

SAFETY IN MAINTENANCE.



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Agenda

Program Requirements & Maintenance's Role in;

- Lock Out Tag Out
- Hazard Communication
- Fall Protection
- Machine Guarding

OSHA Top 10

Top 10 Most Frequently Cited Standards

1. Fall Protection (29 CFR 1926.501)
2. Hazard Communication (29 CFR 1910.1200)
3. Ladders (29 CFR 1926.1053)
4. Respiratory Protection (29 CFR 1910.134)
5. Control of Hazardous Energy (29 CFR 1910.147)
6. Powered Industrial Trucks (29 CFR 1910.178)
7. Fall Protection Training (29 CFR 1926.503)
8. Scaffolding (29 CFR 1926.102)
9. Eye & Face Protection (29 CFR 1926.102)
10. Machine Guarding (29 CFR 1910.212)



Lock Out Tag Out

Lockout Tagout Program

3 Levels of Employee Involvement

1. Authorized
2. Affected
3. Awareness





10 Steps to Lockout / Tagout

1. Notify all affected employees that equipment will be shut down and locked out for maintenance.
2. Identify all energy sources to be isolated.
3. Turn off machine by normal shut down procedures.
4. Locate and deactivate all energy isolating devices.
5. Lockout and tagout the energy control switches.
6. Be sure all stored energy is safely released or blocked.



10 Steps to Lockout / Tagout

7. Test the operating controls to ensure energy is locked out. Then return controls to "off" position.
8. Perform necessary maintenance.
9. Once completed make sure all tools are removed and machine guards reinstalled properly. Notify employees in the area the lockout devices are being removed.
10. Remove lockout devices. Only employees who installed the devices are allowed to remove them. Then you can start the machine back up according to your standard startup procedure.

OSHA Definitions

Minor Servicing

- Short in duration (< 2min) during **NORMAL** production

Servicing & Maintenance

- Activities performed **NOT** during normal production

Troubleshooting

- Limited in duration & Employee must still be protected

OSHA Requirements

Training

All authorized employees

All affected employees

All other employees working in the area (awareness training)

Complete training prior to initial work assignment.

Retraining:

- Job duties change
- Change in equipment
- New hazards are present
- Job performance indicates deficiencies

OSHA Requirements

Equipment Specific Procedures

1910.147(c)(4)(ii)

The procedures shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance including, but not limited to, the following:

1910.147(c)(4)(ii)(A) A specific statement of the intended use of the procedure;

1910.147(c)(4)(ii)(B) Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy;

1910.147(c)(4)(ii)(C) Specific procedural steps for the placement, removal and transfer of lockout devices or tagout devices and the responsibility for them; and

1910.147(c)(4)(ii)(D) Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

OSHA Requirements

Annual Periodic Inspections

Periodic inspection must be performed by an authorized employee other than the one(s) who is using the energy control procedures. This individual will be referred to as the "inspector." The inspector must be able to determine:

- Whether the steps in the energy control procedure are being followed.
- Whether the employees involved know their responsibilities under the procedure.
- Whether the procedure provides the necessary protection, and what changes, if any, are needed.

Hazard Communication

Employer Responsibilities

Employer responsibilities under the HCS:

- Ensure labels are on incoming material and not defaced
- Maintain SDSs from shipments
- Obtain SDSs if not received
- Ensure SDSs are readily accessible
- Ensure chemicals in workplace are properly labeled, tagged, or marked
- Provide information and training to employees
- Provide information/access for employees in multi-employer workplaces
- Develop, implement, and maintain a written hazard communication program



HazCom Written

Components of written program:

Program

- Lists of hazardous chemicals present at worksite
- Availability of SDSs to employees and downstream employers
- Labeling of chemical containers
- Training programs regarding hazards of chemicals and protective measures

HazCom Labels

Alternative workplace labels:

