

SSA+S Bandsaw Safety



3/28/12

Mr. Footland

BAND SAW

- Band Saws are probably the most versatile stationary power tools for cutting wood, plastic, or metal in the lab.
- They are most often used for free cutting as opposed to straight cutting

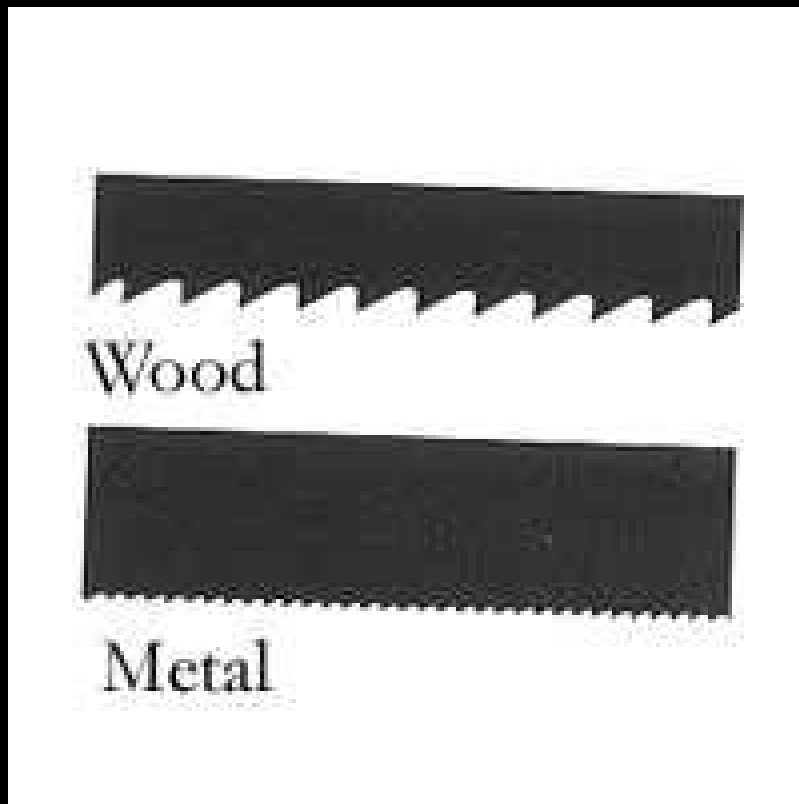


BAND SAW

- Two inner wheels - one drive, one driven, rubber coated and rounded. Blade runs on the higher surface.
- Band saw blade - continuous steel, like a “band”



