



Woodworking machinery at its best!

**MINI LATHE
OWNERS MANUAL
MODEL : W815**



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W815 Technical Specification

Distance between centres	330mm
Swing over bed	200mm
Motor (carbon Brush)	250W 1.3hp 240Vdc
Speeds	750 to 3,200 rpm
Spindle thread	1" x 8 tpi
Headstock and tailstock tapers	1MT
Dimensions (WxDxH)	690mm x 220mm x 310mm
Weight	18kg (20kg gross)
Rating	Hobby

GENERAL SAFETY RULES



WARNING: Do not attempt to operate the machine until you have read thoroughly and understood completely all instructions, rules, etc. contained in this manual. Failure to comply may result in accidents involving fire, electric shock, or serious personal injury. Keep this owner's manual and review it frequently for continuous safe operation.

1. Know your machine. For your own safety, read the owner's manual carefully. Learn its application and limitations, as well as specific potential hazards pertinent to this machine.
2. Make sure all tools are properly earthed.
3. Keep guards in place and in working order. If a guard must be removed for maintenance or cleaning, make sure it is properly replaced before using the machine again.
4. Remove adjusting keys and spanners. Form a habit of checking to see that the keys and adjusting spanners are removed from the machine before switched it on.
5. Keep your work area clean. Cluttered areas and workbenches increase the chance of an accident.

6. Do not use in dangerous environments. Do not use power tools in damp or wet locations, or expose them to rain. Keep work areas well illuminated.
7. Keep children away. All visitors should be kept a safe distance from the work area.
8. Make workshop childproof. Use padlocks, master switches and remove starter keys.
9. Do not force the machine. It will do the job better and be safer at the rate for which it is designed.
10. Use the right tools. Do not force the machine or attachments to do a job for which they are not designed. Contact the manufacturer or distributor if there is any question about the machine's suitability for a particular job.
11. Wear proper apparel. Avoid loose clothing, gloves, ties, rings, bracelets, and jewellery which could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
12. Always use safety glasses. Normal spectacles only have impact resistant lenses. They are not safety glasses.
13. Do not over-reach. Keep proper footing and balance at all times.
14. Maintain machine in good condition. Keep machine clean for best and safest performance. Follow instructions for lubrication and changing accessories.
15. Disconnect the machine from power source before servicing and when changing the drive belt.
16. To avoid accidental starting, make sure the switch is in the OFF position before plugging in the mains cable.
17. Never leave the machine running unattended. Turn the power off. Do not leave the machine until it comes to a complete stop.
18. Do not use any power tools while under the effects of drugs, alcohol or medication.
19. Always wear a face or dust mask if operation creates a lot of dust and/or chips. Always operate the tool in a well ventilated area and provide for proper dust removal. Use a suitable dust extractor.

ADDITIONAL RULES FOR LATHES

1. Never attempt to adjust any part of the workpiece whilst the lathe is still in motion. Wait until the workpiece has come to a complete stop.
2. Ensure that chuck keys, tommy bars and similar items are removed before the lathe is started.
3. Always stand to one side when you start the lathe so that if anything does fly off e.g. a loose piece of bark, you will be out of the line-of-fire.
4. When mounting a new piece of timber, rotate the wood through 360° by hand to ensure that it will not hit the toolrest or the bed of the lathe and then start the lathe at its slowest speed. When you are certain that that the work is secure and not too out of balance set the lathe to the normal turning speed.
5. Always check the rotation speed before switching the lathe on to avoid the risk of starting it whilst it is set to run at too high a speed.
6. The speed of the lathe must be adjusted to suit the size, balance, length and condition of the timber being turned. The greater the diameter of the work, the slower the rotation speed needs to be. If the piece you are turning is out of balance, then you must start turning at a low speed, until it is balanced.
7. The tool must rest firmly on the toolrest before it is brought into contact with the rotating wood and must never be lifted off the toolrest as long as it is in contact with the timber.
8. Before sanding, polishing or doing anything else that brings your fingers close to the work, remove the toolrest. Getting your fingers trapped between the toolrest and the work will at least be very painful and may cause serious injury.
9. Never wrap the sandpaper or polishing cloth round the work. If it tightens up it will pull your fingers into contact with the timber and may lead to serious injury.

Unpacking your lathe

Check the contents of the box have arrived safely and that all the components are present, according to the list below.

Lathe bed with headstock,
tailstock & banjo

Centres

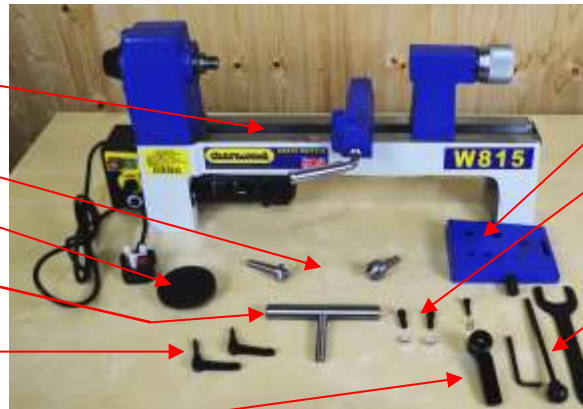
Faceplate

Tool rest stem

& cross bar

Locking handles for tool
post & tailstock

Tailstock locking handle
with fixing bolt & spring



Tool tray

Nuts & bolts for fixing
tool tray

Allen keys, spanner and
knock out bar

Assembly Instructions

1) Fit the tailstock locking handle

This is the shorter of the two locking handles. The keyway in the barrel must be at the top and the tip of the locking screw must engage with it.



