

Clarke® WOODWORKER



190mm (1½") BANDSAW
Model: CBS 190

**OPERATING & MAINTENANCE
INSTRUCTIONS**





SPECIFICATIONS

Motor	230VAC 50Hz 1Ph
Power Rating	350W
Capacitor	6 uF 450V
Current Rating	3.5 Amps
Blade Speed	14.7 M/s
Blade Length	1425mm (6tpi)
Max. Cutting Thickness	80 mm
Max. Cutting Width	190 mm
Table Size	300 x 300 mm
Table Tilt	45° right
Dimensions	425x370x675 mm
Weight net/gross.....	17.5/20 kg
Part Number	6460130

These specifications are correct at the time of going to print. Clarke International reserves the right to change specifications at any time in the interests of safety or design change.

PARTS and SERVICE

Please contact your nearest dealer, or
CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400

PARTS & SERVICE FAX: 020 8558 3622

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

Thank you for purchasing this CLARKE CBS190 - 7½" Bandsaw, specifically designed for hobby and DIY use.

Before attempting to operate the machine, please read this instruction manual thoroughly, and carefully follow all directions, paying particular attention to the safety instructions. By doing so you will ensure the safety of both yourself and others around you, and you can also look forward to the Bandsaw giving you long and trouble free service.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase. This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

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SAFETY PRECAUTIONS

GENERAL SAFETY RULES FOR OPERATING MACHINERY

WARNING:

As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked, or ignored, personal injury to the operator may result.

1. READ and BECOME FAMILIAR with the entire operating manual. Learn the applications and limitations of the machine as well as the specific potential hazards peculiar to it.
 2. ALWAYS ENSURE THAT ADEQUATE LIGHTING is available. A minimum intensity of 300 lux should be provided. Ensure that lighting is placed so that you will not be working in your own shadow.
 3. CHECK for DAMAGE. Before use, any damaged part, such as a guard etc., should be checked to ensure that it will operate properly, and perform its intended function. Check for alignment of moving parts, breakage of parts, mountings, and any other condition that may effect the machines' operation. Any damage should be properly repaired or the part replaced. If in doubt, DO NOT USE the machine. Consult your local dealer.
 4. DISCONNECT the MACHINE from the power supply before servicing and when changing accessories or blades etc.
 5. KEEP GUARDS in place and in working order.
 6. ALWAYS WEAR SUITABLE SAFETY GOGGLES manufactured to the latest European Safety Standards. Also use a face or dust mask if cutting or sanding operation is dusty. Everyday eye glasses do not have impact resistant lenses, they are NOT safety glasses.
 7. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
 8. ALWAYS wear Ear Protectors/Defenders
 9. DON'T FORCE the Machine. It will do a better and safer job at the rate for which it was designed.
 10. REMOVE ADJUSTING KEYS AND SPANNERS.
- Form the habit of checking to see that keys and adjusting wrenches are removed from the machine before switching on.
11. DRUGS, ALCOHOL, MEDICATION. Do not operate machine while under the influence of drugs, alcohol or any medication.
 12. USE RECOMMENDED ACCESSORIES. The use of improper accessories could be hazardous.
 13. NEVER LEAVE MACHINE RUNNING UNATTENDED. Turn power OFF. Do not leave the machine until it comes to a complete stop.
 14. EARTH ALL MACHINES. If the machine is equipped with three-pin plug, it should be plugged into a three-pin electrical socket. Never remove the earth pin.
 15. AVOID DANGEROUS ENVIRONMENT. Don't use power machines in damp or wet locations or expose them to rain. Keep your work area well illuminated. DO NOT use in explosive atmosphere (around paint, flammable liquids etc).
 16. KEEP CHILDREN AWAY. All visitors should be kept a safe distance from the work area, especially whilst operating the unit.
 17. MAINTAIN MACHINE IN TOP CONDITION. Keep tools sharp and clean for the best and safest performance. Follow maintenance instructions.
 18. DON'T OVERREACH. Keep your proper footing and balance at all times. For best footing wear rubber soled footwear. Keep floor clear of oil, scrap wood, etc.
 19. WEAR PROPER APPAREL. Loose clothing or jewellery may get caught in moving parts. Wear protective hair covering to contain long hair.
 20. MAKE WORKSHOP CHILDPROOF. Lock all machines when not in use by removing the safety keys if fitted, and store in a safe location.
 21. ALWAYS use in a well ventilated area. Remove sawdust frequently, and clean sawdust out from the interior of the machine to avoid producing a potential fire hazard.
 22. AVOID ACCIDENTAL STARTING. Ensure the switch is OFF before plugging in to the mains.
 23. BE AWARE that many accidents are caused by carelessness due to familiarity. ALWAYS concentrate on the job in hand, no matter how trivial it may seem.
 24. Never use the machine in the vicinity of flammable or combustible liquids.

ADDITIONAL SAFETY RULES FOR BANDSAWS

- Set the blade guide block assembly as close as possible to the workpiece.
- Switch off the saw, and make sure the blade has come to a complete stop before clearing sawdust or off-cuts from the table.
- Keep the saw properly adjusted, paying particular attention to the blade tension and tracking, and position of the blade guides.
- Disconnect the saw from the mains supply before removing the wheel cover.
- Make sure there are no nails or foreign objects in the part of the workpiece to be sawn.
- Be extra cautious with very large or small, or irregularly shaped workpieces.
- Set up the machine and make all adjustments with the power OFF.
- **NEVER** operate the machine with the wheel cover or blade guards off. They must all be in place and securely fastened when performing any operation.
- When cutting large or oversize stock, always ensure the material is supported at table height.
- Any adjustable component must be securely locked in position to ensure it cannot vibrate free during operation.
- When sawing curves, make relief cuts to allow removal of scrap material. This will prevent undue twisting or binding of the saw blade. Make the relief cuts before starting a curved cut.
- When sawing, hold material firmly, and feed into blade at a moderate speed.
- DO NOT saw any material that does not have a flat surface on which to bear, unless a suitable support is used. Round or tubular work has a tendency to roll, and causes the blade to 'bite'....always use a suitable device to hold round material securely.
- Ensure the bandsaw is securely fixed in position before operating.
- When cutting with the table tilted...ensure the parallel fence is mounted to the right of the saw blade.
- Never cut workpieces that cannot be held comfortably and securely by hand.
- ALWAYS wear Safety Goggles and Ear Defenders. We also strongly recommend the use of a breathing mask.
- ALWAYS replace Table Insert if damaged.

