

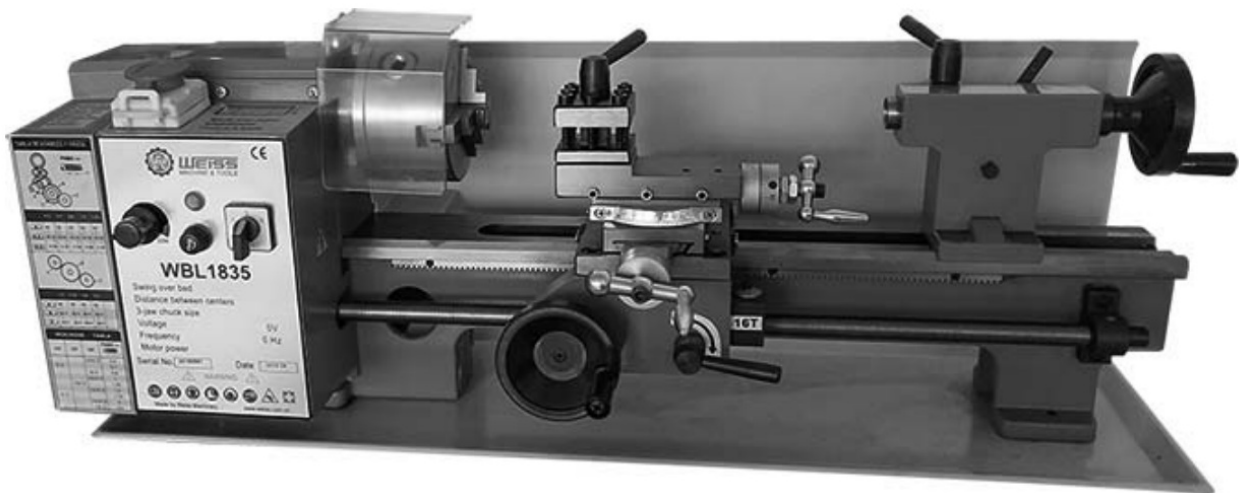


## WEISS MACHINES WBL1835 Variable Speed Mini Lathe Instruction Manual

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### VARIABLE SPEED MINILATHE WBL1835 Instruction Manual



Before Using Be Sure To Read This Manual.  
This machine is suitable To Use Only From 12°C~35°C (53.6°F~95°F)

## Contents

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## Safety rulers for lathe

1. Before you turn on the motor, be sure that you have put in suitable lubrication according to manual's instruction. Also check carefully to see all the tool workpieces etc. are in proper positions.
2. Always use your hand to dismount the chuck or the lathe's face plate. Do not use power tools.
3. After installation of the chuck, remove the wrenches and tools in order not to cause any accidents when the machine is turned on.
4. When the lathe is on, do not use a wrench to fix or adjust the workpiece or any other rotating parts of the machines.
5. when the machine is in motion, do not use any instruments to measure the machine, nor test the sharpness of the cutter with your hand.
6. Do not use too large a tool cutter to do your feeding with too large a workpiece. This will easily cause an accident because of a broken workpiece.
7. Always use the right tools and stand at the proper position when performing your work.
8. Do not change the gear when the machine is in operation.
9. Always keep a proper distance from the machine in order to avoid being struck by a broken workpiece.

## Product features

1. This precision mini lathe is designed to perform various tapes of processing jobs. Counterface turning, drilling, threading, and cutting jobs on materials made up of round bar and bar materials can be performed with this machine. This machine can be used in areas such as mini precision parts processing, sample processing and modeling works.
2. The lathe bed is made of high grade iron.  
The rigidity of lathe, the handness and accuracy of the v-slideways are obtained by raw material, heat hardening and grinding.
3. This machine is DC motor driven.
4. The spindle speed is infinitely variable from 50 to 2500RPM.
5. The feed speed can be adjusted according to the requirements of different workpieces.

## Specifications

Model	WB1,1835	
Distance Between Centers	350mm	14"
Swing Over Bed	180mm	7"
Spindle Taper	MT3	
Tailstock Taper	MT2	
Chuck Diameter	80mm	3.15"
Spindle Bore	20mm	0.79"
Cross Slide Travel	65mm	2.56"
Top Slide Travel	35mm	1.38"
Range of imperial threads	0.5-2.5	12-52T.P.1
Spindle Accuracy	0.01mm	0.0004"
Spindle Speed	50-2500RPM infinitely Variable	
Power of Motor	550w Single Phase	3/4HP
Vol./Freq	220-240V0r100-120v( $\pm 10\%$ )/50HZ/60HZ	
Net Weight	40KG	88b
Packing Dimensions	810x305x315mm	32x12x12.4"

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

The major parts of the lathe are shown is Fig.2 and in Fig.3.