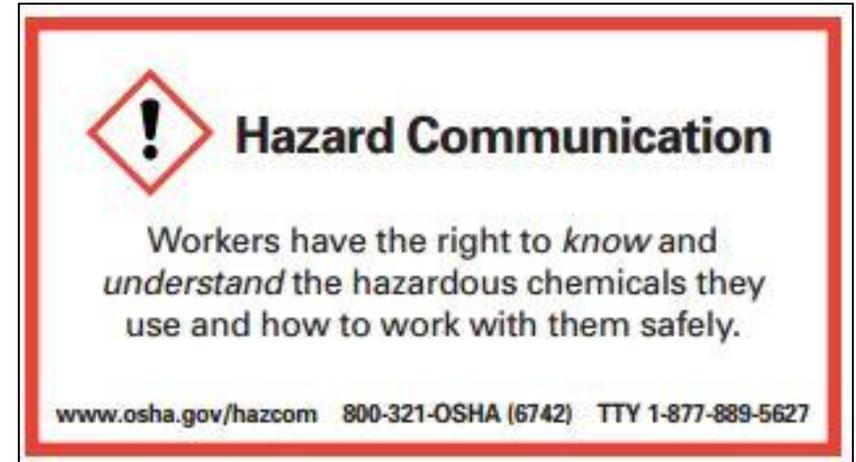
- Permitted for workplace labels
- Must provide at least general information regarding hazards of chemicals
- Hazard warnings or pictograms that conflict with HCS label elements cannot be used
- Examples: NFPA 704 and HMIS



HazCom Program

Training requirements:

- Train employees on hazardous chemicals in their work area
 - Before initial assignment
 - When new hazards are introduced
 - Nonroutine tasks
- Include in training
 - Methods/observations to determine presence/release of chemical in work area
 - Hazards of chemicals
 - Appropriate protective measures
 - Where and how to obtain additional information



Fall Protection



OSHA Requirement

Unless working on a ladder, scaffold or scissor lift, OSHA requires fall protection when exposed to a 4-foot fall or greater.

Employer Responsibilities

- Identify and evaluate fall hazards
- Provide you with fall protection if you are exposed to fall hazards
- Train you on how to recognize and minimize these fall hazards
- Train you on how to inspect, install, use, disassemble, and maintain the fall protection
- Retrain you when you demonstrate a lack of understanding or skill about the fall protection you use



Ladders

Have specific requirements (29 CFR 1926.1053)

