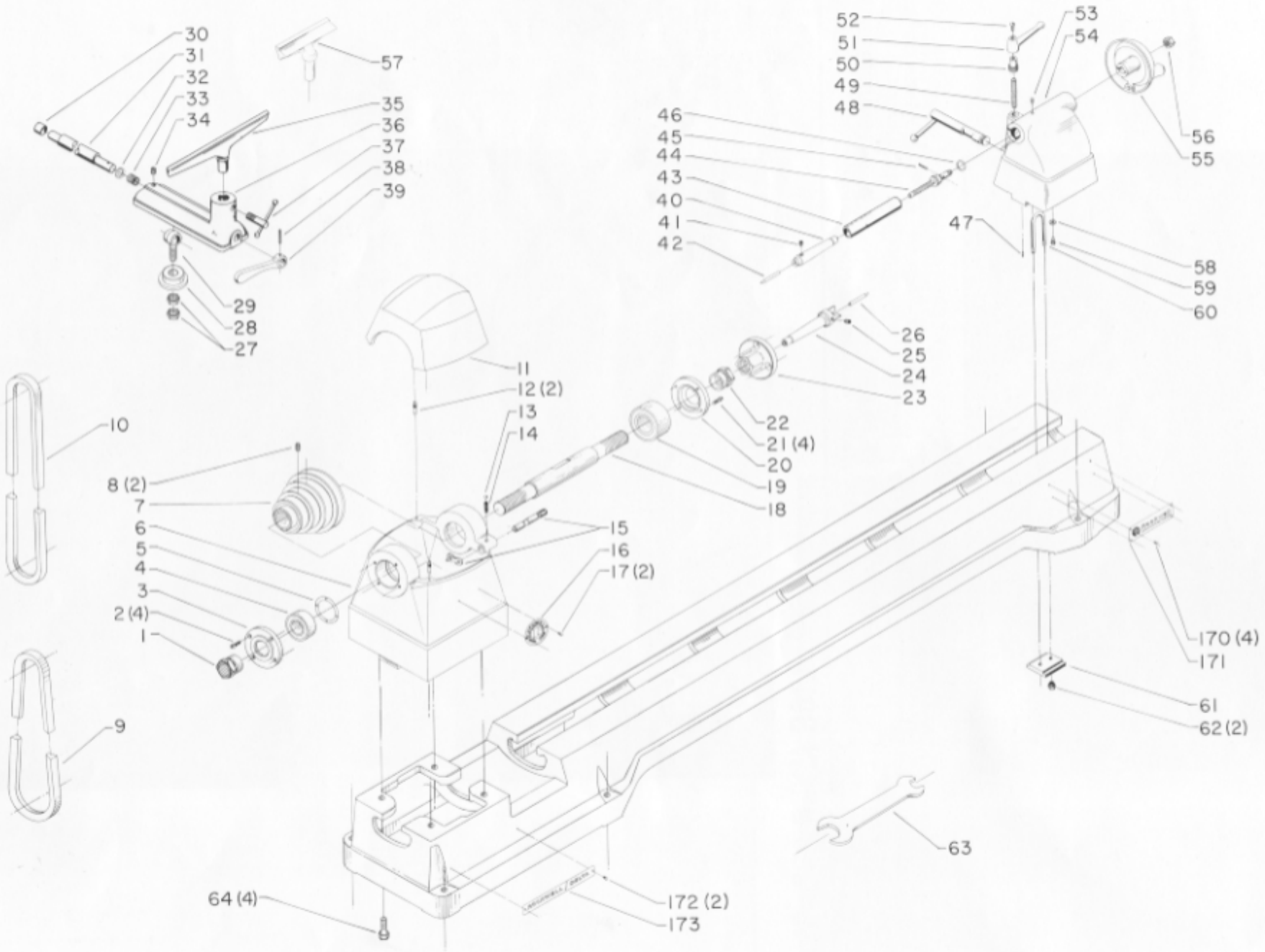
#46–850 DRAW BOLT



Certain tapered shank accessories like the #940 screw center, #163 and #164 sanding drum, and the #935 adapter, are used in the lathe usually without the assistance of the tailstock. These accessories can work loose and come out of the spindle while the lathe is in operation. Therefore they must be securely held in the spindle. These accessories have a 1/4" 20 threaded hole in the tapered end and should only be used together with the Delta #46-850 Draw Bolt.



