

Machine Guarding

OVERVIEW

For this month's training all individual supervisors should be going over all machinery that their employees are expected to operate. The supervisor should be discussing safe operating procedures, where and how the guards work (if applicable), and what hazards are associated with each piece of equipment along with how they are being controlled.

PURPOSE

The hazards posed by an unguarded machine are obvious: in the worst of all cases the machine can do to your body parts what it's doing to the materials it's designed to cut, shape, or form.

One of the major goals of OSHA is to guard all machinery and equipment to eliminate hazards created by points of operation, ingoing nip points, rotating points, and flying chips and sparks.

The words "shall be guarded" apply to most machines and equipment the University uses. Some machines require specific guarding methods and all machines are regulated by the general requirements.

OBJECTIVE

To reduce accidents to workers through the use of machine guards and other safeguards.

RESPONSIBILITY

All personnel using machinery at the University will adhere to the OSHA regulation 1910.111-.222.

PROCEDURE

There shall be one or more methods of machine guarding provided to protect the operator and other employees in the machine area from hazards. Examples of guarding methods are:

- Barrier guards
- Two-hand tripping devices
- Electronic safety devices

TYPES OF GUARDS

Fixed guard— provides a barrier between a person and the point of opera, power train or other moving parts. These include fences, gates, and protective covers for blades, presses and all moving parts.

Interlocked guard – when opened or removed disengage the machine's power source. It cannot be restarted until the guard is replaced.

Adjustable guard – provide a barrier that can be adjusted to many different operations, such as varying sizes of stock.

Self-adjusting guard – barriers that move or self-adjust, according to the size or position of the workplace. The guard returns to its resting position when no material is passing through.

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Machine Guarding

Affix guards to the machine where possible or secure it elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an accident hazard in itself. Point of operation is the area on a machine where work is actually performed upon the material being processed. The point of operation of machines whose operation exposes an employee to injury shall be guarded. The guarding device shall conform with any appropriate standards. If no specific standard exists, then the design and construction of the guard will prevent the operator from having any part of his body in the danger zone during the operating cycle.

The following are some examples of machines requiring point of operation guarding:

- Guillotine cutters
- Shears
- Alligator shears
- Power presses
- Milling machines
- Power saws
- Jointers
- Portable power tools
- Forming rolls and calendars

Revolving drums, barrels, and containers shall be guarded by an enclosure that is interlocked with the drive mechanism so the barrel, drum or container cannot revolve unless the guard enclosure is in place. When the periphery of the blades of a fan is less than seven feet above the floor or working level, the blades shall be guarded. The guard shall have openings not larger than one-half inch.

Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

SIMPLE RULES TO MAXIMIZE WORKER SAFETY

1. Always be sure that moving mechanisms are clear of people and objects
2. Be sure that workers are not wearing any jewelry or loose clothing that could get snagged in the machine
3. Keep an eye on overhead moving parts, like pulleys, for potential hazards
4. Check that guards are in place at all points where you could contact moving parts before turning the machine on
5. Be aware of how to turn power on and off if you should have to do so quickly
6. Read the manufacturer's instructions on how to operate the machine safely and correctly
7. Feed material into the machine with push sticks, not your hands
8. Take it easy. Rushing through a job is one of the major causes of accidents
9. Make sure maintenance is performed when required. If you think your equipment might have missed its scheduled maintenance let your supervisor know.
10. Use lockout/tagout procedures when a machine needs repair or maintenance. Turn the machine and the power to the machine off and tag it so that no one tries to use it.

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EHS TOOLBOX TALK

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10/30/2020

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