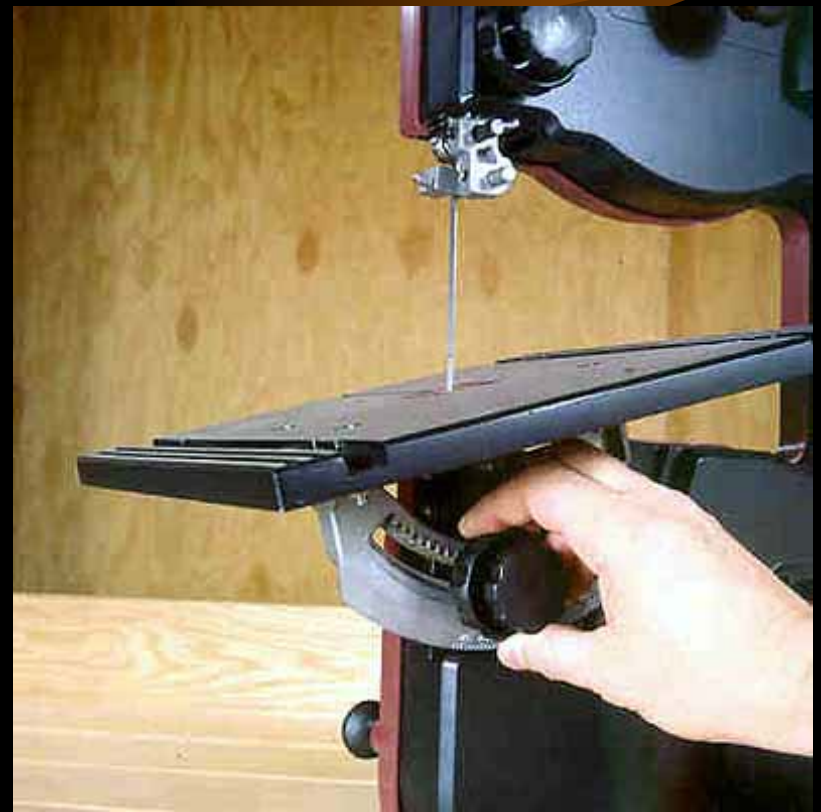
Band Saw



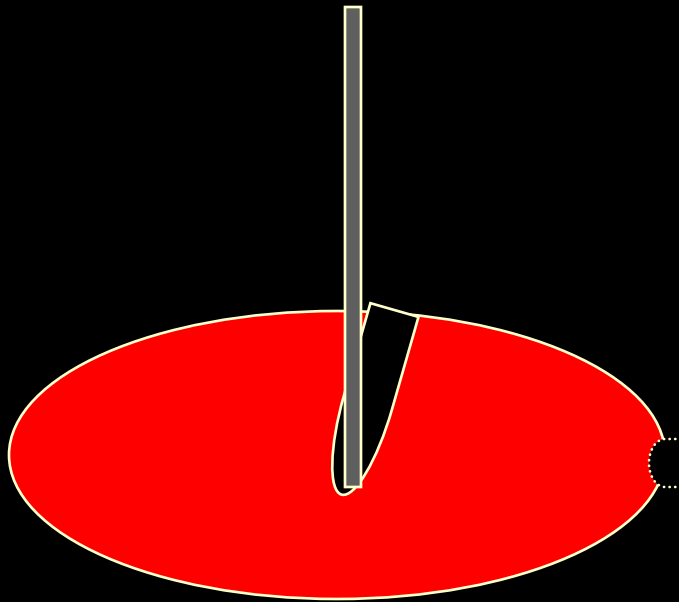
- Set of teeth used is determined by the material to be cut.
- Greater number of teeth per inch (TPI), results in finer cut or for cutting metal or plastic.
- Coarser set for rougher lumber

Band Saw Set Up

- Check status of saw table. Test table to blade relationship with a square to make sure that it is adjusted properly. Purpose of the table is to support the material as the blade cuts it. Teeth point downward and blade moves toward stock, pushing against the table.



Band Saw Set Up

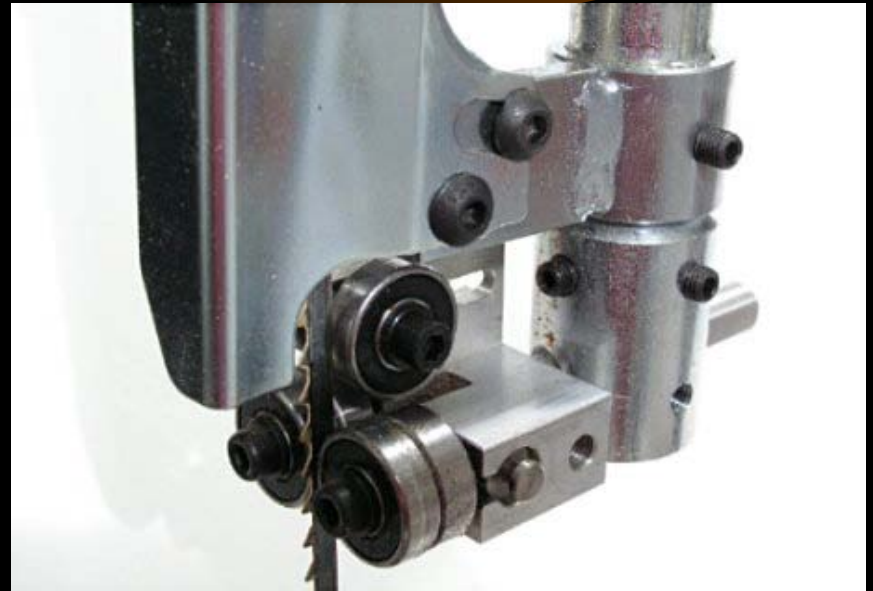


THROAT PLATE

- Saw throat plate is a round, removable, cut out with a slit for the blade. It is used to support the material around the blade as the saw cuts. Watch out for small chips of wood being caught in the throat plate and preventing material feed.