1. Place the accessory in the spindle and insert the draw bolt from the opposite end, threading it into the accessory, and tighten.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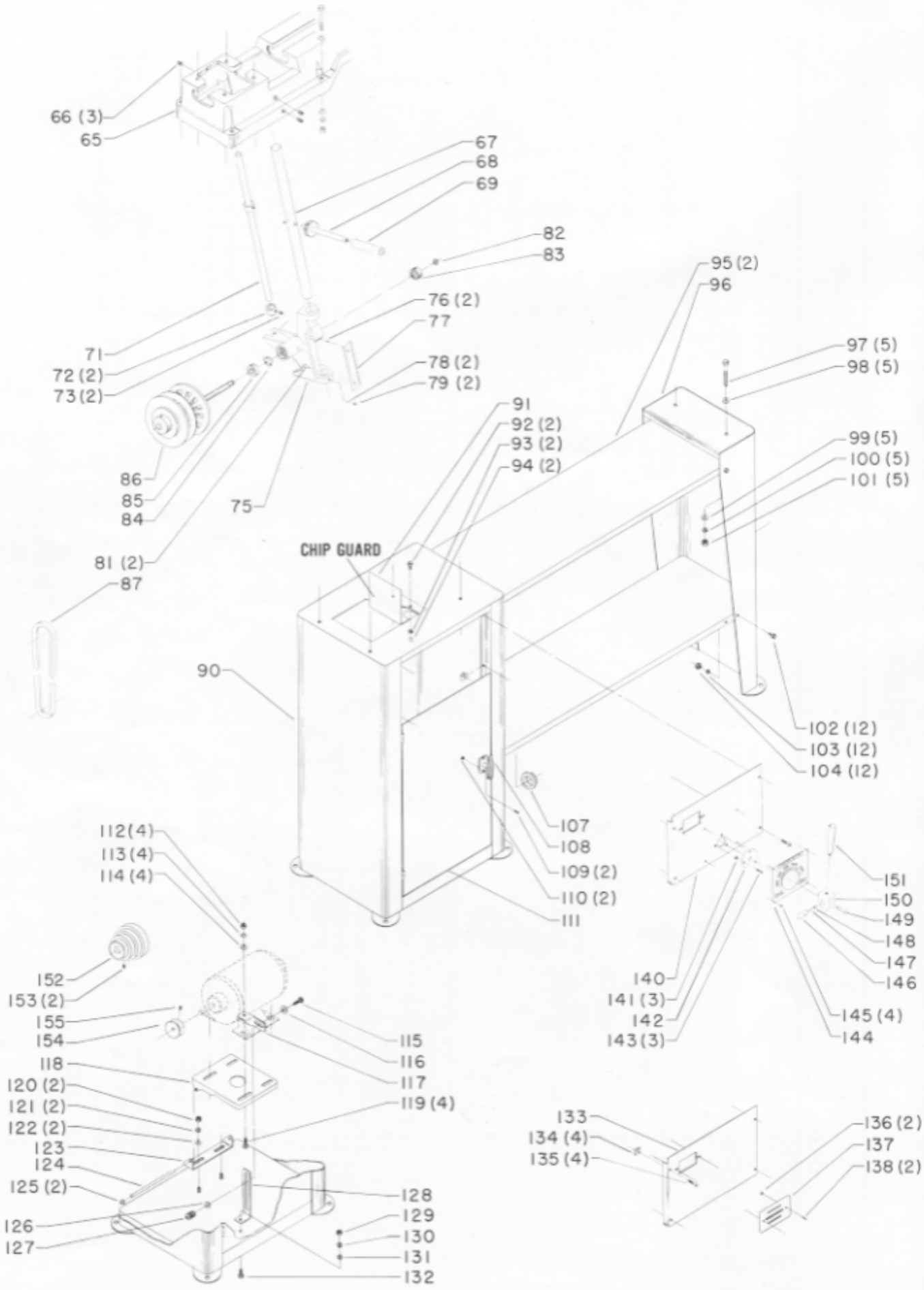
Replacement Parts

