

**RECORD POWER**  
ESTABLISHED 1909®

## Original Instruction Manual

# DML305 Cast Iron 6 Speed Midi Lathe

Version 3.2

January 2015



To register this product please visit  
**[www.recordpower.info](http://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 & 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 and do not leave the machine unattended until it comes to a complete stop.

## 2. General Health & Safety Guidance

- 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 2.5mm<sup>2</sup> 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 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

## 2. General Health & Safety Guidance

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 & 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 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](http://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](http://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](http://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](http://www.recordpower.info)).

# 5. Specifications

|                                  |   |
|----------------------------------|---|
| <b>Max bowl diameter:</b>        | 305 mm  |
| <b>Max between centres:</b>      | 393 mm  |
| <b>Max swing over bed:</b>       | 305 mm  |
| <b>Spindle speeds:</b>           | 350, 670, 1025, 1500, 2225 & 3250 rpm                                       |
| <b>Motor:</b>                    | 230 V / 50 Hz / 1/2 hp / 375 W  |
| <b>Full load current:</b>        | 2.6 A   |
| <b>Tailstock spindle travel:</b> | 60 mm   |
| <b>Thread:</b>                   | 3/4" x 16 TPI or M33 x 3.5 mm (please refer to machine specification label) |
| <b>Taper:</b>                    | 1 or 2 Morse Taper (please refer to machine specification label)            |
| <b>Noise Emission:</b>           | Sound power level < 83 dB (A)<br>Sound pressure level < 83 dB (A)           |
| <b>Size:</b>                     | L807 x W457 x H292 mm   |
| <b>Weight:</b>                   | 39 kg   |

# 6. Contents of the Package

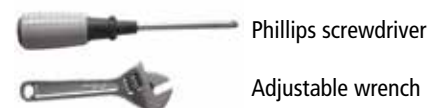


| Item | Description                                  | Quantity | Item | Description                 | Quantity |
|------|--|----------|------|-----------------------------|----------|
| A    | Lathe with faceplate and tailstock installed | 1        | F    | Revolving centre            | 1        |
| B    | Knockout bar                                 | 1        | G    | 4 prong drive centre        | 1        |
| C    | Spindle wrench                               | 1        | H    | Indexing assembly           | 1        |
| D    | Tool rest                                    | 1        | I    | 4 mm hex wrench             | 1        |
| E    | Tool rest holder                             | 1        | J    | Tool holder                 | 1        |
|      |  |          | K    | Pan head screws and washers | 2        |

## Unpacking and Cleaning

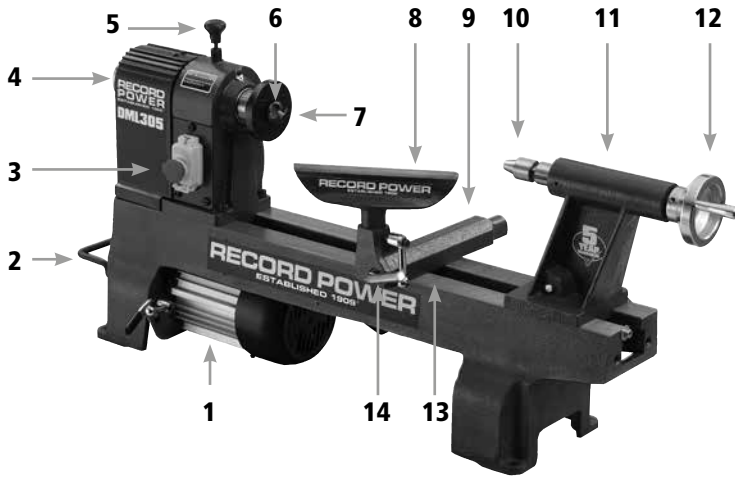
- Carefully lift the lathe from the carton and check that all of the components and contents have been included. Place parts on a protected surface.
- Clean all rust protected surfaces with kerosene or white spirit. Do not use gasoline, paint thinner, mineral spirits, etc. These may damage painted surfaces. Make sure the area is well ventilated and that there are no naked flames or sources of ignition.
- Set packing material and shipping cartons aside. Do not discard until the machine has been set up and is running properly.

## Tools Required for Assembly (Not Supplied)

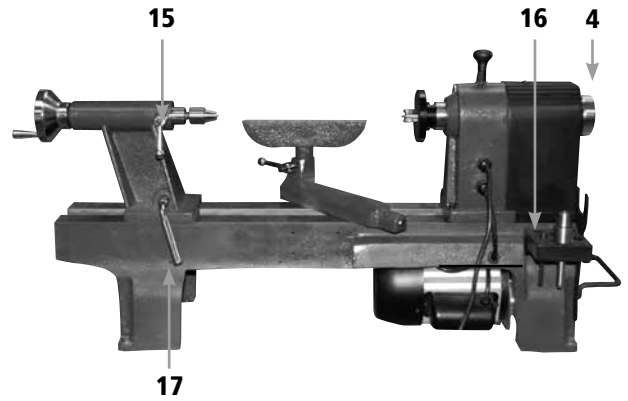




# 7. Getting to Know Your Lathe



- 1 Motor
- 2 Lifting handle
- 3 Switch
- 4 Hand wheel
- 5 Indexing assembly
- 6 4 prong drive centre
- 7 Faceplate
- 8 Tool rest
- 9 Tool rest holder
- 10 Revolving centre



- 11 Tailstock
- 12 Tailstock hand wheel
- 13 Lathe bed
- 14 Tool rest holder locking lever
- 15 Tailstock spindle locking lever
- 16 Tool holder
- 17 Tailstock locking lever

# 8. Assembly

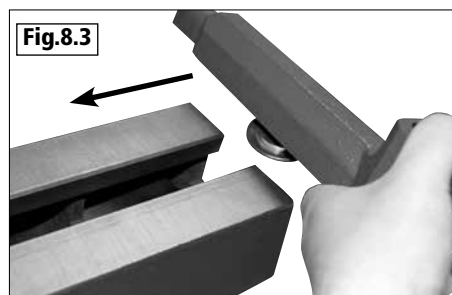
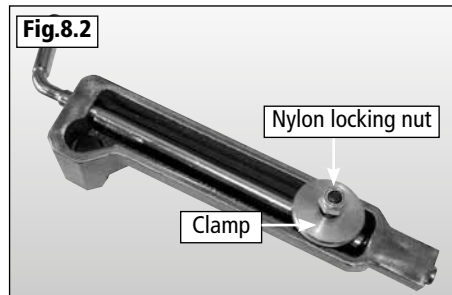
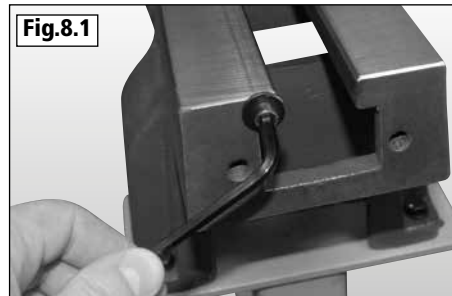


The machine must be unplugged and the power switch must be in the OFF position until the machine is completely assembled.

## Installing the Tool Rest Holder to the Lathe Bed

To allow the tool rest holder to be attached to the lathe, the tailstock must first be removed. Remove the hex head screw and retaining washer at the end of the lathe bed to allow the tailstock to be slid from the lathe bed, **Fig 8.1**.

On the underside of the tool rest holder is a bolt with a nylon locking nut which holds the clamp in place, **Fig 8.2**. Loosen the nylon locking nut until the tool rest holder can be slid onto the lathe bed, **Fig 8.3**.



# 8. Assembly - cont.

The nylon locking nut can now be tightened until the tool rest holder is held firmly on the lathe bed but can slide freely along its length, **Fig 8.4**.

### Installing the Tool Rest to the Tool Rest Holder

Loosen the locking handle and insert the tool rest into tool rest holder, adjust the height as required and tighten the locking handle, **Fig.8.5**.

### Installing the Indexing Assembly

Carefully screw the indexing assembly onto the headstock with an adjustable wrench, **Fig.8.6**.



