



Code 105119

Original Instructions

# AC305WL

## Woodturning Lathe



AT: 26/07/2021  
BOOK REF: 105170  
BOOK VERSION: 04

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# EU Declaration of Conformity

<p><b>Cert No: MC1218DA</b></p> <p>Axminster Tool Centre Ltd Axminster Devon EX13 5PH UK <a href="http://axminstertools.com">axminstertools.com</a></p> <p>declares that the machinery described:-</p> <table border="1"> <tr> <td>Type</td> <td><b>Woodturning Lathe</b></td> </tr> <tr> <td>Model</td> <td><b>AC305WL</b></td> </tr> </table> <p>Signed </p> <p><b>Andrew Parkhouse</b> Operations Director</p> <p>Date: <b>12/06/2017</b></p>	Type	<b>Woodturning Lathe</b>	Model	<b>AC305WL</b>	<p><b>EU Declaration of Conformity</b></p> <p><b>This machine complies with the following directives:</b></p> <table border="0"> <tr> <td>2006/42/EC</td> <td>EN 55014-1:2006</td> </tr> <tr> <td>2006/95/EC</td> <td>EN 55014-2:1997+A1+A2</td> </tr> <tr> <td>06/42/EC - Annex I/05.2006</td> <td>EN 61000-3-3:2008</td> </tr> <tr> <td>EN 61029-1:2009+A11</td> <td>EN 62841-1:2015</td> </tr> <tr> <td>EN 61000-3-2:2006</td> <td>EN ISO 12100:2010</td> </tr> </table> <p>conforms to the machinery example for which the EC Type-Examination Certificate No AM50361061, AE501701975, AM 50380718 has been issued by <b>Laizhou Chunlin Machinery Co., Ltd</b> at: No. 269 Baoshi Road, Wenfeng Street, Laizhou City, Shandong 261400 China and complies with the relevant essential health and safety requirements.</p>	2006/42/EC	EN 55014-1:2006	2006/95/EC	EN 55014-2:1997+A1+A2	06/42/EC - Annex I/05.2006	EN 61000-3-3:2008	EN 61029-1:2009+A11	EN 62841-1:2015	EN 61000-3-2:2006	EN ISO 12100:2010
Type	<b>Woodturning Lathe</b>														
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EN 61029-1:2009+A11	EN 62841-1:2015														
EN 61000-3-2:2006	EN ISO 12100:2010														

The symbols below advise the correct safety procedures when using this machine.



Fully read manual and safety instructions before use



Ear protection should be worn



Eye protection should be worn



Dust mask should be worn



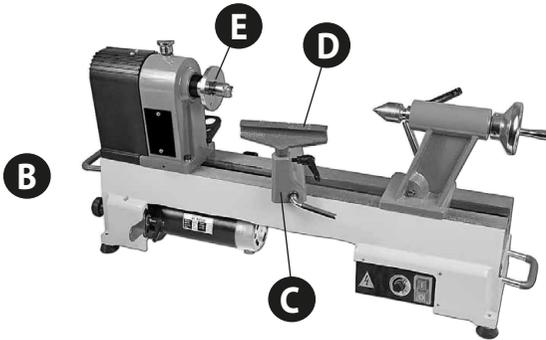
**HAZARD**  
Motor gets hot

## What's Included

Quantity	Item	Part	Model Number
1	Wood Lathe (Index Lock not fitted to the lathe)	<b>B</b>	AC305WL
1	Banjo arm (fitted)	<b>C</b>	
1	150mm Tool rest (fitted to banjo arm)	<b>D</b>	
1	75mm Faceplate (fitted to headstock)	<b>E</b>	
1	Axminster 4 Prong Drive Centre (25mm)	<b>F</b>	(code 340106)
1	Axminster Standard 60° Live Centre	<b>G</b>	(code 340203)
1	Push Rod	<b>H</b>	
1	Tool Holder and two Phillips screws/washers	<b>I</b>	
1	Tailstock handle	<b>J</b>	

## Optional Accessories

Quantity	Item	Part	Model Number
1	Bed Extension with Hex screws, washers	<b>K</b>	(code 504511)



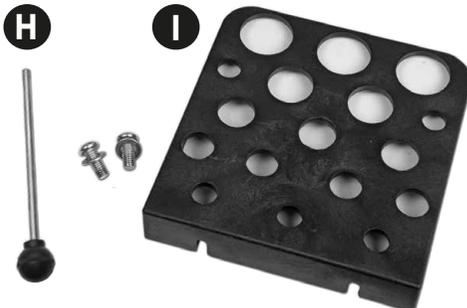
AC305WL Wood Lathe



Axminster 4 Prong Drive Centre



Axminster Standard 60° Live Centre



## General Instructions for 230V Machines

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The following will enable you to observe good working practices, keep yourself and fellow workers safe and maintain your tools and equipment in good working order.



**WARNING! KEEP TOOLS AND EQUIPMENT OUT OF THE REACH OF YOUNG CHILDREN**



**KEEP THE WORK AREA AS UNCLUTTERED AS IS PRACTICAL, THIS INCLUDES PERSONNEL AS WELL AS MATERIAL. UNDER NO CIRCUMSTANCES SHOULD CHILDREN BE ALLOWED IN WORK AREAS.**

### Mains Powered Tools

- Tools are supplied with an attached 13 Amp UK 3 pin plug, fitted with 13 amp fuse.
- Inspect the cable and plug to ensure that neither are damaged. Repair if necessary by a suitably qualified person.
- Do not use when or where it is liable to get wet.