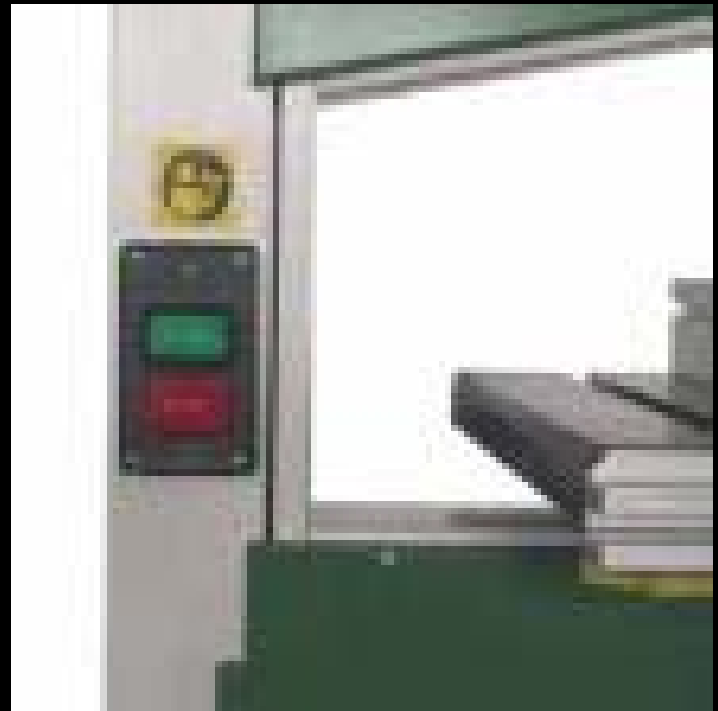
Band Saw Set Up

- Upper blade guide holds blade in line side to side and in back as pressure is applied.
- Adjust guide to within 1/8" of the material to be cut to give the best support and accuracy.



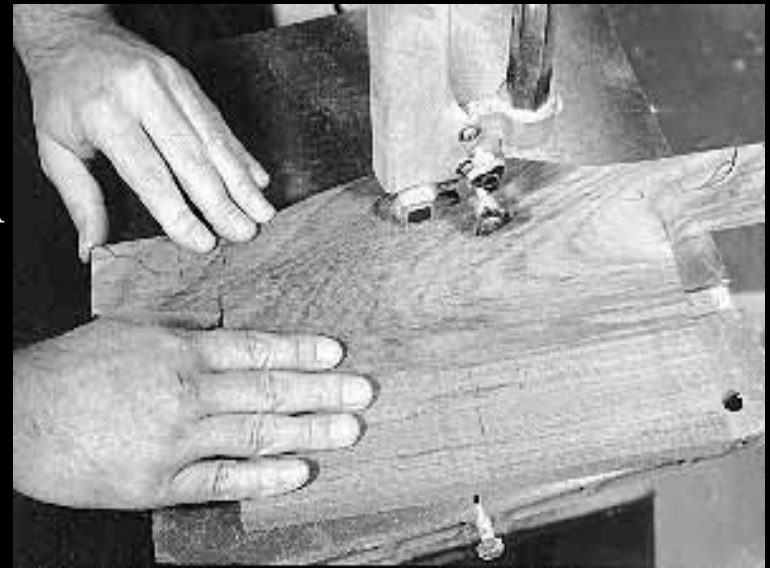
Band Saw Set Up

- Adjust the guard to extend just above the material being cut without interference.
- Locate on/off switch and be able to turn off saw quickly in the event of an emergency.
- Machines are typically easier to turn off than on to prevent unwanted energizing of saw.