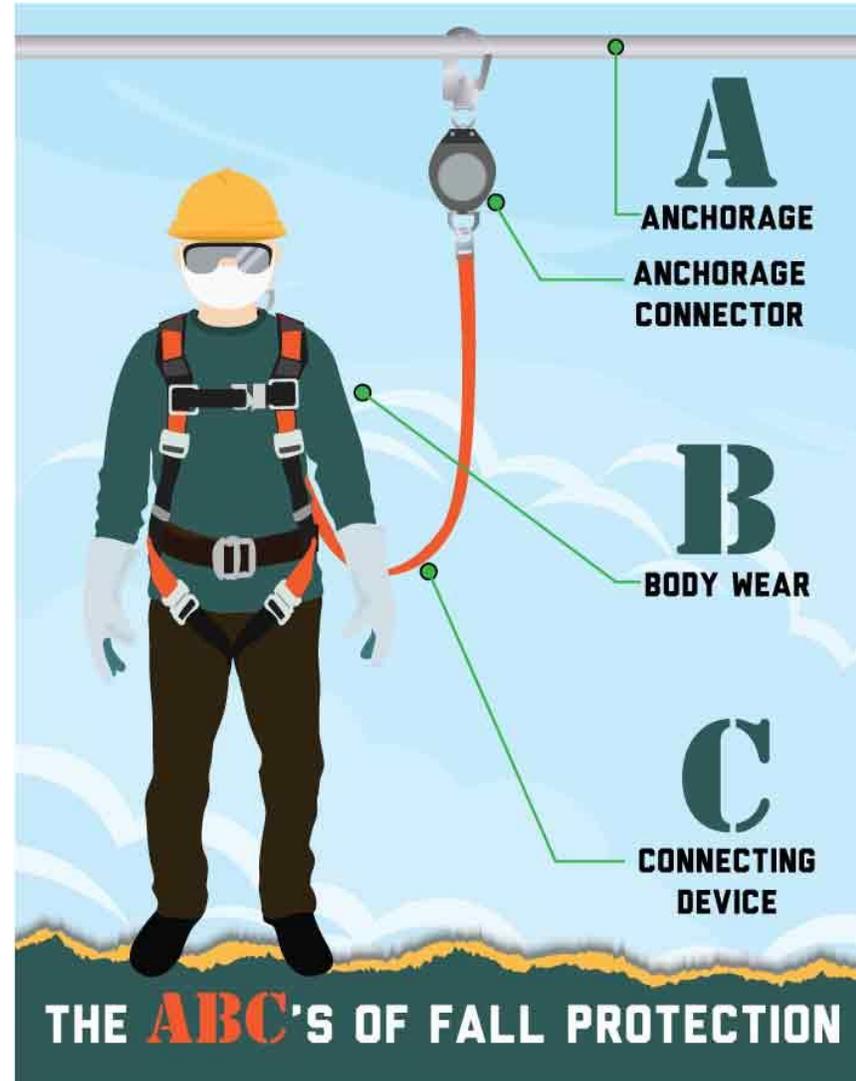
Inspection

- Treads
- Feet/stability
- Missing labels
- Damage



Fall Protection PPE

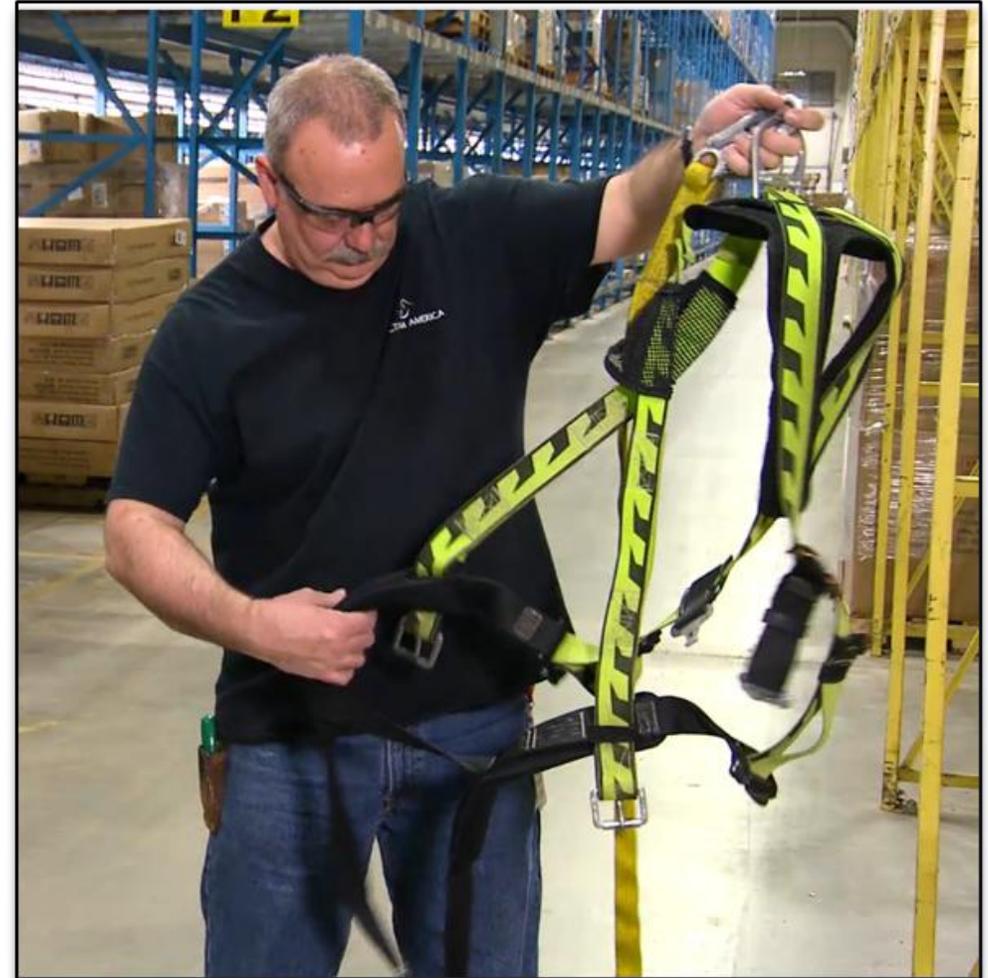
Body Harness
Anchorage
Connector



Inspecting Fall Protection

Inspection Frequency

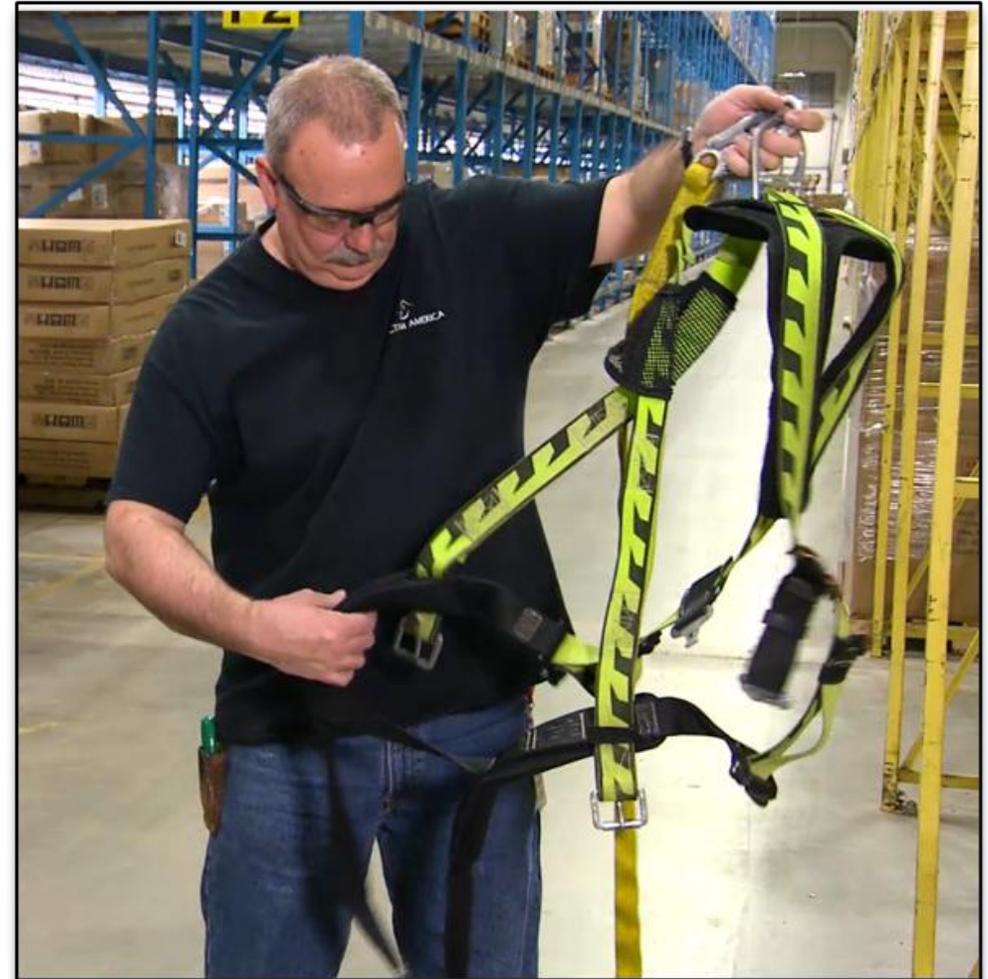
- Daily/Prior to Use
- Annual
- If Conditions have Changes (exposed to contamination)