### Workplace

- Do not use 230V a.c. powered tools anywhere within a site area that is flooded.
- Keep machine clean.

- Leave machine unplugged until work is about to commence.
- Always disconnect by pulling on the plug body and not the cable.
- Carry out a final check e.g. check the cutting tool is securely tightened in the machine and the correct speed and function set.
- Ensure you are comfortable before you start work, balanced, not reaching etc.
- Wear appropriate safety clothing, goggles, gloves, masks etc. Wear ear defenders at all times.
- If you have long hair wear a hair net or helmet to prevent it being caught up in the rotating parts of the machine.
- Consideration should be given to the removal of rings and wristwatches.
- Consideration should also be given to non-slip footwear etc.
- If another person is to use the machine, ensure they are suitably qualified to use it.
- Do not use the machine if you are tired or distracted
- Do not use this machine within the designated safety areas of flammable liquid stores or in areas where there may be volatile gases.
- Check cutters are correct type and size, are undamaged and are kept clean and sharp, this will maintain their operating performance and lessen the loading on the machine.
- **OBSERVE....** make sure you know what is happening around you and **USE YOUR COMMON SENSE.**

## Specific Safety Instructions for Woodturning Lathes

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1. Do not use 'split' work pieces.
2. Always start at the lowest speed when starting a new task.
3. Try to render a new work piece "round" (or as close as is practical) before turning.
4. Check that the tool rest is at or slightly below the centre line of the work piece.
5. Check the work piece is securely mounted in the lathe before switching on the power.
6. Rotate the work piece by hand, to check that it is:- centralised, clear of the tool rest, not 'split' or has loose knots.
7. Where lathes have the facility to be reversed; check the machine is rotating in the correct direction.

8. If your lathe has the facility to run in reverse, you must ensure that the mounting accessories (chucks, faceplates etc.,) can be 'locked' onto the lathe mandrel, and in the case of chucks have some form of security device to prevent them 'unwinding' during reverse operation.
9. Make sure your tools are stored/racked away from the turning area of the lathe. Do not reach over a rotating work piece at any time.
10. Do not 'dig in' or try to take too large a cut.
11. Do not leave the lathe running unattended; or leave the machine until everything is stopped.
12. If you are turning between centres with 'softish stuff', check and reposition the tailstock centre frequently.

## Specification

Code	105119
Model	AC305WL
Rating	Craft
Power	550W, 230V
Speed	(2) 500-2,040 and 1,000-4,080
Spindle Taper	MT2
Spindle Thread	1" x 8tpi (Ref T04M)
Taper Tailstock	2 MT
Distance Between Centres	457 mm
Max Diameter over Bed	305 mm
Tool Rest Stem Diameter	16 mm
Overall L x W x H	820 x 440 x 280 mm
Weight	40 kg

## Assembly

Please take some time to read the section entitled "Illustration & Parts Description" to identify the various parts of your machine so that you are familiar with the terminology we will use to enable you to set up and operate your table lathe safely and correctly.

The machine and its accessories will arrive coated with corrosion preventative grease. This will need to be cleaned from the machine, its components and accessories prior to it being set up. Use coal oil, paraffin or a proprietary de greaser to remove the barrier grease.

Be warned, it will stain if you splash it on clothing etc., wear overalls, coverall et al., rubber gloves are also a good idea, as is eye protection if your cleaning process tends to be a little bit enthusiastic.

After cleaning, lightly coat the machine with a thin layer of light machine oil. N.B If you used paraffin/ kerosene make sure you apply this thin film sooner rather than later.

95% of the machine comes fully assembled, all that remains is to fit the four prong drive centre (F) the 60° live centre (G) and the tool holder (I).

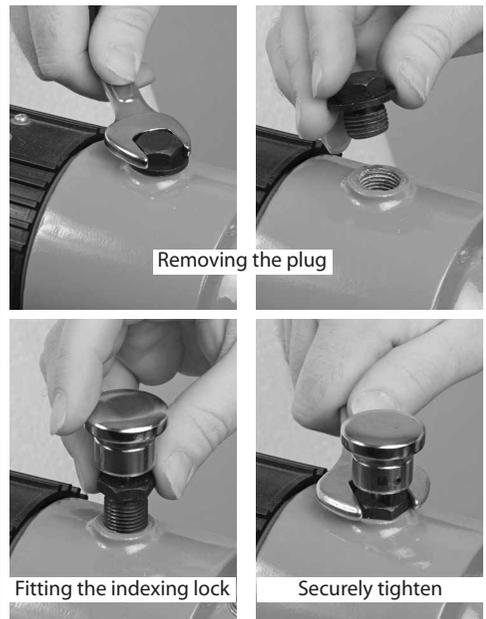
### Indexing Lock

The indexing lock is now supplied separately in the accessory pack and not fitted to the lathe. We recommend to fit the index lock only if you plan to use the index facility in the future.

**NOTE: DO NOT USE THE INDEX LOCK AS A SPINDLE LOCK AS YOU WILL DAMAGE LOCKING PIN.**

Please see figures A-B-C-D for fitting instructions for the indexing lock.

