

# Job Hazard Analysis

JHA Name: Lathe



Assessment Date: 01-03-14

Revision Date: 04-26-17

Building or Location: North Mankato & Faribault Campus

Department or Program: CIM

Description of Individual Tasks or Assignments: Machining Operations (e.g., Cutting, Sanding, Knurling, Drilling, or Deformation, Facing, Turning, etc...)

Tools, Equipment, or Machinery Used when Performing Task: Lathe, and Metal Cutting Fluids/Oils

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 lathe operations from cleaning lathe bed with compressed air (e.g., injuries to eyes), potential exposure to breaking bits or accessories (e.g., injuries to eyes and other soft tissue)	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 cuts and abrasions when handling metal pieces with rough or sharp edges, and from accidental contact with drill bits or cutting accessories (e.g., hand and finger injuries).	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 metal pieces and fixtures (e.g., injuries to feet), potential exposure to spinning/moving parts (e.g., entanglement injuries)	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 chemical materials (e.g., injuries to hands, eyes)	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 of 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.			
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 (e.g., Back and other 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 (compressed air)	X

# Job Hazard Analysis

JHA Name: Lathe



Assessment Date: 01-03-14

Revision Date: 04-26-17

Building or Location: North Mankato & Faribault Campus

Department or Program: CIM

Description of Individual Tasks or Assignments: Machining Operations (e.g., Cutting, Sanding, Knurling, Drilling, or Deformation, Facing, Turning, etc...)

Tools, Equipment, or Machinery Used when Performing Task: Lathe, and Metal Cutting Fluids/Oils

**Personal Protective Equipment Requirements:**

<b>Eyes &amp; Face:</b>	Safety Glasses with Side Shields or Goggles (Required when operating Lathe), Face-shield worn over Safety Glasses with Side Shields, or Goggles (Required when using compressed air to clean)
<b>Head &amp; Ears:</b>	Hearing Protection Devices (Required when using compressed air to clean)
<b>Whole Body:</b>	
<b>Feet:</b>	Safety Shoes (Required when operating Lathe)
<b>Hands:</b>	Leather Gloves (Required when handling metal pieces with rough or sharp edges)
<b>Respiratory:</b>	
<b>Other:</b>	"Note: Keep Loose Clothing Away From Moving Drill Bits/Chucks"

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

**#1) Impact Hazards:** Ensure lathe guards are in place and positioned correctly. Never leave the adjustment key in the chuck (i.e., do not let go of the key until it is free of the chuck and secured). Do not leave tools, bits or pieces of stock on the lathe bed. Only properly sharpened drill bits and cutting tools may be used. Before starting a lathe, turn the chuck or faceplate (by hand) to ensure there is no binding or risk of work pieces striking the lathe; ensure the cutting tool does not contact the chuck or lathe dog; verify the spindle work has the cup center imbedded; tail, stock and tool rests are securely clamped (i.e., correctly sized clamps or vises); ensure that small diameter stock does not project too far from the chuck without support from the tail stock center. The correct speed and feed for the specific material and cutting tool must be used (e.g., large diameter stock turned at low speeds, use lowest speeds to rough out stock before final machining). The operator must always be aware of the direction and speed of carriage or cross-feed before engaging the automatic feed. When roughing stock, do not force the tool into work pieces or take too big a cut. Personnel choosing to clean lathe bed with compressed air must follow approved guidelines that include reducing air pressure to 30 p.s.i. and have appropriate chip guarding in place. Personnel should never use compressed air to clean themselves or their clothing. **#2) Penetration or Cut Hazards:** Personnel should never clean metal shavings/debris from lathe bed by hand; personnel should use a brush to sweep metal shavings/debris away from work surface. **#3) Crush or Pinch Hazards:** Always stop the machine before making adjustments or measurements. **#4) Chemical or Harmful Dust Hazards:** Personnel should receive Right-to-Know training (e.g., regarding chemical & physical hazards). SDS should be provided/available for all hazardous chemicals. **#8) Ergonomic Hazards:** Personnel should receive Ergonomics training (including warning signs and conditions of ergonomic/human factors hazards). When possible set up workstation or immediate job site to help minimize reaching, and/or sitting or working in awkward positions to prevent strains, soreness, and other discomfort. **Miscellaneous Considerations:** When personnel are finished working on lathes (and before leaving the lathe for any reason) the power must be shut off and the unit must come to a complete stop. Stop the lathe immediately if odd noises or excessive vibration occurs. Lathes must be de-energized and locked/tagged from use by approved energy isolation control procedures prior to performing maintenance or service. Note: only "authorized" employees who are trained in the requirements of the College's Lockout/Tagout Plan will perform lockout/tagout procedures and/or the related maintenance or service work. Operators of tools, equipment, and machinery should read and follow all Manufactures' 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.**

Name: Al Kluever

Date: 04-26-17