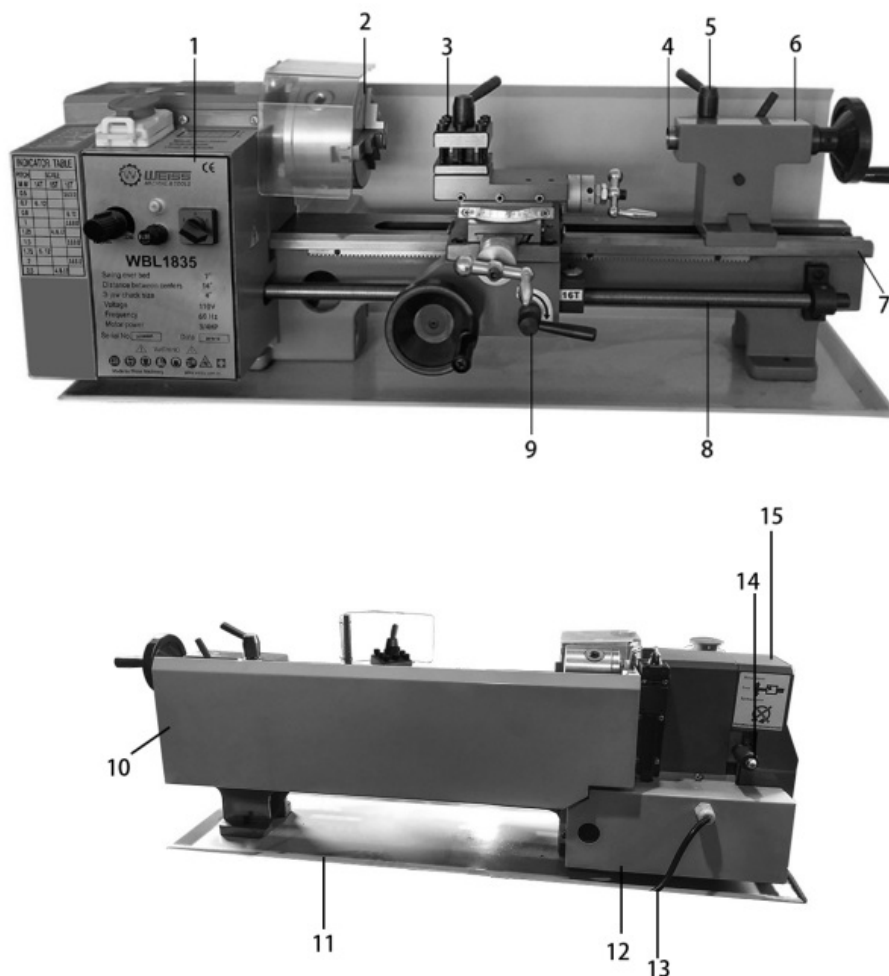


Fig.3 Back View Of The Lathe

- |                                     |                                |
|-------------------------------------|--------------------------------|
| 1. Control box                      | 8 . Lead screw                 |
| 2. Chuck                            | 9 . Automatic feeding handle   |
| 3. Tool post                        | 21. Rear splash guard          |
| 4. Tailstock quill                  | 22. Feeding direction selector |
| 5. Tailstock quill adjust handwheel | 23. Power cord                 |
| 6. Tailstock                        | 24. Chip tray                  |
| 7. Bed way                          | 25. Motor cover                |

## Grounding and insulation

1. In the event of a malfunction or break-down, 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 ordination.
2. Do not modify the plug provided even if it will not fit the outlet, have the proper outlet installed by a qualified electrician.
3. Improper connection of the equipment grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface which is green with or without yellow stripe 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.
4. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or

if in doubt as to whether the tool is properly grounded.

5. Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.
6. Repair or replace damaged or worn cord immediately.

**Note:**

The type of electrical plug and receptacle differs from country to country.

## Adjustment and preparation

1. clean off grease on the machine.
2. check that the 3 set screws of the chuck are tight.
3. turn the chuck by hand and check if it rotates freely.
4. move the feeding direction selector from the back of the body to the middle.
5. first shut off the switch 1. adjust the switch 3 by turning to "O" position and turn the switch 2 to STOP position. If the lathe needs to be started, turn the switch 1 according to direction marked on switch 2 to FORWARD or REVERSE position.

The spindle will turn immediately by turning the switch 3. The speed can be adjusted by turning the switch 3. If the lathe needs to be stopped, turn the switch 3 must be stopped, turn the switch 3 to "O" position. If the direction of the lathe spindle needs to be changed, the switch 3 must be turn to "O" position at first. If the lathe must be stopped under emergency situation, please put down the switch 1 immediately. If the lathe needs to be started again, please do it again according to above mentioned process.(SEE ig.4)



**Fig.4 Switches For Control**

6. Check the compound rest crank and the cross feeding crank and see if they work properly. If they are too tight or too loose, turn the adjusting screws located at both sides.(Fig.5)

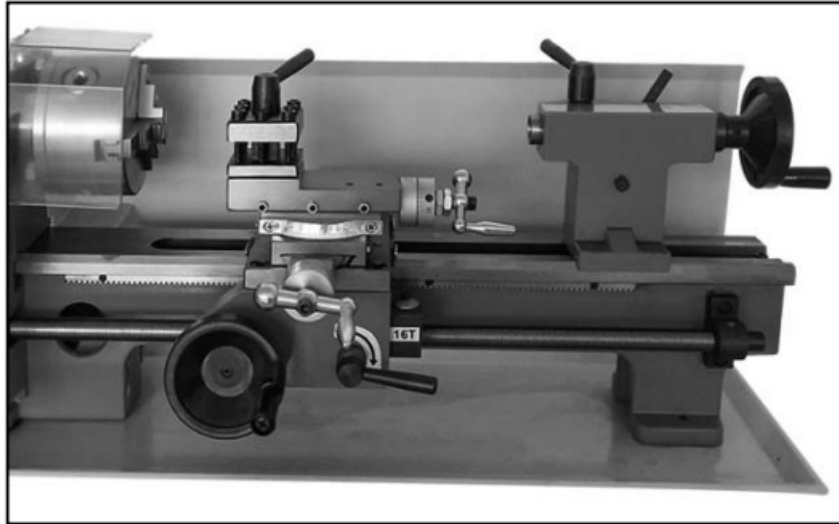


Fig.5 Adjustment Of Saddle, Cross Slide And Compound Rest

## Operation & Replacement

### Replacement of chuck

When replacing the chuck, place a cloth or a piece of wood on the bed way at the bottom of the chuck. This is to avoid damage to the bed way caused by carelessly dropping the chuck. Loosen the 3 set screws as shown in Fig.6 (A) to replace the chuck.

