

Original Instruction Manual

CL Series Lathes

12100 CL3 Professional 5 Speed Lathe

12201 CL4 Professional Electronic Variable Speed Lathe

Including optional **12400** Bowl Turning Attachment
and **12500** Adjustable Lathe Stand

Version 3.2

March 2016



To register this product please visit
www.recordpower.info

It is important to register your product as soon as possible in order to receive efficient after sales support and be entitled to the full **5 year guarantee**. Your statutory rights are not affected.
Please see back cover for contact details.



Always wear safety glasses when
using woodworking equipment.



Always read the instructions
provided before using
woodworking equipment.

Important

For your safety read instructions carefully before
assembling or using this product.

Save this manual for future reference.

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1. Explanation of Symbols

The symbols and their meanings shown below may be used throughout this manual. Please ensure that you take the appropriate action wherever the warnings are used.

Mandatory Instructions



Read and fully understand the instruction manual before attempting to use the machine.



Indicates an instruction that requires particular attention



Wear protective eyewear



Use respiratory protective equipment



Use hearing protection



Use suitable protective footwear



Use protective work gloves

Warnings



Indicates a risk of severe personal injury or damage to the machine



Indicates a risk of severe personal injury from electrical shock



Risk of personal injury from lifting of heavy items



Indicates a risk of severe personal injury from airborne objects



Risk of fire

2. General Health and Safety Guidance

Ensure that you carefully read and fully understand the instructions in this manual before assembly, installation and use of this product. Keep these instructions in a safe place for future reference.

WARNING: for your own safety, do not attempt to operate this machine until it is completely assembled and installed according to these instructions.

WARNING: When using any machine, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury.

Safe Operation

1. Use Personal Protective Equipment (PPE)

- The operation of any machine can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Protective eyewear or other suitable eye protection or face shield should be used at all times. Everyday spectacles only have impact resistant lenses. They are not protective eyewear and do not give additional lateral protection.
- Use respiratory protective equipment (dust mask etc.) if the machining operation creates dust. Exposure to high levels of dust created by machining hardwoods, softwoods and man made composite boards can result in serious health problems. Some imported hardwoods give off highly irritating dust, which can cause a burning sensation. The use of respiratory protective equipment should not be seen as an alternative to controlling the risk of exposure at source by using adequate dust extraction equipment.
- The use of ear plugs or ear defenders is recommended when the machine is in use, particularly if the noise level exceeds 85 dB.
- Wear suitable protective gloves when handling cutting tools or blades. Gloves should NOT be worn when using the machine as they can be caught in moving parts of the machine.
- Non-slip safety footwear is recommended when using the machine and handling large work pieces.

2. Dress appropriately

- Do not wear loose clothing, neckties or jewellery; they can be caught in moving parts of the machine.
- Roll up long sleeves above the elbow.
- Wear protective hair covering to contain long hair.

3. Safety warnings

- Find and read any warning labels on the machine
- It is important that any labels bearing health and safety warnings are not removed, defaced or covered. Replacement labels can be obtained by contacting our Customer Service Department.

4. Familiarise yourself with the machine

- If you are not thoroughly familiar with the operation of this machine, obtain advice from your supervisor, instructor, or other qualified person or contact your retailer for information on training courses. Do not use this machine until adequate training has been undertaken.

5. Take care when moving or positioning the machine

- Some machines can be very heavy. Ensure the floor of the area in which the machine is to be used is capable of supporting the machine.
- The machine and its various components can be heavy. Always adopt a safe lifting technique and seek assistance when lifting heavy components. In some cases it may be necessary to use mechanical handling equipment to position the machine within the work area.
- Some machines have optional wheel kits available to allow them to be manoeuvred around the workshop as required. Care should be taken to install these according to the instructions provided.
- Due to the nature of the design of some machines the centre of gravity will be high making them unstable when moved. Extreme care should be taken when moving any machine.
- If transportation of the machine is required then all precautions relating to the installation and handling of the machine apply. In addition, ensure that any vehicles or manual handling equipment used for transportation

are of adequate specification.

6. The machine should be level and stable at all times

- When using a leg stand or cabinet base that is designed to be fitted to the machine, always ensure that it is securely fastened to the machine using the fixings provided.
- If the machine is suitable to be used on a workbench, ensure that the workbench is well constructed and capable of withstanding the weight of the machine. The machine should always be securely fastened to the workbench with appropriate fixings.
- Where possible, floor standing machines should always be secured to the floor with fixings appropriate to the structure of the floor.
- The floor surface should be sound and level. All of the feet of the machine should make contact with the floor surface. If they do not, either re-locate the machine to a more suitable position or use packing shims between the feet and the floor surface to ensure the machine is stable.

7. Remove adjusting keys and wrenches

- Ensure that all adjusting wrenches and keys are removed before switching the machine 'ON'. There is a risk of severe personal injury or damage to the machine from airborne objects.

8. Before switching the machine 'ON'

- Clear the machine table of all objects (tools, scrap pieces etc.)
- Make sure there is no debris between the work piece and the table / work support.
- Ensure that the work piece is not pressed against, or touching the saw blade or cutting tool.
- Check all clamps, work holding devices and fences to ensure that they are secure and cannot move during machining operations.
- Plan the way that you will hold and feed the work piece for the entire machining operation.

9. Whilst machining

- Before starting work, watch the machine while it runs. If it makes an unfamiliar noise or vibrates excessively, switch the machine 'OFF' immediately and disconnect it from the power supply. Do not restart until finding and correcting the source of the problem.

10. Keep the work area clear

- Working clearances can be thought of as the distances between machines and obstacles that allow safe operation of every machine without limitation. Consider existing and anticipated machine needs, size of material to be processed through each machine and space for auxiliary stands and/or work tables. Also consider the relative position of each machine to one another for efficient material handling. Be sure to allow yourself sufficient room to safely operate your machines in any foreseeable operation.
- Cluttered work areas and benches create the risk of accidents. Keep benches clear and tidy away tools that are not in use.
- Ensure that the floor area is kept clean and clear of any dust and debris that may create trip or slip hazards.

11. Consider the work area environment

- Do not expose the machine to rain or damp conditions.
- Keep the work area well lit and ensure that there is artificial lighting available when there is insufficient natural light to effectively light the work area. Lighting should be bright enough to eliminate shadow and prevent eye strain.
- Do not use the machine in explosive environments eg. in the presence of flammable liquids, gases or dust.
- The presence of high levels of dust created by machining wood can present a risk of fire or explosion. Always use dust extraction equipment to minimise the risk.

12. Keep other persons away (and pets)

- The machine is designed to be used by one person only.
- Do not let persons, especially children, touch the machine or extension cable (if used) and keep visitors away from the work area.
- Never leave the machine running unattended. Turn the power supply off

2. General Health and Safety Guidance

and do not leave the machine unattended until it comes to a complete stop.

- If the work area is to be left unattended, all machinery should be switched 'OFF' and isolated from the mains power supply.

13. Store machines safely when not in use

- When not in use, machines should be stored in a dry place, out of reach of children. Do not allow persons unfamiliar with these instructions or with the machine to operate it.

14. Do not overreach

- Choose a working position that allows your body to remain balanced and feed the work piece in to the machine without overreaching.
- Keep proper footing and balance at all times.

15. Electrical supply

- Electrical circuits should be dedicated to each machine or large enough to handle combined motor amp loads. Power outlets should be located near each machine so that power or extension cables are not obstructing high-traffic areas. Observe local electrical guidelines for proper installation of new lighting, power outlets, or circuits.
- The machine must be connected to an earthed power supply.
- The power supply must be equipped with a circuit breaker that provides short circuit, overload and earth leakage protection.
- The voltage of the machine must correspond to the voltage of the mains power supply.
- The mains plug fitted to the machine should always match the power outlet. Do not modify the plug in any way. If a replacement plug is required it should be fitted by a competent person and of the correct type and rating for the machine.
- If you are unsure about any electrical connections always consult a qualified electrician.

16. Avoid unintentional starting of the machine

- Most machines are fitted with a no-volt release (NVR) switch to prevent unintentional starting. If in doubt always ensure the machine switch is in the 'OFF' position before connecting it to the power supply. This means the machine will not automatically start up after a power cut or switching on of the power supply, unless you first reset the start switch.

17. Outdoor use

- Your machine should not be used outdoors.

18. Extension cables

- Whenever possible, the use of extension cables is not recommended. If the use of an extension cable is unavoidable, then it should have a minimum core cross section of 2.5mm² and limited to a maximum length of 3 metres.
- Extension cables should be routed away from the direct working area to prevent a trip hazard.

19. Guard against electric shock

- Avoid body contact with earthed or grounded surfaces such as pipes and radiators. There is an increased risk of electric shock if your body is earthed or grounded.

20. Always work within the machine's intended capacities

- Operator safety and machine performance are seriously adversely affected if attempts to make the machine perform beyond its limits are made.

21. Do not abuse the power cable

- Never pull the power cable to disconnect it from the power socket. Always use the plug.
- Keep the power cable away from heat, oil and sharp edges.
- Do not use the power cable for carrying or moving the machine.

22. Secure the work piece

- Ensure that the work piece is securely held before starting to machine it.
- When working within 300 mm of the machining area, always use a push stick to feed the work piece in to the blade or cutting tool. The push stick should have a minimum length of 400 mm. If the push stick becomes damaged, replace it immediately.

- Use extra supports (roller support stands etc.) for any work pieces large enough to tip when not held down to the table top.
- Do not use another person as a substitute for a table extension, or as additional support for a work piece that is longer or wider than the basic table, or to help feed, support, or pull the work piece.
- Do not attempt to machine more than one work piece at a time.
- When feeding the work piece towards the blade or cutting tool never position your hands in direct line of the cutting path. Avoid awkward operations and hand positions where a sudden slip could cause your hand or fingers to move into the machining area.

23. Stay alert

- Safety is a combination of operator common sense and alertness at all times when the machine is being used.

- Use all machines with extreme care and do not use the machine when you are tired or under the influence of drugs, alcohol or medication.

24. Use the correct tool for the job

- Do not use the machine for any purpose other than which it was designed.
- When selecting replacement cutting tools and blades, always ensure that they are designed to cut the material that you intend to use them for. If in any doubt seek further advice from the manufacturer.

25. Connect dust extraction equipment

- Always use dust extraction equipment. The dust extractor should be of suitable size and capacity for the machine that it is connected to and have a filtration level appropriate to the type of waste being collected. Refer to the relevant section of the manual for details of the specific dust extraction requirements for this machine.
- The dust extractor should be switched 'ON' before starting the machine that it is connected to. The dust extractor should be left running for 30 seconds after the last machining operation is complete in order to clear any residual waste from the machine.

26. Ensure that the machine is correctly guarded

- Never use the machine if any of the standard safety guards and equipment are removed or damaged.
- Some machines incorporate safety interlocks to prevent the machine from being used without the guards in place. Never attempt to bypass or modify the interlocks to allow the machine to be used without the guards in place.

27. Maintain your machine with care

- This manual gives clear instructions on installation, set up and operation of the machine and also details any routine and preventative maintenance that should be performed periodically by the user.
- Remember always to switch off and unplug the machine from the power supply before carrying out any setting up or maintenance operations.
- Follow any instructions for the maintenance of accessories and consumables.
- Do not use compressed air to clean the machine. Always use a brush to dislodge dust in places that are awkward to reach and a dust extractor to collect the waste.
- Inspect electric cables periodically and, if damaged, have them replaced by an authorised service facility or qualified electrician.
- Inspect extension cables (if used) periodically and replace if damaged.

28. Keep cutting tools sharp and clean

- Correctly maintained cutting tools are easier to control and less likely to bind.
- Cutting tools and blades can become hot during use. Take extreme care when handling them and always allow them to cool before changing, adjusting or sharpening them.

29. Disconnect the machine from the power supply

- When not in use, before servicing, changing blades etc. always disconnect the machine from the power supply.

30. Check for damaged parts

- Before each use of the machine, it should be carefully checked to

2. General Health and Safety Guidance

determine that it will operate properly and perform its intended function.

- Check for alignment of moving parts, binding of moving parts, breakage of parts and any other conditions that may affect the operation of the machine.
- A guard or other part that is damaged should be properly repaired or replaced by a qualified person unless otherwise indicated in this instruction manual.
- Do not use the machine if the switch does not turn the machine 'ON' and 'OFF'.
- Have defective switches replaced by a qualified person.

31. Warning!

- The use of any accessory or attachment, other than those recommended in this instruction manual, or recommended by our Company may present

a risk of personal injury or damage to the machine and invalidation of the warranty.

32. Have your machine repaired by a qualified person

- This machine complies with the relevant safety rules and standards appropriate to its type when used in accordance with these instructions and with all of the standard safety guards and equipment in place. Only qualified persons using original spare parts should carry out repairs. Failure to do this may result in considerable danger to the user and invalidation of warranty.

33. Caution! Motor may become hot during use

- It is normal for motors on some machines to become hot to the touch during use. Avoid touching the motor directly when in use.

3. Additional Health and Safety Guidance for Woodturning Lathes

Safe Operation

Familiarise yourself with the machine

- Machining operations using wood turning lathes have a history of serious accidents. Most serious accidents resulted from the work piece being thrown from the lathe whilst turning. Other accidents can be caused by loose clothing being drawn in to the rotating work piece or hands becoming trapped between the rotating work piece and fixed parts of the lathe.

2. Before switching the machine 'ON'

- Before attaching a work piece to a faceplate, always prepare it to be as round as possible. This will minimise vibration whilst turning. For further instructions please see the section of this manual entitled **Intended Use of the Lathe & Basic Woodturning Instructions**.
- Adjust the tool rest to the correct height and distance from the work piece and check that all fixings are secure.
- Check that the size of the work piece is within the safe working capacities of the lathe as detailed in the manual.
- Select the correct speed according to the size and type of work piece. The slowest speed is the safest speed to start any new work piece.
- Always rotate the work piece by hand before starting the lathe to ensure it does not come into contact with the tool rest. If the work piece strikes the tool rest during operation, it could be split and thrown from the lathe.
- When using a faceplate always ensure the work piece is well secured with screws of a suitable diameter and length.
- Remove any loose knots and bark from the work piece before mounting it to the lathe.
- If mounting a work piece between centres, always ensure that the tailstock is correctly adjusted and fully secure. Check that the locking handle for the tailstock barrel is fully tightened.

3. Whilst using the lathe

- Do not allow the turning tool to dig in to the work piece, which could result in the work piece splitting or being thrown from the lathe. Always position the tool rest at the correct height. For further instructions please see the section of this manual entitled **Intended Use of the Lathe & Basic Woodturning Instructions**.
- Before starting to machine a work piece that is off centre or not perfectly round, always set the machine to the slowest speed and gradually increase speed as the work piece becomes more balanced as material is removed. Running the lathe too fast could cause the work piece to be thrown from the lathe or the turning tool to be snatched from your hands.
- Always store turning tools in a safe place away from the work area of the lathe. Never reach over the rotating work piece to reach for turning

tools or accessories.

- Never attempt to adjust the position of the tool rest whilst the machine is running. Always switch the machine 'OFF' and wait until the work piece has stopped rotating before attempting any adjustments.
- Do not mount a work piece that contains excessive splits or loose knots or bark.
- Keep firm hold and control of the turning tool at all times. Use extreme caution when knots and voids are exposed in the work piece.
- Finish all hand sanding before removing the work piece from the lathe. Do not exceed the speed used for the last cutting operation. For further instructions please see the section of this manual entitled **Intended Use of the Lathe & Basic Woodturning Instructions**.
- Do not attempt to remount a work piece that has been turned on a faceplate unless you are deliberately turning eccentric work. You cannot remount faceplate turned work and expect it to run true, as the timber will have expanded or contracted.
- Do not remount a work piece that has been turned between centres if the original centres have been altered or removed, unless you are deliberately turning eccentric work.
- If re-mounting any work piece, always set the machine to the slowest speed and gradually increase the speed as the work piece becomes more balanced as material is removed.
- Use extra caution when mounting a work piece that has been turned between centres to a faceplate, or when mounting a faceplate turning between centres, for subsequent machining operations. Always ensure that the lathe is set to the slowest speed before switching ON.
- Do not attempt to perform any machining operations when holding the work piece by hand.
- Do not mount a reamer, milling cutter, wire wheel, buffing wheel, drill bit or any other tool to the headstock spindle.
- Always ensure that the turning tool is in contact with the tool rest and fully supported before applying the tool to the work piece.
- When the tool rest base unit is not in use (e.g. when sanding), it should be moved away from the headstock, and the tool rest removed.

4. Maintenance

- Before attempting any maintenance and particularly when cleaning the machine, always remove any accessories and tooling from the machine.
 - Always ensure that any accessories used on the lathe are kept clean and free from rust and deposits of resin.
 - Keep all turning tools sharp and in good condition. Check that the handles are secure and not split or damaged.
5. This machine falls under the scope of the 'Health & Safety at Work etc. Act 1974', and the 'Provision & Use of Work Equipment Regulations

3. Additional Health and Safety Guidance for Woodturning Lathes

1998'. In addition the elimination or control of risks from wood dust is included in the above regulations and the 'Control of Substances Hazardous to Health (COSHH) Regulations 2002'. We recommend that you study and follow these regulations.

Further guidance is available from The Health & Safety Executive and their website www.hse.gov.uk and from the authorised distributor in your country (details on back cover of the manual).

4. Record Power Guarantee

"Products" means the Products sold by Record Power subject to these terms and conditions;

"Record Power" is Record Power Limited, whose company registration number is 4804158 and registered office address is Centenary House, 11 Midland Way, Barlborough Links, Chesterfield, Derbyshire S43 4XA and sells through a network of Authorised Dealers;

"Authorised Distributor" is the nominated importer for your region who will generally sell through a network of Authorised Dealers. Details of Authorised Distributors for specific countries can be found in the Product manual or at www.recordpower.info;

"Authorised Dealer" is a retailer or business authorised to sell Record Power Products to end users.

1 Guarantee

- 1.1 Record Power guarantees that for a period of 5 years from the date of purchase the components of qualifying Products (see clauses 1.2.1 to 1.2.9) will be free from defects caused by faulty construction or manufacture.
- 1.2 During this period Record Power, its Authorised Distributor or Authorised Dealer will repair or replace free of charge any parts which are proved to be faulty in accordance with paragraphs 1.1 above provided that:
 - 1.2.1 you follow the claims procedure set out in clause 2 below;
 - 1.2.2 Record Power, our Authorised Distributor or Authorised Dealer are given a reasonable opportunity after receiving notice of the claim to examine the Product;
 - 1.2.3 if asked to do so by Record Power, its Authorised Distributor or Authorised Dealer, you return the Product, at your own cost, to Record Power's premises or other approved premises such as those of the Authorised Distributor or supplying Authorised Dealer, for the examination to take place;
 - 1.2.4 the fault in question is not caused by industrial use, accidental damage, fair wear and tear, wilful damage, neglect, incorrect electrical connection, abnormal working conditions, failure to follow our instructions, misuse, or alteration or repair of the Product without our approval;
 - 1.2.5 the Product has been used in a domestic environment only;
 - 1.2.6 the fault does not relate to consumable Products such as blades, bearings, drive belts or other wearing parts which can reasonably be expected to wear at different rates depending on usage (for full details contact Record Power or your local Authorised Distributor);
 - 1.2.7 the Product has not been used for hire purposes, by you or by a previous owner;
 - 1.2.8 the Product has been purchased by you as the guarantee is not transferable from a private sale.
 - 1.2.9 where the Product has been purchased from a retailer, the 5 year guarantee is transferable and begins on the date of the first purchase of the Product and in the event of a claim under this guarantee proof of the original purchase date will be required to validate the warranty period.

2 Claims Procedure

- 2.1 In the first instance please contact the Authorised Dealer who supplied the Product to you. In our experience many initial problems with machines that are thought to be due to faulty parts are actually solved by correct setting up or adjustment of the machines. A good Authorised Dealer should be able to resolve the majority of these issues much more quickly than processing a claim under the guarantee.
- 2.2 Any damage to the Product resulting in a potential claim under the guarantee must be reported to the Authorised Dealer from which it was purchased within 48 hours of receipt.
- 2.3 If the Authorised Dealer who supplied the Product to you has been unable to satisfy your query, any claim made under this Guarantee should be made directly to Record Power or its Authorised Distributor (for details of the Authorised Distributor in your country please see your Product manual or check www.recordpower.info for details). The claim itself should be made in a letter setting out the date and place of purchase, and giving a brief explanation of the problem which has led to the claim. This letter should then be sent with proof of the purchase date (preferably a receipt) to Record Power or its Authorised Distributor. If you include a phone number or email address this will help to speed up your claim.
- 2.4 Please note that it is essential that the letter of claim reaches Record Power or its Authorised Distributor on the last day of this Guarantee at the latest. Late claims will not be considered.

