



# CAUTION



## Buffing / Polishing Machine

- Keep work area clean.
- Do not mix incompatible dusts (i.e., steel and aluminum).
- Before you begin:
  - Be sure available dust collection system is operating.
  - Use proper type of polishing wheel for material.
- Polish only on side of wheels designed for side polishing.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Drill Press

- Keep work area clean.
- Before you begin:
  - Replace dull or damaged drill bits.
  - Use clamps, vises, etc., to secure workpiece to table.
- Do not grab quick-change chucks while rotating, regardless of speed.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Multiple Spindle “Gang” Drill Press

- Keep work area clean.
- Before you begin:
  - Replace dull or damaged drill bits.
  - Use clamps, vises, etc., to secure workpiece to table.
- Do not grab quick-change chucks while rotating, regardless of speed.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Pyramid Roll Bending Machine

- Keep work area clean.
- Do not clean or wipe down moving rolls.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Roll Bending and Forming Machine

- Keep work area clean.
- Do not clean or wipe down moving rolls.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Gear Cutting / Hobbing Machine

- Keep work area clean.
- Securely clamp workpiece to table.
- Use spring-loaded operational handles with power-fed tables.
- Cover and store all unused cutters.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Pedestal or Bench Grinder

- Keep work area clean.
- Do not mix incompatible dusts (i.e., steel and aluminum).
- Be sure available dust collection system is operating.
- Before you begin:
  - Replace cracked, badly scarred, or fouled wheels.
  - Dress out-of-true wheels immediately.
- Before mounting new abrasive wheel:
  - Be certain rated speed of grinding machine does not exceed rated speed of abrasive wheel.
  - Give “ring test” to each abrasive wheel.
- After mounting new wheel and before beginning work, stand to one side and allow grinding wheel to run at operating speed for at least one minute.
- Only grind on side of wheel if designed for that purpose.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Surface Grinder

- Keep work area clean.
- Before you begin:
  - Replace cracked, badly scarred, or fouled wheels.
  - Use proper wheel for material being worked.
  - Check coolant level.
- Before mounting a new wheel:
  - Use wheel rated the same or higher than machine speed.
  - Give “ring test” to each abrasive wheel installed.
- After mounting new wheel and before beginning work, stand to one side and allow grinding wheel to run at operating speed for at least one minute.
- Turn off coolant before stopping wheel.

Note: Immediately report all machinery malfunctions to the supervisor.





# CAUTION



## Drop Hammer

- Keep work area clean.
- Secure all overhead machinery parts.
- Use hand tools to feed workpiece.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Precision Honing Machine

- Keep work area clean.
- Do not mix incompatible dusts (i.e., steel and aluminum).
- Be sure available dust collection system is operating.
- Before you begin:
  - Replace cracked, badly scarred, or fouled wheels.
  - Dress out-of-true wheels immediately.
- Before mounting new abrasive wheel:
  - Be certain rated speed of grinding machine does not exceed rated speed of abrasive wheel.
  - Give “ring test” to each abrasive wheel.
- After mounting new wheel and before beginning work, stand to one side and allow grinding wheel to run at operating speed for at least one minute.
- Only grind on side of wheel if designed for that purpose.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Ironworker

- Keep work area clean.
- Be sure foot pedal control is protected against accidental activation.
- Do not wear gloves, jewelry, or loose clothing.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Metal Working Lathe

- Keep work area clean.
- Before you begin:
  - Be sure all personnel are clear of chuck before operation.
  - Check operating speed.
- Do not work material too small for machine.
- Securely clamp workpiece.
- Store unused tools and chucks in racks.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Horizontal Milling Machine

- Keep work area clean.
- Securely clamp workpiece to table.
- Use spring-loaded operational handles with power-fed tables.
- Cover and store all unused cutters.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Knee Mill Milling Machine

- Keep work area clean.
- Before you begin:
  - Securely clamp workpiece to table.
  - Use spring-loaded operating handles on power-fed work table.
  - Use barrier guards when conducting fly cutting operations.
- Cover and store all unused cutters.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Vertical Milling Machine

- Keep work area clean.
- Before you begin:
  - Securely clamp workpiece to table.
  - Use spring-loaded operating handles on power-fed worktables.
  - Use barrier guards when conducting fly cutting operations.
- Cover and store all unused cutters.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Bench-Mounted Hydraulic Power Press

- Keep work area clean.
- Before beginning work:
  - Be sure foot pedal control is protected against accidental activation.
  - Adjust the stroke limit to set die opening to no more than  $\frac{1}{4}$  inch above thickness of material.
  - Use back gage to correctly align material to be processed.
  - Contact safety officer before using unitized dies.
- Locate 2-hand controls a safe distance from point of operation.
- Never leave control mode selector keys in the machine.
- Use inch control mode for setup purposes only.
- Use die blocks during die setting.
- Use hand tools to hold and retrieve workpiece.

Note: Immediately report all machinery malfunctions to the supervisor.





