

Thank you for purchasing a Sealey quality product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



**IMPORTANT:** BEFORE USING THIS PRODUCT, PLEASE READ THE INSTRUCTIONS CAREFULLY. MAKE CAREFUL NOTE OF SAFETY INSTRUCTIONS, WARNINGS AND CAUTIONS. THIS PRODUCT SHOULD ONLY BE USED FOR ITS INTENDED PURPOSE. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE.

### 1. SAFETY INSTRUCTIONS

#### 1.1. ELECTRICAL SAFETY

**WARNING!** It is the user's responsibility to read, understand and comply with the following:

You must check all electrical equipment and appliances to ensure that they are safe to use. You must inspect power supply leads, plugs and all electrical connections for wear and damage. You must ensure the risk of electric shock is minimised by the installation of appropriate safety devices. An RCCB (Residual Current Circuit Breaker) should be incorporated in the main distribution board. We also recommend that an RCD (Residual Current Device) is used with all electrical products. It is particularly important to use an RCD with portable products that are plugged into an electrical supply not protected by an RCCB. If in doubt consult a qualified electrician. You may obtain a Residual Current Device by contacting your Sealey dealer. **You must** also read and understand the following instructions concerning electrical safety.

1.1.1. The **Electricity At Work Act 1989** requires all portable electrical appliances, if used on business premises, to be tested by a qualified electrician, using a Portable Appliance Tester (PAT), at least once a year.

1.1.2. The **Health & Safety at Work Act 1974** makes owners of electrical appliances responsible for the safe condition of the appliance and the safety of the appliance operator. **If in any doubt about electrical safety, contact a qualified electrician.**

1.1.3. Ensure the insulation on all cables and the product itself is safe before connecting to the mains power supply. See 1.1.1. & 1.1.2. above and use a Portable Appliance Tester (PAT).

1.1.4. Ensure that cables are always protected against short circuit and overload.

1.1.5. Regularly inspect power supply, leads, plugs for wear and damage and all electrical connections to ensure that none are loose.

1.1.6. **Important:** Ensure the voltage marked on the product is the same as the electrical power supply to be used and check that plugs are fitted with the correct capacity fuse. A 13Amp plug may require a fuse smaller than 13Amps for certain products, see fuse rating at right.

1.1.7. **DO NOT** pull or carry the powered appliance by its power supply lead.

1.1.8. **DO NOT** pull power plugs from sockets by the power cable.

1.1.9. **DO NOT** use worn or damaged leads, plugs or connections. Immediately replace or have repaired by a qualified electrician. A U.K. 3 pin plug with ASTA/BS approval is fitted. In case of damage, cut off and fit a new plug according to the following instructions (discard old plug safely).

(UK only - see diagram at right). **Ensure the unit is correctly earthed via a three-pin plug.**

a) **Connect the GREEN/YELLOW earth wire to the earth terminal 'E'.**

b) **Connect the BROWN live wire to live terminal 'L'.**

c) **Connect the BLUE neutral wire to the neutral terminal 'N'.**

d) **After wiring, check that there are no bare wires, that all wires have been correctly connected, that the outer cable insulation extends beyond the cable restraint and that the cable restraint is tight.**

Double insulated products are often fitted with live (BROWN) and neutral (BLUE) wires only. Double insulated products are always marked with this symbol . **To re-wire, connect the brown & blue wires as indicated above. DO NOT connect the brown or blue to the earth terminal.**

1.1.10. **Cable extension reels.** When a cable extension reel is used it should be fully unwound before connection. A cable reel with an RCD fitted is recommended since any product which is plugged into the cable reel will be protected. The section of the cores of the cable is important and should be at least 1.5mm<sup>2</sup>. However, to be absolutely sure that the capacity of the cable reel is suitable for this product and for others that may be used in the other output sockets, we recommend the use of 2.5mm<sup>2</sup> section cable.

#### 1.2. GENERAL SAFETY

**WARNING!** Disconnect the bandsaw from the power source before servicing, changing accessories, or performing any other maintenance.

✓ Familiarise yourself with the applications and limitations of the bandsaw, as well as the potential hazards.

✓ Maintain the bandsaw in top condition. Keep it clean and keep blades sharp for best and safest performance.

✓ Use original Sealey spare parts only. Unauthorised parts may be dangerous and will invalidate the warranty.

✓ Keep all guards and fixing screws in place, tight and in working order. Check regularly for damaged parts. A guard or any other part that is damaged must be repaired or replaced before the saw is used further. Check also for incorrect alignment of moving parts, loose mountings, or any other condition that could affect the operation of the saw.

✓ Ensure the space allocated for use and maintenance of the machine is adequate, free from unrelated materials and has good lighting.

✓ Wear approved eye and ear protection when operating the machine. If dust is produced, wear an approved face or dust mask.

✓ Keep children and unauthorised persons away from the work area, especially when the saw is in operation.

✓ Remove any adjusting keys and wrenches from the machine before operating.

