Code **104792**

Original Instructions

AC355WL

Woodturning Lathe

AXMINSTER · THREE YEAR GUARANTEE

AT&M: 02/07/2019
BOOK REF : 007295

Index of Contents

EU Declaration of Conformity	02
What's Included	03
General Instructions for 230V Machines	04
Specific Safety Instructions for Woodturning Lathes	04
Specification	05
Assembly	05-06
Illustration and Parts Description	07-08-09
Operating Instructions	10-11-12-13
Optional Accessories	14
Maintenance	15
Exploded Diagrams/Lists	16-17
Wiring Diagram	18
Notes	19

Cert No: MC1420VDA

Axminster Tools & Machinery Ltd
Axminster Devon
EX13 5PH UK
axminster.co.uk

declares that the machinery described:-

Type	**Woodturning Lathe**
Model	**AC355WL**

Signed

Andrew Parkhouse
Operations Director

Date: **11/09/2017**

EU Declaration of Conformity

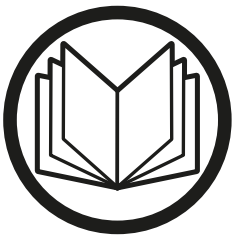
This machine complies with the following directives:

2006/42/EC
EN 61029-1:2009+A11
06/42/EC - Annex I/05.2006

and conforms to the machinery example for which the
EC Type-Examination Certificate No AM 50387407
has been issued by **Laizhou Planet Machinery Co., Ltd.**
at: Yutai West StreetLaizhou, Shandong 261400 China

and complies with the relevant essential health and safety requirements.

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



Fully read manual and safety instructions before use

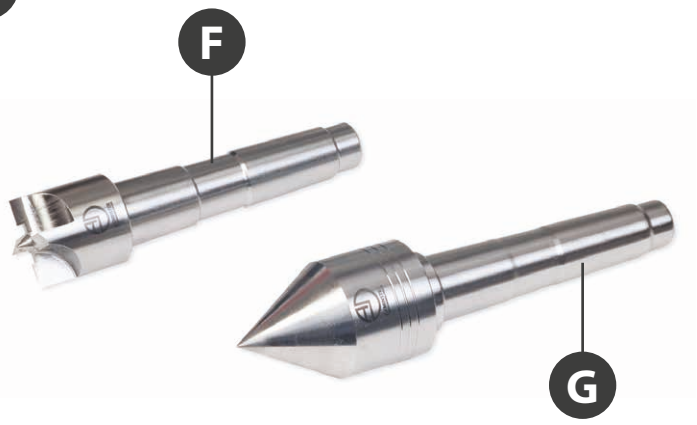
Ear protection should be worn

Eye protection should be worn

Dust mask should be worn

HAZARD

Quantity	Item	Part	Model Number
			AC355WL
1	Woodturning Lathe	**A**	
1	204mm Tool Rest	**B**	
1	100mm Faceplate	**C**	
1	Spanner	**D**	
1	Push Rod	**E**	
1	Axminster 4 Prong Drive Centre	**F**	(Code 340106)
1	Axminster Standard 60˚ Live Centre	**G**	(Code 340203)
1	Power Cable		
1	Instruction Manual		



General Instructions for 230V Machines

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 REACH OF YOUNG CHILDREN

KEEP WORK AREA AS UNCLUTTERED AS IS PRACTICAL. UNDER NO CIRCUMSTANCES SHOULD CHILDREN BE ALLOWED IN WORK AREAS.

Mains Powered Tools

- Tools are supplied with an attached 13 Amp plug.
- 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

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

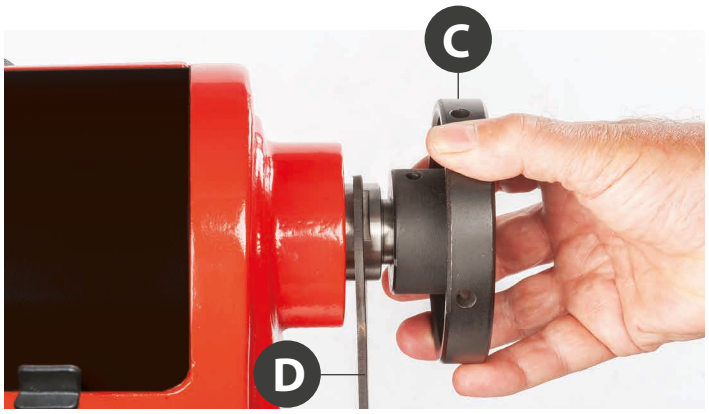
Code	104792
Model	AC355WL
Rating	Craft
Power	750W 230V 50Hz 1ph
Speed	250-3,550rpm
Spindle Thread	T38 M33 x 3.5mm
Taper Tailstock	2MT
Distance Between Centres	510mm
Max Diameter over Bed	355mm
Tool Rest Stem Diameter	25.4mm
Overall L x W x H	1,040mm x 370mm x 480mm
Weight	57kgs

Assembly

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 proprietary de greaser. Wear overalls, coverall and eye protection before cleaning.

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

1. Locate the four prong drive centre (F) and live centre (G). Remove the faceplate (C) by loosening the two grub screws and using the spanner (D), unscrew the faceplate from the spindle left handed thread and place aside, see fig 01-02-03.



2. Insert the drive centre (F) into the spindle and repeat for the live centre (G) into the tailstock barrel, see fig 04-05.

Fig 01-02-03

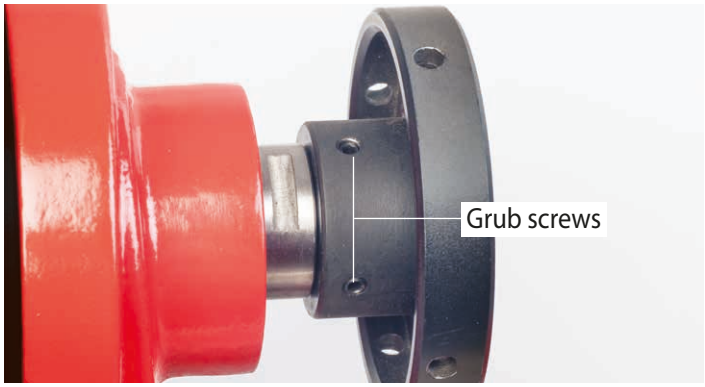
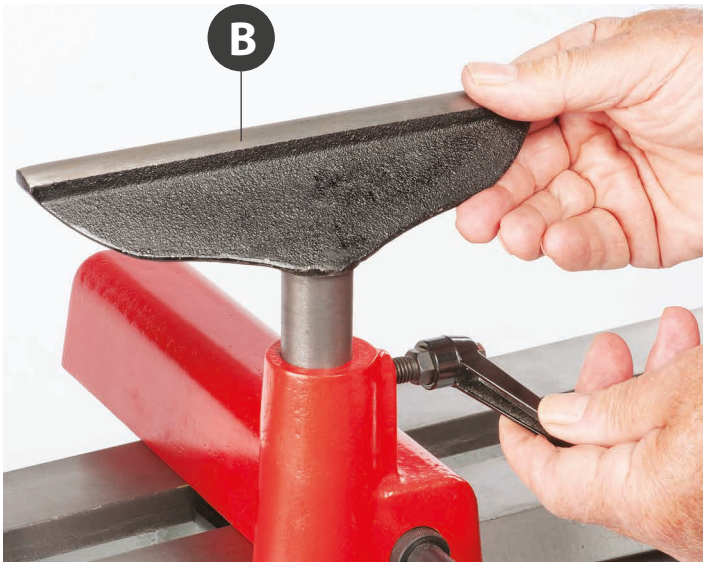


