STANDARD OPERATING PROCEDURE

Radial Arm Saw

PURPOSE / SCOPE

This procedure applies to stationary radial arm saws. While radial arm saws may slightly differ, the basic information about operation and safety requirements are the same.

RESPONSIBILITIES

1. **Operator** -- Responsible to operate the Radial arm saw in a safe manner and to ensure that other employees are not exposed to the hazards of the equipment.
2. **Supervisor** -- The immediate supervisor shall determine who is qualified to operate a radial arm saw, and designate a competent person to provide training for the radial arm saw. The supervisor will also deem an employee as a qualified operator when combined experience and training provides evidence that the employee can effectively and safely operate this equipment.

DEFINITIONS

1. **Cross Cut** – Cutting perpendicular of the grain on the workpiece.
2. **Kick Back** – Occurs when the workpiece binds between the saw blade and a ripping operation. It results in the workpiece being ejected from the saw and thrown back towards the operator. It is not common to use this saw for ripping.
3. **Point of Operation** – Area on the machine where the work is actually performed upon the material being processed.
4. **Qualified Operator** – An employee who has reviewed this SOP, has been mentored, and is deemed authorized to operate this equipment.
5. **Rip Cut** – Cutting with the grain direction of the workpiece.

SAFETY AND OPERATION

- Only qualified operators may operate this machine.

- Keep fingers and hands out of the line of fire of the blade.
- Never leave the machine running unattended.
- Avoid wearing loose clothing or jewelry and tie long hair out of the way.
- Wear appropriate gloves during set-up for the material being cut. Do not wear gloves when working near the point of operation.
- If lead, silica (from masonry products) is suspected, or chemically treated lumber is being sawed, respirators may be required. Contact EHSRM for further requirements.
- Ensure that all guards are in place prior to operation.
- Turn on the dust collector prior to operation.
- Check that the blade size and type is correct for the material to be cut.
- Make all adjustments with the power OFF.
- Inspect the work piece for nails, screws, and other foreign objects.
- The stationary radial arm saw shall be securely anchored to prevent “walking” or moving.
- Stand to the side of the cut line and blade.
- Hold the work piece against the fence and use a clamp when needed.
- Allow the saw blade to obtain maximum speed before making a cut.
- Operate the saw with the left hand when possible and avoid reaching over the saw line.
- Return the cutting head to the rear of the table after each cross cut.
- Verify that all employees and other tools or objects are out of the line of fire in the front, back, and sides of the machine.
- When conducting maintenance, the machine shall be unplugged and in the view of the operator at all times. The plug is the energy isolation point.
- Select the correct type of blade for the workpiece, and ensure the blade is sharp.
- Wait until the saw stops prior to removing the workpiece.
- Always operate the saw at the correct speed for the type of material and the type of blade.
- If the blade gets caught on the material, turn the machine off to remove the workpiece.
- Never reach under or around the stock when sawing.

BLADE SELECTION AND SPEED

Blade selection is determined by type of material to be cut, such as wood or metal, and also by the density of the material. Aluminum, lead, and rubber require a blade that has larger teeth, and hard materials like steel use a blade with smaller teeth. Thick material requires larger teeth, and soft material is cut more effectively with a blade that has smaller teeth.

INSTALLING OR CHANGING A BLADE

A stationary radial arm saw is considered a permanent piece of equipment; therefore, it should be connected directly to a permanently wired outlet instead of using an extension cord. Disconnect the power from the outlet to change the saw blade, and inspect the blade prior to use.

A. Unplug the radial arm saw.

B. Ensure that the saw is all the way to the front bumper and in its highest elevated position.

C. Raise the lower guard and secure in raised position.

D. Install blade.

E. Tighten blade arbor screw.

2. **Blade Breakage**

   Blade breakage can be a result of peculiar stresses placed on the blade, or poor judgment on the part of the operator. Some of the causes of blade breakage include:

   - Faulty alignment or adjustment of the guides
   - Using a blade with an improperly finished braze or weld
   - Wrong type of blade for the material being cut
   - Tooth dullness or absence of sufficient set

LOCKOUT/TAGOUT

No special lockout devices are needed to work on this machine as the plug will be in full view of the operator at all times when servicing. Unplug the machine while servicing.

PPE REQUIREMENTS

- Safety glasses, and potentially a face shield
- Hearing protection
- Gloves to handle work piece only (do not glove a hand where it can be pulled in to the equipment)
- Sturdy leather boots
- Potentially respirator

REFERENCES

- UC Santa Barbara-Environmental Health & Safety. Radial Arm Saw, Procedure No.: SS-RDA-S. 10-01-2021.
- Dalhousie University. *Safe Job Instructions for Radial Arm Saws.* January 2018.
- Dewalt. *3400 Saw User Manual*. Bulletin No. 8814.

Document Tracking	Revision Number	Revision Date	Effective Date	Competency
SOP – Radial Arm Saw #1	0		05/15/2024	

COMPETENCY

1. User: _____
2. User's department: _____
3. User's job title: _____
4. Indicate the type of equipment qualified to operate and the competencies completed:

Stationary radial arm saw:

- ❑ Set up the work area
- ❑ List the safety requirements when using the Radial Arm Saw
- ❑ List the PPE required for this equipment
- ❑ Demonstrate how to change a blade
- ❑ Demonstrate how to adjust the radial arm, guides, and guide post
- ❑ Identify guards
- ❑ Identify safety precautions when the radial arm saw is in operation
- ❑ Use the equipment

EMPLOYEE ACKNOWLEDGEMENT FORM – Radial Arm Saw

I have read and understand the Radial Arm Saw SOP. I am knowledgeable with regards to inspection, use, and safe procedures with a radial arm saw, and have completed the competency evaluation. I will follow this procedure throughout my employment with UAF. I also understand that at any time my supervisor may determine that I require additional training due to failure to follow this established procedure.

_____	_____	_____
Employee Print Name	**Employee Sign Name**	**Date**
_____	_____	_____
Trainer Print Name	**Trainer Sign Name**	**Date**

Place this document in the employee's file.