Inspecting Fall Protection

Visual Inspection

- Damage
- Deterioration
- Broken parts
- Mold/Mildew
- Wear
- Chemical or heat damage
- Brittle material
- Rust
- Faulty connections



Machine Guarding

OSHA Requirement

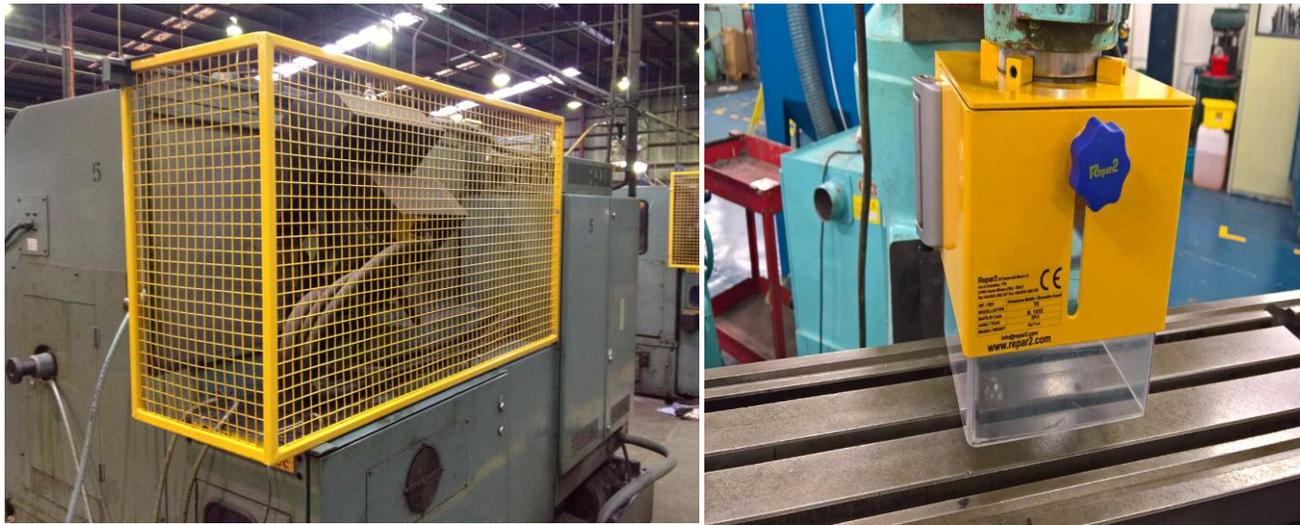
The point of operation of machines whose operation exposes an employee to injury, shall be guarded.