Fig 04-05

Continues over...

3. Inset the tool rest (B) into the machined hole on the banjo arm and secure using the lift and shift handle lock, see fig 06.

Fig 06



4. Place all accessories into one of the two tool holders, see fig 07-08.

Fig 07-08

Tool holder/carrying handle

5. Locate the power cable and insert the connector into the three pinned socket to the side of the control box, see fig 09.

Fig 09

6. Place the lathe on a work bench and adjust the four feet until level.

Optional Accessories (see page 14)

Please contact our Customer Service Department for further details or visit our website at axminster.co.uk.

Floor stand assembly

Headstock wheel

Headstock access panel

4 Prong drive centre

Tailstock barrel

60˚ Live centre

Tailstock operating handle

Lift & shift handle

Banjo arm lock

Motor handle lock

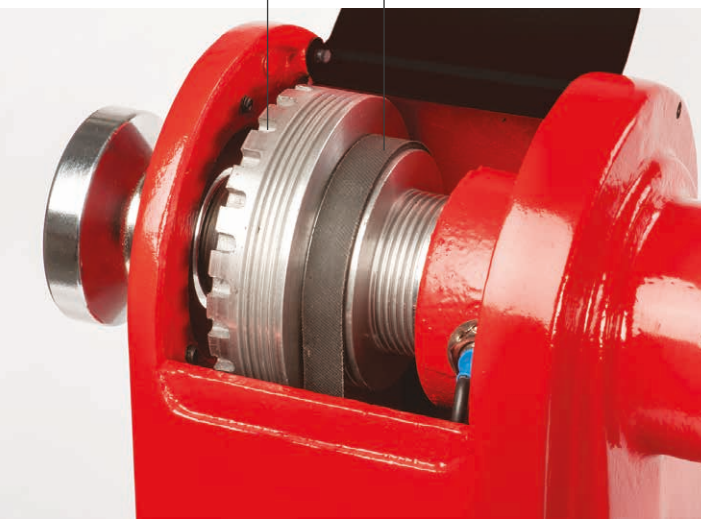
Motor operating handle

Control box

Tool holder/carrying handle

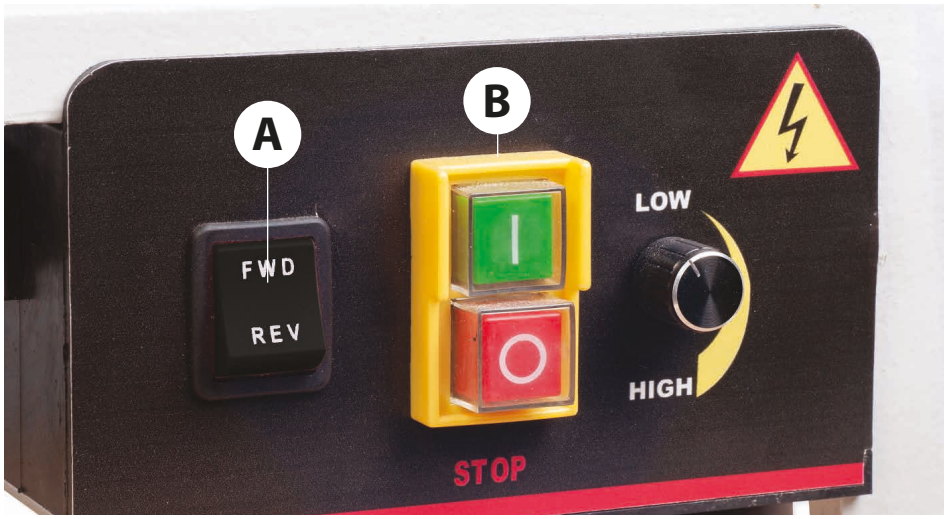
24 Indexing stops

Drive belt



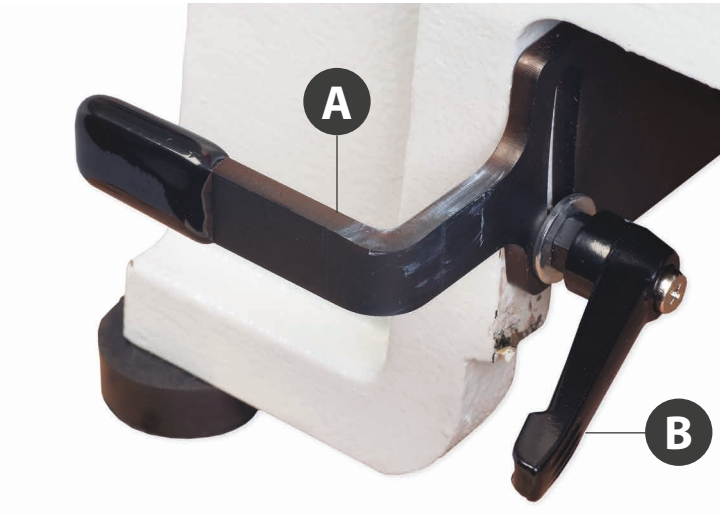
Spindle pulley with a 24 indexing stop facility

