



## Operating Instructions and Parts Manual Drill Press

Model: JDP-20MF



### WMH TOOL GROUP

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**Part No. M-354170**  
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This manual has been prepared for the owner and operators of a JDP-20MF Drill Press. Its purpose, aside from machine operation, is to promote safety through the use of accepted correct operating and maintenance procedures. Completely read the safety and maintenance instructions before operating or servicing the machine. To obtain maximum life and efficiency from your JET Drill Press, and to aid in using the machine safely, read this manual thoroughly and follow instructions carefully.

## **Warranty**

WMH Tool Group warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Repair Stations located throughout the United States can give you quick service.

In most cases, any one of these WMH Tool Group Repair Stations can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your JET, Performax, Wilton, or Powermatic tools.

For the name of an Authorized Repair Station in your area, please call 1-800-274-6848, or visit [www.wmhtoolgroup.com](http://www.wmhtoolgroup.com)

### **More Information**

WMH Tool Group is consistently adding new products to the line. For complete, up-to-date product information, check with your local WMH Tool Group distributor, or visit [www.wmhtoolgroup.com](http://www.wmhtoolgroup.com)

### **WMH Tool Group Warranty**

WMH Tool Group (including JET, Wilton and Powermatic brands) makes every effort to assure that its products meet high quality and durability standards and warrants to the original retail consumer/purchaser of our products that each product be free from defects in materials and workmanship as follow: 1 YEAR LIMITED WARRANTY ON ALL PRODUCTS UNLESS SPECIFIED OTHERWISE. This Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, repair or alterations outside our facilities, or to a lack of maintenance.

WMH TOOL GROUP LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD SPECIFIED ABOVE, FROM THE DATE THE PRODUCT WAS PURCHASED AT RETAIL. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THE WMH TOOL GROUP SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

To take advantage of this warranty, the product or part must be returned for examination, postage prepaid, to an Authorized Repair Station designated by our office. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will either repair or replace the product, or refund the purchase price if we cannot readily and quickly provide a repair or replacement, if you are willing to accept a refund. We will return repaired product or replacement at WMH Tool Group's expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of WMH Tool Group's warranty, then the user must bear the cost of storing and returning the product. This warranty gives you specific legal rights; you may also have other rights, which vary from state to state.

WMH Tool Group sells through distributors only. WMH Tool Group reserve the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment, which they may deem necessary for any reason whatsoever.

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The specifications in this manual are given as general information and are not binding. WMH Tool Group reserves the right to effect, at any time and without prior notice, changes or alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.

# Warnings

1. Read and understand the entire owners manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This drill press is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a drill press, do not use until proper training and knowledge have been obtained.
5. Do not use this drill press for other than its intended use. If used for other purposes, WMH Tool Group disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this drill press. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this drill press, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
  - Lead from lead based paint.
  - Crystalline silica from bricks, cement and other masonry products.
  - Arsenic and chromium from chemically treated lumber.
10. Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
11. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
12. Make certain the switch is in the **OFF** position before connecting the machine to the power supply.
13. Make certain the machine is properly grounded.
14. Make all machine adjustments or maintenance with the machine unplugged from the power source.
15. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
16. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
17. Make sure the drill press is firmly secured to the floor or bench before use.
18. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine 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.
19. Provide for adequate space surrounding work area and non-glare, overhead lighting.
20. Keep the floor around the machine clean and free of scrap material, oil and grease.



## Warnings

21. Keep visitors a safe distance from the work area. **Keep children away.**
22. Make your workshop child proof with padlocks, master switches or by removing starter keys.
23. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
24. Maintain a balanced stance at all times so that you do not fall or lean against the spindle or other moving parts. Do not overreach or use excessive force to perform any machine operation.
25. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
26. Use recommended accessories; improper accessories may be hazardous.
27. Maintain tools with care. Keep drill bits sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
28. Make sure the work piece is securely attached or clamped to the table. Never use your hand to hold the work piece.
29. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
30. Do not stand on the machine. Serious injury could occur if the machine tips over.
31. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
32. Remove loose items and unnecessary work pieces from the area before starting the machine.

**Familiarize yourself with the following safety notices used in this manual:**



This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.



This means that if precautions are not heeded, it may result in serious injury or possibly even death.

**- - SAVE THESE INSTRUCTIONS - -**

# Specifications

Model Number.....	JDP-20MF
Stock Number .....	354170
Swing.....	20-1/2"
Type .....	Floor
Drilling Capacity .....	1"
Chuck Size .....	3/4"
Spindle Travel .....	4-5/8"
Spindle Distance to Base .....	46-3/4"
Spindle Distance to Table (max.).....	29-1/8"
Table Size (Length x Width).....	18-1/2" x 16"
Spindle Taper.....	MT-3
Column Diameter .....	3-3/8"
Number of Spindle Speeds .....	12
Range of Spindle Speeds (RPM).....	150 – 4,200
Base Size .....	13-3/4" x 22-3/4"
Overall Dimensions (H x W x D) .....	66" x 18-1/2" x 31-1/2"
Motor .....	1-1/2HP, 115/230V, 60Hz, 1Ph, Prewired 115V
Net Weight (approx.).....	282 lbs.
Gross Weight .....	293 lbs.
Carton Size (L x W x H): .....	26" x 13" x 58"

# Shipping Contents

Unpack the carton and verify that all parts listed below are included.

## Main Parts

- 1 ea Head Assembly
- 1 ea Table
- 1 set Column and Table Bracket Assembly
- 1 ea Base

## Additional Parts

- 1. 1 set Chuck and Chuck Key
- 2. 1 pc Arbor
- 3. 1 pc Drift Key
- 4. 1 pc Table Crank Handle
- 5. 1 pc Column Lock Handle
- 6. 3 pcs Downfeed Handles and Knobs
- 7. 1 pc 5/8"-11x2" Hex Cap Screw
- 8. 1 set Locator Pin and Hex Nut
- 9. 4 pcs M10 x 40 Hex Cap Screws
- 10. 2 pc Hex Wrenches (3mm, 5mm)

## Other Material

- 1 ea Owner's Manual
- 1 ea Warranty Registration Card

## Required Tools

- 1. 17mm Box Wrench or a 6" – 8" Adjustable Wrench
- 2. 15/16" wrench



*Additional Parts*

## Assembly

**⚠WARNING** Read and understand all assembly instructions before attempting assembly! Failure to comply may cause serious injury!