✓ Ensure that large or oversized workpieces are supported at bed height. Ensure you use a suitable support for any workpiece that does not have a flat surface. Be cautious when cutting workpieces which are irregular in cross-section as the saw blade could be pinched before the cut is completed. Any stock such as frame moulding, must lay flat on the table surface and not be allowed to rock.

**WARNING!** Round bar and tubing have a tendency to roll while being cut and cause the blade to "bite". **DO NOT** cut such items without clamping or blocking the workpiece.

**WARNING!** *Never force the blade through the workpiece.*

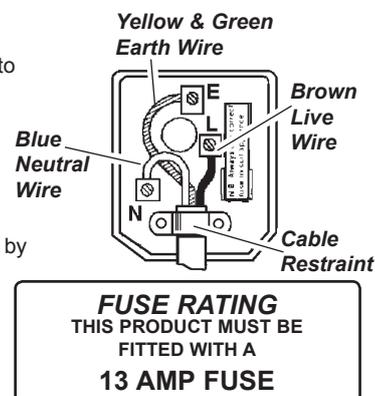
**DO NOT** use this bandsaw for anything other than its intended purpose. This bandsaw is designed for light metal cutting work in engineering workshops, garages, metal fabricators, etc.

**WARNING!** *The SM35CE.V4 bandsaw **MUST NOT** be used to cut non-metallic materials (including wood). To do so will invalidate your insurance cover and your warranty and may cause damage and/or personal injury.*

**DO NOT** wear loose or ill-fitting clothing. Remove ties, watches, rings and other jewellery. Tie up, or adequately cover, long hair.

**DO NOT** start the bandsaw until the workpiece is secure and the blade has been lowered to just above the workpiece.

**DO NOT** run the bandsaw with the blade in the raised position.



- X **DO NOT** use the bandsaw in areas where fumes from paint, solvents, or flammable liquids pose a potential hazard. Keep all flammable materials (including wipes or cleaning rags) away from the saw, and dispose of according to local regulations.
- X **DO NOT** leave the bandsaw running unattended. Turn power switch 'Off' and **DO NOT** leave area until the blade has come to a complete stop.
- X **DO NOT** use if you are fatigued or under the influence of drugs, alcohol or other intoxicating medication.
- X **DO NOT** use the bandsaw with the blade guard or pulley cover removed.
- X **DO NOT** use the bandsaw in wet or damp locations.
- X **DO NOT** start accidentally. Ensure the switch is off before plugging in the saw.
- X **DO NOT** use damaged or deformed bandsaw blades.
- ✓ Keep correct footing and balance at all times and wear non-slip shoes.
- ✓ Turn the bandsaw off **before** raising the blade.
- X **DO NOT** stand on the bandsaw.
- ✓ Always secure the workpiece in the vice.

## 2. INTRODUCTION & SPECIFICATION

Manufactured to comply with Safety of Machinery (Safety) Regulations 1992 (and amendments) and fully CE approved. Saw arm is fitted with hydraulic damping to prevent the arm being dropped onto the workpiece and to ensure smooth cutting performance. Coolant fluid system and main power controls are switched on individual circuits. Heavy-duty single phase electric motor.

### 2.1. Specification

Capacity 90° round.....Ø170mm  
 Capacity 90° square/rectangular H x W..... 170 x 200mm  
 Capacity 45° round.....Ø80mm  
 Capacity 45° square/rectangular H x W..... 170 x 80mm  
 Blade Size.....19.0 x 0.81 x 2362mm

Blade Speeds..... 34, 41, 59, 98mtr/min  
 Motor Power..... 550W  
 Power Supply..... 230V/1ph  
 Weight..... 137kg

## 3. ASSEMBLY

### 3.1. ASSEMBLY.

- 3.1.1. Remove the unit from packing and check all items. Any transit damage should be reported immediately to your supplier.
- 3.1.2. Unbolt the saw from the skid and place it on a level surface. (Do not attempt to move or lift the machine without the use of proper lifting equipment).
- 3.1.3. Clean those surfaces coated in rust protection with kerosene or diesel oil. Do not use cellulose based solvents such as paint or laquer thinners as these will damage the paintwork.

### 3.2. Attaching the wheels.

Place sound, suitable blocking under both ends of the saw base to support the unit whilst the wheels are being installed. Use proper lifting equipment to do this and ensure that the saw remains stable whilst supported.

- 3.2.1. Slide a wheel onto the end of each axle and retain with the circlips provided. Slide the axles through each end of the saw base until they protrude from the other side. Slide the remaining wheels onto the axles and retain with circlips. Push the red plastic covers provided onto each wheel moulding as indicated in fig.1J.

- 3.3. **Attaching the damper cylinder.** Screw the threaded end of the cylinder support rod into the tapped hole in the machine bed (see fig.1C) and tighten it using a 17mm spanner applied to the hex section. Slide the damper cylinder assembly onto the rod in the correct orientation as shown in fig.1 (with valve controls upwards) and screw the 14mm retaining nut into position on the end of the rod (fig.1D). Insert the stepped hinge pin (fig.1E) through the hole in the end of the piston and swing the cylinder upwards towards the cylinder bracket attached to the main arm. In order to screw the hinge pin into the bracket it may be necessary to depress the piston. Alternatively get a second person to raise and support the arm until the hinge pin is aligned with the hole in the bracket. Tighten the hinge pin with a 14mm spanner.

