

# **General Machine Safety Instructions**

**The following is a document containing information on safety around various woodworking machines. It is intended that this document be available in the workshop.**

**The information contained in this document combines the material that the Club approved some time ago and information from the Mens' Shed manual.**

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# **Warragul Woodworkers Club Inc**

## **A Mens Shed**

### **What should you do before using woodworking machines?**

**Woodworking tools and machines can be dangerous if not used properly.**

- Only use woodworking machines that you have been trained to use properly and safely.
- Read the owner's manual carefully, these are located in the library area.
- Make sure you understand instructions before attempting to use any tool or machine.
- Ask questions if you have any doubts about doing the work safely.
- Use only machines for which you have been accredited – this requires each member to be authorised after appropriate training on each machine to be used.
- It is the member's responsibility to ensure all safety gear required for a machine is used – member and club shared responsibility to provide safety equipment.

### **What safety procedures should you follow when using woodworking machines?**

#### **Check if it is OK to use the machine**

##### **FOR YOUR PROTECTION**

- Always wear safety glasses or goggles.
- Wear dust masks when required.
- Wear hearing protection that is suitable for the level and frequency of the noise you are exposed to in the woodworking area. If you have trouble hearing someone speak from three feet away, the noise level from the machine is too high. Damage to hearing may occur.
- Use gloves to protect hands from splinters when handling wood but do not wear them near rotating blades and other machinery parts where the gloves can catch.
- Wear protective footwear.

##### **CHECK THE WORK AREA**

- Use good lighting so that the work piece, cutting blades, and machine controls can be seen clearly. Position or shade lighting sources so they do not shine in the operator's eyes or cause any glare and reflections.
- Ensure that the floor space around the equipment is sufficient to enable you to machine the size of work piece being processed safely without bumping into other workers or equipment.
- Electric power cords should be above head level or in the floor in such a way that they are not tripping hazards.
- Keep work area free of clutter, clean, well swept, and well lit. Spills should be cleaned up immediately. Floor areas should be level and non-slip. Good housekeeping practices and workplace design will reduce the number of injuries and accidents from slips, trips, and falls.

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### CHECK THE MACHINE

- Make sure the guard is in position, is in good working condition, and guards the machine adequately before operating any equipment or machine. Check and adjust all other safety devices.
- Make sure the equipment is properly grounded before use.
- Check that keys and adjusting wrenches are removed from the machine before turning on the power.
- Make sure that all machines have start and stop buttons within easy and convenient reach of an operator. Start buttons should be protected so that accidental contact will not start the machine.
- Ensure that all cutting tools and blades are clean, sharp, and in good working order so that they will cut freely, not forced.
- Woodworking machines should be fitted with efficient and well-maintained local exhaust ventilation systems to remove sawdust or chips that are produced.

### CHECK THE STOCK

- Inspect stock for nails or other materials before cutting, planing, routing or carrying out similar activities.
- No second hand material to be used on machines in the Club workshop.

### OPERATE THE MACHINE

- Start up in a low gear if possible. Listen for unusual noises, vibrations, malfunctions before placing material in position.
- Use a "push stick" to push material into the cutting area. Jigs are also useful in keeping hands safe during cutting procedures. Keep hands out of the line of the cutting blade.
- Do NOT alter settings unless you have been formally trained in this machine.
- Clamp down and secure all work pieces when drilling or milling.
- Use extension tables or roller supports for large work pieces. Supports should be placed on both sides (infeed and outfeed).
- STOP work immediately if a fault occurs. If possible switch off the machine and notify the group leader to isolate the machine.
- When finished, turn the machine off and **CLEAN UP!** the work area.
- Turn the power off **and** unplug the power cord (or lock out the power source) before inspecting, changing, cleaning, adjusting or repairing a blade or a machine. Also turn the power off when discussing the work.

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### What should you avoid when working with woodworking machines?

Do not wear loose clothing, work gloves, neckties, rings, bracelets or other jewellery that can become entangled with moving parts.

Avoid awkward operations and hand positions where a sudden slip could cause your hand to move into the cutting tool or blade.

Do not use excessive force or pressure.

Do not remove sawdust or cuttings from the cutting head by hand while a machine is running. Use a stick or brush when the machine has stopped moving.

Do not leave machines running unattended (unless they are designed and intended to be operated while unattended).

Do not leave a machine until the power is turned off and the machine comes to a complete stop.

Do not try to free a stalled blade before turning the power off.

**Do not distract or startle an operator while using woodworking equipment.**

Horseplay is prohibited. It has no place in the workshop and can lead to injuries.

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### Specific information for various woodworking machinery

#### **What should you do before using a table saw?**

A table saw can be dangerous if not used properly. Until you are accredited you should

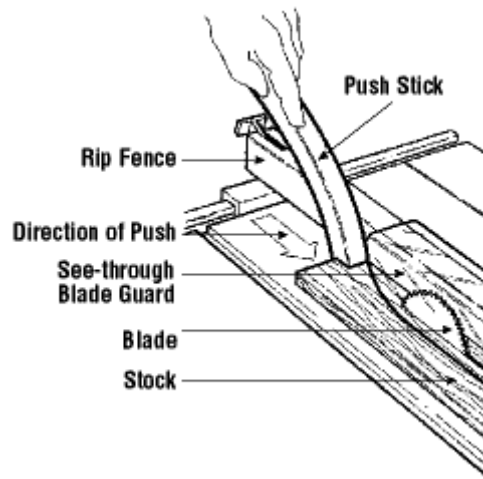
- Understand how the machine works.
- Learn the applications and limitations before use.
- Know that some of the risks are: woodchips and dust in the eyes and nose, noise.
- The saw blade is capable of cutting skin and removing fingers and other parts of the body very quickly.
- Refer to Woodworking Machines - General Safety Tips for general safety precautions.

#### **What safety procedures should you follow when using a table saw?**

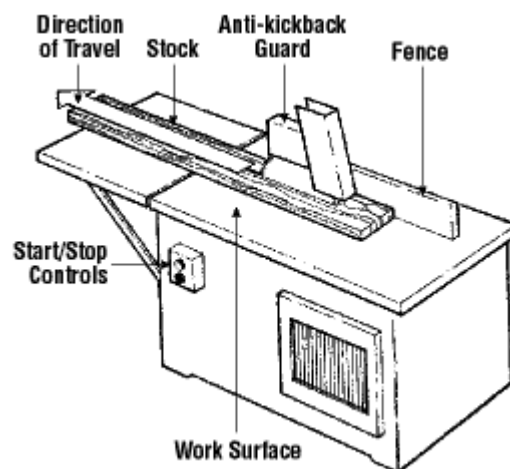
- Wear safety glasses or a face shield.
- Wear hearing protection.
- Wear protective footwear.
- Pay particular attention to the manufacturer's instructions on reducing the risk of kickback (when the wood can be violently thrown back toward the operator).
- Choose proper blades for the type of work being done.
- Keep blades clean, sharp, and properly set so that they will cut freely without having to force the work piece against the blade.
- Use the guards provided with the saw or ones designed for use with the saw that you are using. Keep them in place and in good working condition.
- Use a guard high enough to cover the part of the blade rising above the stock and wide enough to cover the blade when it is tilted. The blade height should be set so it does not extend more than about 3 mm (1/8 in) above the height of the piece being cut.
- Ensure that the fence is locked in position after the desired width has been set.
- Hold the work piece firmly down on the table and against the fence when pushing the wood through.
- Ensure that there is adequate support to hold a work piece; use extension tables or roller supports at the side or back for larger pieces. If an assistant is at the back (outfeed) end of the saw, an extension table should be in place so the back edge is about 1.2 m (4 ft) from the saw blade. The assistant should wait for the work piece to reach the edge of the extension table and should not reach toward the saw blade.
- Feed stock into the blade against the direction of its rotation.
- Use push sticks.
- Wear possible wear a leather apron when operation the saw.

