

# Job Hazard Analysis

JHA Name: Radial Arm Saw



Assessment Date: 06-24-16

Revision Date: 05-19-17

Building or Location: Faribault Campus

Department or Program: Carpentry

Description of Individual Tasks or Assignments: Cutting, Squaring, Mitering & Trimming Wood

Tools, Equipment, or Machinery Used when Performing Task: Radial Arm Saw

Hazard Type(s) Associated with Task or Assignment:		Check for Exposure:	Specific Hazard Exposure:	Check if Exposure Recommends or Requires a Style of PPE?
1	<b>Impact</b> <u>Example:</u> Person(s) can strike an object, or be struck by a moving or flying/falling object (e.g., fragments, chips, particles, sand, dirt/debris).	X	Potential exposure to flying fragments, particles and debris generated from cutting (e.g., injuries to eyes), potential exposure to workpiece kickback (e.g., injuries to head, torso, extremities)	X
2	<b>Penetration or Cut</b> <u>Example:</u> Person(s) can strike an object, be struck by an object, or fall upon an object or tool that would cut or otherwise break the skin.	X	Potential exposure to bladed/cutting equipment (e.g., injuries to hands, arms, legs), potential exposure to wood splinters/splinters (e.g., injuries to fingers, hands)	X
3	<b>Crush or Pinch</b> <u>Example:</u> An object(s) or equipment/machine may crush or pinch a body or body part	X	Potential exposure to crushing and pinching hazard from dropping lumber (e.g., injuries to feet).	X
4	<b>Chemical or Harmful Dust</b> <u>Example:</u> Exposure to chemicals (i.e., hazardous substances and harmful physical agents), infectious agents from spills, splashing, physical contact, and/or exposure to dusts, vapors, fumes, or gases that could cause illness, irritation, burns, asphyxiation, breathing/vision difficulty, sensitization, infection, or other toxic health effects (i.e., acute or chronic). Note: "May also have or create ignition potential."	X	Potential exposure to nuisance dusts (e.g., respiratory irritation/discomfort)	X
5	<b>Heat</b> <u>Example:</u> Exposure to radiant heat sources, sparks, and splashes or spills of hot material			
6	<b>Light (optical) Radiation</b> <u>Example:</u> Exposure to strong light sources, glare, or intense light exposure which is a byproduct or a process. Note: "This category may also include hazards presented from lack of light (e.g., working in dark spaces/areas)."			
7	<b>Electrical Contact</b> <u>Example:</u> Exposure, contact, or proximity to live or potentially live electrical objects.	X	Damaged or frayed electrical cords would pose an electrical hazard. Working in wet conditions could pose and electrocution hazard.	
8	<b>Ergonomic/ Human Factors</b> <u>Example:</u> Working in cramped spaces, repetitive movements, awkward postures, vibration, heavy lifting, etc. Note: "This category may also include unique hazards presented from tasks that require demanding or challenging degrees of mental and/or physical effort to be exerted by an individual. See <i>Physical Effort Definition/Examples</i> category for further explanation of physical effort."	X	Potential exposure to repetitive movements, lifting light to moderately heavy loads, and bending/twisting (when moving lumber) (e.g., Muscular Skeletal Disorders)	X
9	<b>Environmental</b> <u>Example:</u> Exposure to noisy environments, hot or cold work environments, poor weather conditions, working at a height, and any other conditions in the workplace that could cause danger, discomfort, and/or negative health effects.	X	Potential exposure to loud/ prolonged noise (radial arm saw)	X

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Radial Arm Saw

**Personal Protective Equipment Requirements:**

<b>Eyes &amp; Face:</b>	Safety Glasses with Side Shields or Goggles (Required when operating radial arm saw)
<b>Head &amp; Ears:</b>	Hearing Protection Devices (Required when operating radial arm saw)
<b>Whole Body:</b>	
<b>Feet:</b>	Safety Shoes (Required when handling lumber)
<b>Hands:</b>	Leather Gloves (Required when handling lumber with rough or sharp edges)
<b>Respiratory:</b>	N95 Particulate Masks (Optional/Available not required)
<b>Other:</b>	"Note: Personnel must change from loose clothing, tie back long hair, and take off jewelry that could become entangled or snagged in moving blades/parts"