Spindle speed digital indicator

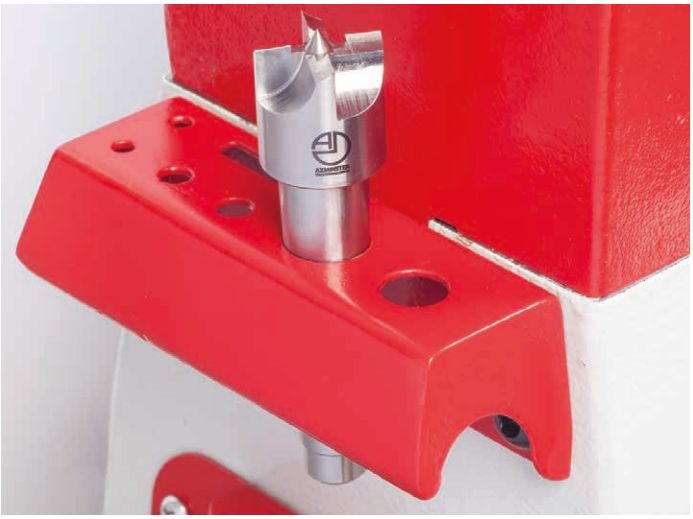


Forward/Reverse switch to change the spindle's direction (A)
(DO NOT operate this switch while lathe is in motion)
ON/OFF NVR switch (B)

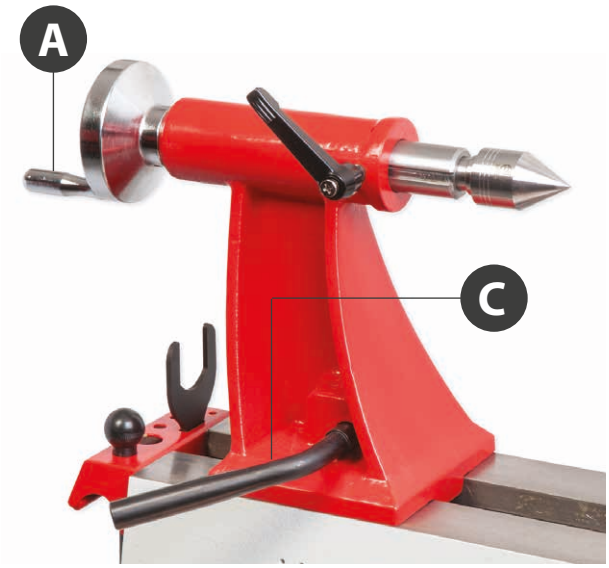
Variable speed control knob
250-3,550rpm



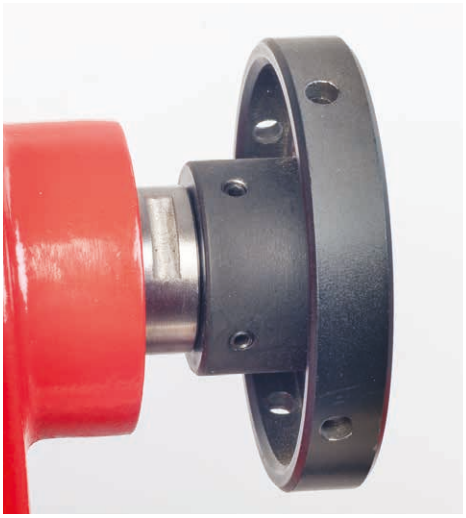
Handle (A) to raise/lower the motor for drive belt position
Motor lock (B)



Tool holder/carrying handle
on either end of lathe bed



Tailstock operating handle (A, Tailstock barrel lock (B),
Tailstock handle lock (C)



100mm Faceplate

DO NOT USE THE INDEX PIN TO LOCK THE SPINDLE WHEN REMOVING OR MOUNTING THE FACEPLATE.

Tailstock barrel scale

Indexing pin

Tailstock

Headstock

Tool rest

Lathe bed

Banjo arm

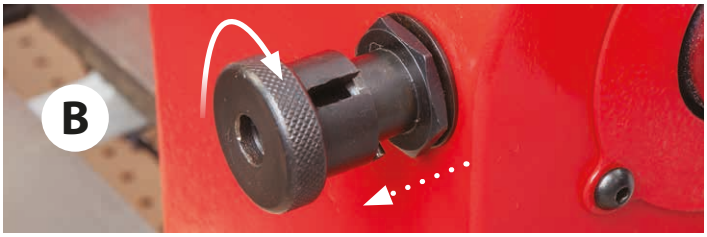
Control box with heat sink

DC brush motor

Motor brush access port

Tailstock lock handle

Lathe foot



Indexing pin (A) locked
Indexing pin (B) unlocked

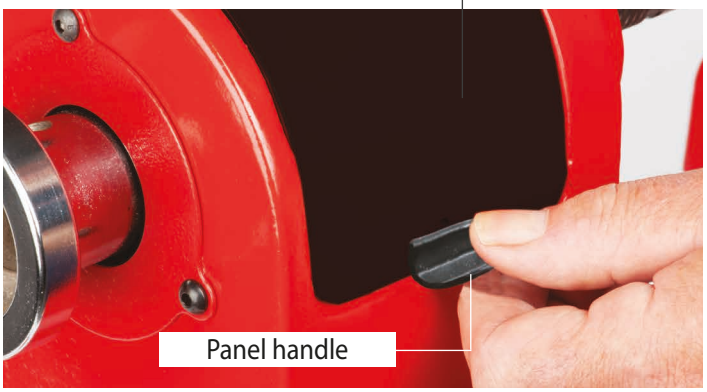
Lower motor pulley access plate

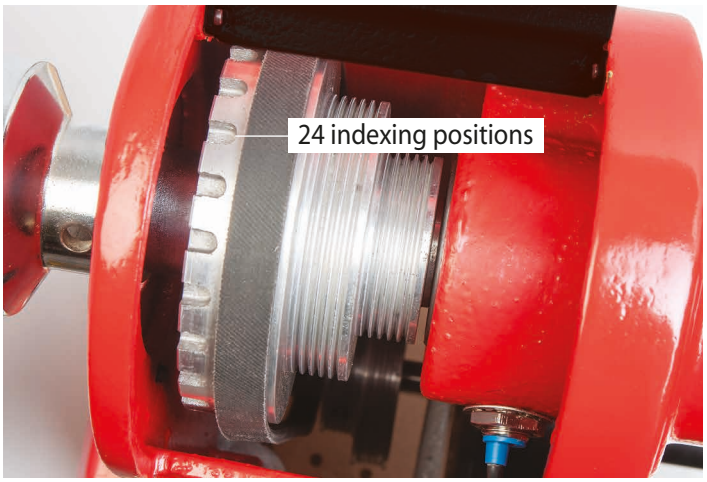
DISCONNECT THE LATHE FROM THE MAINS BEFORE CONTINUING!

Indexing Facility

The indexing facility is useful for fluted columns, clock faces and accurate hole positioning. The index pulley has 24 positions, see fig 10-11.

