

Original Instruction Manual

BS400 Premium 16" Bandsaw

Version 3.0

January 2013



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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Consumables & Spares Quick Find

Part Number	Part Description
	Blades
BB1331406	1/4" x 6TPI Bandsaw Blade
BB1336	3/8" x 6TPI Bandsaw Blade
BB1331206	1/2" x 6TPI Bandsaw Blade
BB1333403	3/4" x 3TPI Bandsaw Blade
BB133103	1" x 3TPI Bandsaw Blade
SBS300-127	Table Insert
	Bandwheels
SBS400-46	Drive belt
SBS400-56	Bandwheel tyre
SBS400-58	Wheel Bearing
SBS400-63	Brush
	Upper Blade Guides
SBS400-203	Upper Guide Support Block
SBS400-262	Upper Blade Guide Support*
SBS400-263	Rear Blade Guide Assembly*
SBS400-264	Rear Blade Guide Assembly*
SBS400-265	Hex Socket Screw M6 x 12*
SBS400-266	Hex Socket Screw M8 x 10*
	Lower Blade Guides
SBS400-160	Left Cover*
SBS400-147	Lower Blade Guide Support
SBS400-151	Right Cover*
SBS400-148	Insert
SBS400-137	Bearing 6021
SBS400-131	Tapped Bar

* Not shown in parts diagram.

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

Warning



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

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.

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.
- 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

General Health & Safety Guidance - cont.

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 2.5 mm² 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 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.

General Health & Safety Guidance - cont.

- 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.

Additional Health & Safety for Bandsaws

Safe Operation

1. Familiarise yourself with the machine

- Machining operations using bandsaws have a history of serious accidents. Most result from contact with the moving blade while presenting material to the blade or moving it from the table. Other minor accidents can occur whilst setting, cleaning, adjusting or maintaining the machine.
- The machine is designed for cutting wood and composite board (plywood, MDF etc.). Certain plastics can also be cut using a suitable blade.

2. Before switching the machine 'ON'

- Ensure that the blade is correctly tensioned and aligned on the bandwheels and the blade guides are correctly adjusted.
- Ensure that the teeth of the blade are pointing downwards.
- Check the condition of the blade to ensure that no teeth are missing, damaged or deformed and the blade is not cracked or split. If any of these conditions apply, replace the blade immediately.
- Ensure that the saw blade type and width are suitable for the material to be cut.
- Check that the blade width is within the minimum and maximum permitted on the machine and that the thickness of the blade is suitable for the diameter of the wheel.
- Some machines have more than one cutting speed. For most wood cutting applications the faster of the speeds should be used.
- Check the condition of the table insert. Replace it immediately if it is damaged or showing signs of wear.
- Adjust the guard as close as possible to the work piece being cut.
- Check that access doors are fully closed and that the latches are secure.

3. Whilst machining

- Never apply sideways pressure to the blade as this may cause the blade to break.
- Care must be taken when cutting wood with knots, nails or cracks in it and / or dirt on it, as these can cause the blade to get stuck. If this happens, switch the machine 'OFF' immediately and follow the procedure detailed in the manual to remove the blade from the work piece.
- If cutting cylindrical timber use a suitable jig to prevent twisting of the work piece.

4. 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 can be found in the 'Safety in the use of narrow bandsaws – Woodworking sheet No. 31' and the 'Safe use of woodworking machinery' code of practice booklet (L114) published by Health & Safety Executive and available from their website www.hse.gov.uk.

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.

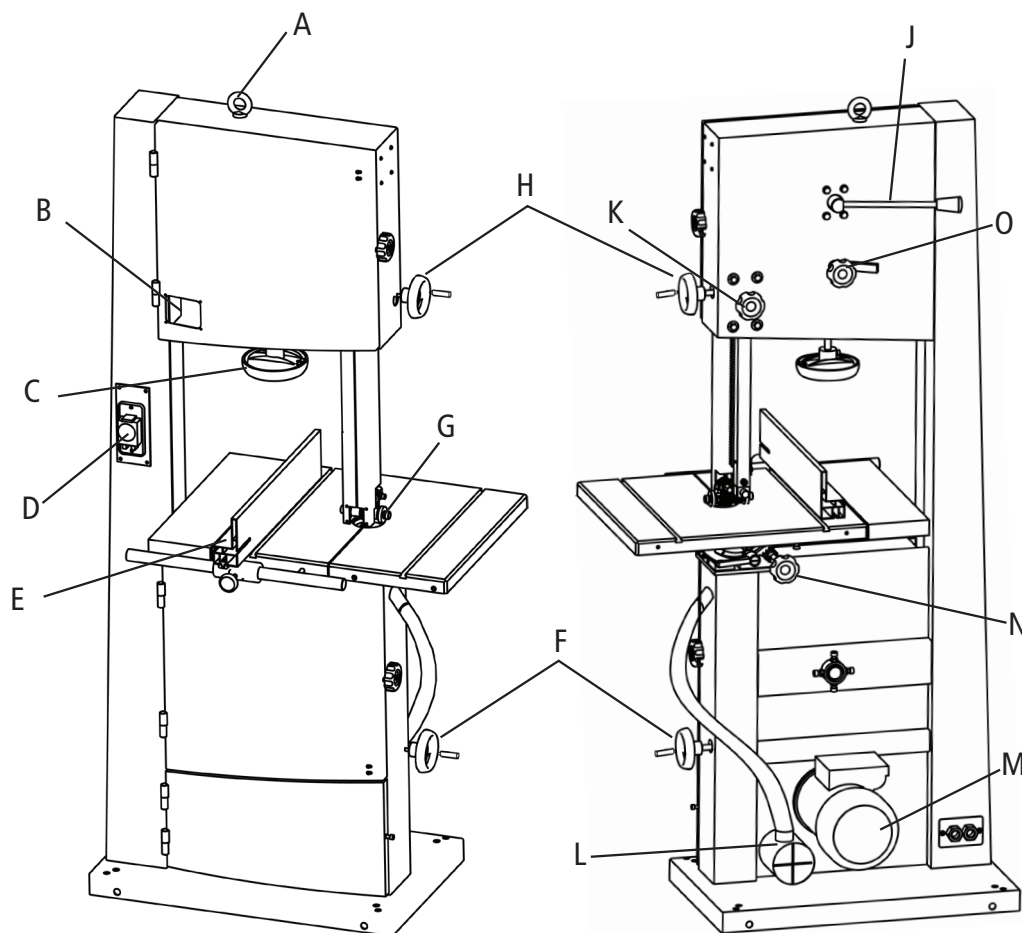
3 Limitation of Liability

- 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).

1. Getting to Know Your Bandsaw



- A. Lifting Ring
- B. Tension Indicator Window
- C. Blade Tension Wheel
- D. Switch Unit
- E. Rip Fence Assembly
- F. Belt Tension & Speed Change Handwheel
- G. Blade Guide

- H. Rise & Fall Hand wheel
- J. Blade Tension Cam Handle
- K. Rise & Fall Lock Knob
- L. Extraction Port
- M. Motor
- N. Table Tilting Knob
- O. Blade Tracking Knob

2. Machine Specification

Maximum depth of cut:	305 mm
Throat width:	416 mm
Blade length:	3378 mm
Blade width:	6 - 25 mm
Blade tilt:	-10° to 45°
Table size:	535 x 485 mm
Saw blade speed:	480 & 820 M/min
Motor:	230 V / 50 Hz / 2 hp / 1500 W
Full load current:	8.4 A
Noise Emission:	Sound power level < 85dB (A) Sound pressure level < 85dB (A)

3. Machine Assembly



CAUTION!

The machine is heavy. Additional help or a suitable lifting device or support will be required for placing the machine in the workshop.

3.1 Unpacking and components included

The machine is supplied partly assembled.

When unpacking the machine the following components are included for the initial assembly **Fig. 3.1**:

1. 1 Large crank handle
2. 1 Small crank handle
3. Table stop screw and nut
4. 1 Lifting ring
5. 4 Table bolts, washers and spring washers
6. Tool kit
7. BS400 Bandsaw
8. Fence bar and scale
9. Extraction hose
10. Rise and fall hand wheel
11. Mitre fence
12. 2x jubilee clips
13. Fence assembly
14. Belt tensioner hand wheel
15. Table
16. Fence

3.2 Rise & fall handle

Attach the rise and fall hand wheel to the rise and fall shaft and tighten the socket head bolt with a 5 mm hex key. Then attach the handle and tighten with a 10 mm wrench. See **Fig. 3.2**.

3.3 Belt tensioner handle

Attach the belt tensioner hand wheel to the tension shaft and tighten the socket head bolt with a 5 mm hex key. Then attach the handle and tighten with a 10 mm wrench. See **Fig. 3.3**.

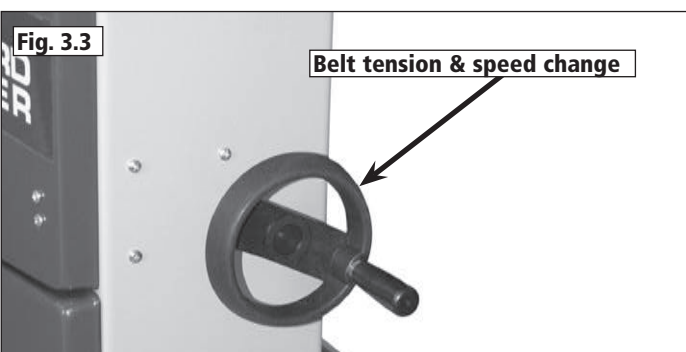
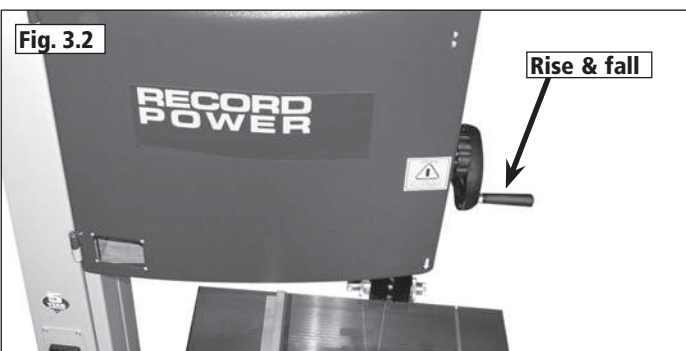
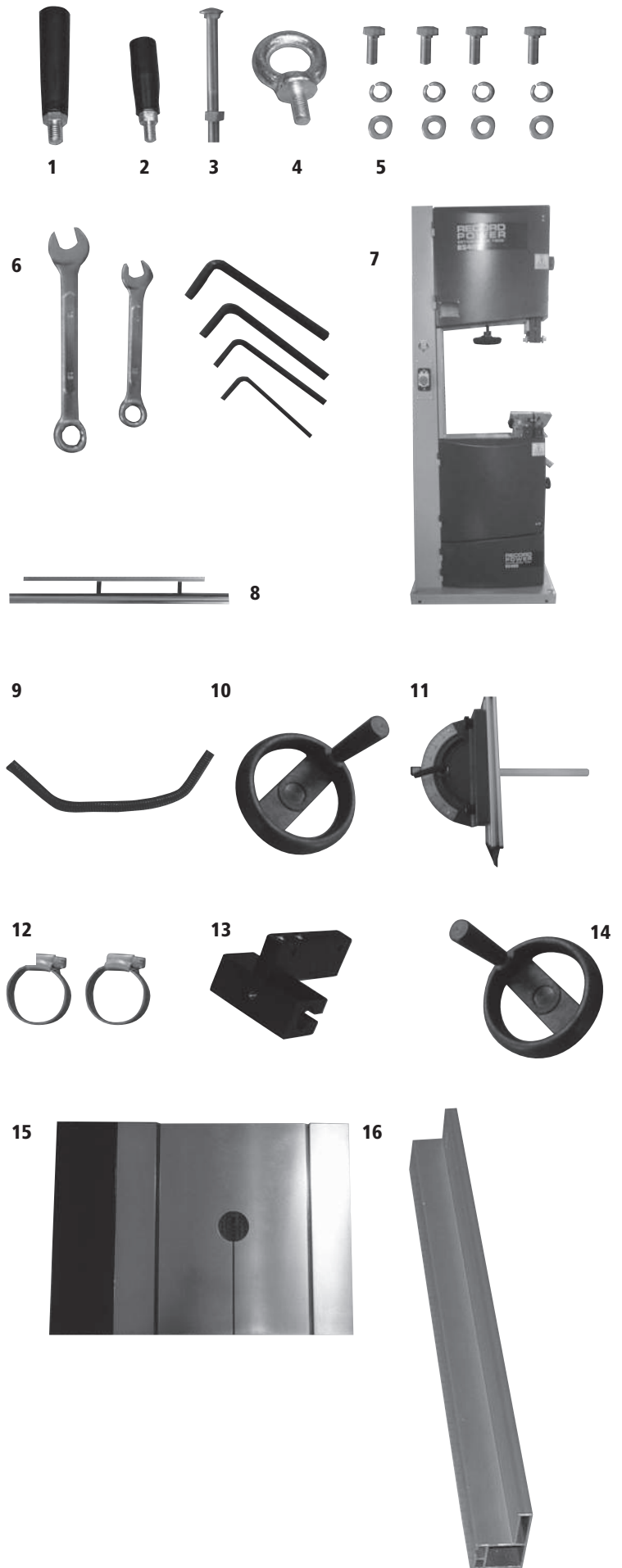


Fig. 3.1



3. Machine Assembly - Cont.



Note: When assembling this Bandsaw, DO NOT fully tighten the nuts and bolts until the assembly is complete.