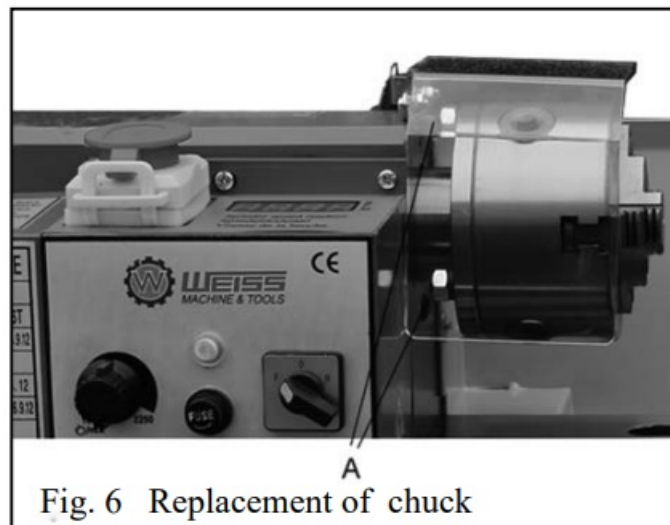


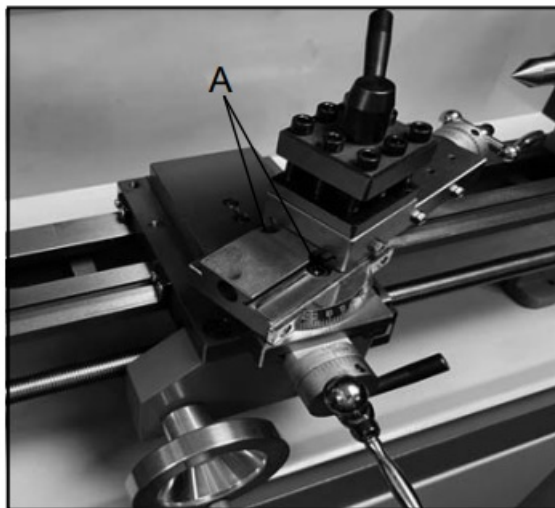
Fig. 6 Replacement of chuck



**Fig.7 Replacement Of Jaws**

### **Replacement of jaws**

The jaws are of two types: the internal jaws and the external jaws. Please note that the number of jaws fit with the number inside the chuck's groove. Do not mix them together. When you are going to mount them, please mount them in ascending order 1-2-3, when you are going to take them out, be sure to take them out in descending order (3-2-1) one by one. After you finish this procedure, rotate the jaws to the smallest diameter and check that the three jaws are well fitted. If not



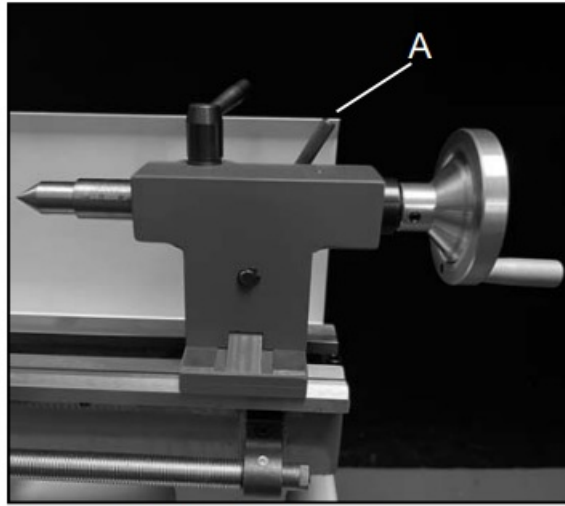
**Fig.8 Compound Rest Adjustment**

you need to reassemble them again as they are not properly assembled (Fig.7). When you are going to mount the work piece you need only to loosen one jaw. However, we recommend you loosen the three jaws at the same time, in this way you can protect them and will not hurt the thread inside.

### **Compound rest adjustment**

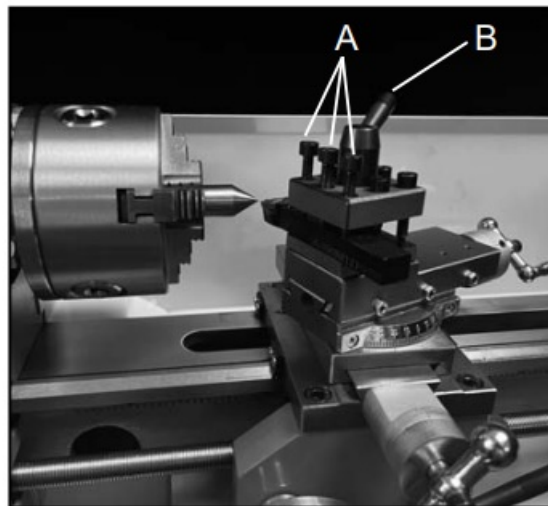
Loosen the two screws as shown in (A) of Fig.8. After you have obtained the angle you demand, please do not forget to tighten them.