**⚠WARNING** Do not attempt to turn on power before this machine is completely assembled.

### Before Assembly

1. Remove the contents from the shipping container.
2. Compare the contents of the shipping container with the list on page 7. Report any shortages or damage to your JET distributor.
3. Clean all rust protected surfaces with kerosene or a light solvent. Do not use lacquer thinner, paint thinner, or gasoline. These will damage plastic components and painted surfaces.

### Column Assembly

Referring to Figure 1:

1. Place the base (A) on a level floor.
2. Place the column assembly (B) on the base (A) and align the holes in the column support with the holes in the base.
3. Using a 17mm wrench, secure the column (B) with four M10 x 40 hex cap screws (C) to the base.

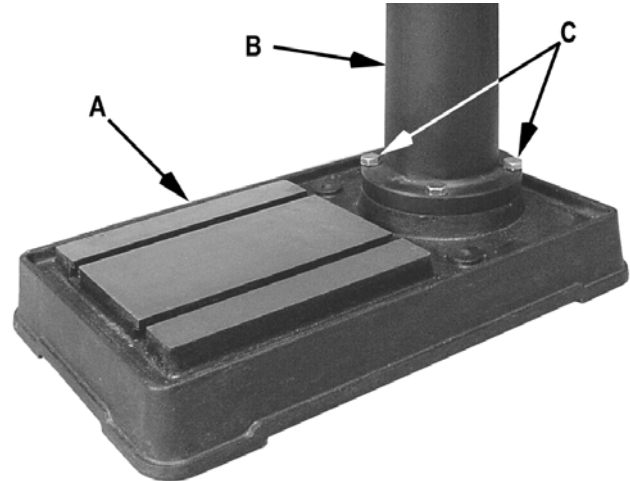


Figure 1

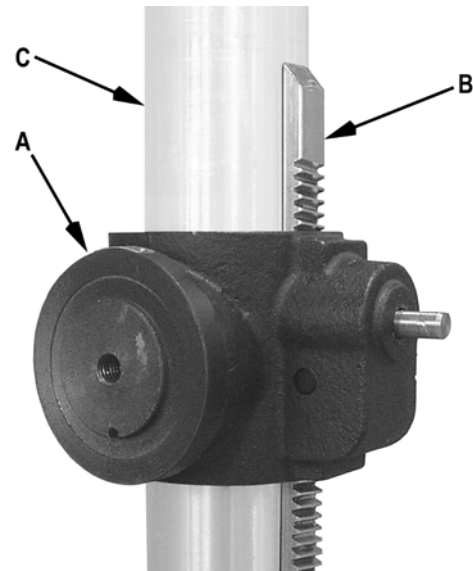


Figure 2

### Table Bracket

When shipped, the *rack ring* and *rack* are bundled together with the column in plastic wrap.

Referring to Figures 2 and 3:

1. Remove the wrap and take the rack ring (D) and rack (B) off the column (C).
2. Install the table bracket (A) together with the rack (B) on the column (C) as shown in Figure 2.
3. Slide the rack ring (D) over the column (C), placing it so it rests against the rack (B) as shown in Figure 3 and tighten firmly with a 3mm hex wrench (provided).

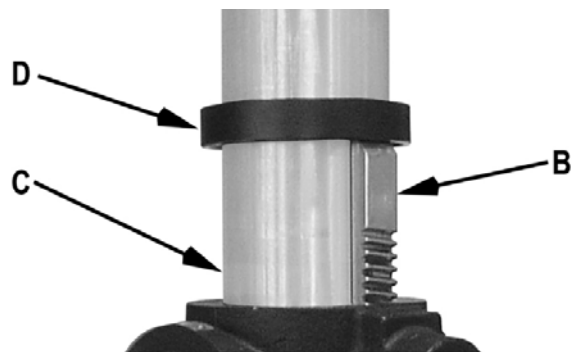


Figure 3



## Crank Handle

Referring to Figure 4:

1. Loosen the setscrew (B) on the table crank handle (A).
2. Slide the handle (A) onto the table bracket shaft.
3. Turn the handle until the setscrew is opposite the flat section on the shaft, and tighten the setscrew to secure the handle.

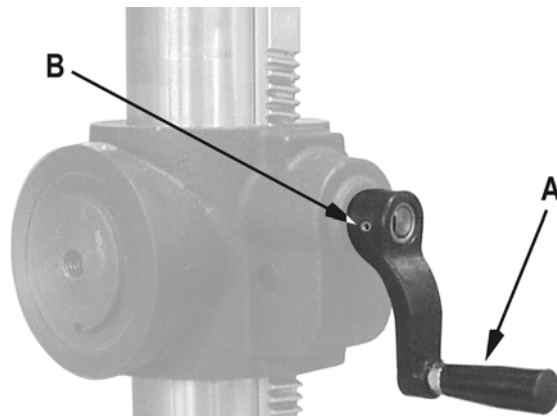


Figure 4

## Column Lock Handle

Referring to Figure 5:

Thread the *column lock handle* (A) into the table bracket (B).