- 3.4. **Attaching the Stock Stop.** Insert the threaded end of the Stock Stop Rod (fig.1A) through the hole in the machine bed adjacent to the damper cylinder and retain it by fixing a bolt and washer on the inside of the bed. Push the stop onto the rod. Retain it by tightening the hex socket set screw (fig.1B).

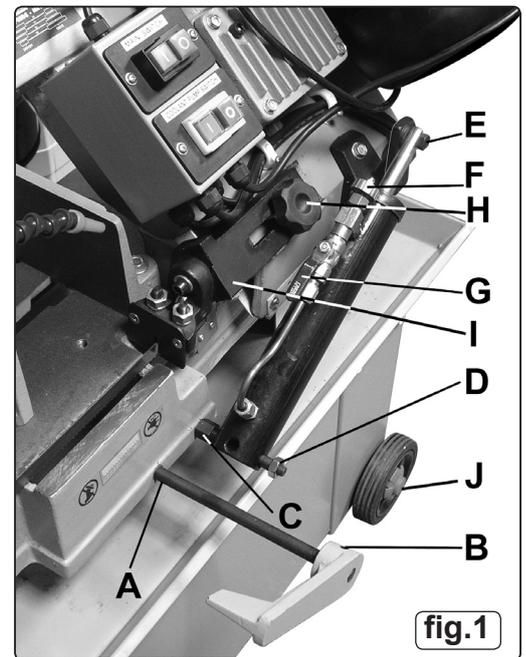


fig.1

## 4. SETUP & ADJUSTMENTS

### 4.1. COOLANT TANK PREPARATION.

The use of a water soluble coolant will increase cutting efficiency and prolong blade life. Five litres of soluble cutting oil can be ordered under Sealey Part No. SCO5L. (follow instructions on pack regarding use and precautions). The coolant tank is situated in the base of the machine and can be accessed through an opening in the back of the base.

- 4.1.1. Disconnect the machine from the power supply before adding/changing coolant.
- 4.1.2. Pull the coolant return hose from out of the hole in the top of the tank cover.
- 4.1.3. Slide the tank out of the saw base and lift off the tank cover with pump attached. The cover must remain next to the machine due to the power cable attached. Fill the tank to approximately 80% of its capacity and place the lid back onto the tank.
- 4.1.4. Slide the tank back into the base and push the coolant return hose back through the hole in the top of the tank.

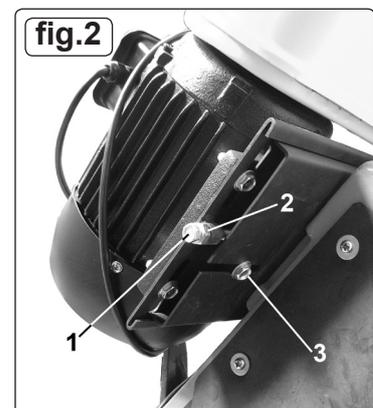
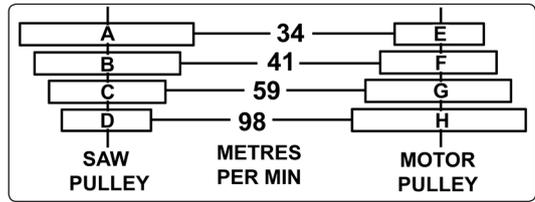


fig.2

**4.2. CHANGING BLADE SPEED.**

- 4.2.1. Disconnect the machine from the power supply.
- 4.2.2. Remove the pulley cover screw and hinge up the cover to access the pulleys and belt.
- 4.2.3. Loosen the lock bolt on the rear of the motor plate as shown in fig.2.3.
- 4.2.4. Loosen the locking nut on the tensioning screw as shown in fig.2.2.
- 4.2.5. Loosen the tensioning screw itself (see fig.2.1) and slacken it off in order to allow the motor plate to move inwards to shorten the distance between the two pulleys. It may be necessary to tap the edge of the motor plate with a soft faced hammer to get the plate to move inwards to the point where the belt position can be changed. Refer to the adjacent diagrams to decide on the best position for the belt for the job in hand.
- 4.2.6. When the belt is repositioned, retension it ensuring that it is not too tight and tighten the motor plate lock bolt. Close the pulley cover and replace the cover screw.