**Fig A-B-C-D**

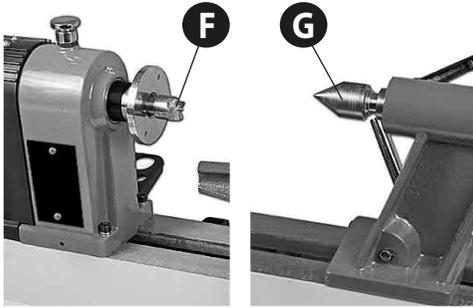


### Drive Centre/Faceplate

Locate the four prong drive centre (F) and slide it through the centre of the faceplate into the headstock spindle, see fig 1.

Locate the live centre (G) and slide it into the tailstock barrel, see fig 2.

### Fig 01-02



#### Tool Holder

Locate the tool holder (I) the two Phillips screws and washers, see fig 3. Place a washer over the screws and screw them into the two pre-drilled holes below the headstock, see fig 4.

**NOTE:** There are also two pre-drilled holes under the tailstock if you wish to mount the tool holder there.



**NOTE GIVE ADEQUATE GAP BETWEEN THE SCREW HEAD AND LATHE CASTING!**

### Fig 03-04

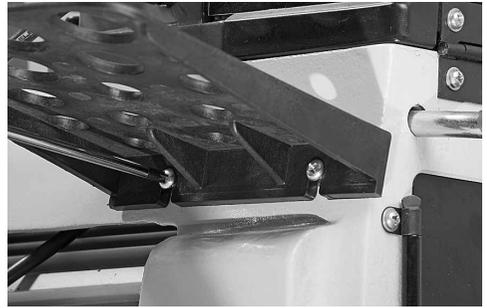


Line up the machined slots in the tool holder (I) and slide the holder down over Phillips screws then lightly tighten the screws to clamp the holder in place, see figs 5-6.

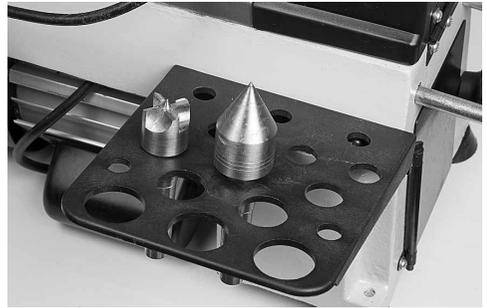


**DON'T OVERTIGHTEN THE PHILLIPS SCREWS AS THE HOLDER IS ONLY PLASTIC!**

### Fig 05



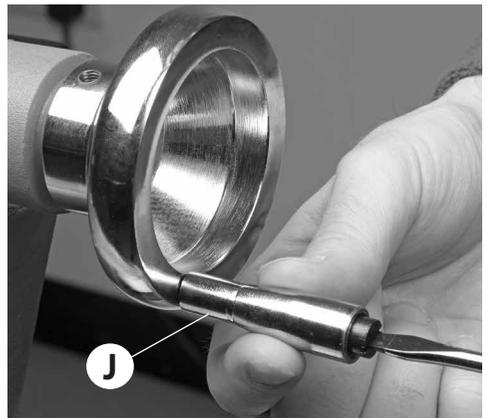
### Fig 06



#### Tailstock Handle

Locate the tailstock handle and screw it into the threaded hole in the tailstock wheel, see fig A.

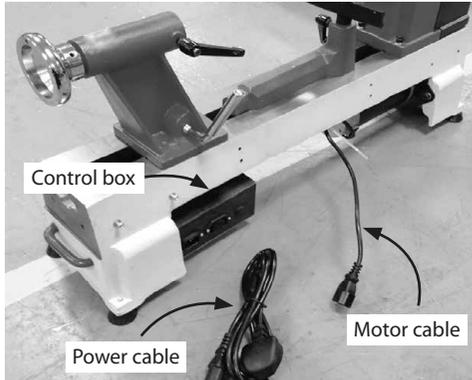
### Fig A



## Motor & Power Cable Connections

1. The lathe may be delivered with the motor and power cables unplugged. Follow the steps for correct connection.

### Step 1



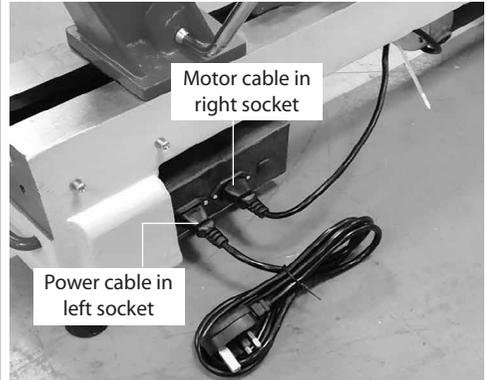
3. Below is a close up view showing the cables in the correct sockets to the rear of the control box. Place the lathe on a level surface, clear away any tools and connect the 3 pin plug to the mains supply.

### Step 3



2. The motor cable is plugged into the right-hand socket to the rear of the control box and the main power cable is plugged into the left-hand socket.

### Step 2



4. **PLEASE NOTE NEVER** plug the motor cable directly into the power cable as shown below as it will cause serious damage to the DC motor.