Fig 10-11



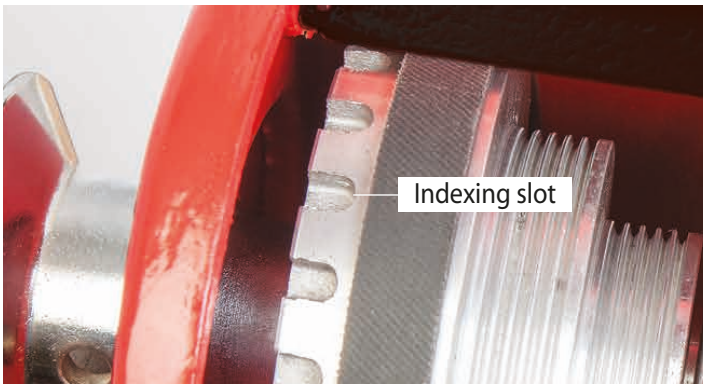


1. Open the headstock access panel, pull out the indexing pin knob to the rear of headstock and turn until its in the unlocked position, see fig 12.

Fig 12

2. Rotate the spindle by turning the headstock operating wheel, lower the indexing pin knob until the pin engages into one of 24 indexing slots, see fig 13-14. Replace the access panel.

Fig 13-14



Removing the Drive & Live Centres

Locate the 'push rod' (E), insert it through the centre of the spindle operating wheel to push out the drive centre (F), see fig 15. Repeat for the live centre (G)

Fig 15

Adjusting the Tailstock

Fig 16

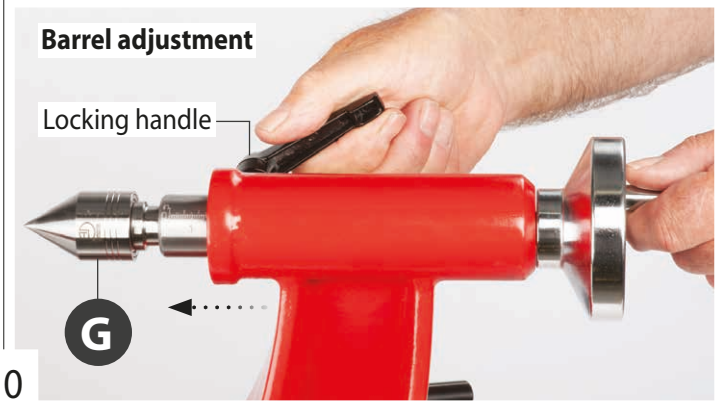
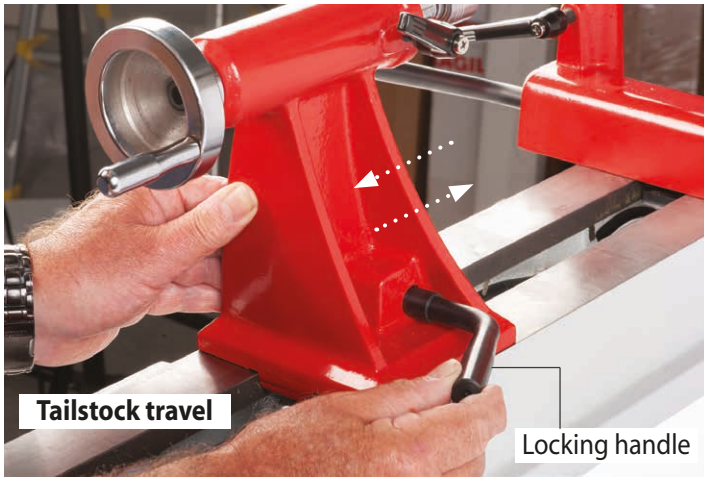


Fig 17



DISCONNECT THE LATHE FROM THE MAINS BEFORE CONTINUING!

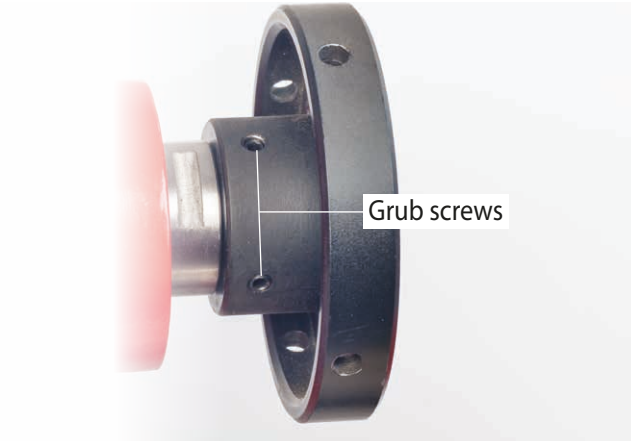
Mounting the Faceplate

DO NOT USE THE INDEX PIN TO LOCK THE SPINDLE WHEN REMOVING OR MOUNTING THE FACEPLATE.

NOTE: LOOSEN THE TWO GRUBSCREWS SUFFICIENTLY WHEN MOUNTING OR REMOVING THE FACEPLATE.

1. Loosen the two grabs screws sufficiently to prevent it snagging on the spindle, see fig 18.

Fig 18



2. Screw the 'faceplate' (C) on the spindle, remember right hand thread. Using the spanner (D) to hold the spindle, tighten the grab screws to secure the faceplate, see fig 19.

3. Note: The faceplate will be tight after use. To remove follow steps 1-2, insert the push stick rod (E) into one of the machined holes in the faceplate. Hold the spanner (D) in place and pull the push stick (E) towards you, see fig 20.