### **Tailstock rest adjustment**



**Fig. 9 Tailstock Rest Adjustment**

When you are going to change position or replace the tailstock you need to loosen the Handle in (A) of Fig.9.  
**Tool post adjustment**



**Fig. 11 Tool Post Adjustment**

When you are going to adjust the tool post position, you only need to loosen the lever shown in (B) of Fig. 11. After you have finished be sure to tighten. If you are going to replace the work cutter then you need to loosen the screws of (A) with the allen wrench provided.

## Operation

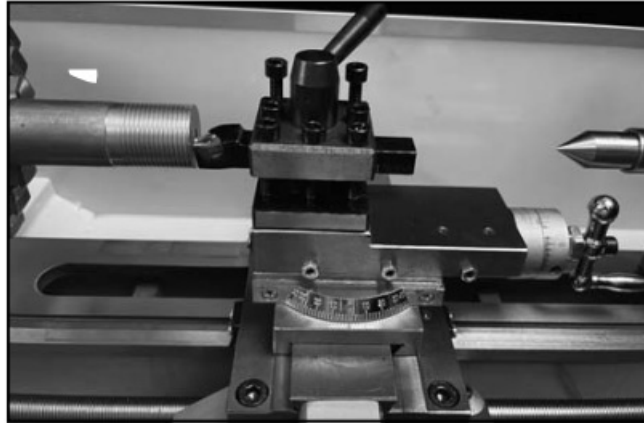


**Fig.13 Workpiece Holding And Drilling**



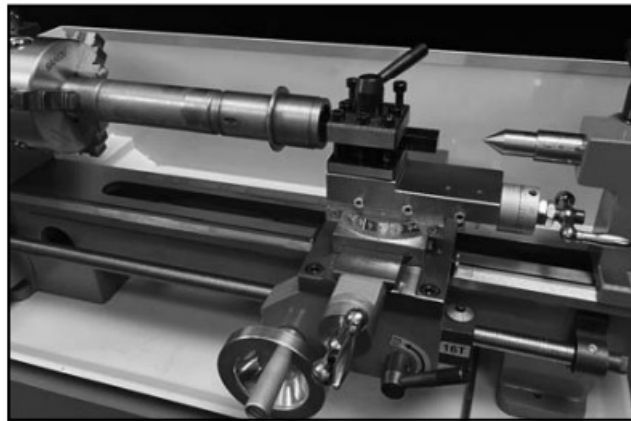
### **Fig.13 Workpiece Holding And Drilling**

Use the chuck to hold the workpiece firmly. Then, use the centre to fix the other end, if you change the center to drilling chuck you can start your drilling immediately. (Fig. 13)



### **Fig.14 face cutting**

Use the chuck to hold the workpiece firmly and the cutter to start lathe's face cutting as shown in Fig. 14 (edge of the cutter must be at the same height as the center).



### **Fig. 15 internal cutting**

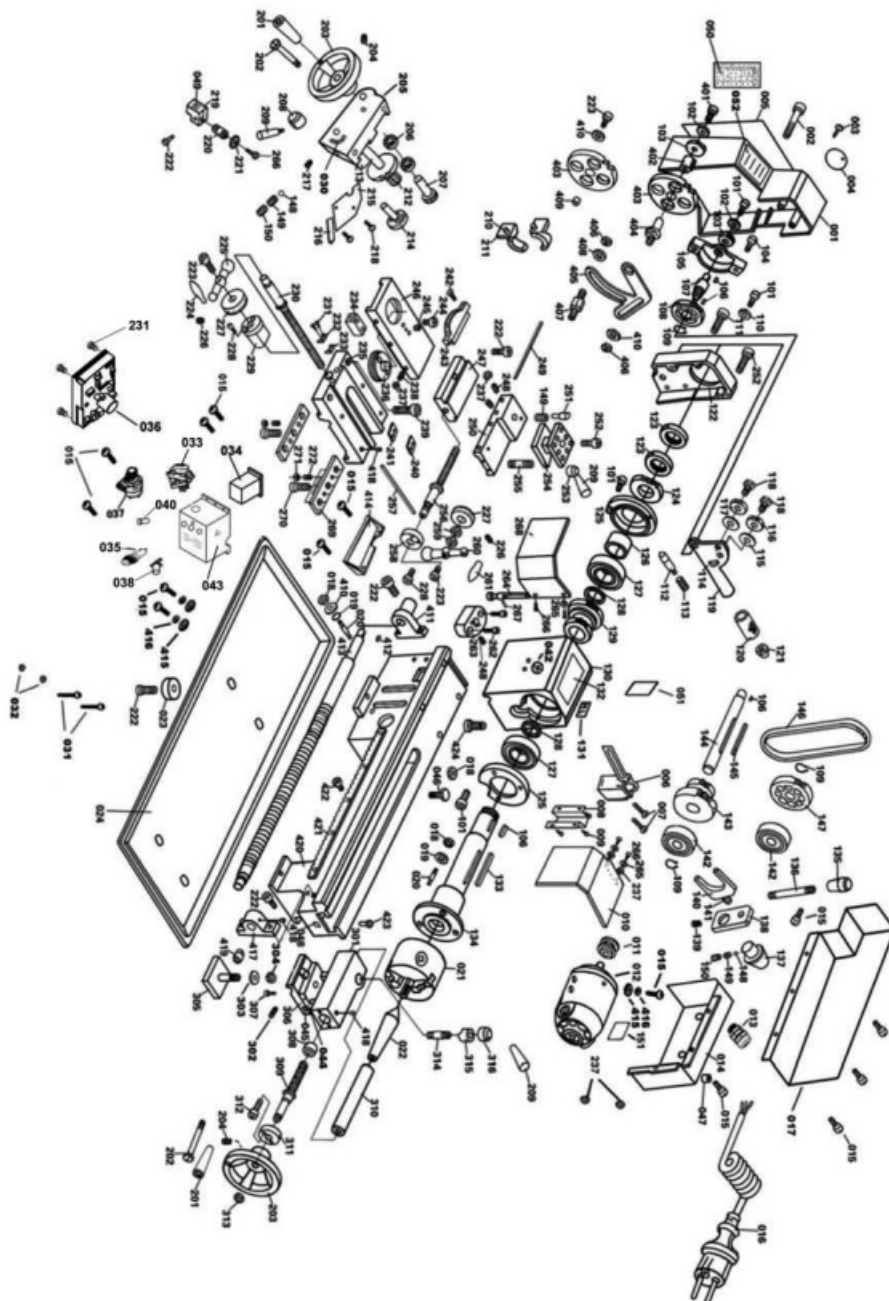
By changing the tool post angle and adjusting the compound rest, you can do internal cutting as in Fig. 15.