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- Move the rip fence out of the way when cross cutting. Never use it as a cut off gauge.
- Use a push stick when ripping narrow or short stock (e.g., when the fence is set less than about 15 cm (6 in) from the blade; when the piece is less than 30 cm (12 in) long or when the last 30 cm (12 in) of a longer piece is being cut). Refer to ripping applications in the manufacturer's instruction manual.
- Use the push stick to remove the cut piece from between the fence and the blade.
- Keep hands out of the line of a saw blade.
- Use guard with a spreader (riving knife) and anti-kickback fingers for all ripping or cross cutting operations.
- Keep the body and face to one side of the saw blade out of the line of a possible kickback.
- Provide adequate support to the rear and sides of a saw table for wide or long stock.
- If using a sliding table. Be sure to clamp the work piece down to keep it stable.
- Be careful when waxing, cleaning, or servicing the table. Shut off and unplug (or lock out) a saw before doing any work on the saw. (Maintenance persons' issue)
- Keep area clean and clutter-free. Operate machines in a non-congested, well-lit area.
- Use the proper sawdust exhaust systems as required by operation.



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### What should you avoid when working with a table saw?

Do not saw freehand. Always hold the stock firmly against the mitre gauge or a rip fence to position and guide the cut.

Do not reach around and over moving blades.

Do not feed the work piece faster than the saw can accept.

Do not leave a saw running unattended. Turn off the power and make sure the machine has stopped running before leaving the area.

#### Procedure:

- 1 Adjust height of safety guard to suit thickness of timber to be sawn
2. Set height of saw blade<sup>[1]</sup><sub>[SEP]</sub>
3. Check Dust Extractor is ON & Gate OPEN<sup>[1]</sup><sub>[SEP]</sub>
4. Check position of Fence
5. Switch saw ON<sup>[1]</sup><sub>[SEP]</sub>
6. Cut timber using PUSH STICKS for small pieces & at the end of the cut
7. Wait for saw to STOP before picking up the pieces<sup>[1]</sup><sub>[SEP]</sub>
8. Turn saw OFF and close Extractor Gate<sup>[1]</sup><sub>[SEP]</sub>
9. **CLEAN UP!**

# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you do before using a wood turning lathe?

A wood turning lathe can be dangerous if not used properly. Until you are accredited you should:

- Understand how the machine works.
- Learn the applications and limitations before use.
- Understand that some of the risks are: risk of entanglement, wood chips in eyes or nose, noise, and flying work pieces.
- The work rotates at high speeds, so tools can be thrown and work pieces can come off. Also, tools can catch in the work piece and cause harmful issues and damage.
- Refer to Woodworking Machines - General Safety Tips for general safety precautions.

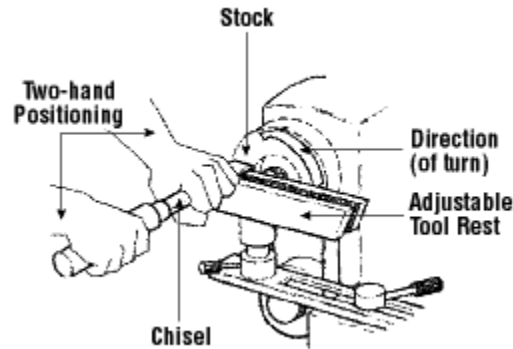
### What safety procedures should you follow when using a wood turning lathe?

- Wear safety goggles or face shield to protect yourself from flying chips.
- Wear hearing protection.
- Wear a dusk mask when dust is generated (e.g., during sanding operations).
- Wear protective footwear.
- Work in well-lighted area.
- Before the lathe is turned on, ensure that all clamps and fittings are secure and that the work piece is free to turn.
- Use stock free of defects.
- Hold tools firmly with both hands and against the tool rest.
- Hold the stock securely on the faceplate or between the centres.
- Use only furnished or approved tools.
- Use sharp, well-maintained chisels and gouges.
- Select a speed that is appropriate for the job. Operate the lathe at a low speed and use a moderate cut depth to prevent splinters from flying out during roughing operations. The actual speed of the lathe depends on type of wood, a diameter of stock, nature of work being done and type of tool used.
- Adjust tool rests so that they are parallel and as close as possible to the stock. They should also be set high enough so that tools will cut into the wood slightly above the centre of the work being turned.
- Remove the tool rest when sanding or polishing.
- Use appropriate tools to hold the sand paper or emery paper whenever possible. If you must use your hands always hold the paper in a way that will not allow the paper to catch, pull or entangle around the stock.
- To make a faceplate turning, the one hand steadies the tip of the chisel, which holds the edge against the tool rest while the other hand guides the tool. Keep the tip of the chisel held higher than the handle.



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## A Mens Shed



### What should you avoid when working with a wood turning lathe?

Do not wear gloves, loose clothing, rings or jewellery around the neck that can hang outside one's clothing.

Clothing should be comfortable but not so loose that it can catch on the machine or get entangled with any rotating parts or the wood being turned; shirts should be tucked in and long hair tied back.

Do not leave a running lathe unattended - leave only after the lathe has been turned off and it has come to a complete stop.

Do not use makeshift tools.

Do not use stock containing checks, splits, cracks, or knots.

### Procedure:

1. Seek instruction if not fully familiar with the wood lathe<sup>[1]</sup>
2. Adjust and centre the work piece before work<sup>[2]</sup>
3. Ensure chuck installed correctly and adjusted for work piece<sup>[3]</sup>
4. Lock Tail Stock and Tool Rest in position<sup>[4]</sup>
5. Set rotation speed and direction appropriate for the work<sup>[5]</sup>
6. Ensure dust extraction on and shut off gate is "open". Position chip collector
7. Switch on and wait for work to reach set speed<sup>[6]</sup>
8. Make small cuts with appropriate hand tool or chisel<sup>[7]</sup>
9. Keep work area as clear as possible and free of large quantities of chips
10. Switch off at machine, then at the wall - if finished work for the day.
11. **CLEAN UP!**

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## A Mens Shed

### What should you do before using a band saw?

A band saw can be dangerous if not used properly. Until you are accredited to use this machine you:

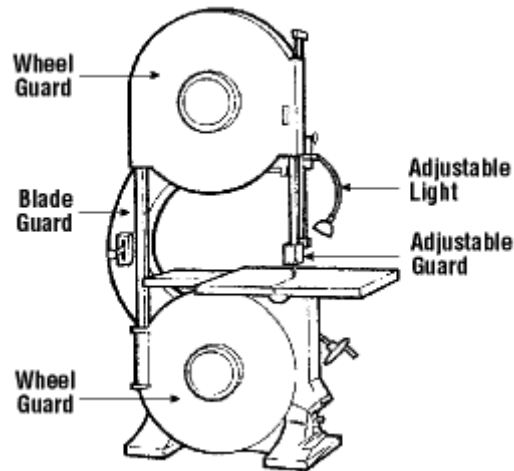
- Should understand how this machine operates.
- Learn the applications and limitations of this machine.
- Should be aware that the band saw should be securely anchored to the floor (or if applicable to a workbench of appropriate height) to reduce vibration.
- Understand that some of the risks from operating this machine include sawdust in the eyes, noise and cutting fingers or hands on the blade.
- Refer to Woodworking Machines - General Safety Tips for general safety precautions.

