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OPERATING INSTRUCTIONS FOR #81631 DRILL PRESS

Operating Precautions

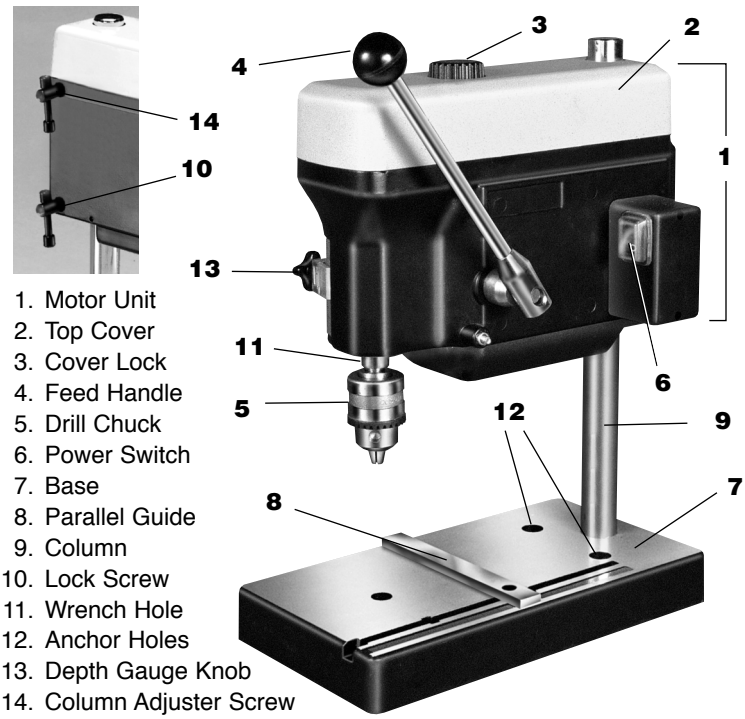
- Be sure the drill press is unplugged from the wall electrical socket before performing any set up or adjustment operations.
- Wear safety goggles when operating the drill press.
- Always secure the workpiece with a clamp or drill press vise.
- Never operate with the top cover removed.
- Use the correct feed and speed for the size of the hole and the material of the workpiece.
- Handle all parts carefully during assembly and use.

Set Up

1. Carefully unpack the drill press. Accessories are packed inside the corrugated sleeves.
2. Anchoring of the unit is possible using (2) screws (not provided) through anchor holes **12**.
3. Loosen the lock screw **10** by turning counter-clockwise and slide the motor unit **1** towards the top of the column **9**; tighten the lock screw to hold the motor unit in position. If applicable, remove protective cap from spindle threads.
4. Install the drill chuck **5** by threading it onto the bottom of the spindle; insert the wrench into the hole **11** in the spindle to keep the spindle from turning while you tighten the chuck (see Figure 2).
5. Thread the feed handle **4** into the spindle feed lever.

Note: Save the packing materials. Please repack the drill press in its original carton should you ever need to return it to us.

PARTS LIST



1. Motor Unit
2. Top Cover
3. Cover Lock
4. Feed Handle
5. Drill Chuck
6. Power Switch
7. Base
8. Parallel Guide
9. Column
10. Lock Screw
11. Wrench Hole
12. Anchor Holes
13. Depth Gauge Knob
14. Column Adjuster Screw

Figure 1

ATTENTION!

Before using your drill press, please use the provided hex key to tighten the set screw that holds the base to the column (located in the back side of the base).

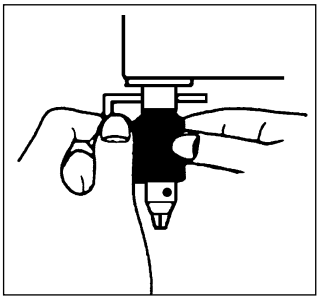


Figure 2

Operation

Installing Drill Bits

Using the chuck key, open the chuck just far enough so that the drill bit can be inserted centrally into the chuck jaws. Carefully tighten the chuck so that it grips the drill bit on the blank portion of the drill shank. Do not tighten the jaws on the drill flutes. Remove the chuck key. Rotate the chuck by hand to confirm that the drill bit is inserted properly and there is no drill wobble.

