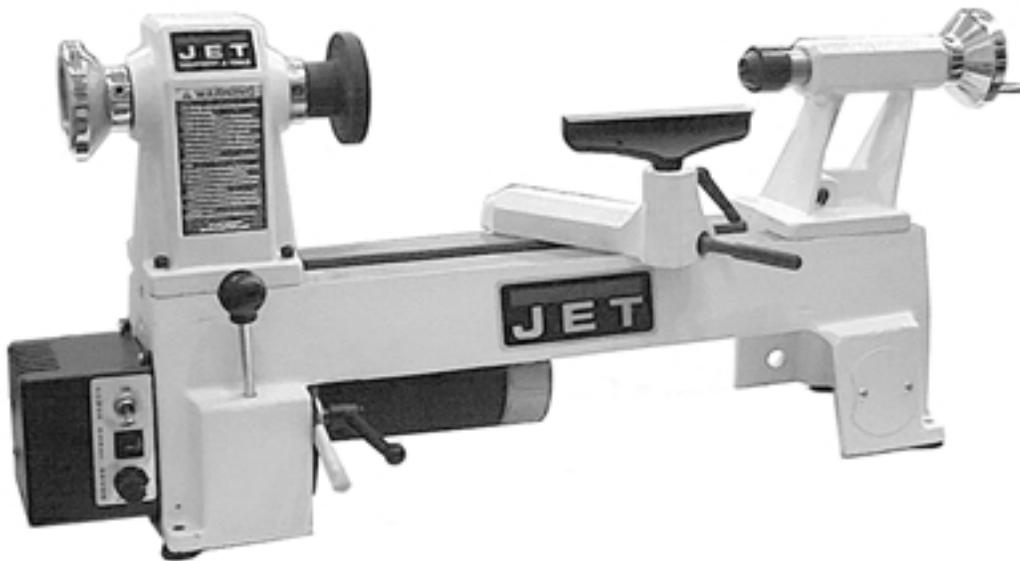


JET[®]

OWNER'S MANUAL JML-1014VS Mini Lathe



WMH TOOL GROUP

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This manual has been prepared for the owner and operators of a JET Model 1014VS Variable Speed Mini Lathe. Its purpose, aside from proper machine operation, is to promote safety through the use of accepted operating and maintenance procedures. To obtain maximum life and efficiency from your lathe, and to aid in using the machine safely, read this manual thoroughly and follow all instructions carefully.

Warranty & Service

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, Powermatic or Wilton tools.

For the name of an Authorized Repair Station in your area, call 1-800-274-6848.

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 wmhtoolgroup.com.

Limited Warranty

WMH Tool Group (including JET, Performax, Powermatic and Wilton 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 follows: 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.

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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, WMH Tool Group 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. WMH Tool Group will return repaired product or replacement at our expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of our 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 reserves 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.

WARNING

For your own safety, read this instruction manual before operating the lathe.

Do not wear gloves, necktie, or loose clothing.

Tighten all locks before operating.

Rotate the workpiece by hand before applying power.

Rough out the workpiece before installing on the faceplate.

Do not mount a split workpiece or one containing a knot.

Use the lowest speed when starting a new workpiece.

Keep guards in place and in working order.

Remove adjusting keys and wrenches. Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

Keep the work area clean. Cluttered areas and benches invite accidents.

Do not use in a dangerous environment. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.

Keep children away. All visitors should be kept a safe distance from the work area.

Make the workshop kid proof with padlocks, master switches, or by removing starter keys.

Don't force the tool. It will do the job better and safer at the rate for which it was designed.

Use the right tool. Don't force a tool or attachment to do a job for which it was not designed.

Use the proper extension cord. 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 product will draw. An undersize cord will cause a drop in the line voltage resulting in loss of power and overheating. **For runs up to 25 feet, use an 18 AWG or larger gauge cord. For runs up to 50 feet, use a 16 AWG or larger gauge cord. For runs up to 100 feet, use a 14 AWG or larger gauge cord. For runs up to 150 feet, use a 12 AWG or larger gauge cord. Runs over 150 feet are not recommended.** If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

Wear eye protection. Always use safety glasses. Also use face or dust masks if the cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

Secure work. Use clamps or a vise to hold the work when it's practical. It's safer than using your hand and it frees both hands to operate the tool.