### What safety procedures should you follow when using a band saw?

- Wear safety glasses or a face shield.
- Wear hearing protection that is suitable for the level and frequency of the noise you are exposed to in the woodworking area.
- Wear protective footwear.
- Make sure all guards are in place and properly adjusted. Ensure all band wheels are enclosed.
- Check to see that sawdust is not a problem in the lower part of the machine.
- Adjust blade guard height to about 3 mm or 1/8 inch above the top of the material being cut.
- Ensure the blade is tracking correctly and runs freely in and against the upper and lower guide rollers.
- Take care to not *Trap* the blade.
- Ensure the blade is under proper tension. A band saw equipped with automatic tension control is desirable.
- Use band saw blades that are sharp, properly set and otherwise suitable for the job (e.g., the right tooth pitch; tooth form; blade width).
- Hold stock firmly and flat on the table to prevent the stock from turning and drawing your fingers against the blade. Keep hands braced against the table.
- Use a push stick when you remove cut pieces from between the fence and saw blade or when your hands are close to the blade. Keep your hands on either side of the blade - not in line with the cutting line and the blade.
- Make release (relief) cuts before tight curves when doing intricate scroll-type work.
- Keep the floor around a band saw clean and free of obstructions or clutter.
- Keep the machine properly oiled and serviced. (Maintenance persons' job only)
- Make sure there is adequate lighting at the machine table.
- There will be a maintenance team that will be responsible for adjusting the machine, others should not be fiddling with guide bearings etc. Be aware of the way the Club handles the tension of the blade on the machine you are going to use.

# Warragul Woodworkers Club Inc

## A Mens Shed



### What should you avoid when working with a band saw?

- Do not use excessive force when pushing the wood past the blade.
- Do not back the stock away from the blade while the saw is in motion if the work piece binds or pinches on the blade.
- If the blade jams- SWITCH OFF before moving the work piece
- Switch “OFF” at the machine and wait for the blade to stop.
- Do not stop a band saw by thrusting stock against the cutting edge or the side of a blade immediately after the power has been shut off, use the brake if provided.
- Do not remove sawdust or cuttings from the table by hand or with compressed air. Use a stick or brush.
- Do not leave a saw running unattended. Turn off the power and make sure the machine has stopped running before leaving the area.

### Procedure:

1. Turn on extractor
2. Lower guard to just clear job. Turn saw on
3. Move timber slowly onto blade, following design lines on timber
4. Do not trap the blade or go backwards through the cut
5. For complicated patterns use multiple cuts at different angles
6. If the blade jams - SWITCH OFF before moving the work piece
7. Keep Hands, Fingers & Arms away from the blade
8. Switch "Off" at the machine & wait for blade to stop
9. Remove work piece & **CLEAN UP!**

Be aware when cutting circles that the blade may come out of the stock and cause a surge toward the blade - always hold stock out of the line of cutting.

Cutting round stock can create the most common cause of broken or damaged blades and machinery. Be sure the Workshop Supervisor is aware of how you intend to cut round stock before you proceed.

# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you do before using a router?

A router can be dangerous if not used properly. Until you are accredited you

- Understand how the machine works.
- Learn the applications and limitations of this machine.
- Think of the care you take when handling a sharp knife, then multiply that many times - a router is a very sharp knife, with the blade spinning very fast
- **Be aware** -If you're not sure if you should be trying a particular operation - DON'T. Routing takes confidence, which comes from practise and working up your skills gradually. Try again when you're more experienced.
- Know that some of the risks from using routers include: woodchips in the eyes, kickback from work pieces, noise and danger from very dangerous cutters.
- Refer to Woodworking Machines - General Safety Tips for general safety precautions.

### What safety procedures should you follow when using a router?

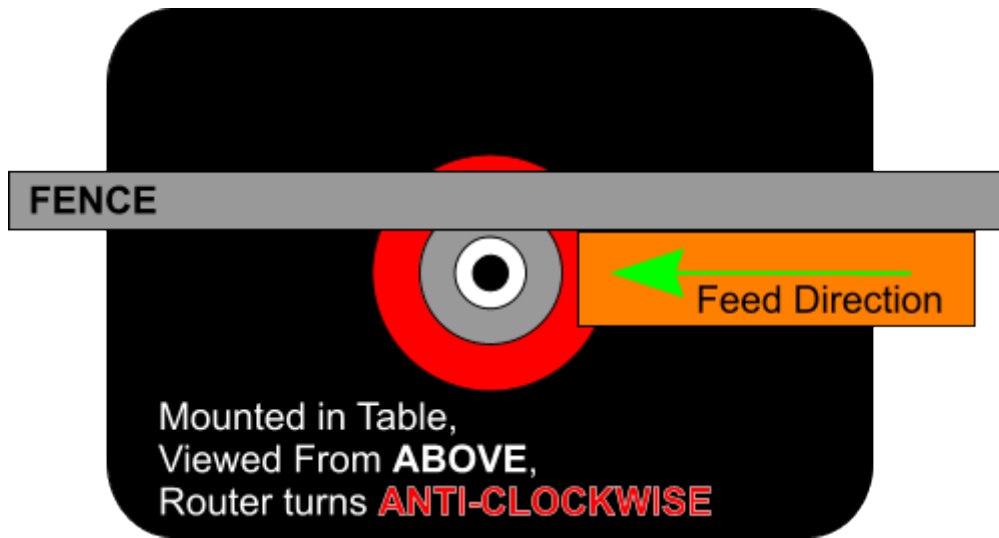
- Always wear eye & ear protection.
- Wear protective footwear.
- Follow router manufacturer's safety & use instructions.
- Insert at least 3/4 of bit shank into the collet.
- Reduce router speeds for large bits.
- Use a router table & fence whenever possible.
- Adjust fence for a slight clearance between the guide bearing and the stock.
- Always use push sticks or jigs to control work.
- For heavy stock removal, to prolong bit life and give a better finish, use multiple passes.
- Pre-plough dovetail cuts with a straight cutter to remove the majority of the waste.
- Before changing cutters, always unplug your router.
- Always check bits for damage before use (and after).
- When installing bits, always leave about 1/8" clearance from the collet bottom.
- Always use a router table with fence when working with large diameter bits.
- Always use sharp bits.