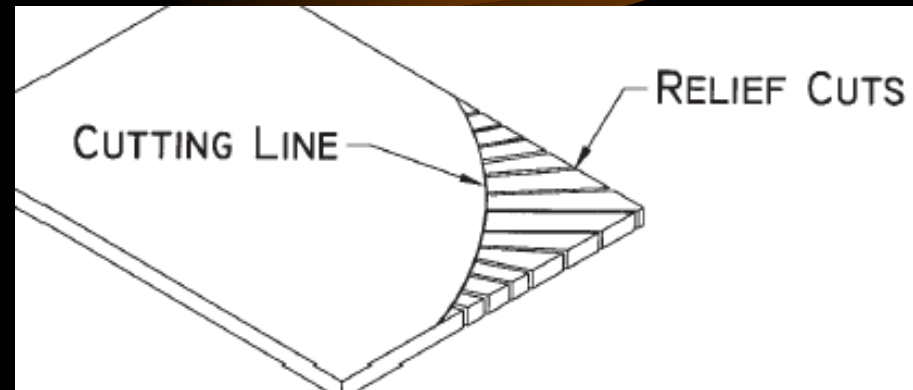
Band Saw Use

- Hold hands on either side of the blade to feed stock - never in line with the blade.
- Allow blade to cut at its own pace - do not put undue pressure on the blade.



Band Saw Use

- Cut curves gradually, by turning the stock into the blade.
- If the curve you need to cut is too tight a turn (too sharp of a curve) use relief cuts



Band Saw Use

- Avoid backing out of cuts with the blade running because it is too easy to pull the blade out of the guide.
- Straight, shallow cuts are usually OK but watch out for saw blade binding and pulling the blade out of the blade guide.



Band Saw Use

- Do not leave the tool until the blade has stopped.
- Do not attempt to clean or remove chips with the blade moving.
- Always use a bench brush to clean to avoid splinters. Then only with the blade stopped.



Band Saw Safety Rules



Safety Rule #1

- Keep all guards in place.



Safety Rule #2

- Adjust the blade guards to within $\frac{1}{8}$ " to $\frac{1}{4}$ " above the workpiece.



Safety Rule #2 - Continued

- *Blade guards that are over 1/4 inch above the work will lead to accidents and reduces the accuracy of your cut.*



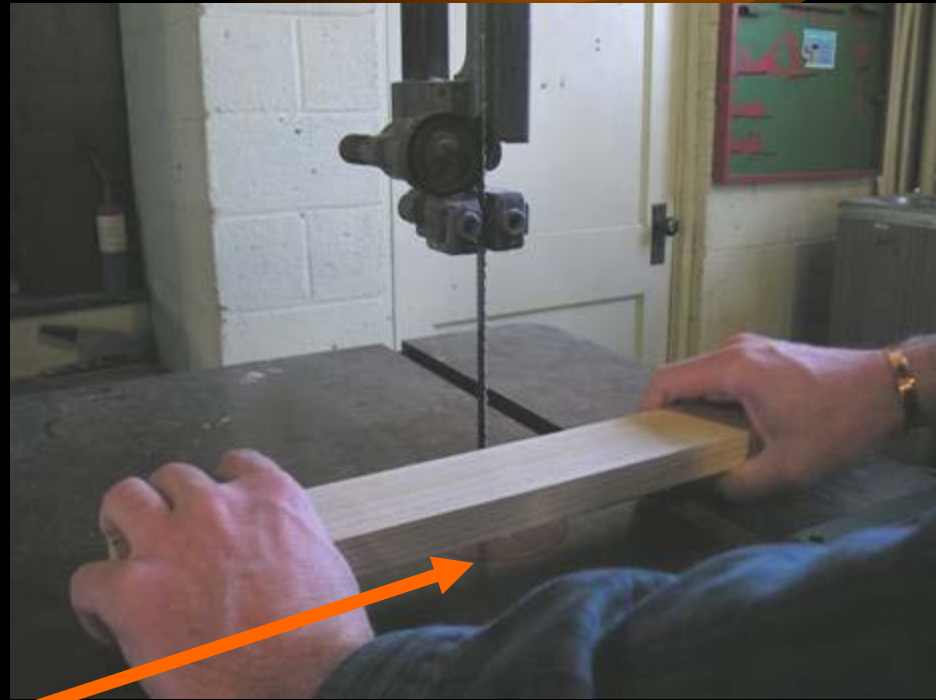
Safety Rule #3

- Maintain the stock flat on the table.