Ref. No.	Part No.	Description
1	CBL-410	Spindle Nut (L. H.)
2	DDL-105	#10-32 x 7/16"Fil. Hd. Screw
3	434-02-079-5002	Retainer
4	SP-5360	Bearing
5	SP-7352	Spring Washer
6	434-04-058-5001	Headstock
7	CBL-407-S	Spindle Pulley, Including:
8	SP-201	5/16-18 x 5/16"Soc. Set Screw
9	Cat. #49-094	Belt (Four Speed)
10	Cat. #51-008	Belt (Variable Speed)
11	434-04-054-5001	Guard
12	CBL-415	Pin
13	SP-27	7/32 Dia. Steel Ball
14	DDL-123	Spring
15	CBL-411-S	Index Pin
16	960-02-012-0037	Nameplate
17	SP-2250	#4 x 3/16"Drive Screw
18	434-02-085-5002	Spindle
19	SP-5334	Bearing
20	434-02-079-5002	Retainer
21	DDL-105	#10-32 x 7/16"Fil. Hd. Screw
22	902-01-201-5462	Spindle Nut (R. H.)
23	Cat. #936	3" Face Plate
24	Cat. #933	Drive Center, Including:
25	SP-253	1/4-28 x 1/4"Soc. Set Screw
26	DDL-206	Center
27	SBS-19	5/8-18 x 3/4"Hex. Nut
28	CBL-436	Flange
29	CBL-439	Eye Bolt
30	CBL-435	Bushing
31	CBL-438	Shaft
32	CBL-434	Washer
33	CBL-437	Spring
34	SP-102	1/4-20 x 3/8"Set Screw
35	Cat. #692	12" Tool Support
36	CBL-425	Base
37	CBL-440-S	Clamp Assembly
38	SP-2708	3/16 x 1 1/4"Roll Pin
39	CBL-433	Lever
40	Cat. #934	Cup Center, Including:
41	DDL-253	Special Screw
42	DDL-206	Center
43	CBL-416	Ram
44	434-04-112-5001	Adjusting Screw
45	SP-2704	1/8 x 3/4"Roll Pin
46	CWL-61	Washer
47	SP-2729	3/16 x 1/2"Roll Pin
48	CWL-65-S	Eccentric Shaft Assembly
49	SP-288	7/16-14 x 2"Soc. Set Screw
50	NCS-361	Serrated Nut
51	SR-217	Clamp Handle
52	SP-7528	1/4-20 x 1/2" Truss Hd. Screw
53	SP-2486	Oiler
54	CWL-63	Tailstock Body
55	930-01-991-9035	Handwheel
56	SP-1266	1/2 -13 Hex. Jam Nut
57	Cat. #46-805	6" Tool Support
58	SP-1764	1/4 Internal Tooth Lockwasher
59	DDL-154	Special Set Screw
60	DDL-278	"U" Bolt
61	CWL-64	Clamp Plate
62	SP-1212	5/16"-24 Hex. Nut
63	Cat. #949	Wrench
64	SP-658	3/8-24 x 1"Hex. Hd. Screw

170	SP-2250	#4 x 3/16" Drive Screw
171	960-02-012-1419	Nameplate
172	SP-2250	#4 x 3/16" Drive Screw
173	960-02-012-1420	Nameplate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Replacement Parts