3.4 Fitting the table

Tools Required: - 13 mm wrench

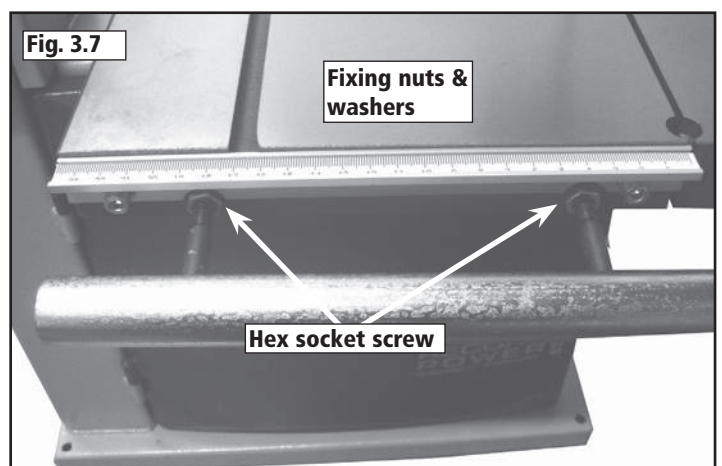
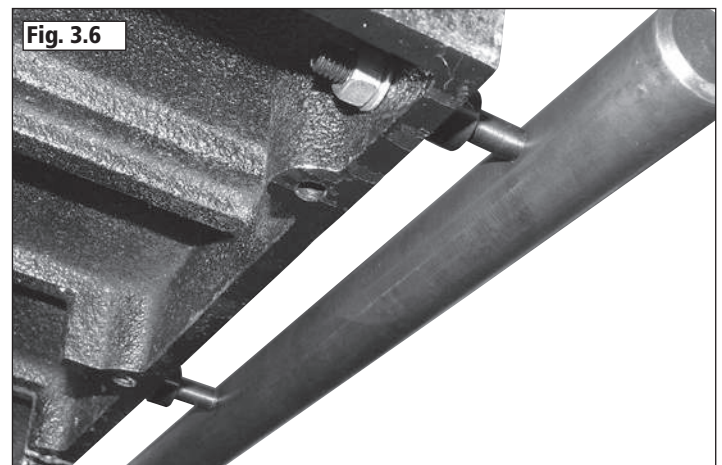
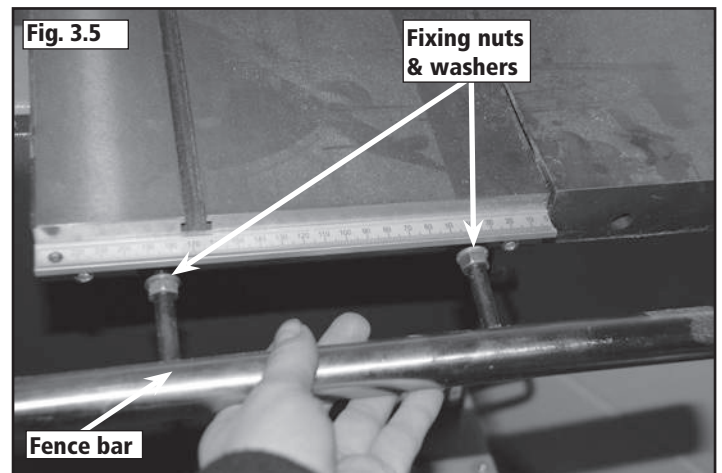
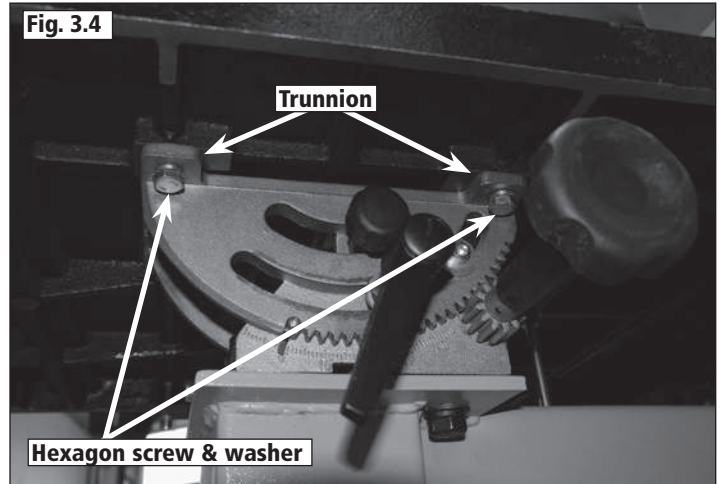
With the help of another person, lift the working table onto the trunnion. Mount the working table on the trunnion using the supplied 4 x hex bolts and 4 x washers **See Fig. 3.4**.

3.4 Fitting the fence bar

Attach the fence bar to the table as shown in **Fig. 3.5**, ensuring 2 washer are placed next to the fixing nuts. Use the 2 remaining nuts and washer to secure the fence bar from the underside of the table, **Fig. 3.6**. Do not fully tighten yet as adjustment may be necessary.

3.5 Fitting the fence scale

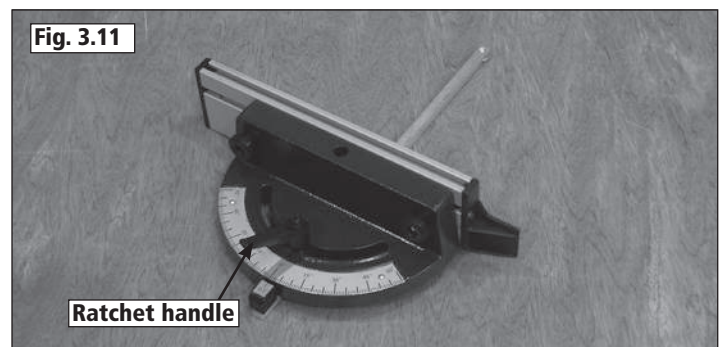
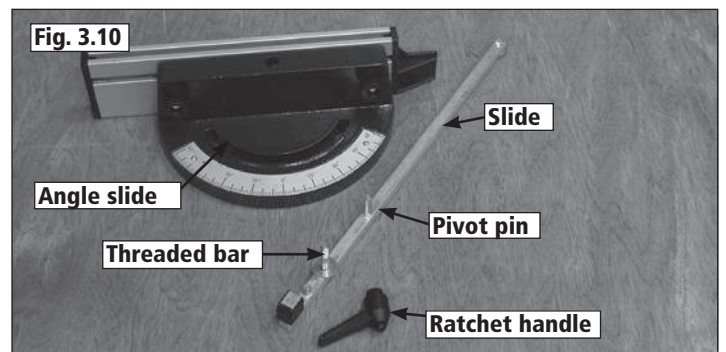
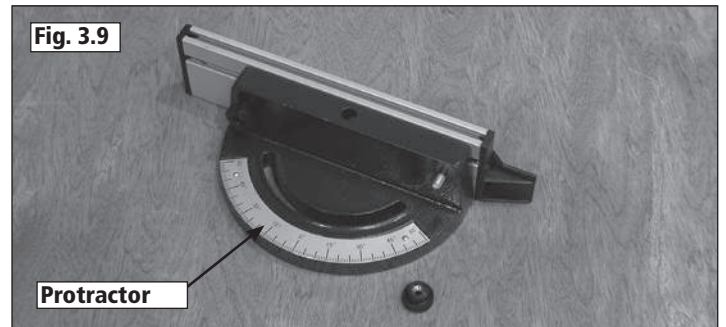
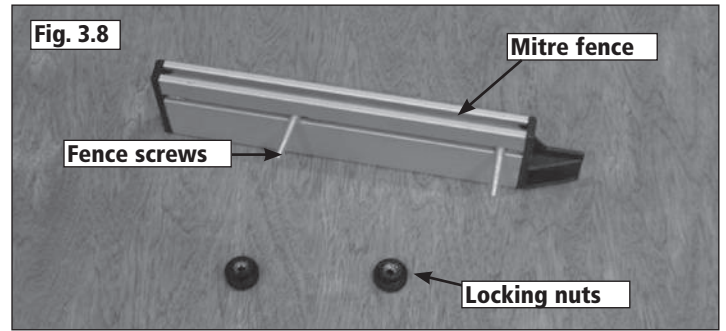
Place fence scale onto the table, **Fig. 3.7** and fix with the two hex socket screws.



3. Machine Assembly - Cont.

3.6 Assembling the mitre fence

1. Unscrew the locking nuts from the mitre fence **Fig. 3.8**.
2. Place the protractor with the flat edge running parallel to the mitre fence.
3. Position it in such a way that the fence screws slot into the holes on the protractor **Fig. 3.9**.
4. Replace and re-tighten the locking nuts.
5. Position the slide underneath the protractor so that the threaded bar sits in the angle slide and the pivot pin inserts into the pivot hole **Fig. 3.10** and **Fig. 3.11**.
6. Tighten the ratchet handle onto the threaded bar **Fig. 3.11**.



3. Machine Assembly - Cont.

3.7 Fitting the fence assembly

Place the fence assembly onto the fence bar. Position the fence on to the table and lock in place using fence Locking knob, **Fig. 3.12**.

3.8 Fence alignment 1

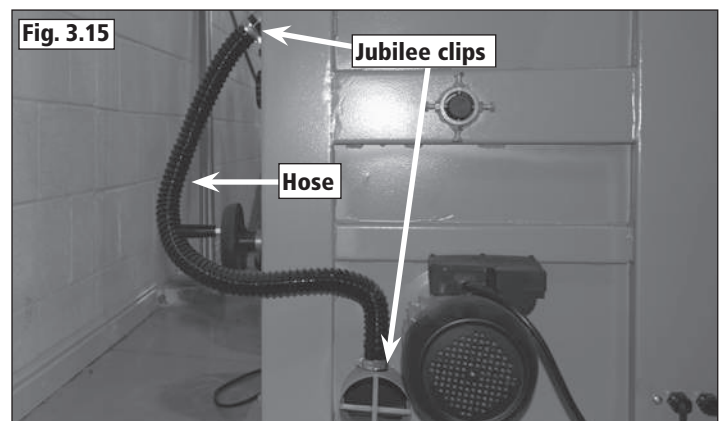
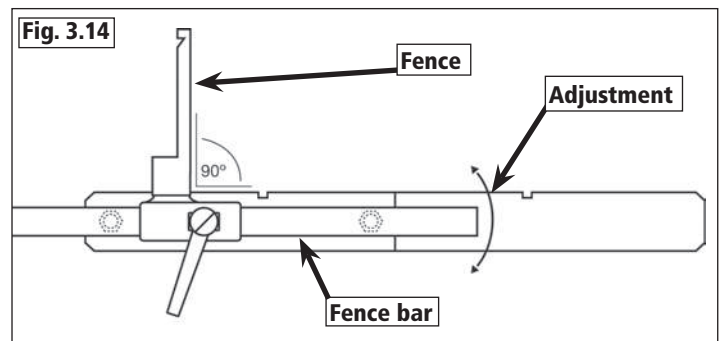
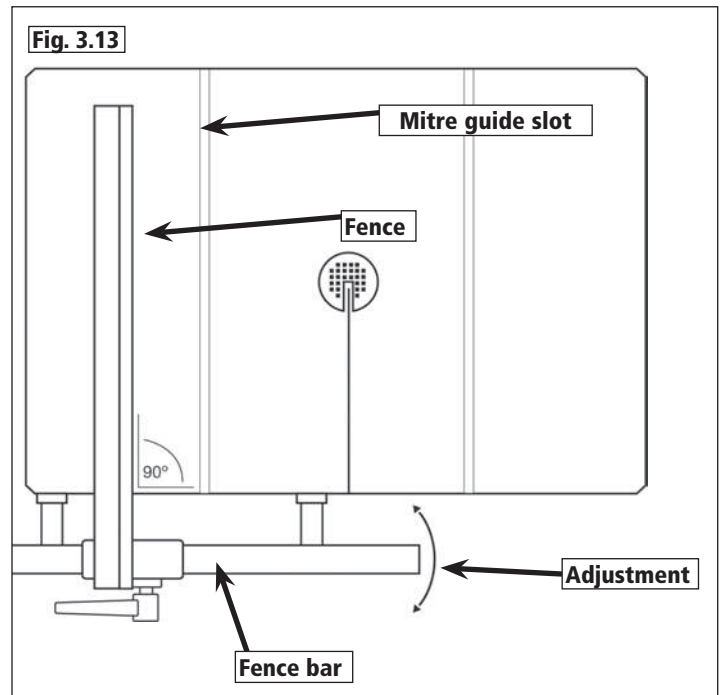
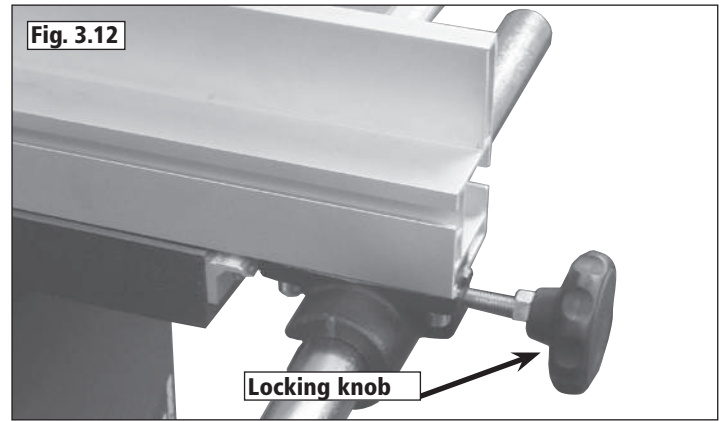
Align the fence assembly in or out until parallel with the side of the mitre guide slot by adjusting the fence bar nuts accordingly, see **Fig. 3.13**.

3.9 Fence alignment 2

Check that the fence is 90° to the table using a suitable square. If no adjustment is needed fully tighten the fence bar nuts. If adjustment is required this is achieved by raising or lowering either side of the fence rail until the fence itself is 90° to the table, **Fig. 3.14**. Once set at 90°, fully tighten the fence bar nuts.

3.10 Dust Extraction Hose

To install the dust extraction hose, attach it to the outlet near the top of the lower band wheel box and the inlet at the rear of the base of the bandsaw, **Fig. 3.15**.



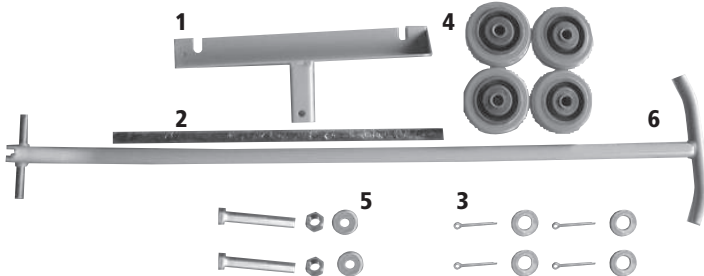
4. Fitting Optional Wheel Kit, Transporting & Positioning

4.1 Fitting the optional wheel kit



CAUTION! The machine is heavy. Additional help or a suitable lifting device or support will be required for fitting wheels.

Fig. 4.1



Contents of the packages

1. Jockey support bracket
2. Axle
3. 4 x split pins and washer
4. 4 x wheels
5. 2 x nuts, bolts and washers
6. Jockey bar

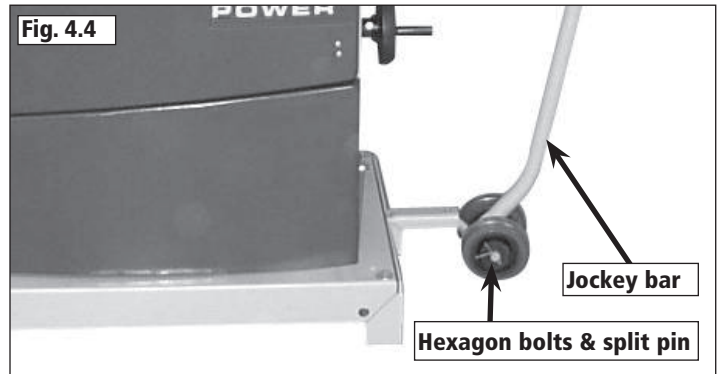
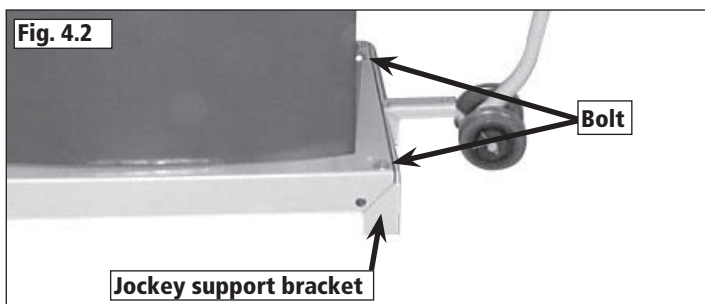
The jockey support bracket is held in place by 2 bolts. The jockey support bracket also levels the machine after the rear wheels have been fitted.