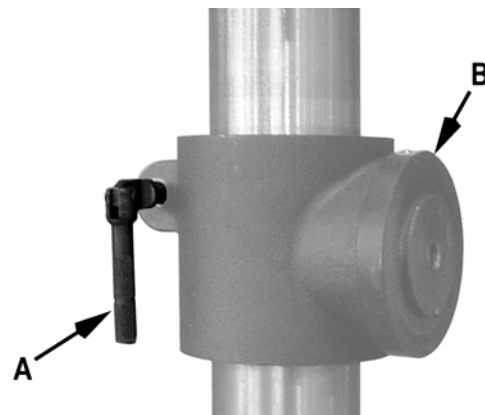


Figure 5

## Table Installation

### CAUTION

**The table is heavy! This installation is a two person operation to avoid injury from accidental dropping.**

Referring to Figure 6:

1. Have one person hold the table (A) against the bracket (B), aligning the hole in the mounting plate of the table with the threaded hole in bracket.
2. Have the second person insert the 5/8"-11x2 hex head screw (C) through the opening on the bottom side of the table (A) and start threading the screw into the bracket by hand.
3. Finish tightening the screw (C) with a 15/16" or wrench (wrench provided), but leave loose enough so the table can be tilted by hand.
4. Using the scale on the bracket as a guide, set the table angle to 0 degrees (level).
5. Take the locator pin (D) and adjust the hex nut towards the end of the thread as shown in the close up view (D).
6. Insert the non-threaded end of the locator pin (D) into the hole on the table found just below the mounting screw. Press all the way in.

**Note:** The table may have to be tilted slightly back and forth if the holes do not quite align.

7. Tighten the screw (C) with a 15/16" wrench.

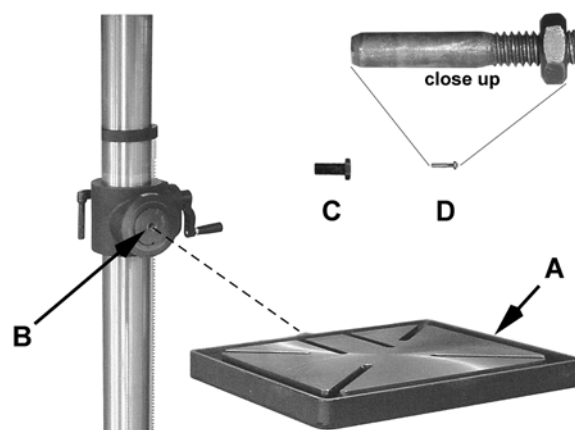


Figure 6

## Head Assembly

Referring to Figure 7:

1. With the aid of a second person, carefully lift the *head* onto the column top and slide it down into position

### **CAUTION**

**The head assembly is heavy! Use care when lifting onto the column!**

2. Rotate head assembly until sides of the pulley cover are parallel with the sides of the base.
3. Tighten two setscrews (A) with a 5mm hex wrench (provided) until they are snug.
4. Install three *downfeed handles* (B) into the downfeed hub (C).



Figure 7

## Chuck and Arbor Installation

Referring to Figure 8:

1. Raise table to approximately seven inches below spindle assembly, and lock the table in place.
2. Place a piece of scrap wood (D) on the table.
3. Thoroughly clean the internal and external taper of the arbor (A), and chuck (B) and spindle (C).

**Important:** These three pieces must be free of any rust protection, or lubricant. If they are not clean, the arbor and chuck will fail to seat in the spindle.

4. Place arbor (A) into the chuck (B).
5. Twist the chuck to retract the chuck jaws if they are exposed.
6. Place arbor and chuck assembly into the spindle (C).
7. Turn the arbor and chuck assembly until the tang on the arbor engages the slot at the end of the spindle.
8. Lower the down feed handle (E) so that the chuck meets the scrap wood. Place downward pressure on the feed handle to seat the arbor and chuck into the spindle.

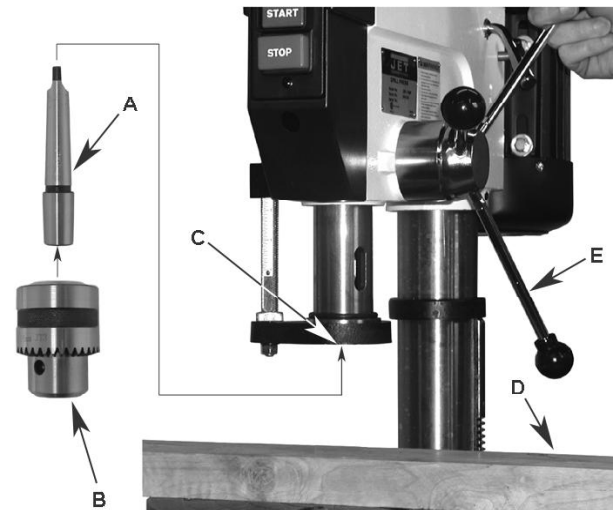


Figure 8

## Chuck and Arbor Removal

1. Unplug machine from the power source.
2. Raise the table until it is about seven inches below the chuck.
3. Place a piece of scrap wood on the table, and lower quill (A, Fig. 9) using the downfeed handle.
4. Rotate spindle to align the keyhole in the spindle with the keyhole in the quill.
5. Insert the drift key (B, Fig. 9) into the aligned slots and tap lightly. The chuck and arbor assembly should fall from the spindle.

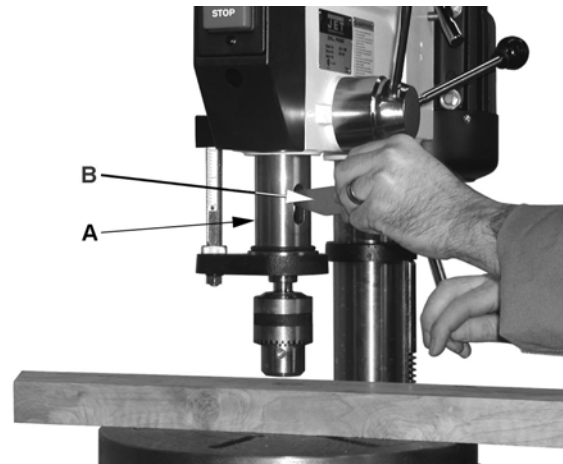


Figure 9

## Adjustment

### Depth Stop Adjustment

To drill multiple holes at the same preset depth, use the depth stop:

1. Use a pencil to mark the depth the bit will drill into the workpiece.
2. With the drill bit in the chuck, lower downfeed handle to advance bit to your mark (A, Fig. 10).
3. With your other hand, advance the lock nuts (B, Fig. 10) on the depth stop rod until they are snug to the seat (C, Fig. 10).
4. The drill bit will now advance to this point.
5. To release, advance the nuts counterclockwise to the top of the depth stop.