**Other Control Measures or Requirements (Engineering & Administrative Controls):**

**#1) Impact Hazards:** To reduce chances of kickback or binding, never use force to make the blade cut through the material. **#2) Penetration or Cut Hazards:** Maintain a 6” margin between all body parts and the saw's blade. Support long boards or work pieces on the work table to prevent binding and kickback. When starting the saw; allow the blade to reach full RPM before cutting, start all cuts gently, and do not force the blade or apply excessive pressure. Saw carriage return must be operational and tested prior to use. Never remove lumber or scrap materials from the cut areas while the blade is in operation. **#4) Chemical or Harmful Dust Hazards:** Particulate masks available upon request for personnel experiencing respiratory discomfort from dusts generated. Local Exhaust Ventilation (LEV) should be provided/maintained to remove sawdust. **#7) Electrical Contact:** Cords and plugs should be inspected for frays, cuts exposing wire or insulation and grounding mechanisms prior to operation. Any damaged cord or plugs must be repaired or replaced prior to use. Ensure the working surfaces are dry to avoid electrocution. **#8) Ergonomic Hazards:** Personnel should receive Ergonomics training (including warning signs and conditions of ergonomic/human factors hazards). Maintain a firm grip with both hands on the workpiece. Workpiece transfer vibrations can be reduced/minimized by regular preventive maintenance of the equipment (keeps equipment running smoothly). "NOTE: Radial arm saws are only operated for very short periods of times in most College environments in comparison to other General Industry, and/or Construction applications." Make sure your grip and footing are secure when using radial arm saws to prevent strains and slips. Keep all radial arm saw blades sharp by replacing dull or damaged blades (dull blades can cause personnel to use more force to complete tasks, which can increase chances of slipping, breaking, and kickback). Support (e.g., with saw horses, workbenches, etc.) large panels or lumber being cut. **#9) Environmental Hazards:** Personnel should receive Hearing Conservation training (e.g., regarding noise hazards), and be included in the Hearing Conservation Program when potentially exposed to a TWA of 85dB. **Miscellaneous Considerations:** Always disconnect power before making adjustments or changing accessories on saws. Remove scraps and any foreign items from the saw before operating. Personnel should make sure to only use blades with the correct size and shape arbor holes for their saw. Operators of tools, equipment, and machinery should read and follow all Manufacturers' recommendations/requirements (e.g., inspections, servicing/maintenance, safe usage, etc.). Any tools, equipment, or machinery found damaged, defective, or otherwise unsafe should immediately be removed from service and not used until repaired or replaced. Personnel should always consult their Supervisors on the selection and use of PPE for the tasks being performed.

**Physical Effort Definition/Examples**

**1.) Physical Mobility-** Movement from place to place on the job, considering distance and speed **2.) Physical Agility-** Ability to maneuver body while in place or in static position **3.) Physical Strength (Light to Moderate)-** Ability to handle routine office materials and tools **4.) Physical Strength (Moderate to Heavy)-** Ability to handle 50lbs+ objects, considering frequency **5.) Dexterity-** Skill and ability in using hands, fingers, and feet **6.) Physical Balance-** Ability to maintain balance and physical control **7.) Coordination-** Harmonious functioning of body parts (e.g., eye/hand, hand/foot, etc.) **8.) Endurance-** Ability to sustain a prolonged stressful effort or activity with limited opportunity to rest.

Note: "This JHA provides only the minimum PPE/safety requirements necessary to safely complete the task or assignment, and the JHA only covers the hazards or exposures that are most likely to be encountered. Nothing within this JHA bars or restricts personnel from requesting higher degrees of PPE or control to mitigate workplace hazards. In addition, South Central College personnel (e.g., employees and students) are required to complete any applicable safety or on-the-job trainings required prior to performing their positions or participating in their programs of study. Finally, South Central College personnel should consult their supervisors/instructors, the college's written safety programs/policies, and/or the Security & Safety Director whenever they have questions or concerns."

**Certification: This document certifies a hazard assessment was conducted meeting the provisions specified under 29 CFR 1910.132 (d) and South Central College's related safety programs and policies.**

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Date: 05-19-17