



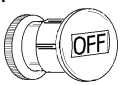
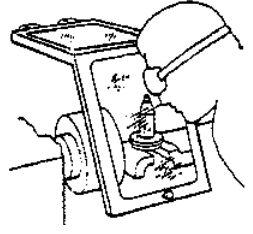
Company Name: _____ Job Site Location: _____
 Date: _____ Start Time: _____ Finish Time: _____ Foreman/Supervisor: _____

Topic 410: Metal Lathe Safety

Introduction: Metal lathes and their moving parts create the possibility for workplace injuries whenever they are used. Providing safeguards is essential for eliminating or controlling the hazards. Following these safeguards can help protect workers from being injured:

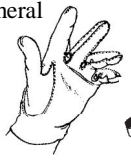
General Machine Safety Requirements:

- **Employers must ensure that** all personnel who operate metal lathes are properly trained in their safe operation and maintenance, and that all required personal protective equipment is available and used.
- **Employers and employees** must ensure that all safety devices, systems, controls, and guards are in place, secure, and operating before assigning any employee to operate the machine, or operating the machine.
- **Make sure employees** working around dangerous machines are protected from slipping on smooth, oily, or otherwise slippery floors by providing one of the following types of floor covering:
 - * Non-slip matting. * Grating. * Non-slip composition flooring. * Some other effective floor treatment.
- **Ensure that lathes** are secured to the floor or base so they will not move or change position during use. Prevent excessive machine vibration that could create a hazard to employees. Keep bearings free from lost motion and well lubricated.
- **Ensure that each machine** has a control that both stops the machine and can be reached by the operator without leaving the operator's position.
- **The operator must** be able to easily reach all machine controls without reaching into a hazardous area of the machine.
- **Ensure foot-operated controls** are located or guarded so that unintentional movement to the "ON" position is unlikely.
- **Machines must not** automatically restart when power is restored after a power failure, if restarting would create a hazard for employees.
- **Emergency stop controls**, if required, must be red in color, easily reached from the operator's normal work position and other hazardous work areas, be kept in a good working, and have to be manually reset before a machine can be restarted.
- **Operate tools and equipment** within their rated speed. Actions that could cause an over-speed condition include:
 - * Installing a more powerful motor. * Changing or increasing the power source. * Changing attachment size or type, such as the blade.
- **Ensure that work areas** around machinery are designed with enough space so that each operator:
 - * Can clean and handle material without interference from other workers or machines.
 - * Does not have to stand in the way of passing traffic.
 - * Is provided enough space so that employees can bring and remove materials safely.
- **Keep work areas** clean and free of trip hazards and clutter at all times.
- **Use proper lockout/blockout/tagout procedures** before performing any maintenance, adjustments, repairs, or removing material or refuse from the machine.



Safety Requirements Specific to Metal Lathes:

- **Provide shields or guards on metal lathes for chip or coolant hazards** - Provide a permanent shield or other equally effective guard to prevent chips or coolant from being thrown or splashed on the operator, aisle, or other assigned work area. Make sure employees' hands do not contact chips that are being produced. Chips may be removed using tools, pullers, or brushes.
- **Safeguard work-holding devices (chucks)** - Provide a fixed or movable guard, such as an awareness barrier or peripheral cover, over areas exposed to the operator on work-holding devices or chucks when:
 - * It is in the clamped mode and has parts that extend beyond the outside diameter of the chuck.
 - * It has an irregular shape to the periphery of its body.
- **Safeguard power-clamping devices** - Protect the operator from the hazards of material being thrown when the clamping device does not have adequate pressure to hold the material. Examples of safeguarding methods include:
 - * Interlocks
 - * Retaining covers that contain the workpiece if it falls or flies out from the clamped work-holding device.
 - * Visual or audible warnings that are located so they can be seen or heard by the operator in the normal work area, making the operator aware that there is no pressure on the clamp side of the actuator.
- **Restrain extended workpieces on horizontal lathes** - Safeguard employees from the hazards of work pieces that extend beyond the edges of the horizontal lathe by:
 - * Restraining work pieces as needed to prevent whipping
 - * Isolating work pieces with an awareness barrier, guard, or railing.



Conclusion: Computer numerically controlled (CNC) lathes save labor and help avoid injury by preventing the amount of operator contact with the working operations associated with metal lathe operations. Follow the above guidelines for safety in metal lathing work.

Work Site Review

Work-Site Hazards and Safety Suggestions: _____

Personnel Safety Violations: _____

Employee Signatures: _____
(My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

Foreman/Supervisor's Signature: _____

These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.