# CAUTION



## Hydraulic Power Press

- Keep work area clean.
- Before beginning work:
  - Be sure foot pedal control is protected against accidental activation.
  - Adjust the stroke limit to set die opening to no more than  $\frac{1}{4}$  inch above thickness of material.
  - Use back gage to correctly align material to be processed.
  - Contact safety officer before using unitized dies.
- Locate 2-hand controls a safe distance from point of operation.
- Never leave control mode selector keys in the machine.
- Use inch control mode for setup purposes only.
- Use die blocks during die setting.
- Use hand tools to hold and retrieve workpiece.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Mechanical Power Press

- Keep work area clean.
- Before beginning work:
  - Be sure foot pedal control is protected against accidental activation.
  - Adjust the stroke limit to set die opening to no more than  $\frac{1}{4}$  inch above thickness of material.
  - Use back gage to correctly align material to be processed.
  - Contact safety officer before using unitized dies.
- Locate 2-hand controls a safe distance from point of operation.
- Never leave control mode selector keys in the machine.
- Use inch control mode for setup purposes only.
- Use die blocks during die setting.
- Use hand tools to hold and retrieve workpiece.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



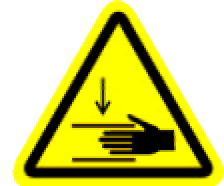
## Hydra-Mechanical Press Brake

- Keep work area clean.
- Before beginning work:
  - Be sure foot pedal control is protected against accidental activation.
  - Adjust the stroke limit to set die opening to no more than  $\frac{1}{4}$  inch above thickness of material.
  - Use back gage to correctly align material to be processed.
- Never leave control mode selector keys in the machine.
- Use inch control mode for setup purposes only.
- Use die blocks during die setting.
- Use hand tools to hold workpiece.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Hydraulic Press Brake

- Keep work area clean.
- Before beginning work:
  - Be sure foot pedal control is protected against accidental activation.
  - Adjust the stroke limit to set die opening to no more than  $\frac{1}{4}$  inch above thickness of material.
  - Use back gage to correctly align material to be processed.
  - Contact safety officer before using unitized dies.
- Locate 2-hand controls a safe distance from point of operation.
- Never leave control mode selector keys in the machine.
- Use inch control mode for setup purposes only.
- Use die blocks during die setting.
- Use hand tools to hold workpiece.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Mechanical Press Brake

- Keep work area clean.
- Before beginning work:
  - Be sure foot pedal control is protected against accidental activation.
  - Adjust the stroke limit to set die opening to no more than  $\frac{1}{4}$  inch above thickness of material.
  - Use back gage to correctly align material to be processed.
  - Contact safety officer before using unitized dies.
- Locate 2-hand controls a safe distance from point of operation.
- Never leave control mode selector keys in the machine.
- Use inch control mode for setup purposes only.
- Use die blocks during die setting.
- Use hand tools to hold workpiece.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



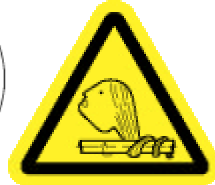
## Pneumatic Riveting / Dimpling Machine

- Keep work area clean.
- Before you begin, set correct temperature and timer settings.
- Keep hands clear of anvils during operation.
- Cool hot dimpling dies before removal or adjustment.
- Lower anvil all the way down when changing setup.
- Raise anvil gradually to avoid damage to dies and parts.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



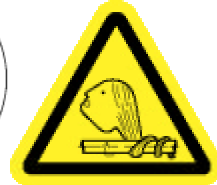
## Combination (Disk and Belt) Sander

- Keep work area and abrasive surfaces clean.
- Be sure available dust collection system is operating.
- Before you begin:
  - Replace torn or worn disks.
  - Use proper abrasive disk and/or belt for material being sanded.
  - Properly adjust guards to cover unused portion of abrasive disk or belt above or below work table.
- Do not mix incompatible dusts (i.e., steel and aluminum).

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Disk Sander

- Keep work area and abrasive surfaces clean.
- Be sure available dust collection system is operating.
- Before you begin:
  - Replace torn or worn disks.
  - Use proper abrasive disk and/or belt for material being sanded.
  - Properly adjust guards to cover unused portion of abrasive disk above or below work table.
- Do not mix incompatible dusts (i.e., steel and aluminum).

Note: Immediately report all machinery malfunctions to the supervisor.





# CAUTION



## Metal Cutting Horizontal Band Saw

- Keep work area clean.
- Before you begin:
  - Replace broken, dull, cracked, or fouled saw blades.
  - Adjust blade tension.
  - Be sure filler plate/blade gap is no more than 1/8”.
  - Be sure exposed blade around material does not exceed 3/8”.
  - Be sure unused part of blade is guarded above and below table.
- Use correct saw blade and speed for material being cut.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Metal Cutting Vertical Band Saw

- Keep work area clean.
- Before you begin:
  - Replace broken, dull, cracked, or fouled saw blades.
  - Adjust blade tension.
  - Be sure filler plate/blade gap is no more than 1/8”.
  - Be sure exposed blade above material does not exceed 3/8”.
  - Be sure unused part of blade is guarded above and below table.
- Use correct saw blade and speed for material being cut.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Abrasive Metal Cutting Chop Saw

- Keep work area and abrasive surfaces clean.
- Be sure available dust collection system is operating.
- Before you begin:
  - Replace or repair sticky spring-loaded trigger switches.
  - Replace dull, cracked or fouled saw discs.
  - Use proper discs to cut material.
  - Securely clamp workpiece.
- Never clamp or wedge guard in open position.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Metal Shearing Machine

- Keep work area clean.
- Securely clamp workpiece to table.
- Use spring-loaded operational handles with power-fed tables.
- Cover and store all unused cutters.

Note: Immediately report all machinery malfunctions to the supervisor.



# CAUTION



## Resistance Welding Machine

- Keep work area clean.
- Wear proper gloves.
- Before you begin:
  - Be sure foot pedal control is protected against accidental activation.
  - Use certified control settings and procedures.
  - Double check heat and tip pressure before welding.
  - Inspect welding cables often for damage and wear.
- Keep hands away from electrodes.

Note: Immediately report all machinery malfunctions to the supervisor.