Ref. No.	Part No.	Description
65	434-04-006-5001	Lathe Bed
66	SP-1112	3/8-16 x 1/2" Soc. Set Scr.
67	434-04-089-5001	Shaft Support
68	434-04-406-5001	Shaft Assembly
69	434-04-104-5001	Spacer
71	434-04-055-5001	Guide
72	H-5	Collar
73	SP-205	5/16 - 18 x 1/4" Soc. Set Scr.
75	434-04-014-5001	Pulley Support
76	SP-2729	3/16 x 1/2" Roll Pin
77	434-04-051-5001	Gear Rack
78	402-04-063-5001	Insert
79	SP-9415	1/4 - 20 x 1/4" Soc. Set Scr.
81	SP-611	1/4 - 20 x 1/2" Hex. Hd. Scr.
82	SP-7412	Retaining Ring
83	920-04-021-6618	Bearing
84	NL-306	Spring Washer
85	SP-5384	Bearing
86	434-04-406-5002	Variable Speed Pulley Assembly
87	Cat. #49-167	Motor Belt (Variable Speed)
	Cat. #50-150	Cabinet Complete (Four Speed) Consisting of:
90	434-04-318-5003	Cabinet
91	434-04-054-5002	Chip Guard
92	SP-611	1/4 - 20 x 1/2" Hex. Hd. Scr.
93	SP-1702	1/4" Split Lockwasher
94	SP-1034	1/4" - 20 Hex. Nut
95	434-04-015-5001	Shelf
96	434-04-366-5001	Leg Assembly
97	SP-644	3/8 - 16 x 2 1/2" Hex Hd. Scr.
98	SP-1615	13/32 x 13/16 x 1/16" Washer
99	SP-1605	3/8 x 7/8 x 1/16" Washer
100	SP-1704	3/8" Split Lockwasher
101	SP-5900	3/8" - 16 Hex Nut
102	SP-611	1/4 - 20 x 1/2" Hex Hd. Screw
103	SP-1702	1/4" Split Lockwasher
104	SP-1034	1/4" - 20 Hex Nut
107	438-01-011-0020	Insulator
108	369-13	Door Handle
109	SP-553	#6 - 32 x 1/4" Rd. Hd. Scr.
110	SP-1215	#6-32 Hex. Nut
111	434-04-331-5001	Door W/Hinges
112	SP-1300	5/16 - 18 Hex Nut
113	SP-2086	5/16" Split Lockwasher
114	SP-1605	3/8 x 7/8 x 1/16" Washer
115	SP-808	5/16 - 18 x 1" Carriage Bolt
116	SP-1638	15/32 x 59/64 x .065" Washer
117	424-04-014-5002	Bracket
118	DP-515	Motor Plate
119	SP-834	5/16 - 18 x 3/4" Carriage Bolt
120	SP-1300	5/16" - 18 Hex Nut
121	SP-2086	5/16" Split Lockwasher
122	240-21	13/32 x 1 x 5/32" Washer
123	402-04-072-5006	Plate
124	DP-517	Pin
125	SP-7035	Retaining Ring
126	SP-1605	3/8 x 7/8 x 1/16" Washer
127	NJ-283	Hand Knob
128	434-04-014-5003	Bracket
129	SP-1300	5/16" - 18 Hex Nut
130	SP-2086	5/16" Split Lockwasher
131	SP-1605	3/8 x 7/8 x 1/16" Washer
132	SP-607	5/16 - 18 x 3/4" Hex Hd. Scr.
133	434-04-031-5008	Cover
• 134	902-03-010-2968	Speed Nut
• 135	SP-535	1/4 - 20 x 1 1/4" Rd. Hd. Scr.
• 136	SP-1215	#6-32 Hex. Nut
• 137	DP-572	Switch Cover Plate
• 138	SP-564	#6-32 x 3/8" Rd. Hd. Scr.
140	434-04-031-5005	Cover (Variable Speed)
141	SP-9152	1/4" - 20 Hex Jam Nut
142	434-04-089-5002	Support
143	SP-403	1/4 - 20 x 5/8" Fil. Hd. Scr.
144	960-04-012-1427	Speed Plate
145	SP-3000	#6-32 x 1/4" Self-Tapping Scr.
146	414-02-071-5018	Pin
147	MCL-161	Plug
148	SP-208	1/4 - 20 x 1/4" Soc. Set Scr.
149	SP-3803	5/16 - 18 x 1" Fil. Hd. Scr.
150	434-04-019-5002	Cam
151	931-01-071-9408	Lever
152	Cat. #41-732	Motor Pulley - Four Speed (1/2" Bore), Including:
153	SP-201	5/16-18 x 5/16" Soc. Set Scr.
152	Cat. #41-733	Motor Pulley - Four Speed (5/8" Bore), Including:
153	SP-201	5/16-18 x 5/16" Soc. Set Scr.
152	Cat. #41-734	Motor Pulley - Four Speed (3/4" Bore), Including:
153	SP-201	5/16-18 x 5/16" Soc. Set Scr.
154	Cat. #41-052	Motor Pulley - Variable Speed, (1/2" Bore,) Including:
155	SP-206	5/16-18 x 5/16" Soc. Set Scr.
154	Cat. #41-053	Motor Pulley - Variable Speed, (5/8" Bore), Including:
155	SP-206	5/16-18 x 5/16" Soc. Set Scr.
154	Cat. #41-054	Motor Pulley - Variable Speed (3/4" Bore), Including:
155	SP-206	5/16-18 x 5/16" Soc. Set Scr.

• These parts also included with Variable Speed Model.