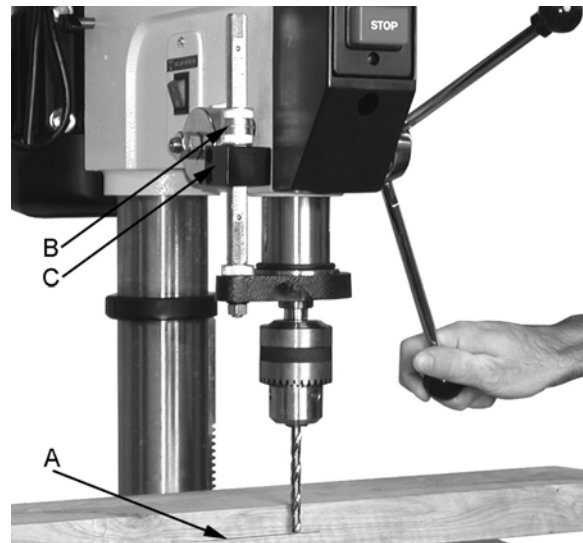


Figure 10

### Changing Spindle Speeds

A spindle speed and pulley/belt arrangement chart is found on the inside of the pulley cover (D, Fig. 11), also shown in Figure 12. Refer to this chart whenever changing speeds.

8. To change spindle speeds:
  1. Unplug the machine from the power source.
  2. Loosen two bar knobs (E, Fig. 11) found on each side of the head assembly.
  3. Rotate the tension adjuster clockwise (F, Fig. 11) to bring the motor base as close to the head as possible.
  4. For desired speed, change the location of belts per pulley/belt arrangement chart.
  5. Rotate the tension adjuster counterclockwise (F, Fig. 11) to tension the belts.
  6. Tighten two bar knobs (E, Fig. 11). Belts are properly tensioned when finger and thumb pressure midway between the two pulleys causes approximately  $\frac{1}{2}$ " deflection.



Figure 11

## Return Spring Adjustment

The return spring is adjusted at the factory and should not need further adjustment. If adjustment is deemed necessary, follow the steps below while referring to Figure 12:

1. Unplug the machine from the power source.
2. Loosen two hex nuts (A). *Do not remove.*

**⚠WARNING** Do not remove the coil spring cover (Step 3). The torsion spring will uncoil and can cause serious injury.

3. Firmly hold the coil spring cover (B).
4. Pull out the cover and rotate until the pin (C) on the return spring plate engages the next notch in the coil spring cover. Turn the cover clockwise to decrease tension and counter-clockwise to increase tension.
5. Tighten two hex nuts (A). Do not over-tighten. Nuts should not contact the housing when tight. The hex nuts should be tightened against each other.

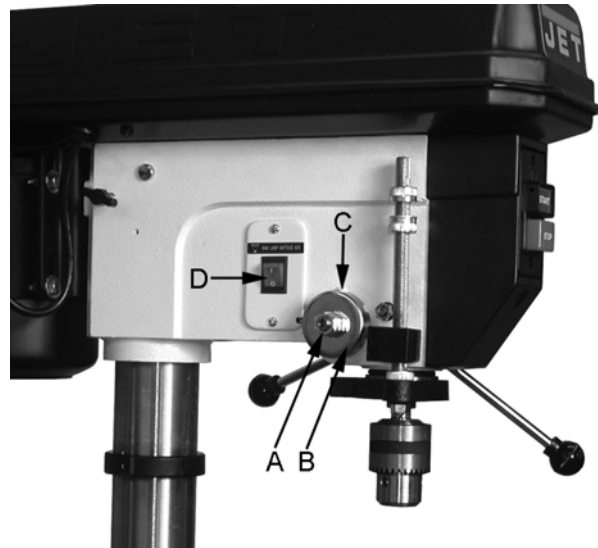


Figure 12

## Work Light

Install a light bulb, no larger than 60 watts into the socket accessed from beneath the head. The rocker switch controls the light switch (D, Fig. 12).

## Table Tilt Adjustment

To tilt the table (refer to Figures 13 and 14):

**⚠CAUTION**

In the following steps, **DO NOT OVER LOOSEN**. This could result in the table assembly to separate from the column, fall and cause injury.

1. Using a 15/16" wrench, loosen the hex cap screw (B), located under the table, about one turn.
2. Pull the locator pin out.

The pin may be seated quite tight; in which case turn the hex nut (B) clockwise with a 3mm hex wrench to assist in extracting the pin

**Note:** When the table is in any position other than level (0 degrees), the locator pin is not used.

3. Tilt the table to the desired angle by aligning the scale (in degrees) on the table (C) to the marker at the base of the bracket (D).
4. Tighten the hex cap screw (A).