### **Fig. 16 bevel cutting**

After adjusting the angle of the compound rest, you can do bevel cutting as in Fig. 16

### **Assembly Diagram and Parts List**



Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
1	Cover	1	207	Feeding Gear(B) (24z)	1
2	Screw M5x45	2	208	Handle	1
3	Scrcw M3x6	4	209	Handle block	3
4	Chuck guard	1	210	Shaft (5×10)	2
5	Label	1	211	Half Nut Base	1
6	Power failure switch	1	212	Feeding Gear(A) (54z/11z )	1
7	Scrcw M4x30	2	213	Pin (8×60)	1
8	Lead screw guard	1	214	Groove Cam	1
9	Scrcw M4x6	1	215*	Cover	1

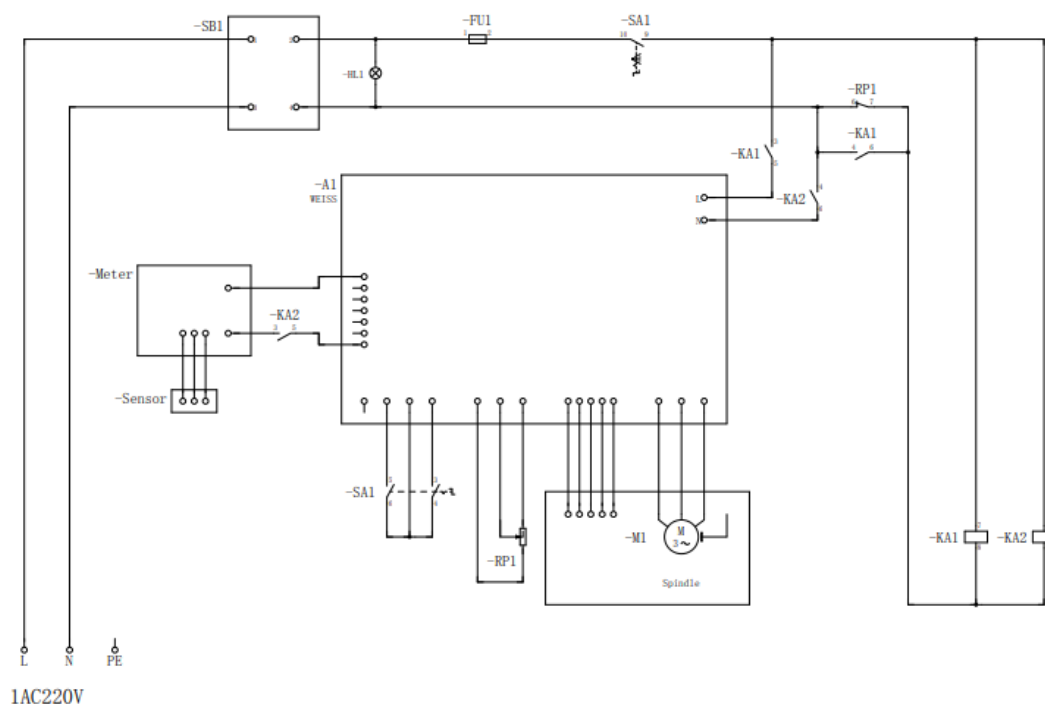
10	Support Mount	1	216	Gib Strip	1
11	Pulley	1	217	Screw M4x8	3
12	DC Motor	1	218*	Screw M3x6	2
13	PG bushing	1	219	Safety Switch	1
14	Cover	1	220	Round Guard (14z/15z/16z)	1
15	Screw M5x8	16	221	Screw indicator	1
16	Power plug cord	1	222	Screw M6x16	12
17	Rear Splash Guard	1	223	Screw M6x8	2
18	Nut M6	7	224	Handle	1
19	Ring Washer 06	5	225	Handle	1
20	Screw M6x28	5	226	Screw M6x12	2
21	Chuck 080	1	227	Dial	2
22	Center	1	228	Screw M4x14	4
23	Rubber	4	229	Bracket	1
24	Chip Tray	1	230	Feeding Screw	1
		1	231	Screw M4x12	4
		1	232	Antirust board	2
		2	233	Rubber	2
		2	234	Feeding Screw	1
29	Rubber quoit 010	1	235	Saddle	1
30	Hale Nut Base Label	1	236	Swivel Disk	1
31	Screw M3x18	2	237	Nut M4	6
32	Nut M3	2	238	Screw M4x16	3
33	Presses the switch	1	239	Screw M8x20	2
34	Relay	1	240	Antirust board	2
35	Fuse socket	1	241	Rubber	2
36	Brushless control board	1	242	Screw M4x6	2
37	Tune up Resistance	1	243	Slot	1
38	ZHA Swith	1	244	Screw M4x8	2
39	Name plate	1	245	Screw M5x10	1
40	Power alarm	1	246	Cross Slide	1
41	Danger	1	247	Compound Rest	1