### Step 4



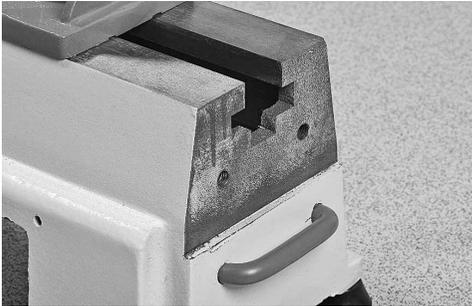
## Optional Bed Extension

Locate the bed extension (K) and the two Hex screws and spring/washers, (see fig 7) position the bed extension against the end of the lathe and line up the pre-drilled holes, see figs 8-9. Place a washer and spring over the Hex screws and lightly screw them into the threaded holes, see fig 10.

**Fig 07**



**Fig 08**



**Fig 09**



**NOTE: DON'T TIGHTEN THE SCREWS AT THIS POINT!**

Release the tailstock clamping lever and position the tailstock across the join to align both beds, re clamp the tailstock in position and tighten both Hex screws, see figs 11-12. Both beds are now aligned.

**Fig 10**



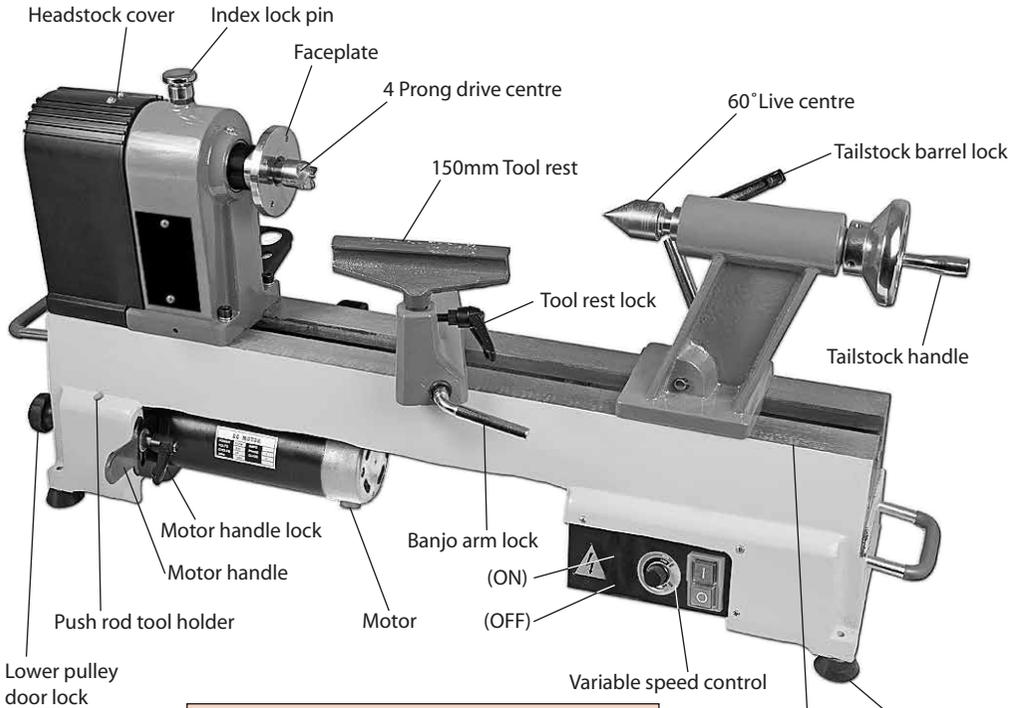
**Fig 11**



**Fig 12**

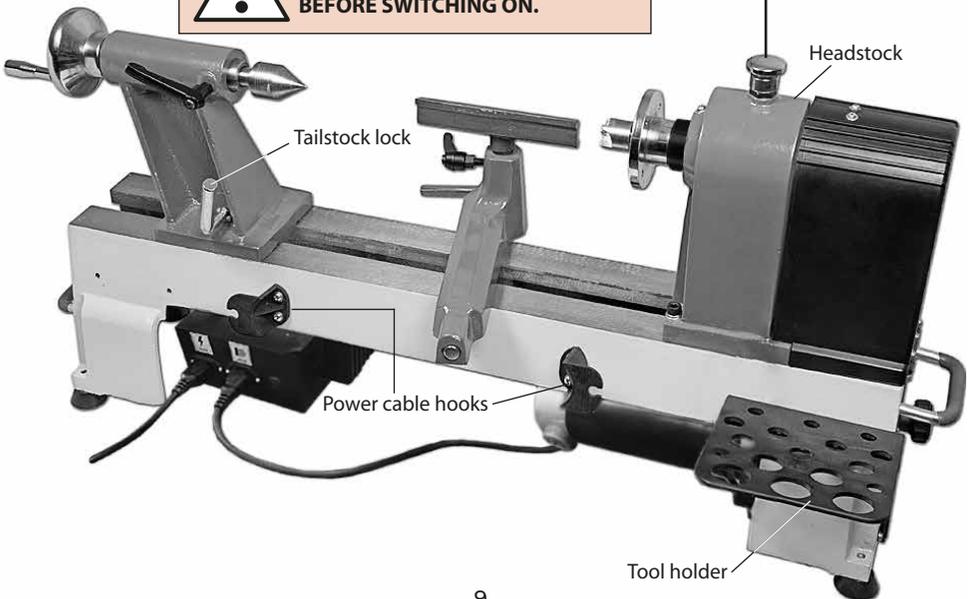


# Illustration and Parts Description



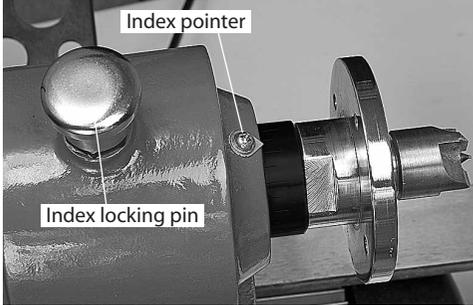
 **WARNING! MAKE SURE THE INDEX LOCK PIN IS IN THE UP POSITION BEFORE SWITCHING ON.**