Don't overreach. Keep proper footing and balance at all times.

Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

Disconnect tools before servicing; when changing accessories, such as blades, bits cutters, and the like.

Reduce the risk of unintentional starting. Make sure the switch is in the off position before plugging in the machine.

Use recommended accessories. Consult the owner's manual for recommended accessories. The use of improper accessories may cause a risk of injury.

Never stand on a tool. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

Check damaged parts. Before further use of the tool, 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.

Direction of feed. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

Never leave the tool running unattended. Turn the power off. Don't leave the tool until it comes to a complete stop.

Drugs, alcohol, medication. Do not operate this machine while under the influence of drugs, alcohol, or any medication.

Health hazards. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains 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 and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures 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 those dust masks that are specifically designed to filter out microscopic particles.

Electrical Requirements

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.

This tool is intended for use on a circuit that has an outlet that looks the one in illustration A, Figure 1. The tool has a grounding plug like that in illustration A. A temporary adapter, like the adapter in illustration B and C, may be used to connect this plug to a two-pole receptacle, as shown in illustration B 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. The green colored rigid ear or tab, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box.

* Canadian electrical codes require extension cords to be certified SJT type or better.

** Use of an adapter in Canada is not acceptable.

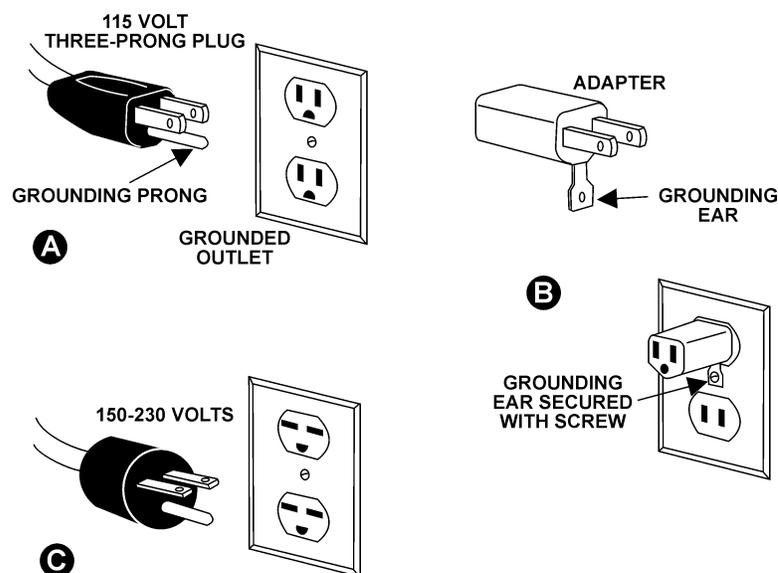


Fig. 1

Specifications:**JML-1014VS**

Stock Number.....	708351
Swing Over Bed (in.)	10
Swing Over Tool Rest Base (in.).....	7 1/2
Working Distance Between Centers (in.).....	14
Variable Speed Range (RPM).....	500 - 3,900
Headstock Spindle Threads (in. x T.P.I.).....	1 x 8
Hole Through Spindle (in.).....	3/8
Headstock Spindle Taper.....	MT-2
Tailstock Spindle Taper	MT-2
Hole Through Tailstock (in.).....	3/8
Tailstock Ram Travel (in.).....	2
Toolrest Length (in.).....	6
Motor.....	1/2 HP, 1Ph, 115V only
Overall Dimensions (in.) L x W x H.....	28-1/8 x 10-1/4 x 14-1/8
Net Weight (lbs. – approx.).....	69

Optional Accessories Available from JET**Chisels**

5 Piece Mini Set	709163
3 Piece Pen Turning Set.....	709160

Pen Kits**24K Gold Titanium Gold**

Twist Pen Kit	709004.....	709010
Plunger Type Pencil Kit	709005.....	709011
Mont Blanc Style Pen Kit	709006.....	709015
Mont Blanc Style Letter Opener.....	709007.....	709013

Pen Mandrel w/bushings.....	709014
Wood Blanks Exotic Hardwoods (5 piece).....	709021
Drill Bit 7mm.....	709123
Wax Pen Finishing Kit	709019
Insta-Cure Glue	709020
Pens from the Woodlathe Book	709123

Chucks

Original Nova™ Chuck & Insert	709345K
Companion Supernova™ Chuck & Insert	709346K
Compac Mini Lathe Chuck.....	709513

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, alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.