ELECTRICAL INSTALLATION

Connect the mains lead to a standard, 230 Volt (50Hz) electrical supply through an approved 13 amp BS 1363 plug, or a suitably fused isolator switch.

WARNING!

THIS APPLIANCE MUST BE EARTHED

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

Green & Yellow - Earth

Blue - Neutral

Brown - Live

As the colours of the flexible lead of this appliance may not correspond with the coloured markings identifying terminals in your plug proceed as follows:

- Connect GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol "⏏" or coloured GREEN or GREEN & YELLOW.
- Connect BROWN cord to terminal marked with a letter "L" or coloured RED.
- Connect BLUE cord to terminal marked with a letter "N" or coloured BLACK.

If this appliance is fitted with a plug which is moulded on to the electric cable (i.e. non-rewirable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.
5. The fuse in the plug must be replaced with one of the same rating (**13 amps**) and this replacement must be ASTA approved to BS1362.

Cable Extensions

Important: If a cable extension is needed, it is essential to comply with the following data.

Voltage	Extension length	Cable Section
230v	Up to 20m	1.5mm ²
230v	From 20 to 50m	2.5mm ²

UNPACKING

Unpack the shipping carton and lay out all the items so that they may be clearly identified as follows:

- Main Frame Assembly complete
- Table Assembly
- Mitre Gauge Assembly
- Parallel Fence Assembly
- 2 x Hex. Wrenches.
- 1 x Table Clamping Screw, with handle

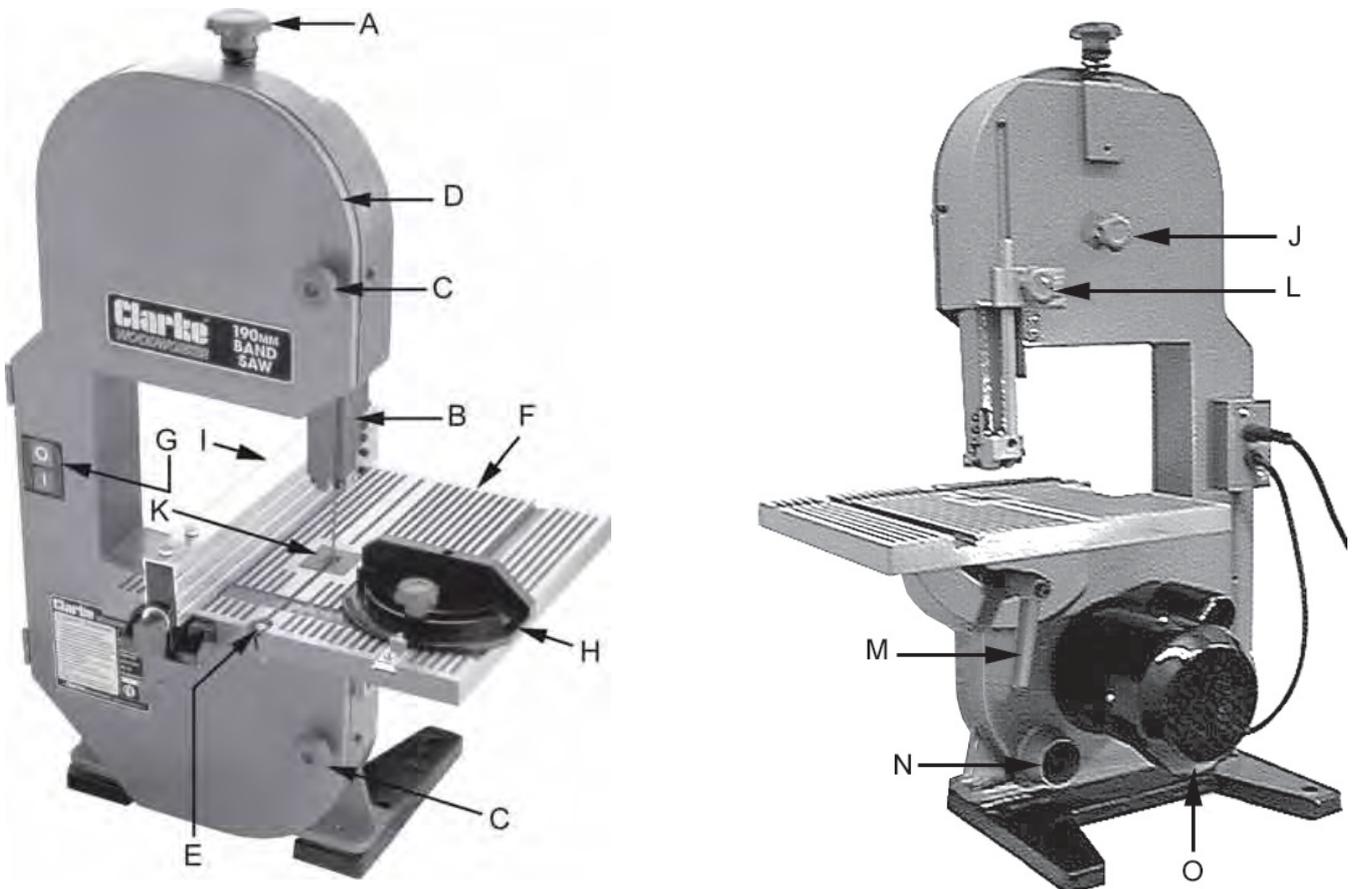
Check to ensure that no damage was suffered in transit, and that all parts are accounted for. You should contact your CLARKE dealer immediately, should there be any damage or deficiency