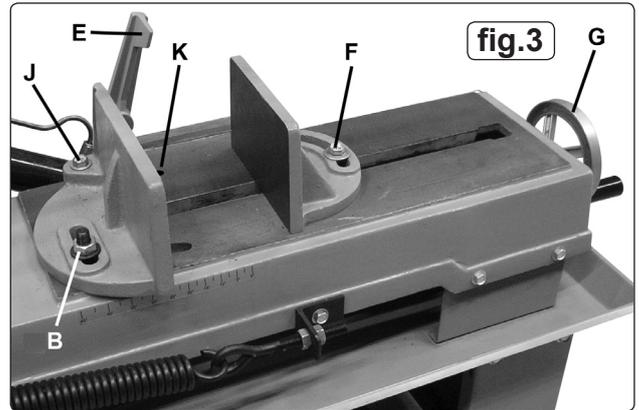


Recommended Pulley Selection for Various Metals			
Material	Saw Pulley	Motor Pulley	Blade Speed
Tool, stainless or alloy steel. Bearing bronze.	(A)	(E)	34m/min
Low carbon steel.	(B)	(F)	41m/min
Medium carbon steel.	(C)	(G)	59m/min
Aluminium. Copper. Brass.	(D)	(H)	98m/min

Cutting Chart for Flat and Round Bar				
Recommended blade teeth per inch (tpi) for nominal cut length				
Cut length	Under 8mm	4-13mm	6-16mm	8-22mm
Tpi	32	24	18	14
Cut length	10-35mm	17-40mm	25-50mm	38-75mm
Tpi	10	8	6	4
Cut length	50-100mm	75-150mm	114-225mm	>200mm
Tpi	3	2	1.25	0.75

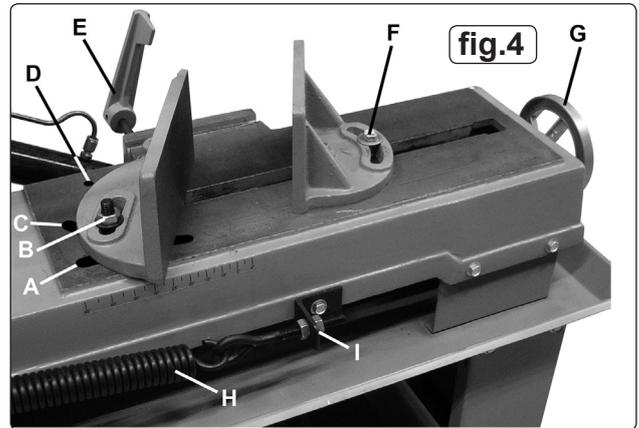
**4.3. HYDRAULIC FEED SELECTOR OPERATION.**

- 4.3.1. The rate of descent of the main cutting arm is controlled by the damping cylinder seen in fig.1. By turning the knob 'F' in fig.1 clockwise the rate of descent is slowed down. By turning the knob anticlockwise the rate of descent is increased. The arm can be locked in any position by turning the hydraulic flow off using tap 'G' in fig.1. When the tap is at 90° to the cylinder the flow is off and the arm will stop moving.



**4.4. VICE SET UP & ADJUSTMENT.**

- 4.4.1. The vice has two adjustment positions. One specifically set at 90° degrees to the blade (see fig.3) and the other for variable angle cutting (see fig.4).
- 4.4.2. For a non angled cut the vice should be set up as shown in fig.3. Loosen pivot bolt 'J' and locking nut 'B' and adjust the vice face to be 90° degrees to the blade by laying a set square onto the machine bed as shown in fig.5. Tighten pivot bolt 'J' and locking nut 'B'. When locking bolt 'F' is loosened the distance between the vice faces can be adjusted by winding handle 'G'. Adjust the position of the stock stop 'E' as required. Lay the material to be cut into the vice and wind handle 'G' until the material is firmly clamped between the vice faces. Tighten locking bolt 'F'.
- 4.4.3. To change the set up to an angled cut the vice should be configured as shown in fig.4. Remove locking nut 'B' and its associated bolt from straight slot 'A' and reassemble them into the curved slot 'C'. Referring back to fig.3 move the pivot bolt 'J' to position 'K' on the bed. The vice face will now pivot around bolt 'J'. Set the vice face to the desired angle using an adjustable square and lock it at the set position with nut 'B' as shown in fig.4. Lay the material to be cut into the vice and wind handle 'G' until the material is firmly clamped between the vice faces. Tighten locking bolt 'F'.



**4.5. ADJUSTING BOW WEIGHT.**

- 4.5.1. Bow weight is one of the most important adjustments on the saw. Incorrect bow weight can result in poor performance including crooked cuts, tooth stripping, stalling and the blade coming off the blade wheels. The hydraulic feed rate unit will not compensate for improper bow weight. Bow weight is factory set and should not normally require adjustment. If performance problems are encountered the bow weight can be adjusted as follows:
- 4.5.2. The bow weight spring, which acts on the main arm, can be seen in fig.4.H as can the adjuster nuts fig.4.I
- 4.5.3. Disconnect the saw from the power supply.
- 4.5.4. Turn the hydraulic cylinder valve on and place the arm in the horizontal position. Turn the feed rate valve on the cylinder anticlockwise until it stops.
- 4.5.5. Hook a spring balance under the blade tension handle and lift the saw arm. The scale should read 5-6kg. If this is not the case adjust the tension until it does.