Safety Rule #3 - Continued

- *Never hold the stock 'above' the table, the material must remain flat on the table surface at all times.*



Safety Rule #4

- Don't cut round stock on the band saw.
- *The round stock may roll into the blade causing an accident.*
- *Only the instructor should perform this task while using a miter gauge.*



Safety Rule #5

- Concentrate your attention on the job at hand.



Safety Rule #5 - Continued

- *Do not interrupt others while using power equipment.*
- *Stay focused until the blade has stopped moving.*



Safety Rule #6

- Never leave the machine operating while unattended.



Safety Rule #7

- Keep the work area clean.



Safety Rule #7 - Continued

- *Scrap wood or tools on the floor or the bandsaw table will lead to accidents and injuries.*



Safety Rule #8

- If the blade comes out of the guides or breaks, stop the machine immediately by turning off the power.
- *DO NOT* open the access door to the machine
- *Have the instructor reposition or install a new blade.*



Safety Rule #9

- Do not reach across the saw line.



Safety Rule #10

- Never back material out of a cut until power has been turned off and the motion of the blade has stopped.



Safety Rule #11

- Always use a push stick when sawing small stock.



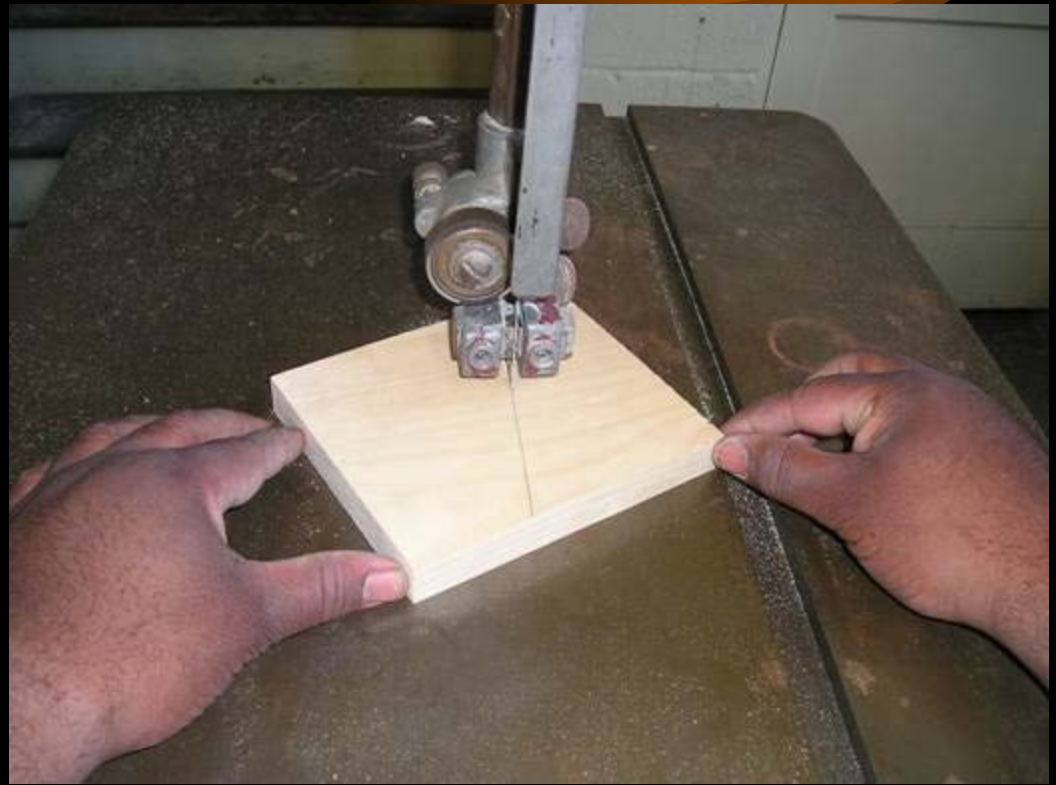
Safety Rule #12

- Do not hold the stock in line with the saw blade.