PRINCIPAL PARTS

(Ref. Fig. 1)

- A Blade Tension Adjuster Knob
- B Upper Guide Block and Blade Guard Assembly.
- C Wheel Cover Knobs
- D Wheel Cover
- E Table Clamping Screw
- F Table
- G ON/OFF Switch
- H Mitre Gauge
- I Parallel (Rip) Fence
- J Blade Tracking Adjuster
- K Table Insert
- L Upper Blade Guard Securing Knob
- M Table Securing Handle
- N Dust Extraction Outlet
- O Motor

Fig. 1



ASSEMBLY

GENERAL NOTES:

For maximum stability and safety, the Bandsaw should be bolted firmly to either a workbench, a suitable stand, or a piece of plywood, 5/8" thick, and the plywood should be clamped firmly to a workbench, using 'G' clamps, whenever the bandsaw is being used.

Ensure the saw is located in an area large enough to allow you to work freely, taking into account the size of workpiece, and that there should be adequate light. Never work in your own shadow.

Ensure also that an adequate electrical supply is close at hand. Take extra care where extension leads are used...ensure there is no possibility of tripping over the lead when moving around the work area.

Any protective coating on the Band Saw should be removed using a cloth moistened with paraffin.

DO NOT use acetone, petrol or paint thinners.

The saw is fully assembled, except for attaching the table as follows:

1. Remove the clamping screw from the table slot, (E, Fig. 1), and the table insert from the table, (K, Fig.1).
2. Taking care not to damage the saw blade or the table, carefully manoeuvre the table, with the saw blade in the table slot, on to its mounting.
3. Remove the handle from the table clamping screw by unscrewing spring loaded screw arrowed in illustration.
4. Hold the table firmly so that the quadrant, on the underside of the table, is flat against the body of the saw, with the curved guide (on the body of the saw), engaged in its slot in the quadrant. Screw in the clamping screw as far as it will go, by hand as shown in Fig. 3.
5. Replace the handle on the clamping screw ensuring the spring is in place.
6. Replace and tighten the clamping screw in the slot in the table then replace the Table Insert.



Fig. 2



Fig. 3

PREPARATION FOR USE

All adjustments are factory set, except for those detailed below which **MUST ALWAYS be checked before switching on the saw.**

A. Blade Tension

Blade tension is effected by raising or lowering the upper wheel, by means of the Blade Tension Adjuster Knob (A, fig. 1) The upper wheel is mounted on a spring loaded trunnion, and tension is therefore a matter of 'feel'.

Turn the knob clockwise until it becomes tight. The blade should be taught enough to prevent slippage, but not overtight, as this will lead to breakage of the blade.

Additionally, the upper wheel can be adjusted so that the blade will run centrally about both wheels. This adjustment is factory set and should not need to be carried out. If, subsequently, the blade persists in running off the wheels or runs off-line, then the adjustment necessary to overcome this is detailed under 'Maintenance'.

B. The Table Angle

For all normal sawing operations, it is important to ensure that the table is set at 90° to the blade. This is checked by sliding an engineers square on the table, up to the blade (with the blade correctly tensioned), and carrying out a visual inspection.

If necessary slacken off the Table Clamping Screw, and move the table until you are satisfied it is square with the blade, then re-tighten the Clamping Screw.

It may also be necessary to undo the Table Stop Screw lock nut (see Fig.4), and screw the Stop Screw in or out so that it just contacts the body of the machine, when the table is at 90° to the blade. Nip up the lock nut when satisfied.

Now, whenever the table is set to cut Mitres, it is a simple procedure to reset the table to 90°. i.e. when the stop screw touches the body, the table is at 90°.

With the Table Clamping Screw tight, check to ensure the pointer beneath the table, is correctly set to zero on the scale on the quadrant. If necessary, slacken the pointer securing screw, and reset the pointer to zero.



Fig. 4

C. Blade Guide Height

The Upper Blade Guide must be adjusted according to the thickness of the workpiece to be cut.

Slacken off the Guide Block using knob (L, Fig. 1) and adjust the height of the guide so that it is **no more than 5mm** higher than the workpiece, then secure in this position.

Check this setting and readjust if necessary before each cut.

OPERATION

Check to ensure that all safety precautions have been complied with before switching on the mains supply and pressing the ON button (1). Allow the blade to come to full speed.

Ensure the workpiece is held firmly against the table at all times. (See 'Tips On Using Your Bandsaw' which follows).

Remember that round stock should be clamped as shown in Fig. 5, to ensure it cannot roll.

Always feed the workpiece at a rate that allows the blade to cut without difficulty.

Whenever new adjustments are made, you should always make a trial cut in order to check the settings.

Parallel Fence and Mitre Gauge

Always use the parallel fence or mitre gauge on all cuts for which they are intended, to prevent the blade from running off the cutting guide line, particularly when working with a tilted table.

When using the parallel fence, there must be sufficient clearance between the blade and fence so as to allow the operator to hold the workpiece firmly, between fence and blade, without endangering the hand. The other hand is used as a guide/support ONLY, the hand between fence and blade being the hand that feeds the workpiece into the blade.