42	Earth product label	1	248	Screw M4x14	4
43	Control Box	1	249	Gib Strip	1
44	Guide finger	1	250	Compound Rest	1
45	label	1	251	Positioning Pin	1
46	Screw M6x25	2	252	Screw M6x25	8
47	Rubber quoit	1	253	Clamping Lever	1
48	Label	1	254	Tool Rest	1
49	Label	1	255	Screw M10x50	1
50	Screw label	1	256	Cross Feeding Screw	1
51	Label	1	257	Gib Strip	1
52	Caution productlabel	1	258	Bracket	1
101	Screw M5x10	8	259	Nut M10	1
102	Washer 05	2	260	Handle	1
103	Pinion (20z)	2	261	Handle	1
104	Screw M5x18	2	262*	Screw M5x16	2
105	Mount	1	263*	Fixity	1
106	Key (4x6)	4	264*	Bracket	1
107	Shaft	1	265*	Washer	4
108	Gear (45z)	1	266*	Screw M4x10	5
109	Retaining Ring 12	3	267*	Pin 2.5x12	1
110	Washer 05	4	268*	Support mount	1
111	Screw M6x20	1	269	Clamp Plate	2
112	Indicator	1	270	Screw M6 x12	6
113	Spring 01.4x8x32	1	271	Nut M5	4
114	Apron	1	272	Screw M5x10	4
115	Washer 08	3	301	Tailstock Casting	1
116	Pinion (25z)	1	302	Screw M6x20	2
117	Gear (20z)	1	303	Washcr 010	2
118	Support Screw	1	304	Cover Nut M10	1
119	Handle Mount	1	10c	Tail Plate	1
120	Handle	1	306	Tail soleplate	1
121	Cover Nut IW.	1	307	Screw M5x14	1
122	Fixed Covcr	1	308	Bush	1

123	Nut (M27x1.5)	2	309	Tailstock Screw	1
124	Spur Gear (45z)	1	310	Tailstock Quill	1
125	Cover	2	311	Bracket	1
126	Spacer	1	312	Screw M4x10	27
127	Ball bearing 6206 RS	2	313	Cover Nut M8	1
128	Spacer	2			
129	I-UL Gear (I) (21z/29z)	1	314	Screw M8x40	1
130	Head Stock Casting	1	315	Clamp	1
131	H/L label	1	316	Handle	1
132	Warning label	1	401	Screw M5x8	4
133	Key (5x40)	1	402	Bush w/Key	1
134	Spindle	1	403	Gear (80z)	1
135	Shifting Grip	1	404	Shaft	1
136	Screw M8x60	1	405	Support Platc	1
137	Shifting Knob	1	406	Nut M8	1
138	Shifting Ann	1	407	Shaft	1
139	Screw M5x8	1	408	Ring Washer 08	1
140	Shifting Fork	1	409	Screw set	1
141	Shifting Fork Pin	1	410	Washcr 06	5
142	Ball bearing 6001-Z	2	411	Bracket (left)	1
143	H/L Gear (11)(20Z/12Z)	1	412	Key (4x8)	1
144	H/L Gear Shaft	1	413	Lead Screw	1
145	Key (4x45)	1	414	Kccps offihcforming block	1
146	Timing Belt(1. 5x70x95)	1	415	Tooth pad 5	3
147	Pulley	1	416	spring washcr 5	3
148	Steel ball 05	2	417	Brackct (right)	1
149	Spring 00.8x4x9	2	418	Grease cup 06x6.5	6
150	Screw M6x6	2	419	Mill flat nut M8	1
151	Motor label	1	420	Bed Way	1
201	Knob	2	421	Rack	1
202	Screw M6x40	2	422	Screw M3x16	4
203	Wheel	2	423	Screw M6x22	1
204	Screw M6x8	2	424	Screw M8x25	4

205	Apron	1			
206	Ball bearing 609-z	2			

## Wiring diagram



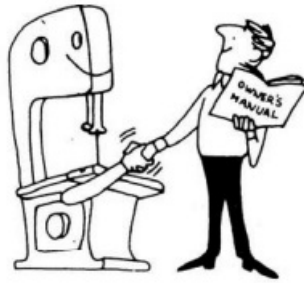
## New SAFETY RULES for Stationary Power Tools

follow them for best results and full benefit from shop machines

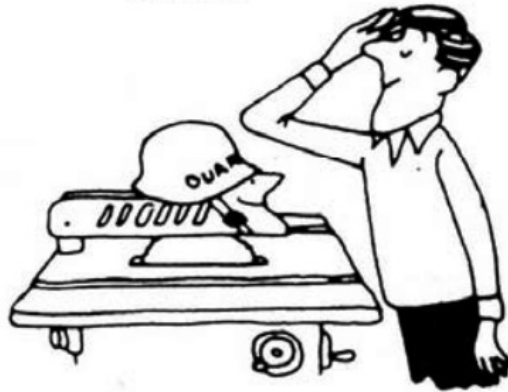


very good craftsman respects the tools with which he works. He knows they represent years of constantly improved design. He also knows that they are dangerous if misused. This is the theme of a new safe-use program developed by the Power Tool institute, Inc., for stationary power tools. The institute has put together a list of safety rules, based on ap-proved practices in industrial and home shops, to accompany a set of new standards for sta-tionary power tools that members of the in-stitute manufacture.