**Warning:** Always disengage the indexing lock before turning the machine on.

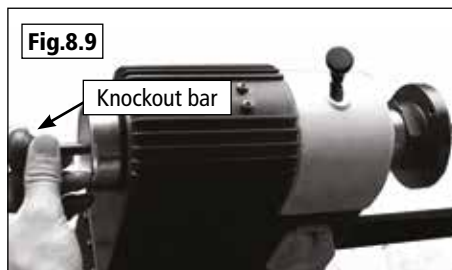
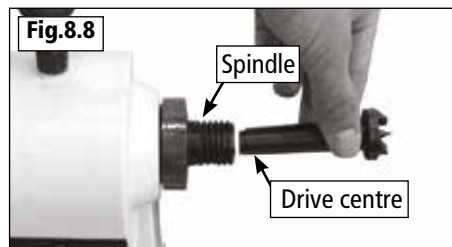
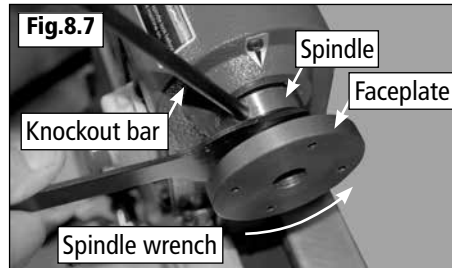
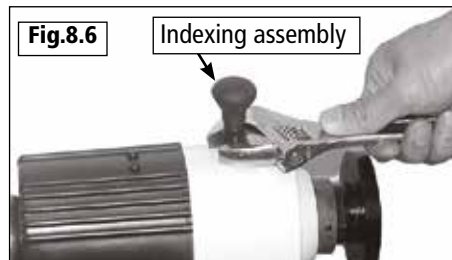
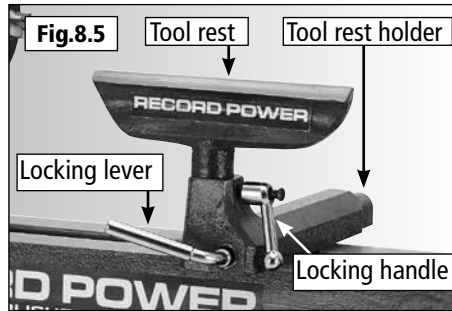
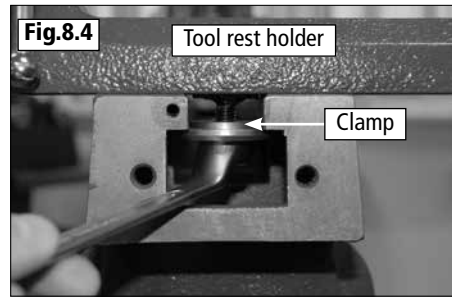
### Fitting the 4 Prong Drive Centre to the Headstock

Before fitting the drive centre, the faceplate must be removed from the lathe. Place the knockout bar in the circular hole in the spindle nose and hold firmly to ensure the spindle does not turn. Now use the spindle wrench on the faceplate collar to loosen the faceplate, turning anti-clockwise, see **Fig 8.7**.

Insert the drive centre into the headstock spindle, **Fig.8.8**.

### Removing the 4 Prong Drive Centre from the Headstock

The knockout bar is used to remove the drive centre from the headstock spindle. To do so, insert the knockout bar into the hole positioned centrally in the hand wheel, at the opposite side of the headstock from the drive centre and give the drive centre a sharp knock to dislodge it. See **Fig.8.9**.



# 8. Assembly - cont.

## Fitting the Revolving Centre to the Tailstock

First ensure the locking handle is loosened then insert the revolving centre into the tailstock spindle and tighten the locking handle, **Fig.8.10**.



**Please note: Before inserting tapered attachments into the headstock or tailstock spindle, always ensure that the taper is clean and free of any waste material that may cause misalignment or vibration. Always fully seat the taper by tapping it into place with a wooden mallet.**

To remove the revolving centre from the tailstock spindle insert the knockout bar into the hole in the centre of the tailstock hand wheel and give the revolving centre a sharp knock to dislodge it from the tailstock, see **Fig 8.11**.

## Fitting the Faceplate to the Headstock

Thread the faceplate clockwise on to the headstock spindle. Place the knockout bar in the circular hole in the spindle nose and hold firmly to ensure the spindle does not turn. Now use the spindle wrench on the faceplate collar to tighten the faceplate, turning clockwise, see **Fig 8.12**.

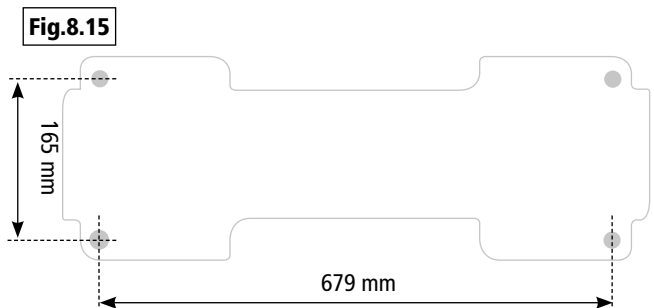
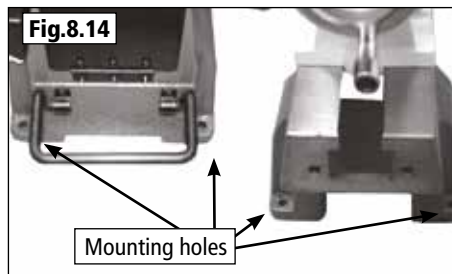
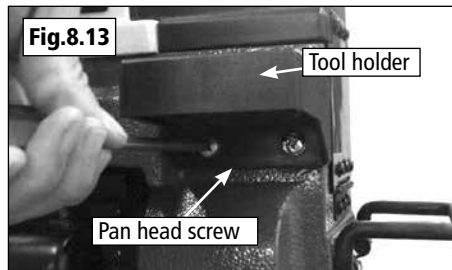
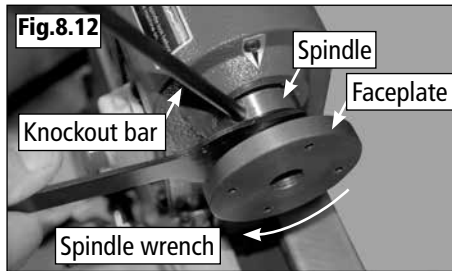
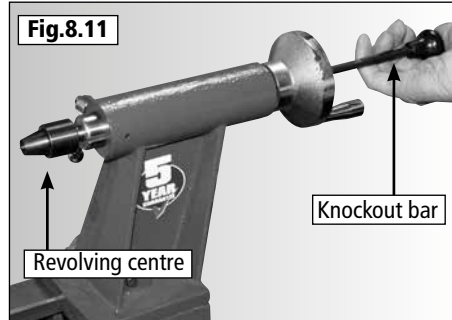
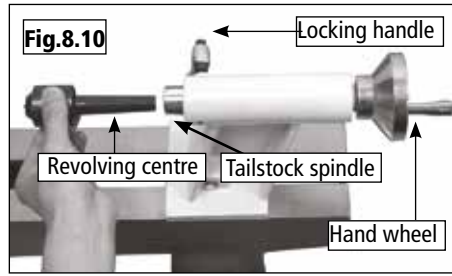
## Fitting the Tool Holder to the Lathe Bed

Install the tool holder onto the lathe bed at the rear of the headstock with the two pan head screws supplied, **Fig.8.13**.

## Secure Lathe to a Solid Work Surface

The lathe must be attached to a solid work surface or stand, not less than 25 mm thick. Four mounting holes are easily accessible at the base of the lathe, **Fig.8.14**. Drill holes in the work surface, using a 13 mm or 1/2" drill bit, following the measurements shown in **Fig. 8.15**.

