

SCROLL SAW

STANDARD OPERATING PROCEDURES DOCUMENT

Scope and Responsibilities

This standard operating procedure (SOP) applies to all personnel who operate and instruct on the safe operation and use the Scroll Saw. In a school setting this includes,

- **Administrators/Teachers:** Ensure operators are trained and the SOP is followed
- **Students/Teachers/Operators:** Follow the owner/operators manual, industry recommendations, this SOP, guarding is in place, and wear the appropriate personal protective equipment (PPE)

SAFETY IS A PRIORITY !

DO NOT use this machine unless you have received instruction in its safe use and operation and have been given permission by your teacher.

To ensure the safe and efficient operation of the Scroll Saw, this machine requires:



Safety glasses must be worn at all times in work areas.



Long and loose hair must be contained.



Closed toe / CSA approved footwear must be worn at all times in work areas.



Close fitting / protective clothing must be worn.



Rings and jewelry must not be worn.



A dust mask should be worn when excessive airborne dust or fumes are created.

Personal Protective Equipment (PPE)

- Safety glasses
- Apron or shop coat
- Dust mask (when creating lots of dust)

Pre-Operational Checks

- Ensure the power tool has a suitable safe work area
- Keep work area clean
- Examine the power cord and machine for obvious damage
- Make sure switch is in off position before plugging in
- Check that the blade guard is securely fixed in place
- Check that the blade teeth point downward
- Check to see that the scroll saw is stable and mounted on a workbench or stand.

Operational Steps

1. Preparation

- Make sure you have been authorized to use this piece of equipment - you have received training, passed the test, have demonstrated the safe use of this piece of equipment and have a safety passport signed
- You are “shop ready” – trained, proper clothing, wearing required PPE, etc.
- If sawdust collection is being used, make sure that it is turned on prior to use of saw
- Do not plug in until all adjustments have been made and the blade has been tightened
- Check that the saw is stable and on an even surface
- Always fit the blade with the teeth pointing downward
- Never make adjustments or reach under the saw table with machine in operation
- For very small work pieces, do not hold by hand. Use a jig or push stick to avoid mishaps
- For other larger work pieces, hold the work piece flat on the table with both hands
- Do not attempt to cut wood that is not flat to the table unless properly supported
- Keep fingers clear and never in line with the blade.

2. Sawing Process

- Maintain complete control and feed work slowly
- Do not apply excessive force – this could cause the blade to break
- Avoid prolonged use. This could overheat the blade and the motor and fatigue
- A broken blade, ejected chips of wood and fine dust can all be thrown into the eyes
- Many species of exotic wood or other materials create a dust that can be toxic – in these circumstances, wear a dust mask
- Use the flexible blower tube, (if fitted) to safely clear your cutting line of dust
- Turn off and wait until the blade completely stops before removing scrap material or making adjustments.

3. Shutting Down the Machine

- Turn Scroll Saw off and wait for the blade to come to a complete stop
- Unplug scroll saw
- Remove all waste
- Clean the machine and work area.

Post-Operational Checks

- Ensure the machine is off and unplugged after use.
- Ensure all switches, and guards are cleaned.
- Clean the machine and leave work area in a safe and tidy condition.

Common Problems of Operation

- Machine does not power up.
- Broken blades
- Speed not adjusted properly
- Blade installed incorrectly
- Relief cuts not made on curves

Safety Precautions

- Wear Personal Protective Equipment (P.P.E) such as safety glasses, safety goggles, coat.
- No loose clothing, long hair, or jewelry is allowed in the shop
- Only operate the Scroll Saw after you have received instruction and permission from the teacher
- Be aware of the positions of the on/off switches and emergency STOP button
- Do not force tool to cut or feed workpiece too fast
 - Keep fingers clear and never in line with the blade.

Common Injuries Sustained

- Oscillating sharp blades
- Dust and fumes
- Cuts or lacerations
- Eye injury.

Maintenance

- Always refer to the manufacturer's manual
- Regularly check and repair or replace damaged or worn equipment immediately
- Clean the machine as required
- Keep a maintenance log for the machine
- Inspect the electrical cords for damage, cracked insulation, fraying, etc.

Work Zones

- Typically, in front of the machine approximately 1 meter (3 feet) the length of the machine
- Work zone or area should be identified on the floor (ie: yellow paint or tape)
- Work zone or area should not be entered while operator is using the machine.

Additional Information can be found at,

Ontario Council for Technology Education [SAFEdocs](#) and [ToolSAFE Videos: OCTE](#)

Fundamentals of Woodworking <https://www.fundamentalsofwoodworking.com/jig-saw-circular-saws-and-cnc-machine/the-scroll-saw/introduction-to-the-scroll-saw>

University of Waterloo <https://uwaterloo.ca/environment-technology-instructional-support/env-makerspace/equipment/scroll-saw>

Canadian Center for Health and Safety

https://www.ccohs.ca/oshanswers/safety_haz/power_tools/saf_elec.html