### What should you avoid when working with a router?

- Do not use excessive force when pushing work piece past the cutter.
- Do not back the stock away from the cutter unless timber is held firmly
- Do not remove sawdust or cuttings from the table by hand or with compressed air. Use a stick or brush when the machine has stopped
- Do not leave a router running unattended. Turn off the power and make sure the cutter is completely stopped before leaving the area.

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## A Mens Shed



The illustration above shows an alignment for cutting slots or trenches. When routing an edge no part of the piece must be between the cutter and the fence. When routing an edge the fence will be located so that the work piece can only touch the cutter as illustrated below.



### Procedure:

1. Ensure cutter bit is tightly locked in the chuck & free to rotate.
2. Lock at the correct height using machine lock & adjustment lock nuts.
3. Ensure guards are in place. [SEP]
4. Switch "On" - Allow tool to reach full speed - Check dust extraction is "On".
5. Hold wood firmly to table - feed edge to cutter - Beware of Kickback.
6. Always feed the work against the direction of rotation of the bit. [SEP]
7. Use repeated small cuts rather than one deep cut. [SEP]
8. Switch off at the machine (not wall). [SEP]
9. Wait until the bit stops rotating. then remove work piece.
10. **CLEAN UP!**

# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you do before using a sliding compound saw?

Sliding compound or mitre saws can be dangerous if not used properly. Until you are accredited to use one at the Club you should:

- Understand how it operates.
- Learn the applications and limitations of this machine.
- Know that some of the risks include woodchips and or dust in eyes, kickback from a work piece, noise and potential for getting cut on the blade.

### What safety precautions should you follow when using a sliding compound saw?

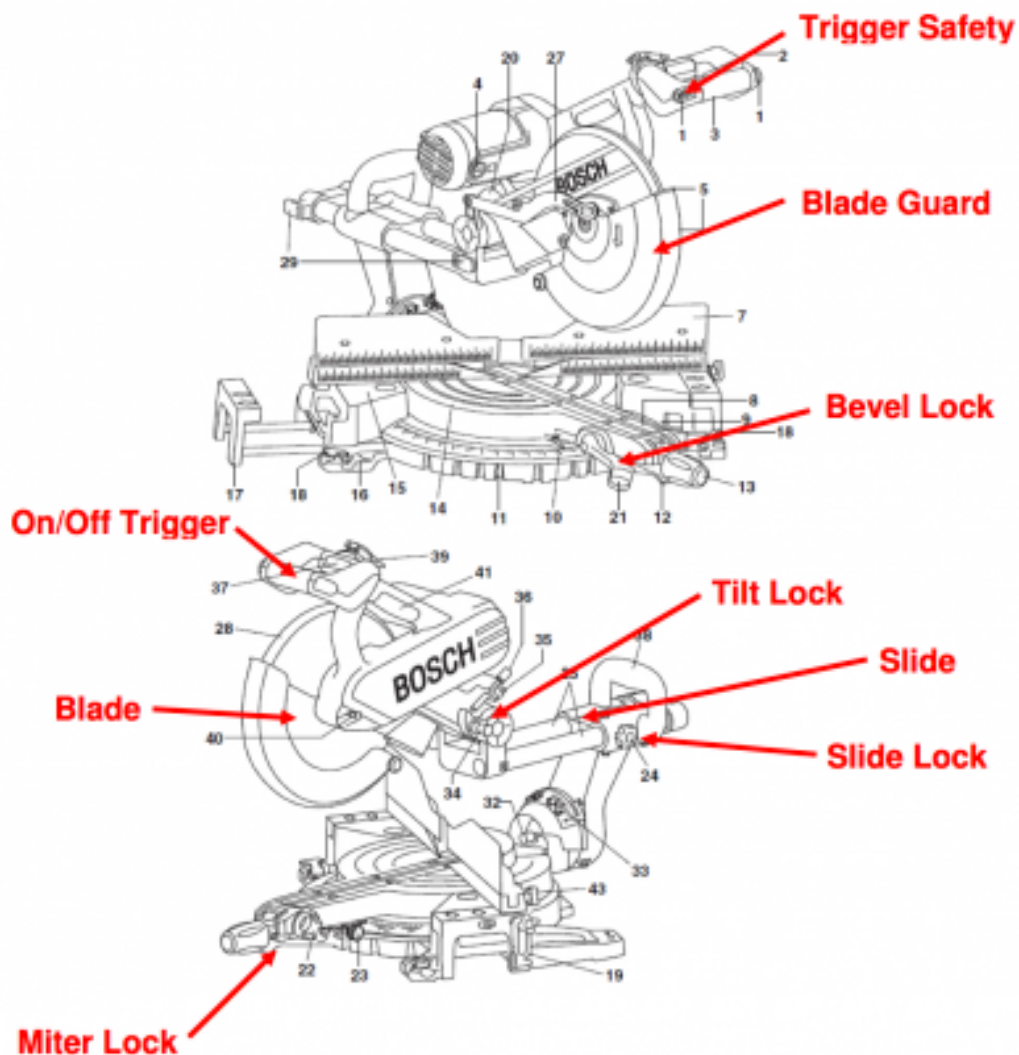
- Wear safety glasses or a face shield. If work is dusty, use a respirator or dust mask.
- Wear appropriate hearing protection.
- Wear protective footwear when required.
- Check that the Club has attached the saw firmly on a workbench or other rigid frame and you can operate the saw at waist height.
- Keep one hand on the trigger switch and handle and use the other hand to hold the stock against the fence.
- Use a hold down (clamp) on the wood where possible.
- Keep hands out of the path of the blade.
- Keep guards in place and in working order. (Report to shed manager if guards are missing)
- Remove adjusting keys and wrenches.
- Use a crosscut or combination blade. (Get help if the blade needs changing)
- Ensure that the blade rotates in the correct direction.
- Ensure that the blade and arbor collars are secure and clean. Recessed sides of collars should be against blade.
- Keep blade tight, clean, sharp and properly set so that it cuts freely and easily.
- Turn on dust extractor before starting saw.
- For long cuts pull saw back – keep well above the timber.
- **Allow motor to reach full speed before cutting.**
- Lower blade and PUSH blade through timber – do not pull to cut.
- Release “On” switch – wait for blade to stop turning.
- Lift saw and return it to its rest position.
- Remove work piece and **CLEAN UP!**
- Keep the work area clean. Cluttered areas and benches invite accidents.
- Keep the work area well lit.
- Reduce the risk of unintentional start-up. Make sure saw switch is in OFF position before plugging in.
- Check for damage. Report issues to Shed Manager.
- Keep motor air slots clean and free of chips.
- Use only the accessories designed for the specific saw and job.

# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you avoid when using a sliding compound mitre saw?