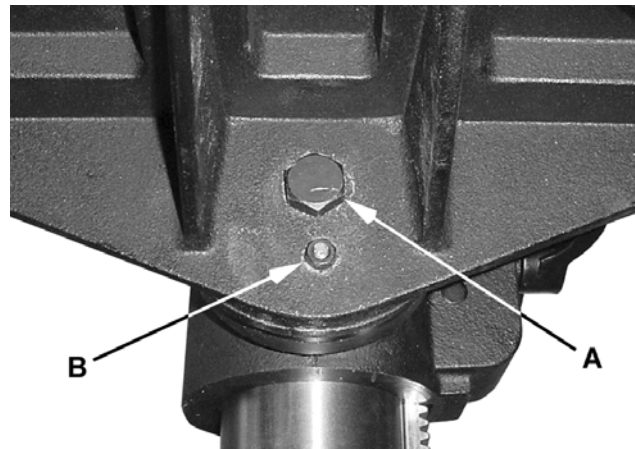


Figure 13

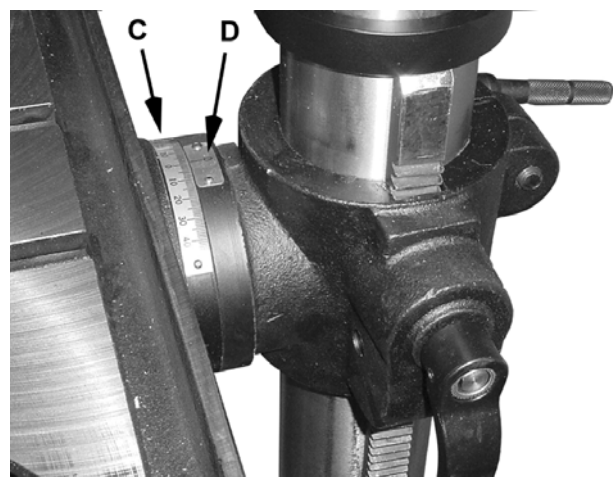


Figure 14

# Operation

## Installing Drills

Insert the drill into the chuck jaws with about 1" insertion. When using a small drill do not insert it so far that the jaws touch the flutes of the drill. Make sure that the drill is centered in the chuck before tightening the chuck with the key.

## Positioning the Workpiece

Always place a piece of wood (or plywood) on the table. This will prevent "splintering" or making heavy burrs on the underside of the workpiece as the drill breaks through. The wood should contact the left side of the column.

## Using the Vise

For the small workpiece that cannot be clamped to the table, use a drill press vise. The vise must be clamped or bolted to the table. Always use a back-up piece of scrap wood to cover the table. This protects both the table and the drill bit.

## Basic Operation

Place material to be drilled in such a way as to come into contact with the left side of the column. This prevents the material from spinning.

### **⚠WARNING**

**If the work piece is not large enough to come into contact with the column, use a clamp or drill press vise that is securely fastened to the table! Failure to comply may cause serious injury!**

Feed the bit into the material with only enough force to allow the drill bit to work. Feeding too slowly may cause burning of the workpiece. Feeding too quickly may cause the motor to stop and/or the drill bit to break.

Generally speaking, the smaller the drill bit, the greater the RPM required. Wood requires higher speeds than metal. Metal is usually drilled at slower speeds.

In dusty environments, frequently blow out any dust that accumulates inside the motor.

## Maintenance

### **⚠WARNING**

**Before any intervention on the machine, disconnect it from the electrical supply by**

**pulling out the plug or switching off the main switch! Failure to comply may cause serious injury.**

A coat of automobile-type wax applied to the table and column will help to keep the surfaces clean.

If the power cord is worn, cut, or damaged in any way, have it replaced immediately.

## Lubrication

All of the ball bearings are packed with grease at the factory. They require no further lubrication.

Periodically lubricate the gear, rack, table elevation mechanism, the splines (grooves) in the spindle, and the teeth of the quill with a #2 tube grease.

## Electrical

### 115 Volt Operation

Referring to Figure 15:

As received from the factory, your drill press is ready to run at 115-volt operation. This drill press, when wired for 115 volt, is intended for use on a circuit that has an outlet and a plug that looks like the one illustrated in (A). A temporary adapter, which looks like the adapter shown in (B), may be used to connect this plug to a two-pole receptacle if a properly grounded outlet is not available. The temporary adapter should only be used until a properly grounded outlet can be installed by a qualified electrician. This adapter is not applicable in Canada. The green colored rigid ear, lug, or tab, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box.

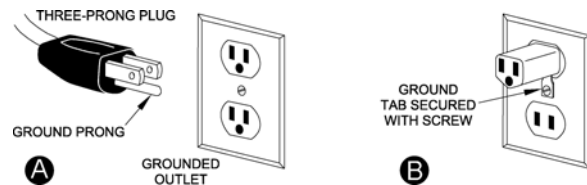


Figure 15

### 230 Volt Operation

Referring to Figure 16:

If 230V, single-phase operation is desired, the following instructions must be followed:

1. Disconnect the machine from the power source.
2. The JET drill press motor has four numbered leads that are factory connected for 115V operation, as shown in (A). For

230V operation reconnect the leads as shown in (B).

- The 115V attachment plug (C), supplied with the drill press, must be replaced with a UL/CSA listed plug suitable for 230V operation (D). Contact your local Authorized JET Service Center or qualified electrician for proper procedures to install the plug. The drill press must comply with all local and national codes after the 230-volt plug is installed.
- The drill press with a 230-volt plug should only be connected to an outlet having the same configuration as shown in (D). No adapter is available nor should be used with the 230-volt plug.

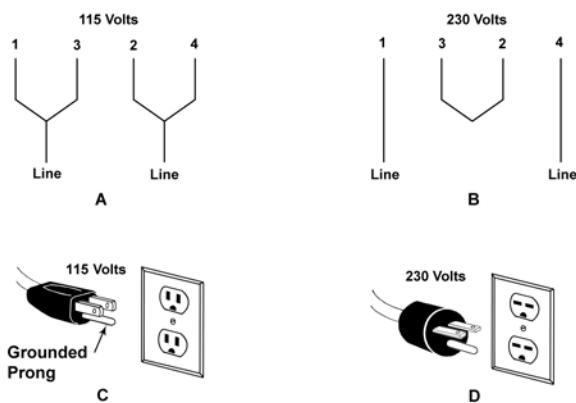


Figure 16

## Grounding Instructions

### CAUTION

**This tool must be grounded while in use to protect the operator from electric shock.**

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor, with insulation having an outer surface that is green with or without yellow stripes, is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not

connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Use only three wire extension cords that have three-prong grounding plugs and three-pole receptacles that accept the tool's plug.

Repair or replace a damaged or worn cord immediately.

## Extension Cords

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your machine will draw. An undersized cord will cause a drop in the line voltage resulting in power loss and overheating. The table following shows the correct size to use depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. Remember, the smaller the gauge number, the heavier the cord.

Length of Cord	AWG
0-25	16
25-50	14
51-100	12

The drill press with a 230-volt plug should only be connected to an outlet having the same configuration (D, Fig. 16). No adapter is available or should be used with the 230-volt plug.