Fig 19

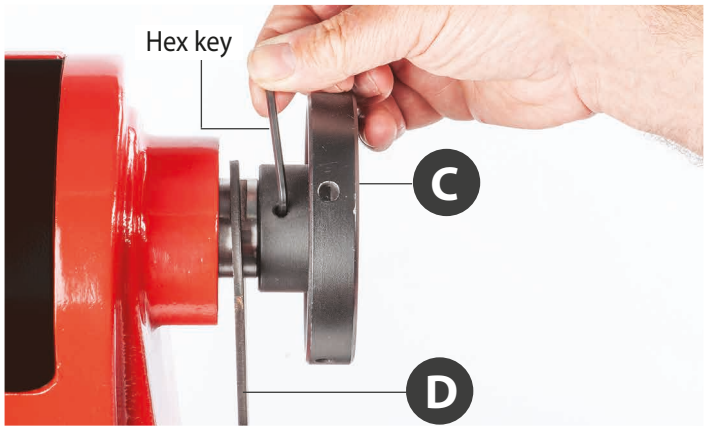
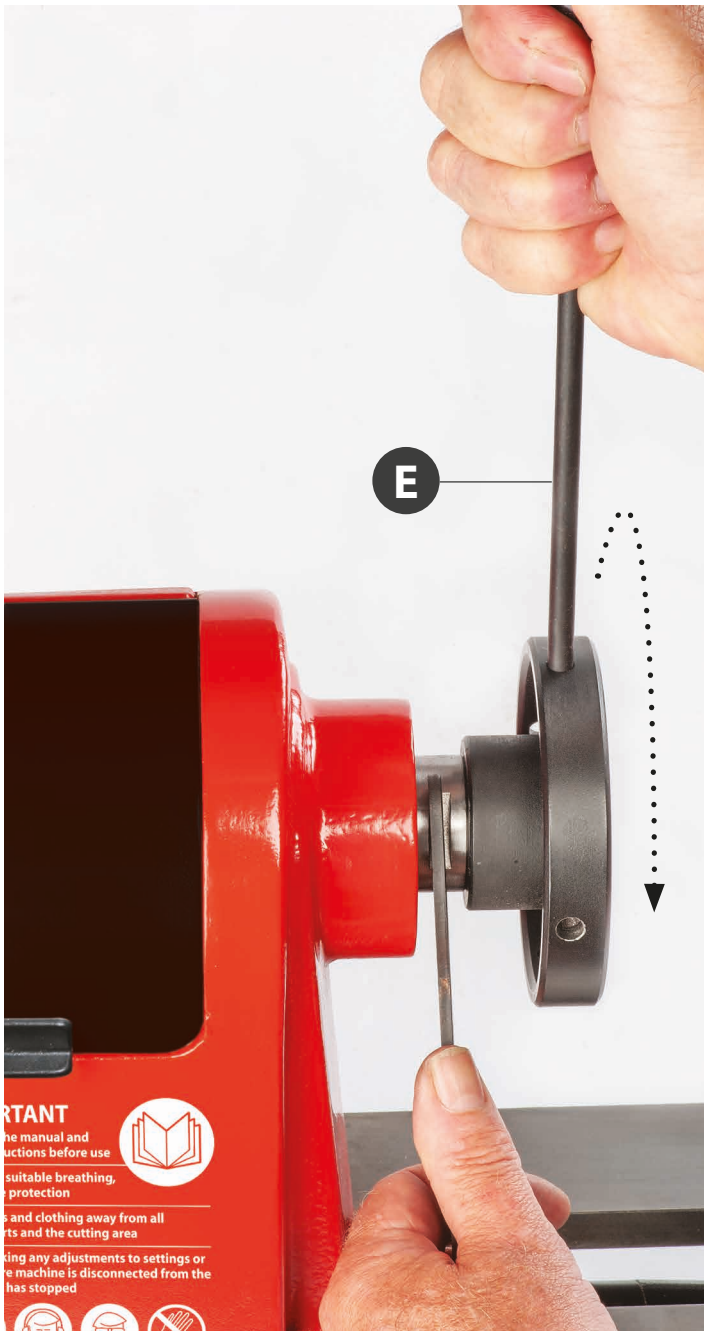


Fig 20



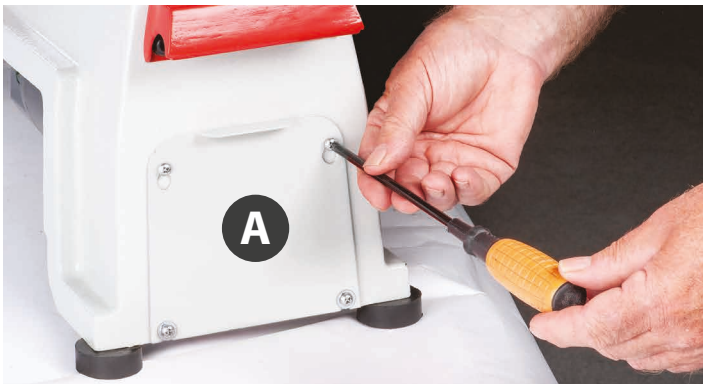
Continues over...

Changing the Lathe Speed

DISCONNECT THE LATHE FROM THE MAINS BEFORE CONTINUING!

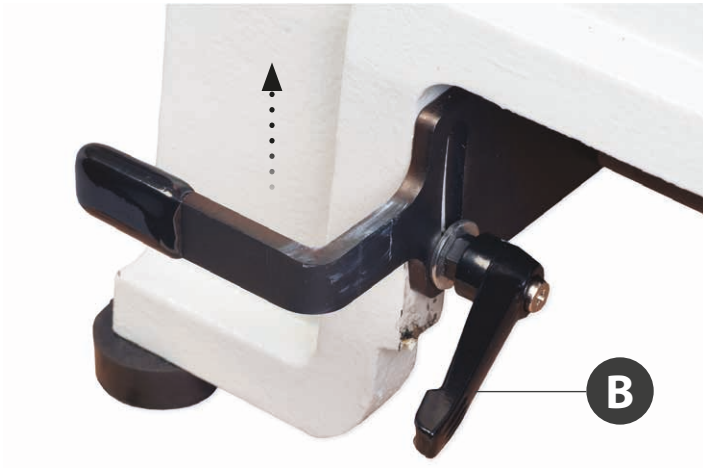
1. Open the access panel, see fig 10-11. Loosen the four screws holding the motor pulley access plate (A) and remove, see fig 21-22.

Fig 21-22



2. Release the motor locking handle (B) and lift up the motor, retighten the locking handle, see fig 23-24.

Fig 23-24



3. Reposition the drive belt to one of the three positions, see fig 25-26-27. Note: The speed chart shows approximate speeds.