- Do not operate the saw on ground.
- Do not cut pieces smaller than 20 cm (8 in.) in length.
- Do not cut "free hand." The stock should lie solidly on the table against the fence.
- Do not reach around or behind the saw blade.
- Do not take your hand away from the trigger switch and handle until the blade is fully covered by the lower blade guard.
- Do not overreach. Keep proper footing and balance at all times.
- Do not force the saw. The saw cuts better and more safely at the rate for which it was designed.
- Do not leave the saw until it has stopped completely. Turn the power off and unplug the saw. (Depends on the system in place in the workshop if you need to unplug)
- Do not use electric tools in damp or wet locations.
- Do not operate electric tools near flammable liquids or in gaseous or explosive atmospheres. Sparks may ignite fumes.
- 



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## A Mens Shed

### Procedure:

1. Check guard is in place & functioning satisfactorily
2. Turn on Dust extractor
3. Place timber flat onto cutting bed & clamp into position against fence
4. For long cut pull saw back - keep well above the timber
5. Switch "On" - hold button down until blade has reached full speed
6. Lower and PUSH blade through timber - do NOT pull to cut
7. Release "On" switch - wait for blade to stop
8. Lift saw & return it to its rest position
9. Remove work piece
10. **CLEAN UP!**



# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you do before using a small mitre saw?

Small compound or mitre saws can be dangerous if not used properly. Until you are accredited to use one at the Club you should:

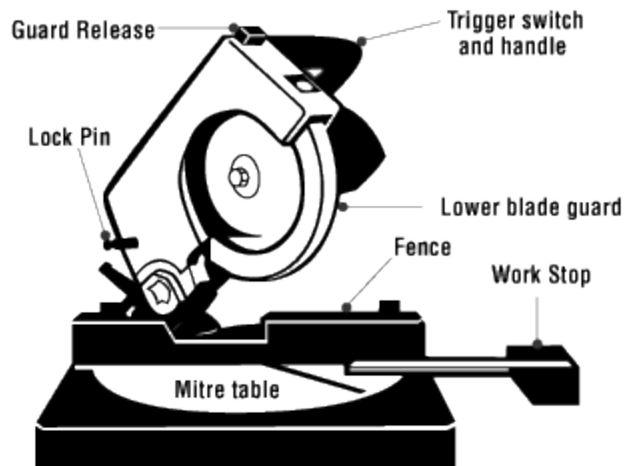
- understand how it operates.
- learn the applications and limitations this machine.
- know that some of the risks include woodchips in eyes, kickback from a work piece, noise and the potential for getting cut on the blade.

### What safety precautions should you follow when using a small mitre saw?

- Wear safety glasses or a face shield. If work is dusty, use a respirator or dust mask.
- Wear appropriate hearing protection.
- Wear protective footwear when required.
- Check that the Club has attached the saw firmly on a workbench or other rigid frame and you can operate the saw at waist height.
- Make sure the work area well lit.
- Reduce the risk of unintentional start-up, make sure saw switch is in OFF position before plugging in.
- Keep one hand on the trigger switch and handle and use the other hand to hold the wood against the fence.
- Use a hold down (clamp) on the wood where possible.
- Keep hands out of the path of the blade.
- Keep guards in place and in working order. (Report to shed manager if guards are missing)
- Remove adjusting keys and wrenches.
- Use a crosscut or combination blade. (Get help if the blade needs changing)
- Ensure that the blade rotates in the correct direction.
- Ensure that the blade and arbor collars are secure and clean. Recessed sides of collars should be against blade.
- Keep blade tight, clean, sharp and properly set so that it cuts freely and easily.
- Turn on dust extractor before starting saw if available for the saw.
- Switch “On”
- **Allow motor to reach full speed before cutting.**
- Lower blade and PUSH blade down through timber.
- Release “On” switch – wait for blade to stop turning.
- Lift saw and return it to its rest position.
- Remove work piece and **CLEAN UP!**
- Keep the work area clean. Cluttered areas and benches invite accidents.
- Check for damage. Report issues to Shed Manager.
- Keep motor air slots clean and free of chips.
- Use only the accessories designed for the specific saw and job.

# Warragul Woodworkers Club Inc

## A Mens Shed



### What should you avoid when using a small compound or mitre saw?

- Do not operate the saw on ground.
- Do not cut pieces smaller than 20 cm (8 in.) in length.
- Do not cut "free hand." The stock should lie solidly on the table against the fence.
- Do not reach around or behind the saw blade.
- Do not take your hand away from the trigger switch and handle until the blade is fully covered by the lower blade guard.
- Do not overreach. Keep proper footing and balance at all times.
- Do not force the saw. The saw cuts better and more safely at the rate for which it was designed.
- Do not leave the saw until it has stopped completely. Turn the power off and unplug the saw. (This depends on the system in place in the workshop if you need to unplug)
- Do not use electric tools in damp or wet locations.
- Do not operate electric tools near flammable liquids or in gaseous or explosive atmospheres. Sparks may ignite fumes.

### Procedure:

1. Check guard is in place & functioning satisfactorily
2. Turn on Dust extractor
3. Place timber flat onto cutting bed & clamp into position against fence
4. Switch "On" - hold button down until blade has reached full speed
5. Lower and PUSH blade down through timber
6. Release "On" switch, - wait for blade to stop
7. Lift saw & return it to its rest position
8. Remove work piece &
9. **CLEAN UP!**

# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you do before using jointers, planers, (buzzers) and thicknessers?

What's what with all these names?

Buzzer = jointer (joiner) or planer/jointer - used to flatten the face and square and straighten one edge.

Thicknesser = thicknesser or thickness planer or planer thicknesser. - used to plane the opposite face and edge (from those done on the buzzer/jointer) so that they are parallel.

Jointers and planers can be dangerous if not used properly. Until you are accredited you:

- Learn how the machine operates.
- Learn the applications and limitations of these machines.
- Understand that some of the risks from these machines include: risk of entanglement, wood chips in the eyes, noise, and kickback from the work piece.
- Be aware the cutters rotate at a very high speed and remove flesh very quickly if you are not careful.
- Refer to Woodworking Machines - General Safety Tips for general safety precautions.

### What should you check before starting your machine?

- Are the knives set for the proper clearance and depth of cut?
- Are they sharp, balanced, and fastened securely? (job of the maintenance person)
- Is the fence anchored in the proper position?
- Can the guard (swing or overhead) move freely and return over the cutting head?
- Is the equipment properly lubricated? (Job of the maintenance person)
- Are the parts or accessories in proper working condition?
- Is the dust extraction on and working?

### What safety procedures should you follow when using jointers and planers?

- Wear safety glasses or goggles.
- Wear hearing protection that is suitable for the level and frequency of the noise you are exposed to in the woodworking area.
- Wear protective footwear.
- Eliminate loose clothing/ long hair
- Do not stand behind work piece
- Follow correct cutting direction
- Use only sharp, balanced and joined knives. Notify shed manager if there is an issue.
- Ensure you know where the start and stop buttons are and that they are within easy and convenient reach.
- Make sure the swing guard pushes beside the stock as it passes over the cutting heads and returns against the fence after the stock is removed.

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## A Mens Shed

- Remove all wrenches and tools used in the set up from the table.
- Provide a minimum clearance of at least 1 m (3 ft) greater than the length of the longest stock being worked.
- Construct hold-down push blocks to do bevelling and surface operations.
- Use hold-down (double-handed) push blocks. These keep hands well away from the cutting head.
- Maintain an adequate amount of downward and forward force with push blocks as the knife blades on a revolving cutting head can take the stock from an operator's hands.
- When turning on, wait for cutter to reach full speed before presenting timber to cutter.
- When turning off, wait until cutter rotation stops before cleaning up.