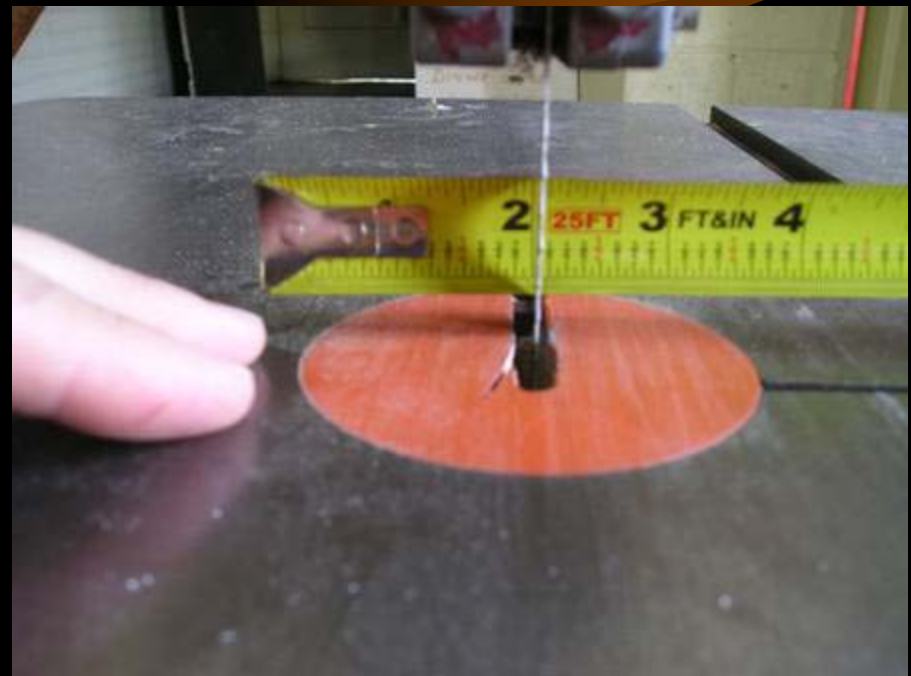
Safety Rule #12 - Continued

- *Hold the stock on the sides not on the cutting line.*



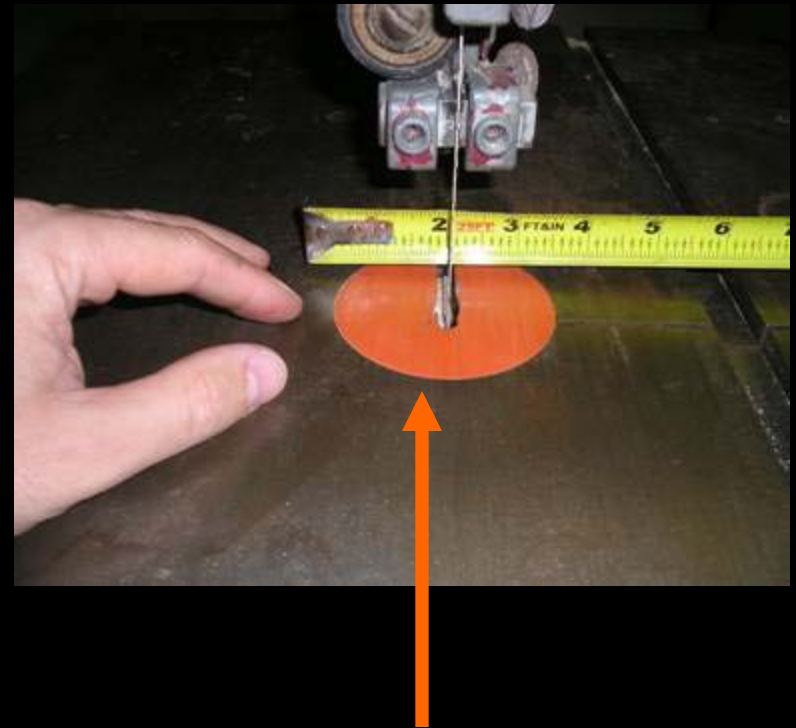
Safety Rule #13

- Keep your hands and fingers 2 inches from the side of the blade.



Safety Rule #13 - Continued

- *Remember to keep your hands clear of the table insert.*



Safety Rule #14

- Use 'relief cuts' on tight curves to avoid breaking the blade.



Summary

- Follow the safety rules.
- Use the band saw and other laboratory tools only for their intended purpose.
- Follow the directions and safety guidelines as listed by the machine's manufacturer.