Receiving

1. Remove contents from the shipping box.
2. Inspect contents for shipping damage and report damage, if any, to your distributor.
3. Be sure to keep the box and packing material should you need to pack the lathe for moving.
4. Exposed metal surfaces on the lathe have been factory-treated with a protectant, and should be cleaned with a soft rag. Do not clean the lathe with anything other than a damp cloth or a mild solvent. Use of heavy solvents, paint thinner, gasoline, etc. will damage painted surfaces.

Contents of the Shipping Carton:

- 1 - Lathe w/ motor and tailstock
- 1 - Tool rest
- 1 - Face plate
- 1 - Knockout rod
- 1 - Live center
- 1 - Spur center
- 1 - Safety goggles
- 1 - Owner's manual
- 1 - Warranty card

Assembly

The JML-1014 is fully assembled and comes ready to use right out of the box. However, it is a good practice to thoroughly check the machine for loose fasteners, handles, etc. before use.

If desired, the lathe can be bolted to a work table or stand by removing the rubber feet and inserting screws through the holes in the base. A stand specifically made for this lathe is available (stock #708354).

Operation

Tailstock Handwheel (A, Fig. 2) - Turn clockwise to move tailstock spindle forward. Turn counter-clockwise to retract tailstock spindle.

Tailstock Spindle Lock (B, Fig. 2) - Locks tailstock spindle. Release to adjust with handwheel.

Tailstock Lock (C, Fig. 2) - Locks tailstock in position on the bed. Release to move tailstock assembly closer to or farther from the headstock.

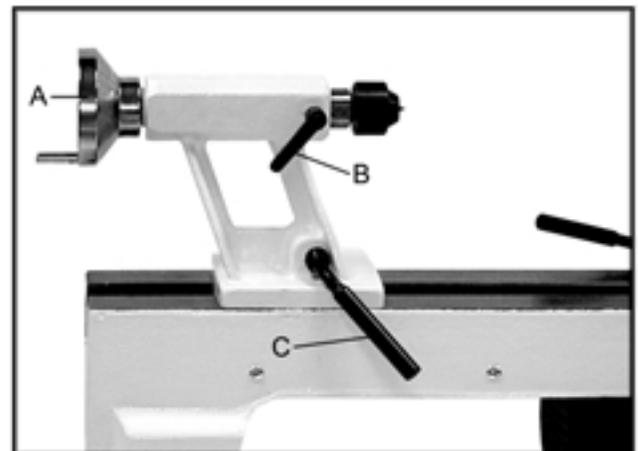


Fig. 2

The tailstock spindle is hollow. This can be useful for inserting a long bit to drill a hole in the center of a workpiece on the faceplate.

The clamping device on the tailstock has been factory adjusted; however if further adjustment should be needed, slide the tailstock off the end of the bed, and tighten or loosen the nut (D, Fig. 3) beneath the tailstock.

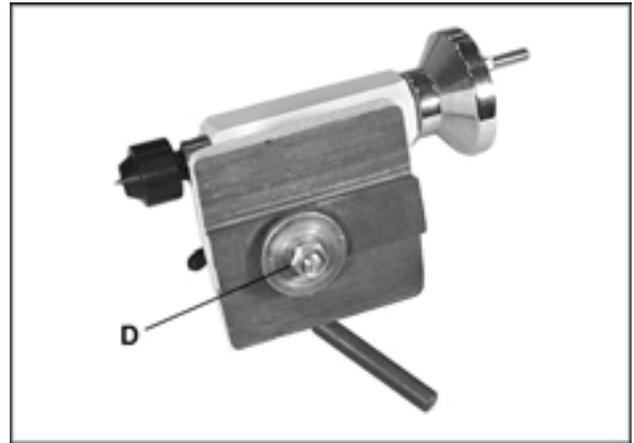


Fig. 3

Spur Center (A, Fig. 4) - locks into headstock and holds the workpiece during spindle turning.