Adjust the Motor Unit Height

Loosen the lock screw and adjust the motor unit up or down so that the drill bit clears the top of the workpiece. If you are drilling through the workpiece, be sure the drill bit will pass through the hole in the base. **Note:** Item **14** is not intended for use as a headstock lock. It is designed to remove headstock/column play. Once tightened by hand, it should no longer require any adjustment.

Adjust the Spindle Speed

Different drill sizes and workpiece materials require different spindle speeds. In general, harder materials and large drills require a slower speed. Softer materials and smaller drills require a faster speed (see Figure 3).

Size of drill bit	Position of belt		Speed
Larger than 1/8”	Top	Low Speed	2,100 RPM
1/8” to 1/16”	Middle	Medium	4,500 RPM
Smaller than 1/16”	Bottom	High Speed	6,200 RPM

Figure 3

To change the spindle speed, unplug the machine, unscrew the cover lock **3** and remove the top cover **2**. Move the belt to different positions by sliding the belt first to a smaller pulley, then, while turning the pulley shaft, relocate the other end to the larger pulley. Be sure the belt is tracking properly before reinstalling the top cover and turning on the motor (see Figure 4). Check belt tension (see next page).

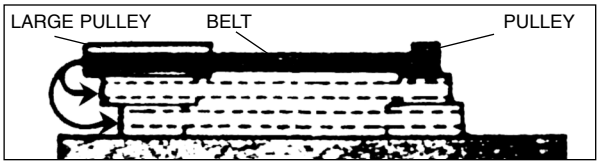


Figure 4

Set the Depth Gauge

When drilling blind holes (holes that do not break through the bottom of the workpiece), the depth of the hole can be controlled by setting the depth gauge to the desired depth (each division is 1mm). For example, to drill a hole 19mm deep (3/4 inch), lower the feed handle until the bit touches the workpiece. (Note: you may have to reposition the motor unit to obtain the desired spindle travel). Set the gauge to 19mm and then drill the hole until the dial reads 0 (stops automatically). The hole has now been drilled to the desired depth.

Drilling Parallel Holes

You can drill several holes in a line by using the parallel guide (see figure 5). The scale shows the distance from the drill bit; each small division is 1mm. The parallel guide is also helpful to brace the workpiece and keep it from spinning if the drill bit grabs. Be careful not to loosen the allen screw too far or the nut inside the slot will fall out.

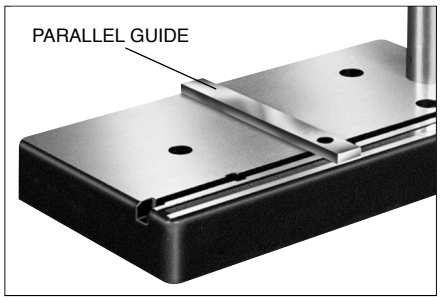


Figure 5

Care and Maintenance of Your Drill Press

Very little maintenance is required to keep your drill press in fine working order, but, if adjustments are necessary, follow the guidelines below:

1. Spindle side-play can be minimized by adjusting the locknut located on the left side of the motor unit 1-1/2 inches behind the spindle and towards the bottom of the motor unit. While moving the feed handle up and down, tighten the lock nut until the play is minimized, but not so tight so as to restrict free movement of the spindle. The spindle should return by itself to the full up position.

2. The drive belt tension may be adjusted by removing the top cover and then loosening the two nuts on either side of the motor pulley. Adjust the motor position and tighten the nuts so that moderate finger pressure against the belt causes it to deflect 3/16" to 1/4" (see Figure 6). Excessive belt tension may result in damage to the bearings. **Note:** Belt tension can also affect the generation of "noise" in the drill press. Although it does not affect drilling accuracy, it may be desirable to adjust the tension for minimum noise.