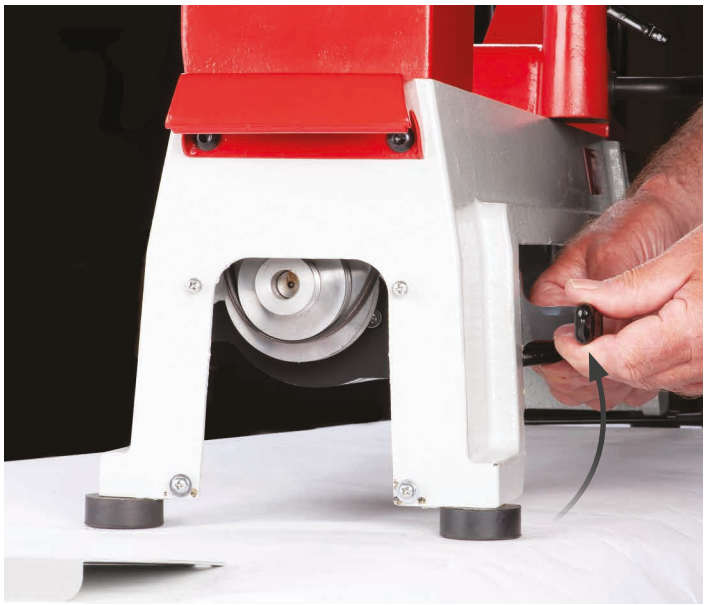
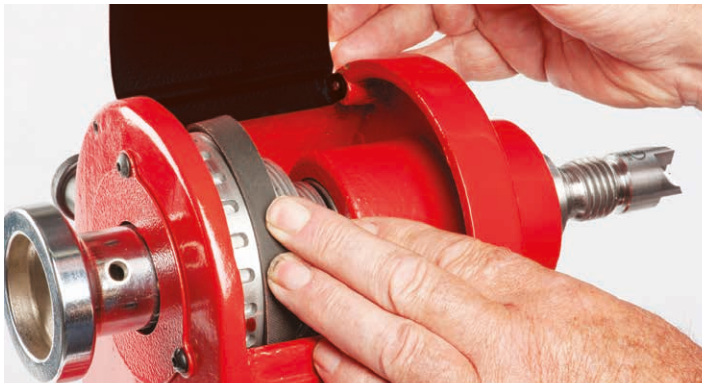
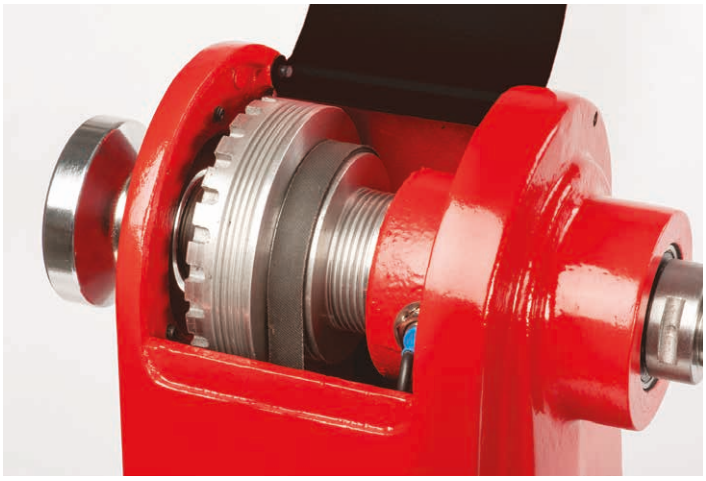
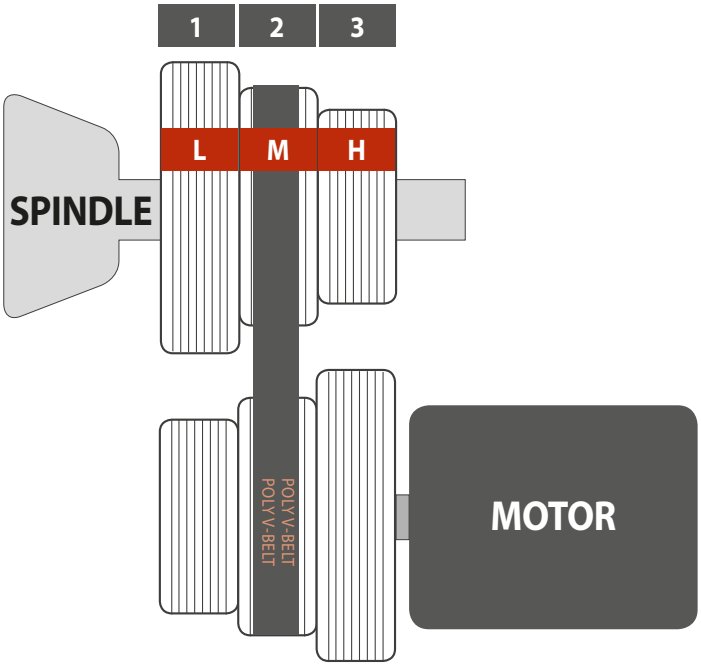


Fig 25-26-27





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



Position	Spindle Speed Chart RPM		
1	LOW	250	720
2	MEDIUM	600	1,700
3	HIGH	1,200	3,550

4. Release the clamping handle and press down the motor to retention the belt, secure in place.

5. Replace the motor pulley access plate and close the headstock access panel.

Control Box

1. The control box comprises a Forward/Reverse switch, ON/OFF NVR buttons and a variable speed control dial. Before switching on make sure the indexing pin is disengaged and the speed control dial is turned down to low, see fig 28-29.

Fig 28-29

2. Select 'Forward or Reverse' on the selector switch, DO NOT change direction while in operation, see fig 30.

3. Make sure the work piece is secure and all tools are clear of the work area. Switch on the mains supply and press the NVR 'GREEN' button to start the lathe, see fig 31.

4. Increase the spindle speed, the reading will be displayed on the digital readout indicator, see fig 32. When operation is completed reduce the speed down to 'LOW' and press the NVR 'RED' button to stop the lathe, see fig 31. Switch off the mains supply.

Fig 30-31

Fig 32

Code 104794 Floor stand assembly

The floor stand for the Axminster Craft AC355WL wood turning lathe is made from box section steel and simple to assemble and sturdy enough to hold the lathe securely. It is adjustable in height from 610mm-875mm to create a comfortable working height. The feet are splayed back to give plenty of foot space, and are also fitted with rubber feet which are adjustable to accommodate an uneven workshop floor. Unscrew the lathe feet, line up the holes on top of the stand assembly and secure with bolts washer/nuts.

Motor Brushes

DISCONNECT THE LATHE FROM THE MAINS SUPPLY!

1. After 100 hours of use, check the condition of the motor brushes by unscrewing each access port cap in turn, see fig 33.

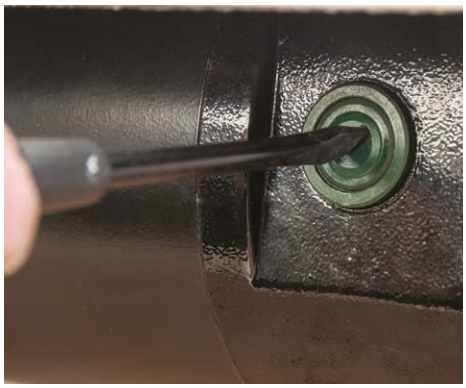
NOTE: Take careful note of the orientation of the brushes, remember that they have bedded themselves to the profile of the commutator in that position. If you fit them reversed, it can cause excessive sparking and heat until they have re-bedded themselves.