⚠ WARNING
Thoroughly clean the taper on the spur center and the inside of the headstock spindle before mounting the spur center. Failure to do so may result in separation of the two and possible injury or tool damage.



Fig. 4

Face Plate (A, Fig. 5) – screws on to the headstock and is used in face plate turning operations. Mount your workpiece onto the faceplate with brass wood screws (not provided). Make sure the screws are not so long that they will enter the area of the workpiece where the material is to be removed.



Fig. 5

To remove the faceplate from the spindle, place knock-out rod into hole (Fig. 6) and let it contact the bed of the lathe for leverage. Then unscrew the faceplate.



Fig. 6

Knockout Rod (A, Fig. 7) - slides into the headstock to tap the spur center free. Stored in the hole in the base below the headstock. NOTE: Always catch the spur center with your other hand as it falls, to prevent damage to the tip.



Fig. 7

Tool Rest (Fig. 8) - attaches to the bed. Used to steady cutting tool during spindle turning or face plate operations.

Adjusting the Tool Rest

Position the tool rest as close to the work piece as possible. It should be 1/8" above the centerline of the work piece.

Position the tool rest base on the bed by releasing the lock handle (A, Fig. 8) and sliding onto the desired position. Tighten handle (A, Fig. 8) to lock. Adjust the height of the tool rest by loosening handle (B, Fig. 8) and raising arm (C, Fig. 8).

Should adjustment of the tool rest clamping device become necessary, turn off the machine, reach under the bed, and adjust the clamping nut.

NOTE: The lock levers (B, Fig. 2; B, Fig. 8) are spring loaded. Simply pull up on the lever, rotate it on the pin, then release.

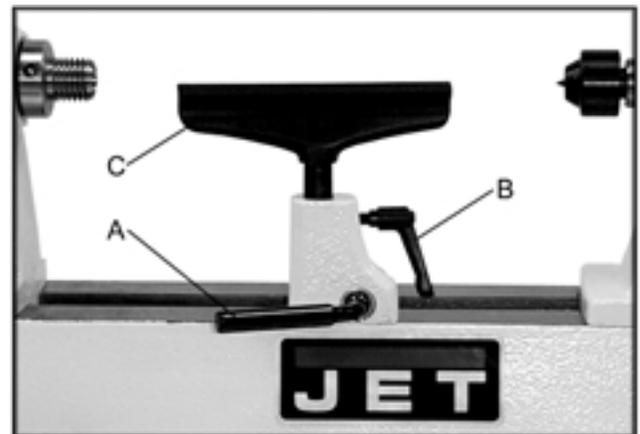


Fig. 8

Variable Speed Control

The variable speed control box contains the electrical connections to the motor, and has three external controls.



WARNING

Always set the speed control knob to its lowest setting before starting lathe. Never start a workpiece at maximum speed.

Power Switch (A, Fig. 9) – controls electrical power to lathe motor. Flip toggle switch on ON position to start the motor. The lathe will begin turning and driving the headstock spindle. The lathe will reach full speed in about 1 to 3 seconds. The time it will take the motor to reach the speed set by the speed control knob depends on the size and weight of the workpiece.

Move the switch to the OFF position to stop the lathe. Wait for the workpiece to come to a complete stop.

Speed Control Knob (B, Fig. 9) – sets the speed of the lathe to suit the weight of the workpiece or type of tool being used. After lathe is started, turn knob clockwise to increase spindle speed (up to maximum 3900 RPM). Counterclockwise decreases speed.

Reset Button (C, Fig. 9) – contains 8-amp overload protection. If the lathe stops suddenly during operation, or does not start when the power switch is set to ON, an overload condition may have occurred. Flip the power switch to OFF, and push the reset button. Then re-start the lathe.

Changing Spindle Speeds

The variable speeds of the lathe are controlled by the speed knob on the control box as well as the position of the belt on the pulleys.