3 Limitation of Liability

- 3.1 We only supply Products for domestic and private use. You agree not to use the Product for any commercial, business or re-sale purposes and we have no liability to you for any loss of profit, loss of business, business interruption or loss of business opportunity.
- 3.2 This Guarantee does not confer any rights other than those expressly set out above and does not cover any claims for consequential loss or damage. This Guarantee is offered as an extra benefit and does not affect your statutory rights as a consumer.

4 Notice

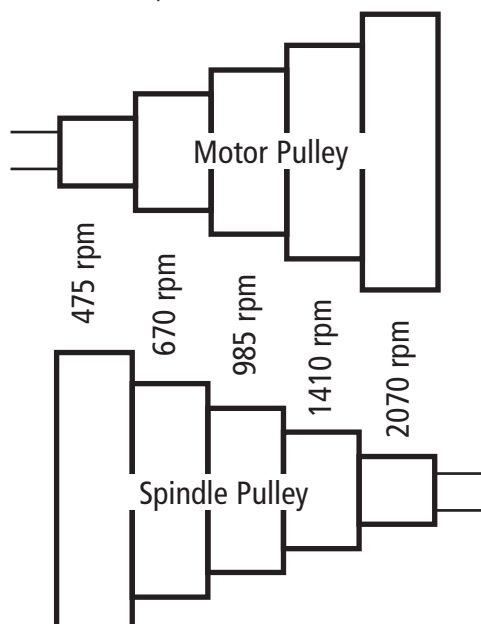
This Guarantee applies to all Products purchased from an Authorised Dealer of Record Power within the United Kingdom of Great Britain and Northern Ireland. Terms of Guarantee may vary in other countries – please check with the Authorised Distributor in your country (details of the Authorised Distributor for your country can be found in the manual or at www.recordpower.info).

5. Specifications

	CL3	CL4
Voltage:	230 V	230 V
Frequency:	50 Hz	50 Hz
Motor input P1:	0.75 kW	0.75 kW
Motor output P2:	0.55 kW	0.55 kW
Motor speed:	1400 rpm	1380 rpm
Full load current:	3.5 A	4.7 A
Maximum bowl diameter:	762 mm (30")	762 mm (30")
Maximum between centres:	610 mm (24")	610 mm (24")
Maximum swing over bed:	305 mm (12")	305 mm (12")
Spindle speeds:	475, 670, 985, 1410 & 2070 rpm	13 - 4600 rpm
Thread:	M33 x 3.5	M33 x 3.5
Taper:	2 Morse Taper	2 Morse Taper
Spindle travel:	63 mm	63 mm
Weight:	75 kg	79 kg
Continuous Rating:	240 V, 1 Phase, 50 Hz	230 V, 3 Phase, 50 Hz (uses 230 V single phase supply)
Inverter:	N/A	230 V - 50 Hz 750 W. 15 - 100 Hz frequency output range
Inverter enclosure rating:	N/A	IP55 (dust proof)
Noise Emission:	Sound power level < 85dB (A) Sound pressure level < 85dB (A)	Sound power level < 85dB (A) Sound pressure level < 85dB (A)
Size:	H386 x W1168 x D381 mm	H600 x W1168 x D381 mm

Pulley Speed Ranges

By changing the belt on to each of the five different pulleys the speed can be varied from 475 to 2070 rpm.



CL4 / VSLK Speed Ranges

By changing the belt on to each of the five different pulleys and using the VSLK controls, the speed and torque can be fully varied from 13 to 4648 rpm.

Speed Setting	Pulley Steps				
	475	670	985	1410	2070
10	1029	1453	2150	3161	4648
9	926	1308	1935	2845	4184
8	823	1162	1720	2529	3718
7	720	1017	1505	2213	3254
6	617	872	1290	1897	2789
5	515	727	1075	1581	2324
4	417	581	860	1264	1859
3	309	436	645	948	1394
2	206	291	430	632	930
1	103	145	215	316	465
0	13	18	27	40	58



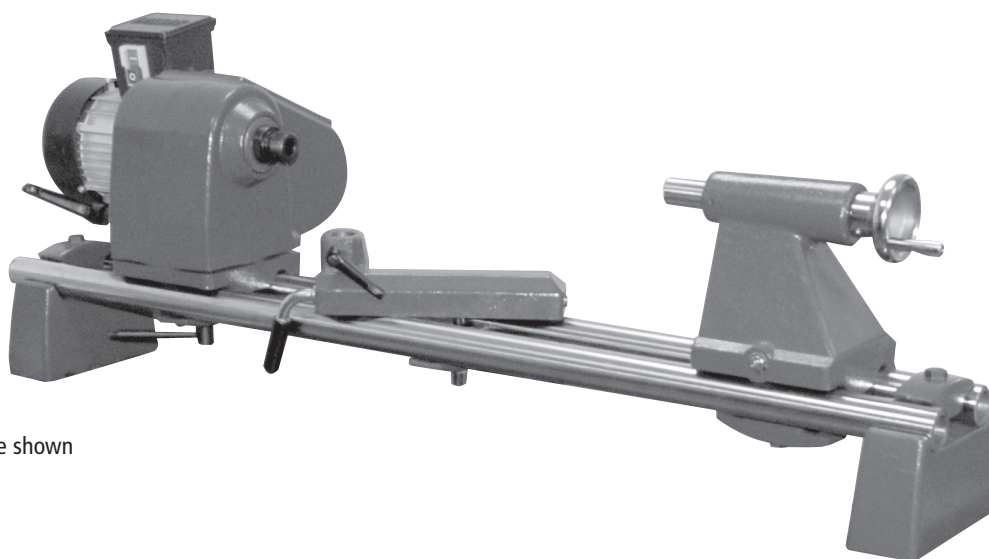
KINEMATIC DESIGN

Throughout this manual you will find references to kinematics and the kinematic design of this product. The principle of kinematics is that three points of contact provide the most stability. The best example of this is to compare the stability of a three legged stool and four legged stool. The three legged stool utilises the kinematic concept and will never rock because it has three points of contact. The four legged stool however is far more unstable, only a tiny amount of distortion will cause

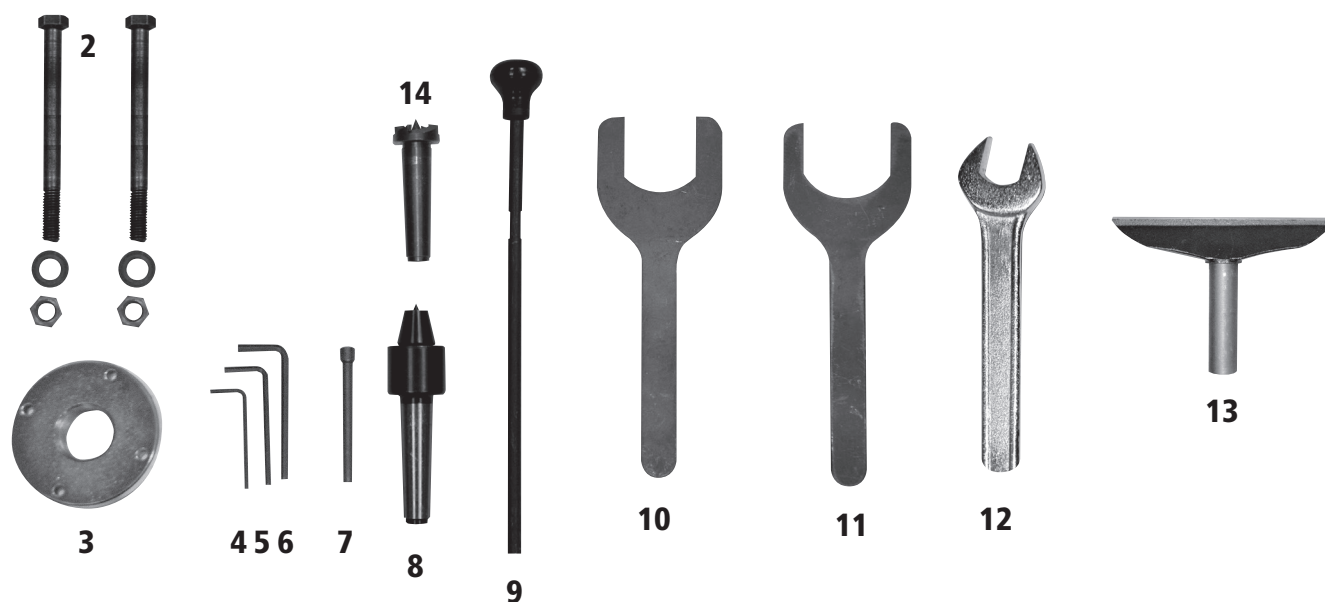
the stool to become unstable and move. Record Power apply the kinematic design theory to the CL3 and CL4 lathes, wherever there is a critical piece of the structure being assembled kinematics are employed giving unsurpassed stability and rock solid performance. Please take care to follow all instructions when assembling, making sure that all critical kinematic areas are correctly positioned so that you enjoy optimum performance.

6. Contents of the Package

1



CL3 lathe shown



- 1 CL series lathe
- 2 Long mounting bolts, nuts and washers x 2
- 3 3" Faceplate
- 4 3 mm hex wrench
- 5 4 mm hex wrench
- 6 5 mm hex wrench
- 7 Drive centre knockout bar
- 8 Revolving centre
- 9 Knockout bar
- 10 38 mm wrench
- 11 46 mm wrench
- 12 18 mm wrench
- 13 Tool rest
- 14 Drive centre

7. Mounting the Lathe to a Bench or Workstand

Before use the lathe must be attached to a suitable bench. We recommend the Record Power **12500** Adjustable Lathe Stand.

If you wish to build your own bench, remember that the lathe is heavy and the bench must not move during use.



Warning

Inadequate strength of the bench could result in failure of the bench, which may cause the lathe to fall. Serious injury could occur. If there is movement when not running, this movement will be exaggerated when in use. Serious injury could occur and work quality will suffer. To reduce movement, bolt the bench to the floor and the lathe to the bench.



Caution

To avoid back injury, get help lifting the lathe. Bend your knees, lift with your legs, not your back. The headstock and bed bars in particular are very heavy.

General Installation Notes

The first decision to be made when installing a lathe is the selection of the ideal location. For best results the location should have a solid floor of concrete or similar. Wooden floors will always have a certain amount of natural movement that will amplify any vibration present whilst turning. This is particularly noticeable if the machine is installed in a garden shed as the quality of materials used to construct the floor are generally not as good a quality as those used in the building industry. If the garden shed or workshop is the only option available, then the floor should be strengthened or reinforced to increase rigidity and dampen vibration.

The second, and possibly the most important decision is the selection of an appropriate bench or stand on which to mount the lathe. If using a wooden bench, whether it is an existing bench or purpose built, there are several points that should be kept in mind:

- The bench top should have a minimum thickness of 2" (50 mm) and additional braces should be fitted length ways along the underside of the bench to improve rigidity.
- The legs should be of a suitable type and cross section to support the bench. This will of course depend on the overall size of the bench and type of lathe. The minimum cross section of wooden legs should be approximately 4" (100 mm).
- The top of the legs should be located on the underside of the bench at approximately the same distance apart as the end brackets of the lathe. If the legs are mounted too close together the bench will become unstable. If the legs are too far apart the bench may have a tendency to sag under the weight of the lathe.
- The legs should never be vertical and should always slightly splayed by approximately 5° across the length and width of the bench. This will not only increase stability but also reduce vibration. Vertical legs will act like a trampoline, so that any force exerted downwards will simply rebound from the floor back up the legs and into the bench.
- The legs should be braced at approximately one third of their height from the floor, and should be braced both along the length and width of the bench.
- If possible the bench should be bolted to the floor, but it should never be fixed to any of the surrounding walls and should always be free standing.

7. Mounting the Lathe to a Bench or Workstand

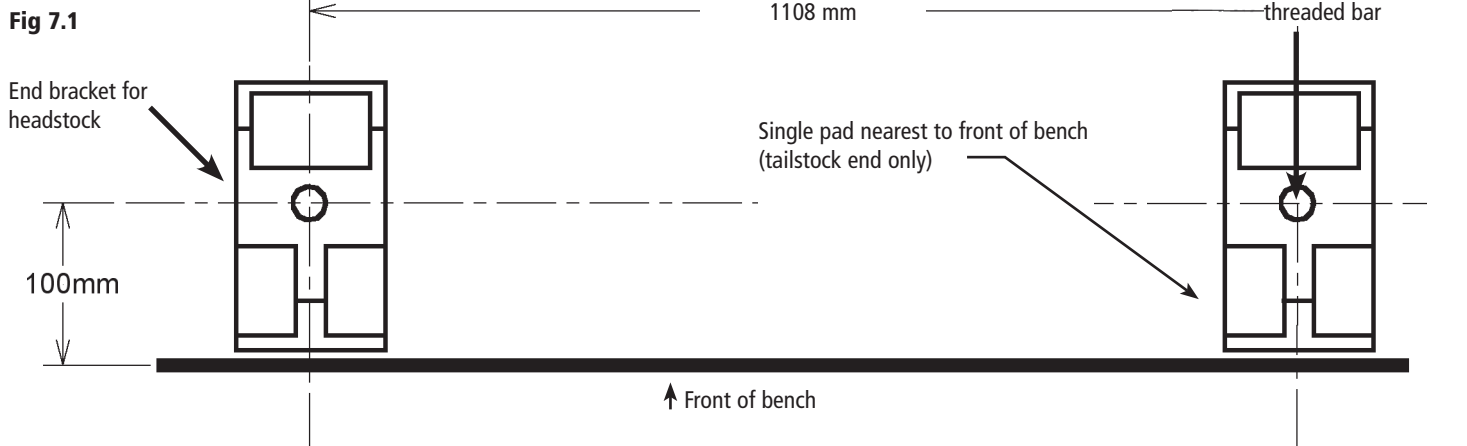
The following instructions apply to all models of CL series lathe.

Please Note: If you are fitting a 12400 Bowl Turning Attachment please refer to the chapters **Contents of the 12400 Bowl Turning Attachment Package** and **Assembly of the 12400 Bowl Turning Attachment**. The bracket supplied with the 12400 Bowl Turning Attachment permanently replaces the head stock end bracket supplied with the lathe, see **Fig 7.1**.

Depending on what the lathe will be mounted to, it may need to be disassembled and re-assembled to the stand or bench. If extreme care is taken the fully assembled lathe may be lifted by four people onto the stand or bench to reduce installation time, however, it is recommended to disassemble the lathe before installation to the bench or stand for maximum safety.

The following instructions show the lathe being fitted to the Record Power **12500 Adjustable Lathe Stand**. For assembly instructions for this product please see the chapters **12500 Adjustable Lathe Stand Specifications**, **12500 Adjustable Lathe Stand Assembly** and **Fitting a Lathe to the 12500 Adjustable Lathe Stand**

If the lathe is to be assembled on a bench other than the **12500 Adjustable Lathe Stand** please refer to **Fig 7.1** for location measurements. If disassembly and re-assembly is required, the following instructions should be followed.



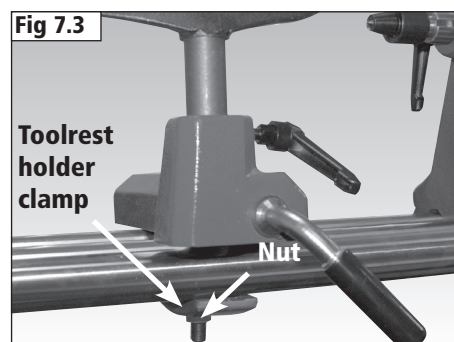
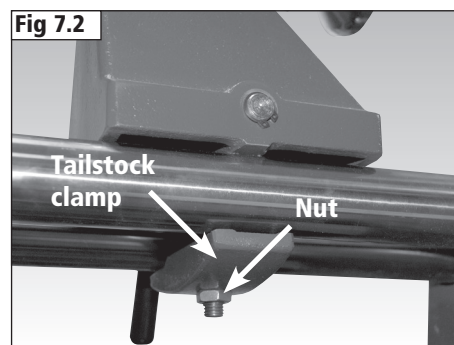
To disassemble the lathe, the tailstock, Tool rest holder and headstock must first be removed.

To remove the tailstock, use a 16 mm wrench to remove the nut beneath the bed bars which holds the tailstock clamp to the tailstock bolt as shown in **Fig 7.2**.

The tailstock can now be lifted upwards away from the bed bars and placed to one side.

To remove the tool rest holder, use a 16 mm wrench to remove the nut beneath the bed bars which holds the tool rest holder clamp to the tool rest holder bolt as shown in **Fig 7.3**.

The tool rest holder can now be lifted upwards away from the bed bars and placed to one side.



7. Mounting the Lathe to a Bench or Workstand



Please note: It is much easier to remove the headstock if the motor is removed first.



Ensure the power is turned off before disassembly of the headstock.

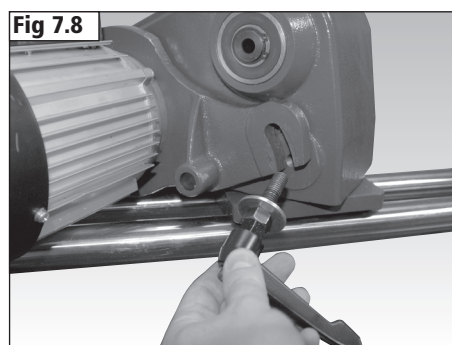
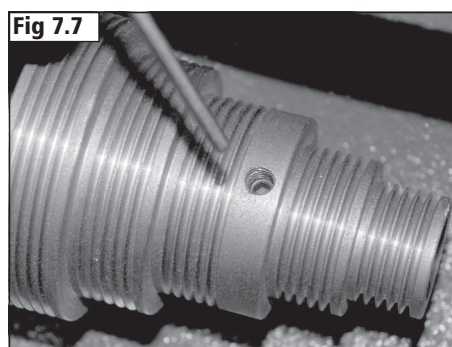
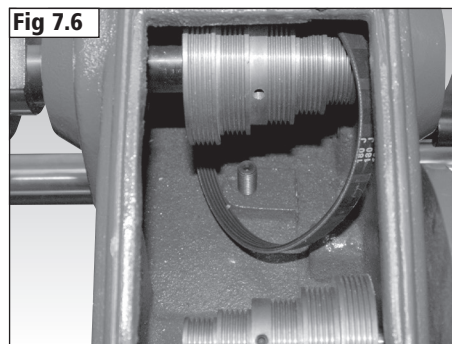
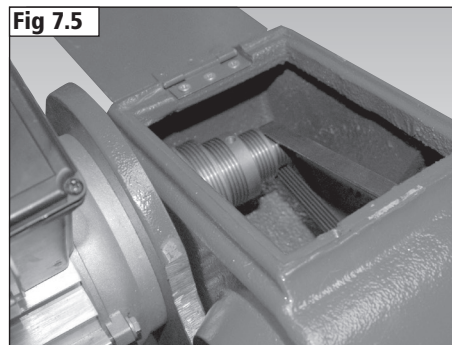
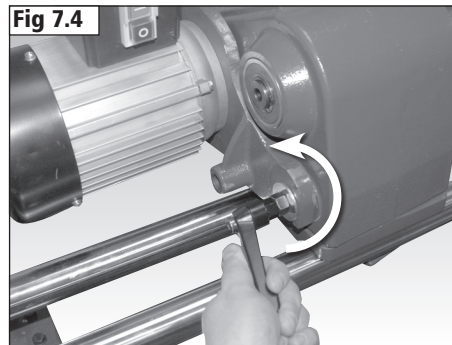
Loosen the motor tension bolt as shown in **Fig 7.4** and pull the motor towards the front of the headstock to remove tension from the drive belt.

Open the headstock cover as shown in **Fig 7.5** to gain access to the pulleys and drive belt.

Remove the belt from the motor pulley as shown in **Fig 7.6**.

The motor pulley is attached to the motor spindle by 2 stacked blind set screws. To allow the pulley to slide off the spindle when the motor is removed from the headstock, remove as shown in **Fig 7.7**.