If the clearance is small, then a push stick should be used; i.e the workpiece is fed into the blade with a pushstick.

NOTE:

Pushsticks can easily be made using a piece of wood 1/2"x1" x 12" , with a 1/4" notch cut in one end, as shown below.



DUST EXTRACTION

A dust extraction outlet is provided which may be connected to a vacuum cleaner or a dust extraction device, such as the CLARKE CDE35, when the need arises.

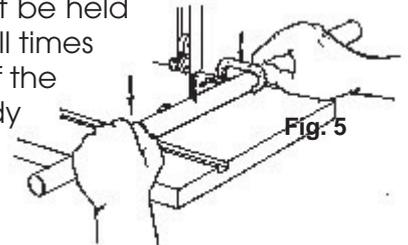
Please see your CLARKE dealer for details.

TIPS ON USING YOUR BANDSAW

It should be understood that this machine is primarily designed for freehand cutting - i.e. to cut shapes in relatively thin wood. It is NOT designed for cutting plastics, or any other material. However, to increase its versatility, it is possible to cut straight lines using either the Mitre Gauge or Parallel Fence, as described below.

For all cutting operations, the upper guide block and blade guard assembly should be adjusted to be just clear of the work being cut. Not only does this provide the best safety for the operator, but it also brings the blade guides closer to the work giving more accurate results and better control.

Use both hands to feed the workpiece into the blade. The work must be held flat on the table at all times to prevent binding of the blade. Use a steady even pressure just sufficient to keep the blade cutting.

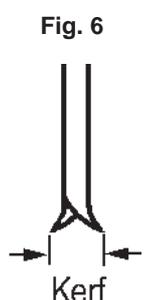


Always use a rip fence or mitre guide where possible to eliminate any sideways slip of the work. This is most important when the table is tilted to an angle.

Always plan your work ahead, and aim to make a complete cut in one pass, rather than stopping a cut, which requires the workpiece to be withdrawn. The tradesmans' rule is "measure twice, cut once". It is best to finish a cut in one continuous operation, but frequent backtracking may be necessary.

If you do have to withdraw the workpiece, switch off the bandsaw first, by pressing the OFF (O) button, and allow the blade to come to a complete stop before backing it out of the cut.

Remember that the blade removes material during the cut. This gap created by the blade is called the 'kerf', and must be allowed for when cutting to exact sizes. Plan your cut so that the kerf is the scrap side of the lines you wish to cut. If necessary, allow a little more for finish sanding.



RIP SAWING

This term refers to the cutting of the timber with the grain, rather than at a right angles to the grain. You can rip wood freehand to a previously drawn line, but best results are obtained by using the rip fence.

If the table is set at a level angle, set the rip fence to the left hand side of the blade for long pieces, allowing you to use your right hand to support the work and your left hand, or pushstick to feed the work into the blade and held firmly against the fence.

For shorter pieces you may set it to the right as shown in fig. 7, using your right hand to hold the work firmly to the table and rip fence.

Fig. 8 shows a similar operation with the table set to produce a 45° bevel.

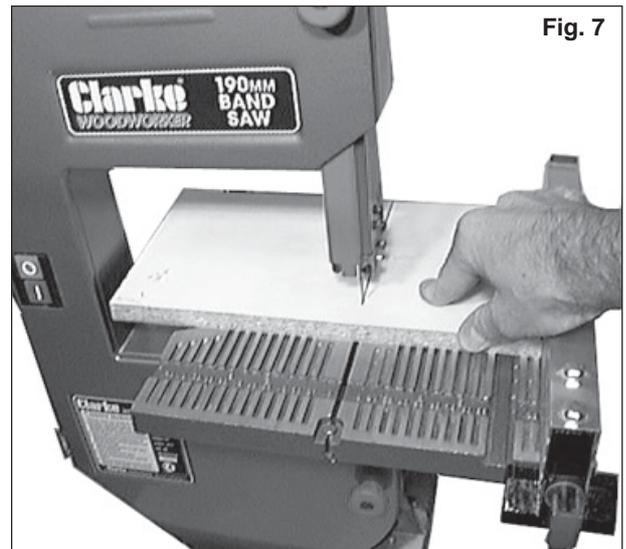


Fig. 7

CROSS CUTTING

This term refers to cutting timber at right angles to the grain. This type of cut can also be made freehand, but the mitre gauge is used to ensure accurate results. The mitre gauge can be adjusted to a angles up to 45°, to produce mitre cuts, or with the table tilted as well - compound mitre cuts. Make sure the work is held firmly against the table and against the face of the mitre gauge. Be careful to keep your fingers away from the blade, particularly at the end of the cut.

Slide the Gauge and workpiece together, across the table with the guide bar engaged in the slot provided as shown in Fig. 9.

NOTE:

In each of the illustrations, for clarity, the left hand has been omitted, however, in practice it would be used to support and guide the workpiece, on the opposite side of the blade, wherever possible.

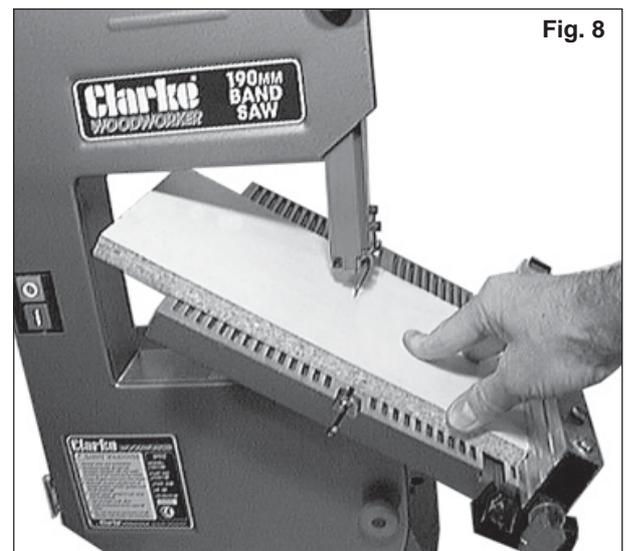


Fig. 8

FREEHAND SAWING

The ease with which many different and varied shapes can be cut is one of the most important features of the bandsaw.