#### 4.6. ADJUSTING BLADE GUIDES.

- 4.6.1. Disconnect the saw from the power supply.
- 4.6.2. The two blade guides should be adjusted to be as close as possible to the workpiece without interfering with the cut.
- 4.6.3. The left hand blade guide can be seen in fig.6 item B. To adjust it, loosen knob A and slide the guide near to the workpiece. Tighten knob A.
- 4.6.4. The right hand blade guide can be seen in fig.1 item 'I'. To adjust it, loosen knob H and slide the guide near to the workpiece. Tighten knob H.

#### 4.7. BLADE TRACKING ADJUSTMENT.

- ❑ **WARNING! Blade tracking adjustment requires running the saw with the back cover open. This adjustment should only be carried out by qualified, experienced personnel. Failure to comply may result in serious injury.**

- 4.7.1. Blade tracking is factory set and should not normally require adjustment. If a blade becomes warped it will not track properly and it must be replaced. The tracking should be checked whenever a new blade is fitted (see section 4.8.2).
- 4.7.2. Raise saw arm and lock in place by shutting off the hydraulic cylinder valve.
- 4.7.3. Confirm that the blade tension is set properly. Adjust if necessary by referring to section 4.9.1.
- 4.7.4. Open blade cover to check blade-to-wheel relationship. Switch the machine on and observe the running of the blade. The rear edge of blade should be very close to, but not hard against, the wheel flanges. Turn saw off.
- 4.7.5. If inspection indicates that adjustment is required loosen bolts 'D' (fig.6) using a 12mm spanner. Start up saw.
- 4.7.6. Place a 12mm spanner onto the adjuster (fig.6.E) and rotate it in or out as required whilst observing the position of the blade on the wheels. Turn the adjuster clockwise to track the blade closer to the wheel flanges. Turn the adjuster anti-clockwise to track the blade away from the wheel flanges. When satisfied with the tracking turn the saw off and close and secure the safety covers. Re-tighten bolts 'D'.

#### 4.8. CHANGING THE BLADE.

- ❑ **WARNING! Take care when handling saw blades, blade teeth are very sharp. Wear gloves.**
- ❑ **WARNING! BEFORE MAKING ANY ADJUSTMENTS, DISCONNECT SAW FROM POWER SUPPLY**

- 4.8.1. All adjustments that relate to the smooth and safe running of the blade have been set at the factory. However, if you require to replace a blade due to it being worn out or if you need to change to a blade with a different tooth size it will be necessary to re-adjust the saw.
- 4.8.2. Raise the main arm to the vertical position and lock it there by turning off the hydraulic feed (the tap should be at 90° to the cylinder).
- 4.8.3. Remove the two screws that hold the upper blade guard in place (fig.7C) and remove it. Also remove the lower blade guard (fig.7D) which has a built-in blade brush and is also held in place with two screws.
- 4.8.4. Loosen the two screws (fig.7B) holding the lower blade wheel cover in place and slide the cover upwards to the full extent of its travel. This is necessary as the main blade cover will not open fully otherwise. Temporarily tighten the screws to prevent the cover sliding down again.
- 4.8.5. Undo and remove the two screws (fig.7A) that hold the main blade cover closed and fully open the cover as shown in fig.8.
- 4.8.6. Before the blade can be removed release the tension on the blade by turning the blade tension knob (fig.8E) anti-clockwise.
- 4.8.7. Ease the blade away from the lowest pulley wheel first and support it as you remove it from the upper pulley wheel then carefully remove the blade from between the guide wheels.
- 4.8.8. Place the new blade through the guides first and then ease it around the lower pulley wheel. (Ensure that the tooth direction is consistent with the blade tooth diagram attached to the main bed.) Retain the blade on the lower pulley with one hand and take up the tension at the top of the blade with the other hand. Then use both hands to ease the blade over the upper pulley.
- 4.8.9. Reattach the blade guards.