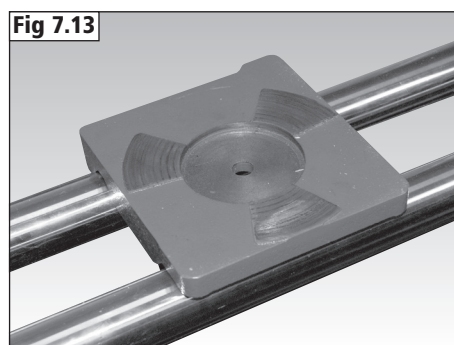
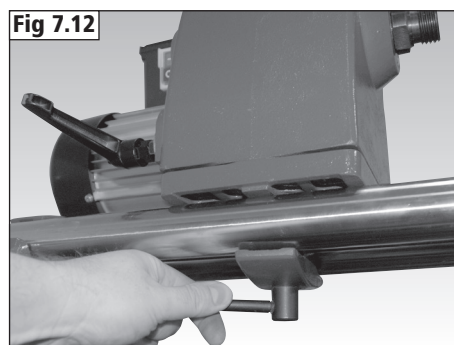
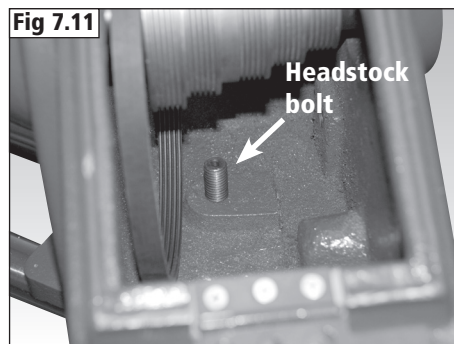
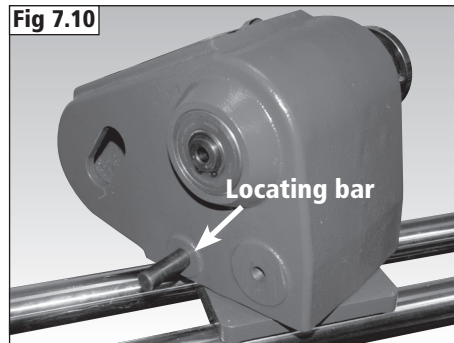
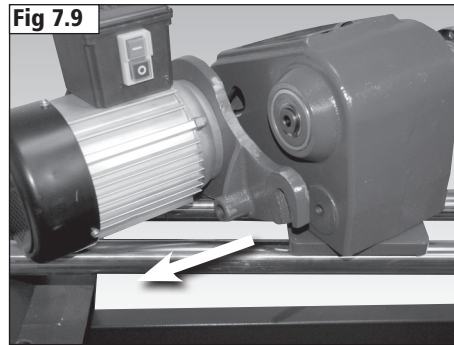
Before the motor can be removed the motor tension bolt must be removed to allow the motor plate to come away from the headstock. The motor tension bolt comprises the bolt itself, a washer, nut and ratchet handle. Remove the whole assembly as shown in **Fig 7.8**.



7. Mounting the Lathe to a Bench or Workstand

The motor plate, with motor attached, is now ready for removal as shown in **Fig 7.9**. Carefully move the motor and plate away from the headstock and place to one side. The headstock is now ready for removal, **Fig 7.10**. The headstock features a locating bar as shown in **Fig 7.10**. When removing the motor and plate, ensure the bar is retained in its socket and is not misplaced.

The headstock is held to the bed bars with a retaining bolt which passes through the headstock base and the bottom of the headstock itself, protruding into the casting of the headstock as shown in **Fig 7.11**. Remove this bolt by unscrewing it from beneath the bed bars as shown in **Fig 7.12**. Once the bolt is removed, carefully lift the headstock and place to one side. This will leave the headstock base on the bed bars as shown in **Fig 7.13**. Remove this also and place to one side.



7. Mounting the Lathe to a Bench or Workstand

All that remains is to remove the end bracket clamps from the end brackets by removing the retaining nuts and bolts as shown in **Fig 7.14** using a 19 mm wrench.

Once the end bracket clamps are removed, the bed bars can be lifted from the end brackets and the end brackets placed in the correct position on the bench or lathe stand, ready for re-assembly.

If the lathe is to be installed to a Record Power **12500** Adjustable Lathe Stand, first adjust the bench to be the correct width so the end brackets sit at the correct distance apart for the bed bars to fully seat on them as shown in **Fig 7.15**. If the bed bars are only partially sat on the brackets, the lathe will be unstable and dangerous to use.

Ensure the brackets are placed flush with the front of the mounting plate as shown in **Fig 7.16** and that the hole in the mounting plate is directly beneath the hole in the end bracket.



Important: Each end bracket features 3 kinematic points as shown in **Fig 7.17**. Ensure both brackets are positioned with the same number of kinematic points at the front and back as each other, **Fig 7.18**.

Fig 7.14

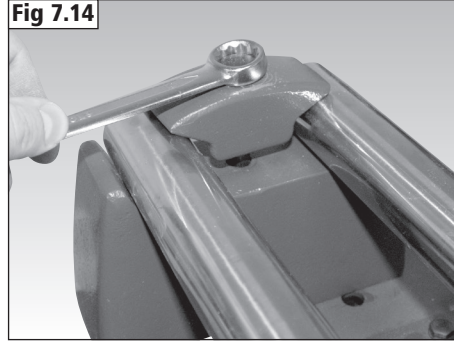


Fig 7.15

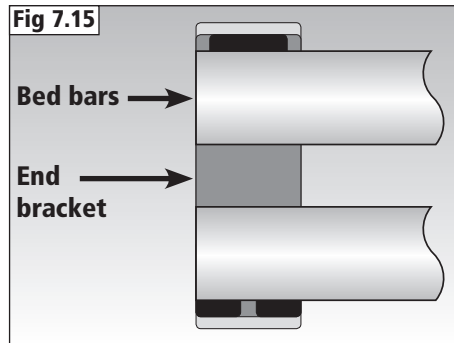


Fig 7.16

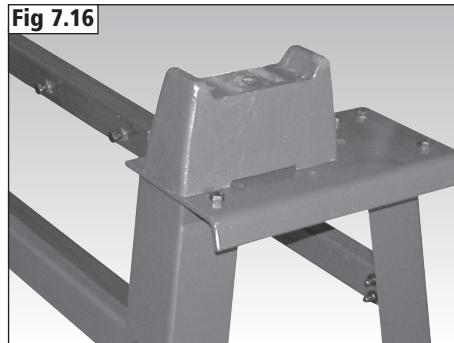


Fig 7.17

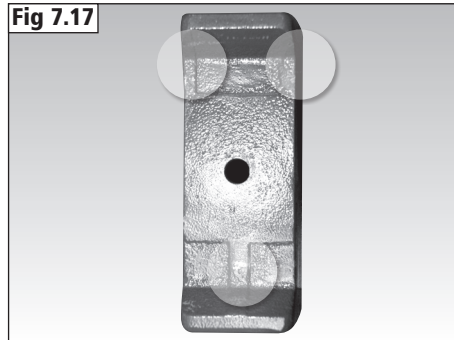
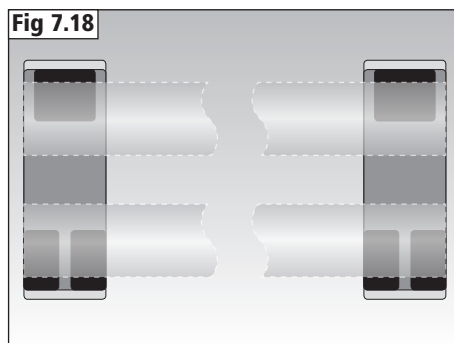


Fig 7.18



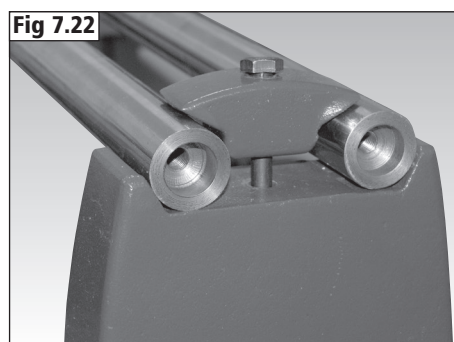
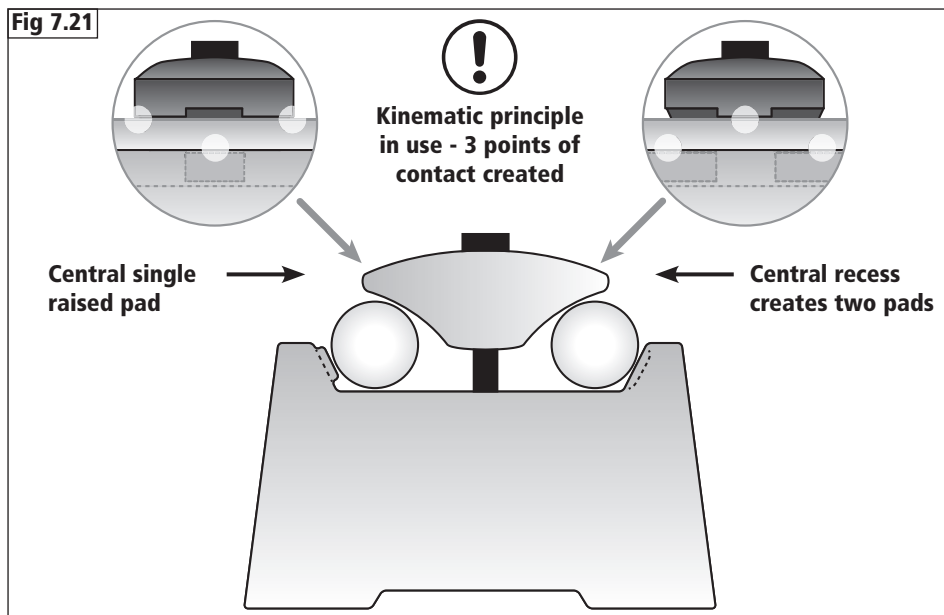
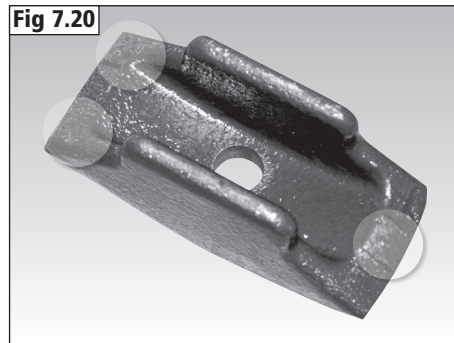
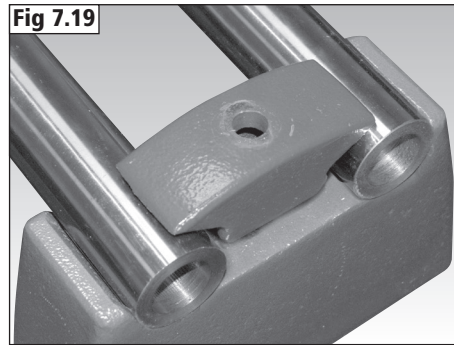
7. Mounting the Lathe to a Bench or Workstand

Once the end brackets are in place, carefully lay the bed bars on top of them and place the end bracket clamps on top of the bed bars as shown in **Fig 7.19**.

Ensure the kinematic points of the end bracket clamps, shown in **Fig 7.20**, are positioned in opposition to those of the end brackets shown in **Fig 7.18**, i.e. 2 points at the front and 1 at the back. **Fig 7.21** illustrates the correct placement in more detail.



Ensure the threaded ends of the bed bars are at the tailstock end of the lathe as shown in **Fig 7.22** so that bed bar extensions can be added if required.



7. Mounting the Lathe to a Bench or Workstand

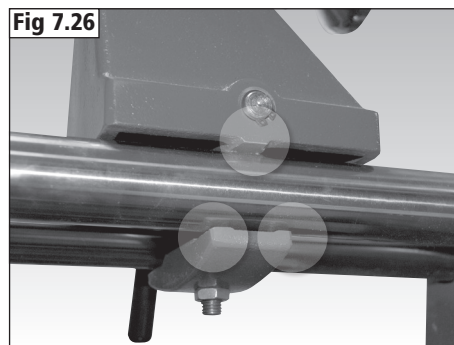
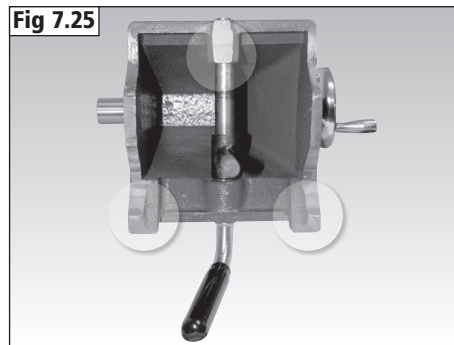
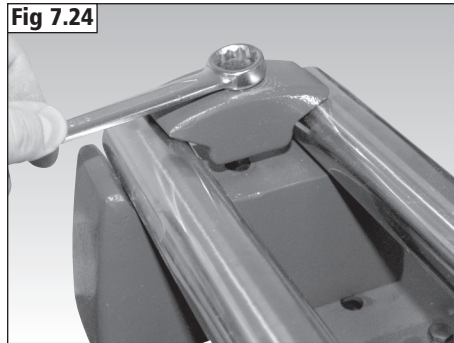
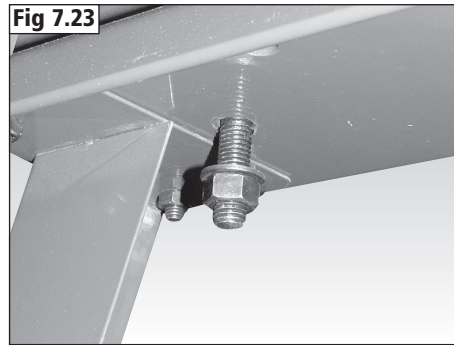
With the end bracket clamps in position, secure them to the bed bars and end brackets using the long bolts, nuts and washers supplied by passing the bolts through the top of the end bracket clamps and securing with the nuts from beneath as shown in **Fig 7.23**, using a 19 mm wrench to hold the nut beneath and a second 19 mm wrench to tighten the bolt from above as shown in **Fig 7.24**.

Assembling the Tailstock

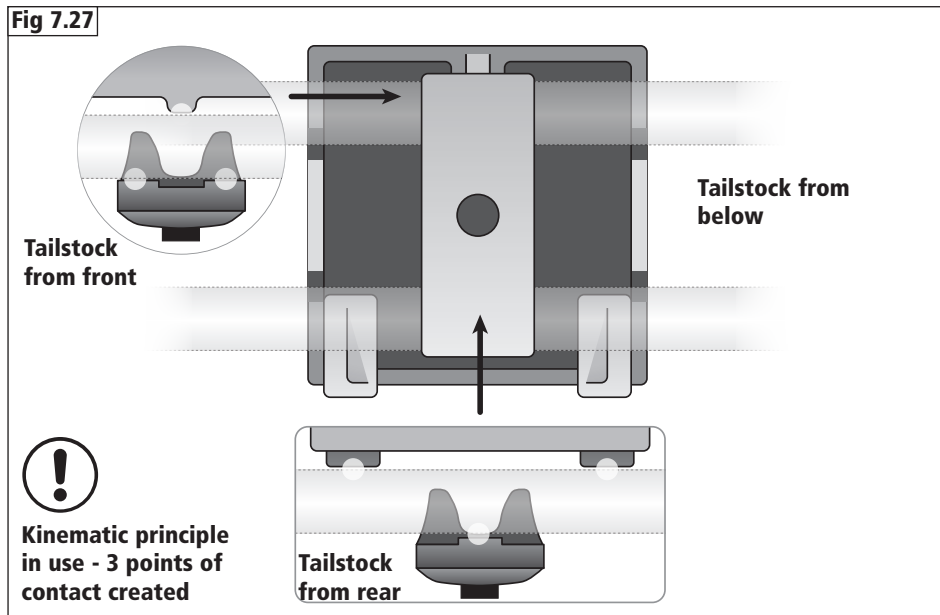
The tailstock features 3 kinematic points of contact as shown in **Fig 7.25**. Place the tailstock back onto the bed bars at the right hand side, ensuring the tailstock bolt passes between the bed bars and the single point of contact is at the front as shown in **Fig 7.26** and re-attach the tailstock clamp to the tailstock bolt with the nut using a 16 mm wrench.



Please note: Sensitivity of the cam is adjusted with this nut. To reduce travel on the cam and increase clamping force, tighten the nut. To increase travel on the cam and reduce the clamping force, slacken the nut.



7. Mounting the Lathe to a Bench or Workstand



Ensure that the tailstock clamp's 2 points of contact are at the front of the lathe, in opposition to the tailstock's 2 points of contact at the rear. **Fig 7.27** illustrates the correct placement in more detail.

The revolving centre can now be installed to the tailstock as shown in **Fig 7.28**.

Assembling the Tool rest

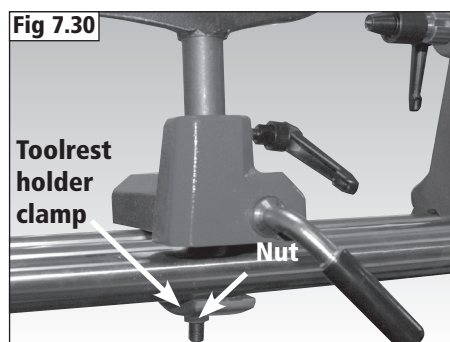
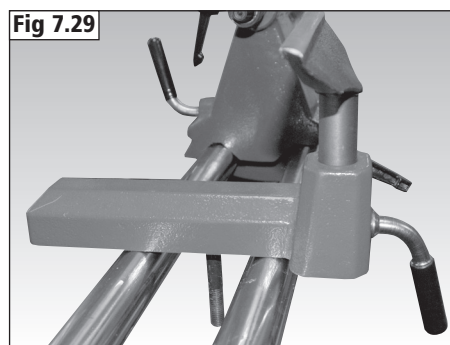
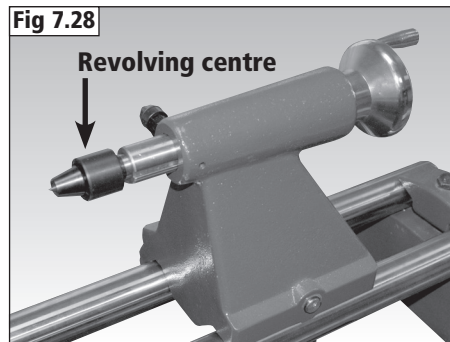
Place the tool rest holder onto the bed bars as shown in **Fig 7.29**, with the cam handle to the front of the lathe and the tool rest bolt positioned between the bed bars.

Attach the tool rest holder clamp to the tool rest bolt from beneath the bed bars as shown in **Fig 7.30** using a 16 mm wrench.

Please note: The bottom of the tool rest holder is flat to allow travel on the bed bars and so in this case there are no kinematic points of contact. This means the position of the tool rest clamp is not critical. There are 3 identical clamps used on the lathe - 1 for the tailstock, 1 for the head stock (where kinematic points are used) and 1 for the tool rest (where kinematic points are not used).



Please note: Sensitivity of the cam is adjusted with this nut. To reduce travel on the cam and increase clamping force, tighten the nut. To increase travel on the cam and reduce the clamping force, slacken the nut.



7. Mounting the Lathe to a Bench or Workstand

Assembly of the Headstock

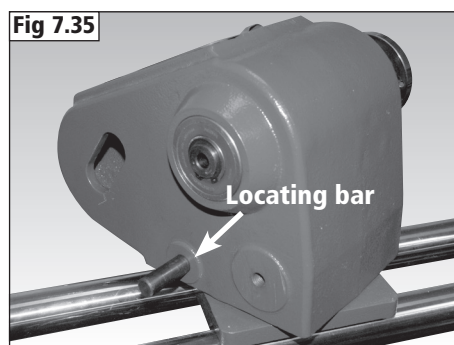
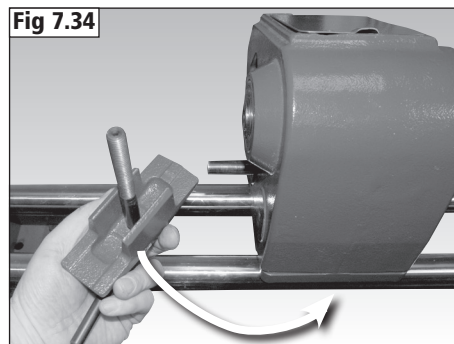
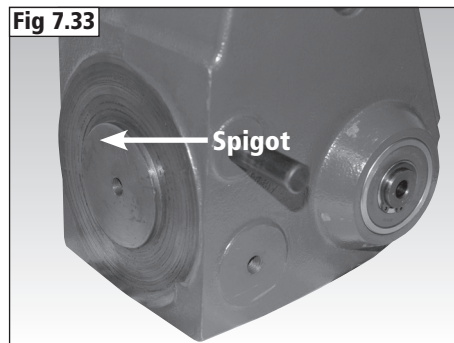
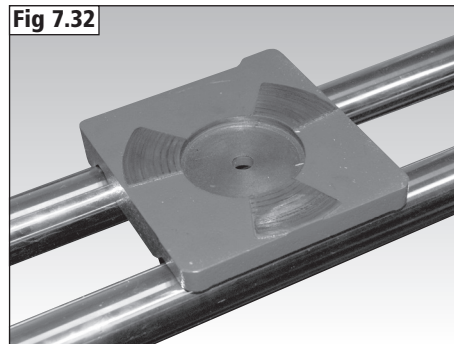
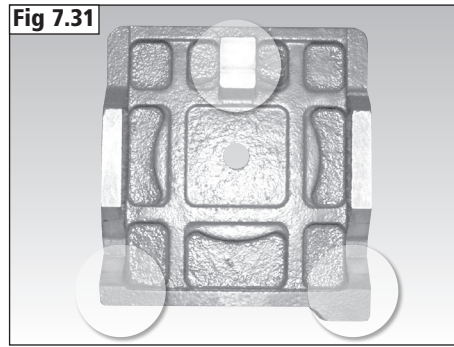
The underside of the headstock base features 3 kinematic points of contact as shown in **Fig 7.31**.