Lathe bed  
Rubber foot



# Illustration and Parts Description

**Fig 13**



Indexing assembly facility

**Fig 14**



Tailstock barrel with scale

**Fig 15**



Motor pulley access door

**Fig 16**



Lower the headstock cover to reveal the pulley system



Optional bed extension attached giving a maximum of 965mm between centres

## Indexing Facility

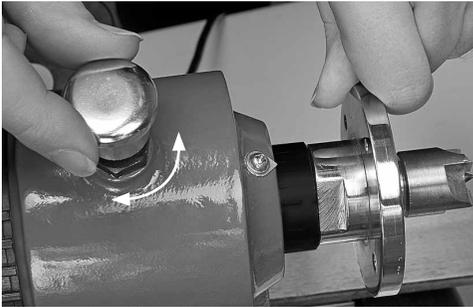
The indexing facility is useful for fluted columns, clock faces and accurate hole positioning.

Lift and Rotate the index locking pin knob to unlock the headstock spindle, turn the faceplate and line up one of the positions then lower the indexing pin to lock the spindle in position, see figs 17-18-19-20.

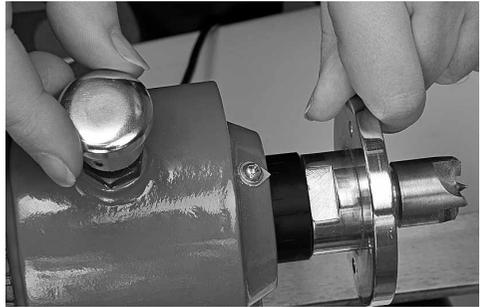


**WARNING! DO NOT USE THE INDEX PIN WHEN REMOVING THE FACEPLATE OR CHUCK OTHERWISE THE PIN COULD BRAKE!**

**Fig 17**



**Fig 18**



Turn the faceplate to select the required position then lower the index pin knob to lock the spindle

**Fig 19**



Indexing pin in the up position (spindle unlocked)

**Fig 20**



Indexing pin in the locked down position

# Operating Instructions

## Changing the Lathe Speed

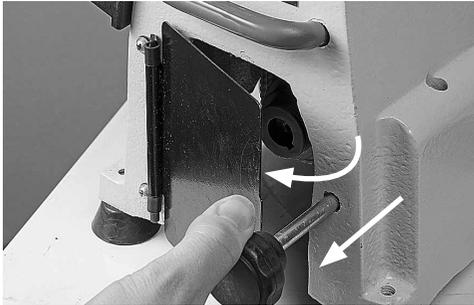


**DISCONNECT THE LATHE FROM THE MAINS SUPPLY BEFORE CONTINUING!**

1. Open the motor pulley access door by pulling the door knob back, see figs 21-22. Lower the headstock cover to access the pulleys, (see fig 23).

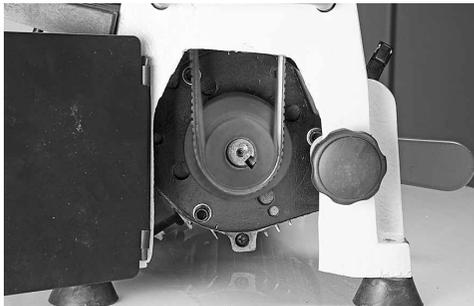
2. Release the motor handle lock and lift the motor up, tighten the handle to lock the motor in position, this releases the tension on the pulleys, see figs 24-25.

**Fig 21**



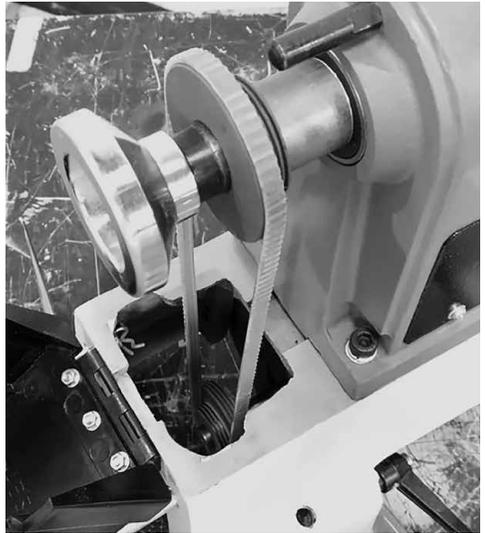
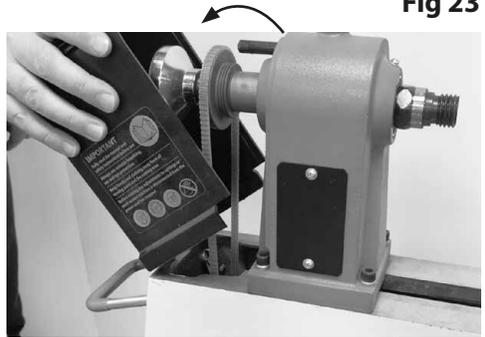
Open the motor pulley access door by pulling back the sprung door knob.