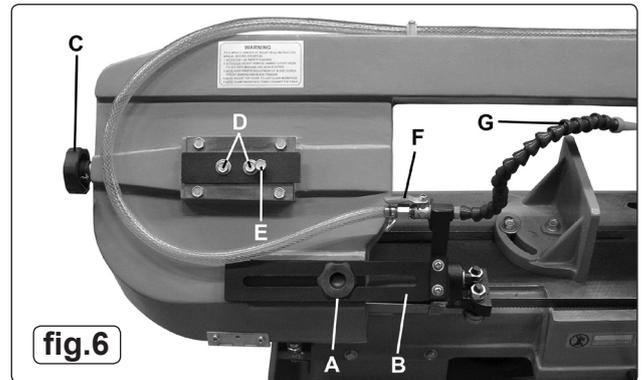


fig.6

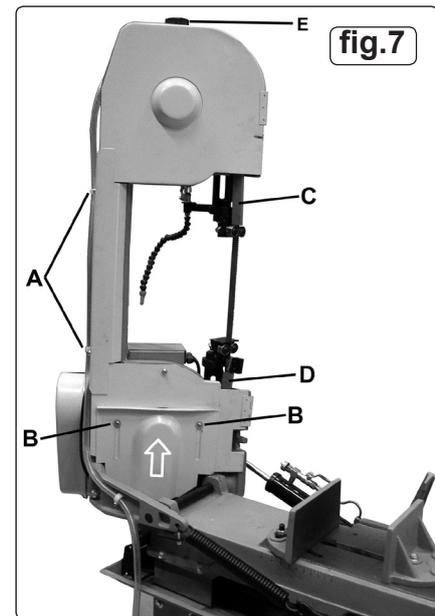


fig.7

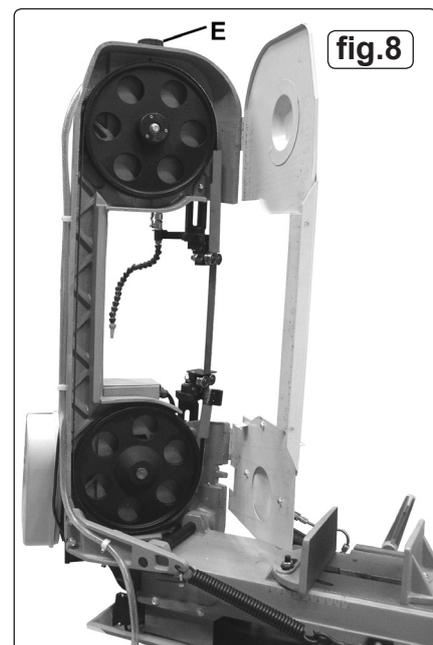


fig.8

#### 4.9. TENSIONING THE BLADE.

☐ **WARNING! DO NOT over tighten the blade as this may cause the blade to stretch and warp.**

Note: Blade tension is important for the correct operation of the saw. The correct blade tension is 700 to 900kg as measured on a blade tension gauge. To set the blade tension without the use of a gauge do the following. Tension the blade slightly to remove any sag in the blade between the two wheels by turning the knob (fig.8E) clockwise but as you do so make sure that the back edge of the blade is close to the rim of both pulleys. Check that the blade is seating properly by turning the pulleys by hand until you have observed a full rotation of the blade.

- 4.9.1. Once the blade is properly aligned increase the tension by turning the knob one and three quarter to two revolutions clockwise. This equals approximately 800kg blade tension.
- 4.9.2. Replace the upper and lower blade guards.
- 4.9.3. Close the blade protection safety cover and secure it with the two screws.
- 4.9.4. Loosen the two screws on the lower blade wheel protection cover and slide it downwards so that the lower blade wheel is completely covered. Tighten the screws.
- 4.9.5. Reconnect the saw to the power source and run it for two to three minutes to seat the blade.
- 4.9.6. Disconnect the saw from the mains power supply and open the safety covers again.
- 4.9.7. Loosen the blade until it just begins to sag.
- 4.9.8. Tighten blade again until it just becomes straight between the blade wheel with all sag eliminated.
- 4.9.9. Further tighten the blade by turning the tension knob two full revolutions. The blade is now properly tensioned and ready for use.
- 4.9.10. Close and secure safety covers.
- 4.9.11. After fitting a new blade the tracking should be checked as described in section 4.7.1

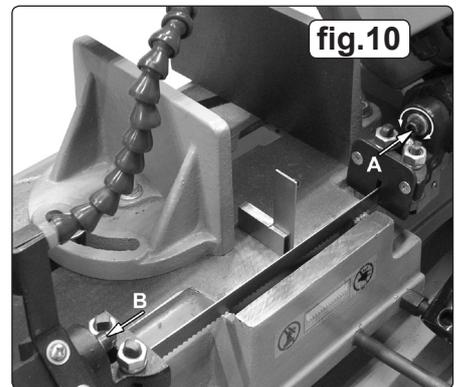
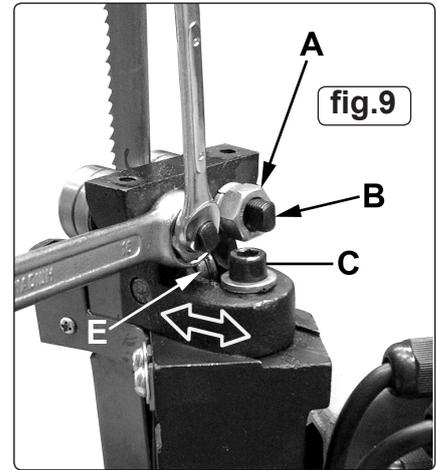
#### 4.10. BLADE GUIDE BEARING ADJUSTMENT

☐ **WARNING! This machine is designed and intended for use with blades that are 0.8/0.9mm thick by 19mm wide by 2362mm long. Use of blades with a different specification may cause inferior performance.**