1. Disconnect machine from the power source (unplug).
2. Pull open the control box at the left side of the base (A, Fig. 10), and the access door at the back side of the headstock (A, Fig. 11) to expose the pulleys.

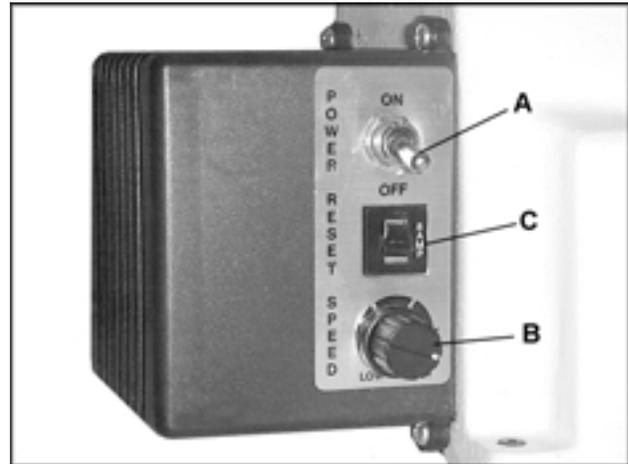


Fig. 9

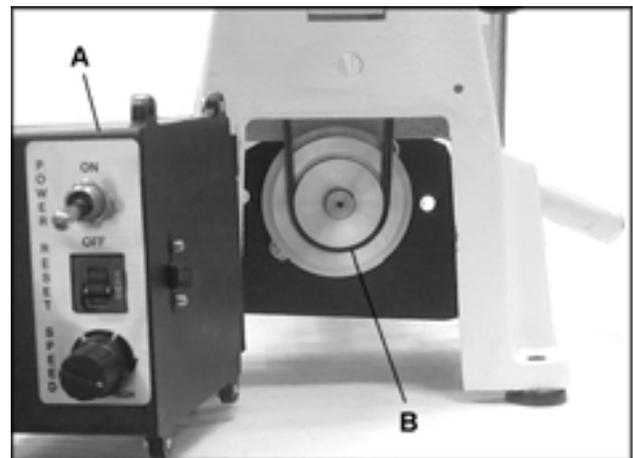


Fig. 10

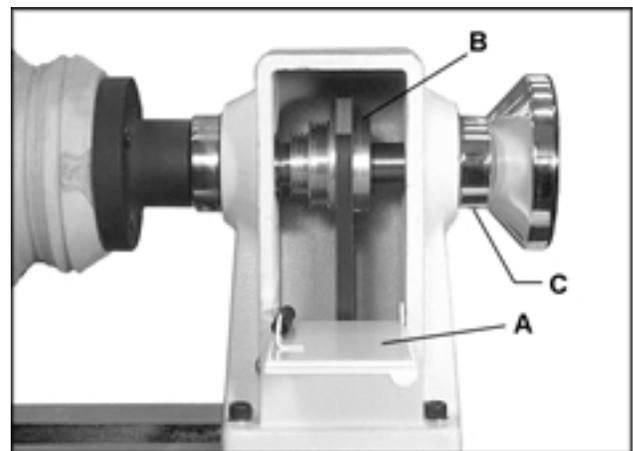


Fig. 11

3. Loosen the motor plate lock handle (A, Fig. 12). Lift up on the motor plate handle (B, Fig. 12) to take tension off the belt.
4. Move the belt (B, Fig. 10) to the desired pulley groove according to the speed chart found on the inside of the headstock access door. Be sure the belt is aligned with spindle pulley and motor pulley.
5. Tension the belt by pushing down on the motor plate handle (B, Fig. 12) and lock in place.