**Fig 22**

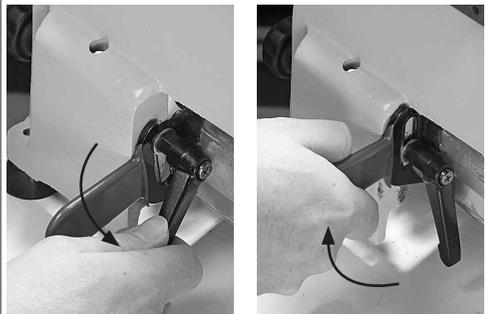


Motor pulley

**Fig 23**



**Fig 24-25**



Release the motor handle lock, lift the motor up and retighten to lock the motor in position

## Operating Instructions

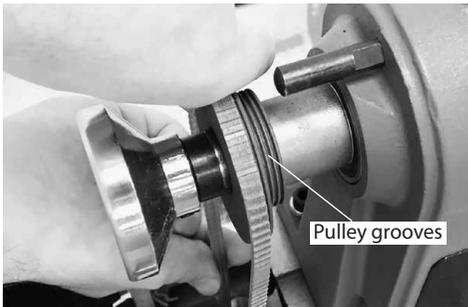
3. Reposition the belt to one of the five positions on the pulleys, see figs 26.



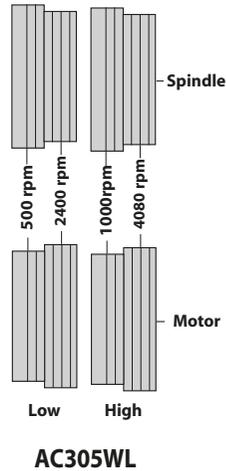
**MAKE SURE THE BELT IS INSERTED CORRECTLY INTO THE PULLEY GROOVES!**

4. Lower the motor to put tension back on the pulleys and lock in position. Raise the headstock cover and close the motor access door.

**Fig 26**



### Lathe Pulley Speed Chart



**NOTE: The speed chart above shows approximate speeds with the lathe off load.**

## Removing the Faceplate

**Fig A**



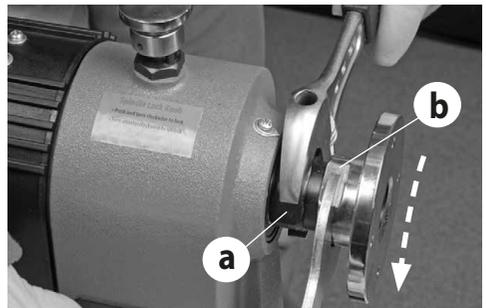
**DISCONNECT THE LATHE FROM THE MAINS SUPPLY BEFORE CONTINUING!**



**MAKESURE THE LOCKING PIN IS IN THE UP POSITION BEFORE CONTINUING!**

You will require two spanners.

Place the first spanner onto the lathe spindle (a) and the other on the faceplate (b), see fig A. While holding the first spanner in position, turn the other anti-clockwise (remember left handed thread) and remove the faceplate, see fig B.



**Fig B**



## Removing Drive/Live Centres

To remove the Drive Centre (F), locate the push rod (H), while holding the Drive Centre insert the push rod (H) through the centre hole of the headstock wheel and push the Drive Centre (F) out, see fig 27. Repeat the procedure for the Live Centre (G) in the tailstock, see fig 28.

Fig 27

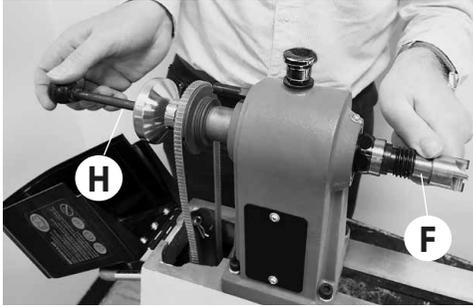
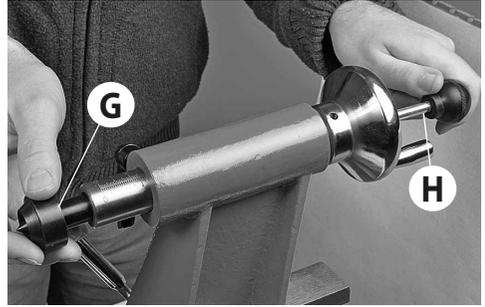