Place the headstock base on the bed bars as shown in **Fig 7.32**, ensuring the side with the single point of contact is at the front of the lathe.

The underside of the headstock features a circular spigot as shown in **Fig 7.33**. Place the headstock onto the headstock base ensuring that the spigot locates inside the circular recess of the base.

Secure the headstock to the headstock base by attaching the headstock clamp as shown in **Fig 7.34**, with the 2 points of contact at the front of the lathe. The bolt must be passed between the bed bars and through the tapped hole in the base of the headstock and headstock base.

Once the headstock is secure, the motor and motor plate can be attached to it. The headstock features a locating bar as shown in **Fig 7.35**.



7. Mounting the Lathe to a Bench or Workstand

When attaching the motor and motor plate, ensure the locating bar passes into the casting of the motor plate as shown in **Fig 7.36**.

As the motor shaft is placed inside the headstock, the motor pulley must be placed over the shaft.

Once the motor and motor plate are in position, the motor tension bolt assembly must be screwed back in as shown in **Fig 7.37**.

With the motor and motor plate installed, use the motor tension bolt to secure the motor in place before aligning the pulleys.

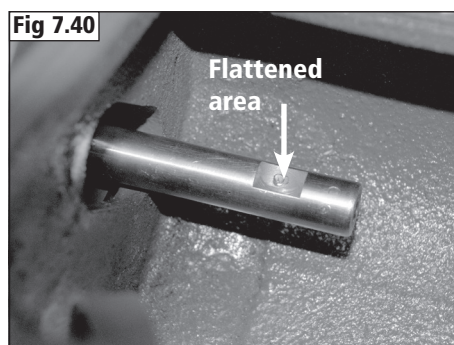
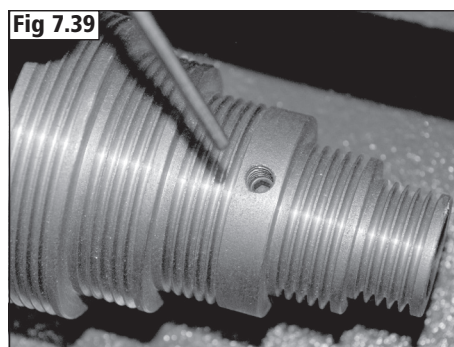
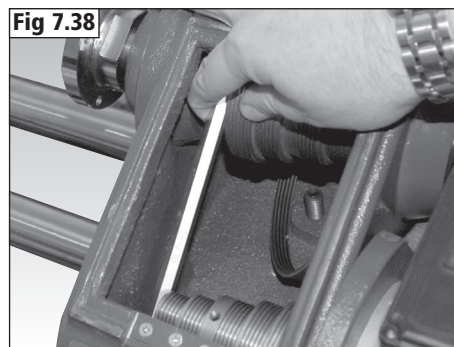
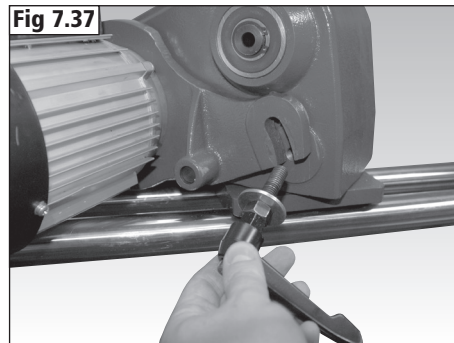
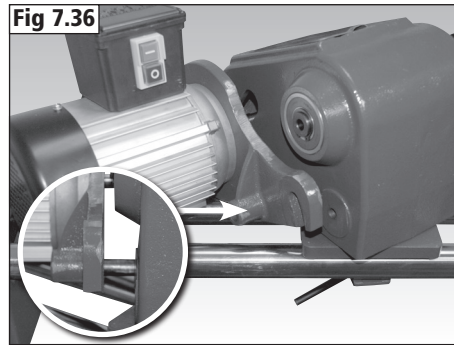


Important: It is essential to align the pulleys to reduce wear on the drive belt and also provide optimum performance and torque.

To align the pulleys, place a straight edge firmly against the side of the spindle pulley as shown in **Fig 7.38**. Position the motor pulley to touch the straight edge and secure in place using the 2 blind set screws as shown in **Fig 7.39**. The motor shaft has a flattened area as shown in **Fig 7.40**. Ensure the blind set screw is screwed onto this area.

With the motor tension fully released, place the drive belt back onto the motor pulley and spindle pulley in the desired position and carefully lower the motor back into position to tighten then belt. Turn the pulleys by hand to check that they are in alignment and that the belt is fully engaged on them.

Once complete, tighten the tension lever and close the headstock cover.



7. Mounting the Lathe to a Bench or Workstand

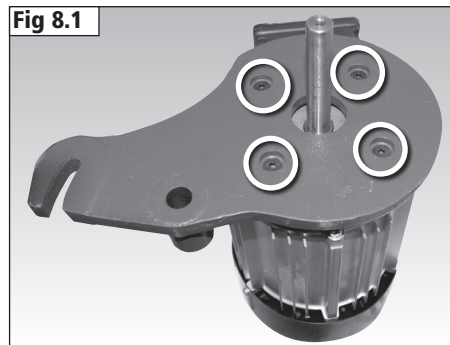
The lathe is now assembled and ready for use, **Fig 7.41**.

Fig 7.41.



8. Upgrading the CL3 to Electronic Variable Speed

When upgrading the CL3 to electronic variable speed using the VSLK unit, the motor and motor plate must be removed as shown in the chapter **Mounting the Lathe to a Bench or Workstand**. The motor plate must then be removed from the motor by removing the 4 hex head screws shown in **Fig 8.1** using a 4 mm hex wrench. The VSLK can now be fitted to the motor plate using the existing fittings and re-attached to the headstock as previously described.



9. Intended Use of the Lathe and Basic Woodturning Instructions

Intended Use of the Lathe

This lathe is designed for turning wood between centres or on the headstock (using appropriate accessories), for sanding and applying finishes to wood. It is not to be used for any other purpose. Doing so will invalidate the warranty and may cause serious harm to the user.

Health & Safety

Please read the health and safety instructions contained in this manual and the specific health and safety instructions relating to woodturning. In addition, it is recommended to ensure your work area is adequately equipped with dust extraction and air filtration equipment.



Respiratory equipment should also be used to greatly reduce lung exposure to harmful fine dust. Always establish the properties of the timber being turned and take extra care when working with harmful and carcinogenic materials.



Eye protection must always be worn. Due to the nature of woodturning, shavings, dust and splinters can be thrown at fast speeds, making adequate eye protection essential.

Mounting Timber to a Faceplate or Chuck

Before mounting the workpiece to a faceplate or chuck (not supplied), it is advisable to shape the timber into as cylindrical a profile as possible, see **Fig 9.1**. Turning unbalanced timber increases lathe vibration, the risk of it being thrown from the lathe, increased risk of chisel dig in and makes correct positioning of the tool rest difficult due to variable distances.

Mounting Timber Between Centres

When turning between centres, it is essential to correctly and securely mount the timber so as to reduce the risk of it being thrown from the lathe. It is also essential to mount the timber as centrally as possible. This will reduce the amount of roughing out needed and also maximise the possible diameter of the final piece.

1. Using a square or rectangular profile blank, draw two lines, one from each opposing diagonal corner to the other, at each end of the blank. The point where the lines intersect indicates the centre of the blank. See **Fig 9.2**. If using irregular shaped timber, a centre finder is an invaluable tool.
2. Take the four prong centre supplied with the lathe and place its point directly on to the centre point of one end of the blank. Using a soft mallet (of either plastic, rubber or wood) tap the four prong centre with reasonable force until it bites into the timber. See **Fig 9.3**.
3. Carefully place the four prong centre into the headstock spindle of the lathe, **Fig 9.4**, and ensure that it is correctly seated in the spindle by tapping it firmly into place with a mallet.
4. Slide the tailstock up the bed until the tailstock centre is almost touching the other end of the blank. Lock the tailstock in position and use the hand wheel to extend the tailstock centre until it grips the blank firmly at the centre point. See **Fig 9.5**. Then use the tailstock locking handle to secure the position. The blank is now successfully mounted and ready to be turned.

Positioning the Tool Rest

It is extremely important to ensure the tool rest is correctly positioned before turning on the lathe. Place the tool rest close to the timber, allowing enough room to manoeuvre the chisel with ease. Spin the timber by hand to ensure it does not come into contact with the tool rest. If the lathe is started without checking this and the timber hits the tool rest, there is a risk the timber could be thrown from the lathe and cause injury. Never attempt to reposition the tool rest while the lathe is in motion.

Tool rest height is also important and varies depending on the chisel

Fig 9.1

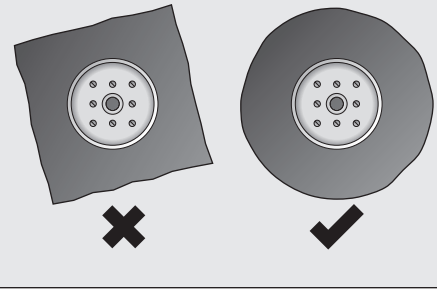


Fig 9.2

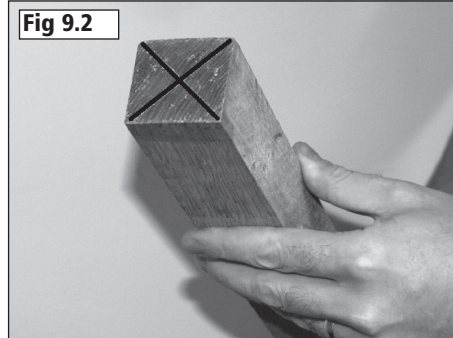


Fig 9.3

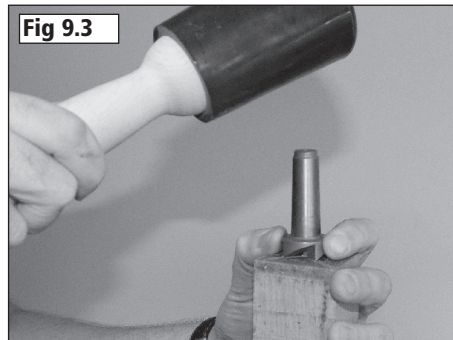


Fig 9.4

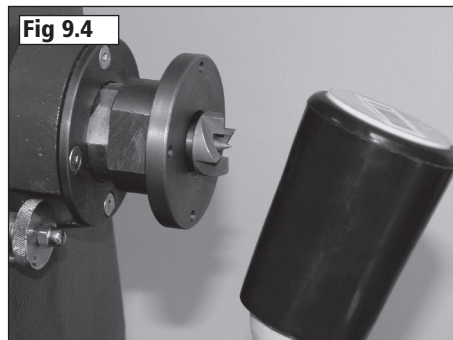


Fig 9.5



9. Intended Use of the Lathe and Basic Woodturning Instructions

being used. When using a roughing gouge, the cutting edge should come into contact with the centre of the workpiece, see **Fig 9.6**. If using a skew chisel, the cutting edge should be applied approximately 3/8" (10 mm) above the centre height, see **Fig 9.7**. A spindle gouge's cutting edge should come into contact with the workpiece approximately 3/8" (10 mm) below its centre, see **Fig 9.8**.

Using the Roughing Gouge

The first step when turning between centres is invariably to 'rough out' the blank. This involves taking a square section blank and paring it down with a roughing gouge to a cylindrical profile, ready to shape into the final piece. Roughing gouges are usually sharpened to have the bevel at a 45° angle. Using the tool rest to support the blade, offer the blade to the workpiece at an angle, see **Fig 9.9**. When offering the roughing gouge to the workpiece, the bevel should be rubbing it, without cutting. To make a cut, gently raise the handle of the tool in order to bring the cutting edge into contact with the timber. Using light passes, move the blade outwards towards the same edge of the timber which the blade is facing, **Fig 9.9**. Never move the tool backwards, as this introduces the risk of splintering the wood and causing injury.

Using the Spindle Gouge

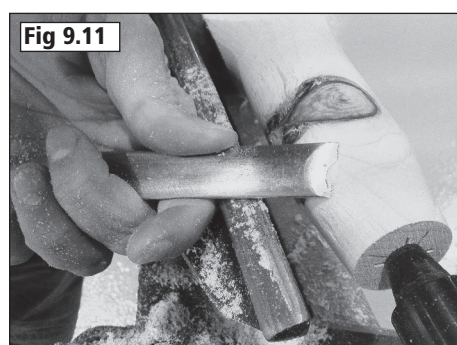
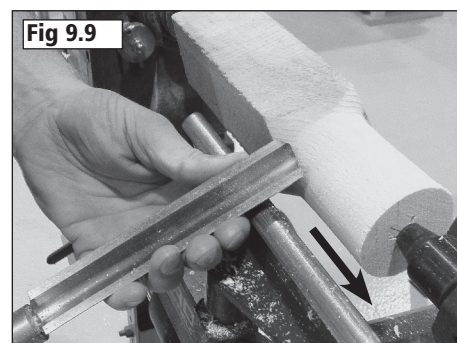
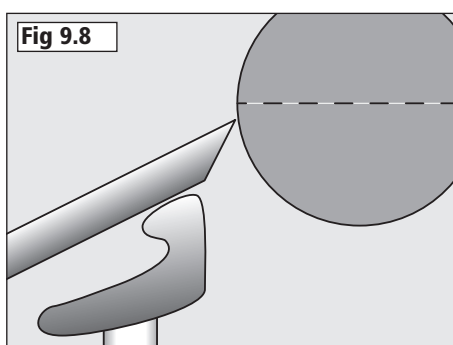
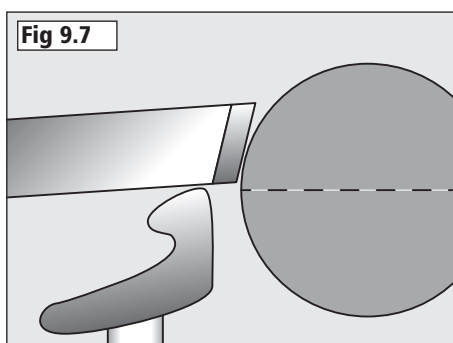
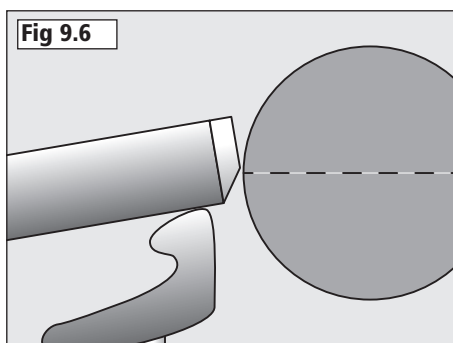
A spindle gouge is used to shape the final profile of a spindle and is capable of finer work than a roughing gouge. It is designed specifically for cutting coves or valleys. The blade should come into contact with the wood at just below the centre line. Resting it on the tool rest, apply the blade to the workpiece at an angle, see **Fig 9.10**, rubbing the bevel onto it. Raise the handle to apply the cutting edge and make cuts. As with the roughing gouge, use controlled and light passes, trying to not remove too much wood at once. Never attempt to use a spindle gouge for working on bowls or hollow form work as the angle of the cutting bevel of the gouge is too shallow and will cause it to dig in to the work piece or snatch the tools from your hands.

Using the Skew Chisel

Skew chisels are available in both flat and oval profiles. The curved profile is favoured by many as it gives better results more easily. Skew chisels are ideal for creating beads, refining the profiles and can be used to create a final smooth finish to the workpiece. The skew chisel should be applied to the workpiece horizontally with the blade resting on the tool rest, **Fig 9.11**, again with the bevel rubbing the workpiece and raising the handle to take careful, controlled cuts.

Further Operations

The guidelines above give basic instructions on some of the most common woodturning procedures. There are a wide variety of specialised chisels and many complementary accessories available for Record Power lathes which enable a huge variety of work to be created. For further instructions on more advanced safe and effective woodturning, please seek professional training.



Speeds of the Lathe

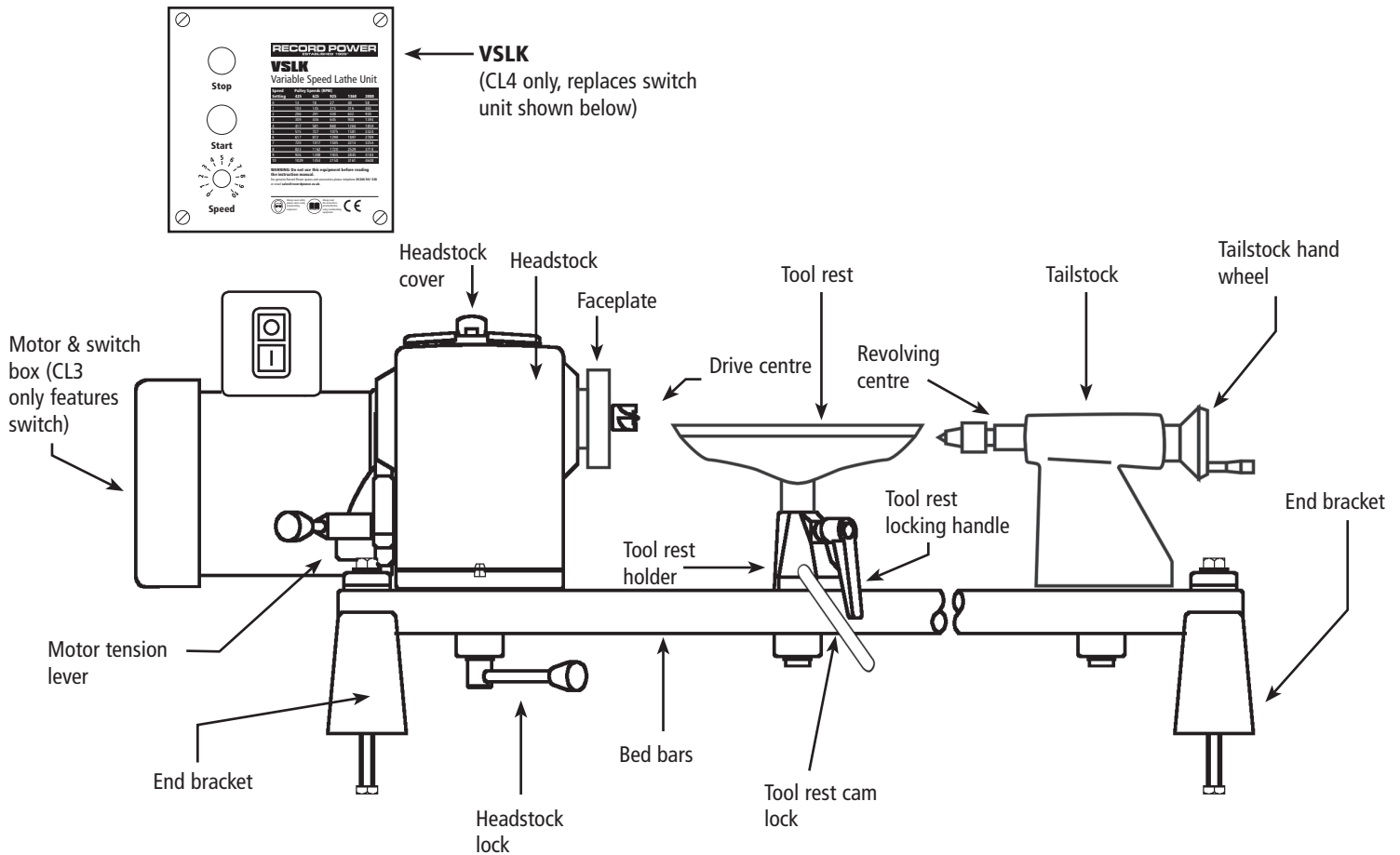
To ensure the safest possible use of the lathe, it is important to understand which speeds are suited to which tasks. In general, the slower speeds should be used for the initial turning and roughing out of large pieces and the slowest speed should be used when large pieces are out of balance. This will reduce the possibility of the workpiece being thrown from the lathe.

Medium speeds are ideally suited for general purpose work which doesn't place heavy loads on the spindle of the lathes, for example when creating the profiles of spindles and some smaller bowl turning.

The fastest speeds should be used only for small diameter work, where the size of workpiece is relatively small and therefore poses a lower risk of causing damage. Extra care should be taken when turning at the fastest speeds, using only a relatively light touch.

When sanding, care should be taken to not burn the operator's hands or the workpiece. It is recommended to not exceed the speed used for the last turning operation. If in doubt, use a slow speed.