Commonly Used Safeguards

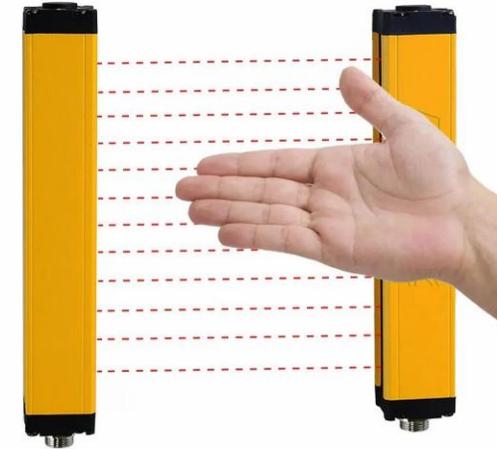
Guards

- Fixed
- Interlocked
- Adjustable
- Self-Adjusting



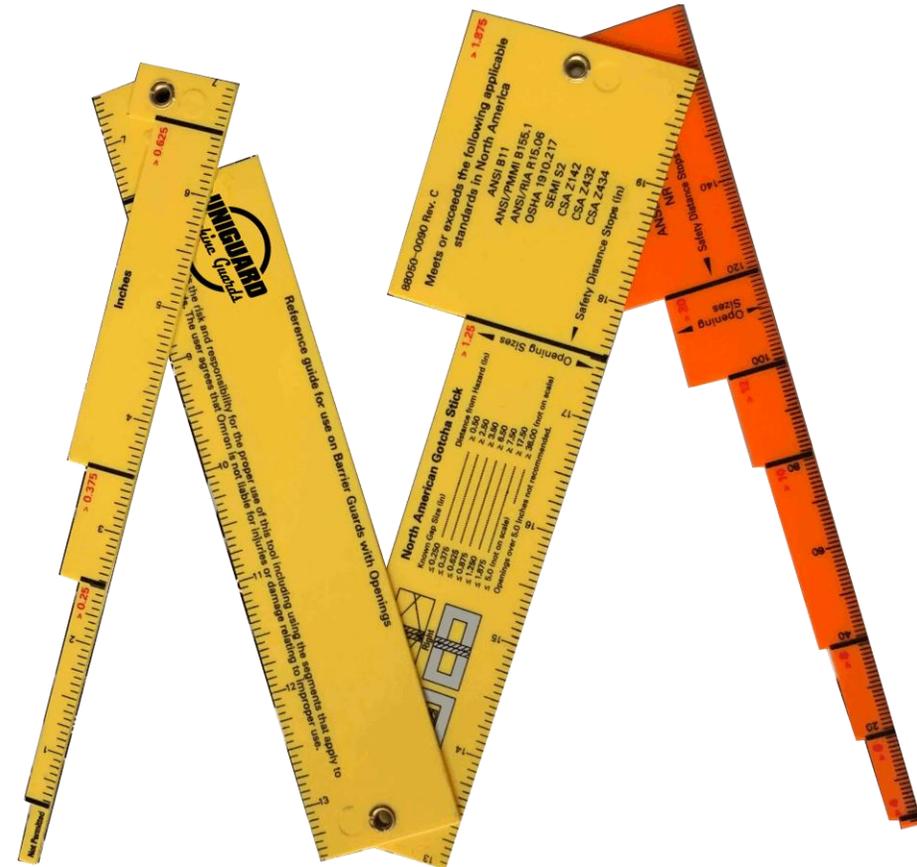
Devices

- Presence Sensing
- Restraint
- Two-Hand Control



OSHA O-10 Table

Distance to Point of Operation	Max Width of Opening
0.5-1.5	0.250
1.5-2.5	0.375
2.5-3.5	0.500
3.5-5.5	0.625
5.5-6.5	0.750
6.5-7.5	0.875
7.5-12.5	1.250
12.5-15.5	1.500
15.5-17.5	1.875
17.5-31.5	2.125



Machine Guarding

Is my machine guarding adequate?

AUTO Principle;

Around - Wide enough someone can't reach around it.

Under - Low enough someone can't reach under it.

Through - Openings are small enough someone can't reach through it.

Over - Tall enough someone can't reach or climb over it.

Thank You!



Share your feedback

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Please don't hesitate to reach out.

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