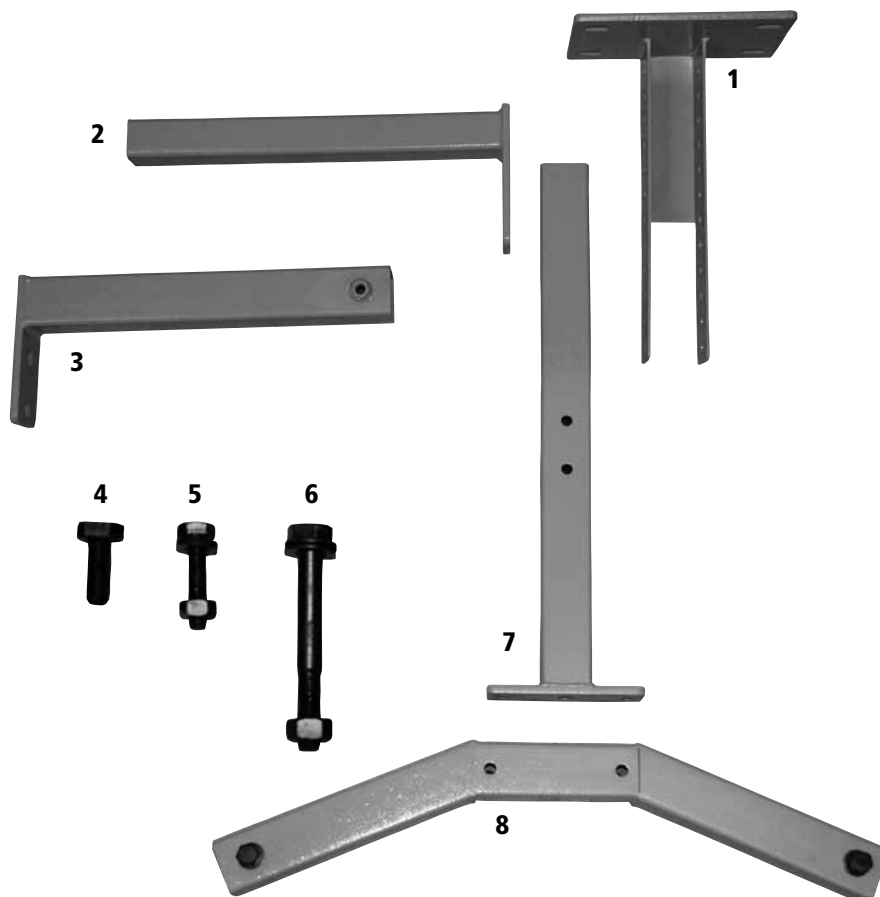
**Note: Use of the DML305/A Leg Stand is recommended.**



# 9. Assembly of the Optional DML305/A Leg Stand

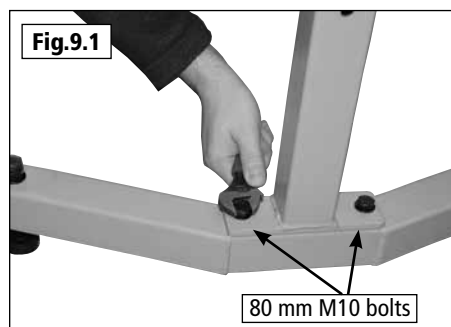
## Contents of the Package

- 1 Upright plinths x 2
- 2 Male cross brace
- 3 Female cross brace
- 4 M10 x 25 mm set screws x 2
- 5 M8 x 35 mm bolts, nuts and washers x 2
- 6 M10 x 80 mm bolts, nuts and washers x 12
- 7 Upright columns x 2
- 8 Base x 2

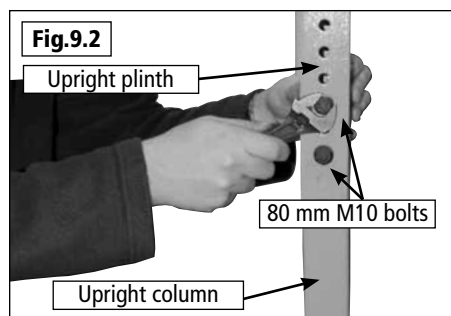


## 9. Assembly of the Optional DML305/A Leg Stand - cont.

1. Attach the upright column to the base using two M10 x 80 mm bolts, ensuring that there is an M10 washer between each bolt and the upright column and another M10 washer between each M10 nut and the base, **Fig.9.1**. Repeat this process to assemble the second base onto the second upright column.

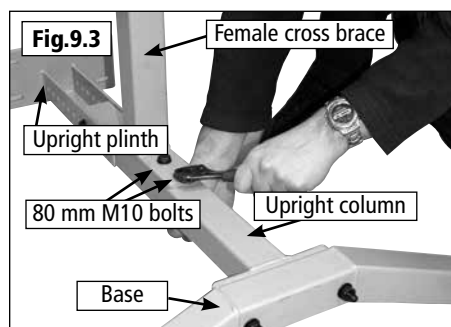


2. Attach the upright plinth to the upright column using two M10 x 80 mm bolts to the desired height, making sure that the overhang of the plate on top of the plinth is facing towards the inside of the legstand. Also ensure that there is at least one hole space between the two bolts and that both bolts pass through the upright column. **Fig.9.2**. Repeat this process to complete the assembly of the second leg.



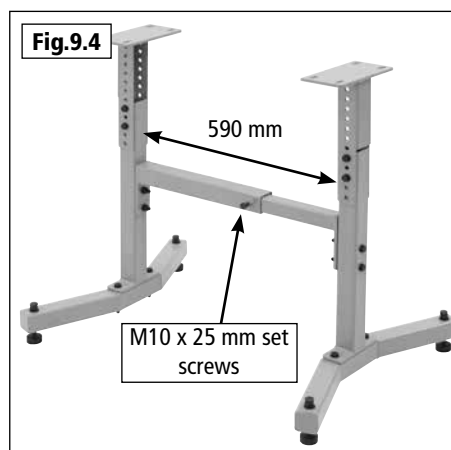
**Please note: The leg stand is adjustable in height to allow for comfortable use of the lathe. As a general rule, the centre height of the lathe should be at elbow height.**

3. Attach the female cross brace to one of the upright columns using two M10 x 80 mm bolts. Attach the male cross brace to the remaining upright column in the same manner, **Fig.9.3**.



4. To complete assembly of the legstand, insert the male cross brace into the female cross brace, ensuring that the distance from the inside of one leg to the other is approximately 590 mm. Hold in place using two M10 x 25mm set screws. **Fig.9.4**.

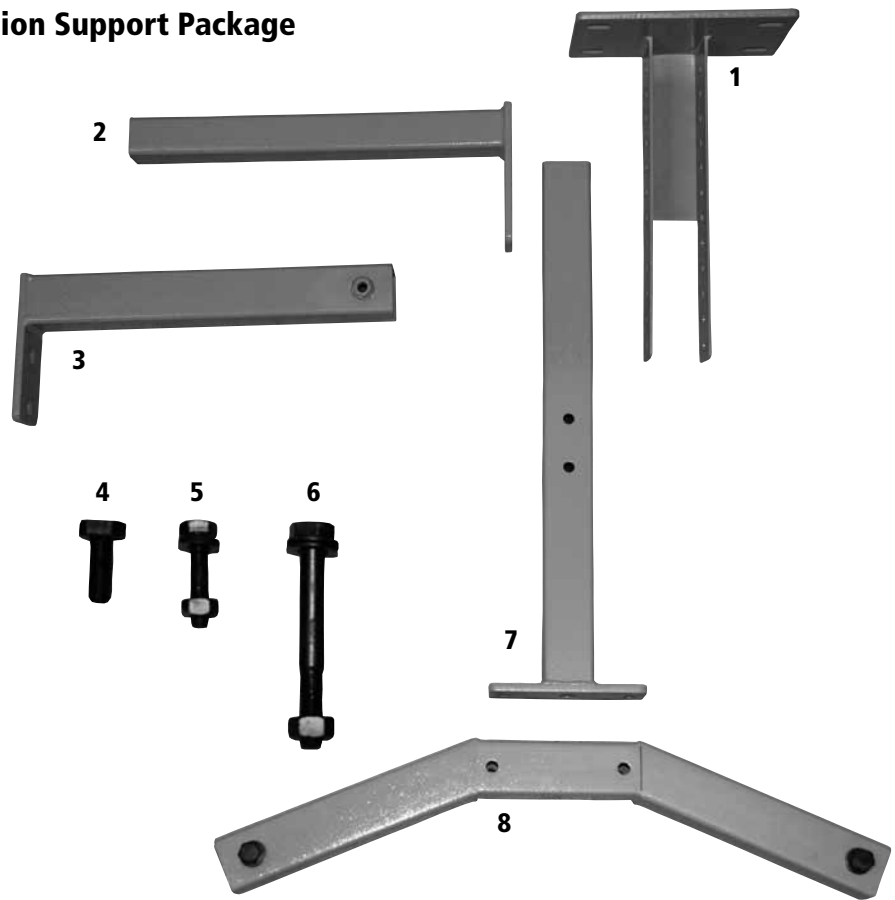
The remaining bolts, nuts and washers are used to attach the lathe to the stand.