10. Control Identification and Function



CONTROL	FUNCTION	OPERATION / COMMENT
CL4 Variable Speed Unit	Starts and stops motor and controls speed.	Green on, red off. Rotary control for speed selection.
CL3 Switch Box	Starts and stops motor.	Green on, red off.
Tool rest	Supports turning tool.	Position as per lathe safety instructions.
4 Prong centre	Holds and drives workpiece for spindle turning.	Provides driving force from motor. Firm contact is required.
Headstock lock	Locks headstock to bed bars. Allows headstock to be rotated 90° for large faceplate turning. Spindle must be parallel to bed bars when spindle turning.	Turn handle clockwise to lock. Firmly lock before mounting work. Loosen and turn headstock to desired position; For bowls larger than 12" (max 30") the headstock must be rotated to 90° and used with optional bowl rest (part no. 12400).
Tool rest lock	Locks Tool rest post into base.	Turn clockwise to lock.
Tool rest cam lock	Locks Tool rest base to bed bars.	Turn clockwise to lock.
Tailstock cam lock	Locks tailstock to bed bars.	Turn right to lock. Position tailstock along bed bars before locking.
Motor tension lever	Locks motor when belt is tensioned.	Loosen to adjust belt for selected speeds. Tighten when belt is properly positioned.
Tailstock hand wheel	Moves tailstock centre into workpiece.	Rotate clockwise to move back centre towards workpiece.
Faceplate	For mounting bowl blanks.	

11. Lathe Operation



Procedure for Re-Starting the Machine After a Power Failure or Overload

CL3

The CL3 lathe is fitted with a no volt release (NVR) switch which will cut out in the event of a power failure preventing automatic re-starting when the power source is restored.

If the machine stalls due to overloading (following a dig in whilst turning), switch the machine OFF by pressing the red button marked 'O'. Rectify the source of the overload and rotate the work piece by hand to ensure that it can rotate freely before attempting to re-start the lathe.

CL4

The CL4 lathe does not have a no volt release (NVR) switch, but the inverter drive unit incorporates low voltage and overload sensors.

The low voltage sensor will prevent automatic re-starting of the lathe when the power source is restored.

If the machine stalls due to overloading (following a dig-in whilst turning), switch the machine OFF by pressing the red button marked 'O'. In cases of severe overload, the overload sensor will cause the inverter to cut out negating the need to switch the machine OFF. Rectify the source of the overload and rotate the work piece by hand to ensure that it can rotate freely before attempting to re-start the lathe. Ensure that the speed control is returned to its lowest setting before attempting to re-start the machine. Gradually increase the speed back to the required level before applying the turning tool.

Caution

Before carrying out any adjustments or maintenance ensure that the machine is isolated and disconnected from the electricity supply.



Speed Selection

Speed (RPM) controls the quality and safety of the work. Too slow and the finish will not be smooth. Too fast and the work can fly off the lathe causing damage and risking severe injury. Follow these steps to obtain the correct speed.

1. Remove the tool rest from the lathe.
2. Trim work before turning the lathe ON. Mount work on the lathe and spin it by hand. Imbalance is the result of one side being heavier than the other. Trim excess with a saw, sander, chisel or other means before turning the lathe on.



WARNING: Unbalanced workpieces can be thrown off the lathe at high speed. You can be seriously injured if hit by flying pieces. Always wear a face shield or suitable protection and ensure work is mounted securely. Start with a slow speed at first and build up to optimum speed only when the work becomes roughed out and balanced.

3. Set spindle speed to lowest speed and replace headstock cover if necessary, before turning the lathe ON.
4. Stand to the side of the workpiece when turning the lathe ON. So that if the work does fly off, you will not be in its path.

If, after letting the workpiece rotate at the slower speed, you are satisfied that it rotates safely, stop the machine, replace the Tool rest and begin to rough out the work piece.

5. Adjust to a higher speed only after roughing out to achieve a balanced workpiece.

Warning: Excessive speeds can cause the workpiece to break apart, throwing pieces in all directions. Always use the lowest speed that produces acceptable results. Any item that cannot be turned over the bed bars – MUST be turned using the lower speed range.

Most turning can be safely and effectively achieved between 400 and 2000 rpm. The additional speeds achievable with this unit are for specialist turning such as high speeds for miniature work, pens and lace bobbins and slow speeds for thread cutting for example. These speeds are only to be used by experienced turners who have had adequate training and observe all recommended safety and operating procedures.

Refer to speed chart shown below for pulley / speed details.

Pulley Speed Ranges

By changing the belt on to each of the five different pulleys the speed can be varied from 425 to 2000 rpm on the CL3 and 13 to 4648 rpm on the CL4.



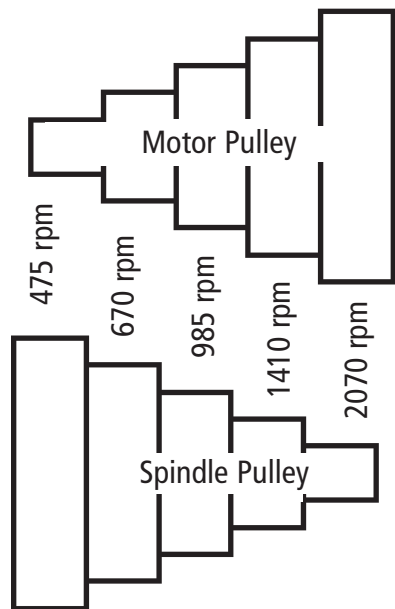
WARNING: For your own safety, turn OFF and remove plug from power source before making any adjustments.

1. Ensure that the blind set screws in the two pulleys are fully tightened. It is advisable that these should be checked periodically.
2. Adjustment of the tailstock along the bed bars is obtained by releasing the **tail stock cam lock** and moving the tailstock to the desired position, then lock firmly. When working between centres, the tailstock centre is positioned in the workpiece by means of the tailstock hand wheel. The barrel is then locked in position by the **tailstock centre lock**.
3. Adjustment of the Tool rest base on the lathe bed rails is achieved by slackening the **tool rest cam lock** and moving it to the desired position, then locking firmly.
4. Adjustment of the Tool rest is obtained by releasing the **Tool rest locking handle** and moving the Tool rest to the desired position, then lock firmly using the **Tool rest locking handle**.
5. Always ensure that the adjustments mentioned above have been followed by firm clamping before starting the lathe and always turn the workpiece by hand to ensure it will not foul on any part of the lathe.

11. Lathe Operation

Speed Selection

The speeds shown below represent the CL3 speeds and also the approximate CL4 speeds when the speed dial is set to half speed and the belt is positioned on the pulleys as shown.



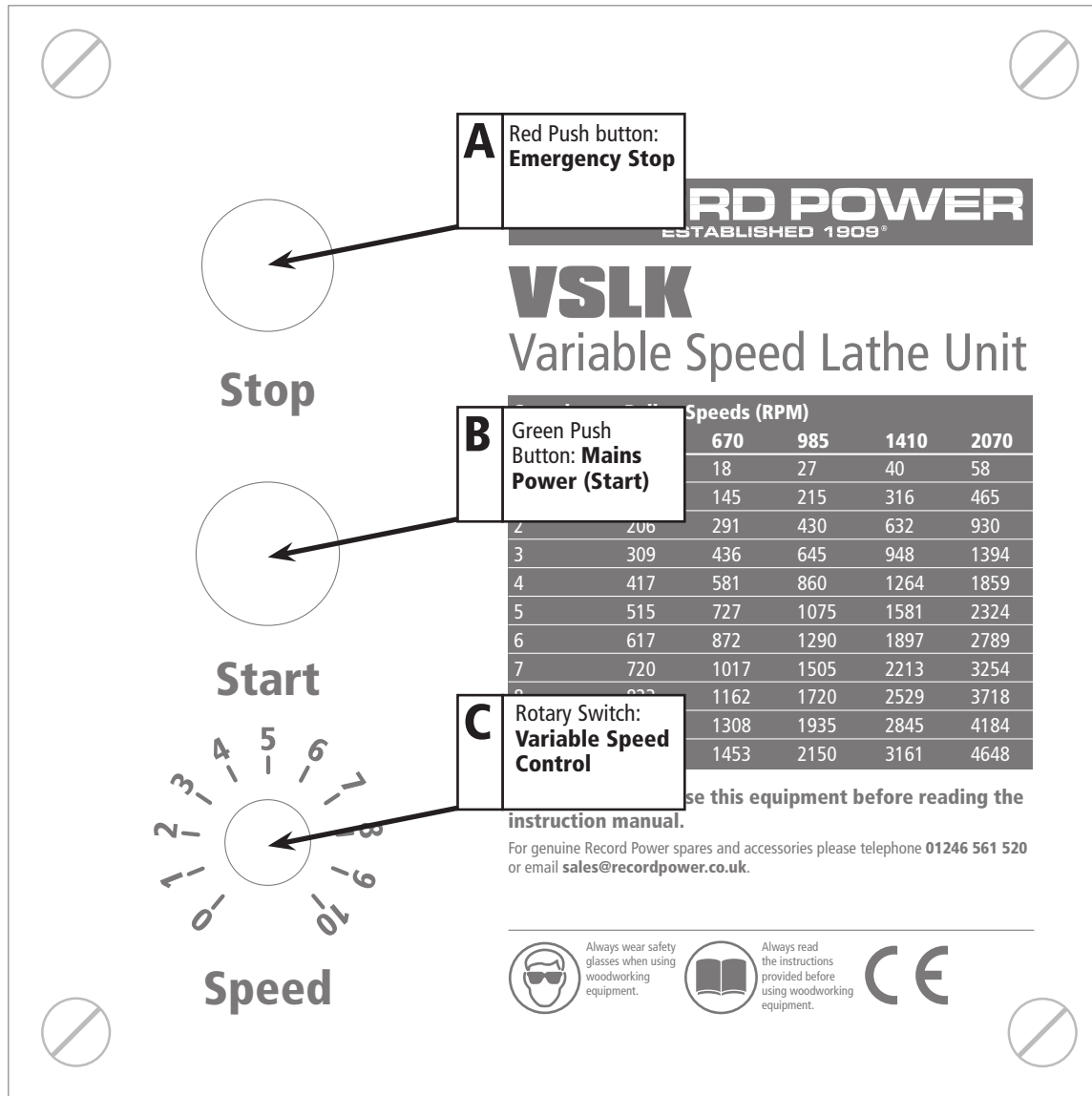
Speed Selection (CL4 Only)

Speed Setting	Pulley Steps				
	475	670	985	1410	2070
10	1029	1453	2150	3161	4648
9	926	1308	1935	2845	4184
8	823	1162	1720	2529	3718
7	720	1017	1505	2213	3254
6	617	872	1290	1897	2789
5	515	727	1075	1581	2324
4	417	581	860	1264	1859
3	309	436	645	948	1394
2	206	291	430	632	930
1	103	145	215	316	465
0	13	18	27	40	58

11. Lathe Operation

Controls and Functions of the Variable speed Unit (CL4 Only)

Fig 11.1



Please refer to **Fig 11.1** for control references.

1. To start the drive unit push button **B**.
2. To adjust the speed of the lathe, turn the variable speed control **C** to achieve the required speed. To increase the speed turn the control knob clockwise and to decrease the speed turn the knob anti-clockwise.



IMPORTANT: Before starting the machine with work mounted, always ensure that the speed control knob is set to the lowest speed setting and gradually increase the speed as the work piece becomes balanced and concentric.

3. To stop the machine or in case of emergency, push button **A**.



WARNING: As the lathe slows down after switching off, do not attempt to slow the lathe down by hand. This could lead to severe damage to the hands, through splinters, burning of the skin or even trapping of hands between workpiece and tool rest / bed bars. Marking of the workpiece or trapping could also occur if using a rag or cloth as a brake.



IMPORTANT: DO NOT run the variable speed unit below number 3 on the speed control dial for more than 30 minutes without providing extra cooling for the motor.

CAUTION: Even when the speed control dial is set to 0 the motor will still turn slowly in a jerky motion. This is a safety feature designed to indicate that the rotary switch **C** is on. DO NOT run the lathe at this setting (see note above).

11. Lathe Operation

Controls and Functions of the CL3 Switch Box

The CL3 switch box is located on the motor unit, attached to the head stock. To turn the CL3 on, press the green switch marked **I**. To stop the lathe, press the red switch marked **O**, see **Fig 11.2**.

Changing the Belt Speed



Turn the lathe OFF and disconnect from power source.

Remove the headstock cover, **Fig 11.3**.

Unlock the motor plate using the tension lever, **Fig 11.4**.

Pull the motor towards the front of the lathe to loosen the belt.

While supporting the weight of the motor with one hand, move the belt to the desired pulley position and turn the spindle by hand to ensure the belt is seated correctly on both pulleys.

Lower the motor to tighten the belt.

Replace the headstock cover.

Tighten the motor tension lever.



WARNING: Do not operate the lathe without the headstock cover locked in place. Loose items, clothing or hands may enter the opening and become entangled in rotating parts. Serious injury could occur.

Removing the Faceplate

To remove the faceplate, use the 38 mm wrench on the collar of the spindle to move it clockwise and the 46 mm wrench on the collar of the faceplate to move it anti-clockwise and loosen the faceplate, see **Fig 11.5**.

Removing the Drive Centre

To remove the drive centre, first place the drive centre knockout bar through the centre of the rear spindle then push the knockout bar through the rear of the spindle, giving a sharp tap to dislodge the drive centre, **Fig 11.6**. Push the knockout bar fully through to dislodge the drive centre and the drive centre knockout bar.

Fig 11.2



Fig 11.3

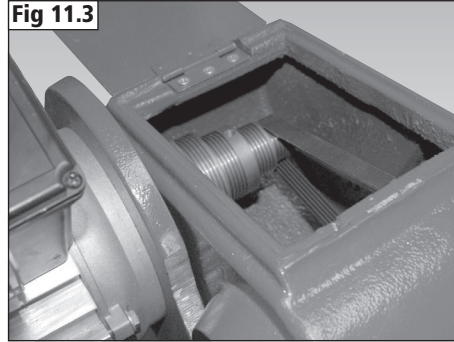


Fig 11.4

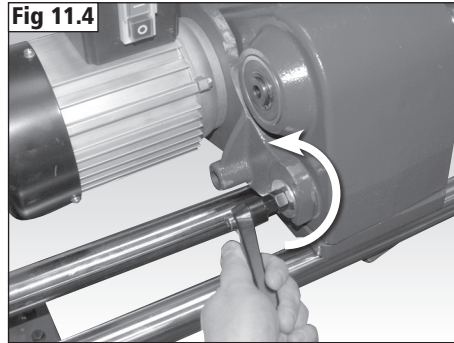


Fig 11.5

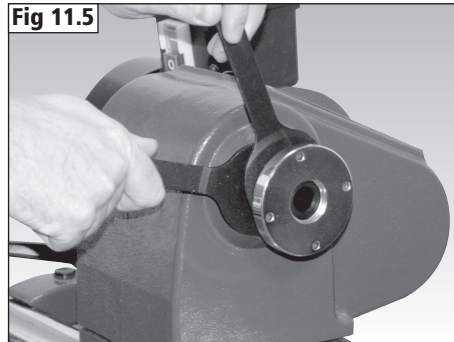
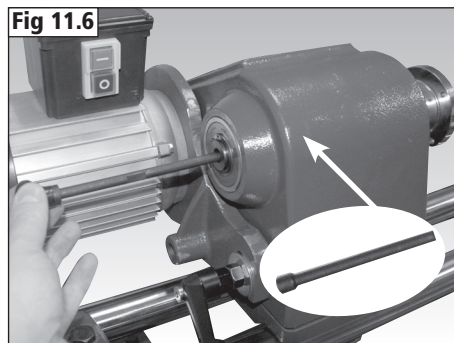


Fig 11.6



12. Maintenance



Caution: Before carrying out any adjustments or maintenance ensure that the machine is isolated and disconnected from the electricity supply.

Please note: The procedure for changing a belt and changing a bearing are similar and both operations are covered in the following instructions. For replacing only one of these parts, follow these instructions simply omitting the part not being replaced.

Changing the Bearings and Belt

Open the headstock cover and remove the blind set screws from the spindle pulley as shown in **Fig 12.1**.



Please note: The motor pulley has 2 blind set screws stacked in one threaded recess but the spindle pulley has 2 threaded recesses around its circumference with 2 blind set screws stacked in each.

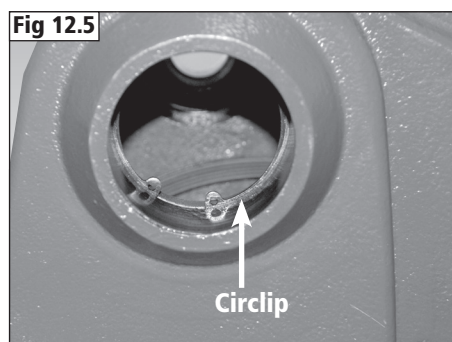
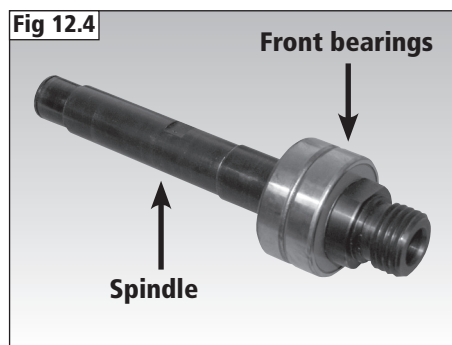
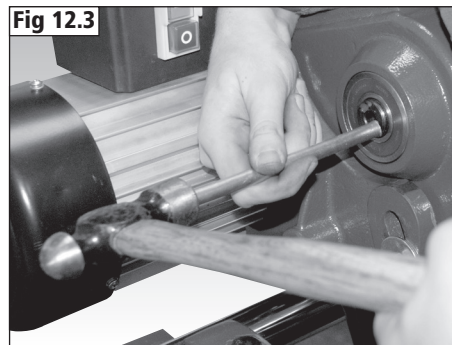
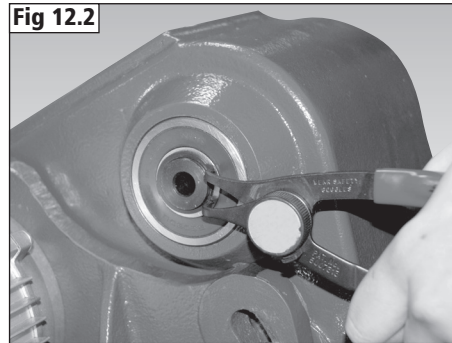
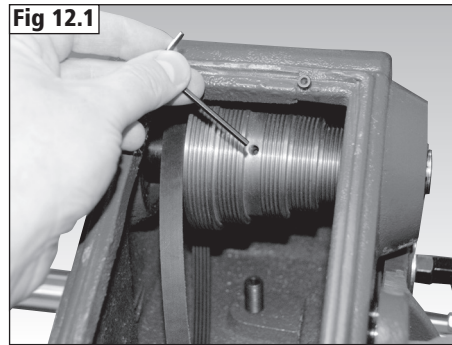
Using circlip pliers, remove the circlip from the back bearing as shown in **Fig 12.2**.

The spindle can now be removed. Using a brass drift or similar bar made of material softer than the steel of the bearing but sufficiently resilient to take blows from a mallet, carefully tap the drift with a soft mallet until the spindle comes away from the headstock, **Fig 12.3**.

The spindle will have both the front bearings attached to it as shown in **Fig 12.4**.

If the belt is to be changed, the old one can now be removed and the new one fitted over the spindle pulley when it is re-installed to the machine.

It can now be seen that there is a circlip behind the front bearings as shown in **Fig 12.5**, which functions as a stop for the front bearings and should not be removed.



12. Maintenance

The back bearing can now also be seen from inside the headstock, **Fig 12.6**. To remove this, carefully tap the bearing with a brass drift and mallet from the inside of the headstock until the bearing comes away from the headstock.

To remove the 2 front bearings from the spindle, secure the spindle as shown in **Fig 12.7** and carefully knock the spindle away from the bearings using a soft mallet.

Once new bearings are fitted as required, the headstock can be re-assembled following these steps in reverse.



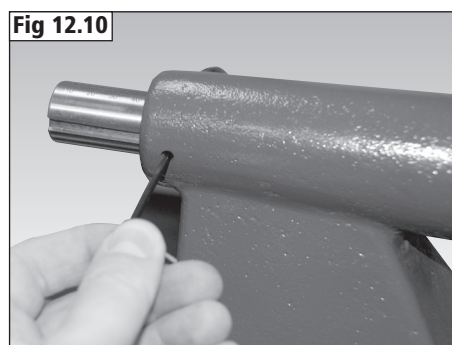
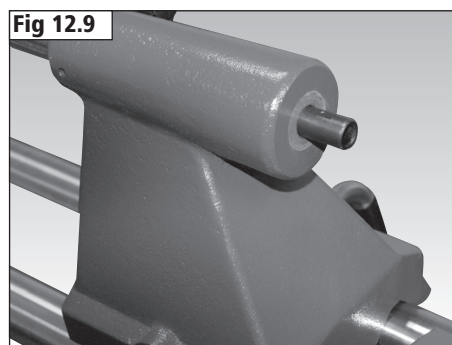
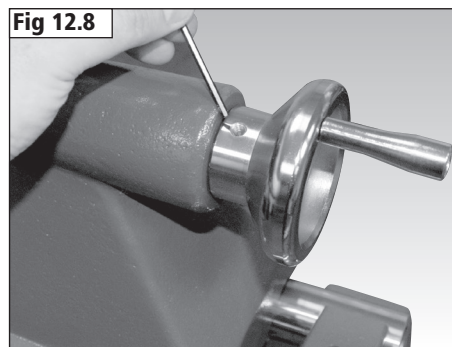
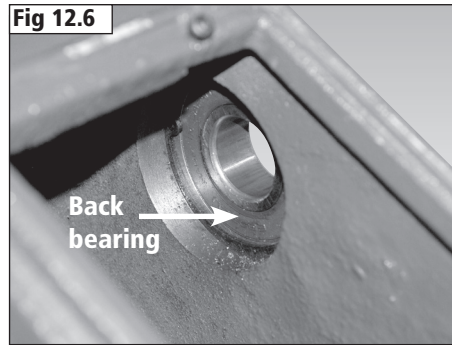
Important: It is essential to align the pulleys to reduce wear on the drive belt and also provide optimum performance and torque. Please see the chapter Mounting the Lathe to a Bench or Workstand for instructions.