When freehand cutting, always feed the work slowly so that the blade can follow the line you wish to cut. Make sure not to drag the work off line, forcing the blade sideways, or twisting it.

In many cases, it is helpful to rough cut about 6mm away from the line. For difficult curves which may be too tight for the blade, make relief cuts at 90° to the face of the curve so that these scraps will fall away as the final radius is sawn.

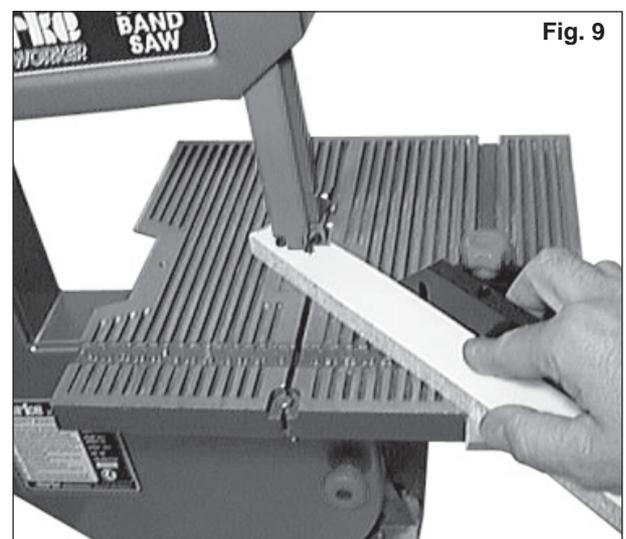


Fig. 9

MAINTENANCE

ALWAYS disconnect from the power supply before carrying out any maintenance

After use

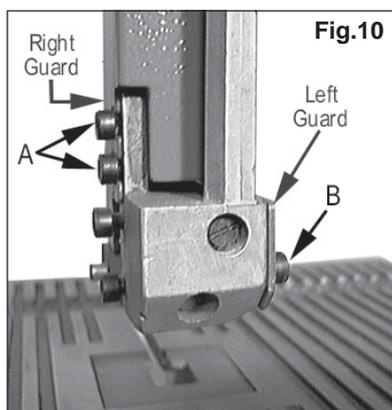
1. Accumulated dust and chips should be removed from inside the bandsaw. Open the Wheel Cover and use a brush or vacuum cleaner at the end of every work session.
2. ALWAYS Lower the Blade Guide Block and Guard Assembly to its lowest position and lock it in place.
3. ALWAYS slacken off blade tension.

Periodically

1. Apply a coat of wax paste to the table surface which will allow the wood stock to glide across it smoothly and effortlessly.
2. Inspect electric cables to ensure they are not cracked or damaged in any way. Damaged cables should be renewed immediately.
3. Inspect the blade for damaged teeth. If any are broken, the blade should be renewed.

BLADE RENEWAL

1. Disconnect the mains cable from the supply.
2. Slacken off blade tension fully, using the adjuster knob on top of the machine.
3. Remove both halves of the Upper Blade Guard by removing the screws at B, Fig. 10 , sufficient for the left half of the guard may be removed, and slackening off screws A, fig 10, so that the right half may be removed.
4. Remove the Table Insert and the Clamping Screw, within the table slot, then remove the table.



NOTE: Removal of the upper blade guards and table not only simplifies the blade removal process but also gives easy access to the various components which will subsequently require adjusting.

5. Open the Wheel Cover using a screwdriver on each of the two knob centre screws
6. Ease the blade off the upper and lower wheels, taking care that the blade does not 'spring' as this could cause serious injury. It is advisable to wear proper clothing, i.e. industrial gloves, long sleeves and goggles.
7. Refer to Figs. 12 and 13, and using the Hex. wrench provided, slacken off the screws 'A' and 'G'. This frees the two Blade Support Bearings, the upper one of which is shown at 'E'.
Move the bearing 'E', and the Lower Guide Block (H), backwards as far as possible.
8. Slacken off the screws shown at 'B' and 'D'. This frees the Blade Guides shown at 'C1 and C2'....move them away from each other to provide a gap..
9. Replace the new blade - over the lower wheel first.

NOTE: It may be necessary to slacken of the brush mountings in the lower left corner of the wheel housing in order to manoeuvre the blade between brush and wheel rim.

Ease the blade over the upper wheel and through the Blade Guide Block assemblies, ensuring the teeth point down towards the table.

10. Try as far as possible to align the blade so that it runs as near central on the wheels as possible, then apply tension by turning the Blade Tension Adjuster Knob clockwise until the blade feels firm on its run between the two wheels, but do not overtighten.
11. Readjust the brush if previously moved, or if not, check to ensure it is brushing firmly up against the wheel.

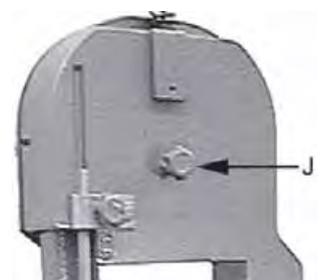
NOTE: The brush is responsible for bringing the wheels, and hence the blade, to a quick stop when the machine is switched off.