# 10. Assembly of the Optional DML305/L Extension Support and DML305/E Bed Extension

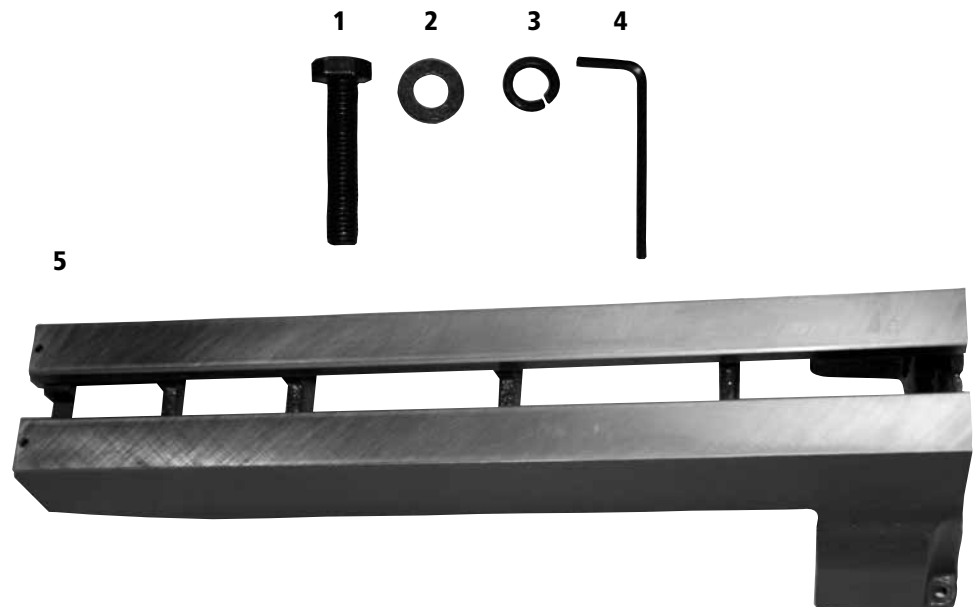
## Contents of the DML305/L Extension Support Package

- 1 Upright plinth
- 2 Male cross brace
- 3 Female cross brace
- 4 M10 x 25mm set screws x 2
- 5 M8 x 35 mm bolts, nuts and washers x 2
- 6 M10 x 80 mm bolts, nuts and washers x 6
- 7 Upright column
- 8 Base



## Contents of the DML305/E Bed Extension Package

- 1 M10 x 50 mm bolts x 2
- 2 M10 washers x 2
- 3 M10 spring washers x 2
- 4 Hex wrench
- 5 Bed extension



# 10. Assembly of the Optional DML305/L Extension Support and DML305/E Bed Extension - cont

## Assembly of the DML305/L Extension Support

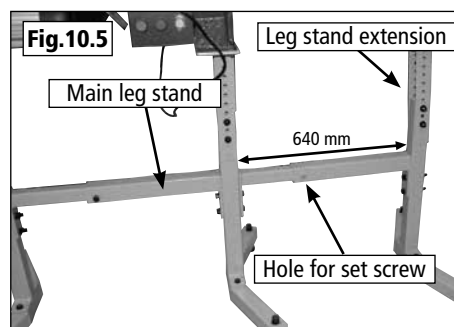
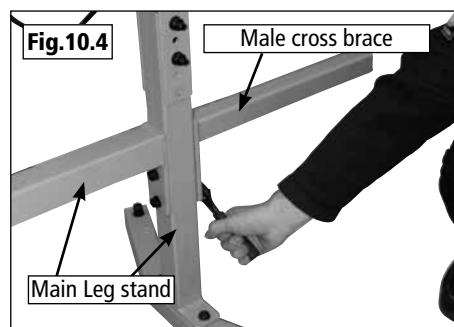
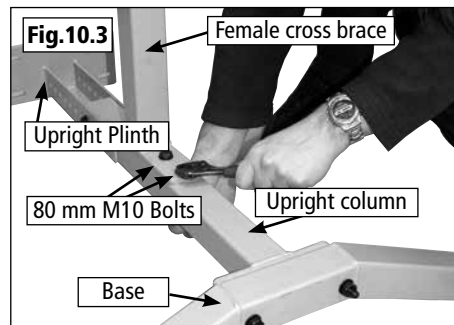
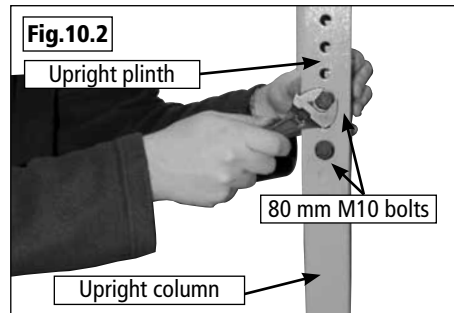
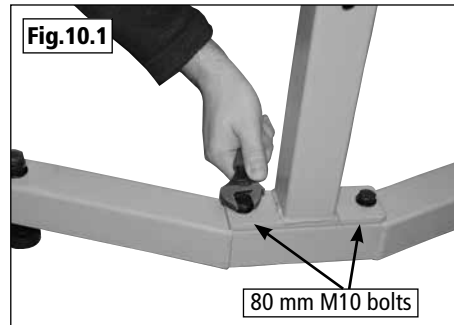
Attach the upright column to the base using two M10 x 80 mm bolts, ensuring that there is an M10 washer between each bolt and the upright column and another M10 washer between each M10 nut and the base, **Fig.10.1**.

Attach the upright plinth to the upright column using two M10 x 80 mm bolts to the desired height, making sure that the overhang of the plate on top of the plinth is facing towards the inside of the legstand. Also ensure that there is at least one hole space between the two bolts and that both bolts pass through the upright column, **Fig.10.2**.

Attach the female cross brace to the upright column of the leg extension using two M10 x 80 mm bolts, **Fig.10.3**.

Attach the male cross brace to the main leg stand using the same bolts which hold the either the male or female cross brace in place on the main leg stand, **Fig 10.4**. The Leg extension can be mounted to either side of the main leg stand, depending on which way round the lathe was originally attached to the main leg stand.

Set the distance between the main leg stand and the new leg extension to approximately 640 mm (25") so that the bed extension can sit on the leg extension safely. Hold in place by attaching the two M10 x 25 mm set screws in the female cross brace, **Fig 10.5**.



# 10. Assembly of the Optional DML305/L Extension Support and DML305/E Bed Extension - cont

## Assembly of the DML305/E Bed Extension

Place an M10 spring washer followed by an M10 washer onto an M10 x 50 mm bolt and screw into the hole on the end of the original bed leaving approximately 20 mm of the 50 mm M10 bolt exposed, **Fig 10.6**.

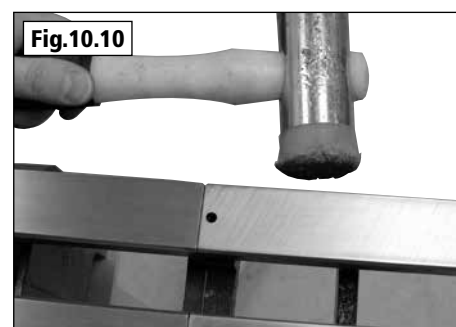
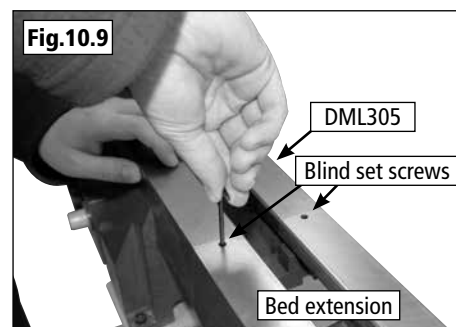
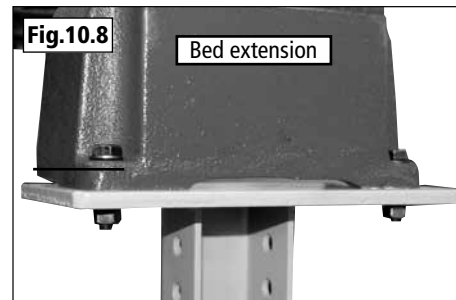
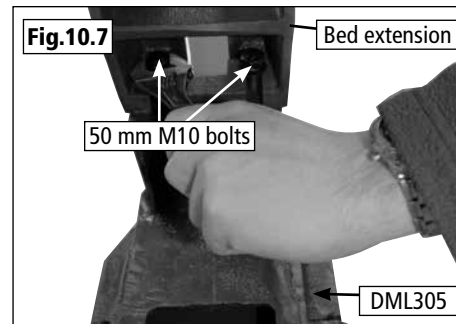
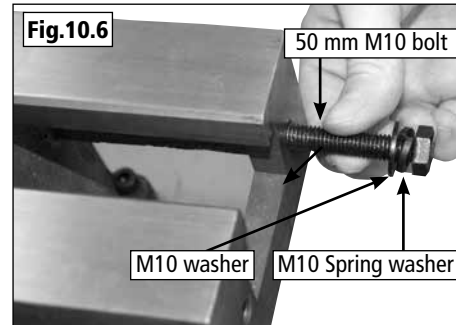
Repeat this process for the adjacent hole.

