

# Job Hazard Analysis

JHA Name: Press Brake



Assessment Date: 10-24-13

Revision Date: 05-15-17

Building or Location: Faribault & North Mankato Campuses

Department or Program: Multiple Programs

Description of Individual Tasks or Assignments: Punching, Forming, and/or Bending Metal

Tools, Equipment, or Machinery Used when Performing Task: Press Brake

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, debris and other ejection hazards generated from press brake operations (e.g., injuries to eyes, head, torso, and upper 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 equipment (e.g., injuries to hands, arms), Potential exposure to cuts and abrasions when handling metal pieces with rough or sharp edges (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 hazards from dropping metal pieces and fixtures (e.g., injuries to feet), Potential exposure to crushing and pinching hazards from fingers/hands placed within machine's point-of-operation (e.g., injuries to fingers, and hands)	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."			
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.			
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 steel) (e.g., Muscular Skeletal Disorders)	
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.			

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**Personal Protective Equipment Requirements:**

<b>Eyes &amp; Face:</b>	Safety Glasses with Side Shields or Goggles (Required when operating Press Brake)
<b>Head &amp; Ears:</b>	
<b>Whole Body:</b>	
<b>Feet:</b>	Safety Shoes (Required when operating Press Brake)
<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 Blades/Parts"

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

**#1) Impact Hazards:** Before operating press brake ensure the die is positioned and secured correctly. **#2) Penetration or Cut Hazards; & #3) Crush or Pinch Hazards:** Ensure press brake guards (e.g., barrier, two-hand control, restraints, pull-backs, light curtains, etc...) are in place and positioned correctly. Never attempt to bypass a guarding or place hands or any portion of your body within the machine's point-of-operation. "Note: When point-of-operation guarding is not feasible due to the nature of the material/process, then guarding by distance is acceptable if followed per OSHA directive (CPL 02-01-025). If guarding by distance, a minimum distance of 4" must be maintained between the operator and the machine's point-of-operation." Use hand tools to position/remove pieces as necessary. **#8) Ergonomic Hazards:** Personnel should receive Ergonomics training (including warning signs and conditions of ergonomic/human factors hazards). Make sure your grip and footing are secure when using press brakes to prevent strains and slips. Support (e.g., with saw horses, workbenches, etc...) large work pieces being machined. **Miscellaneous Considerations:** If the machine is operated by more than one operator (at a single time), then dual operator controls should be installed on the press brake. Keep the rear and sides of the press brake clear; never operate the press brake with someone within press brake's safety zone. Never exceed the rated capacity of the press brake for the types of metal and thickness sizes to be processed. When personnel are finished working on press brakes (and before leaving the press brakes for any reason) the power must be shut off and the unit must come to a complete stop. Stop the press brake immediately if odd noises or excessive vibration occurs. Press brakes must be de-energized and locked/tagged from use by approved energy isolation control procedures prior to performing maintenance, service, and adjusting machine or die. 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 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.**

Name: Al Kluever

Date: 05-15-17