- First lift up the front (table end) of the machine with a suitable lifting device. Do not lift the machine using the table. Now fit the jockey support bracket to the base, bolt the bracket through the pre-drilled hole at either end of the base and fully tighten, **Fig.4.2**.
- Again using a suitable support, lift the rear (spine end) of the machine up and slide the axle through the base. Fit a wheel to either end of the axle and secure them with a washer each side of the wheel and split pin, **Fig.4.3**.

4.2 Using The Jacking Bar

The wheel kit is now fitted. Attach the wheels to the jockey bar using the hexagon bolts and split pin, this jacking bar is now used to lift and manoeuvre the front of the machine, **Fig.4.4**.

CAUTION! This wheel kit is only to be used on a level surface.



4.3 Moving the machine

Damage caused by incorrect handling, transportation or installation may invalidate the guarantee. Consequently if in doubt about the safe handling or installation of the machine obtain the services of a competent technician, contact Record Power customer services, or contact the organisation from which the machine was purchased.

When transporting this machine do not strap across the table or over the top of the machines, **Fig 4.5a and 4.5b**. Always locate retaining straps over the lower wheel box beneath the table **Fig. 4.5c**.

Fig. 4.5a



Fig. 4.5b

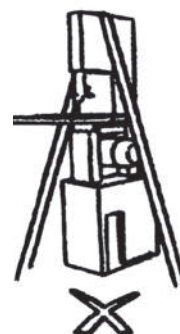
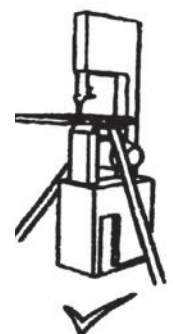


Fig. 4.5c



When moving and positioning this machine do not hold the table and drag it, always hold the spine or lower wheel box, see **Fig 4.6a and 4.6b**. If moving long distances position the machine on a trolley before moving, see **Fig 4.6c**.

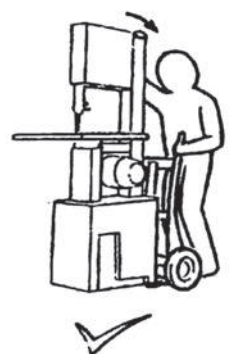
Fig. 4.6a



Fig. 4.6b



Fig. 4.6c



4.4 Positioning the machine

The machine should not be located in a confined space. Ensure that the working area is adequately lit. A cabinet located nearby is useful for the safe and secure storage of tools, blades and accessories.

The machine should be located on a solid surface that is level. If the machine is to be permanently located four mounting holes are provided in the base so the machine can be bolted to the floor. Ensure that the anti-corrosive coating is removed from the table and other working parts used before use.

5. Adjustment of the Table & Installation of Blades

SETTING THE TABLE



CAUTION!

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

5.1 Setting the table stop at 90° to saw blade

Tools Required:- Small 90° square (Not supplied)

The table can be set at 90° to the Bandsaw Blade **see Fig. 5.1** by adjusting the table stop screw **see Fig. 5.2** underneath the table.

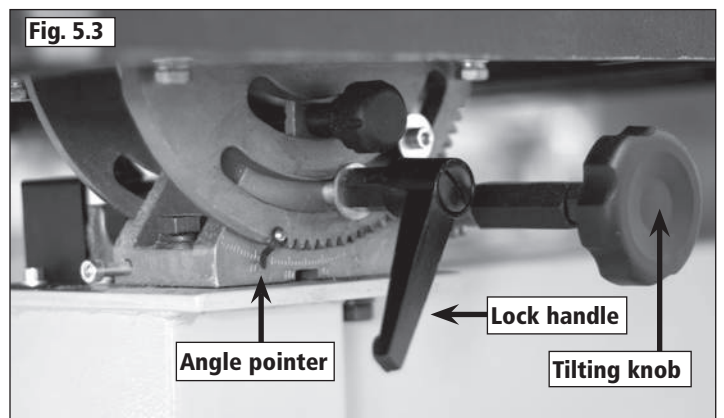
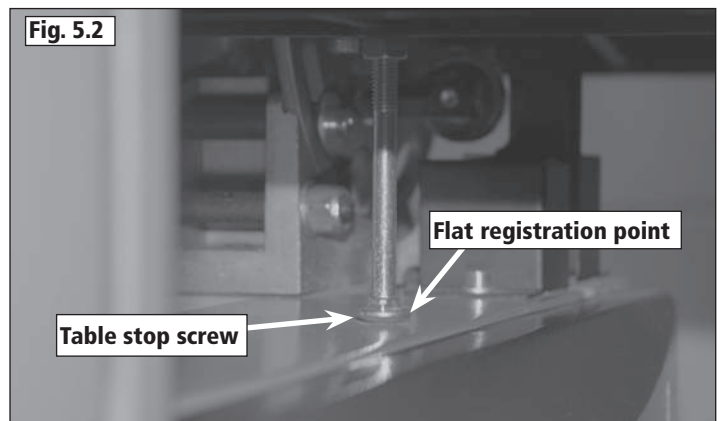
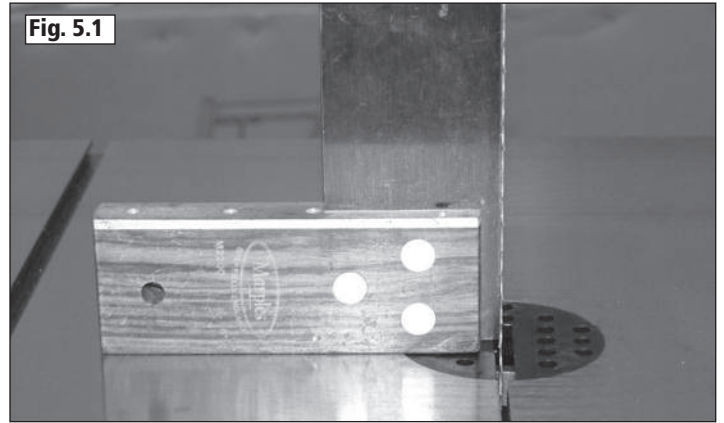
- First offer the square up to the blade to give an indication of adjustment required.
- If the table is not at 90° to the blade use table tilting mechanism **see Fig. 5.3** to adjust the table until it is 90° to the blade. If the table stop screw position is too high it may be necessary to wind this down out of the way so 90° can be achieved **see Fig. 5.2**.
- Once the table is at 90° to the blade lock off the lock handle on the table tilt mechanism to secure the table position **see Fig. 5.3**.
- Now set the table stop screw **see Fig. 5.2**, the table stop screw should be adjusted so that the head of the screw makes contact with the top surface of the lower bandwheel housing. Once the stop screw is set to the correct length, it is secured by tightening the lock nut up to the flat registration point on the underside of the table.

5.2 Adjusting the table tilt scale

Once the table is set at 90° to the Bandsaw Blade it may be necessary to adjust the angle pointer on the angle scale so any further angles are accurate. To do this use a Phillips screwdriver to loosen the pan head screw and adjust the pointer to 0°, **see Fig. 5.3**.

5.3 Tilting the table

The tilt mechanism will be used when squaring the table to the blade. Tilt the table as follows: Loosen the lock handle on the table trunnion. Turn the table tilting knob to adjust the table angle **see Fig. 5.3**. Use the angle indicator scale on the trunnion bracket to find the desired angle. Re-tighten the lock handle to secure the table.



5. Adjustment of the Table & Installation of Blades - Cont.

BLADE SETUP



CAUTION!

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

5.4 Tensioning the blade

The blade tensioning wheel should be used to increase or decrease tension see **Fig. 5.4**. The only truly accurate way to check a blade is with a tension meter. These are very expensive so most users may need another method. The blade tension indicator, **Fig. 5.4** should be used first, as a guide to the correct tension. We then suggest testing the tension by the amount the blade will deflect sideways. First set the guides to 6 inches above the table, making sure the saw is turned off push the blade sideways with a reasonable amount of pressure using the push stick.

A correctly tensioned blade should not move more than a 1/4" sideways, see **Fig. 5.5, A**. If the blade is over-tightened, as in **Fig. 5.5 B**, the blade could be damaged.

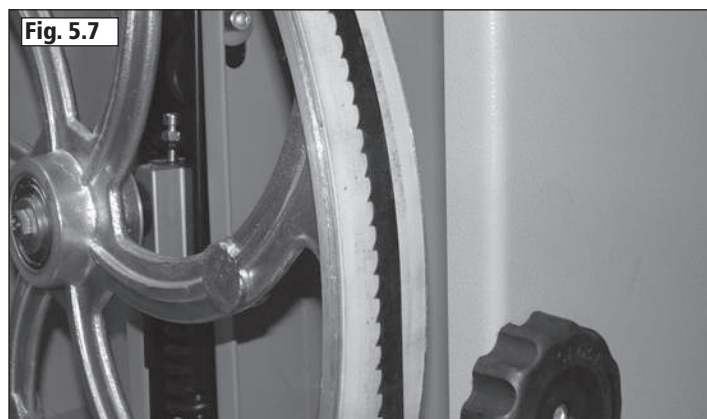
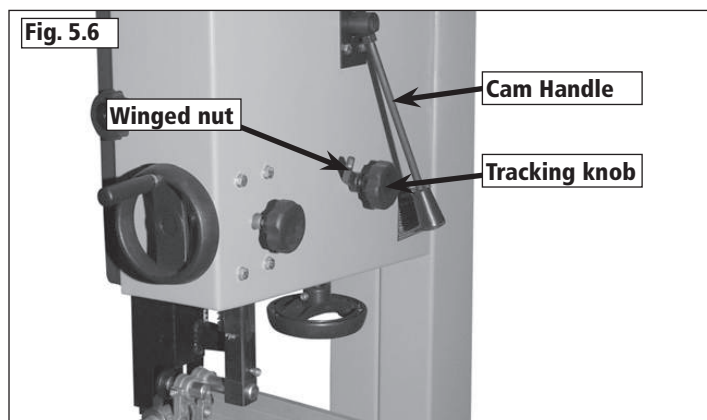
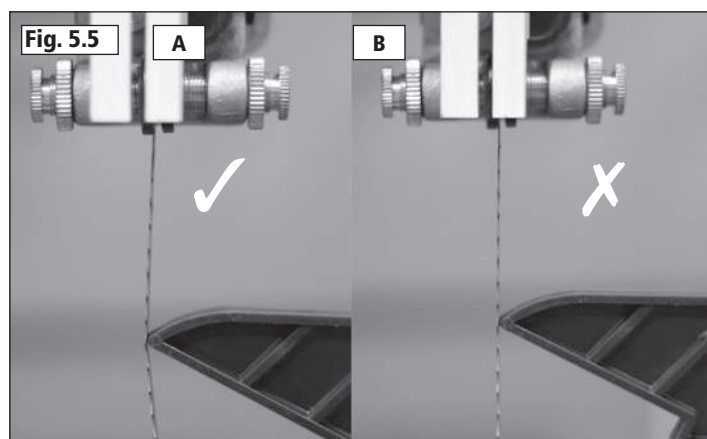
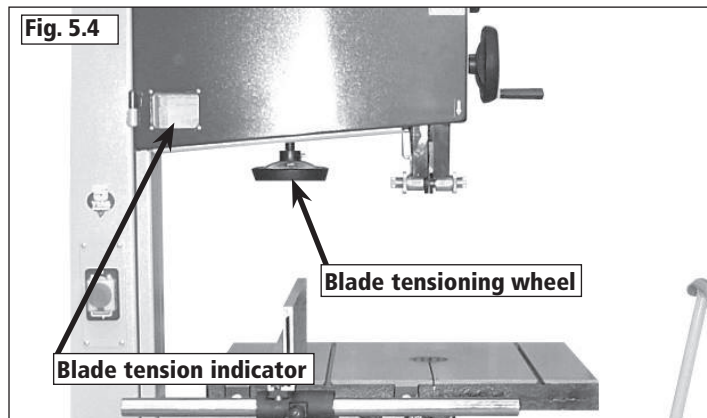
However perhaps the most tried and tested way of blade tensioning is simply: If the bandsaw is cutting accurately then the blade is tensioned correctly, if the blade tends to wander and an accurate cut cannot be achieved then the blade tension needs adjusting.

If the machine is to stand idle for a period it is good practice to slacken tension and re-tension when next using. On the BS400 the simplest way to release and re-tension the blade is to use the cam handle located on the back on the machine. **Fig. 5.6**.

5.5 Tracking the Bandsaw blade

Isolate the machine from the supply by unplugging the mains plug. Set the tracking of the blade before setting the blade guides. Once the blade is tensioned, track the blade by turning the upper bandwheel by hand and adjusting the tracking knob see **Fig. 5.6**. When viewed from back of the machine turning the tracking knob clockwise the blade will move towards the back of the bandwheel, by turning the tracking knob anti-clockwise the blade will move to the front of the bandwheel. The blade should run as close to the centre of the bandwheel as possible, as shown see **Fig. 5.7**. On 1/4", 3/8" and 1/2" blades it may be necessary to run the blade to rear of the bandwheel. After the blade is tracked in the desired position on the bandwheel, rotate the band wheel several more times by hand without any further adjustment ensuring that the blade remains in the same position. Once this has been achieved lock the tracking knob with the winged nut see **Fig. 5.6**.

The machine should then be run for a few seconds before any adjustment of guides are carried out. It takes a few revolutions of the band wheel for the effect of adjustment on the tracking knob to become apparent. To avoid over adjusting, make small gradual adjustments on the tracking knob and revolve the band wheel a few times to check the alignment of the blade before making further adjustments.



6. Adjustment of Guides & Further Operations



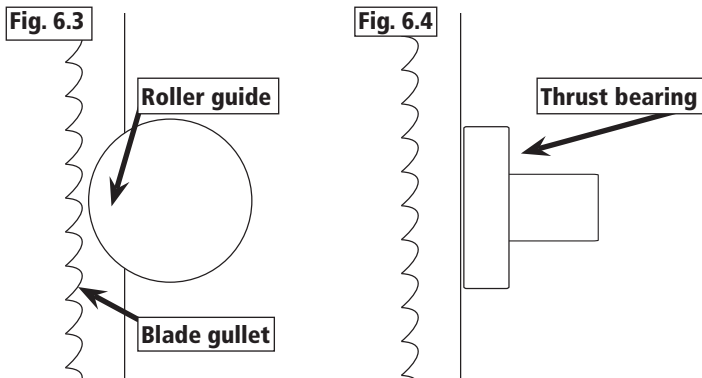
CAUTION!