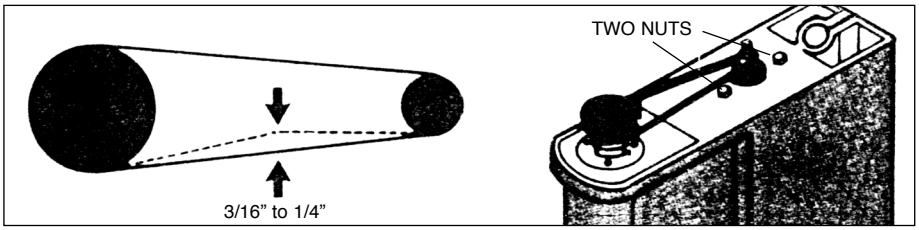


Figure 6

3. The spindle has been generously oiled at the factory. You may have to periodically wipe off oil that makes its way down the spindle.

DIMENSION CONVERSION CHART

Multiply millimeters by .03937 to obtain inches.

Multiply inches by 25.4 to obtain millimeters.

mm	inch
1	.039
2	.079
3	.118
4	.157
5	.197
6	.236
7	.276
8	.315
9	.354
10	.394
11	.433
12	.472
13	.512
14	.551
15	.591
16	.630
17	.669
18	.709
19	.748
20	.787
21	.827
22	.866
23	.906
24	.945
25	.984
26	1.024