Place the bed extension onto the exposed M10 x 50 mm bolts and tighten the bolts so that they hold the bed extension in place, **Fig 10.7**. Do not tighten the bolts fully as some adjustment will be required to make the bed surfaces flush with one another so that the tailstock runs smoothly between the original bed and the bed extension.

Attach the foot of the bed extension to the top of the upright plinth using M8 x 35 mm bolts with M8 washers on either side of the bed extension and secured with M8 nuts, **Fig 10.8**.

Using the hex wrench supplied, adjust the blind set screws on top of the optional DML305/L Extension Support bed extension to raise (turn clockwise) or lower (turn anti-clockwise) the extension until it is flush with the main bed of the lathe, **Fig.10.9**.

Finally, begin to tighten up the M10 x 50 mm bolts to hold the bed extension as securely as possible making sure that the tailstock runs smoothly between the original bed and the bed extension. Further adjustment may be required during this process, this can be done using a soft mallet without causing damage to the lathe or bed extension, **Fig.10.10**.





# 11. Adjustments and Operations

## Adjusting the Tool Rest

To move the tool rest across the lathe bed, loosen the locking lever by turning in an anti-clockwise direction, slide the tool rest base to the new position and tighten the locking lever in a clockwise direction. To adjust the height of the tool rest loosen the locking handle, raise or lower the tool rest, then retighten the locking handle, **Fig.11.1**.

If the movement of the tool rest base is unsatisfactory, either due to being too stiff and difficult to move or too easy to move and giving inadequate locking, the clamping action can be adjusted. Please see the assembly section of the manual for full details.

## Adjusting the Tailstock

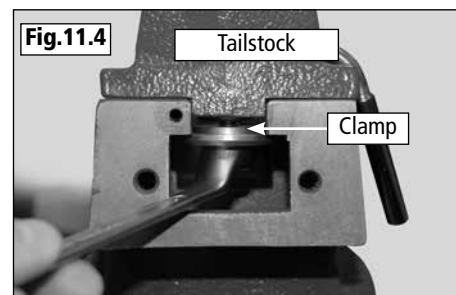
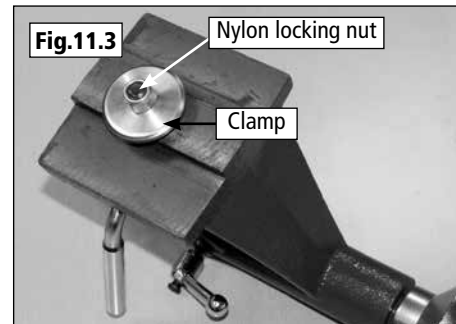
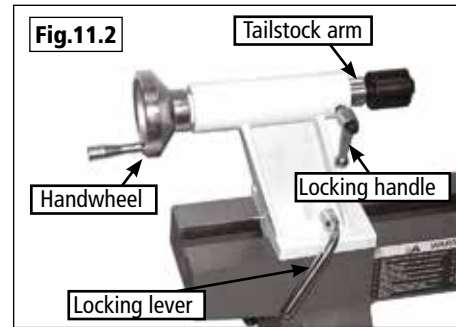
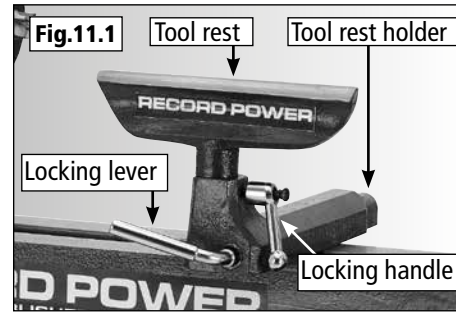
Loosen the locking lever to move the tailstock along the lathe bed to the desired position and tighten the lever.

To adjust the tailstock spindle in or out, loosen the locking handle and turn the handwheel. When the tailstock spindle is in the desired position, tighten the locking handle, **Fig.11.2**.

If the movement of the tailstock is unsatisfactory, either due to being too stiff and difficult to move or too easy to move and giving inadequate locking, the clamping action can be adjusted. The underside of the tailstock features the same nylon locking nut and clamp mechanism as the tool rest holder, see **Fig. 11.3** and can be adjusted in the same manner as the tool rest holder by adjusting the nylon locking nut until the tailstock is held firmly on the lathe bed but can slide freely along its length, see **Fig. 11.4**.

## Changing Spindle Speeds

The lathe features a six step motor and spindle pulley to provide different spindle speeds. To access the pulley system first undo the hex head socket retaining screw at the side of the headstock cover, **Fig. 11.5**, then pull back the headstock cover from the top to detach the retaining clip from the domed nut, **Fig. 11.6**.



# 11. Adjustments and Operations - Cont.

With the headstock cover open, loosen the locking arm. Raise the tension lever to release tension on the motor pulley and tighten the locking arm, see **Fig. 11.7**. Check speed and belt position chart inside access the cover to determine the spindle speed required.

Move the drive belt to the desired pulley combination. Loosen the locking arm and lower the tension lever. In addition to the weight of the motor, a little further pressure may need to be applied to correctly tension the drive belt. Tighten the locking arm and close the headstock cover.

## Indexing Lock

The indexing lock is positioned on the top of the headstock. The headstock indexing feature has 12 equally spaced positions, see **Fig. 11.8**. The spring loaded locking pin assembly is engaged by turning the knob a half turn allowing it to drop into the desired position. To disengage, lift the lock knob up and turn a half turn either direction, see **Fig. 11.9**.

The 12 position indexing feature allows accurate pattern work on projects such as straight fluting, grooving, drilling, lay out and more.

To use the indexing feature, disengage the locking knob by lifting up and rotating half a turn. Move the spindle to the desired position and engage the locking knob to hold the spindle in position.



**Please note: The indexing mechanism should not be used as a method of holding the spindle whilst removing accessories such as face plates, chucks etc. Always hold the spindle with the knockout bar in the hole on the spindle nose when removing accessories.**

## Starting & Stopping the Lathe

To turn the lathe on, press the green switch marked 'I' on the headstock, located beneath the red emergency stop button.

To stop the machine, press the red button marked 'O' on the headstock, located beneath the red emergency stop button.

To stop the machine in an emergency, press the large red button located on the headstock, **Fig 11.7**.

## In the Event of a Blockage or if the Machine Stalls

If the lathe stalls due to a dig in, simply removing the turning tool from the work piece will normally allow the work piece to start turning again.

In the event of a blockage (for example, if the work piece becomes trapped against a fixed part of the machine) switch off the machine immediately, by pressing the red button marked 'O' on the switch.

Locate and rectify the source of the blockage and ensure that the work piece can be rotated freely by hand before attempting to re-start the machine.