12. Carry out all adjustments, i.e. Blade tracking and Blade Guide Bearings, as follows:

A. Blade Tracking

It is important that the blade runs centrally about the upper and lower wheels. Note that the upper wheel carries a rubber tyre which has a convex outer surface. It is important therefore to ensure the blade runs

Fig. 11



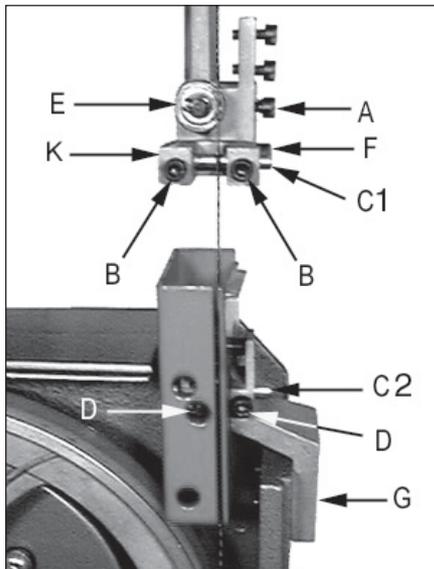


Fig. 12

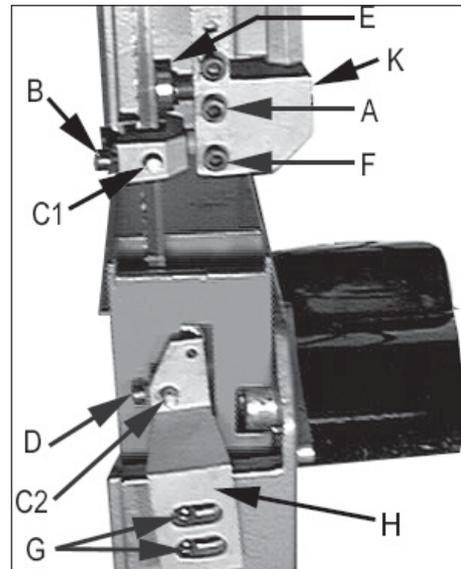


Fig. 13

exactly in the centre of the tyre. This adjustment is effected by turning the Tracking Adjuster Knob (J, Fig. 11).

Screwing 'in' (clockwise), will cause the upper wheel to tilt inwards at the top slightly, which in turn causes the blade to run on the front of the wheel. Screwing anticlockwise, has the opposite effect.

The sequence of adjustment is as follows:

Ref: Fig's. 12 and 13

1. Apply tension to the blade by screwing the tension adjuster knob clockwise until the blade feels firm on its' run between the two wheels.
2. Turn the upper wheel clockwise, by hand, and observe the reaction of the blade, and its position on the tyre of the upper wheel
3. If the blade begins to move towards the front edge of the tyre, (i.e. towards you as you look at it), slowly turn the adjuster knob anti-clockwise, causing the upper wheel to tilt outwards at the top, thereby causing the blade to move further towards the back edge of the tyre. Conversely, if the blade tends to run towards the back edge of the tyre, turn the alignment knob clockwise.

Tracking is correct when the blade runs precisely in the middle of the wheel.

Fig. 14

IMPORTANT:

It is essential that this adjustment is carried out correctly, as it has a direct bearing on the ability of the saw to cut in a straight line.



NOTE:

Should you have difficulty in moving the tension adjuster, it is possible that the Guide Screw, (arrowed in fig 14) is too tight. Slacken it off slightly using the Hex. wrench supplied, to free off the mechanism. Do not leave this screw too loose, it should be firm, but the trunnion must be free to move up and down.

When tracking is correct, it is necessary to adjust the Blade Guides as follows:

B. Blade Guide Adjustments.

(Ref Figs 12 & 13)

NOTE:

- a. *Blade Guides should be inspected regularly for wear or chipping. When replacing guides replace all guides at the same time, both upper and lower.*
- b. *In order to obtain satisfactory results, it is important that the Blade Guide adjustments are properly maintained at all times. Before carrying out these adjustments, the blade must be correctly tensioned, and tracking properly.*

1. Upper Blade Guides

The Guide Block (K), carries the Blade Guides (C1) and the Blade Support Bearing (E).

The Blade Guides provide side support for the blade, and are adjusted as follows:

- 1.1 Lower the Upper Guide Block to its lowest position and secure it.

Check the position of the Blade Guides. They should be positioned so that they run in the middle of the flat portion of the blade and must NOT come into contact with the teeth (see Fig.15).

Slacken off the screw (F), if necessary, using the Hex. wrench provided. This allows the guide housing to move in or out as required

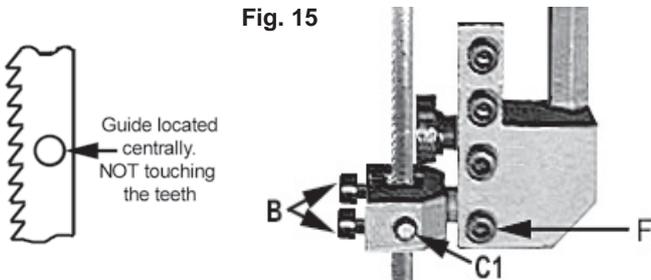


Fig. 15

until the guides (C1) are positioned correctly. When correctly aligned, re-tighten screw (F).

1.2 Slacken off the two screws (B), securing the Blade Guides (C1), and position each guide in turn so that it **lightly** touches the side of the blade. Secure firmly in this position by re-tightening the screws (B).

Turn the upper wheel to ensure the blade is not pinched or that it is not being pushed to one side by a maladjusted guide. If necessary, repeat the process until completely satisfied.