2. Remove the motor brushes and check the condition of the brush head,see fig 34.

3. If they are in good condition, re-fit. If they were worn to the 'Line' replace with new brushes, see fig 35. **For after sales enquires, call 03332 406406.**

4. Replace the new brushes and access port cap screws, connect to mains supply and run the machine off load for approximately. 20 minutes to bed the new brushes in.

Fig 33

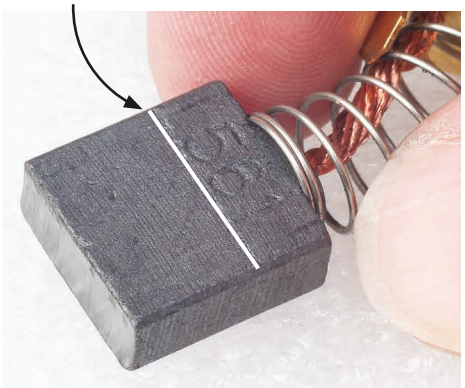


Remover the access port with a flat headed screwdriver

Fig 34

Remove the motor brush and check its condition

Fig 35



Replace the motor brush if worn down to the 'Line'

DISCONNECT THE LATHE FROM THE MAINS SUPPLY!

Daily After Use

- Clean wood shavings away from the lathe bed and tool rest.
- Smear a light coat of wax, 'Axminster Machine Wax', code 101582', see fig 36, over the lathe bed to allow the banjo and tailstock to run more smoothly over the bed and to prevent corrosion.
- Spray 'Axcaliber Dry Lubricant', code 503468, over the tailstock barrel/live centre and headstock spindle/chuck after use, see fig 37.

Monthly

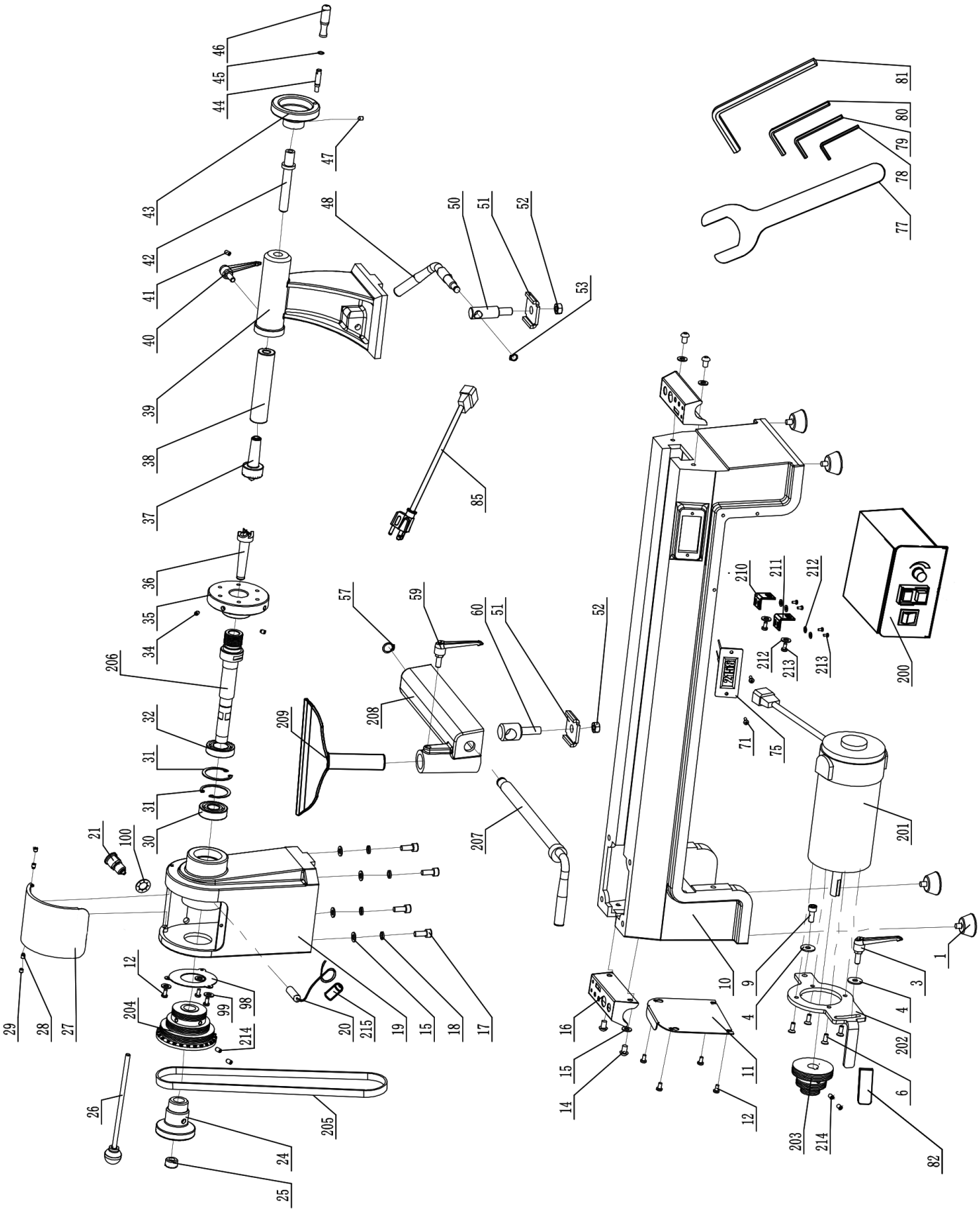
- Check the tension of the belt and adjust, see page 12 for Changing the Belt Speed.
- Check any build up of wood shavings on the motor and spindle pulleys and clean if necessary.
- Use an 'M' class vacuum cleaner to clean the heat sink air vents on the NVR control box assembly.