AUTHORIZED PARTS DISTRIBUTORS

Authorized 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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Rockwell Manufacturing Company
Highway 65 and Pioneer Avenue
P. O. Box 711
Phone: 209 784-7180

COLORADO
DENVER, 80207
Rockwell Manufacturing Company
4900 East 39th Avenue
Phone: 303 388-5803

GEORGIA
ATLANTA, 30301
Rockwell Manufacturing Company
1495 Northside Drive N.W.
Phone: 404 351-5434

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CHICAGO, (Melrose Park), 60160
Rockwell Manufacturing Company
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Phone: 312 921-2650

MASSACHUSETTS
WORCESTER, 01604
Waite Hardware Company
189 Front Street
Phone: 617 753-8161

MICHIGAN
DETROIT, 48220
Waterston's
960 West Eight Mile Road
Phone: 313 564-5794 or 545-1500

MISSOURI
KANSAS CITY, 64105
Rockwell Manufacturing Company
1649 Jarboe Street
Phone: 816 221-2070

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NEW YORK, 10013
Rudolf Bass, Inc.
175 Lafayette Street, Cor. Grand Street
Phone: 212 CA6-4000

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

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CHARLOTTE, 28201
Industrial & Textile Supply
1300 South Mint Street
Phone: 704 376-6411

OHIO
CINCINNATI, 45203
Rockwell Manufacturing Company
906 Dalton
Phone: 513 241-2737

CLEVELAND, 44115
Reynolds Machinery Company
3107 Carnegie Avenue
Phone: 216 361-3745

PENNSYLVANIA
PHILADELPHIA, 19122
Delta Equipment Company
1776 North Fifth Street
Phone: 215 236-6350

PHILADELPHIA, 19106
Swanger Brothers
116 North Third Street
Phone: 215 627-0178

PITTSBURGH, 15208
Rockwell Manufacturing Company
400 N. Lexington Avenue
Phone: 412 241-8400

TEXAS
DALLAS, 75247
Rockwell Manufacturing Company
2934 Iron Ridge
Phone: 214 631-1890

WASHINGTON
SEATTLE, 98109
Rockwell Manufacturing Company
1918 Minor Avenue
Phone: 206 622-4576

WISCONSIN
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Rockwell Manufacturing Company
10700 W. Burleigh
Phone: 414 774-3650

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Rockwell Manufacturing Company
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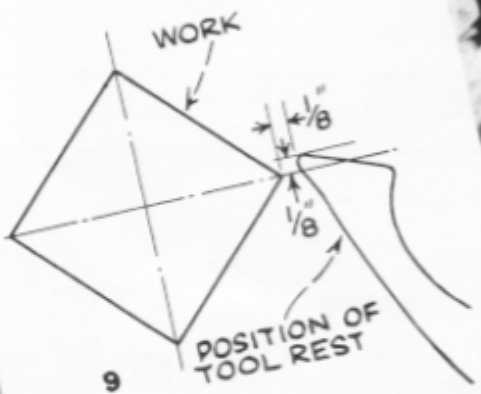

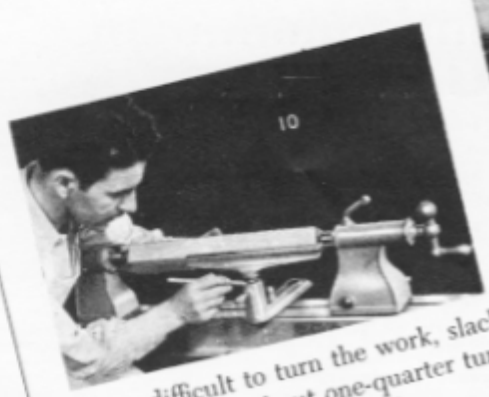

comes difficult to turn the work, slack off on the feed about one-quarter turn and lock the tailstock spindle.

Tool Rest Position. The tool rest is now mounted in place, about ⅛ in. away from the work and ⅛ in. above the work centerline, as shown in Fig. 9. This position may be varied to suit the work and the operator. A guide mark to show the most suitable working position can be placed on the tool rest shank, as shown in Fig. 10, as an aid to quick and accurate re-setting. Once some experience has been obtained, the setting of the tool rest will become almost second-nature.

Roughing a Cylinder. The large gouge is used in the first turning operation of roughing-off the sharp corners

Figs. 11-13 show right and wrong methods in roughing a cylinder with a large gouge.

There are numerous operations which can be performed on your Delta Lathe. We show you how simple these operations are in our Deltacraft publication No. 4703, "GETTING THE MOST OUT OF YOUR LATHE".

Above is only one page from this book. It contains hundreds of illustrations, charts and many helpful hints.

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.

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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.

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