**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 electrician check the receptacle.

# Troubleshooting

Trouble	Probable Cause	Remedy
Drill press will not start.	Drill press unplugged from wall, or motor.	Check all plug connections.
	Fuse blown, or circuit breaker tripped.	Replace fuse, or reset circuit breaker.
	Cord damaged.	Replace cord.
	Starting capacitor bad.	Replace starting capacitor.
Drill press does not come up to speed.	Extension cord too light or too long.	Replace with adequate size and length cord.
	Low current.	Contact a qualified electrician.
Drill Press vibrates excessively.	Stand on uneven surface.	Adjust stand so that it rests evenly on the floor.
	Bad belt(s).	Replace belts.
Noisy Operation.	Incorrect belt tension.	Adjust belt tension. See the <i>Changing Spindle Speeds</i> section.
	Dry spindle.	Lubricate spindle. See the <i>Lubrication</i> section.
	Loose spindle pulley.	Check tightness of retaining nut on pulley, and tighten if necessary.
	Loose motor pulley.	Tighten setscrews in pulleys.
Workpiece Burns.	Incorrect Speed.	Change to appropriate speed; see the <i>Changing Spindle Speeds</i> section.
	Chips not clearing from hole or bit.	Retract drill bit frequently to remove chips.
	Dull drill bit.	Resharpen, or replace drill bit.
	Feeding too slowly.	Increase feed rate.
Drill bit wanders.	Bit sharpened incorrectly.	Resharpen bit correctly.
	Bent drill bit.	Replace drill bit.
	Bit, or chuck not installed properly.	Reinstall the chuck, or bit properly.
Wood splinters on the underside.	No backing board used.	Place a scrap board underneath the workpiece to prevent splintering.
Drill bit binds in workpiece.	Workpiece pinching the bit.	Support or clamp workpiece.
	Excessive feed rate.	Decrease feed rate.
	Chuck jaws not tight.	Tighten chuck jaws.
	Improper belt tension.	Adjust belt tension. See the <i>Changing Spindle Speeds</i> section.

## Troubleshooting (cont.)

Trouble	Probable Cause	Remedy
Excessive drill bit runout, or wobble.	Bent drill bit.	Replace drill bit.
	Worn spindle bearings.	Replace spindle bearings.
	Bit, or chuck not properly installed.	Reinstall the bit, or chuck properly.
Quill returns too slow, or too fast.	Spring has improper tension.	Adjust spring tension. See the <i>Return Spring Adjustment</i> section.
Chuck or arbor does not stay in place.	Dirt, grease, etc on arbor, chuck, or spindle.	Clean all mating surfaces thoroughly with a cleaner degreaser.

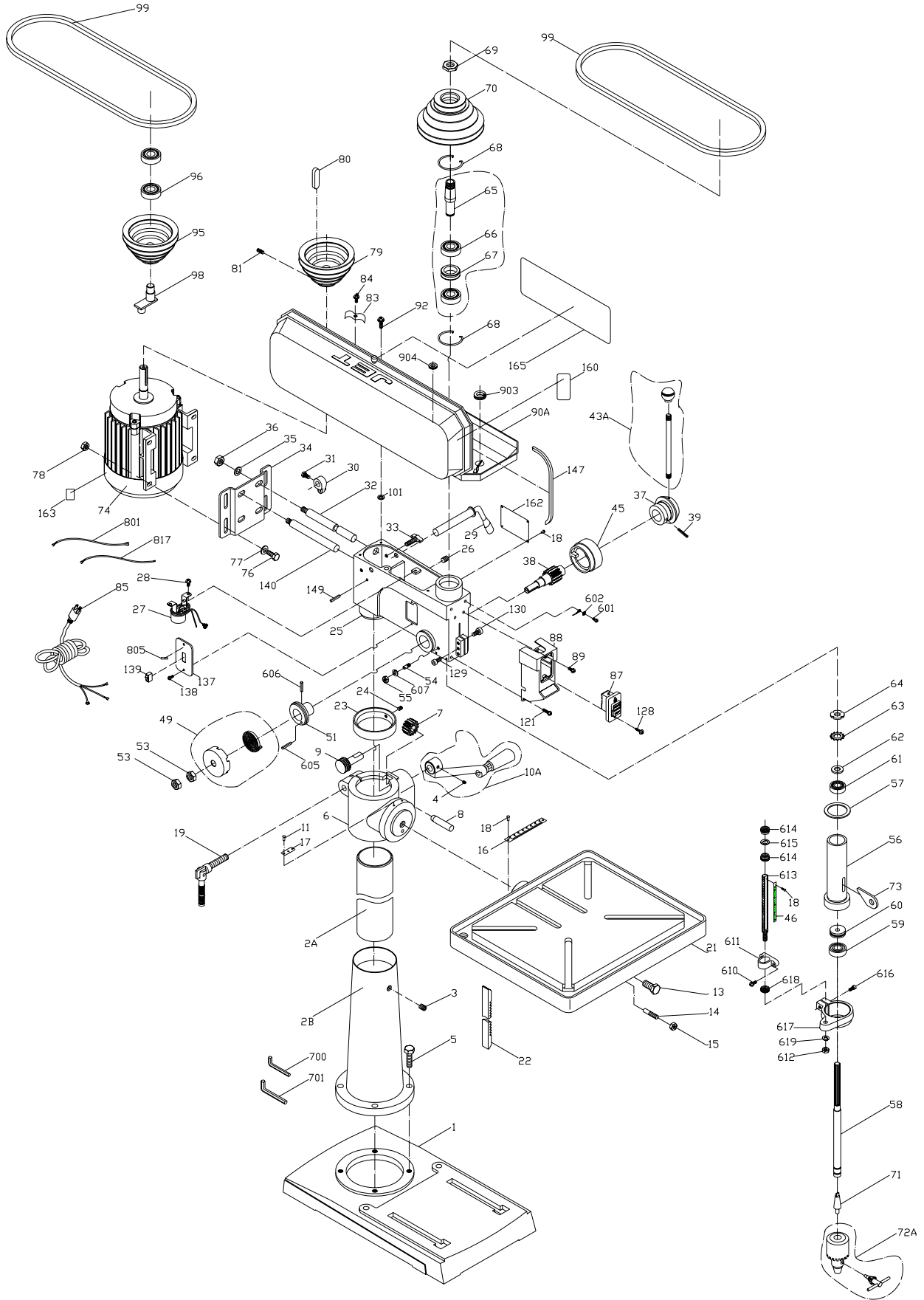
## Parts

### Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 800-274-6848 between 7:00 a.m. and 6:00 p.m. (CST), Monday through Friday. Having the Model Number and Serial