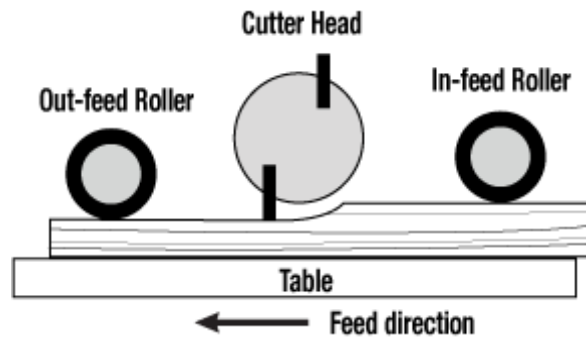


Figure 1 – Planer/thicknesser

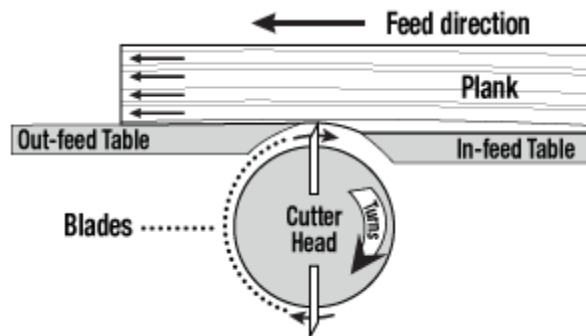


Figure 2 – Jointer/buzzer

### What should you avoid when using a jointer or planer?

- Do not leave the machine running unattended. Shut off the power and make sure that the cutting head has stopped revolving.
- Always make small cuts.
- Do not make cuts deeper than .3 cm (1/16") in one pass.
- Do not joint (edge) stock of pieces less than 30 cm (12") long, 2 cm (3/4") wide and less than .6 cm (1/4") thick.
- Do not surface stock less than 30 cm (12") long, 2 cm (3/4") wide or more than 15 cm (6") wide or less than 1.5 cm (5/8") thick.
- Do not pass hands over the cutters.
- Do not remove dust or particles of wood from a table by hand or with compressed air. Use a stick or brush.

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### Procedure:

1. Adjust depth of cut for light pass. Make small cuts
2. Adjust work piece gauges and guides
3. Ensure guards are in place
4. Ensure dust extraction on and shut off gate is “open”
5. Switch on and wait for cutter to reach full speed
6. Always feed the work against the rotation of the cutter
7. Hold Work piece in position against guides. Beware of “Kick Back”
8. Use push sticks where required for small work pieces
9. Switch off at machine. Not at the wall
10. When cutter rotation stops, remove work piece
10. **CLEAN UP!**

# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you do before using sanders?

Sanders can be dangerous if not used properly. Until you are accredited you should:

- Understand how the machine works.
- Learn the applications and limitations of the various sanding machines before use.
- Know that some of the risks are: risk of entanglement, wood dust in eyes and nose, noise, risk of burns or abrasion as the discs and belts rotate at high speed, and sometimes work pieces are taken out of operators hands if not careful.
- Refer to Woodworking Machines - General Safety Tips for general safeguards.

### What safety procedures should you follow when using sanders?

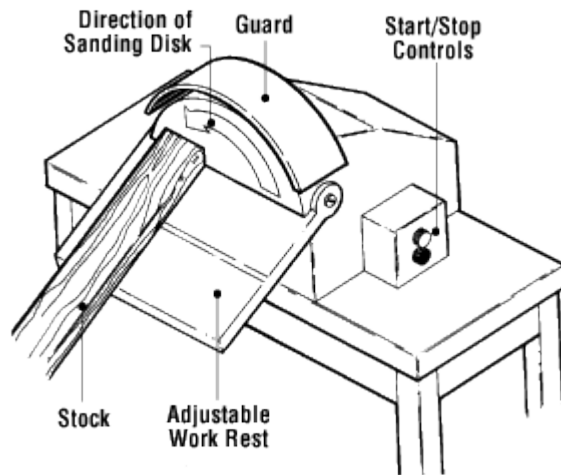
- Wear goggles when operating sanders.
- Wear hearing protection.
- Wear protective footwear.
- Use sanders with the local exhaust ventilation (LEV) turned on. The LEV should be designed for the sander and well maintained to work effectively.
- Wear respiratory protection (e.g., dust masks) where required, during sanding operations and CLEAN UP!.
- Keep hands away from the abrasive surface.
- Hold small or thin pieces of stock in a jig or holding device to prevent injuries to the fingers or hands.
- Inspect abrasive belts before using them. Replace belts worn, frayed, or excessively worn in spots. (Depending on the machine, this may be a maintenance job)
- Sand on the downward side of a disc sander so that the wood is driven onto the table by the machine's rotation.
- Enclose all drums, disk or belt sanding machines with an exhaust dust hood that covers all portions of the machine but the portion designed for the work feed.
- When turned on, wait for the belt/disc to reach full speed before contacting work piece.
- Make sure the dust extraction is on if applicable.
- Wait until rotation has stopped before **cleaning up**.

### What should you avoid when using sanders?

- Do not sand small or thin hand-held work pieces.
- Do not wear loose clothing or jewellery while using revolving power tools. Tie back long hair or wear appropriate hair protection. These measures will prevent hair, clothing, or jewellery (like dangling neck chains) from being caught and pulled by sander belts and pulleys that are in motion.
- Do not operate sanders without the exhaust system operating.
- Do not operate sanders unless adequately guarded.
- Do not operate sanders unless the work rest is properly adjusted.

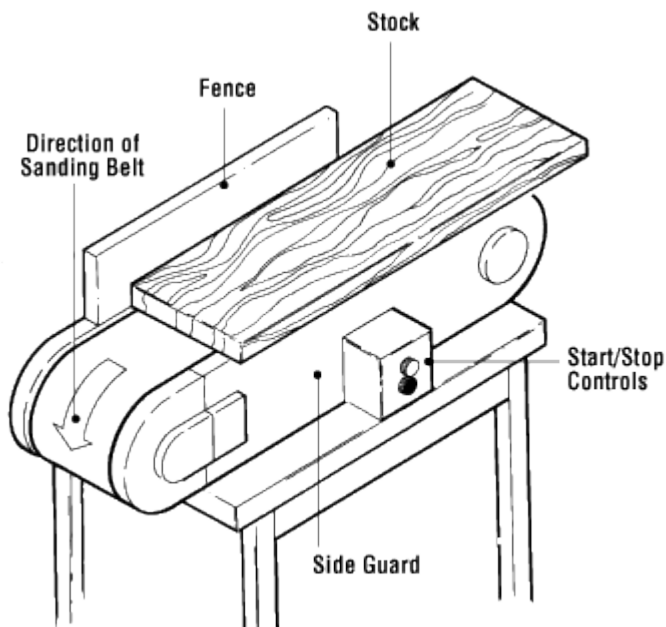
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## A Mens Shed



**Disc sander**

- Adjust work rests on all manually fed sanders to provide minimum clearance between the belt and the rest. The work rest should be secured properly.
- Install abrasive belts that are the same width as the pulley drum.
- Adjust abrasive belt tension to keep the belt running the same speed as pulley-drum when the wood is in contact with the belt.
- Guard feed rollers to allow boards to pass, but keep operators' fingers and arms out.
- Install guards to prevent contacts at:
  - in-running nip points,
  - power transmission,
  - feed roll parts, and
  - the unused portion of the abrasion belt on the operator's side of the machine.