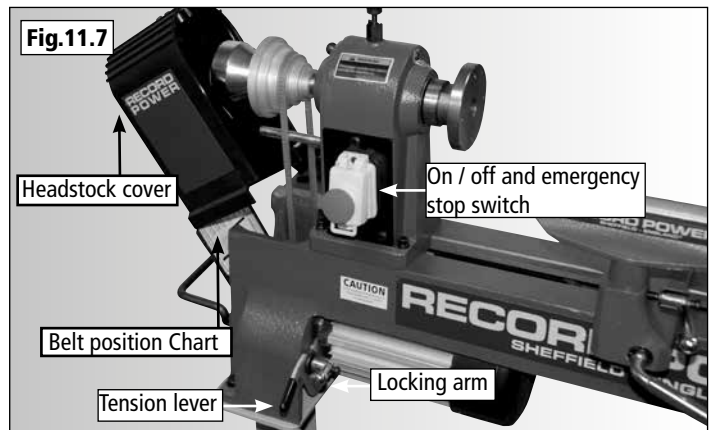
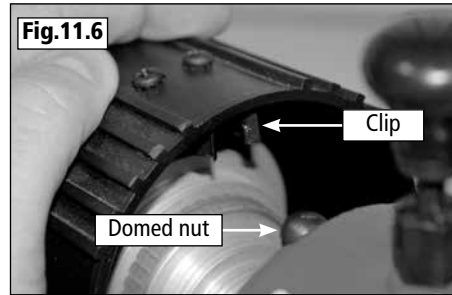
To re-start the machine, press the green button marked 'I' on the switch.

## In the Event of a Power Failure

The lathe is fitted with a no volt release (NVR) switch to protect the user against automatic starting of the machine when power is restored after a power failure.

In the event of a power failure, first locate and rectify the source of the failure. If the fault is within the power circuit of the workshop, there may be an underlying cause (circuit overload etc.) that should be investigated by a qualified electrician, before attempting to restore the power source.

Once the power is restored, the machine can be re-started by pressing the green button marked 'I' on the switch.



# 12. Intended Use of the Lathe & 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 12.1**. 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 12.2**. 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 12.3**.
3. Carefully place the four prong centre into the headstock spindle of the lathe, **fig 12.4**, 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 12.5**. 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.12.1

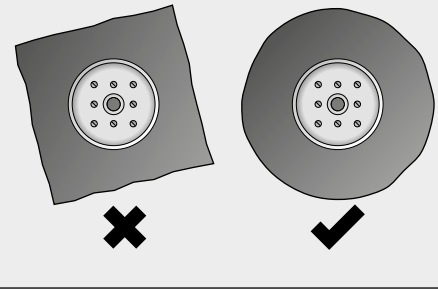


Fig.12.2

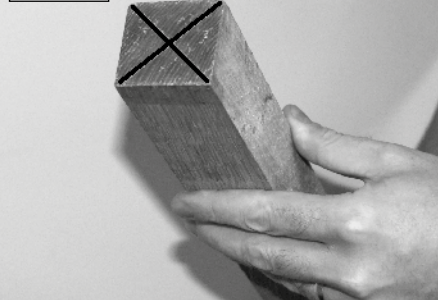


Fig.12.3



Fig.12.4

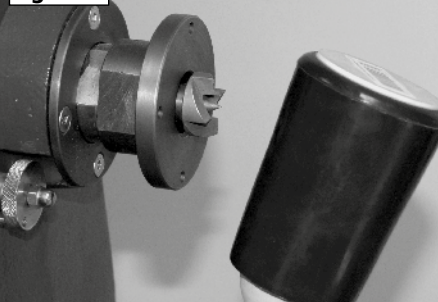
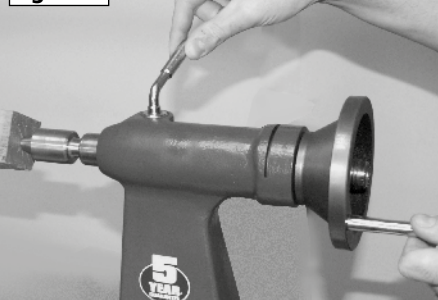


Fig.12.5





# 12. Intended Use of the Lathe & Basic Woodturning Instructions - cont.

being used. When using a roughing gouge, the cutting edge should come into contact with the centre of the workpiece, see **fig 12.6**. If using a skew chisel, the cutting edge should be applied approximately 3/8" (10 mm) above the centre height, see **fig 12.7**. A spindle gouge's cutting edge should come into contact with the workpiece approximately 3/8" (10 mm) below its centre, see **fig 12.8**.

## 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 12.9**. 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 12.9**. Never move the tool backwards, as this introduces the risk of splintering the wood and causing injury.

## Using the Spindle Gouge

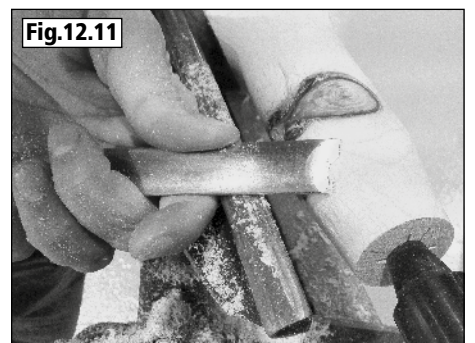
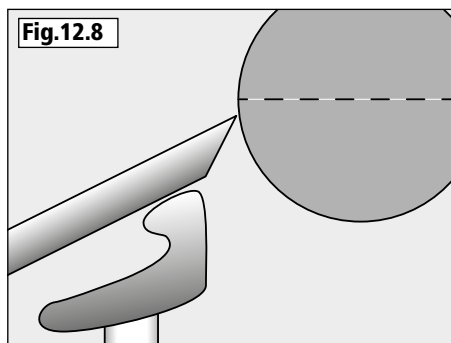
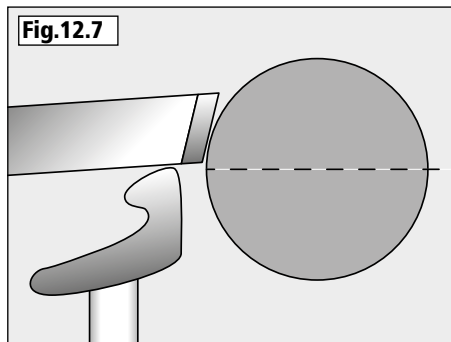
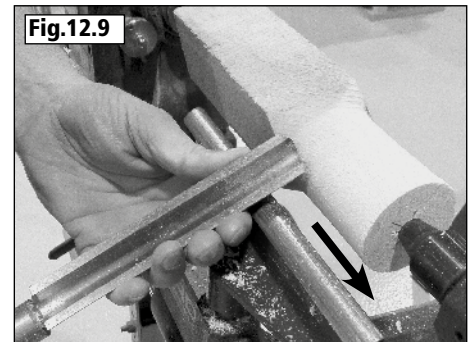
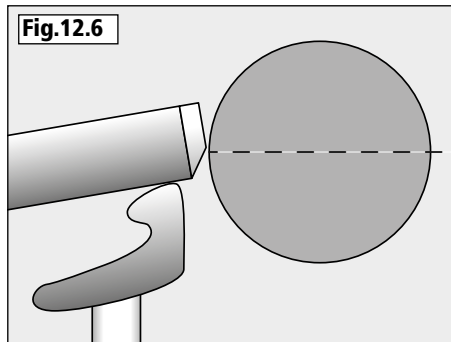
A spindle gouge is used to shape the final profile of a spindle and is capable of finer work than a roughing gouge. It is designed specifically for cutting coves or valleys. The blade should come into contact with the wood at just below the centre line. Resting it on the tool rest, apply the blade to the workpiece at an angle, see **fig 12.10**, 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 12.11**, 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.

# 13. Dust Extraction

## The Importance Of Dust Extraction

Before the machine is started, ensure that adequate dust extraction provisions have been installed. Dust extraction is extremely important not only for health and safety but also for the correct upkeep of the machine. Saw dust can cause the machine not to operate properly or even fail completely. By keeping the machine free of large amounts of waste the performance will be optimised.

If a large amounts of MDF or toxic woods are to be cut we recommend that there is a good ventilation system in place and that in addition to proper extraction a mask or respirator be worn as minimum protection.

## Record Power Extractors

Record Power offer a range of high quality dust extractors, we offer both drum and bag type extractors which filter down 0.5 micron providing protection from harmful fine dusts. All Record Power dust extractors & chip collectors have 100 mm inlets and hoses.

### DX1000 High Filtration Dust Extractor

Drum type extractor, 45 litre capacity, single 1 kW motor, suitable for intermittent use ie must be switched off for 20 minutes every hour.

**0.5 micron filtration**

### RSDE1 High Filtration Dust Extractor

Drum type extractor, 45 litre capacity, single 1 kW motor, suitable for intermittent use ie must be switched off for 20 minutes every hour.

**0.5 micron filtration**

### RSDE2 High Filtration Dust Extractor

Drum type extractor, 50 litre capacity, single 1 kW motor, suitable for intermittent use ie must be switched off for 20 minutes every hour.