# Exploded View Drawing JDP-20MF



## Parts List JDP-20MF

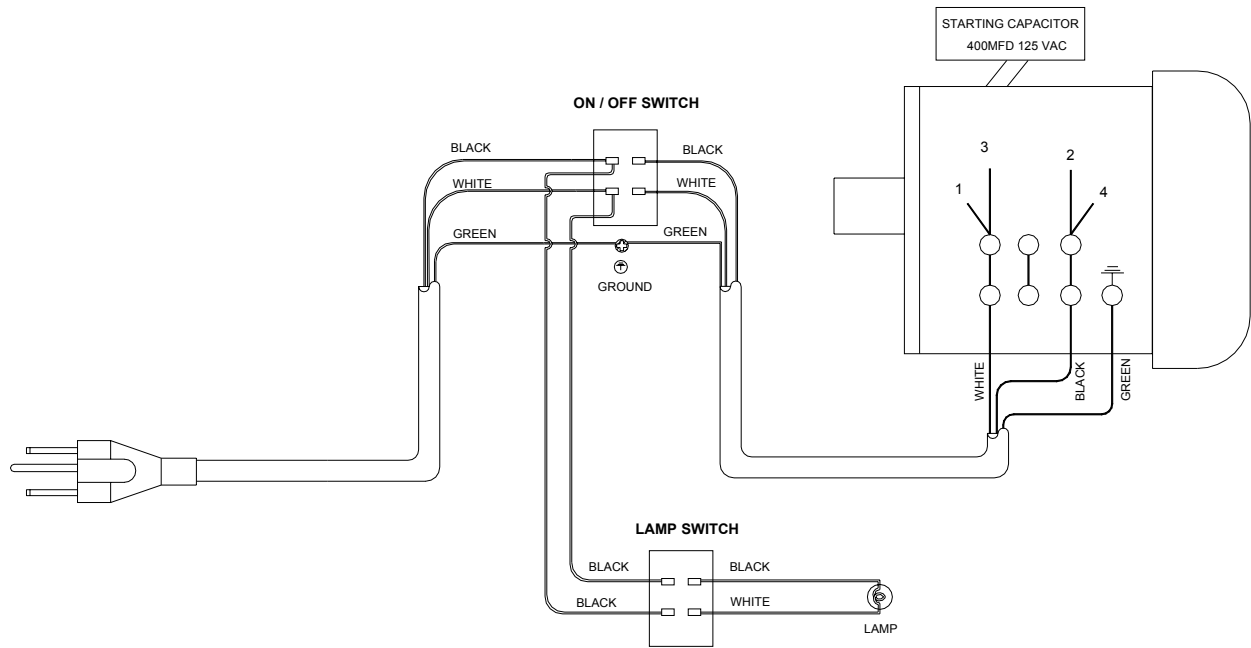
Index No.	Part No.	Description	Size	Qty
1	11300117	Base JDP-20MF		1
	11400401A1	Column & Holder Assembly (Index 2A, 2B)	Ø85mm	1
2A	JDP20-102A	Column		1
2B	JDP20-102B	Holder		1
3	TS-1525021	Socket Set Screw	M10x12	1
4	TS-1523041	Socket Set Screw	M6x12	1
5	TS-1492041	Hex Cap Screw	M12x40	4
6	11400607	Bracket		1
7	10600702	Pinion Gear		1
8	10600802	Gear Shaft		1
9	10600902	Worm Pinion		1
10A	11501003	Crank Handle		1
11	JDP20-111	Pan Head Screw	M5x6	2
13	TS-0071031	Hex Cap Screw	5/8"-11x2"	1
14	10901402	Locator Pin		1
15	TS-0561011	Hex Nut	1/4"-20	1
16	11401601	Angle Scale		1
17	10601702	Centering Scale		1
18	2658MZDU36	Drive Screw	Ø2.3x5	8
19	10601901	Column Lock Handle		1
21	11302119	Work Table		1
22	11402207	Rack		1
23	11402311	Rack Ring		1
24	TS-2276081	Socket Set Screw	M6x8	1
25	11302522	Head		1
26	TS-1525021	Socket Set Screw	M10x12	2
27	10602701	Lamp Socket		1
28	TS-1534042	Pan Head Screw	M6x12	2
29	11502901	Handle Shifter		1
30	10603002	Cam		1
31	TS-1490021	Hex Cap Screw	M8x16	1
32	11503212	Slide Bar (right)		1
33	10903302	Slide Bar Bolt	M10x40	2
34	11403437	Motor Base		1
35	TS-0720111	Lock Washer	1/2"	2
36	TS-1540081	Hex Nut	M12	2
37	10603704	Hub		1
38	11303812	Feed Shaft		1
39	2536MBE611	Spring Pin	Ø5x16	1
43A	10604303A1	Handle Bar Assy		3
45	10661801	Shaft Collar		1
46	13105102	Scale		1
49	11404903A2	Coil Spring & Cover		1
51	11305107	Spring Seat		1
53	TS-0561052	Hex Nut	1/2"-20 UNF	12
54	10605403	Quill Set Screw		1
55	TS-1540071	Hex Nut	M10	1
56	11305616	Quill		1
57	11405704	Rubber Washer		1
58	11305801	Spindle		1
59	BB-6206ZZ	Ball Bearing	6206ZZ	1
60	2003A02906	Thrust Bearing		1
61	BB-6204Z	Ball Bearing	6204Z	1
62	11406202	Washer		1
63	11406302	Lock Nut		1