2) Fit the tool post locking handle.

This is the longer of the two locking handles. They are not interchangeable. The tool rest stem and cross bar are supplied screwed together. Ensure that they are screwed tightly.



3) Fit tool rest

Place the tool rest stem in the hole in the banjo and lock in place with the locking handle.



4) Fit the tool Tray

The tool tray is bolted to the tailstock end of the lathe. The nuts should be under the tray. Fit the one with restricted access first, as shown, using a 6mm Allen key.



Your new lathe is now ready for use with either the faceplate or the drive centres supplied. A spanner is supplied to facilitate removal of the faceplate and there is a knock out bar provided for easy removal of the centres.

Main Features of Charnwood W815 lathe



This lathe is built on a solid cast iron bed which gives it strength, weight and stability. The top surface of the bed is precision machined so that the headstock and tailstock are always in perfect alignment.

At the left end of the machine is a combined no-volt-release switch and speed controller. The motor is mounted under the bed, keeping the centre of gravity low, thus adding to the overall stability.

A convenient tool tray is to found at the right hand end of the bed. Used for storing the centres, face plate and other accessories.

Spindle speeds of between 750 and 3200 rpm are available simply by twisting the control knob. Speed is infinitely adjustable within this range.

The tool rest cross bar can be removed from tool rest stem. Alternative cross bars are available, including shaped type for bowl turning.

The tailstock features a large knurled handgrip for easy adjustment of the barrel position and the barrel itself has metric scale engraved on it.

Basic Operating Instructions - to be read in conjunction with safety rules.

Site the lathe where you will have clear space to move in front of it and there is a standard 13 amp socket to which it can be connected. It is sensible to have it unplugged when mounting work between centre, in a chuck or on a faceplate.

It is essential to have it unplugged when tensioning/changing the drive belt or replacing the brushes.

When you have mounted a piece of wood, position the tool rest and always rotate the work piece by hand to ensure that it is clear of the crossbar.

Select a low speed on the control dial (turn the knob anticlockwise) and press the green button on the NVR switch. ALWAYS start at a low speed. When you are sure that the work is firmly held in place, the speed may be increased to that which is correct for the job in hand. Do not run the lathe at a speed which causes excessive vibration when the work piece is in a 'raw' state and still unbalanced.

Cut gently with well sharpened chisels and gouges. Do not force the work or allow a tool to dig in.

Optional Accessories



Viper 2 chuck system



Alternative Tool rest cross bars

Routine Maintenance

1) Adjusting The Drive Belt Tension



To adjust the belt tension, slacken off the two cap head bolts fixing the motor to the lathe bed. Pivot the motor on the rear bolt until the desired tension is reached and then tighten both bolts.

2) Replacing The Drive Belt



To change the drive belt: Release the belt tension. Remove the black cover plate on the left side of Headstock. Remove the old belt and fit the new one.

3) Changing the carbon brushes

The carbon brushes will eventually need changing. This should be carried out when wear is down to a Length of 7mm.