- 4.10.1. Correct guide bearing adjustment is important so that the blade runs smoothly and evenly without twisting or snagging anywhere along its path.
- 4.10.2. Raise arm to vertical position and lock in place by turning off the hydraulic cylinder valve.
- 4.10.3. For greater visibility and ease of adjustment the protective plate directly over the guide bearings can be temporarily removed.
- 4.10.4. Loosen the hex socket cap screw (see fig.9C) in order to adjust the position of the back roller bearing (see fig.9E). The bearing should be 0.08mm to 0.12mm from the back of the blade.
- 4.10.5. Each of the outer guide bearings is mounted on an adjustable eccentric bushing. Loosen the lock nut (see fig.9A) with a 16mm ring spanner whilst holding the adjuster 'B' with an 6mm open ended spanner.
- 4.10.6. Turn the adjuster to adjust the bearing. The bearing should barely touch the blade (0.001"). This clearance can be measured with a piece of thin paper which should just fit into the gap between the bearing and the blade. Tighten the lock nut when satisfied with the bearing adjustment.
- 4.10.7. Adjust both outer guide bearings. When satisfied that the adjustment is accurate, carefully turn the blade wheels by hand to see if the blade snags or rubs at any point. Re-adjust bearing(s) if necessary.

#### 4.11. ADJUSTING BLADE TO BE 90° TO THE BED.

- 4.11.1. Disconnect the machine from the power supply.
- 4.11.2. Place an engineer's set square onto the bed touching the blade as shown in fig10. The blade should make contact with the square across its entire width.
- 4.11.3. If adjustment is necessary loosen the socket cap screws as shown in fig.10A&B and rotate both blade guide assemblies slightly in the same direction until the blade makes contact with the square across its entire width.
- 4.11.4. Tighten bolts A & B.
- 4.11.5. Having made this adjustment the blade guide bearing adjustments should be checked again as detailed in section 4.10.



## 5. OPERATION

- WARNING!** Before operating the bandsaw ensure that you read, understand and apply the safety instructions in Section 1. **NOTE:** Before operating the machine certain checks and adjustments will need to be carried out as detailed in Section 4 'Set Up and Adjustments'. It is very important that these instructions are followed carefully in order that the machine is set up safely and correctly.
- WARNING!** The machine is designed for light **metal** cutting work in engineering workshops, garages, metal fabricators, etc. The SM35CE.V4 **must not** be used to cut any other materials (including wood). To do so will invalidate your insurance cover and your warranty and may cause damage and/or personal injury.
- WARNING!** Never operate the saw unless all blade guards are installed and working properly.

Note: The harder the material being cut, the slower the cutting speed should be. The use of a cutting oil is recommended with the higher blade speeds.

### 5.1. OPERATION.

- 5.1.1. Ensure that the saw is disconnected from the power supply.
  - 5.1.2. Adjust the blade speed to suit the workpiece material (see Section 4.2).
  - 5.1.3. Raise the saw arm to the vertical position.
  - 5.1.4. Adjust the stock stop to the desired length.
  - 5.1.5. Adjust the vice to the desired angle or set up at 90° to the bed as required.
  - 5.1.6. Open vice, insert the workpiece and clamp it securely.
  - 5.1.7. Adjust the two blade guides so that they are close to the workpiece but will not foul it.
  - 5.1.8. Adjust the rate of descent of the arm as described in Section 4.3 so that it is creeping slowly down towards the workpiece. Shut off the hydraulic cylinder when the blade gets close to the workpiece. Do not start cutting on a sharp edge. File it off first.  
**DO NOT** turn on machine until workpiece is secured and blade has been lowered to just above workpiece.
  - 5.1.9. If using coolant, position the nozzle over the workpiece and turn on the pump. Direct the flow to the cutting area.
  - 5.1.10. Start the saw.
  - 5.1.11. To bring the blade into contact with the workpiece open the valve on the hydraulic cylinder. If the blade jams, immediately switch off the power. Refer to the 'Troubleshooting' section for common problems.
  - 5.1.12. When the cut is completed switch off the coolant pump and disconnect the saw from the power supply, raise blade and remove workpiece.
- WARNING!** Never raise blade when machine is running .
  - WARNING!** Wear gloves when handling sawn metal parts as the cutting process will have made them hot to touch and the cut edges will be sharp.



## 6. LUBRICATION

### 6.1. LUBRICATION.

- 6.1.1. The bearings on the blade guide assemblies and the blade wheels are permanently sealed and require no lubrication. Lubricate vice lead screw as necessary.
- 6.1.2. Change the gearbox oil after the first 90 days of operation and thereafter every 6 months.
- 6.1.3. To change the gearbox oil first disconnect the machine from the power supply.
- 6.1.4. Place the saw arm in the horizontal position.
- 6.1.5. Remove the screws from the four corners of the gearbox cover and remove the gearbox cover and gasket.
- 6.1.6. Place an oil container under right hand lower corner of gearbox and then carefully raise saw arm fully to drain oil.
- 6.1.7. Lower saw arm, remove any remaining oil from gearbox with clean cloths and then refill with 0.3litres of SAE90 gear oil. Replace cover and gasket.

## 7. MAINTENANCE

- WARNING!** Disconnect the bandsaw from the power source before servicing, changing accessories, or performing any other maintenance.