Index No.	Part No.	Description	Size	Qty
64	11406403	Spindle Nut		1
65	11406508	Drive Sleeve		1
66	BB-6206Z	Ball Bearing	6206Z	2
67	11406706	Collar		1
68	11406803	Retaining Ring		2
69	10606902	Pulley Set Nut		1
70	11407019	Spindle Pulley	12S,A	1
71	21015M3J40	Arbor	MT3xJT4	1
72A	561709	Chuck & Chuck Key		1
73	10607303	Wedge		1
74	8211422651	Motor		1
75	C0014170122	Motor Cable		1
76	TS-1490041	Hex Cap Screw	M8x25	4
77	TS-1550061	Flat Washer	M8	4
78	TS-1540061	Hex Nut	M8	4
79	11037972	Motor Pulley	19mm	1
80	2571MNC109	Key	5x6x27	1
81	TS-1524031	Socket Set Screw	M8x12	1
83	10608301	Wire Clip		1
84	TS-1533032	Pan Head Screw	M5x10	1
85	2807AB08B3	Power Cord		1
87	2850AG5A14	Switch		1
88	11308801	Switch Box		1
89	TS-1534042	Pan Head Screw	M6x12	2
90A	11309014A1	Pulley Cover Assembly		1
92	TS-1534052	Pan Head Screw	M6x16	4
95	11409511	Center Pulley Assy		1
96	BB-6202Z	Ball Bearing	6202Z	2
98	11409803	Center Pulley Shaft		1
99	VB-A32	Belt	A-32	2
101	2501MNVN11	Rubber Washer		4
121	TS-2286302	Pan Head Screw	M6x30	2
128	2653MBDE15	Tapping Screw	M4x20	2
129	TS-1504051	Socket Head Cap Screw	M8x25	1
130	TS-1504061	Socket Head Cap Screw	M8x30	2
137	10308846	Switch Cover		1
138	TS-1533042	Pan Head Screw	M5x12	2
139	2852U55702	Bulb Switch		1
140	11514001	Motor Bar (left)		1
147	JDP20-1147	Cover Edge Strip		1
149	2536MBE619	Spring Pin	Ø8x25	2
160	11316902	Nameplate		1
162	10216210	Warning Label		1
163	JDP20-1163	Motor Label		1
165	11316501	Speed Chart		1
601	TS-1533032	Pan Head Screw	M5x10	2
602	TS-0733041	Lock Washer External Tooth	1/4"	2
605	2536MBE623	Spring Pin	Ø6x16	1
606	2536MBE625	Spring Pin	Ø2.5x10	1
607	TS-0720091	Lock Washer	3/8"	2
610	TS-2286202	Pan Head Screw	M6x20	2
611	11361101	Seat		1
612	TS-1540071	Hex Nut	M10	1
613	11361301	Scale Bolt		1
614	13005701	Nut	M16-2.0P	2
615	13005601	Washer		1
616	TS-1504051	Socket Head Cap Screw	M8x25	1
617	11361701	Set Ring		1

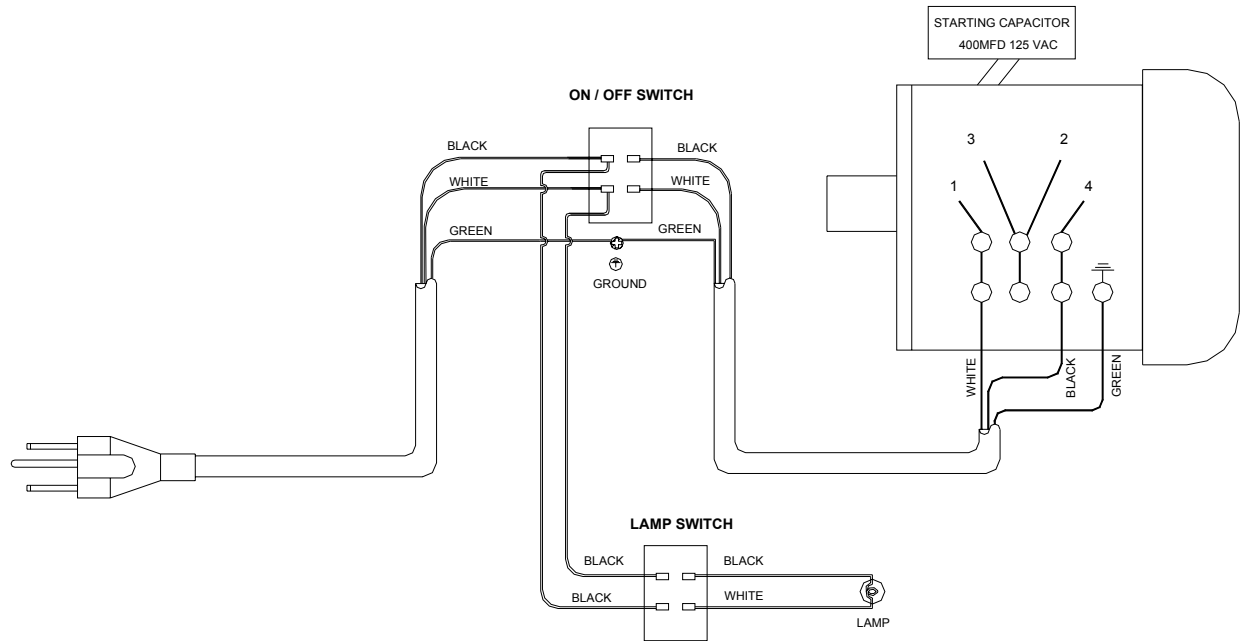
Index No.	Part No.	Description	Size	Qty
618	10604505	Round Nut		1
619	TS-0720091	Lock Washer	3/8"	1
700	TS-152704	Hex Wrench	3mm	1
701	TS-152706	Hex Wrench	5mm	1
801	28065558B3	Bulb Wire		1
805	10280501	Bulb Sticker		1
903	2801ABRF04	Strain Relief		2
817	28065558B3	Bulb Wire		1
904	JDP20-1904	Strain Relief		1

# Wiring Diagram

## JDP-20MF Electrical Schematic – 115V



## JDP-20MF Electrical Schematic – 230V



# NOTES

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