**Belt Sander**

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### Procedure:

1. Adjust disc table as required.
2. Switch on and wait for belt/disc to reach full speed.
3. Adjust work piece gauges and guides.
4. Ensure dust extraction on and shut off gate is “open”.
5. Always feed the work against the rotation of the belt.
6. Hold Work piece lightly in position on belt/disc. Beware of “Kick Back”!!!!
7. Switch off at machine. Not at the wall
8. When belt rotation stops, **CLEAN UP!**



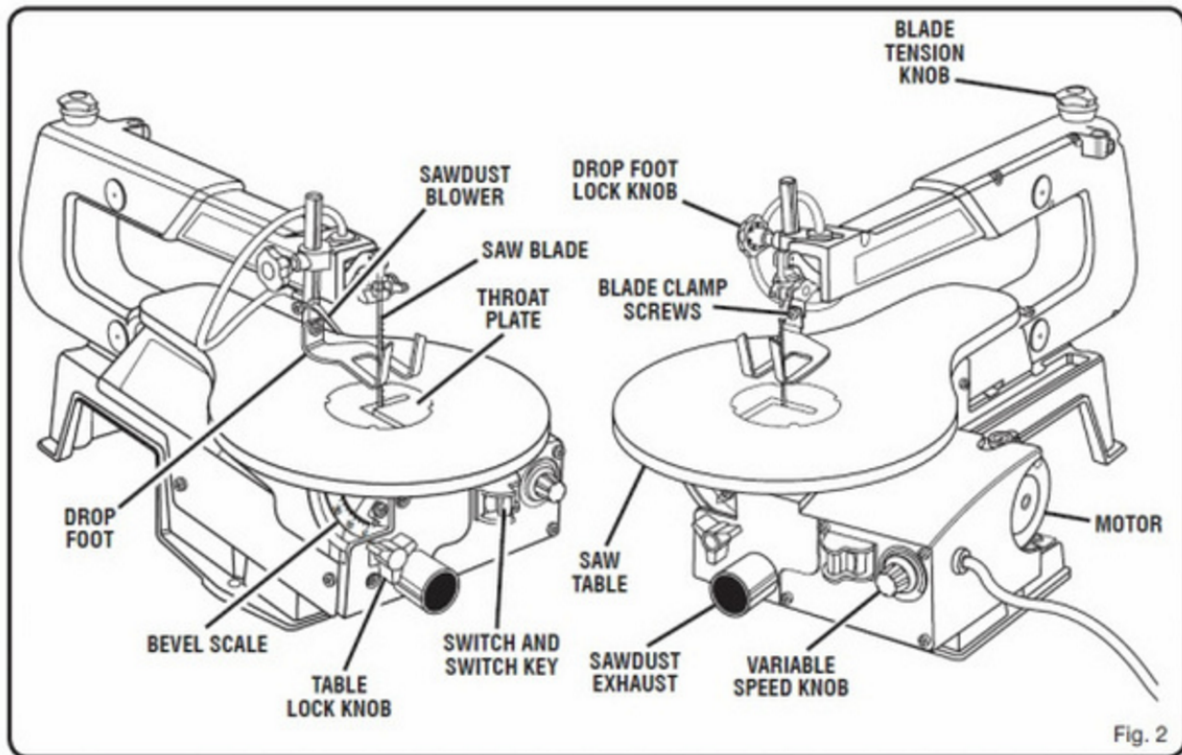
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## A Mens Shed

### What should you do before using a table scroll saw?

Scroll saws can be dangerous if not used properly. Until you are accredited you should

- Understand how the scroll saw works.
- Learn the applications and limitations of this tool.
- Know that some of the risks include: risk of entanglement, noise, wood dust in eyes or nose, and getting cut by a high speed oscillating blade.
- Refer to Woodworking Machines - General Safety Tips for more information.



### What safety precautions should you follow when using a scroll saw?

- Wear safety glasses or a face shield. If work is dusty, use a respirator or dust mask.
- Wear appropriate hearing protection.
- Eliminate loose clothing and long hair
- Wear protective footwear.
- Check that the saw is firmly on a workbench or other rigid frame and that you can operate it at the right height.
- Keep hands out of the path of the blade.
- Carefully hold the work piece down as the blade moves up and down.
- Keep guards (if any) in place and in working order.
- Keep blade tight, clean, sharp and properly set so that it cuts freely and easily.
- Allow motor to reach full speed before cutting.

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- Keep the work area clean. Cluttered areas and benches invite accidents.
- Keep the work area well lit.
- Keep motor air slots clean and free of chips.

### Procedure:

1. Adjust saw blade tension as required<sup>[SEP]</sup>
2. Switch on and wait for blade to reach full speed<sup>[SEP]</sup>
3. Adjust work piece table and guides<sup>[SEP]</sup>
4. Ensure dust extraction on and shut off gate is “open”
5. Always feed the work slowly into the blade<sup>[SEP]</sup>
6. Guide work piece carefully, blade may break<sup>[SEP]</sup>
7. Switch off at machine. Not at the wall<sup>[SEP]</sup>
8. When blade motion ceases, **CLEAN UP!**

# Warragul Woodworkers Club Inc

## A Mens Shed

### When should you use push sticks?

Push sticks or push blocks should be used when operating standard woodworking machinery, including table saws, band saws, radial arm saws, jointer/planers and shapers. These sticks protect the hand while allowing good hand control of the stock as it is pushed through the cutting head or blade. Push blocks for Jointer/Planers should be constructed for two-handed positioning.

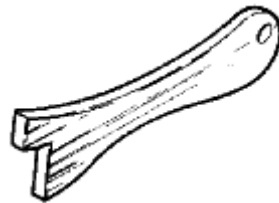
- Always use a push stick for pieces less than 30cm (1 ft) in length, or for the last 30cm of a longer cut.
- Use the push stick to remove the cut piece from between the fence and the blade.

### What are some features of a push block?

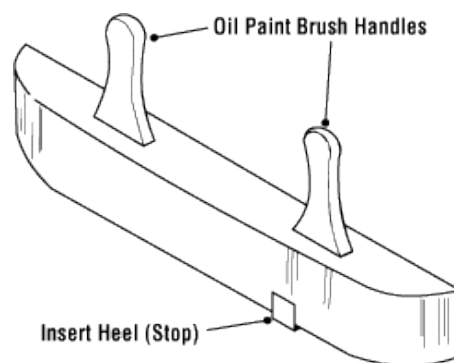
Hold-down push blocks should:

- be rigid
- enable the operator to protect both hands
- allow the operator to exert a firm and steady pressure on the work piece.

