Hints and tips for saw piercing

Loading the piercing saw...

Depending on your stature, you will need a small countersunk recess in the leg of your workbench or perhaps on the edge of your bench. Hold the saw frame with its backbone downwards and with the handle pointing into your stomach, place the nib end of the frame into the recess so that it will not slip. Lean your body so that your stomach holds the handle. Fit one end of the saw blade into the frame clamp, using the thumbscrew. Lean firmly against the handle of the saw frame causing the frame to flex and the other end of the saw blade to enter into the clamp and tighten. When you release the flexing pressure on the frame, the blade will be gripped firmly and be under tension. Test the tension by plucking the blade which should give a high pitched pinging sound. The process is a little different if the frame has an adjustable length... In this case the tension can be applied before the backbone clamping screw is finally tightened, however be warned that the sliding action must not be at all sloppy, otherwise there is a risk of bending stresses at the top end blade clamp, such stresses shorten blade life.

Using the piercing saw...

This is a relatively simple process that requires considerable practice to master. Breaking off such fine blades is inevitable and is predominantly human error; however such breakages will become less frequent with practice and developing a strong technique.

Sawing technique... Start by placing the work piece roughly horizontal on a bench peg (see drawings below).

- Try to hold the saw vertically with the blade against your work. If not vertical, then at least perpendicular to the surface of the item being cut.

- Start sawing using an up and down motion, with long strokes those are relaxed and smooth, using little pressure and the full length of the blade. This will prolong the life of the blade(s) the wear and tear of will be proportionate across the teeth, as a result it is less likely to break.

- Cutting only occurs on the down stroke and your sawing action must reflect this, so that the pressure is relaxed on the upstroke with the blade barely touching the work. Do not overdo this and allow the blade to come out of contact with the work, but maintain a slight 'dragging' contact on the upstroke.

- Grip the saw in a relaxed and delicate fashion, but maintaining an adequate grip so that the handle does not slip from your grasp.

- Follow the design marked out on your work piece, turning the saw very slightly during the down stroke in order to negotiate any curves. If the curves are very tight it is absolutely essential to keep the saw cutting and use the full length of the blade, if you twist the blade too much it will break. Really sharp internal corners can be negotiated by working the saw up and down 'on the spot' while changing direction slightly at each stroke.

- When the blade does jam in the work, try to work the blade loose using an up and down motion while keeping the frame vertical, any tilting or twisting is likely to cause the blade to break..

- If you need to withdraw the saw backwards out of a cut, it is easier to do this using a full length up and down sawing motion.

The Bench Peg…

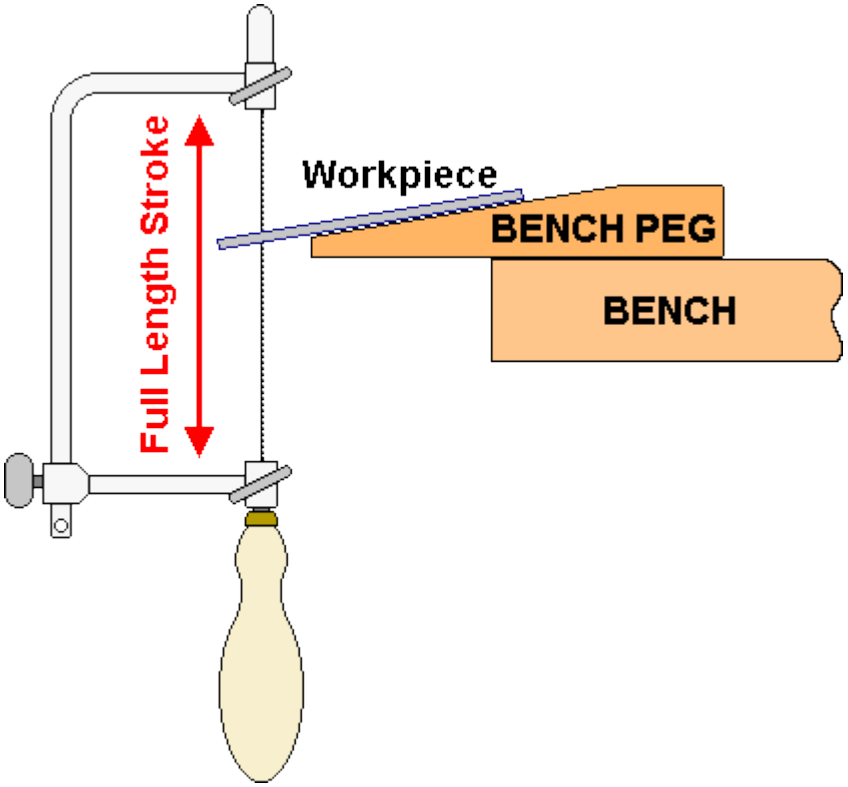
A 'bench peg' is a chamfered wooden block that can be mounted either above or below the edge of a work bench. It is used as a rest for drilling and grinding operations, or when filing and sawing. (Please see links below).

When filing and sawing it can be useful to gain a little more control both the work and the edge of the peg at the same time.

It can sometimes be helpful to have a 'keyhole' shaped slot in the front edge of the bench peg so that the work is well supported and the blade itself is in 'free space'.

The illustration shows the saw reciprocating in an exact vertical plane; however it sometimes can be more prudent to use the saw perpendicular to the work. Thick solid sections are easier to saw if the blade is perpendicular as the amount of material presented to the blade is a minimum, but very thin sections can be

more easily sawn at an angle as more teeth are then in contact with the work, which reduces juddering or 'chatter'.



Using the full length of the blade on every stroke, cannot be over stressed, it is the single most important factor in blade life, as well as technique and rhythm which is developed through practice also goes a long way towards prolonging the lifetime of a blade.