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

6.1 Adjusting the Upper Guides

To adjust the upper blade guides, first position the guide assembly relative to the blade, by slackening off the hex screw - A **Fig. 6.1** and moving the guide carrier until the roller guides are just behind the gullets of the blade **see Fig. 6.3**. Next set the roller guides as near as possible to the blade without actually touching. This is done by unlocking the locking the nut on each side of the guide adjustment **see Fig. 6.1**. Do not let the roller guides actually touch the blade as this will adversely affect the life of the blade. Finally adjust the thrust bearing to be just clear of the back of the blade **see Fig. 6.4**.

Do this by unlocking the hex socket screw B **Fig. 6.2**. When the correct adjustment is reached, lock the thrust bearing in position with hex socket screw B **Fig. 6.1**.

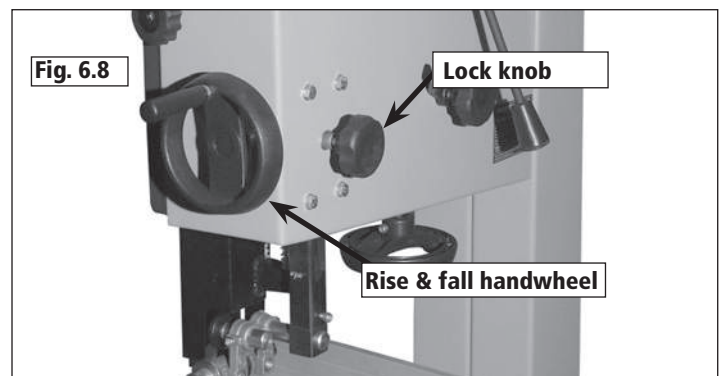
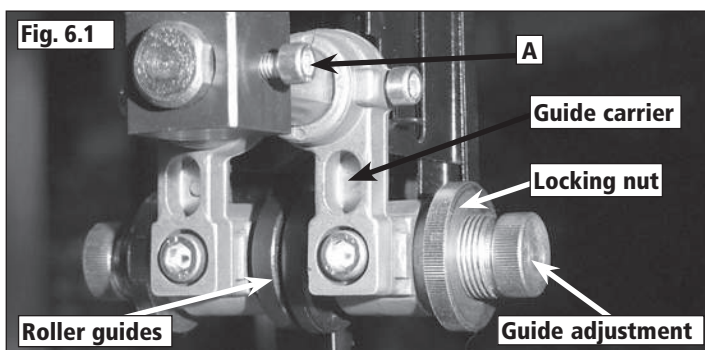
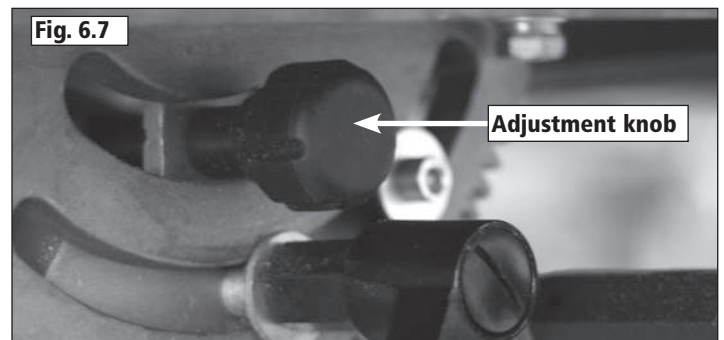
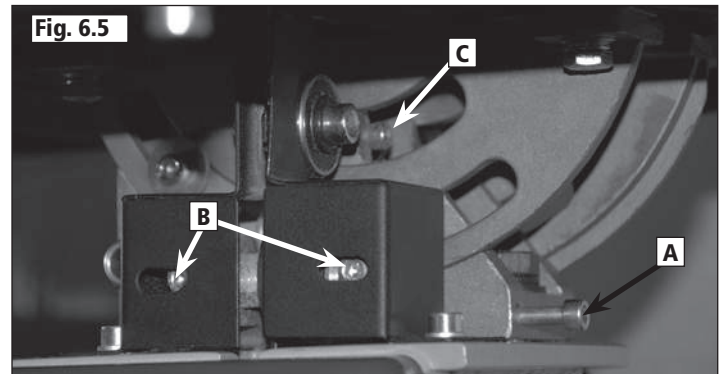
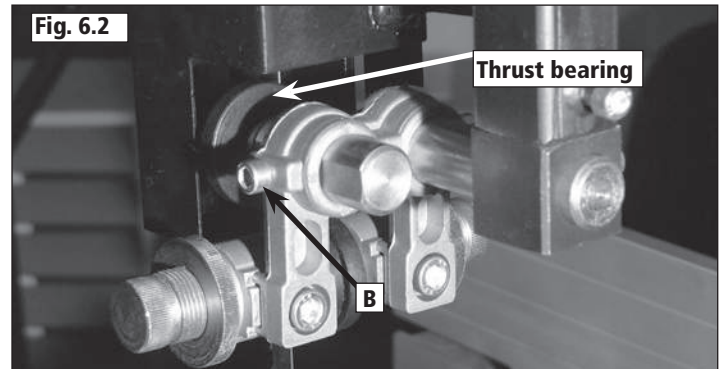


6.2 Adjusting Lower Guides

To adjust the lower blade guides, first slacken off the hex socket screw - A **see Fig. 6.5**, move the guide carrier casting so the guides are just behind the gullets of the blade. Next set the roller guides as near as possible to the blade without actually touching. This is done by releasing the hex head socket screw - B **see Fig. 6.5** on each side of the blade. Finally adjust the rear thrust bearing to be just clear of the back of the blade **see Fig. 6.6**. To do this first unlock the Hex socket screw - C **see Fig. 6.5** then using the adjustment knob at the rear, position the thrust bearing **Fig. 6.7**.

6.3 Adjusting the cutting height

Once the blade is set, the cutting height must be adjusted so there is maximum guarding for the blade and so that the blade guides are providing optimum support to the blade. To adjust the cutting height loosen the rise and fall lock knob and turn the rise and fall handwheel to raise or lower the guide post/upper blade guide assembly to the desired height **Fig. 6.8**. The upper blade guide should provide approximately 5 mm clearance above the workpiece. After the desired position has been set tighten the guide post lock knob. Always check the guide bearing for slight adjustment when the height of cut is changed.



6. Adjustment of Guides & Further Operations - cont.



CAUTION!

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

6.4 Adjusting the drive belt tension

Use the crank handle, **Fig. 6.9** to adjust the tension of the drive belt. Rotate the handle anti-clockwise to increase the tension and clockwise to decrease tension. As a guide the belt is adequately tensioned when using the index finger to impart reasonable pressure on the belt - the belt should not deflect more than 1/4". But like tensioning a bandsaw blade, this is very subjective and the best test is in operation, if the belt isn't slipping or wearing excessively then the drive belt is tensioned correctly.

6.5 Changing the Blade Speed

The BS400 has two blade speeds 820 m/min for wood and 480 m/min for some plastics and acrylics. This machine is not suitable for cutting metals.

The lower bandwheel has two integral multi vee form pulleys and the motor shaft has a twin multi vee form pulley.

The vee belt passes around the bandwheel pulley, the motor pulley and the plain tension roller. The belt tension is released and applied by using the crank handle, this moves the tension roller and allows the speed to be changed, see **Fig. 6.9**.

High Speed 820 m/min

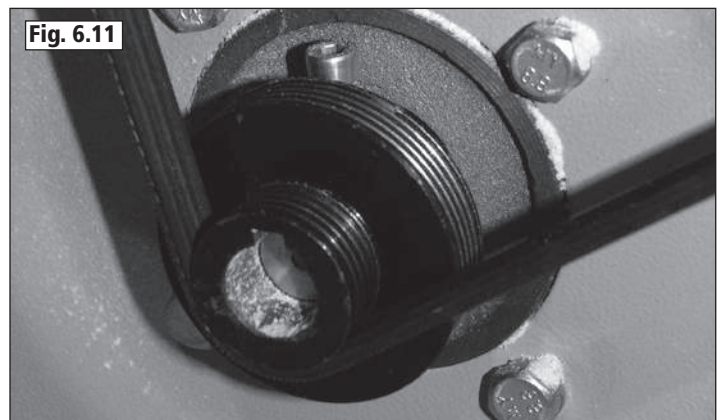
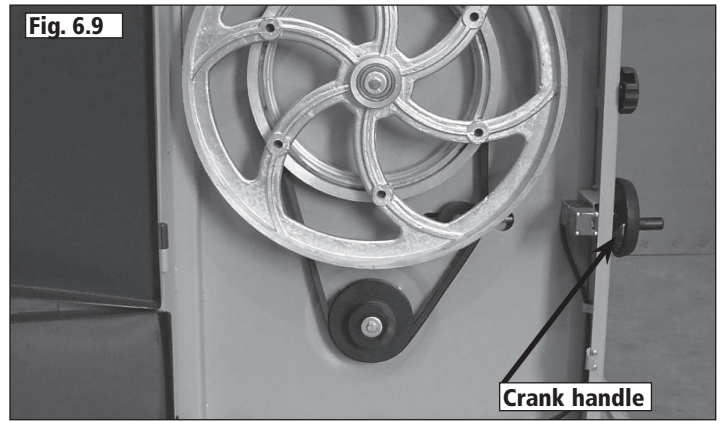
Before changing the speed always make sure the machine has been isolated from the mains supply. For the high speed the belt should be fitted to the rear pulley on both the motor and bandwheel, **Fig. 6.10**.

Lower Speed 480 m/min

Before changing the speed always make sure the machine has been isolated from the mains supply. For the low speed the belt should be fitted to the front pulley on both the motor and bandwheel, **Fig. 6.11**.



After any adjustment of the belt ensure the poly vees are correctly located in the vee slots as failure to do so could damaged the belt in use.



7. Operation and Bandsawing Practice

Basic Bandsawing Principles

- The blade cuts on a continuous down stroke.
- Slowly feed the workpiece towards the blade, using only light pressure whilst letting the blade do the cutting. Always use a push stick and take care.
- Firmly hold the workpiece and feed it towards the blade slowly, using the push stick and keeping your hands well away from the blade.
- For best results the blade must be sharp. Damaged or worn blades should always be replaced.
- Select the correct blade for the job, depending on the thickness of the wood and the cut to be made (see blade selection).
- For straight cutting use the rip fence supplied.
- When cutting shapes, follow the design marked out by pushing and turning the workpiece evenly. Do not attempt to turn the workpiece without pushing it, as this may cause the workpiece to get stuck, or the blade to bend.



CAUTION! Particular care should be taken towards the end of the cut as there will be a sudden decrease in resistance and care must be taken to stop hands from being thrown towards the blade. Always use a push stick.

Always ensure that your machine is properly maintained and clean. Before commencing work on an important project, it is advisable to familiarise yourself with the operation of the equipment by practising on low value or scrap materials.

Complicated Cutting

Very complicated cuts and small radius curves are the best accomplished with the aid of pre-drilled holes combined with a few tangential or radial cuts. This technique will achieve excellent results without putting undue tension on the blade and blade guide assembly.



WARNING! In circumstances such as cutting deep or wet timber, the work piece may close up behind the blade causing it to stall. In the event that the blade stalls whilst cutting, ease the work piece backwards slightly, to release feed pressure from the blade. Allow the blade to reach full speed before continuing to feed the work piece in to the blade. If the blade fails to move when feed pressure is released, immediately switch off the machine and disconnect the power supply before attempting to free the blade from the work piece.



WARNING! If any component of the machine fails whilst in use or if the blade should break whilst the machine is running, immediately switch off the machine and disconnect from the power supply. Remove the faulty component and replace only with genuine Record Power replacement parts. Any electrical components should only be replaced by a suitably qualified person. To replace a broken blade, please refer to the section of this manual entitled "Band saw Blade Set Up". Always remember to fully release the blade tension mechanism before attempting to fit a new blade. If you are in any doubt about using the machine following a failure or if you need to order replacement spare parts or blades, please contact customer services in your country.

Restarting

In the Event of a Blockage or if the Machine Stalls

If the bandsaw stalls due to the blade becoming trapped in the work piece, switch it off immediately by pressing the emergency stop button and wait for the machine to come to a complete stop before proceeding further.

If the blade is trapped within the work piece, it may be necessary to prise the work piece apart slightly using a suitable lever in order to free the blade. If it is not possible to free the blade using this method, then it may be necessary to cut the blade using suitable side cutters or tin snips. Replace the blade if necessary and ensure that it is correctly tracked and tensioned and that both doors of the bandsaw are fully closed and secured 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 bandsaw 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. If a cutting operation was taking place when the power supply was interrupted, then it may be necessary to free the blade from the work piece before attempting to re-start the machine.

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

Blade Selection (TPI)

The selection of the best blade configuration (see the table below) is necessary for optimum cutting performance.

- Correct blade choice is primarily dependant on two factors: material thickness and material type.
- Greater TPI should be selected as material thickness decreases.
- However, if the TPI is too great, the tooth loading will be insufficient to enable penetration; and cutting. The teeth will also rapidly lose their sharpness.
- For thicker material a lower TPI should be used otherwise the gullet will not be sufficient to clear the waste and the blade will stall or burn the wood.
- In general a minimum of 3 teeth should be in contact with the wood at all times during cutting.

The accompanying blade selection chart (see the table opposite) gives guidance on the TPI that should give the best results when cutting a variety of material types and thickness. The table below provides recommendations on selecting the correct blade for a variety of commonly used materials. If in doubt about any aspects of blade selection contact Customer Services in your country.

The table provides a guide to selection only. Exact tooth configurations are not always available, nor are all blade configurations covered, but the principles remain the same. For special applications, custom blades can be supplied please call Customer Services in your country and we can advise you accordingly on your specific needs.