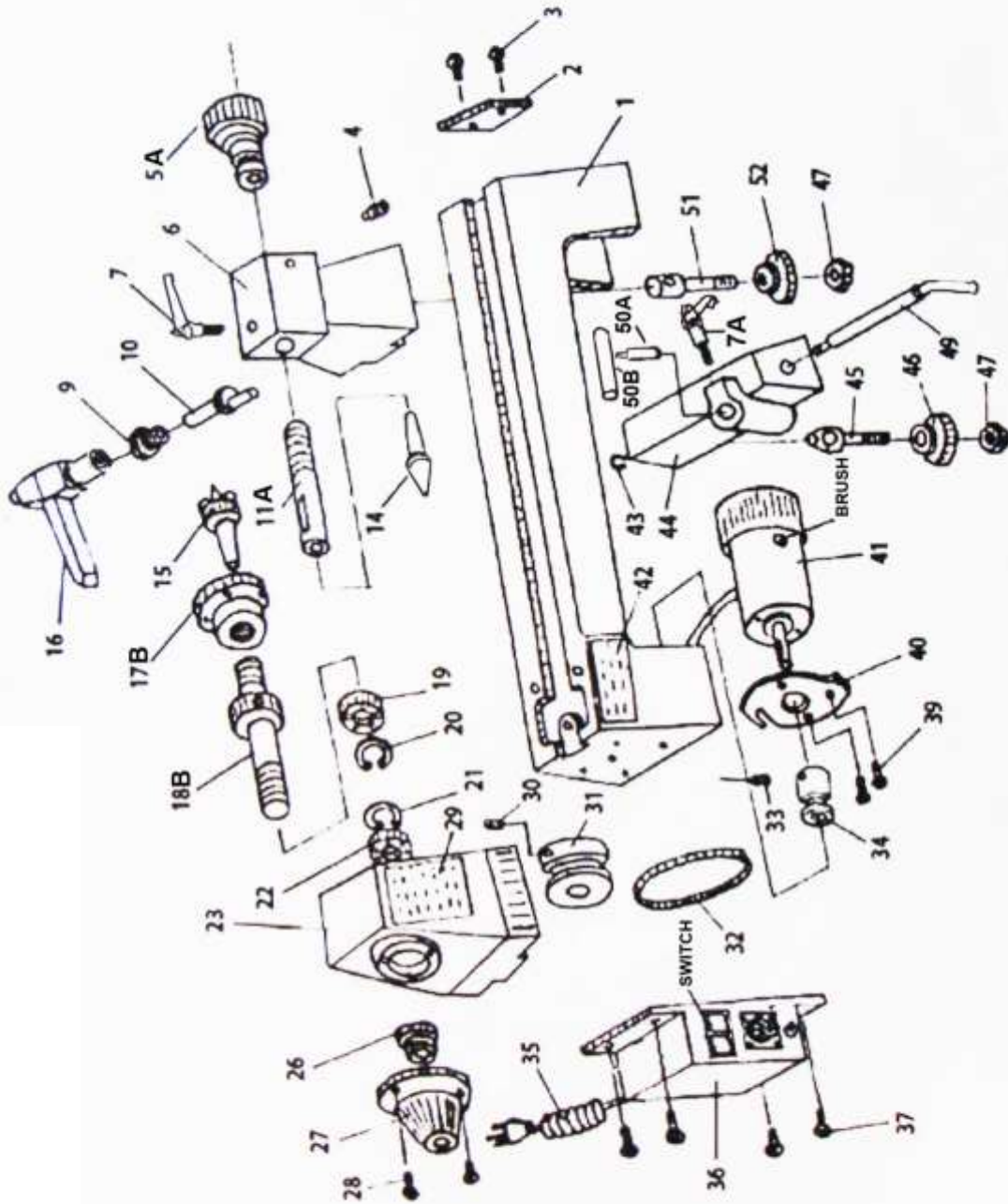
Unscrew the two black plastic screws found on either side of the motor, withdraw the old brush and spring, then replace it with a new one. Always replace both brushes at the same time.



CHARNWOOD W815 LATHE TROUBLESHOOTING GUIDE

Fault	Possible Cause	Remedy
Machine will not start	Power supply not connected	Check plug socket is switched on
	Fuse in plug has blown	Replace fuse
	Fuse in control panel has blown	Replace fuse
	Break in power supply cable	Visually check cable, replace in necessary
	Loose terminal on switch	Remove speed controller and check connections
	Switch failed	Replace switch
Machine will not start, switch latches	Speed controller failed	Replace speed controller
Machine will not start, but a buzz is heard	On/Off Switch has failed (when holding down green button the machine starts)	Replace switch
Machine starts to turn but slow speed only	Failed variable speed circuit	Check connection to speed dial
		Replace speed controller
Spindle stalls but motor still running	Loose drive belt	Increase belt tension
Motor is running but spindle not turning	Broken drive belt	Replace drive belt
Motor is overheating	Too much load on motor	Reduce load on motor, make shallower cuts
	Airflow to cooling fan is blocked	Remove fan cover and clean grill
Spindle rotation slows during cut	Excessive depth of cut	Make shallower cuts
	Chisels are dull	Sharpen chisels
	Worn out carbon brushes	Replace carbon brushes (see page 8)
	Loose drive belt	Increase belt tension

W815 Parts Diagram



W815 Parts List

Part No.	Description	Part No.	Description
01	Bed	02	Restraining Plate
03	Bolt	04	Bolt
05A	Handgrip (Chrome)	06	Tailstock
07	Locking Handle – Tailstock 18mm	07A	Locking Handle – Toolrest 28mm
08	Bolt	09	Sleeve
10	Eccentric Axis	11A	Barrel 1MT
14	Tail Centre	15	Drive Centre
16	Tailstock Locking Handle	17B	Faceplate 1" x 8 tpi
18B	Headstock Spindle 1" x 8 tpi 1MT	19	Bearing
20	Circlip	21	Circlip
22	Bearing	23	Headstock
26	Headstock Spindle Nut	27	Cover Plate
28	Bolt	29	Label
30	Bolt	31	Drive Pulley
32	Drive Belt	33	Bolt
34	Motor Pulley	35	Mains Cable
36	NVR Switch and Speed Control	37	Bolt
39	Bolt	40	Motor Plate
41	Motor	42	Warning Label
43	Circlip	44	Banjo
45	Cam Hanger	46	Plate
47	Hex Nut	49	Eccentric Rod
50A	Toolrest Stem	50B	Toolrest Crossbar
51	Cam Hanger	52	Plate
59	Knock Out Bar	60	Tool Tray
SWITCH	KJD6 On/Off Switch	BRUSH	Carbon Brushes - Pair



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