Cleaning the Tailstock Barrel

It is advisable to periodically check the thread of the tailstock barrel lead screw for build up of residue and dust which could impair its movement.

To access the lead screw, first remove the blind set screw of the handwheel using a 3 mm hex wrench as shown in **Fig 12.8** and remove the handwheel, **Fig 12.9**.

Loosen the tailstock barrel retaining blind set screw with a 3 mm hex wrench as shown in **Fig 12.10**.



12. Maintenance

Loosen the tailstock retaining lever as shown in **Fig 12.11**.

The tailstock barrel can now be removed as shown in **Fig 12.12** and the lead screw unscrewed as shown in **Fig 12.13**. Please note that the thread is left handed and works in the opposite direction to conventional threads.

Clean all residue and debris from the thread using a degreasing agent and replace the lead screw inside the tailstock barrel.

Place the tailstock barrel back into the tailstock, ensuring the scale is uppermost and the 2 grooves are on either side, as shown in **Fig 12.14**.

Push the tailstock barrel in as far as possible and re-attach the handwheel, ensuring the blind set screw is secured to the flattened area of the shaft as shown in **Fig 12.15**.

Fig 12.11

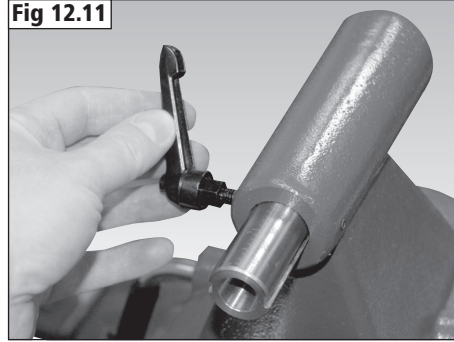


Fig 12.12

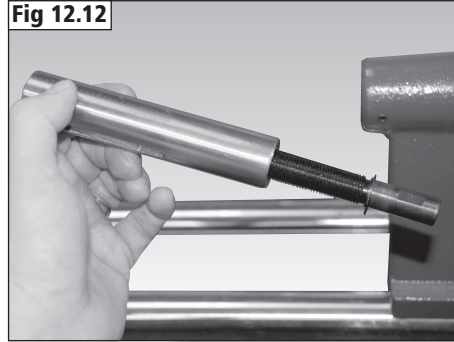


Fig 12.13

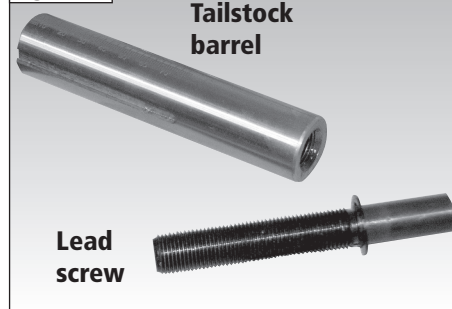


Fig 12.14

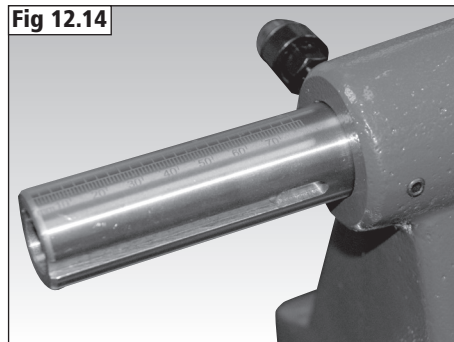
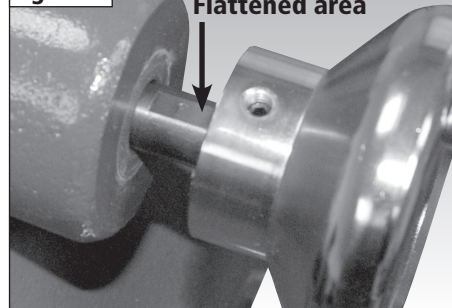


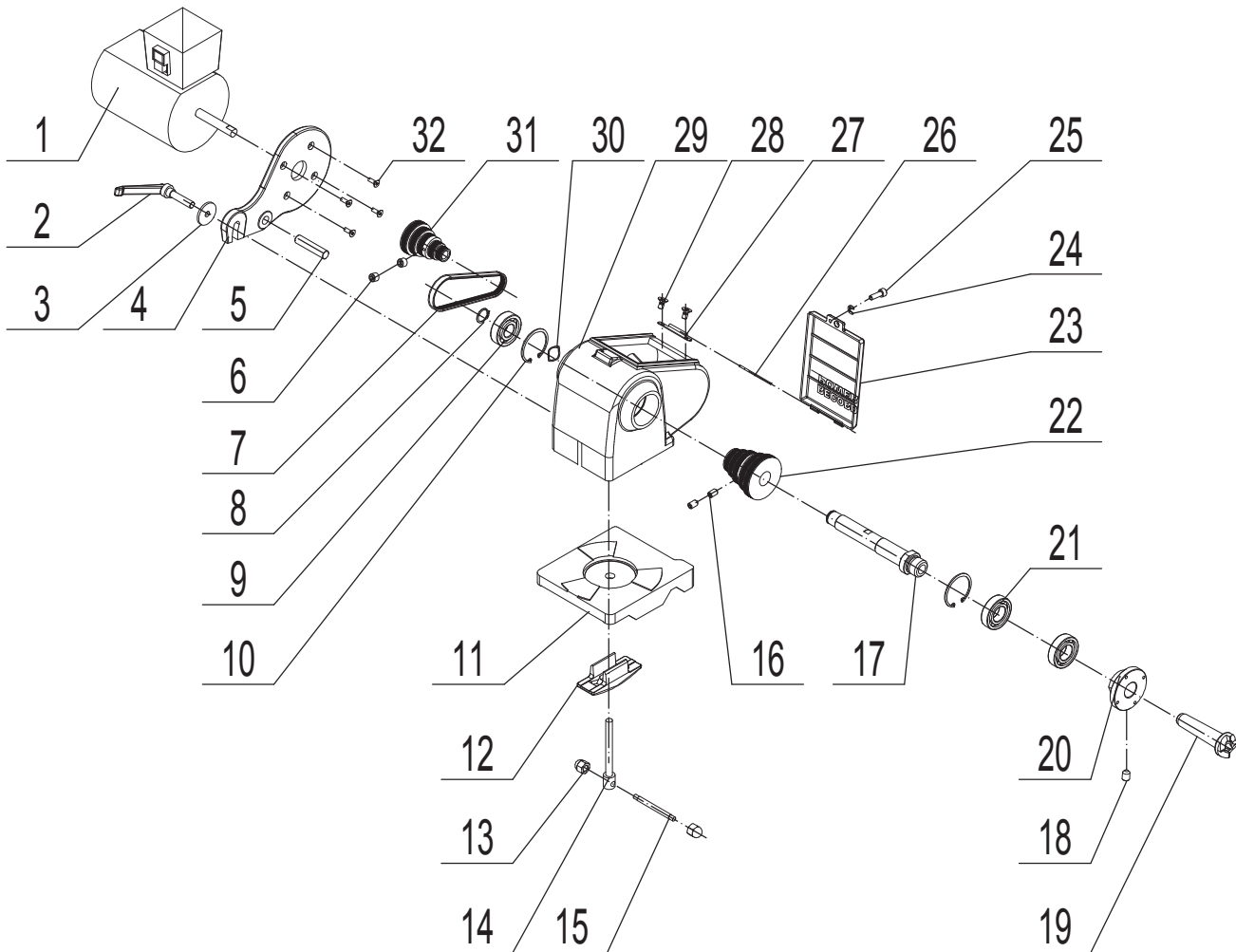
Fig 12.15



13. Troubleshooting

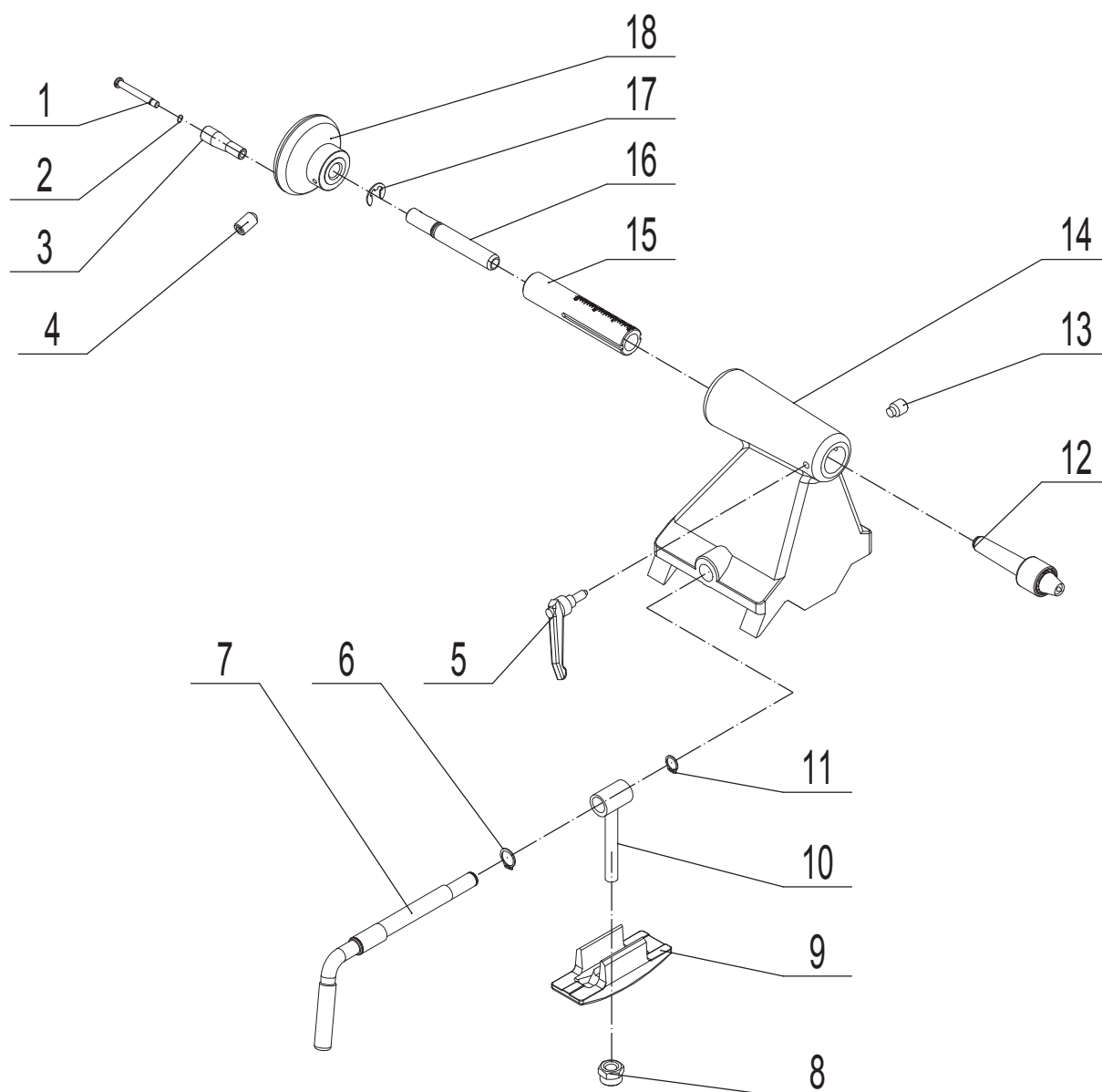
Symptom	Possible Cause	Possible Remedy
Motor will not start.	Not connected to power supply.	Check connection to power supply and re-try.
	Faulty fuse or circuit breaker tripped.	Check fuse and replace if necessary. Check circuit breaker and re-set if necessary
	Object in the path of workpiece.	Check that the work piece can rotate freely. Adjust tool rest so that it is clear of the workpiece.
	Faulty switch / control unit.	Have the switch or control unit inspected and replaced if necessary.
	Faulty motor.	Have the motor inspected and replaced if necessary.
Motor slows down / stalls or cuts out when in use.	Excessive pressure being applied to turning tool.	Reduce amount of force being exerted on the turning tool.
	'Dig in' caused by irregular shaped work piece / poor technique.	Reduce the spindle speed to provide more torque. Reduce amount of force being exerted on the turning tool. Sharpen turning tools regularly.
	Turning tool edge has become dull.	Sharpen the tool regularly.
	Bronze bearing has run dry.	Check that the bearing is well lubricated and apply oil regularly.
	Headstock drive centre not seated correctly.	Remove drive centre and ensure that the taper is clean and free from foreign bodies. Re-seat the drive centre by tapping it firmly in to the headstock spindle using a soft faced mallet.
	Faulty motor.	Have the motor inspected and replaced if necessary.
	Circuit overloaded by other tools or lighting.	Decrease the load on the circuit by removing or switching off other tools etc.
	Circuit too long or undersized wires.	Avoid using extension leads. Check that any leads used are of suitable cross section and diameter Have the circuit checked by a qualified electrician.
	Voltage too low.	Have the circuit checked by a qualified electrician.
	Circuit breaker does not have sufficient capacity.	Have the circuit checked by a qualified electrician.
	Insufficient belt tension allowing motor pulley to slip.	Check the belt tension and adjust as necessary. Check for oil or other waste material on the surface of the pulleys and belt. Clean as necessary.
Excessive noise or vibration from motor / headstock.	Loose pulley.	Check that retaining screws in both pulleys are fully tight.
	Motor fan cover damaged or loose or making contact with motor fan.	Check the fan cover for damage and clearance. Adjust as necessary.
	Incorrect pulley alignment.	Check and adjust pulleys.
	Rear bearing faulty.	Check the bearing and replace if necessary.
	Faulty motor bearing.	Have the motor inspected and replaced if necessary.
Tailstock or tool rest cam locking device not effective.	Machine not correctly assembled.	Check the correct configuration of the kinematic clamping points as detailed in the assembly instructions.
	Incorrect adjustment.	Adjust nut to increase or decrease force exerted by the cam mechanism.

14. Parts Lists and Diagrams



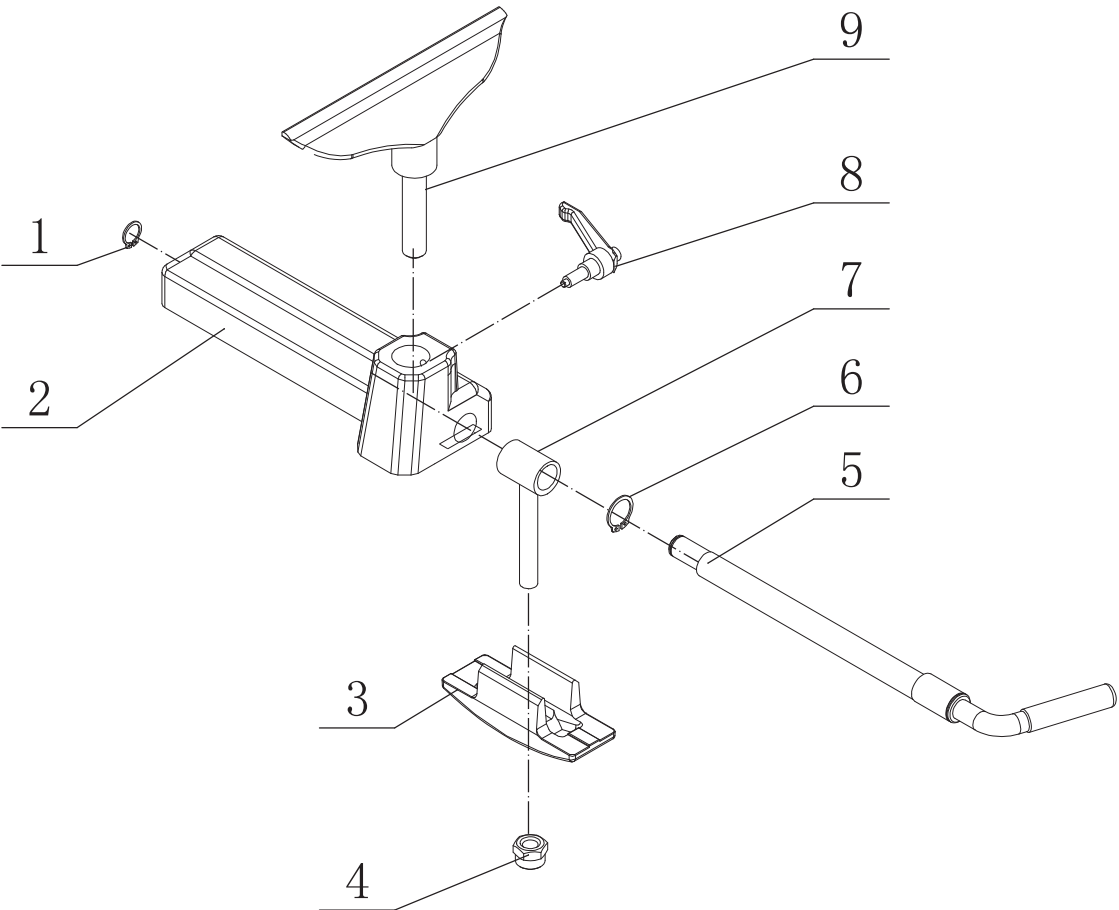
Item	Part Number	Description	Quantity
1	2-YYH800064C	Motor	1
2	KTSB-B-M12X95X50	Ratchet handle	1
3	WSH12GB5287Z	12 mm diameter washer	1
4	RCWL1201020002	Motor plate	1
5	RCWL1201020007	Locating bar	1
6	M6X6GB80B	M6 x 6 blind set screw	2
7	5PJ450GB16588	Drive belt	1
8	CLP25GB894D1B	Circlip	1
9	BRG6305-2R5GB276	Rear bearing	1
10	CLP62GB893D1B	Circlip	2
11	RCWL1201020006	Headstock base	1
12	RCWL1201020004	Headstock clamp	1
13	M8GB802Z	M8 nut	2
14	RCWL1201020008	Headstock bolt	1
15	RCWL1201020012	Headstock locking lever	1
16	M6X8GB80B	M6 x 8 blind set screw	2
17	RCWL1201020009	Spindle	1
18	M6X8GB80B	M6 x 8 blind set screw	1
19	JL93011100	Drive centre	1
20	JMWL1203020010A	3" faceplate	1
21	BRG6202-2R5GB276	Front bearing	2
22	RCWL1201020011	Spindle pulley	1
23	RCWL1201020005	Headstock cover	1
24	CLP5GB896B	Circlip	1
25	M5X16GB70D1B	M5 x 16 hexagon socket head screw	1
26	JMWL1203020003	Hinge shaft	1
27	JMWL1203020002	Hinge	1
28	M4X10GB819B	M4 x 10 cross recessed countersunk head screw	2
29	WSH32JB7590B	Head	1
30	RCWL1201020001	32 mm diameter spring washer	1
31	RCWL1201020003	Motor pulley	1
32	M6X20GB70D3B	M6 x 20 hexagon socket countersunk head screw	4

