

Toolbox Safety Topic

Machine Guarding

Machines do lots of useful work to save us time and effort. They cut, punch, roll, drill, grind, assemble, handle, and transport - **but they can't think!** Only the human operator – you – can make them do their jobs properly and safely.

Machines cause thousands of injuries in the workplace every year. Many are serious, including:

- crushed and broken arms and legs
- amputation of fingers and limbs
- eye injuries
- burns from hot machinery or chemicals
- electric shock
- hearing damage from excessive noise

Obviously, there's a lot at stake in using machines safely. This is why OSHA requires proper machine guards and safety devices, and it's why it's important for employees to understand the company's safety rules and follow them.

Machinery Hazards: There are three major types of hazards associated with moving machinery:

1. Mechanical – These are hazards associated with the machine's moving parts, which can injure a person's body. The critical areas of a machine are the "point of operation" (the spot where the work actually takes place) and the "power train" (the place where energy is transferred through moving parts like gears, shafts, cables, and cylinders).
2. Electrical – These hazards include electric shock and burns from using machinery improperly or with damaged electrical equipment. A related hazard is fire, resulting from electrical problems or poor maintenance of the machinery.
3. Noise – Excessive machinery noise can cause temporary or permanent hearing loss unless workers use proper protective equipment. (Call EHSS, we can monitor noise levels for you!)

Preventing Injuries: OSHA requires machinery in the workplace to have guards and safety devices to protect workers from injuring themselves. Types of machine guards include:

- Fixed Guards – such as fences, gates, and protective covers that act as a barrier between a person and the machine's point of operation, power train, and other moving parts.
- Interlocking Guards – which disengages the machine's power source if opened or removed.
- Adjustable Guards – barriers that can be adjusted manually for different kinds of operations.
- Self-Adjusting Guards – barriers that move, or self-adjust, according to the size, shape, or position of the work being performed.
- Sensor Devices – causing the machine to stop automatically when a body part enters a danger zone.
- Restraints and Cables – attached to a worker's hands or arms, these restrict the worker's field of movement or force the worker out of the way during the dangerous part of a machine's operation.
- Safety Trip Devices – emergency controls that stop a machine if someone accidentally moves too close to a machine's moving parts.

Safety guards and devices are meant to be used! A machine guard/safety device can't protect anything if it is disabled, misused, or not working properly. Remember:

- Never remove or disable a machine guard or safety device! (Yes, that means put the guard back on the machine!)
- Never reach around or through a machine guard.
- If a machine guard or safety device is not working properly, report it to your supervisor and don't use the machine.

Any questions?

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Date: _____

Meeting Conducted By: _____ Title: _____

Attendees

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1		24	
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3		26	
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