The following are samples of push blocks.



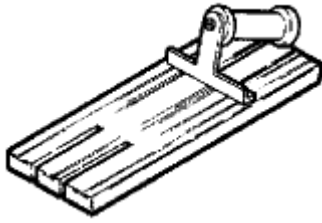
Simple push stick useful on table saw when distance between the blade and fence is narrow.



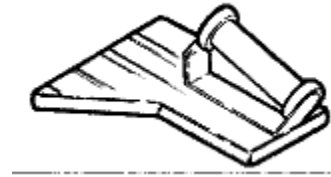
Double-handed hold-down push block

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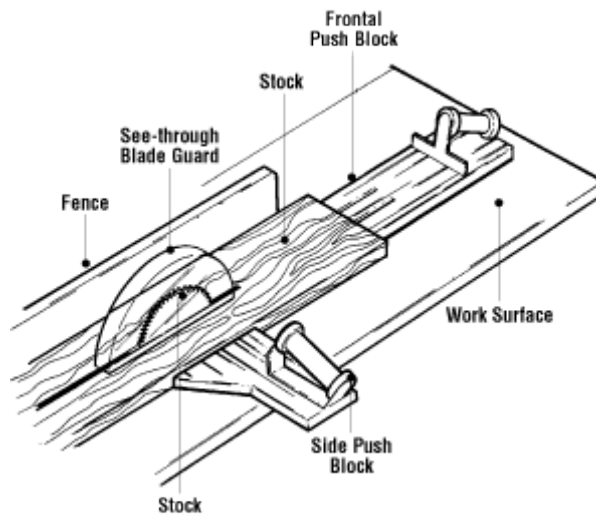
## A Mens Shed



Frontal Push Block



Side Push Block



Use of two push blocks on single application

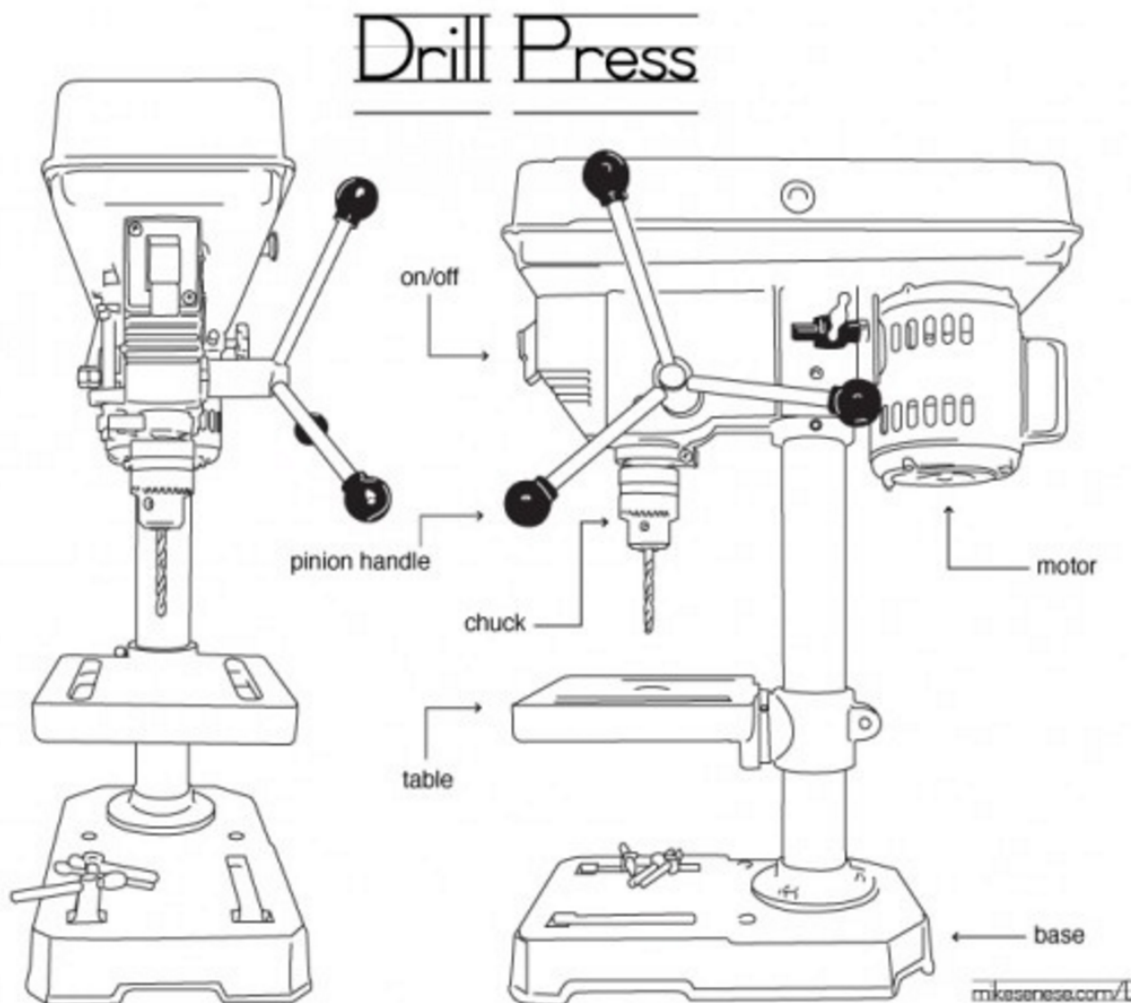
# Warragul Woodworkers Club Inc

## A Mens Shed

### What should you do before using a drill press?

A drill press can be dangerous if not used properly. Until you are accredited to use one at the Club you should:

- Understand how it operates.
- Learn the applications and limitations of this machine.
- Know that some of the risks include shavings in eyes, clothes/hair getting caught in the machine, and if not properly clamped the work piece may move and cause an injury.
- Refer to Woodworking Machines - General Safety Tips for more information.



# Warragul Woodworkers Club Inc

## A Mens Shed

### What safety precautions should you follow when using a drill press?

- Wear safety glasses or a face shield.
- Wear protective footwear.
- Check that the Club has attached the drill press firmly on a workbench or other rigid frame and you can operate the drill press at the correct height.
- Use a hold down (clamp) on the work piece where possible.
- Keep hands away from the drill bit
- Remove adjusting keys and wrenches. (A chuck key can become a missile)
- Remove work piece and CLEAN UP!.
- Keep the work area clean. Cluttered areas and benches invite accidents.
- Keep the work area well lit.
- Use only the accessories designed for the specific drill and job.

#### Procedure:

1. Lock drill bit in chuck using chuck key<sup>[1]</sup>
2. Locate drill bit over target mark. If possible clamp down the work<sup>[2]</sup>
3. Turn on machine - wait for full speed<sup>[3]</sup>
4. Using manual lowering arm, move drill through material, backing off to clear swarf if necessary<sup>[4]</sup>
5. Do not move material during the drilling operation<sup>[5]</sup>
6. Lift drill to its rest position, turn off & wait until rotation of the bit stops
7. Remove work piece
8. **CLEAN UP!**