14. Parts Lists and Diagrams



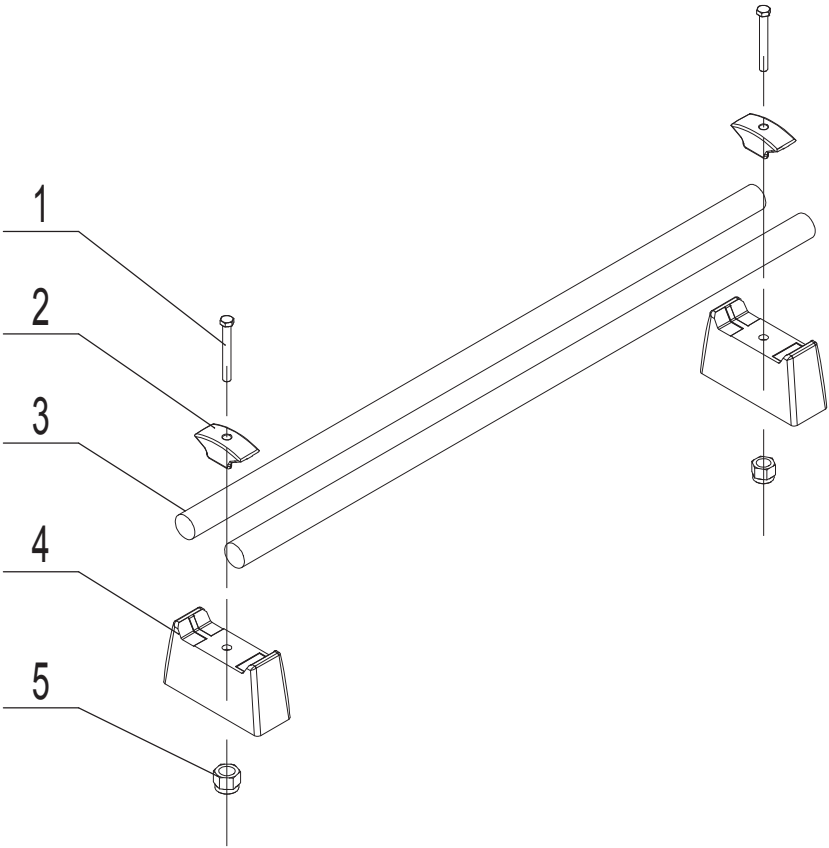
Item	Part number	Description	Quantity
1	JL93030008	Shaft	1
2	JMWL1203040007	Spring washer	1
3	JL93030007	Hand wheel handle	1
4	M6X10GB80B	M6 x 10 blind set screw	1
5	JMWL1203041000	Ratchet handle	1
6	CLP17GB894D1B	Circlip	1
7	RCWL1201040002	Cam lock handle	1
8	M12GB889D1Z	Hex nut M12	1
9	RCWL1201020004	Tailstock clamp	1
10	RCWL1201040003	Locking tube	1
11	CLP12GB896B	Circlip	1
12	JL93031000A	Revolving centre	1
13	M6X8GB79B	M6 x 8 blind set screw	1
14	RCWL1201040001	Tailstock casting	1
15	JL93030001	Tailstock barrel	1
16	JL93030003	Tailstock screw	1
17	CLP14GB894D1B	Circlip	1
18	JMWL1203040005	Tailstock hand wheel	1

14. Parts Lists and Diagrams



Item	Part number	Description	Quantity
1	CLP15GB894D1B	Circlip	1
2	RCWL1201030001	Tool rest base casting	1
3	RCWL1201020004	Tool rest clamp	1
4	M12GB889D1Z	M12 hex nut	1
5	RCWL1201030003	Cam lock handle	1
6	CLP21GB894D1B	Circlip	1
7	RCWL1201030002	Locking tube	1
8	JMWL1203041000)	Ratchet Handle	1
9	JMWL1203050001A	Tool rest	1

14. Parts Lists and Diagrams



Item	Part Number	Description	Quantity
1	M12X100GB5783Z	Hex bolt M12 x 100	2
2	RCWL1201010003	End bracket clamp	2
3	RCWL1201010002	Bed bars	2
4	RCWL1201010001	End bracket	2
5	M12GB889D1Z	M12 Nut	2

15. Electrical Connection and Wiring Diagram

Machines supplied for use in the UK are fitted with a 3 pin plug conforming to BS1363, fitted with a fuse conforming to BS1362 and appropriate to the current rating of the machine.

Machines supplied for use in other countries within the European Union are fitted with a 2 pin Schuko plug conforming to CEE 7/7.

Machines supplied for use in Australia & New Zealand are fitted with a 3 pin plug conforming to AS/NZS3112.

In all cases, if the original plug or connector has to be replaced for any reason, the wires within the mains power cable are colour coded as follows:

230 V (Single Phase)

- Brown: Live (L)
- Blue: Neutral (N)
- Green and Yellow: Earth (E)

The wire coloured brown must always be connected to the terminal marked 'L' or coloured red.

The wire coloured blue must always be connected to the terminal marked 'N' or coloured black.

The wire coloured green and yellow must always be connected to the terminal marked 'E' or with the earth symbol:



or coloured green / green and yellow.

It is important that the machine is effectively earthed. Some machines will be clearly marked with the double insulated logo:



In this case there will not be an earth wire within the circuit.
In the case of the BS1363 plug for use in the UK, always ensure that it is fitted with a fuse conforming to BS1362 appropriate to the rating of the

machine. If replacing the original fuse, always fit a fuse of equivalent rating to the original. Never fit a fuse of a higher rating than the original. Never modify the fuse or fuse holder to accept fuses of a different type or size.

Where the current rating of the machine exceeds 13 A at 230 V, or if the machine is designated for use on a 400 V 3 phase supply a connector conforming to BS4343 (CEE17 / IEC60309) will be used.

230 V machines will be fitted with a blue 3 pin connector. The wiring for this type of this connector will be the same as shown above.

400 V, 3 phase machines will be fitted with a red 4 or 5 pin connector. The wiring for this type of connector is as shown below:

400 V (3 phase)

- Brown: Live (L1)
- Black: Live (L2)
- Grey: Live (L3)
- Blue: Neutral (N)
- Green and Yellow: Earth (E)

The wire coloured brown must always be connected to the terminal marked 'L1'.

The wire coloured black must always be fitted to the terminal marked 'L2'.

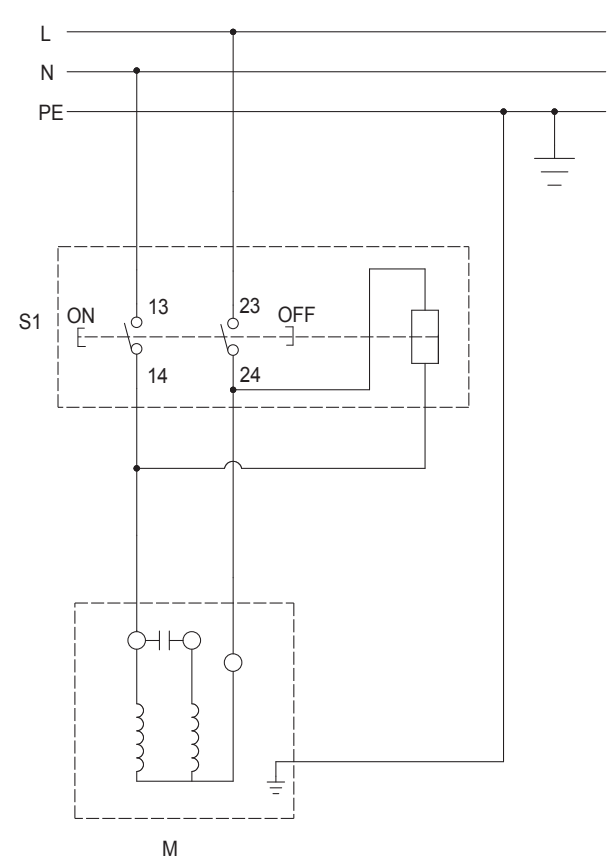
The wire coloured grey must always be connected to the terminal marked 'L3'.

The wire coloured blue must always be connected to the terminal marked 'N' or coloured black.

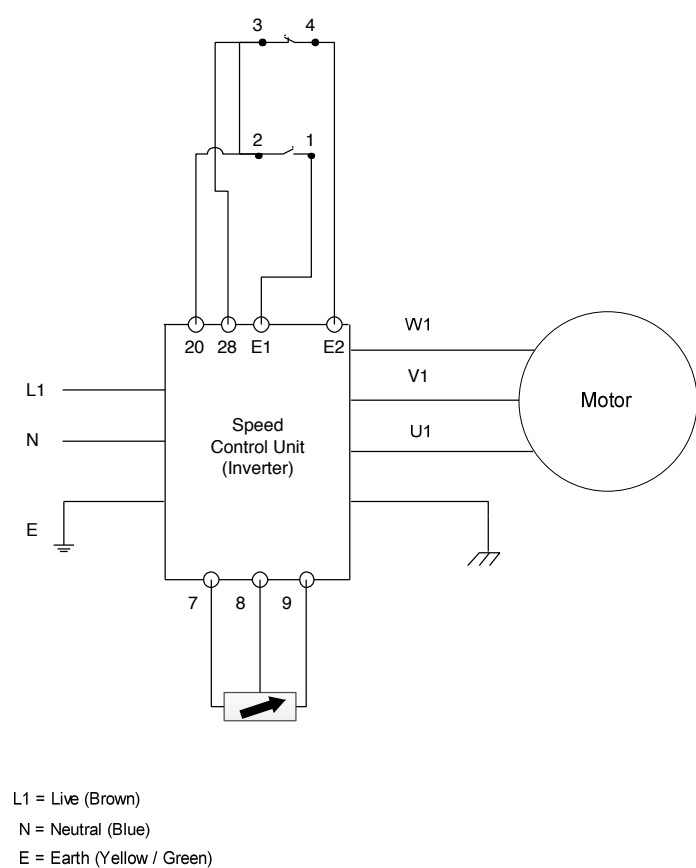
The wire coloured green and yellow must always be connected to the terminal marked 'E' or with the earth symbol

If in doubt about the connection of the electrical supply, always consult a qualified electrician.

CL3 Wiring Diagram



CL4 Wiring Diagram



16. Contents of the 12400 Bowl Turning Attachment Package

- 1 Bracket
- 2 Swivel bracket
- 3 Tubular bowl rest
- 4 Banjo
- 5 Banjo clamping screw
- 6 Swivel bracket clamping screw
- 7 Bracket securing screw
- 8 Swivel bracket secondary screw
- 9 Ratchet handle for tool rest (banjo)
- 10 Allen key



17. Assembly of the 12400 Bowl Turning Attachment

Please note: The bracket supplied as part of the 12400 Bowl Turning Attachment replaces the end bracket supplied with the lathe, at the head stock end.

Fitting The Bracket To The Lathe

To assemble the unit, simply remove the end bracket at the headstock end of the machine and fix the new bracket supplied with the 12400 Bowl Turning Attachment in its place. Then assemble the swivel bracket as shown in **Fig 17.1** and **Fig 17.2**. This unit can be left on the machine when turning between centres etc.

Positioning & Adjustment

The most comfortable position for turning a particular workpiece can be obtained not only by adjusting the various components of the bowl rest attachment but also by swivelling the headstock to the optimum angle and by adjusting its position along the bed bars. See **Fig 17.3** for a typical arrangement of the bowl rest.

Fig 17.1

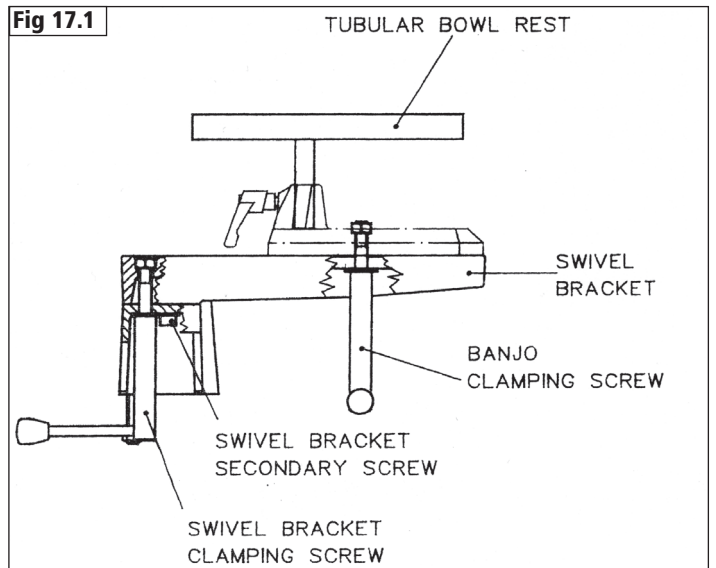


Fig 17.2

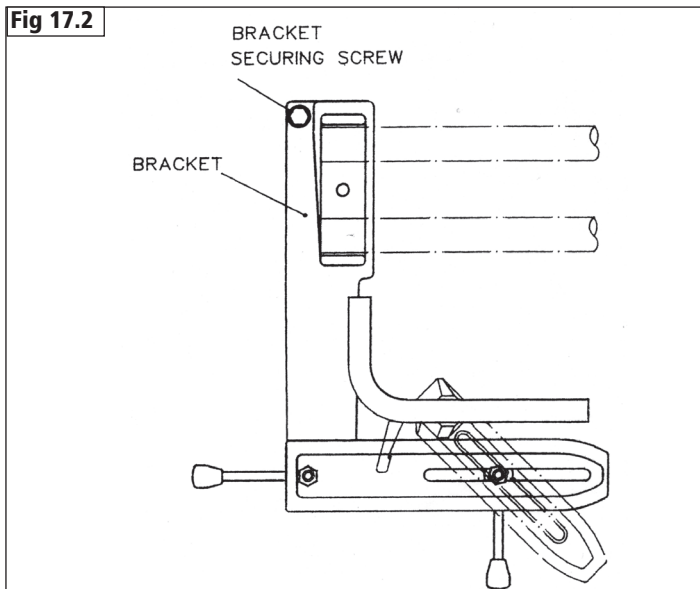
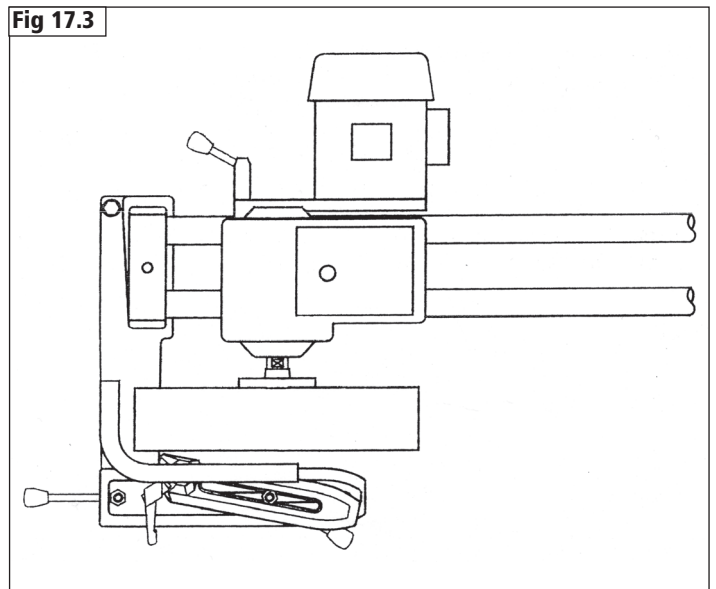


Fig 17.3

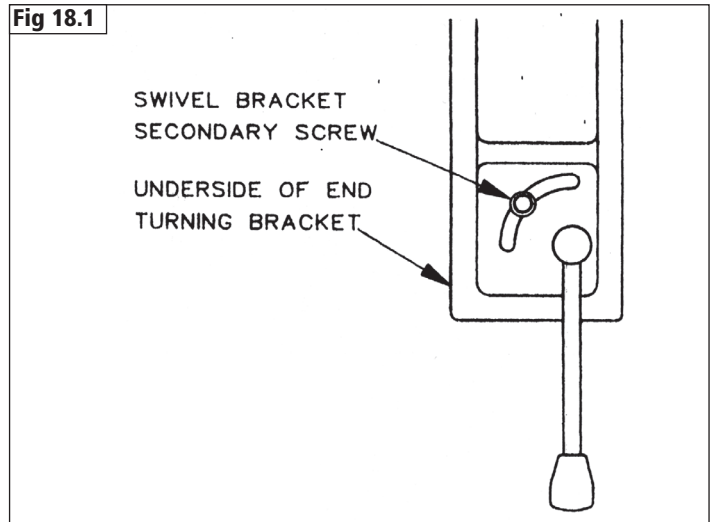


18. Use and Application of the 12400 Bowl Turning Attachment

Normal Duty work

For normal duty work the swivel bracket clamping screw is sufficient to secure the swivel bracket in position but if movement is anticipated then the swivel bracket secondary screw should also be tightened, **Fig 18.1**.

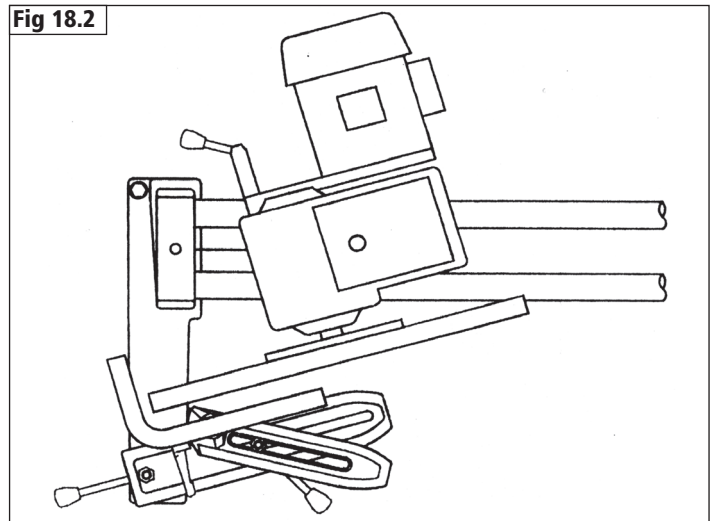
Fig 18.1



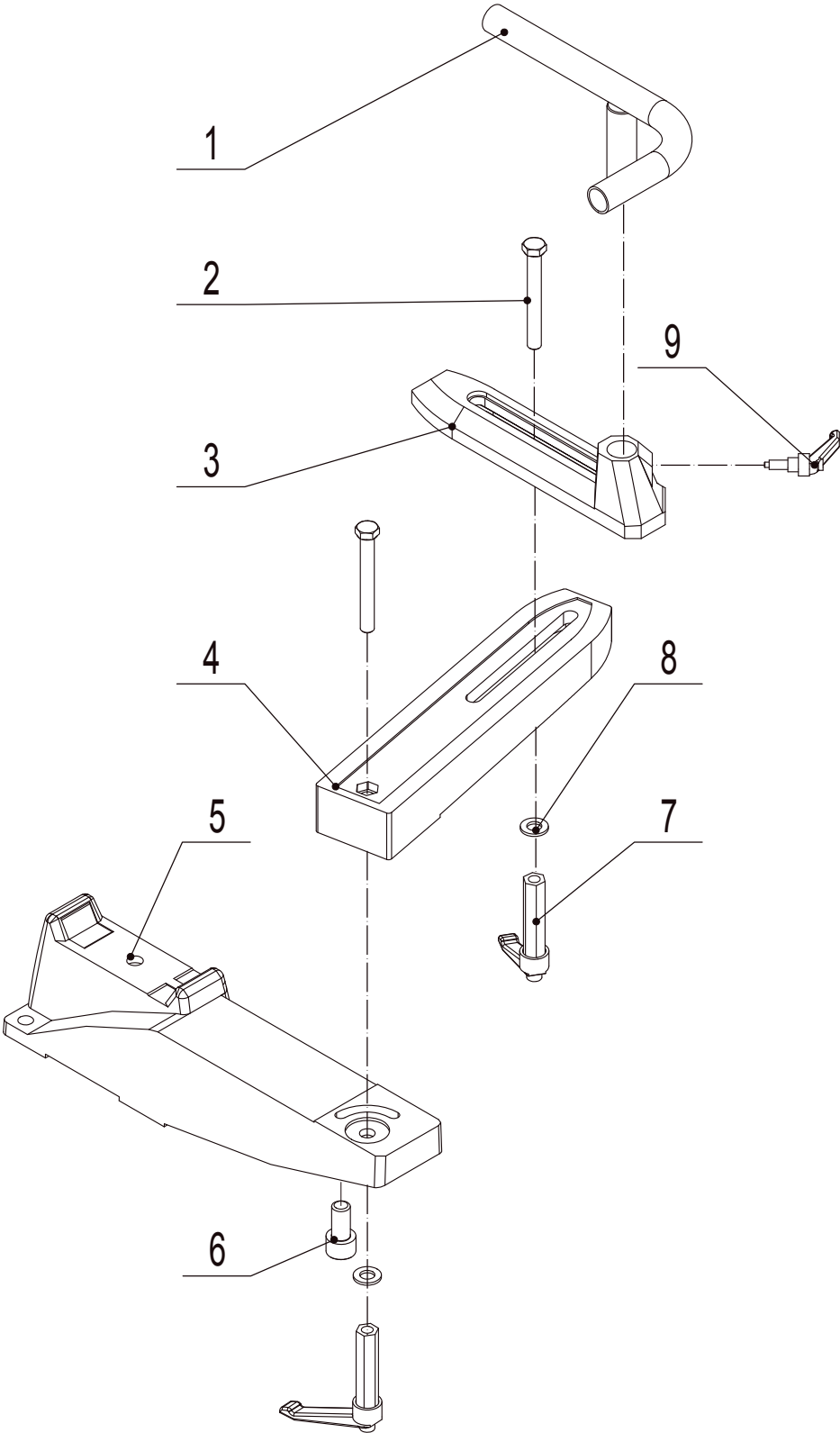
Thin work

For thin work the headstock can be swivelled to give maximum clearance for the turning tool handle, **Fig 18.2**.

