



HARVARD

Campus Services

ENVIRONMENTAL HEALTH, SAFETY & EMERGENCY MANAGEMENT

Date: 10/6/08

Toolbox Talk #14

MACHINE GUARDING

This Toolbox Talk is based on OSHA's machine guarding standards. Guarding involves protecting ourselves from machines and equipment in our work environment.

Basic Terminology:

Parts of the Machine Requiring Guarding

- **Point of Operation:** Area where machine performs work on material
- **Power Transmission Apparatus:** Belts, gears, flywheels, chains, pulleys, spindles, couplings, cams, machine components that transmit energy.
- **Other Moving Parts:** Reciprocating, rotating, traversing motions, auxiliary machine parts.

Types of Mechanical Motion that Must be Guarded:

- **Pinch Points:** Points at which it is possible to be caught between moving parts, or between moving and stationary parts of a piece of equipment
- **Rotating:** Circular motion of shafts with a protrusion sticking out can grip clothing or pull body part into point of operation
- **Reciprocating:** Back-and-forth or Up-and-Down motion that may trap/strike an employee between the moving object and a fixed object.
- **Traversing:** Movement in straight, continuous line that may strike or catch an employee in a pinch or shear point between a moving and fixed object.
- **Cutting:** Action of sawing, boring, drilling, milling, slicing
- **Punching:** Action resulting when a machine moves a slide (ram) to stamp a sheet of metal or other material.
- **Shearing:** Movement of a powered slide or knife during metal trimming or paper cutting
- **Bending:** action occurring when power is applied to a slide to draw or form metal or other materials

Common Machines That Require Machine Guards:

Circular Saw	Reciprocating Saw	Band Saw	Jointer
Power Feed Planer	Shaper	Lathe	Sander
Drill Press	Grinding Wheels	Mechanical Power Press	Mortising Machine

Group Discussion Topics:

- Identify the machines in your shop or that you use that require machine guarding.
- How could someone be injured by using these machines? How can this be prevented?
- Inspect your machines to ensure the guards are correctly positioned, intact and in place. Contact EHSEM if you need further assistance.



Retro-Fit all non compliant equipment



Table saws need to have proper guards



Barrier devices create a safety buffer for employees

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