

Kushed Procedures

Bandsaws

W3

Bandsaws:

19" Bandsaw – Major

14" Bandsaw – Carbatec

14" Bandsaw – Major





The Shed provides items such as welding masks and gloves.

Members are required to provide their own footwear, eyewear, hearing protection and masks.

Safety

This is a very high priority for our Shed members. There are some aspects that are mandatory under our insurance policies and some which the The Shed requires members to adhere to for everyone's benefit.

The Shed Safety Induction

It is a requirement of attendance at The Shed that members have reviewed the Safety Induction Presentation

Personal Protective Equipment

This is required in various forms depending upon the equipment being used or the activity being undertaken.

Protective eyewear is always mandatory when using machinery.

The Shed schedules a Coordinator and a First Aid Safety Officer for each day of attendance and their safety directions are final and must be adhered to.

Key Features of Band Saws

Each of our three Bandsaws consists of a continuous flexible steel band with downwards facing teeth on the front edge. The teeth are bent (set) alternately sideways to provide a cut (kerf) which is wider than the blade thickness. This gives clearance in the cut and allows for blade manoeuvrability in the kerf for curved cutting. The blade runs through a set of upper and lower guides and a slotted throat insert in a flat worktable. It is supported and driven by two large crowned wheels which are coated with “rubber-like” tyres. The blade should track on the centre of these wheels.

The timber work piece is held flat on the worktable and fed into the blade to cut where the blade contacts the work. The tables are made from cast metal, machined flat and slotted to enable new blades to be installed. The table may be tilted for cutting bevels.

The Bandsaws are used for straight, curved or irregular shaped cutting, cross-cutting and ripping along the grain. Mitre gauges, which slide in straight grooves in the table surface, and fences may be used on the table to improve accuracy with ripping and cross cutting.





Speed of Operation

The speed of the machines can be adjusted to suit the work.

- Low speed is used for cutting soft woods over 100mm in height or hardwoods over 50mm in height.
- High speed is best for cutting timber under these sizes.

Only qualified coordinators should change the speed of these machines.

Sawdust is drawn down through the table insert and into the machine, from where an extractor sucks the dust into a collector bag. Dust will build up in the machine if the extractor is not used and eventually it may cause poor blade tracking or band or belt breakage if build-up occurs on tyres or pulleys.

The 19" machine is more generally used with a large ripping blade whereas the narrower blades in the 14" machines are more suited to finer work.

One of the 14" machines is fitted with an emergency stop pedal which switches the motor off and brakes the turning of the drive wheel. Ensure it is "lifted" back up so that the micro switch is not still activated after use.

Blades should be tensioned correctly to ensure proper tracking and cutting action. Indicators on the machines show the tension which should suit the width of the saw blade being used. **WARNING:** The tracking tension on the Major 14" Bandsaw (with the foot brake) should not be wound lower than the minimum setting on the scale otherwise the tension mechanism may be inadvertently unseated/disconnected.



Safety First

Never use the band saw for cutting operations that can be performed more efficiently or safely on another machine.

The band saw should never be left unattended with the power switched on.

Safety & Procedural Issues

Before the Cut

If in doubt about the operation you are about to do, seek a Coordinator's assistance.

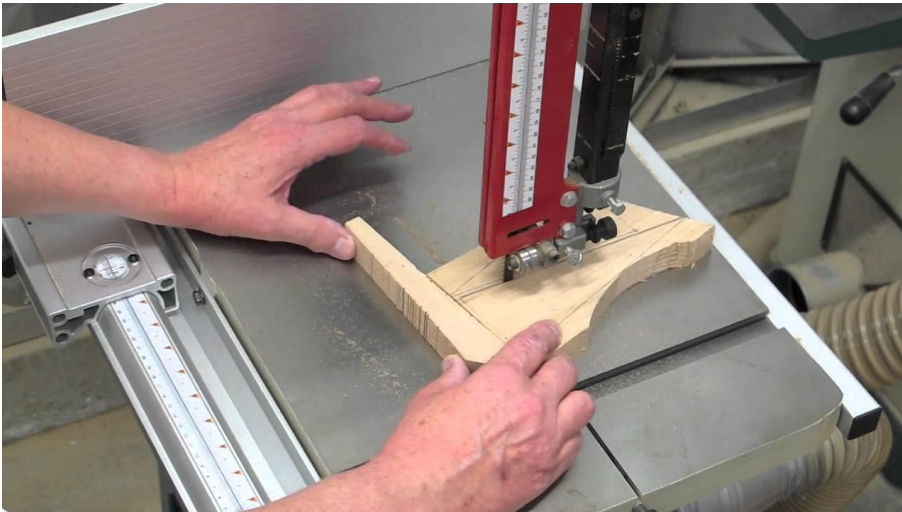
- Blade changes and major maintenance should only be carried out by an experienced Coordinator. This particularly applies to guide adjustment.
- Always ensure the machine is turned off at the wall outlet before making adjustments.
- For safety, covers to the machine casing should be securely closed and latched after being opened and this helps ensure any micro switches fitted to them are deactivated.
- The blade should be installed with the teeth facing toward the operator and points facing downward toward the table. The blade rotates downwards towards the table.
- The blade should be sharp, undamaged and set correctly. The blade type should be suited to the material to be cut. For curved cutting the blade should be narrow enough to turn in its kerf and follow the radius of the curved cuts.



