

## FACT SHEET

### MACHINE SAFEGUARDING

#### Introduction

One of the most preventable injuries is caused by machinery. Crushed hands, arms, severed fingers, blindness, etc. are all avoidable, if proper safeguards are in place. A good rule to remember is that any machine part, function or process which may cause injury must be safeguarded. Mechanical hazards occur in three areas, Point of Operation, Power Transmission and other moving parts, such as belts, rollers and articulating arms.

#### Applicable Regulations

OSHA Regulations:

- 29 CFR 1910.Subpart I - Personal Protective Equipment
- 29 CFR 1910.Subpart O - Machinery & Machine Guarding
- 29 CFR 1910.Subpart R - Special Industries
- 29 CFR 1910.Subpart S - Electrical

#### Summary of Requirements

Machine safeguarding must protect employees against mechanical and electrical hazards. Safeguards must;

- **Prevent Contact:** Safeguards must prevent hands, arms and any other body part of a worker from making contact with “dangerous moving parts”
- **Secure:** Guards must be secured and not readily removable or tampered with and be durable to withstand normal use and the work environment.
- **Protect from Falling Objects:** Safeguards must assure no objects can fall into moving parts.
- **Create No New Hazards:** Guard must not create a hazard or cause injury itself.
- **Create No Interference:** Any safeguard must not impede a worker from performing their job quickly and comfortably.
- **Allow Safe Lubrication:** Machines must be serviceable without having to remove guards by locating serviceable areas and guard design efficiently.
- **Engineering Controls Are Not Available:** Operators must wear personal protective equipment.
- **No Mechanical hazards:** No mechanical hazards, such as, stored energy (springs) or electrical.

## **Training**

Operators of equipment require specific and detailed training in the proper use of the machinery, all safeguarding efforts and all machine-related hazards. Thorough operator training must involve either formal instruction or hands-on training in the following:

- A description and identification of the hazards associated with particular machines;
- Proper use and care of the machinery, including setup and servicing methods.
- The safeguards themselves, how they provide protection and the hazards for which they are intended;
- How to use the safeguards and why;
- How and under what circumstances safeguards can be removed, and by whom.
- What to do if a safeguard is damaged, missing or unable to provide adequate protection.

This kind of safety training is necessary for new operators and maintenance or setup employees, when any new or altered safeguards are put in service or when employees are assigned to a new machine or operation.

Assistance is available through EH&S to develop safety training for equipment operation and to conduct routine inspections of equipment to ensure proper guarding.

## **Reporting**

EH&S must be notified immediately in the event of any incident resulting in the near-miss, minor or serious injury of any person or property damage.

## **Recordkeeping**

Written inspection forms recommended by EH&S are to be completed and copies forwarded to the EH&S Office. Inspections should be conducted at regularly scheduled intervals or upon changes in the work environment.

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