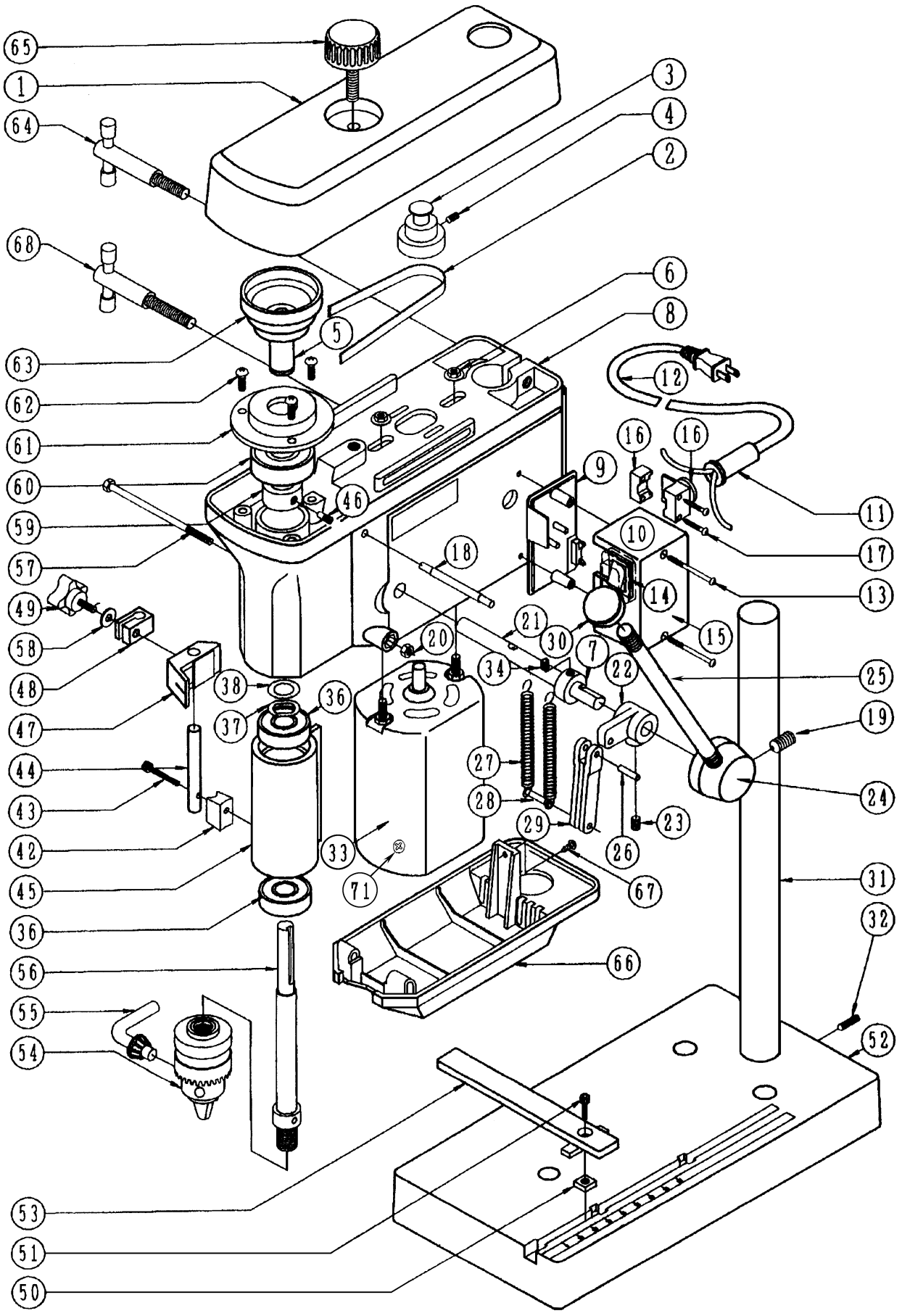
MicroLux Drill Press #81631 Parts List

(Item # refers to assembly drawing shown on last page).

ITEM #	DESCRIPTION	QTY/UNIT	ASY CODE
1	COVER, TOP	1	
2	BELT (#15117)	1	
3	PULLEY, MOTOR	1	
4	SET SCREW, PULLEY	1	
5	SHAFT, HOLLOW SPINDLE PULLEY	1	A
6	NUT, MOTOR MOUNTING	2	
7	LOCKING COLLAR	1	
8	HOUSING, MACHINED	1	
9	SWITCH HOUSING, BACK	1	
10	N/A		
11	BUSHING, POWER CORD	1	
12	POWER CORD	1	
13	SCREW, SWITCH HOUSING	2	
14	SWITCH	1	
15	SWITCH HOUSING, FRONT	1	
16	LEAD RETAINER (2 PARTS)	1	
17	SCREW, LEAD RETAINER	2	
18	PIN, SPRING/HEADSTOCK	1	
19	SET SCREW, HUB/LEVER SHAFT	1	
20	NUT, QUILL ADJUSTER	1	
21	SHAFT, LEVER	1	
22	CRANK LEVER	1	
23	SET SCREW, CRANK LEVER	1	
24	HUB, LEVER SHAFT	1	
25	FEED HANDLE	1	
26	PIN, LINK	1	
27	SPRING, LEVER	2	
28	PIN, LINK/SPRING/QUILL	1	
29	LINK	1	
30	KNOB, FEED HANDLE	1	
31	COLUMN	1	
32	SET SCREW, COLUMN	1	
33	MOTOR	1	
34	SET SCREW, LOCKING COLLAR	1	
35	N/A	1	
36	BEARING, SPINDLE	2	B
37	WASHER, BEARING	1	
38	WASHER, SPINDLE	1	
39	N/A		
40	N/A		
41	N/A		
42	STOP BLOCK	1	
43	SCREW, STOP BLOCK	1	
44	ROD, STOP BLOCK	1	
45	QUILL	1	B
46	SET SCREW, DRIVE PIN	1	A
47	DEPTH GAUGE	1	
48	CLAMP, DEPTH GAUGE	1	
49	KNOB, DEPTH GAUGE	1	
50	NUT, SQUARE, PARALLEL GUIDE	1	
51	SCREW, PARALLEL GUIDE	1	
52	BASE	1	
53	PARALLEL GUIDE	1	
54	CHUCK	1	
55	CHUCK KEY	1	
56	SPINDLE	1	B
57	BOLT, QUILL ADJUSTER	1	
58	WASHER, STOP GAUGE	1	
59	COLLAR, SPINDLE PULLEY	1	A
60	BEARING, SPINDLE PULLEY	1	A
61	BEARING HOUSING, SPINDLE PULLEY	1	A
62	SCREW, BEARING HOUSING	1	
63	PULLEY, SPINDLE	1	A
64	UPPER T-HANDLE SCREW	1	
65	KNOB, COVER LOCK	1	
66	COVER, BOTTOM	1	
67	SCREW, BOTTOM COVER, RETAINING	1	
68	LOWER T-HANDLE SCREW, HEADSTOCK LOCK	1	
71	BRUSHES, MOTOR	2	
	(COMPONENTS SOLD AS SETS ONLY)		
	SPINDLE DRIVE; 5, 46, 59, 60, 61, 63		A
	QUILL SPINDLE; 36, 45, 56		B

MicroLux Drill Press #81631 Assembly Drawing

DRAWING MM061301



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