1. Know your power tool. Read the owner's manual carefully. Learn its applications and limitations, as well as the specific potential hazards peculiar to this tool.



2. Keep guards in place and in working order.



3. Ground all tools. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter wire must be attached to a known ground. Never remove the third prong.



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



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



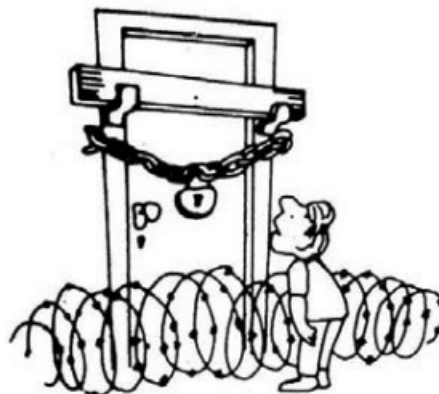
6. CAvoid dangerous environment Don't use power tools in damp or wet locations or expose them to rain, Keep your work area well lighted.



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



8. SMake workshop kidproof — with pad-locks, master switches, or by removing starter keys

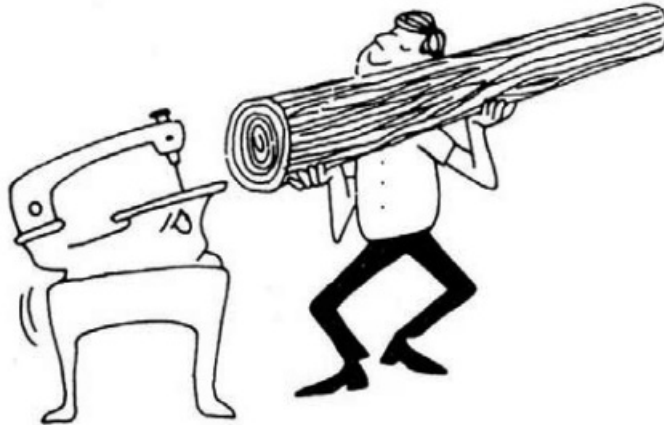




9. Don't force tool. It will do the job better and be safer at the rate for which it was designed.



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



11. Wear proper apparel Wear no loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.



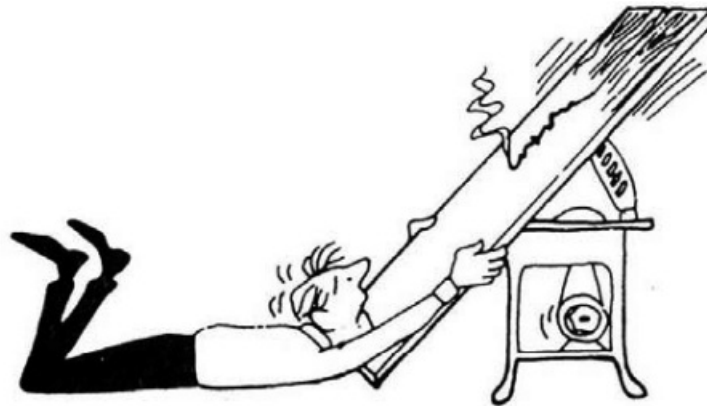
12. Always use safety glasses. Also use face or dust mask if cutting operation is dusty. Every-day eyeglasses only have impact resistant lenses. They are NOT safety glasses.



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



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



15. Maintain tools with care Keep tools sharp and clean for best and • safest per-formance. Follow instruc-tions for lubricating and changing accessories.



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

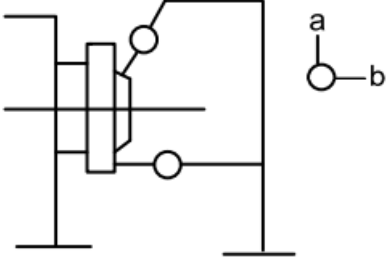
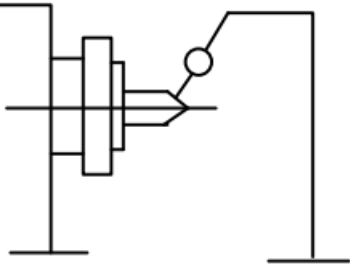
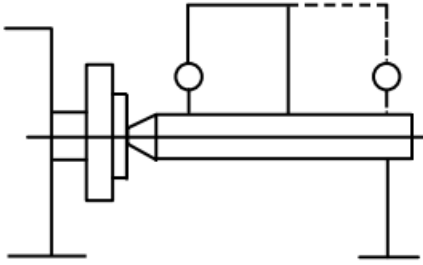
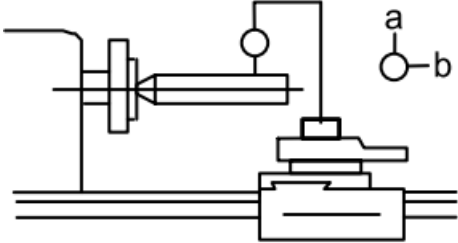
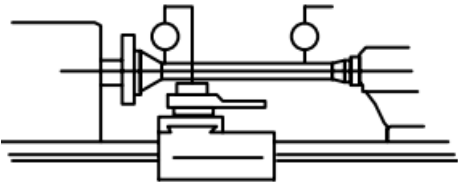
17. Use recommended accessories. Consult owner's manual for recom-mended accessories Use of improper accessories may cause risk of injury to persons.