**0.5 micron filtration**

### RSDE/2A High Filtration Dust Extractor with Auto Switching

Drum type extractor, 50 litre capacity, single 1 kW motor, auto switching allows the machine to be turned on and off as machines and power tools are operated. Suitable for intermittent use ie must be switched off for 20 minutes every hour. Maximum auto switch capacity tools up to 1.1 kW.

**0.5 micron filtration**

### DX4000 High Filtration Dust Extractor

Drum type extractor, 80 litre capacity, Twin 1 kW motor, suitable for heavy usage ie if one motor is switched off for 20 minutes then the other can be used thus enabling continuous usage. Or both motors can be used simultaneously giving maximum suction but in this mode the extractor must be switched off for 20 minutes every hour. **0.5 micron filtration**

### DX5000 High Filtration Dust Extractor

Bag type extractor, 200 litre capacity, Twin 1 kW motor, suitable for heavy usage ie if one motor is switched off for 20 minutes then the other can be used thus enabling continuous usage. Or both motors can be used simultaneously giving maximum suction but in this mode the extractor must be switched off for 20 minutes every hour. **0.5 micron filtration**

### CX2000 Compact Chip Extractor

Medium capacity chip collector, with a powerful 0.56 kW induction motor. An extremely smooth running unit suitable for continuous usage. Very quiet impeller system extracts dust and chippings.

### CX2600 Chip Collector

Large capacity chip collector, with a powerful 0.37 kW induction motor. An extremely smooth running unit suitable for continuous usage. Very quiet impeller system extracts dust and chippings.

**Suitable for chip collection or finer dust using the optional filter cartridge**

### CX3000 Chip Collector

Larger capacity chip collector, with a more powerful 0.75 kW induction motor and heavy duty construction. An extremely smooth running unit suitable for continuous usage. Very quiet impeller system extracts dust and chippings.

**Suitable for chip collection or finer dust using the optional filter cartridge**

### Air Cleaners

It is strongly advised to also use an air cleaner to remove the fine airborne dust present in the workshop which cannot be removed using machine extraction. Record Power offer a range of air cleaners suitable for all home workshops. Please contact your preferred stockist or visit [www.recordpower.info](http://www.recordpower.info).

|  | DX1000           | RSDE1            | RSDE2            | RSDE/2A          | DX4000           | DX5000           | CX2000           | CX2600           | CX3000           |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Bandsaws</b><br><b>Circular saws</b><br><b>Sanders</b><br>Intermittent usage                  | ✓<br>Recommended | ✓<br>Recommended | ✓<br>Recommended | ✓<br>Recommended | ✓<br>Recommended | ✓<br>Recommended |                  |                  |                  |
| <b>Bandsaws</b><br><b>Circular saws</b><br><b>Sanders</b><br>Heavy usage                         |                  |                  |                  |                  | ✓<br>Recommended | ✓<br>Recommended |                  |                  |                  |
| <b>Planer Thicknessers</b><br><b>Spindle Moulders</b><br><b>Universals</b><br>Intermittent usage | ✓<br>Recommended | ✓<br>Recommended |                  |                  | ✓<br>Can be used | ✓<br>Recommended | ✓<br>Recommended | ✓<br>Recommended | ✓<br>Recommended |
| <b>Planer Thicknessers</b><br><b>Spindle Moulders</b><br><b>Universals</b><br>Heavy usage        |                  |                  |                  |                  | ✓<br>Can be used | ✓<br>Recommended |                  | ✓<br>Recommended | ✓<br>Recommended |
| <b>Dust Extraction System</b><br>Intermittent usage  |                  |                  |                  |                  | ✓<br>Can be used | ✓<br>Recommended |                  |                  |                  |

# 14. Troubleshooting



**Warning: For your own safety, always turn off and unplug the machine before carrying out any troubleshooting.**

| <b>Problem</b>                              | <b>Possible Cause</b>  | <b>Solution</b>   |
|---|--|---|
| Motor will not start                        | Machine not plugged in<br>Low voltage<br>Loose connection  | Plug the machine in<br>Check power supply to machine<br>Check all external connections  |
| Motor overheats                             | Motor overloaded<br>Air flow restricted on motor   | Reduce load on motor<br>Clean out motor to obtain normal air flow   |
| Excessive motor noise                       | Faulty motor<br>Pulley set screw loose   | Have motor checked<br>Tighten set screw   |
| Motor will not develop full power or stalls | Circuit overloaded with lights or other tools<br>Circuit too long or undersized wires<br>Voltage too low<br>Circuit breakers do not have sufficient capacity<br>Drive belt tension too high<br>Use of extension cord | Decrease the load on the circuit<br>Reduce the length of the wire or use a suitable diameter cable<br>Have the voltage checked by an electrician<br>Have a licensed electrician install proper size breaker<br>Adjust belt tension<br>Use heavier gauge extension cord or no extension cord |
| Machine labours during cutting              | Excessive depth of cut<br>Turning tools are dull   | Decrease depth of cut<br>Sharpen turning tools  |



**Warning: do not make adjustments while the lathe is running. Ensure the switch is off, power is disconnected and all moving parts have stopped before servicing. Failure to comply may result in serious injury.**

# 15. Electrical Connection & 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 (L 3)  
 Blue: Neutral (N)  
 Green and Yellow: Earth (E)

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

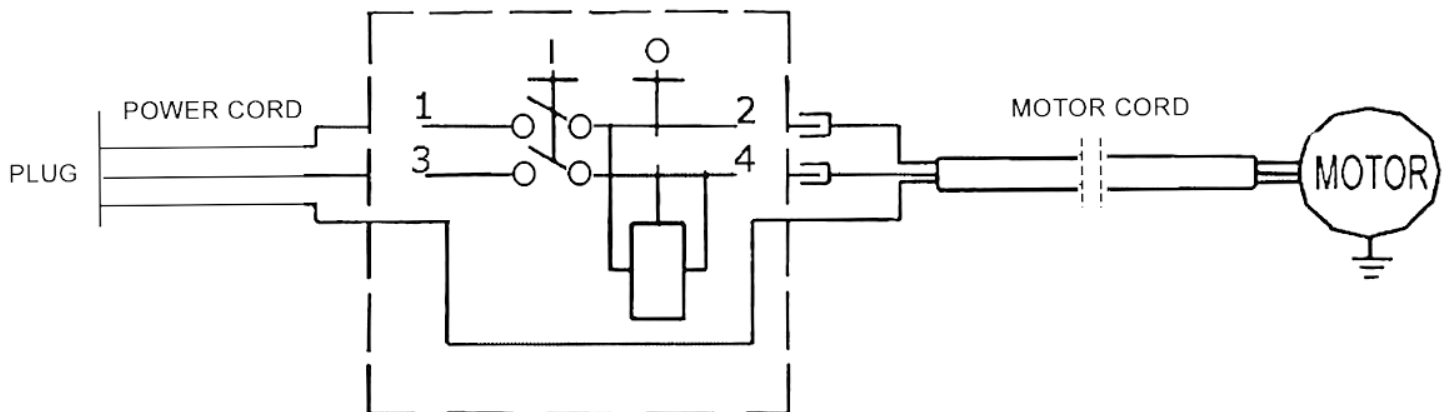
The wire coloured black must always be fitted to the terminal marked 'L2'.