Fig 36-37

Axminster Machine Wax
Code: 101582

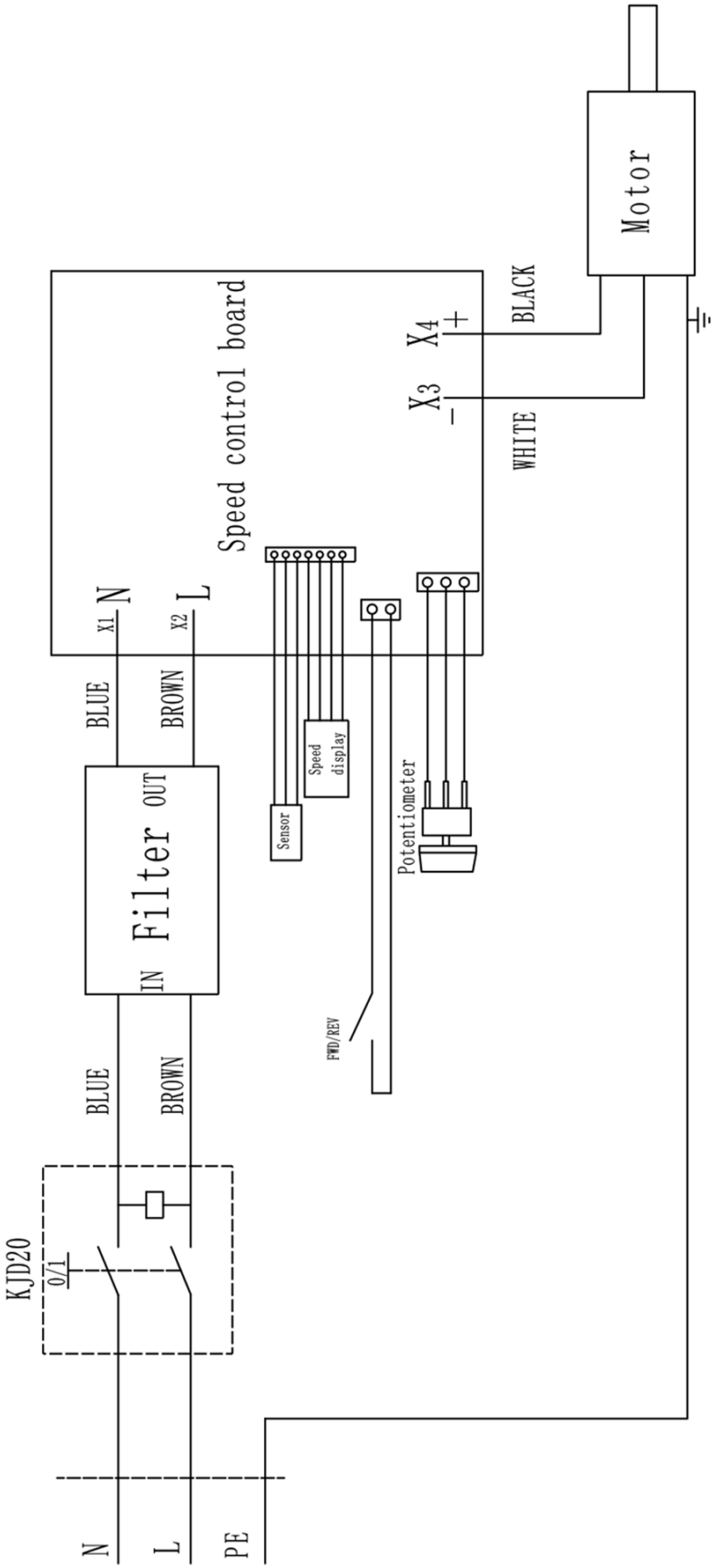
Axcaliber Dry Lubricant
Code: 503468

Liberon Lubricating Wax
Code: 600221


46
45
44
43
42
41
40
39
38
37
36
35
34
206
32
31
31
30
21
100
29
28
27
12
204
214
99
98
26
25
24
205
20
215
19
15
18
17
48
50
51
52
53
85
57
59
60
51
52
209
208
207
16
15
14
10
11
12
9
4
81
80
79
78
77
210
211
212
212
213
213
71
75
200
201
1
3
4
202
6
203
214
82

PART NO	DISCRIPTION	QTY
1	FOOT	4
3	BELT TENSION LOCK LEVER	1
4	FLAT WASHER	2
6	HDCAP SCREW M6X16	4
9	CAP SCREW M8X16	1
10	BED	1
11	BELT DOOR	1
12	HEX HEAD SCREW M5X10	7
14	HD SCREW M8X12	4
15	FLAT 8MM	8
16	HANDLE	2
17	CAP SCREW M8X20	4
18	SPRING WASHER M8	4
19	HEADSTOCK	1
20	DIGITAL READOUT SENSOR	1
21	LOCATION PIN ASSEMBLY	1
24	HEADSTOCK WHEEL	1
25	LOCKING NUT	1
26	KNOCKOUT ROD ASSEMBLY	1
27	COVER FOR MOTOR PULLEY	1
28	CAP SCREW M5X10	2
29	SET SCREW M5X6	2
30	BEARING 6204	1
31	RING	2
32	BEARING 6005	1
34	CAP SCREW M6X8	2
35	FACE PLATE	1
36	SPUR CENTRE	1
37	LIVE CENTRE	1
38	QUILL	1
39	TAILSTOCK	1
40	QUILL LOCK HANDLE	1
41	HEX HEAD BOLT M8X10	1
42	LEADSCREW	1
43	TAILSTOCK WHEEL	1
44	HANDWHEEL AXLE	1
45	C-RING 8	1
46	HANDWHEEL HANDLE	1

47	SET SCREW M8X10	1
48	TAILSTOCK LOCK LEVER	1
50	TAILSTOCK CLAMP BOLT	1
51	TAILSTOCK CLAMP	2
52	NUT M12	2
53	C-RING	1
57	C-RING	2
59	ADJUSTING HANDLE	1
60	TOOL REST CLAMP BOLT	1
71	PHLP HD SCREW M4X8	2
75	DIGITAL READOUT	1
77	WRENCH	1
78	HEX WRENCH 03	1
79	HEX WRENCH 04	1
80	HEX WRENCH 05	1
81	HEX WRENCH 012	1
82	KNOB	1
85	US/CSA PLUG CORD (WITH USB INTERFACE)	1
98	HEADSTOCK REAR PLATE	1
99	WASHER M5	3
100	INTERNAL TOOTH LOCK WASHER M16	1
200	US DRIVE ASSEMBLY(110V)	1
201	DC-MOTOR	1
202	MOTOR CONNECT PLATE-1	1
203	MOTOR PULLEY-1	1
204	SPINDLE PULLEY-1	1
205	POLY V-BELT	1
206	SPINDLE	1
207	LOCKING BAR FOR TOOL REST	1
208	TOOL REST BASE	1
209	8" TOOL REST	1
210	CONNECT PLATE-2	1
211	CONNECT PLATE-1	1
212	WASHER	6
213	SOCKET HEX HEAD BOLT M5X10	6
214	SOCKET HEX HEAD BOLT M8X10	4



MC1420VDA-WIRING DIAGRAM FOR EUROPE MARKET WITH 1 PHASE POWER

The **Axminster guarantee** is available on
Craft, Trade, Engineer, Air Tools & CNC Technology Series machines

Buy with confidence from Axminster!
So sure are we of the quality, we cover all parts and labour free of charge for three years!

For more information visit **axminster.co.uk/3years**

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 & Machinery

Axminster Tools & Machinery
Axminster Devon EX13 5PH
axminster.co.uk