Round Stock

Never cut round stock without ensuring it is very firmly held so that it will not rotate into the blade and catch or kink the blade. A vee support block is advisable.

- The blade should be tensioned correctly and tracking properly. It should run straight and true.
- The blade should be square to the front edge of the table. It should not be “kinked” or twisted.
- The saw should be in good condition and correctly adjusted.
- Thrust and guide wheels should be in good condition, correctly adjusted and should rotate freely. They should be just clear of a free running blade.
- Listening to the free running saw will give an indication of rubbing guide wheels or damaged blades.
- The table insert should be in good condition and free of small off cuts which may lodge between the blade and insert.
- Band wheel tyres should be clean and in good condition.
- Guards must be fitted, correctly adjusted and secured.
- The upper guide assembly should be adjusted as close as practicable to the work (5mm – 10mm from the upper surface). NEVER ADJUST THE GUIDE WITH THE MACHINE RUNNING.



A simple band saw steering stick

During the Cut

- A push stick should be readily available; a push stick should be used to keep hands away from the blade.
- Long and/or wide stock should be supported with the aid of an assistant or with appropriate roller supports.
- Hands should never be in line with the cut and should be kept at least 50mm clear of the blade during sawing.
- The operator or observers should never stand on the right side of the blade. This could be dangerous in the event of blade breakage. Observers should stand well clear of the work area.
- Ensure that dust collectors and duct gates are open when using the saw.

NEVER START THE MACHINE WITH THE BLADE ALREADY CONTACTING THE WORK.

This places undue stresses on the machine and blade, and proper control of the saw cannot be ensured. Be sure the blade has gained full operating speed before starting the cut.



Don't do this if you value your fingers

- If ripping with a sloping table, always have the fence below the work to give it proper support.
- With both hands, firmly hold the work-piece down on the table, and feed it towards the blade slowly, using the push stick to keep hands away from the blade. Put only light pressure on the work.
- Use “relief cuts” when cutting sharp curves or pre-drill in the curve to give the sharp profile required.
- Do not attempt to turn the work-piece without pushing it, as this may cause the work to jam and can bend or break the blade.
- Off cuts and saw dust must not be removed from the table with hands while the blade is moving.
- When cutting thin, flexible material, a piece of firm ply or sheet material can be used as a support to prevent deflection of the work, especially when using the saw with the more flexible plastic insert. This sheet support piece is also cut and provides better support right up to the cut edge.

After machine use

- Saw dust and off-cuts must be cleaned off the machine and floor area after machine use.
- Ensure all guards and adjustment screws are left tight in case the next operator does not check them.
- Periodic cleaning of dust build-up in and around the machines should be done with a vacuum cleaner.
- Replace any fences or tools to their correct place of storage.
- Lower the upper guide assembly so that very little of the blade is left exposed.
- If the blade is “burning” it could be running too fast in which case the speed can be lowered by a qualified Coordinator. Other causes of “burning” are that the blade may be dull or be being forced around too sharp a curve.
- If the blade breaks, the operator should turn the machine off and move away from the broken blade. A new blade must be fitted by an authorised maintainer. Both band wheels must be stationary before guards are opened and the broken blade removed.
- Feed stock at a rate appropriate for the cut. Cutting too slow will put excessive wear on the blade. Cutting too fast will damage motor and may cause injury. Cut only as fast as the blade can properly remove material.
- Never attempt to cut curves that are too tight for the width of blade in the machine.
- Avoid withdrawing the material (backing out) from the blade when making long cuts. This can usually be achieved by planning the cut and making short relief cuts at 90 degrees to the cutting line prior to making the long cut.
- Constant clicking sounds when the saw is running usually indicate a cracked or kinked blade. The machine should be switched off and the blade inspected immediately by an authorised maintainer.