7. Operation and Bandsaw Practice - Cont.

Material	Material Thickness			
	<6 mm	6-12 mm	12-25 mm	>25mm
Perspex	16 TPI	14 TPI	-	-
Chipboard	-	6 TPI	3-6 TPI	3-4 TPI
Fibre board	16 TPI	14 TPI	-	-
Hardboard	10 TPI	-	-	-
Plywood	10 TPI	8 TPI	6 TPI	3-4 TPI
Strawboard	14 TPI	10 TPI	-	-
Cork	14 TPI	6 TPI	3 TPI	3-4 TPI
Leather	14 TPI	-	-	-
Rubber	10 TPI	8 TPI	-	-
Wood -log	-	-	-	3-4 TPI
Wood -soft	6 TPI	3-6 TPI	3-4 TPI	3-4 TPI
Wood -hard	6 TPI	3-6 TPI	3-4 TPI	3-4 TPI
Wood -wet	-	-	-	3-4 TPI

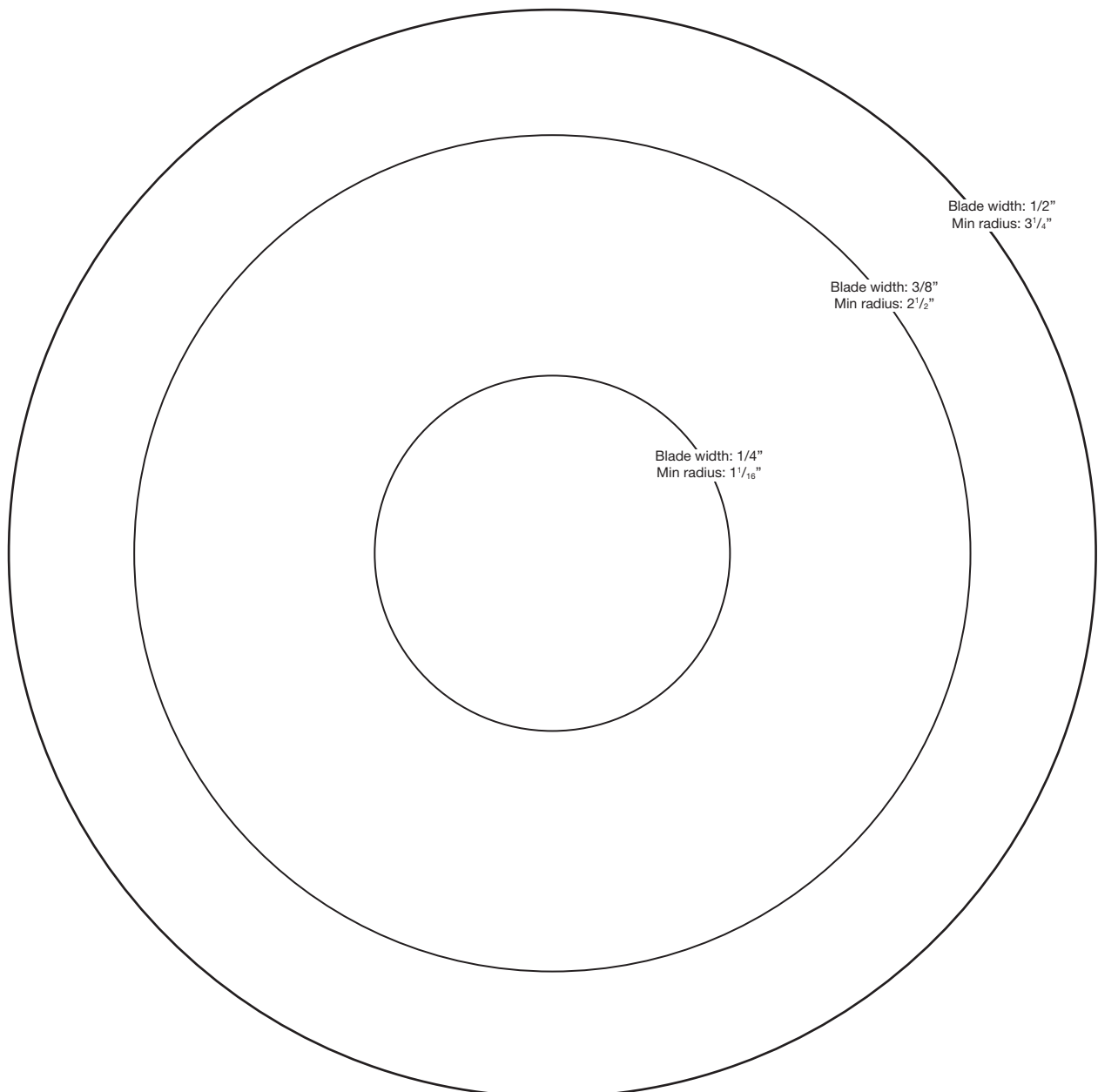
Blade Selection (TPI) - Cont.

Having selected an appropriate blade for the particular thickness and type of material to be sawn, it is essential that the saw blade is allowed to cut freely by not applying too much pressure.

- The need for excessive pressure is likely to be a result of the incorrect blade selection or a worn blade and will result in inaccurate cutting and possibly blade breakage.

Blade Selection (Width)

- When cutting shapes, the width of the blade limits the minimum radius that can be cut.
- If the blade is too wide for the cutting radius the blade will twist and possibly jam or break.
- The smaller the radius the narrower the blade has to be.
The diagram below provides guidance on the minimum radius to be cut with the most commonly used blade widths.



7. Operation and Bandsaw Practice - Cont.

Blade Selection Summary

To see how TPI and width of the blade come together, use the table opposite for reference.

- Regularly examine the blade for excessive damage or cracking as a result of fatigue. If such damage is present replace the blade.
- It is important to use a sharp blade. Dull teeth result in increased feed pressure producing a poor quality finish and an inaccurate cut.



Note:

As well as the blades listed, we can also supply bandsaw blades to almost any specification please contact your preferred stockist or call customer services in your country.

7.9 Record Power BS400 Blade Range

Record Power's high performance bandsaw blades are manufactured to the highest quality tolerances using a specialist premium high carbon steel strip. The extensive quality control program which involves digital tooth profile checks, set analysis, straightness testing, hardness testing and micro structural analysis results in a blade that cuts straighter and has harder, longer lasting teeth. A premium British blade that can last up to ten times longer than other blades on the market.

The following range of blades are available for the BS400:

BB1331406	1/4" x 6 TPI Blade
BB1336	3/8" x 6 TPI Blade
BB1331206	1/2" x 6 TPI Blade
BB1333403	3/4" x 3 TPI Blade
BB133103	1" x 3 TPI Blade
BB133 - 3 PACK	1/4 x 6 TPI,
	3/8" x 4 TPI,
	3/4" x 3 TPI

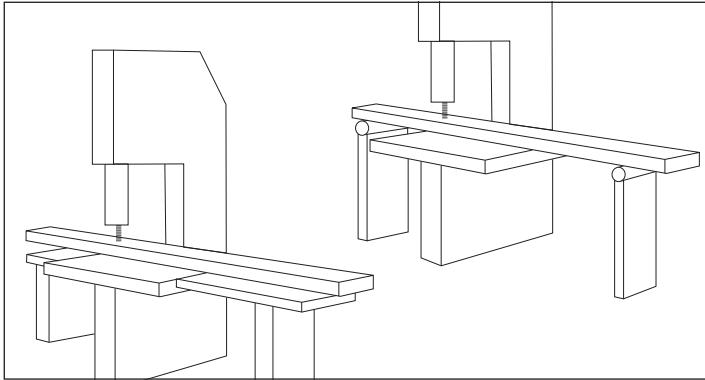
	Narrow Blade Wide Blade		
	Application TIGHT CONTOUR	Application MEDIUM CONTOUR	Application STRAIGHT CUT / LARGE CONTOUR
Coarse Blade Fine Blade	Material Thick / Soft Timber Blade Spec width 1/4" teeth 4 TPI	Blade Spec widths 3/8" teeth 4 TPI	Blade Spec widths 1/2" teeth 4 TPI
	Material General Timber Blade Spec width 1/4" teeth 4 - 6 TPI	Blade Spec widths 3/8" teeth 4 - 6 TPI	Blade Spec widths 1/2" teeth 4 - 6 TPI
	Material Thin / Hard Timber Blade Spec width 1/4" teeth 6 TPI	Blade Spec widths 3/8" teeth 6 TPI	Blade Spec widths 1/2" teeth 6 TPI

7. Operation and Bandsaw Practice - Cont.

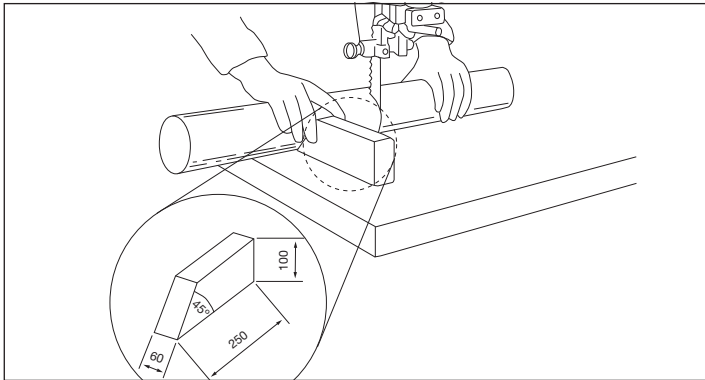
Custom Jigs & Work Support

A bandsaw is one of the most versatile machines in the workshop and with careful preparation many problems encountered on a job can be overcome. By making and using custom jigs repetitive and accurate work can easily be achieved, the following illustrations are some examples of typical jigs and supports used on a bandsaw.

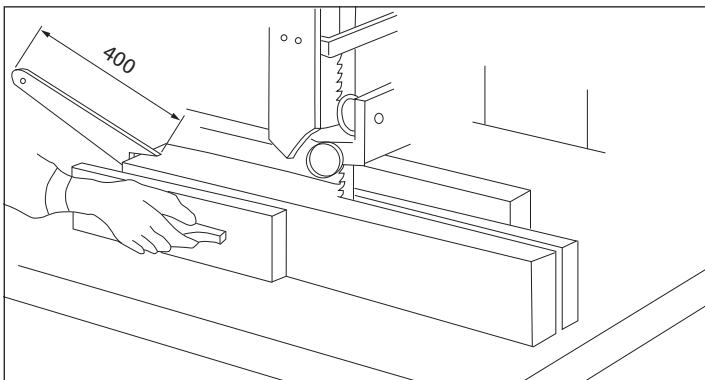
Ex. 1. Supporting large workpieces with roller stands or take off tables.



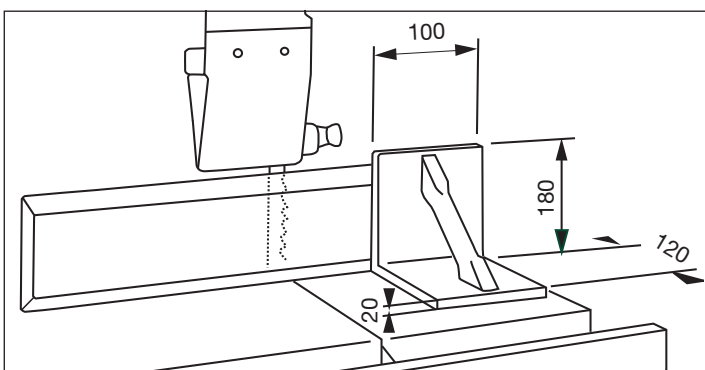
Ex. 2. Always support round pieces with a wedge or vee block. Take extreme care as there is a danger that if the work is not secured properly the blade will snatch the work piece, potentially causing it to spin or bounce back at you.



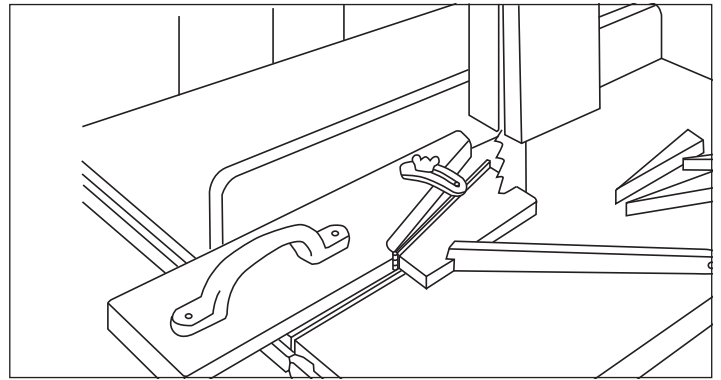
Ex. 3. Use a side pressure pad for accurate cutting of taller material.



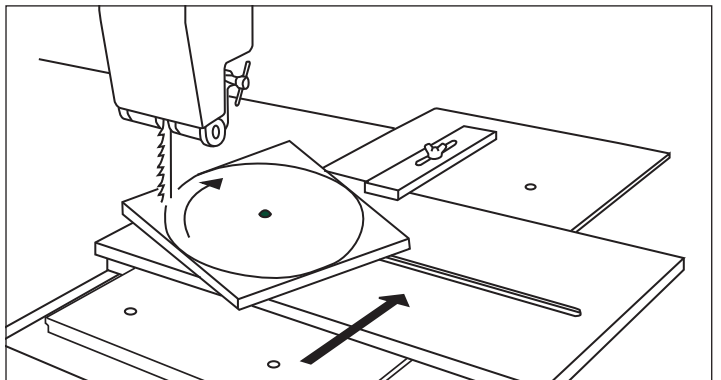
Ex. 4. Chamfered pieces can be cut square using an additional support jig on the opposite side of the work piece to the fence.



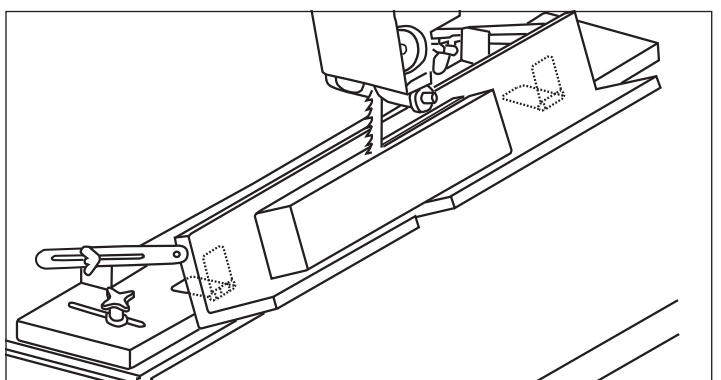
Ex. 5. Jig for accurate repetitive wedges.



Ex. 6. By mounting a registration pin on a slide repetitive circles can easily be achieved.



Ex. 7. Angle cutting jig for accurate repetitive compound angles.



8. 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 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**

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 call customer services in your country.

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

9. Maintenance



CAUTION!