Fig 28



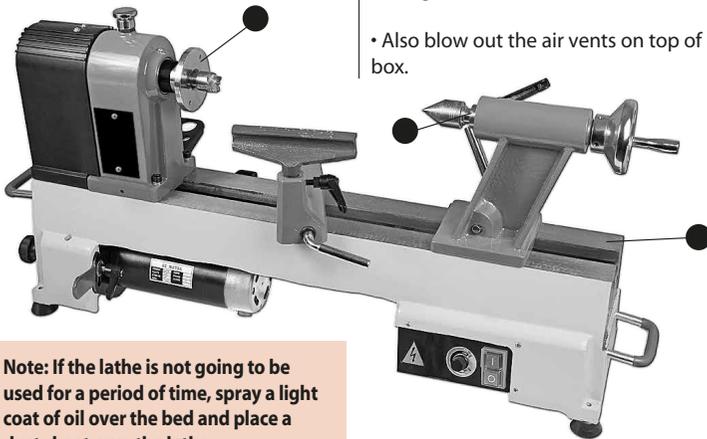
## Maintenance

### Daily after use

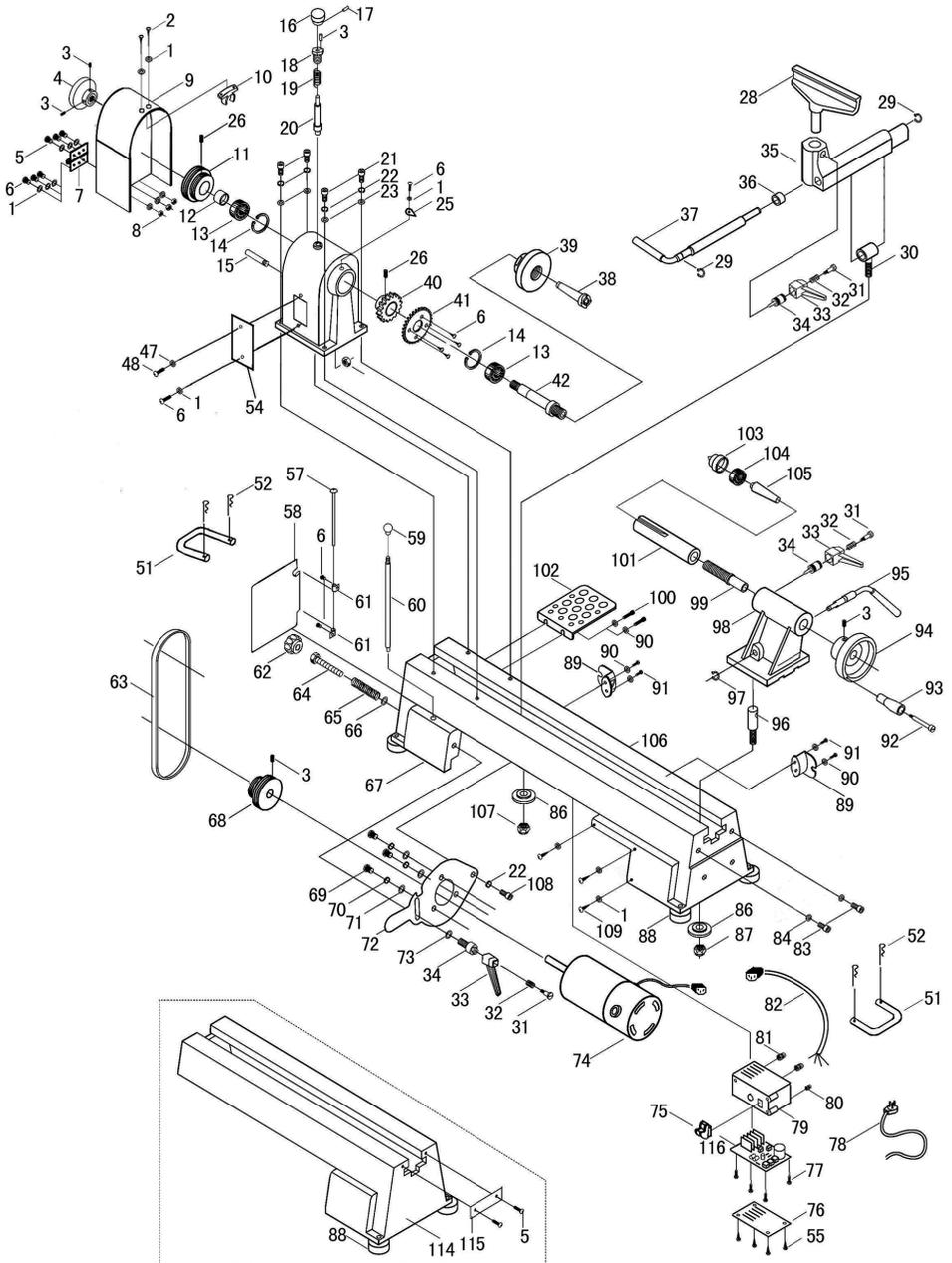
- Clean wood shavings away from the lathe bed and tool rest.
- Spray a light coat of Camellia Oil or Axcaliber Dry Lubricant, (see our catalogue for details) over the lathe bed, to allow the Banjo and Tailstock to run more smoothly over the bed, also spray the headstock and tailstock to prevent corrosion.

### Monthly

- Check the tension of the belt and adjust if required, (See Changing the Belt Speed). Also check the condition of the belt for signs of wear and change if required, (**contact our technical department on 03332 406406**)
- Check any build up of wood shaving on the motor and spindle pulleys and clean if necessary.
- Using an airline, blow out the motor's air vent.
- Also blow out the air vents on top of the control box.