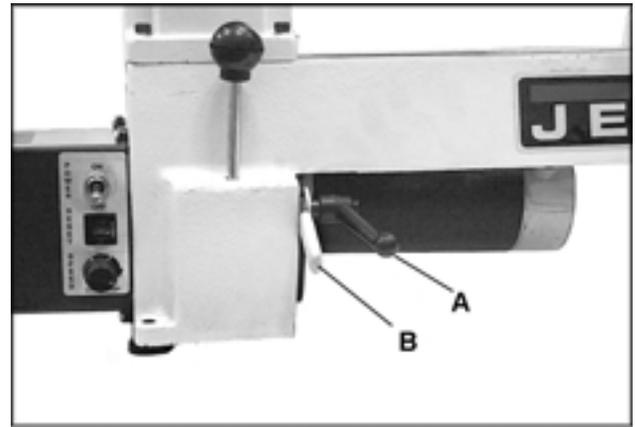


Fig. 12

Belt Replacement

1. Disconnect the machine from the power source (unplug).
6. Open the access doors at the left side of the base (Fig. 10), and at the back side of the headstock (Fig. 11).
2. Loosen the motor plate lock handle (A, Fig. 12). Lift up on the motor plate handle (B, Fig. 12) to take tension off the belt.
3. Loosen the set screw (B, Fig. 11) on spindle pulley (upper).
4. Loosen two set screws in handwheel (C, Fig. 11). Unscrew the handwheel while holding onto the spindle.
5. Remove handwheel and pull the spindle out while holding onto the spindle pulley.
6. Place the new belt on the spindle pulley. Place the spindle pulley back into the headstock the same way it was removed.
7. Insert the spindle into the spindle pulley aligning the key.
8. Thread the handwheel onto the spindle leaving a little space between the handwheel and headstock. Tighten set screws.
9. Center the spindle pulley and tighten set screw.
10. Wrap the belt around the motor pulley (lower). Be sure the belt is aligned with spindle pulley and motor pulley.
11. Tension the belt and tighten the motor plate lock handle.

Removing and Installing the Live Center

1. Loosen tailstock lock handle (B, Fig. 13).
2. Turn the tailstock handwheel (A, Fig. 13) counter-clockwise until the live center (C, Fig. 13) ejects from the spindle. NOTE: Catch the live center in your other hand as it falls, to prevent damage to the tip.
3. Before installing the live center into the spindle, the spindle must be extended out from the tailstock body far enough to allow the live center to "seat" in the spindle.