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

9.1 Replacing the bandsaw blade

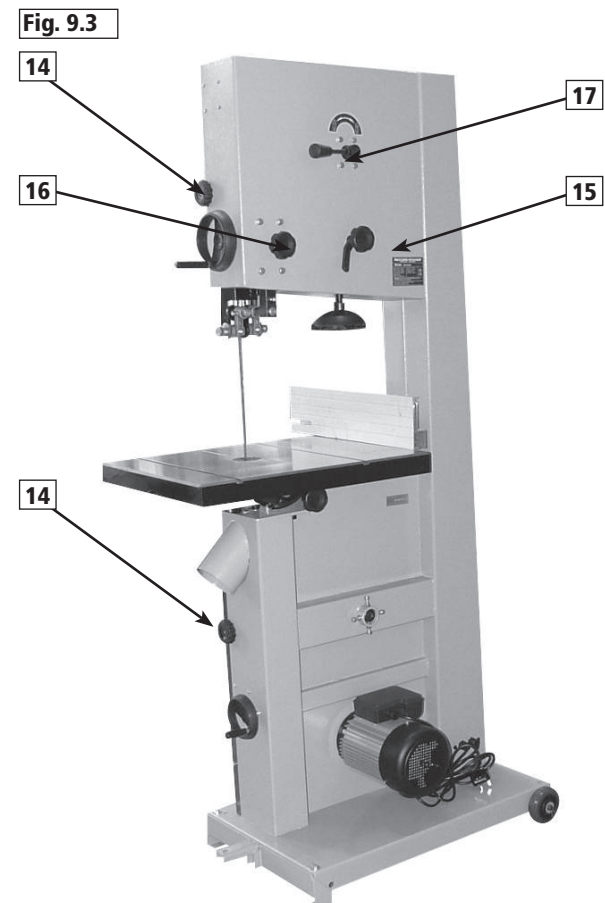
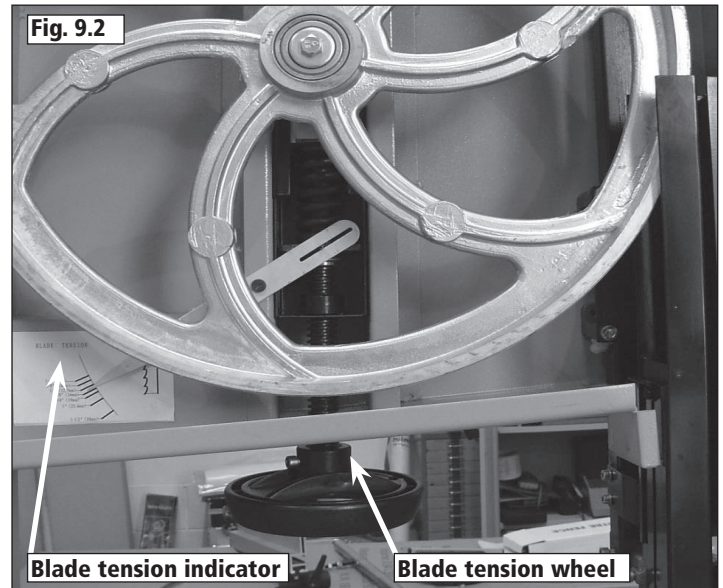
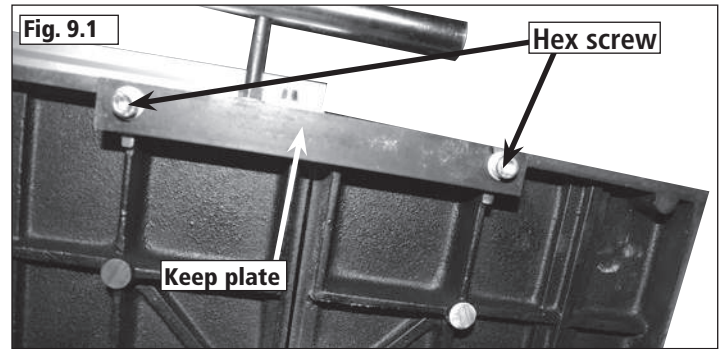


HAZARD! Take great care when unpacking the bandsaw blade as they are usually folded and can spring out very suddenly with great force.

TIP: If the new blade being fitted is a different width to the one being removed, it is advisable to move back and slacken off all blade guides before fitting the new blade as this will make fitting easier. Whenever a different size blade is fitted the blade guides will always need re-setting.

1. Isolate the machine from the power supply.
2. Open the top and bottom bandwheel doors by turning the star handle, **Fig. 9.3 (14)**.
3. Remove the hex socket screw and keep plate from the underside of the table, **Fig 11.1**.
4. Move the cam lever clockwise to release the blade tension. **Fig. 9.3 (17)**.
5. Remove the bandsaw blade by feeding it through the slot in the table, upper blade guides & guard and slot in the spine of the machine taking care not to cut yourself, wear gloves if necessary.
 - Fit the new blade ensuring the blade teeth are pointing downwards and towards you at the position where the blade passes through the table.
 - Ensuring that the blade is fully in place on bandwheel. Simply re-apply tension using the cam handle lever.
 - Adjust the blade tension further if required using the blade tension wheel.
6. Check the blade tracking on the newly fitted blade by turning the upper wheel by hand. The blade should run as close to the centre of the bandwheel as possible. On 1/4", 3/8" and 1/2" blades it may be necessary to run the blade to rear of the bandwheel, see section 5.5.
7. If required adjust the tracking using tracking knob **(15)** and lock knob to the rear of the upper bandwheel housing. When the tracking is correct lock the setting, see section 5.5.
8. Re-set the blade guides, see sections 6.1 & 6.2.
9. Close and lock both the bandwheel doors before reconnecting the power supply.

The blade tension indicator is a guide only and may need re-calibrating periodically. For further information on blade tensioning **see section 5.4**.



9. Maintenance - Cont.



CAUTION!

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

9.2 Replacing the drive belt

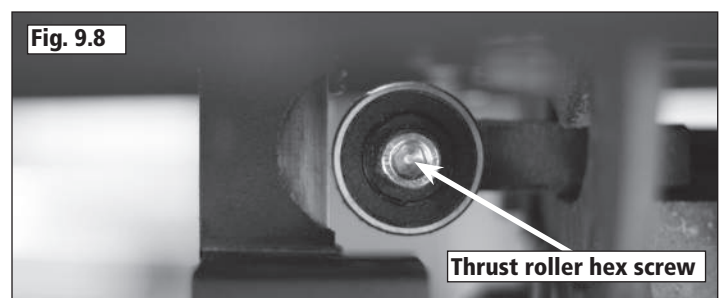
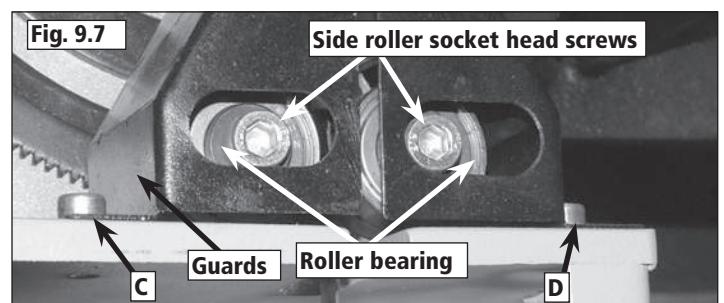
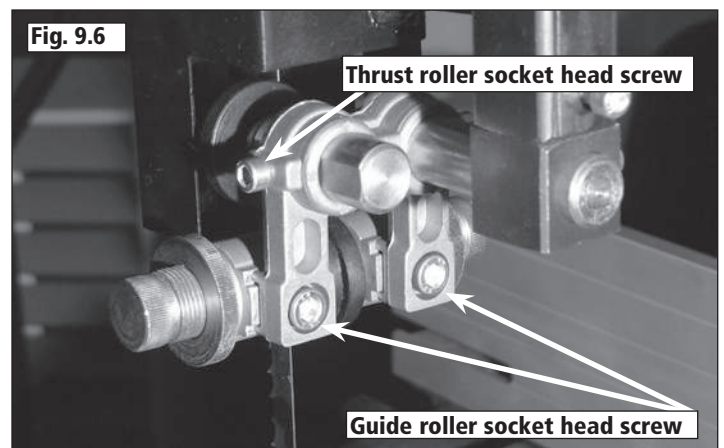
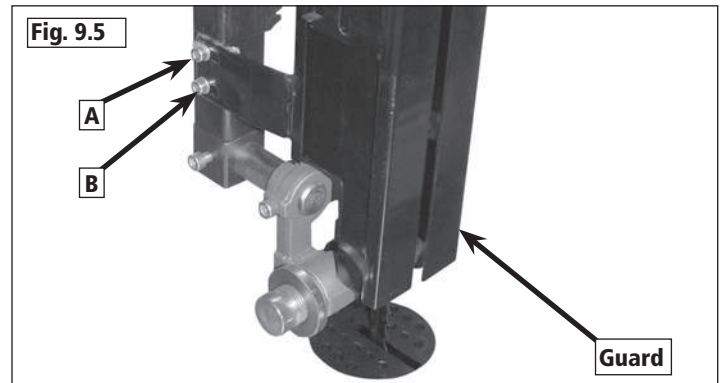
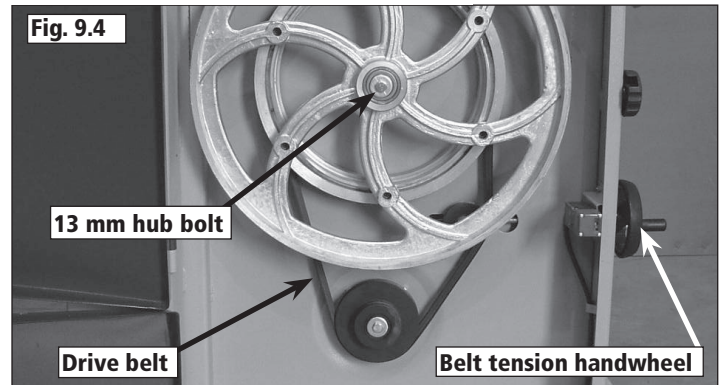
To replace the drive belt first remove the lower bandwheel by undoing the 13 mm bolt on the hub. Then simply loosen the tension on the belt using the tension handwheel, remove the old belt and fit the new one **Fig. 9.4**. Once the drive belt is in place re-fit the lower bandwheel and tighten the bolt. Now tension the drive belt using the tension handwheel. For further information on tensioning the drive belt please see **section 6**.

9.3 The blade guide system

In general usage it is advisable to carefully apply silicon spray to the blade guides to ensure free movement of the rollers, do not use oil or grease for lubrication as this will attract dust and cause the rollers to jam. The blade guide system is a consumable item and depending on usage will wear and need replacing.

When replacing components on the upper guide assembly first ensure that the blade is removed. Undo socket head screws **A & B** then remove the guard, **Fig. 9.5**. Once the guard is removed then the various components can be accessed and replaced. Undo the relevant socket head screw for either the guide rollers or rear thrust pad, **Fig. 9.6**, and fit the new parts. Once the new components are fitted. The blade should be re-fitted as shown in **section 9.1** and the guides adjusted as shown in **section 6**.

When replacing components on the lower guide assembly first ensure that the blade is removed. Undo socket head screws **C & D** and remove the guard, **Fig. 9.7**. Once the guard is removed then the various components can be accessed and replaced. The roller bearing are shown in **Fig. 9.7** and the thrust roller bearing at the rear in **Fig. 9.8**. This is done by simply undoing the relevant socket head screw and replacing the part. Once the new components are fitted. The blade should be re-fitted, **Section 9.1** and the guides adjusted as shown in **section 6**.



9. Maintenance - Cont.

9.4 The table insert

The table insert on a bandsaw is a consumable item, **Fig. 9.9** and will therefore need replacing periodically. This procedure should be carried out with the bandsaw blade removed. To replace the table insert simply push the old insert out from underneath the table and fit the new one into position.

9.5 The bandwheel tyres

The bandwheels on this machine have rubber tyres fitted to the outer rim of the wheel **Fig. 9.10** to protect the set of the blade when in use, also to provide drive and to stop the blade slipping. As part of your regular service schedule inspect the tyres for wear and damage and replace if necessary. Again, this is a consumable part of the bandsaw and will need replacing periodically, depending on usage.

First remove the blade from the bandsaw, then remove the bandwheel by undoing the hex head bolt **Fig. 9.10**. Gently ease the existing tyre from the rim, taking care not to damage the bandwheel. When fitting the new tyre it is a good idea to heat the tyre first in hot water, this softens the rubber up and makes it easier to stretch it over the bandwheel. The tyres before stretching are much smaller than the bandwheel and a good deal of stretching is required to make them fit. It is advisable to get help from a second person who can insert the wheel into the tyre while it is fully stretched. It is easier to replace the tyre with the wheels removed.

9.6 The bandwheel bearings

The bandwheel bearings are sealed for life units which will need replacing periodically depending on usage.

To replace the bearings; first ensure that there is no blade fitted. Remove the hex head bolt from the hub and remove the bandwheel, you will notice that there are two separate bearings fitted in the hub pressed up against each other. Take a brass drift (or similar) and tap one of the bearings out, the second bearing should now be able to be pushed out.

When fitting the new bearings; position by hand in the wheel hub and tap in until the bearing seats against the ridge in the casting, **Fig. 9.11**.

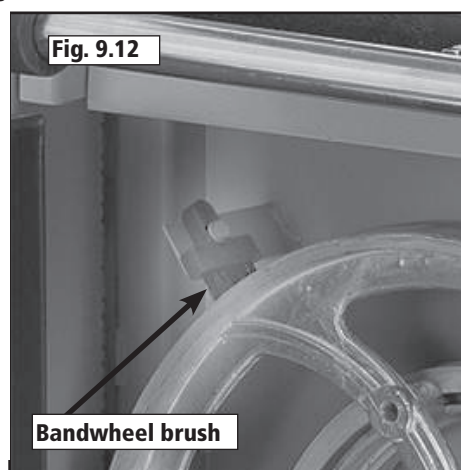
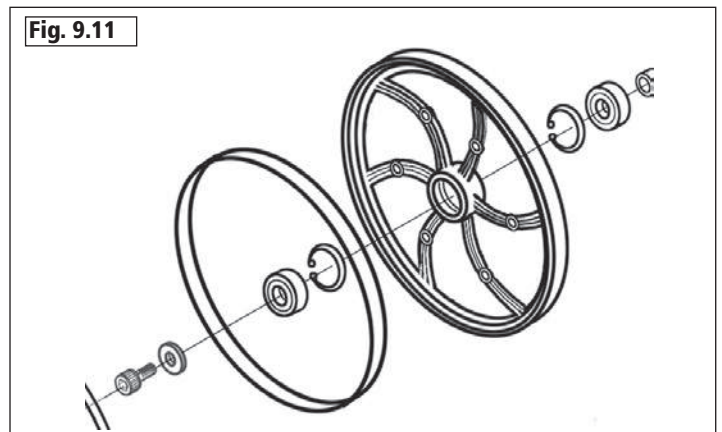
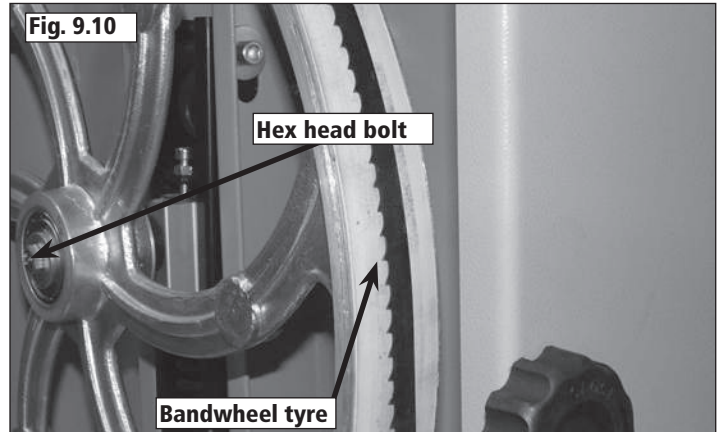
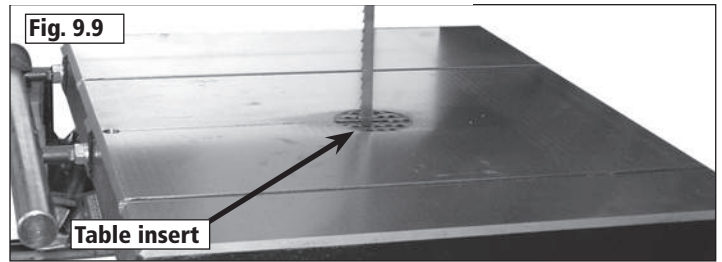
9.7 Cleaning the table

The table is ground from cast iron and if cared for properly will provide smooth, accurate performance. When machining wood a certain amount of resin will be deposited on the surface, to ensure optimum performance the table needs to be properly cleaned at regular intervals.