Fig 18.2



19. 12400 Bowl Turning Attachment Parts List and Diagram

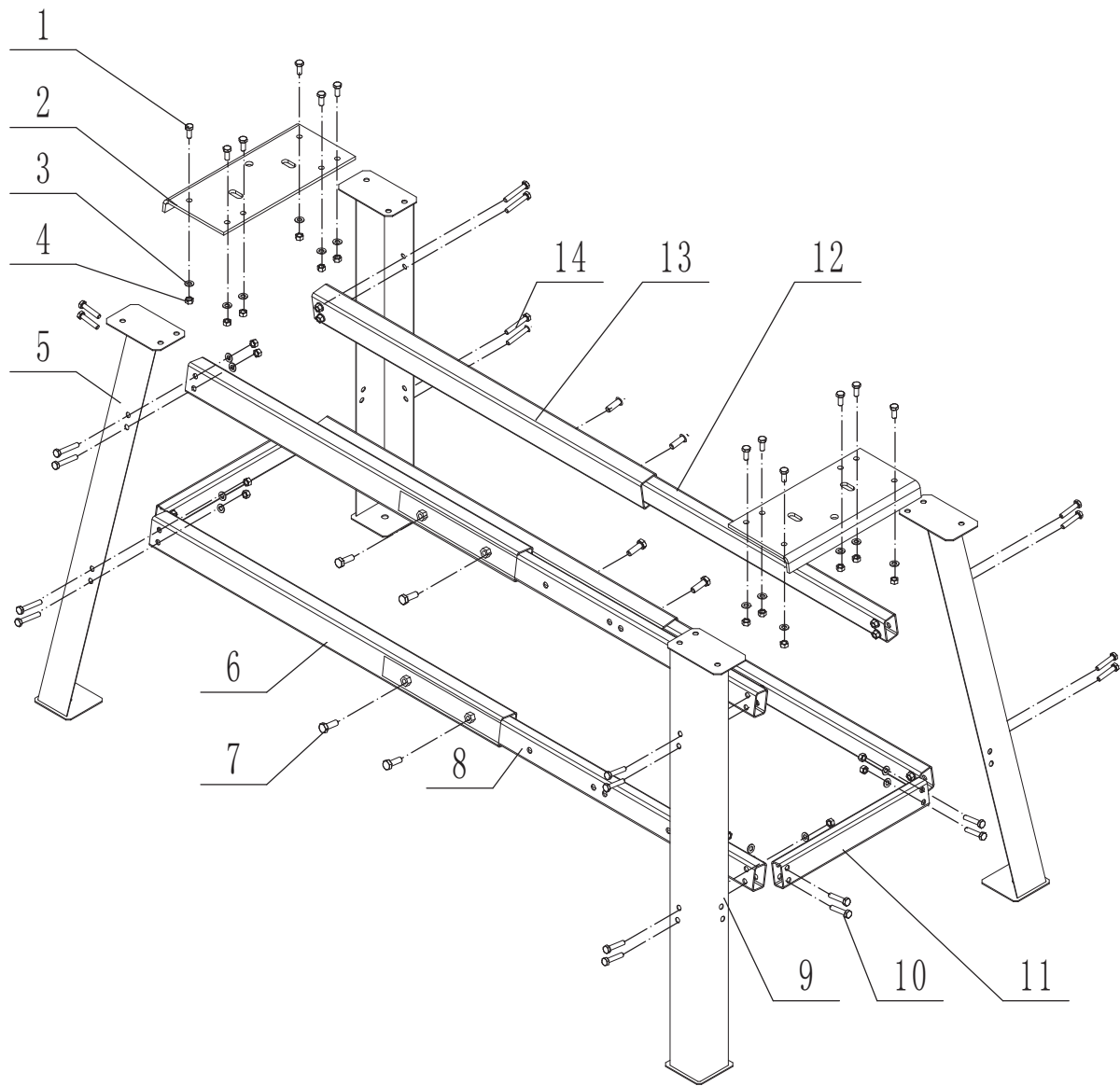


Item	Part number	Description	Quantity	Item	Part number	Description	Quantity
1	RCWL1201030100	Tubular bowl rest	1	6	M10X20GB70D1Z	Hexagon socket head screw	1
2	M12X100GB5783Z	Hex bolt M12 x 100	2	7	RCWL1201030008	Ratchet handle	2
3	RCWL1201030001A	Tool rest base casting	1	8	WSH12GB97D1Z	Washer	2
4	RCWL1201030004	Swivel bracket	1	9	JMWL1203041000	Ratchet Handle	1
5	RCWL1201030005	Bracket	1				

20. Contents of the 12500 Adjustable Lathe Stand Package

Remove bench parts from packaging and lay out in a clean, uncluttered area. Check contents against parts list and diagram, **Fig 20.1**, then follow assembly instructions.

Fig 20.1



Item	Part Number	Description	Quantity
1	M8X20GB5783Z	M8 x 20 hex bolt	12
2	RCWL1201100001	Top plate	2
3	WSH8GB97D1Z	Washer	36
4	M8GB6170Z	M8 hex nut	36
5	RCWL1201100100	Fabricated steel leg (front left / back right)	2
6	RCWL1201100003	Lower female side rail	2
7	M10X30GB5783Z	M10 x 30 hex bolt	8
8	RCWL1201100005	Lower male side rail	2
9	RCWL1201100200	Fabricated steel leg (front right / back left)	2
10	M8X40GB5783Z	M8 x 40 hex bolt	16
11	RCWL1201100006	End rail	2
12	RCWL1201100004	Upper male side rail	2
13	RCWL1201100002	Upper female side rail	2
14	M8X50GB5783Z	M8 x 50 hex bolt	8

21. 12500 Adjustable Lathe Stand Specifications

The 12500 Adjustable Lathe Stand can be adjusted to suit the CL3 and CL4 Record Power lathes. It is also possible to fit the DML36SH-CAM Record Power lathe, providing alternative holes are drilled. Other lathes may be accommodated by drilling extra holes in the side rails or by mounting a wooden top with suitable holes for bolting the lathe down.

Length (36" Lathe)	1664 mm
Width	547 mm
Height	800 mm
Weight	45 kg

22. 12500 Adjustable Lathe Stand Assembly



IMPORTANT: Unless otherwise instructed, do not fully tighten any of the fixing bolts until all of the assembly instructions have been completed.

Before assembling the lathe stand, take time to correctly identify the upper and lower side rails. They have differing lengths and can only be used in the intended positions. The lathe stand cannot be assembled successfully if the wrong size rails are used in the wrong places. Please see section 19 for full details of sizes.

1. Assemble the upper male side rail (12) into the female upper side rail (13) and lining up the relevant holes to suit the required lathe length. Screw (7) 2 off into the nuts on (13) and locate into the holes in (12). Fully tighten.
2. Assemble the lower side rails in the same way. Slide (8) into (6) and locate bolts (7) through the nuts on (6) and into the relevant holes in (8). Fully tighten.
3. Bolt the ends of rails (13 and 6) to the leg (5) using fastenings (14). Please note: all nuts and washers should be on the inside of the bench.
4. Bolt the ends of rails (12 and 8) to leg (9) using fastenings (14).
5. Repeat for the remainder of the rails (12, 13, 8 and 6). Then legs (5 and 9). You now have 2 leg sub-assemblies.

6. Assemble the end rails (11) to the legs (5 and 9) with fasteners (10). Ensure that the widest bolt hole centres in the end rail are nearest the bottom of the rail.

Fig 22.1

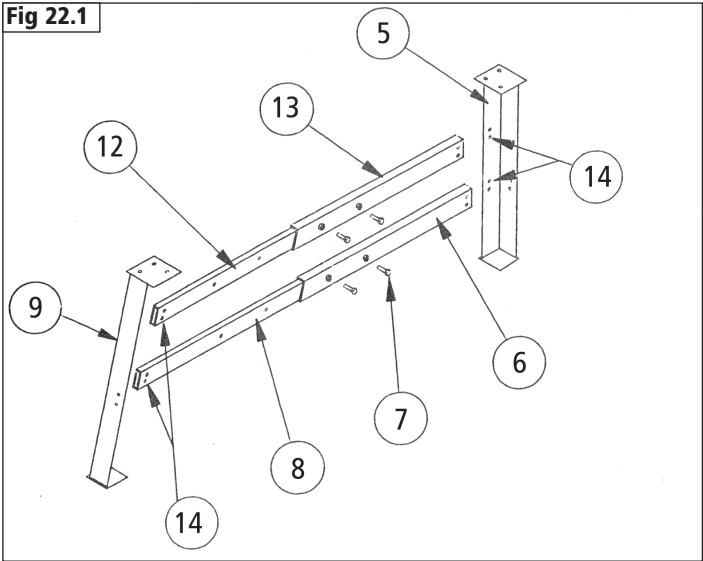
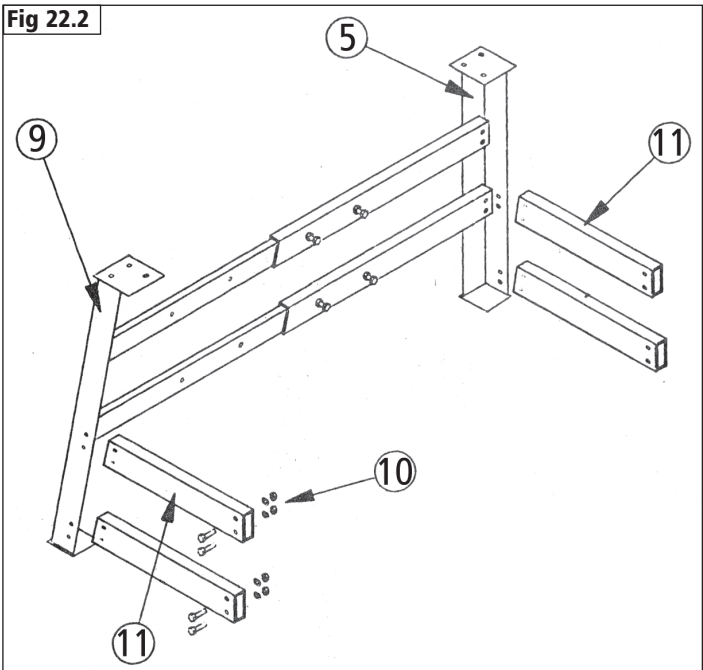


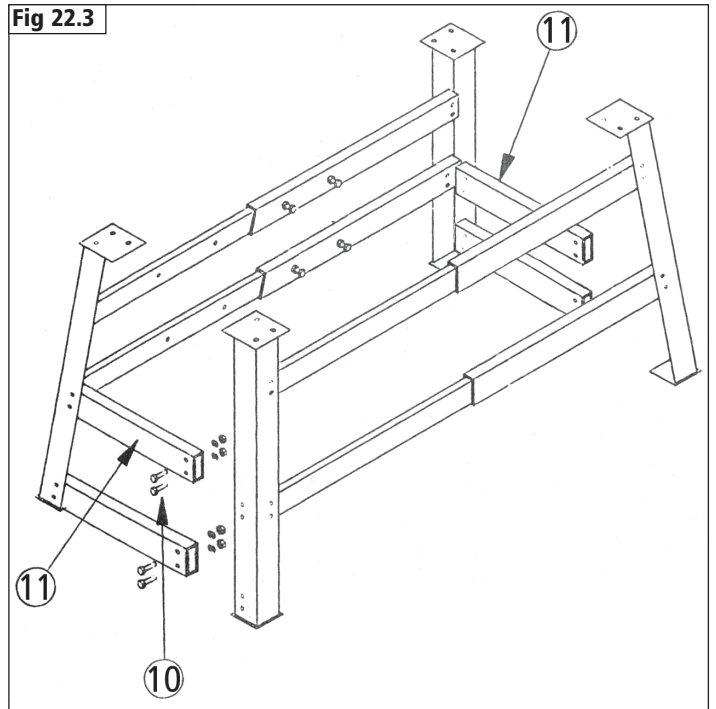
Fig 22.2



22. 12500 Adjustable Lathe Stand Assembly

7. Assemble the second leg sub-assembly to the end rails (11) using fasteners (10).

Fig 22.3

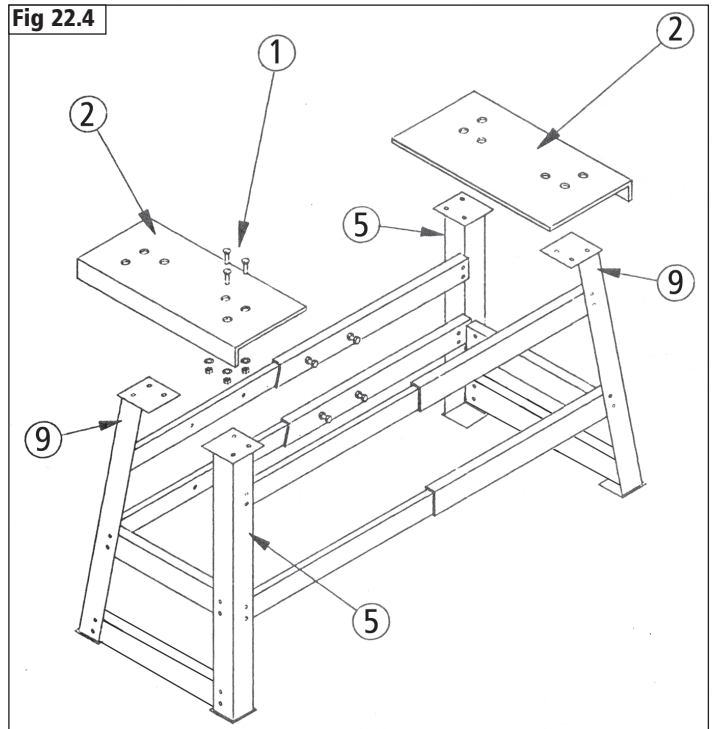


8. Attach the two top plates (2) onto the legs (5 and 9) using the fasteners (1) in the corresponding holes in the leg tops.

9. Finally, fully tighten all nuts and bolts.

10. If the bench needs to be lengthened or shortened to suit a different Record Power lathe, this can be done by unscrewing the 8 M10 bolts (7), extending or retracting the bench, re-aligning the bolts (7) with the required holes in the inside rail and then fully re-tighten.

Fig 22.4



23. Fitting a Lathe to the 12500 Adjustable Lathe Stand

Fitting a CL Series Lathe to the Bench



IMPORTANT: Ensure that the lathe is firmly fixed to the bench before use. If heavy duty turning is intended, the bench should be bolted to the floor by means of the holes in the bench feet. Use M10 or 3/8" diameter bolts.

1. Ensure that the bench is assembled with nuts and bolts fully tightened before fitting the lathe.
2. Bolts (15) and washers (16) are used to fit the lathe to the bench instead of the bolts and cast washers supplied with the lathe which are not suitable.
3. For the CL3 and CL4 lathes use the holes in the top plates to bolt the lathe to the bench as indicated, **Fig 23.1**.
4. The hole marked with a star, **Fig 23.1**, is provided for fixing the optional 12400 Bowl Turning Attachment.

Fitting a DML36SH-CAM Lathe to the Bench

The DML36SH-CAM can be mounted on the bench at an angle using the holes in the top plates as indicated. Alternatively, additional holes can be drilled in order to mount it square. See **Fig 23.2**.



Please note: The maximum rigidity of the bench will not be achieved until the lathe is bolted firmly in position, **Fig 23.3**.

Fig 23.1

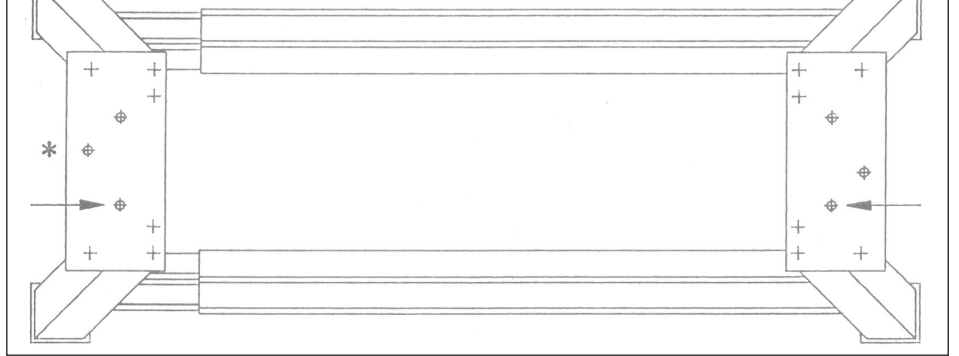


Fig 23.2

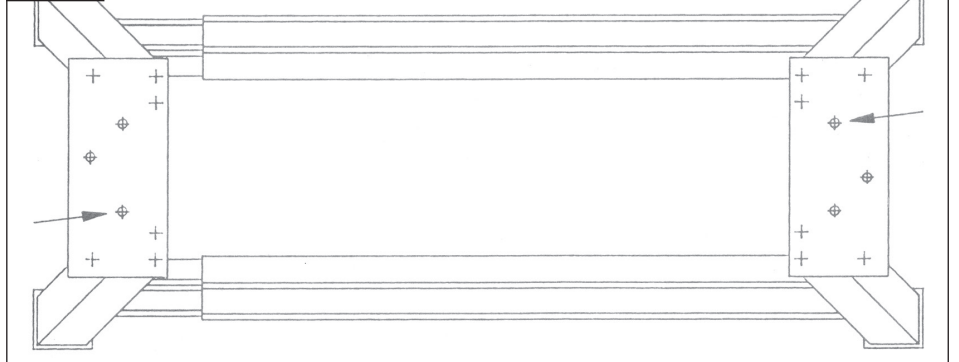
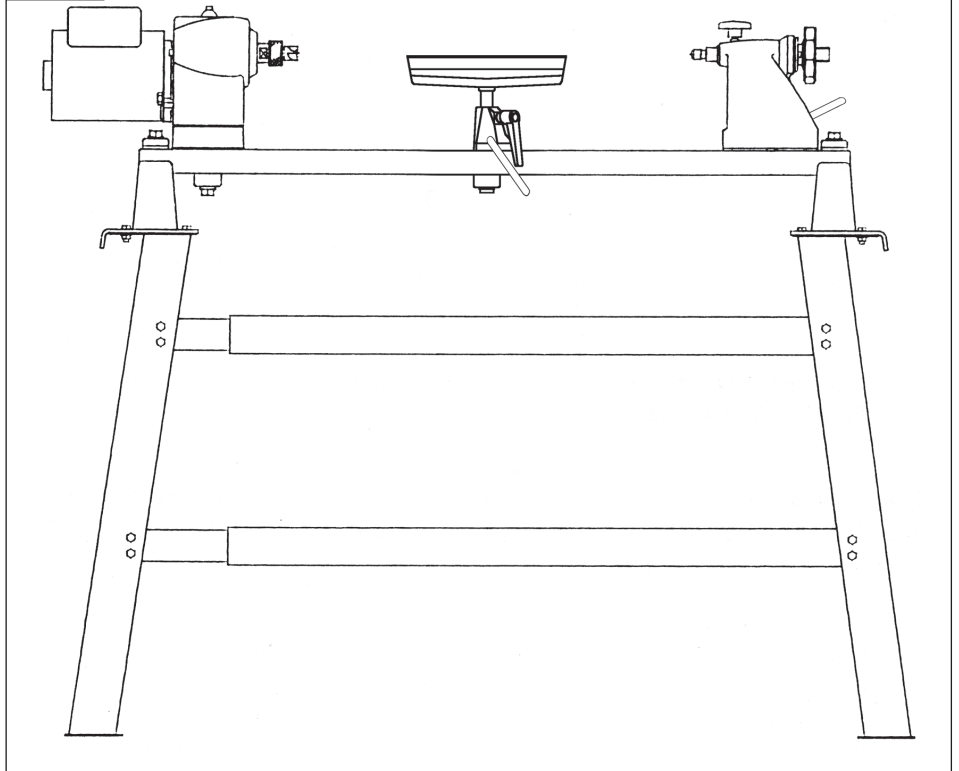


Fig 23.3



EU Declaration of Conformity

Cert No: EU / CL3 / 1

RECORD POWER LIMITED, Centenary House, 11 Midland Way, Barlborough Links, Chesterfield, Derbyshire S43 4XA
declares that the machinery described:-

- 1. Type: **Professional Woodturning Lathe**
- 2. Model No: **CL3 & CL4**
- 3. Serial No

Conforms with the following directives:-

MACHINERY DIRECTIVE	2006/42EC
LOW VOLTAGE DIRECTIVE	2006/95EC
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE and its subsequent amendments	2004/108EC EN55014-1:2006 EN55014-2:1997+A1 EN61000-3-2:2006 EN61000-3-3:1995+A1+A2



and complies with the relevant essential health and safety requirements.

Signed..........Dated: **01/03/2016**
Andrew Greensted
Managing Director



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