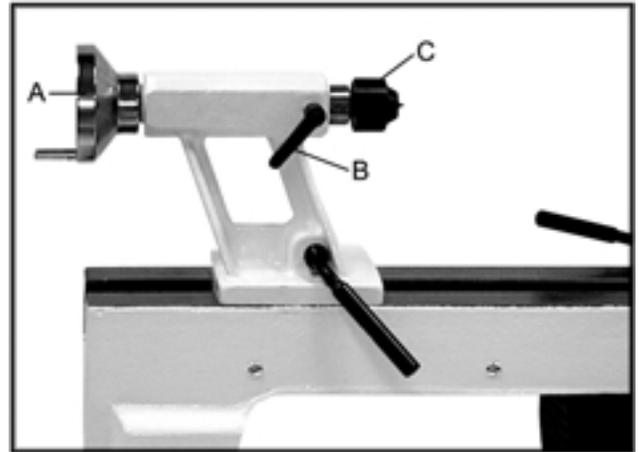
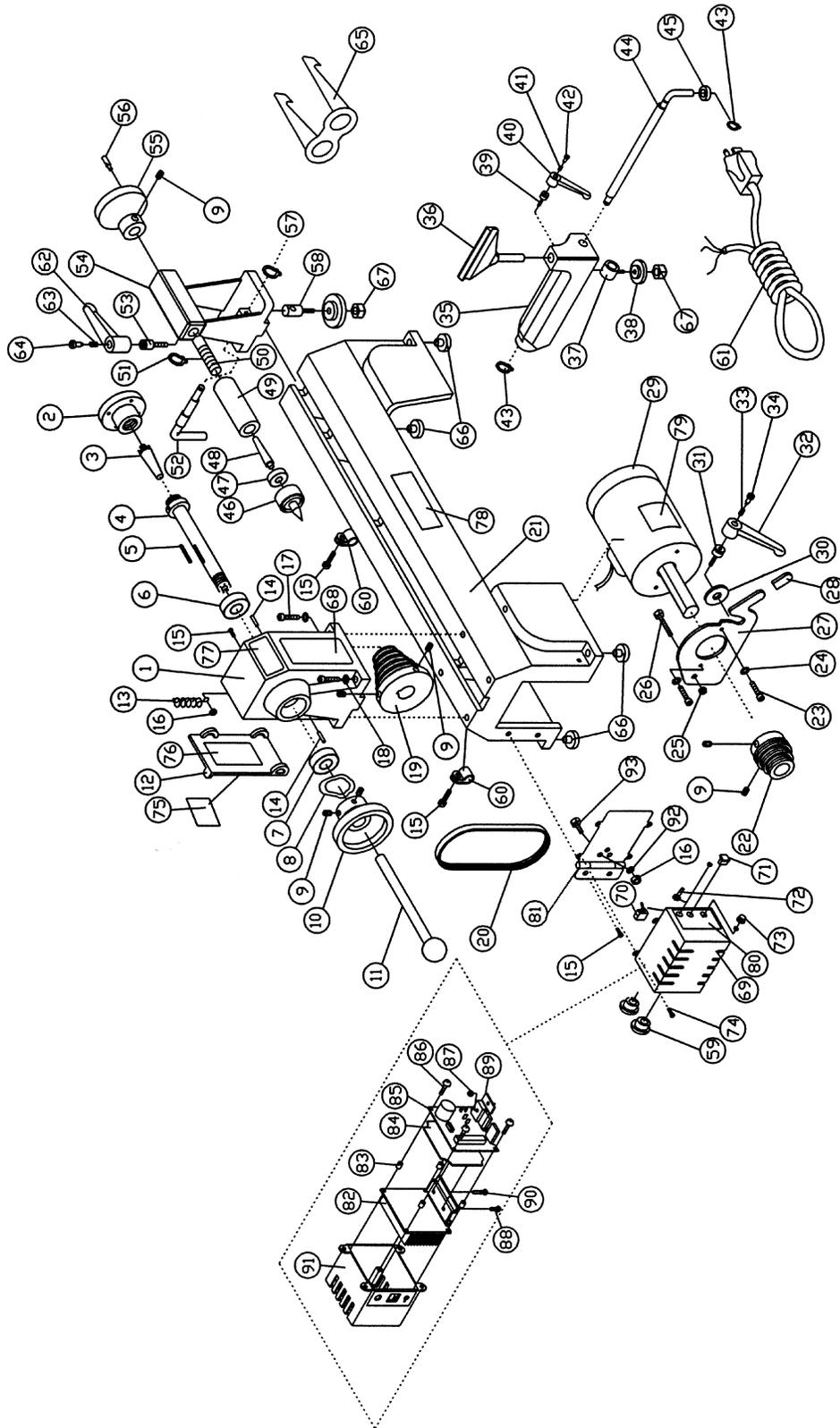


Fig. 13

Maintenance

1. Disconnect machine from power source before performing any maintenance.
2. Blow out dust and accumulation inside the motor, the housing and the bed assembly frequently. If the tailstock has been used as a guide for drilling through the center of a workpiece, also blow sawdust or shavings out of the center of both spindles.
3. A coat of paste wax applied to the bed will help keep the surface clean and the movement of the tool rest and tailstock smooth.