Firstly brush off all loose particles, then wipe clean with white spirit ensuring that any resin build up is removed. Once the table has been thoroughly cleaned it can now be treated with CWA195 silicone spray or wax. If these guidelines are followed the timber will glide smoothly across the table.

9.8 The bandwheel brush

The purpose of this brush is to remove any excess sawdust and resin from the bandwheel and tyre, **Fig. 9.12**. This brush will need adjusting periodically depending on usage. Before each use inspect the brush and make sure it is making sufficient contact with the bandwheel to remove sawdust from the tyre. The brush should be touching but not applying pressure to the wheel. If it isn't; loosen the fixing and adjust accordingly so it makes contact with the wheel. When the brush cannot be adjusted any nearer the wheel due to the bristles being worn then it must be replaced. Periodically the brush may also become clogged up with resin (this is especially common when cutting a long run of soft wood) if this occurs this resin must be scraped off, as performance of the brush will be reduced.



10. 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'.

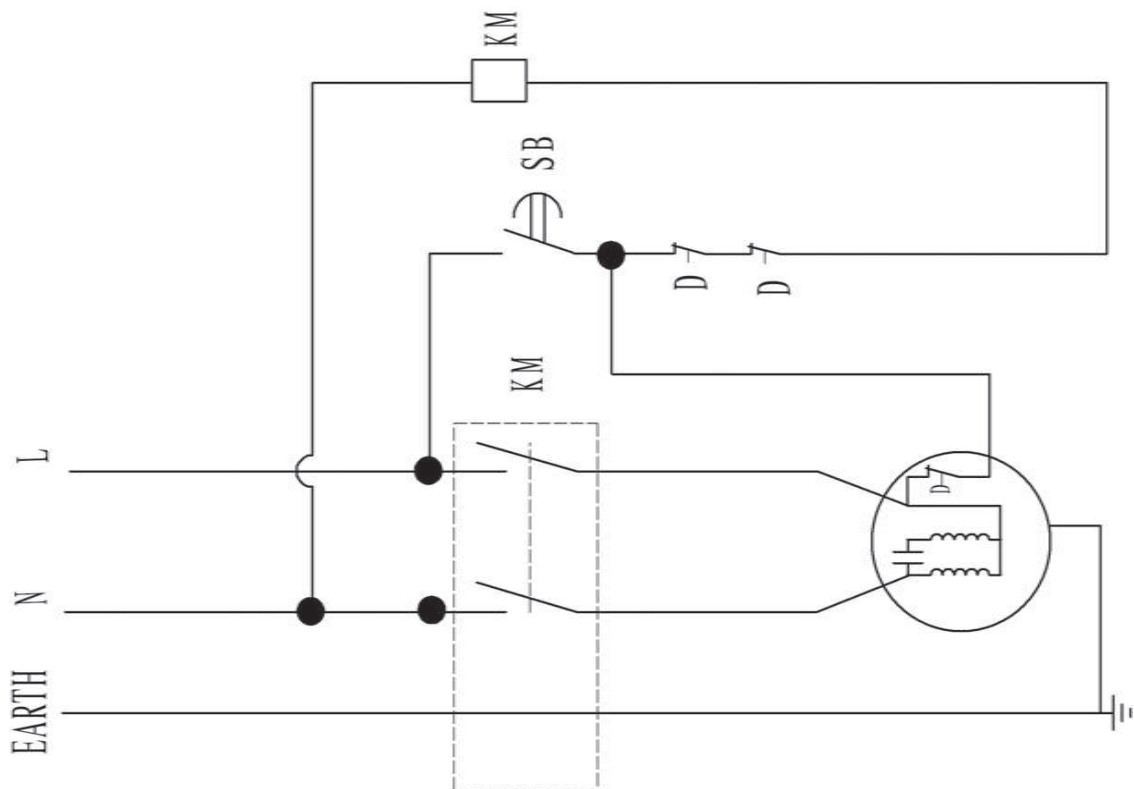
The wire coloured black must always be fitted to the terminal marked 'L2'.

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.



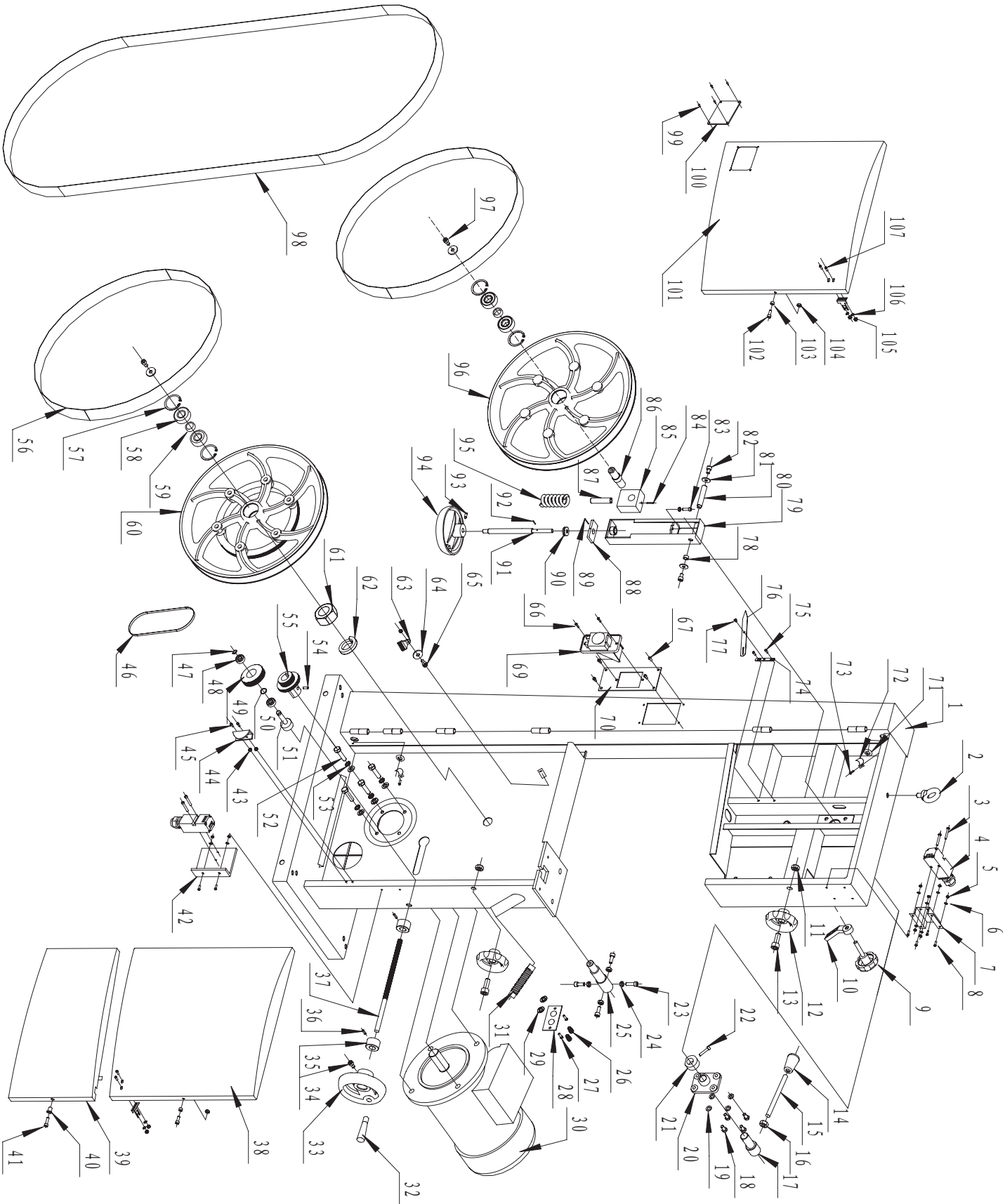
11. Trouble Shooting



WARNING: for your own safety, always turn off and unplug the machine before carrying out any troubleshooting.

Trouble	Probable Cause	Remedy
The machine does not work when switched on.	1. No power supply. 2. Defective switch. 3. Doors not closed fully.	Check the cable for breakage. Contact your local dealer for repair. Ensure both doors are closed fully.
The blade does not move with the motor running.	1. The quick release lever or blade tension wheel has not been tightened. 2. The blade has come off one of the wheels. 3. The saw blade has broken. 4. The drive belt has snapped.	Switch off the motor, tighten the quick Release lever or blade tension handwheel. Refit blade, track and tension. Replace the blade. Replace the belt.
The blade does not cut in a straight line.	1. Fence for cutting not used. 2. Too fast feed rate. 3. The blade teeth are dull or damaged 4. Blade guides not suitably adjusted	Use the fence. Put light pressure on the workpiece & make sure the blade does not bend. Use a new blade. Adjust the blade guides.
The blade does not cut, or cuts very slowly.	1. The teeth are dull, caused by cutting hard material or long use. 2. The blade was mounted in the wrong direction.	Replace the blade, use a 6 TPI. blade for wood and soft materials. Use a 14 TPI. blade for harder materials. A 14 TPI. blade always cuts slower due to the finer teeth and the slower cutting performance. Fit the blade correctly.
Sawdust builds up inside the machine.	1. Occurs through normal use.	Clean the machine regularly. Open the hinged door and remove the sawdust with a dust extractor.
Sawdust inside the motor housing.	1. Excessive dust build-up on the machine exterior components.	Clean the ventilating slots of the motor with a dust extractor. From time to time remove the sawdust to prevent it from being sucked into the housing.
The machine does not cut at 45° or 90° angles.	1. The table is not at right angles to the blade. 2. The blade is dull or too much pressure was put on the workpiece.	Adjust the table. Replace the blade or put less pressure on the workpiece.
The blade cannot be properly positioned on the bandwheels.	1. The wheels are not in alignment. Defective bearing. 2. The blade tracking knob hasn't been properly adjusted. 3. Poor quality blade.	Contact your local dealer for repair. Adjust the knob. Replace the blade.