### 7.1. MAINTENANCE.

- 7.1.1. Keep all surfaces clean and free from rust, slag, chips and coolant build-up.
- 7.1.2. Do not use compressed air to clean bandsaw. Compressed air may force chips into the guide bearings and other critical areas of the saw.
- 7.1.3. Use a small paint brush or parts cleaning brush to remove metal particles.
- 7.1.4. Wipe saw down with a clean dry cloth and oil all unpainted surfaces with light machine oil.
- 7.1.5. Keep blade guides clean and free from metal chips.
- 7.1.6. Check guide bearings frequently to make sure they are properly adjusted and running freely.

### 7.2. BLADE CLEANING BRUSH.

It is important that the blade cleaning brush be properly adjusted and kept in good working order. (The brush is built into the blade guard attached to the right hand blade guide). Blade life will be shortened severely if the brush is allowed to go out of adjustment, becomes worn or damaged. Replace the brush if it becomes worn or damaged.

- WARNING!** Do not attempt to to adjust the blade brush with the machine running. Adjust only when the machine is disconnected from the power source.

## 8. TROUBLESHOOTING

Excessive blade breakage and/or teeth ripping from the blade.	<ol style="list-style-type: none"> <li>1. Workpiece is loose in the vice.</li> <li>2. Incorrect speed or feed.</li> <li>3. Blade is too coarse.</li> <li>4. Workpiece material is too coarse.</li> <li>5. Incorrect blade tension.</li> <li>6. Blade is in contact with workpiece before saw is started.</li> <li>7. Blade is rubbing on the wheel flange.</li> <li>8. Blade guides are misaligned.</li> <li>9. Blade is too thick.</li> <li>10. Bad weld on blade</li> </ol>	<ol style="list-style-type: none"> <li>1. Clamp the workpiece securely.</li> <li>2. Check machinist's handbook.</li> <li>3. Check machinist's handbook for recommended blade type.</li> <li>4. Use the saw at slower speed and use a smaller tpi blade.</li> <li>5. Adjust blade tension so that it does not slip on the wheel.</li> <li>6. Place blade in contact with the workpiece only after the saw has started.</li> <li>7. Adjust blade tracking.</li> <li>8. Adjust blade guide alignment.</li> <li>9. Use correct thickness blade.</li> <li>10. Re-weld or replace blade.</li> </ol>
Premature blade dulling.	<ol style="list-style-type: none"> <li>1. Blade tpi is too high.</li> <li>2. Incorrect speed - too fast.</li> <li>3. Inadequate feed pressure.</li> <li>4. Hard spots or scale on the workpiece.</li> <li>5. Blade installed backwards.</li> <li>6. Insufficient blade tension.</li> <li>7. Work hardened material especially stainless</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with a smaller tpi blade.</li> <li>2. Reduce speed.</li> <li>3. Increase feed pressure by unscrewing tension bar. This will decrease the spring tension on the arm.</li> <li>4. Reduce speed, increase feed pressure.</li> <li>5. Remove blade, twist inside out and reinstall.</li> <li>6. Increase blade tension.</li> <li>7. Increase feed pressure by reducing spring pressure.</li> </ol>
Unusual wear on side or back of blade.	<ol style="list-style-type: none"> <li>1. Blade guides are worn.</li> <li>2. Blade guides not properly adjusted.</li> <li>3. Blade guide brackets are loose.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade guides.</li> <li>2. Adjust as described in manual.</li> <li>3. Tighten blade guide brackets.</li> </ol>
Motor overheating.	<ol style="list-style-type: none"> <li>1. Blade tension too high.</li> <li>2. Drive belt tension too high.</li> <li>3. Blade too coarse or too fine.</li> <li>4. Gears need lubrication.</li> <li>5. Blade is binding in the cut.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce blade tension.</li> <li>2. Reduce drive belt tension.</li> <li>3. Use a blade more suitable for the workpiece.</li> <li>4. Lubricate the gears.</li> <li>5. Decrease feed and speed.</li> </ol>
Bad, crooked or rough cuts.	<ol style="list-style-type: none"> <li>1. Feed pressure too great.</li> <li>2. Blade guide bearings not properly adjusted.</li> <li>3. Inadequate blade tension.</li> <li>4. Blade is dull.</li> <li>5. Incorrect speed.</li> <li>6. Blade guides are spaced out too far.</li> <li>7. Blade guide assembly is loose.</li> <li>8. Blade is too coarse.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed pressure by increasing the spring tension on the arm.</li> <li>2. Adjust blade guide bearing in accordance with manual.</li> <li>3. Increase blade tension a little at a time.</li> <li>4. Replace the blade.</li> <li>5. Check manual for recommended speed.</li> <li>6. Move guides closer to workpiece.</li> <li>7. Tighten the guide assembly.</li> <li>8. Use a finer blade.</li> </ol>
Blade is twisting.	<ol style="list-style-type: none"> <li>1. Blade is binding in the cut.</li> <li>2. Blade tension is too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease feed pressure.</li> <li>2. Decrease blade tension.</li> </ol>

**NOTE:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

**IMPORTANT:** No liability is accepted for incorrect use of this product.

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