With the Guides correctly set, it is now necessary to adjust the Upper Blade Support Bearing (E). The Blade Support Bearing, prevents the blade from being pushed backwards, and protects it from tooth damage.

This bearing is adjusted as follows:

(Ref Figs 16)

1.3 With screw 'A', (which secures the shaft carrying The Blade Support Bearing 'E'), slackened, turn the shaft, using a screwdriver in slot M, so that the blade runs on the edge of the bearing as shown in fig. 17

NOTE: The bearing is mounted on a cam so turning the shaft will move the bearing, across the blade.

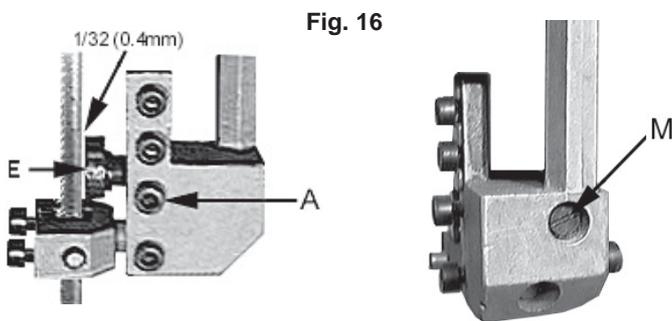


Fig. 16



Fig. 17

Simultaneously, slide the bearing to within 1/32" (0.4mm) of the back of the blade (shown in fig.16).

Re-tighten screw (A) using the Hex. wrench provided when completely satisfied.

2. Lower Blade Guides

Ref: Fig.18

The manner of adjustment is similar to that for the upper blade guides....however, it is necessary to check the position of the Blade Support Bearing FIRST.

The sequence of adjustment is as follows:

2.1 Slacken the lower blade guide securing screws (D) (if not already loose).

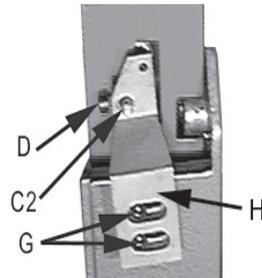


Fig. 18

2.2 Slacken the two Lower Guide Block mounting screws (G) and position the Guide Block 'H' so that the correct clearance of 1/32" (0.4mm), is achieved between the rim of the bearing and back of the blade. Re-tighten the mounting screws (G).

2.3 Adjust the Blade Guides (C2) so that they **lightly** touch the side of the blade. Secure firmly in this position by re-tightening the screws (D).

2.4 Turn the upper wheel to ensure the blade is not pinched or that it is not being pushed to one side by a maladjusted guide. If necessary, repeat the process until completely satisfied.

2.5 With the upper and lower guides fully adjusted, the Upper Blade Guard may be re-fitted, the Wheel Cover closed, using a screwdriver on the cover knob centre screws, and the Table reassembled and replacing the clamping screw and Table Insert.

2.6 OBSERVING ALL PRECAUTIONS, plug the machine in to the supply and switch on. Check for any unusual noises. A harshness in sound suggests that one or more of the blade guides is interfering with the blade. This should be investigated and rectified before use.

BEARINGS

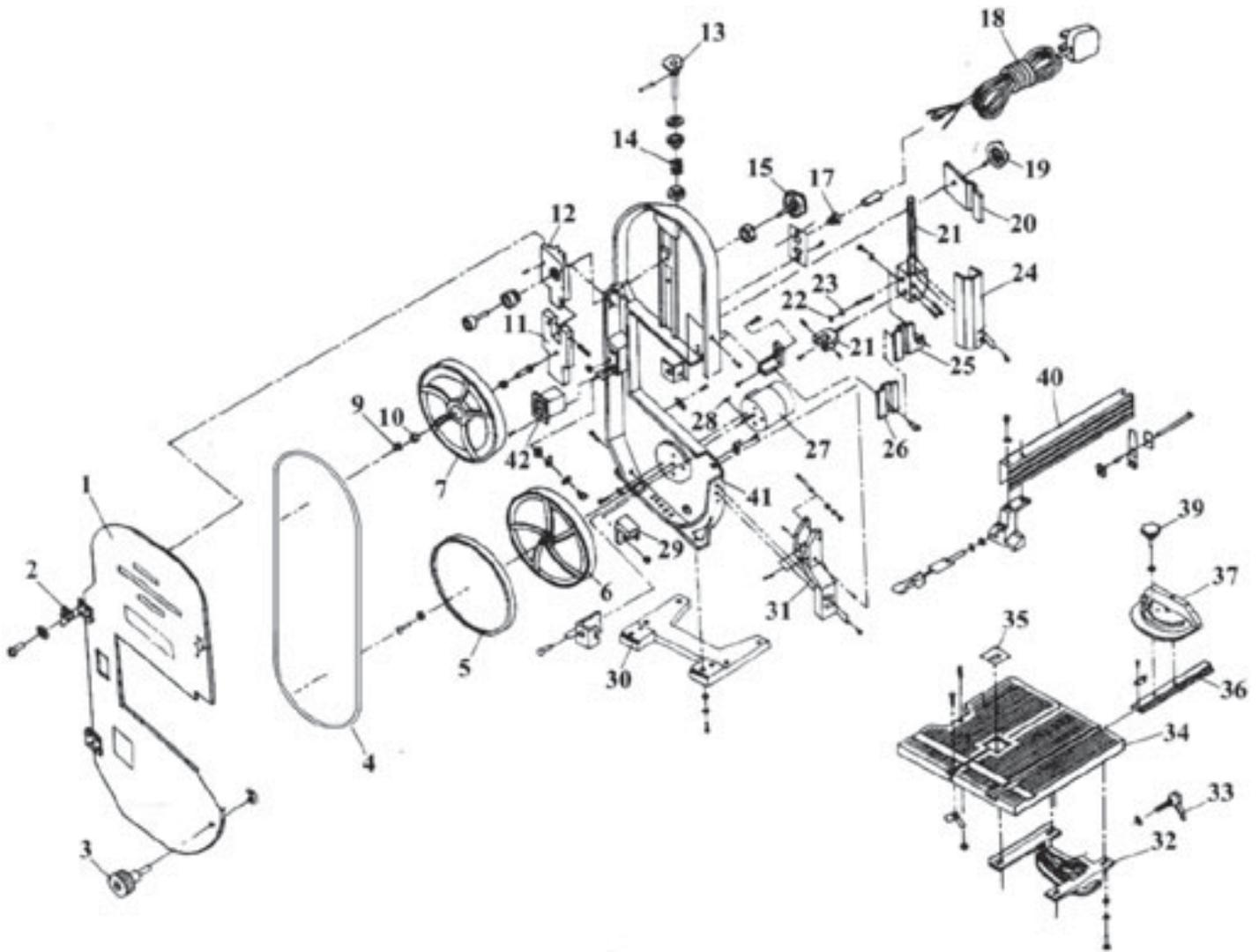
All bearings used in the construction of your bandsaw and its motor are sealed and lubricated for life.