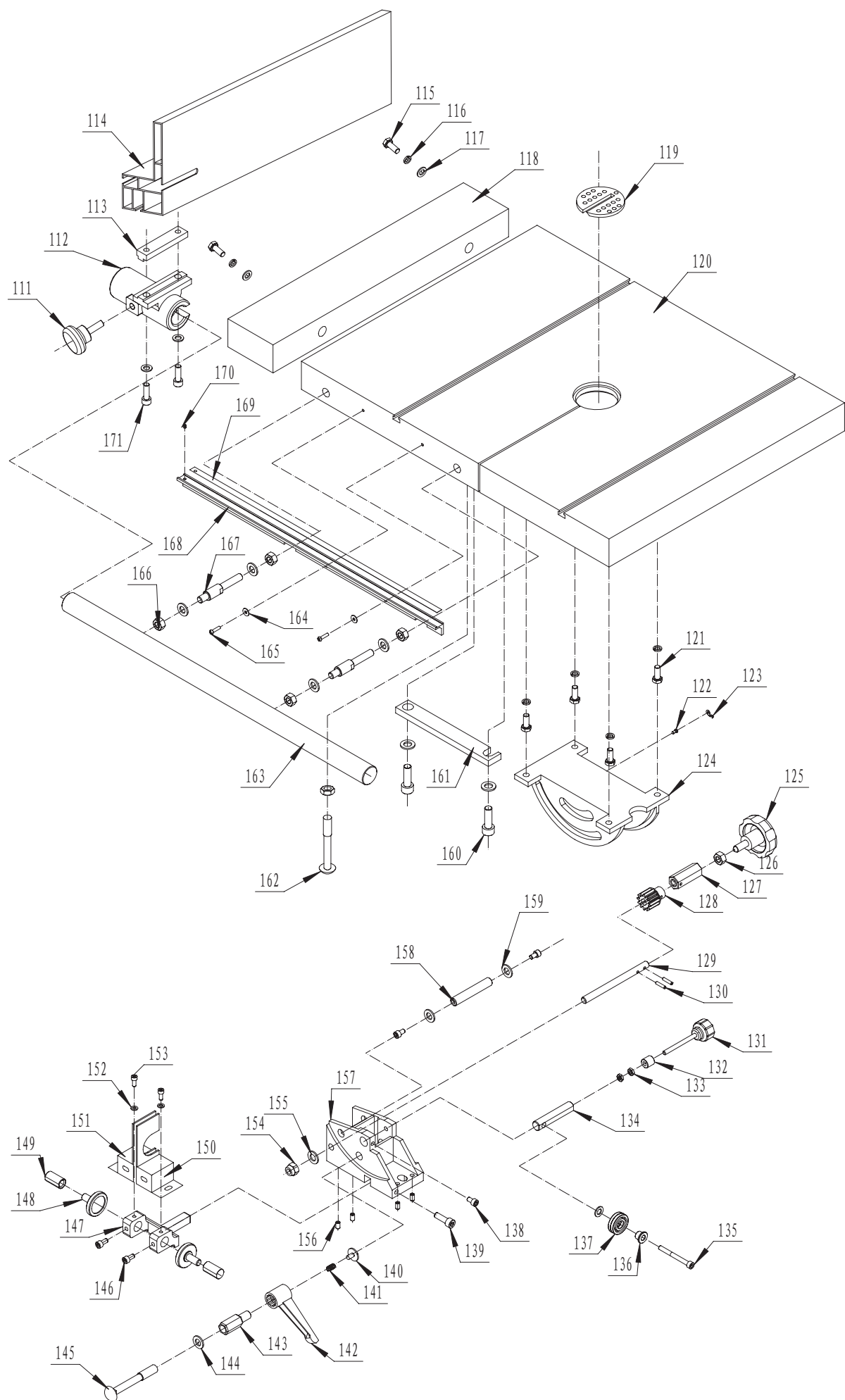
12. Exploded Diagrams & Parts Lists



12. Exploded Diagrams & Parts Lists

Key No.	Part No.	Description	Key No.	Part No.	Description
1	JMBS16001011000B	Frame Assembly	67	M5X12GB818Z	Pan Head Screw
2	M12GB825Z	Ring Bolt	68	M5X12GB818Z	Pan Head Screw
3	M4X30GB818Z	Pan Head Screw	69	DZ07-16ZF/230V	Switch
4	QKS8	Safety Switch	70	JL26010008B	Switch Plate
5	M4GB6170Z	Hex Nut	71	1905010	Rubber Ring
6	WSH4GB97D1Z	Flat Washer	72	1502014-02	Cord Plate
7	JL26010012	Switch Bracket	73	M5X12GB818B	Pan Head Screw
8	M4X10GB818Z	Pan Head Screw	74	JL27010005	Position Plate
9	JL26030015-001S	Adjusting Knob	75	M5X10GB818Z	Pan Head Screw
10	JL26030016-001S	Adjusting Handle	76	JL26010004	Indicator
11	M6GB889Z	Hex Nut	77	JL26010010	Indicator Screw
12	JL26010006-001S	Handle	78	JL26030017A	Support Tube
13	M6X20GB70Z	Hex Bolt	79	JMBS1601041000	Tension Bracket Asm.
14	1904011	Knob	80	JL26030001A	Support Shaft
15	JMBS160104009	Rod	81	WSH8GB5287Z	Big Washer
16	M12GB6170B	Hex Nut	82	M8X10GB70Z	Screw
17	JL26030005	Tension Shaft	83	M6X35GB70Z	Screw
18	M8X16GB5783Z	Hex Bolt	84	PIN5X35GB879D1B	Roll Pin
19	WSH8GB97D1Z	Flat Washer	85	JMBS1601040011	Slide Bracket
20	JL26030006	Tension Base	86	JMBS1601040006A	Upper Shaft
21	JL26030007	Tube	87	JL26030002	Spring Tube
22	M8X16GB70Z	Screw	88	JL26030010	Plate
23	M8X25GB5783Z	Bolt	89	PIN2D5X16GB879B	Roll Pin
24	M8GB6170Z	Hex Nut	90	BRG51100GB301	Bearing
25	JMBS1601020004	Lower Shaft	91	JMBS1601040005A	Threaded Shaft
26	JL20072101	Strain Relief	92	PIN2D5X10GB879B	Roll Pin
27	1-M6X12GB818B	Pan Head Screw	93	M6X12GB78B	Screw
28	JL26010011	Cord Plate	94	JMBS1601040008-001S	Big Handwheel
29	JL20072102	Strain Relief Nut	95	JL26030011	Tension Spring
30	KH8023582-07	Motor	96	JMBS1601021001	Upper Wheel
31	JMBS1601011111	Duct Pipe	97	M8X16GB70Z	Screw
32	JL26020014-001S	Handle Assembly	98	JMBS1601020005	Blade
33	JL26020012-001S	Handle	99	RVT3X7GB12618A	Rivet
34	M6X16GB70Z	Screw	100	JL26010001	Window
35	CLP10GB884Z	Retainer Ring	101	JMBS1601012000A	Upper Door Asm.
36	M5X8GB78Z	Screw	102	M6X20GB70Z	Screw
37	JL26020013	Tension Shaft	103	JL26010007	Tube
38	JMBS1601013000A	Lower Door Assembly	104	M6GB8897	Lock Nut
39	JMBS1601014000	Small Door Assembly	105	M4GB170Z	Hex Nut
40	M6X15GB/T17880D3Z	Rivet Nut	106	WSH4GB97D1Z	Flat Washer
41	M6X25GB70Z	Bolt	107	M4X10GB818Z	Pan Head Screw
42	JL27010016	Switch Bracket			
43	M4GB889Z	Nut			
44	JL26010009	Plate			
45	M4X12GB818Z	Pan Head Screw			
46	JMBS1601020002	Belt			
47	CLP12GB894D1B	Retainer Ring			
48	BRG80101GB278	Bearing			
49	JMBS1601020006	Tension Wheel			
50	CLP28GB893D1B	Retainer Ring			
51	JL26020009	Tension Wheel Shaft			
52	M8X16GB5783Z	Hex Bolt			
53	WSH8GB93Z	Spring Washer			
54	M6X12GB80B	Screw			
55	JMBS1601020001	Motor Pulley			
56	JMBS1601020003	Tire			
57	CLP47GB893D1B	Retainer Ring			
58	BRG180204GB278D	Bearing			
59	JL26010018-001S	Tube			
60	JMBS1601022100	Lower Wheel Assembly			
61	M27X2GB6171Z	Nut			
62	WSH27GB93Z	Washer			
63	JL26010003	Brush			
64	WSH6GB96Z	Big Washer			
65	M6X25GB5781Z	Bolt			
66	M4X10GB823Z	Pan Head Screw			

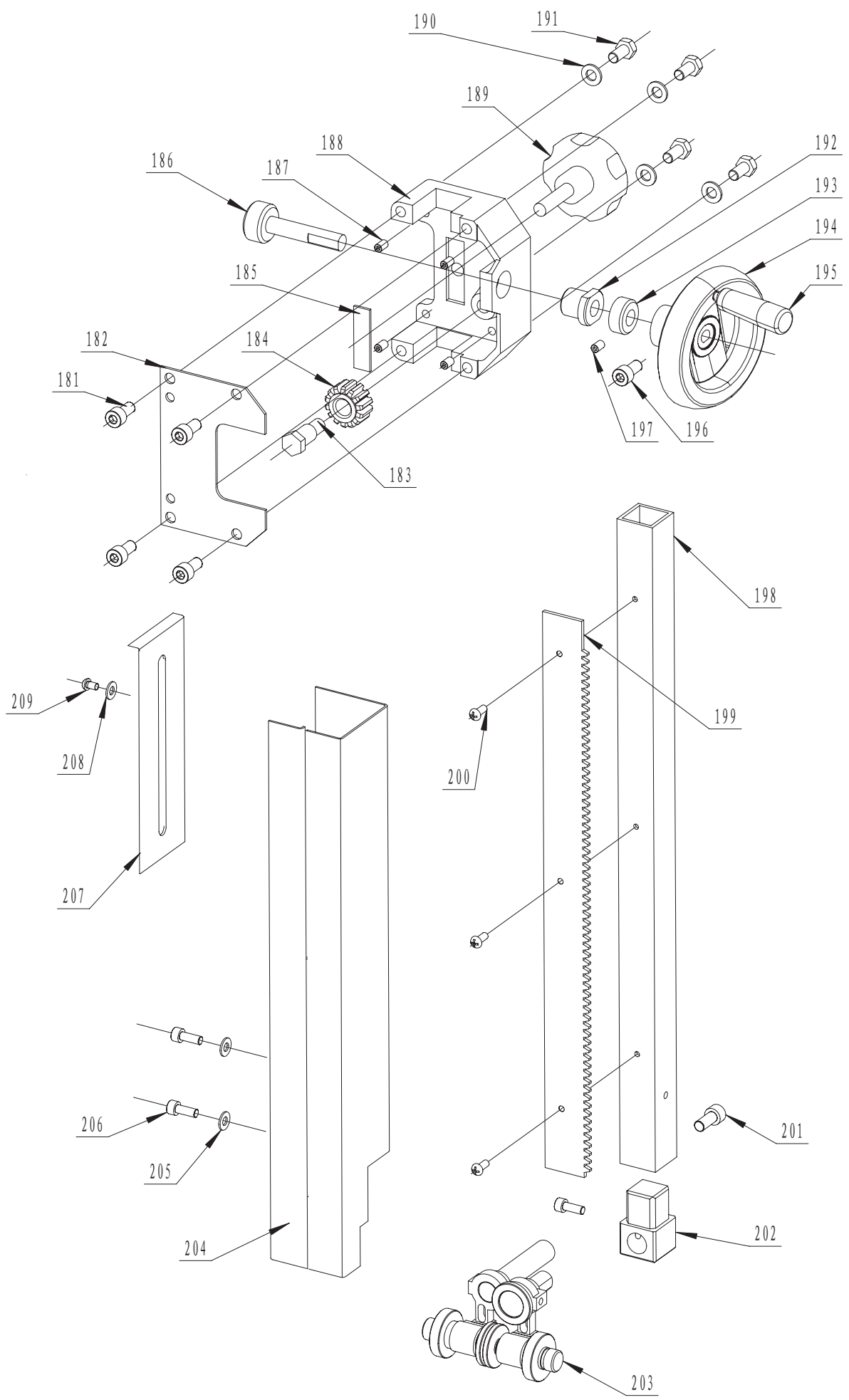
12. Exploded Diagrams & Parts Lists - Cont.



12. Exploded Diagrams & Parts Lists

Key No.	Part No.	Description	Key No.	Part No.	Description
111	JL28060017	Handle	142	JL41031101	Lock Handle
112	JMBS1601060003	Handle Base	143	JL26053001A	Hex Thread Rod
113	JMBS1601060002	Lock Plate	144	WSH12GB97D1Z	Flat Washer
114	JMBS1601060001A	Fence	145	M12X90GB801Z	Carriage Bolt
115	M8X16GB5781Z	Bolt	146	M6X12GB70D1Z	Screw
116	WSH8GB93Z	Spring Washer	147	JL26051001C	Lower Guide
117	WSH8GB97D1Z	Flat Washer	148	JL26043006A	Plate
118	JMBS1601030003	Table Extension	149	JL27051004	Lower Guide Tube
119	JL26050008-001S	Table Insert	150	JL26051002C	Left Guard
120	JMBS1601030001A	Table	151	JL26051003C	Right Guard
121	M8X20GB5783Z	Screw	152	WSH6GB97D1Z	Flat Washer
122	ST2D9X6D5GB845Z	Tapping Screw	153	M6X10GB70Z	Screw
123	JL26050005A	Indicator	154	M10GB889Z	Lock Nut
124	JL26050002B	Trunnion	155	WSH10GB97D1Z	Flat Washer
125	JL26040015-001S	Lock Handle	156	M6X12GB77Z	Screw
126	M10GB6170B	Hex Nut	157	JL26050004C	Trunnion Seat
127	JL26054003	Hex Collar	158	JL26050011	Guide Shaft
128	JL26054002	Gear	159	WSH6GB96Z	Big Washer
129	JL26054001	Gear Shaft	160	M8X20GB70Z	Screw
130	PIN4X18GB879B	Roll Pin	161	JL2705009	Mounting Plate
131	JL26052002A001S	Handle	162	M8X85GB801Z	Screw
132	JL26052003	Tube	163	JMBS1601060004A	Guide Bar
133	M6GB6172B	Hex Nut	164	WSH5GB97D1	Flat Washer
134	JL26052001A	Rod	165	M5X16GB818Z	Pan Head Screw
135	M8X25GB70Z	Screw	166	M8GB6170Z	Hex Nut
136	JL26041006	Bearing Tube	167	JL28060005A	Support Shaft
137	BRG180201GB278	Bearing	168	JMBS1601030002A	Scale Bracket
138	M5X12GB70Z	Bolt	169	JMBS1601030004	Scale
139	M6X60GB70Z	Screw	170	M4X4GB823Z	Pan Head Screw
140	M6X10GB947B	Screw	171	M6X20GB70Z	Screw
141	JL4031102	Spring			

12. Exploded Diagrams & Parts Lists - Cont.



12. Exploded Diagrams & Parts Lists

Key No.	Part No.	Description
181	M8X16GB70Z	Screw
182	JL26040002	Cover
183	JL26040006	Screw
184	1501006	Helical Gear
185	JL26040007	Plate
186	JL26040004	Worm
187	M6X12GB77Z	Screw
188	JL26040008	Gear Bracket
189	JL26040015-001S	Lock Handle
190	WSH8GB96Z	Big Washer
191	M8X16GB5783Z	Hex Bolt
192	JL26040003	Shaft Tube
193	CLP12GB884B	Retainer Ring
194	JL26020012C-001S	Small Handwheel
195	JL26020014-001S	Small Handle Asm.
196	M6X16GB70Z	Screw
197	M5X8GB78Z	Screw
198	JMBS1601050001A	Guide Rod
199	JMBS1601050005	Rack
200	M4X10GB819Z	Screw
201	M6X12GB70Z	Screw
202	JL26041005	Bracket
203	JMBS1601052000A	Upper Guide Asm.
204	JMBS1601051000	Blade Guide
205	WSH5GB97D1Z	Flat Washer
206	M5X10GB70Z	Screw
207	JMBS1601050002	Slide Plate
208	JL26040011	Flat Washer
209	M5X10GB81B	Screw

EU Declaration of Conformity

Cert No: EU / BS400 / 1

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

- 1. Type: **Bandsaw**
- 2. Model No: **BS400**
- 3. Serial No

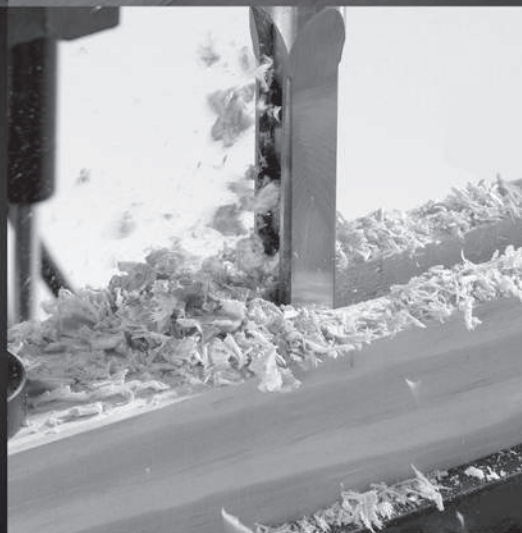
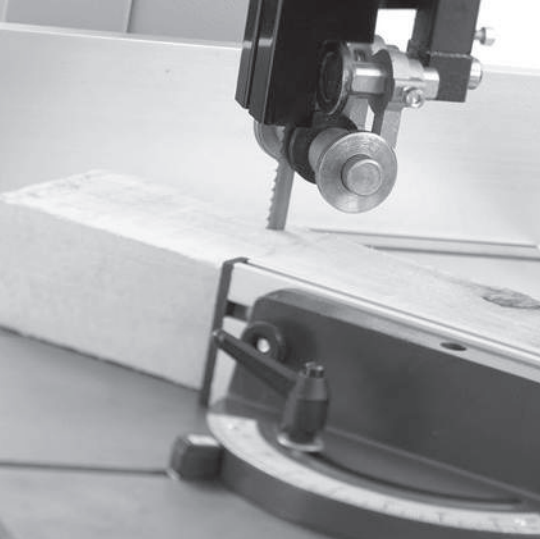
Conforms with the following directives:-

MACHINERY DIRECTIVE (repealing / replacing Directives)	2006/42/EC
LOW VOLTAGE DIRECTIVE	2006/95/EC
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE	2004/108/EC EN 55014-1:2006 EN 61000-3-2:2006 EN 61000-3-3:1995+A1+A2 EN 55014-2:1997+A1

and conforms to the machinery example for which the
EC Type-Examination Certificate No. AN50154095, BM50162639, AE50172471
at: Am Grauen Stein, D-51105. Cologne, Germany

and complies with the relevant essential health and safety requirements.


Signed.....Dated: **01/01/2013**
Andrew Greensted
Managing Director



RECORD POWER ESTABLISHED 1909®

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