**Note:** If the lathe is not going to be used for a period of time, spray a light coat of oil over the bed and place a dust sheet over the lathe.



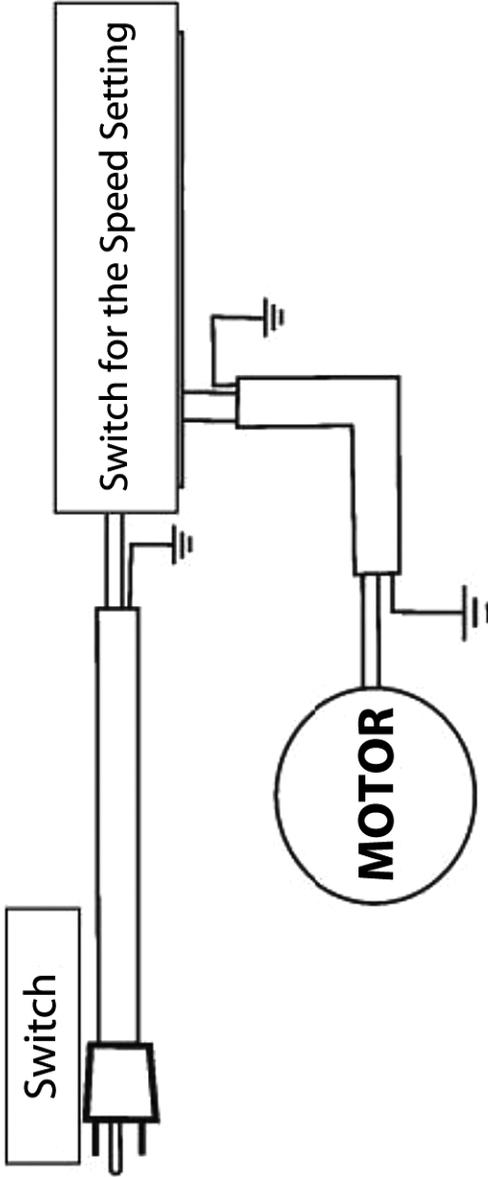
## Exploded Diagrams/Lists

### 1218VDA (AC305WL)

No.	Description	Qty	No.	Description	Qty
1	Washer ø4	7	36	Bush	1
2	Semi-circle head screwM4X8	2	37	Lock handle for tool rest base	1
3	Hex socket screw M6×12	3	38	Headstock spur center	1
4	Hand wheel	1	39	Face plate	1
5	Semi-circle head screwM6×24	6	40	Gear	1
6	Semi-circle head screwM4X6	2	41	Round plate	1
7	Hinge	1	42	Headstock spindle	1
8	Hex nut M6	3	47	Washer	1
9	Side protection guard	1	48	Semi-circle head screw M3×12	1
10	Lock piece	1	51	Handling hand	2
11	Cam follower tailstock	1	52	Clip	4
12	Main shaft sleeve	1	54	The box cover	1
13	Ball bearing 80105	2	57	Pin hinge	1
14	Retaining ring 47	2	58	Mounting plate	1
15	shaft	1	59	Ball	1
16	Cap	1	60	Knock-out rod	1
17	Screw	1	61	Hinge	2
18	Bush	1	62	Door latch	1
19	Spring	1	63	Drive belt	1
20	Index pin	1	64	Connecting rod	1
21	Hex socket screw M8×30	4	65	Spring t	1
22	Spring washer	4	66	Washer	1
23	Washer ø8	4	67	The main body	1
24	Nut M10	1	68	Motor pulley	1
25	Indicator	1	69	Hex socket screw M6×16	3
26	Hex socket screw M6×12	1	70	Spring washer	3
28	Tool rest	1	71	Washer ø6	3
29	Retaining ring 10	1	72	Motor plate with notch	1
30	Tool rest cam follower	1	73	Tapping screw	1
31	Bolt	1	74	Moto	1
32	Spring	1	75	Switch	1
33	Handle	1	76	Box plate	1
34	Lock bolt	1	77	Tapping screw	4
35	Tool rest bas	1	78	Plug line	1

## Exploded Diagrams/Lists

79	Switch-box	1	96	Cam follower tailstock	1
80	Strain relief	1	97	Retaining ring 10	1
81	Strain relief	2	98	Tailstock	1
82	Cable	1	99	Tailstock quill	1
83	Hex socket screw M10×25	2	100	Semi-circle head screw M5×12	2
84	Washer ø10	2	101	Tailstock axis	1
			102	Tool rack	2
86	Lock nut	2	103	Cup center	1
87	Nut M10	1	104	Ball bearing	1
88	Rubber washer	6	105	Taper rod	1
89	Support	1	106	Bed	1
90	Semi-circle head screw M5×12	4	107	Nut M10	1
91	Washer ø5	2	108	Hex socket screw M8×16	1
92	Screw	1	111	Motor pulley	1
93	Bush	1	114	Extension bed	1
94	Quill adjusting wheel	1	115	Small plate	1
95	Eccentric axis	1	116	Variable plate	1



(Change carbon brushes every 60 hours)



## The Axminster guarantee

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The packaging is suitable for recycling.  
Please dispose of it in a responsible manner.



### EU Countries Only

Do not dispose of electric tools together with household waste material.  
By law they must be collected and recycled separately.

Axminster Tools, Axminster Devon EX13 5PH

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