TROUBLE SHOOTING

ALWAYS disconnect your bandsaw from the power supply when troubleshooting, or carrying out adjustments or maintenance.

Fault	Possible Cause	Remedy
Blades break	<ol style="list-style-type: none"> 1. Faulty alignment (tracking) 2. Blade guides incorrectly adjusted. 3. Feeding the work too fast. 4. Forcing or twisting the blade around a tight radius. 5. Blade too tight. 6. Dull teeth. 7. Blade is badly welded or brazed. 8. Wrong blade fitted 9. Blade left running when not in use. 	<ol style="list-style-type: none"> 1. Carry out tracking adjustments (p10) 2. Readjust Blade Guides 3. Lower the feed rate 4. For tight curves, make relief cuts, fairly close together, at 90° to the curve 5. Relieve blade tension 6. Renew blade 7. Renew blade 8. Fit only Quality blades supplied by Clarke Int'l 9. ALWAYS switch machine OFF when not in use
Motor does not run	<ol style="list-style-type: none"> 1. Fuse blown 2. Plug or Power cable defective 3. Motor defective 	<ol style="list-style-type: none"> 1. Renew fuse. If condition persists, consult your Clarke dealer 2. Renew/Repair plug/Power cable 3. Consult your Clarke dealer
Machine vibrates	<ol style="list-style-type: none"> 1. Mountings loose 2. Table loose 3. Motor loose 4. Mounting platform is not robust enough 	<ol style="list-style-type: none"> 1. Tighten Mountings 2. Secure table 3. Secure motor mountings 4. Ensure workbench or platform is of strong enough construction to fully support the machine
Blade runs off cutting line	<ol style="list-style-type: none"> 1. Blade Guides incorrectly adjusted 2. Blade tracking maladjusted 3. Blade tension too loose 4. Wrong blade fitted..too thin 	<ol style="list-style-type: none"> 1. Readjust Blade Guides 2. Carry out tracking adjustment (p10) 3. Re-tension blade 4. Fit correct blade

PARTS LIST & DIAGRAM



No.	Description	Part No.	No.	Description	Part No.
1	Side Cover	HT190001	22	Circlip	HT190022
2	Hinge	HT190002	23	Bearing	HT190023
3	Side Cover Knob	HT190003	24	Upper Blade Guard complete	HT190024
4	Saw Blade	HT190004	25	Lower Blade Guard complete	HT190025
5	Rubber Tyre	HT190005	27	Motor	HT190027
6	Drive Wheel	HT190006	29	Brush complete	HT190029
7	Driven Wheel	HT190007	30	Stand	HT190030
9	Circlip	HT190009	31	Lower Guide Block	HT190031
10	Bearing	HT190010	32	Quadrant	HT190032
11	Lower Plate	HT190011	33	Table Clamping Screw complete	HT190033
12	Upper Plate	HT190012	34	Table	HT190034
13	Blade tension Adjuster Knob	HT190013	35	Table Insert	HT190035
14	Spring	HT190014	36	Guide bar	HT190036
15	Blade Tracking Adjuster Knob	HT190015	37	Mitre Gauge complete	HT190037
17	Cable Grommet	HT190017	39	Mitre Gauge Adjuster Knob	HT190039
18	Power Cable	HT190018	40	Parallel/Rip Fence complete	HT190040
19	Upper Guard Fixing Knob	HT190019	41	Casing	HT190041
20	Clamping Plate	HT190020	42	ON/OFF Switch complete	HT190042
21	Upper Guide Block	HT190021			

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INTERNATIONAL



DECLARATION OF CONFORMITY

We declare that this product complies to the following standards/directives:

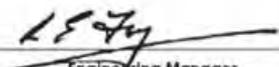
■ **98/37/EC (ANNEX IV)**

EC TYPE APPROVAL No. BM 9659185 01
TUV Rheinland Product Safety GmbH,
Am Grauen Stein, D51105, Koln

Product Description: **7.5" BANDSAW**

Model Number: **CBS190**

Serial (Batch) No: **See Product Data Plate**

Signed 
Engineering Manager

Clarke[®] INTERNATIONAL
Hemnal Street, Epping, Essex CM16 4LG

Clarke International is a trading style of Clarke International Limited

 When disposing of this product, do not dispose of with general waste. It must be disposed of according to the laws governing Waste Electrical and Electronic equipment, at a recognised disposal facility.