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

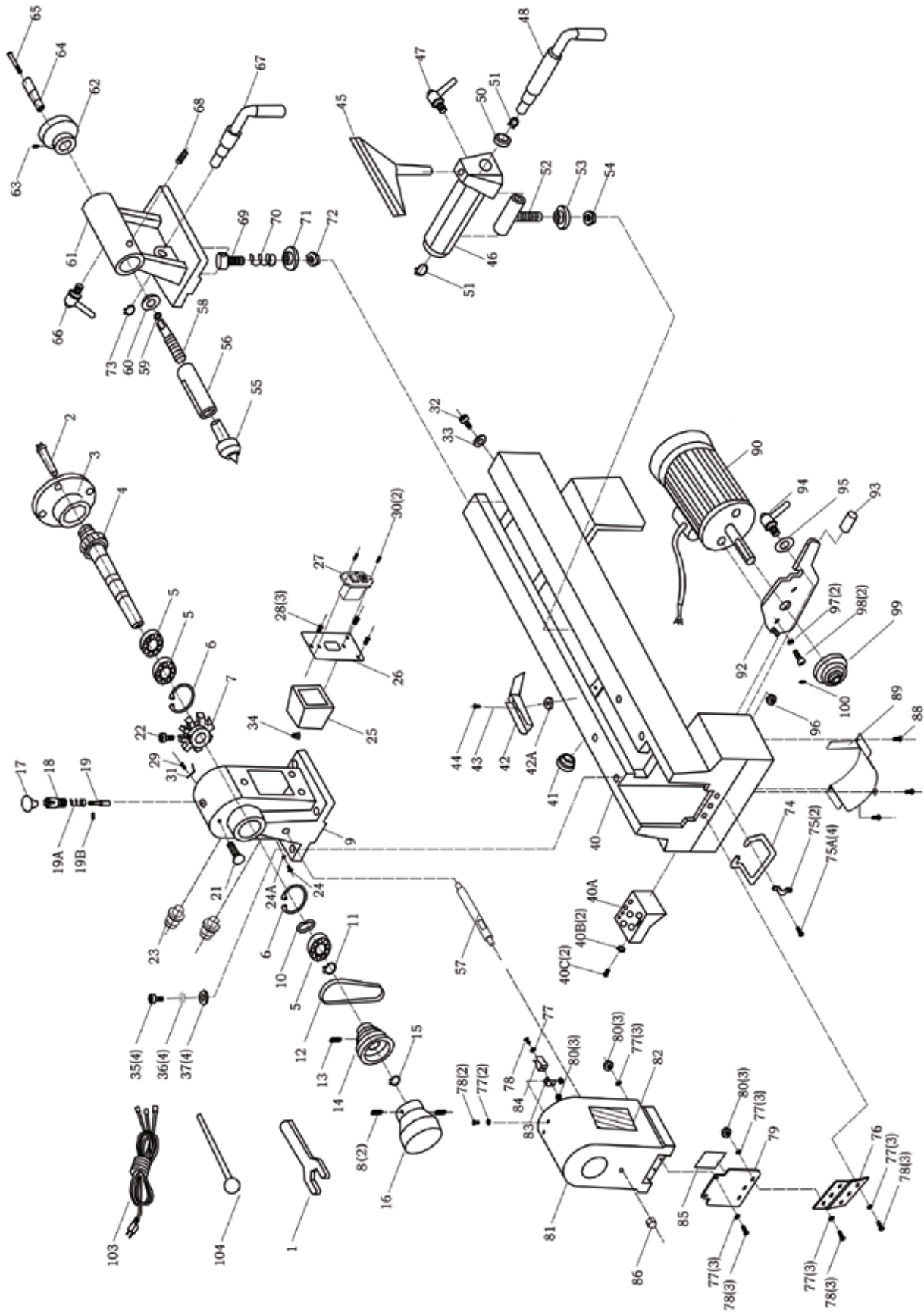
The wire coloured blue must always be connected to the terminal marked 'N' or coloured black.

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.



# 16. Parts Diagram & List





# 16. Parts Diagram & List - cont.

| <b>Part No.</b> | <b>Description</b>                | <b>Part No.</b> | <b>Description</b>                |
|-----------------|-----------------------------------|-----------------|-----------------------------------|
| 1               | Wrench                            | 50              | Collar                            |
| 2               | Spur centre                       | 51              | Retaining ring 12 mm              |
| 3               | Faceplate                         | 52              | Cam bolt                          |
| 4               | Spindle shaft                     | 53              | Clamp disc                        |
| 5               | Bearing 6005-2Z                   | 54              | Lock nut M10                      |
| 6               | Ring retaining 47 mm              | 55              | Live centre                       |
| 7               | Indexing gear                     | 56              | Axle sleeve                       |
| 9               | Headstock                         | 58              | Bolt                              |
| 10              | Washer 47 mm                      | 59              | Retaining ring                    |
| 11              | Retaining ring 25 mm              | 60              | Washer 14 mm                      |
| 12              | Poly-v-belt                       | 61              | Tailstock                         |
| 13              | Hex socket set screw M6 x 10 mm   | 62              | Handwheel                         |
| 14              | Spindle pulley                    | 63              | Hex. Socket set screw M6 x 12 mm  |
| 15              | Ring retaining 19 mm              | 64              | Handwheel handle                  |
| 16              | Handwheel                         | 65              | Screw                             |
| 17              | Indexing lock knob                | 66              | Lock handle                       |
| 18              | Indexing lock tube                | 67              | Lock lever                        |
| 19              | Indexing lock shaft               | 68              | Hex. Socket set screw M5 x 8 mm   |
| 19A             | Indexing lock spring              | 69              | Cam bolt - tailstock              |
| 19B             | Roll pin 3 x 16 mm                | 70              | Spring                            |
| 21              | Rounded insert                    | 71              | Clamp disc                        |
| 22              | Hexagon socket cap screw          | 72              | Lock nut M10                      |
| 23              | Cable gland                       | 73              | Retaining ring 10 mm              |
| 24              | Pan head screw M5                 | 74              | Lifting handle                    |
| 24A             | Locking washer                    | 75              | Lifting handle mounting bracket   |
| 25              | Switch box                        | 75A             | Pan head screw M5 x 10 mm         |
| 26              | Switch plate                      | 76              | Hinge                             |
| 27              | NVR switch                        | 77              | Lock washer M4                    |
| 28              | Pan head screw M6 x 10 mm         | 78              | Pan head screw M4 x 10 mm         |
| 29              | Cross recessed pan head screw     | 79              | Motor pulley cover                |
| 30              | Pan head tapping screw            | 80              | Hex. Nut M4                       |
| 31              | Pointer                           | 81              | Access cover                      |
| 34              | Close-end connector               | 83              | Lock housing bracket              |
| 35              | Hex. Socket head screw M6 x 35 mm | 84              | Lock housing                      |
| 36              | Spring washer 6 mm                | 85              | Belt position chart               |
| 37              | Washer 6 mm                       | 90              | Motor                             |
| 40              | Bed                               | 92              | Belt tension handle               |
| 40A             | Tool holder                       | 93              | Belt tension handle cover         |
| 40B             | Washer 6 mm                       | 94              | Motor tension lock                |
| 40C             | Pan head screw M6 x 15 mm         | 95              | Washer 8 mm                       |
| 41              | Cable gland                       | 96              | Lock nut M8                       |
| 42              | Dust chute                        | 97              | Washer 6 mm                       |
| 43              | Washer 5 mm                       | 98              | Hex. socket head screw M6 x 15 mm |
| 44              | Pan head screw M5 x 10 mm         | 99              | Motor pulley                      |
| 45              | Tool rest                         | 100             | Hex. socket set screw M6 x 12 mm  |
| 46              | Tool rest holder                  | 103             | Power cable                       |
| 47              | Lock handle                       | 104             | Knockout bar                      |
| 48              | Lock lever                        |                 |                                   |

# EU Declaration of Conformity

**Cert No: EU / DML305 / 1**

Record Power Ltd, Centenary House, 11 Midland Way, Barlborough Links, Chesterfield, Derbyshire S43 4XA  
declares that the machinery described:-


1. Type: **Variable Speed Midi Lathe**
2. Model No: **DML305**
3. Serial No .....

Conforms with the following directives:-

|   |  |
|---|--|
| MACHINERY DIRECTIVE<br>(repealing / replacing Directives) | 2006/42EC  |
| LOW VOLTAGE DIRECTIVE                                     | 2006/95EC  |
| ELECTROMAGNETIC<br>COMPATIBILITY DIRECTIVE                | 2004/108EC<br>EN 55014-1:2006<br>EN 55014-2:1997/+A1:2001/+A2:2008<br>EN 61000-3-2:2006<br>EN 61000-3-3:2008 |

and conforms to the machinery example for which the  
EC Type-Examination Certificate No. **SH09081132-001, SH09081132-002, SH09081133-001**  
at: Intertek Testing Services Shanghai, Building No 86, 1198 Qinzhou Rd (North), Shanghai 200233

and complies with the relevant essential health and safety requirements.

  
Signed.....Dated: **15/01/2015**  
**Andrew Greensted**  
Managing Director





Over  
**100**  
 years  
 Experience • Knowledge  
 Support • Expertise

**RECORD POWER**  
 ESTABLISHED 1909®

Woodworking Machinery & Accessories

**United Kingdom**

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