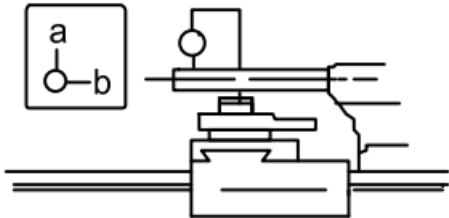
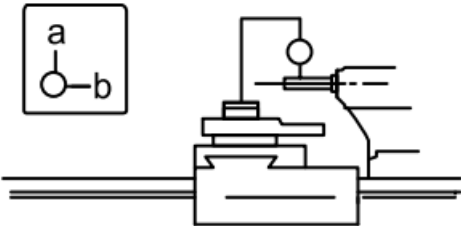
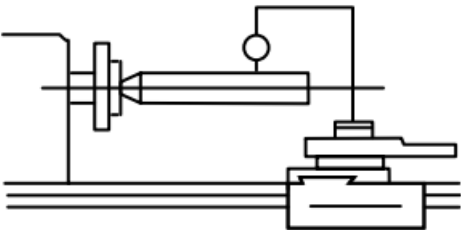
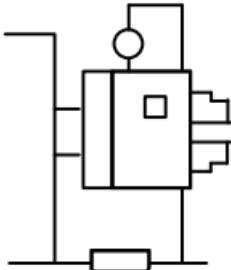
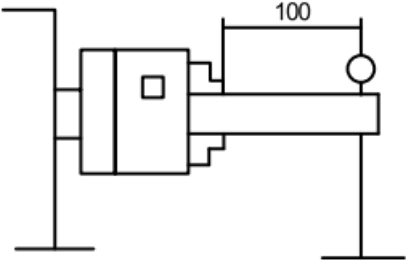


18. Reduce the risk of un-intentional starting. Make sure switch is in oft position before plugging in



<b>I. Visual Inspection</b>	<b>OK</b>	<b>IV. Electrical Inspection</b>	<b>OK</b>
1. Correct label	<input type="checkbox"/>	1. Connection tightened	<input type="checkbox"/>
2. Painting damage	<input type="checkbox"/>	2. Correct electrical elements	<input type="checkbox"/>
3. Corrosion damage	<input type="checkbox"/>	3. Earth resistance	<input type="checkbox"/>
4. Screw tightened	<input type="checkbox"/>	4. Insulation resistance	<input type="checkbox"/>
<b>II. Mechanical Inspection</b>	<b>OK</b>	5. Tolerance voltage test	<input type="checkbox"/>
1. Function of top slide	<input type="checkbox"/>	6. Function of F/R switch	<input type="checkbox"/>
2. Function of cross slide	<input type="checkbox"/>	7. Emergency stop switch	<input type="checkbox"/>
3. Function of carriage	<input type="checkbox"/>	8. Spindle safety cover	<input type="checkbox"/>
4. Function of tailstock	<input type="checkbox"/>	9. Function of motor	<input type="checkbox"/>
5. Lubrication for sliding parts	<input type="checkbox"/>	<b>V. Final Inspection</b>	<b>OK</b>
6. Parallelism of pulleys	<input type="checkbox"/>	1. Correct accessories	<input type="checkbox"/>
7. Spindle adjustment	<input type="checkbox"/>	2. Correct documents	<input type="checkbox"/>
<b>III. Active Inspection</b>	<b>OK</b>	3. Machine cleanness	<input type="checkbox"/>
1. Function of gearbox	<input type="checkbox"/>	4. Credibility antirust	<input type="checkbox"/>
2. Function of apron	<input type="checkbox"/>	5. Correct mark	<input type="checkbox"/>
3. Running test	<input type="checkbox"/>		
4. Noise test	<input type="checkbox"/>		
5. Leaky test	<input type="checkbox"/>		
6. Cutting test	<input type="checkbox"/>		
<b>Remark:</b>			

NO.	INSPECTION ITEM	DIAGRAM	TOLERANCE(mm)	
			PERMISSIBLE	ACTUAL
1	Runout of spindle nose a radial plane b face plane		a 0.01 b 0.015	
2	Runout of center		0.03	
3	Runout of spindle taper hole a spindle nose b 250 distance		a 0.015 b 0.03	
4	Parallelism of center line of spindle to carriage movement a in horizontal plane b in vertical plane		a 0.03/250 b 0.03/250	a b
5	Difference between two centers (higher at tailstock)		0.02-0.06	

6	Parallelism of tailstock quill to carriage movement a in horizontal plane b in vertical plane		a 0.025/50 b 0.025/50	a b
7	Parallelism of tailstock quill taper hole to carriage movement a in horizontal plane b in vertical plane		a 0.03/250 b 0.02/250	a b
8	Parallelism of center line of spindle to top slide movement		0.04/50	
9	Radial runout of chuck		0.04	
10	Radial runout Ø20 test bar		0.08/100	

Test Record

WBL1835

Serial No.....

Date.....

Inspector.....



**Documents / Resources**



[WEISS MACHINES WBL1835 Variable Speed Mini Lathe](#) [pdf] Instruction Manual  
WBL1835, Variable Speed Mini Lathe, WBL1835 Variable Speed Mini Lathe, Mini Lathe, Lathe