Parts Breakdown for the JML-1014VS Mini Lathe



Parts List for JML-1014VS Mini Lathe

Index No.	Part No.	Description	Size	Qty.
1	JML-1W	White Headstock		1
2	JML-2	Faceplate	3"	1
3	JML-3	Spur Center	MT2	1
	JML-3A	Center Point for Spur Center (not shown)		1
4	JML-4	Spindle	8 TPI	1
5	JML-5	Key	5x25	1
6	BB-6005VV	Ball Bearing	6005VV	1
7	BB-6004VV	Ball Bearing	6004VV	1
8	JML-8	Wave Washer		1
9	TS-0267041	Socket Set Screw	1/4-20x3/8	7
10	JML-10	Handwheel		1
11	JML-11	Drift Rod		1
12	JML-12W	White Spindle Pulley Door		1
13	JML-13	Spring		1
14	JML-14	Roll Pin	3x10	2
15	TS-081C042	Phillips Pan Head Machine Screw	#10-24x5/8	5
16	TS-0560071	Hex Nut	#10-24NC	3
17	TS-0207061	Socket Head Cap Screw	1/4-20x1	4
18	TS-0720071	Lock Washer	1/4	4
19	JMLVS-19	Spindle Pulley		1
20	JML-20	V-Belt		1
21	JMLVS-21	White Bed		1
22	JMLVS-22	Motor Pulley		1
23	TS-0207031	Socket Head Cap Screw	1/4-20x5/8	2
24	TS-0680021	Flat Washer	1/4	2
25	TS-0640081	Nylon Lock Hex Nut	5/16-18NC	1
26	TS-0051061	Hex Cap Screw	5/16-18x1-1/4	1
27	JMLVS-27	Motor Bracket		1
28	JML-34W	White Handle Protector		1
29	JMLVS-29	DC Motor	1/2HP	1
	JMLVS-29-1	Motor Carbon brush (not shown)		2
30	TS-0680031	Flat Washer	5/16	1
31	JML-37	Stud		1
32	JML-38	Handle		1
33	JML-39	Spring		1
34	JML-40	Stud		1
35	JML-41W	White Tool Rest Body		1
36	JML-42	Tool Rest	6"	1
37	JML-43	Bolt		1
38	JML-44	Clamp		2
39	JML-45	Stud		1
40	JML-46	Handle		1
41	JML-47	Spring		1
42	JML-48	Stud		1
43	JML-49	C-Ring		2
44	JML-50	Eccentric Rod		1
45	JML-51	Bushing		1
46	JML-52	Live Center Head		1
	JML-52A	Center Point for Live Center (not shown)		1
47	BB-6002ZZ	Ball Bearing		1
48	JML-54	Live Center Shaft		1

Parts List for JML-1014VS Mini Lathe (continued)

Index No.	Part No.	Description	Size	Qty.
	708331	Live Center Assembly (not shown)		1
49	JML-55	Tailstock Spindle		1
50	JML-56	Lead screw		1
51	JML-57	E-Ring		1
52	JML-58	Eccentric Rod		1
53	JML-59	Stud		1
54	JML-60W	White Tailstock		1
55	JML-61	Handwheel		1
56	JML-62	Handle		1
57	JML-63	C-Ring		1
58	JML-64	Bolt		1
59	JML-70	Strain Relief Bushing		2
60	JML-72	Cord Clamp		2
61	JML-75	Power Cord		1
62	JML-76	Handle		1
63	JML-77	Spring		1
64	JML-78	Stud		1
65	JML-79	Safety Goggles		1
66	JML-80	Rubber Feet		4
67	JML-81	Clamp Nut	M10x1.5P	2
68	JML-82	Warning Label		1
69	JMLVS-83	Controller Assembly (#'s 70-73, 80, 82-91)		1
70	JMLVS-84	ON/OFF Switch		1
71	JMLVS-85	Circuit Breaker		1
72	JMLVS-86	Control Pot Assembly		1
73	JMLVS-87	Knob		1
74	TS-081B012	Phillips Pan Head Machine Screw	#8-32x1/4	4
75	JMLVS-89	I.D Label		1
76	JMLVS-90	Speed Label		1
77	JMLVS-91	JET Label		1
78	JMLVS-92	JET Plaque		1
79	JMLVS-93	Motor Label		1
80	JMLVS-95	Control Panel Label		1
81	JMLVS-96	Hinge Plate		1
82	JMLVS-97	Heat Sink		1
83	JMLVS-98	Spacer		4
84	JMLVS-99	Insulator		1
85	JMLVS-100	Circuit Board		1
86	JMLVS-101	Tap Screw		4
87	JMLVS-102	Hex Nut	M4x0.7P	1
88	JMLVS-103	Screw	M4x0.7Px12	1
89	JMLVS-104	Clamp Bar		1
90	JMLVS-105	Screw	M4x0.7Px20	1
91	JMLVS-106	Plastic Cover		1
92	JWL1442-170	Star Washer	3/16	2
93	JMLVS-108	Hex Cap Screw	#10-24 x3/8	2



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