

3 - What Is Lockout/Tagout: Safety Training

EH&S – MGA

Goals: This safety session should teach you to:

- A. Know the hazards of unexpected equipment energization.
- B. Understand that lockout/tagout prevents injuries.

OSHA Regulations: 29 CFR 1910.147

1. Powered Machines and Equipment Are Dangerous If They Start Up Unexpectedly

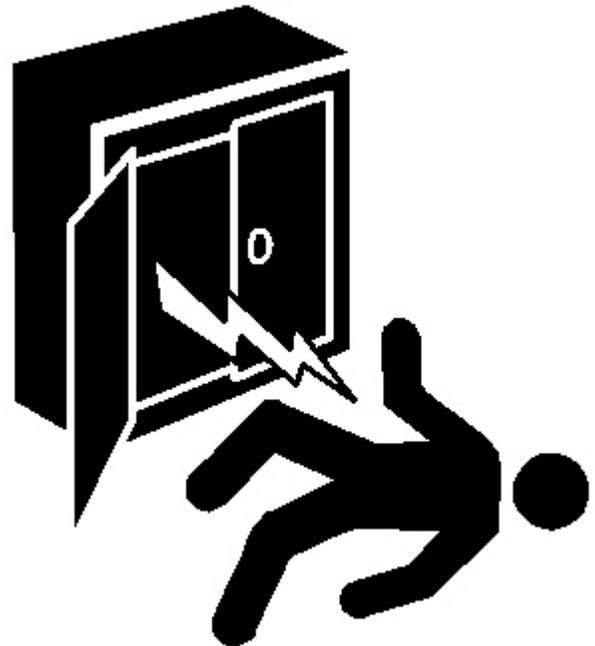
- A. The electrical, mechanical, hydraulic, or pneumatic energy that powers equipment or the energy stored in springs, steam, or pressurized air or liquids can be dangerous. Working on equipment you believe has been shut off can cause serious injury if there's an unexpected:
 - 1. Restart of power
 - 2. Release of energy stored in springs, steam, or pressurized air or liquid
 - 3. Movement of parts
- B. Unexpected energization could cut, hit, crush, or even kill a person who's working on the machine to perform tasks like:
 - 1. Repairs or maintenance
 - 2. Cleaning
 - 3. Checking mechanical or operational problems

2. Take Action to Prevent Accidental Energization

- A. Before working on powered equipment, you must:
 - 1. Turn it off, and lock out the power
 - 2. Release, drain, and lock out any stored energy

3. Lockout Prevents Accidental Energization

- A. A lock is placed on the machine's energy control switch, circuit breaker, etc.
- B. The lock locks the device in an "off" position so it can't be started up accidentally.



4. OSHA Sets Standards for Lockout/Tagout Locks and Tags

- A. These locks and tags must be:
 - 1. Used only for lockout/tagout
 - 2. Durable enough for the job's length and conditions (e.g., temperature, humidity)
 - 3. Standardized so all facility lockout/tagout locks and tags are the same color, shape, and size
 - 4. Strong enough to be removed only by heavy force or tools like bolt cutters
 - 5. Identified with the name of the employee who installs and removes it
- B. Tags must also be:
- C. Legible, even if they get dirty or damp
- D. Attached by hand with nylon cable ties or other self-locking means that:
 - 1. Can't be reused
 - 2. Need at least 50 pounds of strength to remove

5. You Need Special Training and Authorization to Perform Lockout/Tagout

- A. Lockout/tagout is performed only by authorized employees who are trained to:
 - 1. Recognize hazardous energy sources and their type and amount of energy
 - 2. Isolate and control energy to prevent accidents
 - 3. Perform OSHA's specific, required lockout/tagout steps
- B. Affected employees work with powered equipment but aren't authorized to apply or remove locks and tags. They must know:
 - 1. Why lockout/tagout is important and how it works
 - 2. The requirement to lock/tag out equipment before performing repairs or service
 - 3. The importance of not trying to remove or work around locks or tags
- C. Other employees aren't involved with lockout/tagout, but should still understand:
 - 1. Lockout/tagout's basic procedures
 - 2. The importance of not trying to restart locked or tagged equipment

6. Review: The six-step procedure required for controlling hazardous energy:

- A. Step 1: Prepare for shutdown (Electrical, hydraulic, etc)
- B. Step 2: Shut down the equipment (Switch "off")
- C. Step 3: Isolate the equipment (Close valves, throw main disconnects, throw circuit breakers)
- D. Step 4: Apply lockout/tagout devices
- E. Step 5: Control stored energy (Release residual energy)
- F. Step 6: Verify isolation of energy (Test by switching "on" – return to off, ie. Make sure the equipment will not run before you begin your repair.)

Summation: Lockout/Tagout Is a Valuable Protection Against Serious Injury

Be sure authorized employees have performed lockout/tagout before repairing or servicing powered equipment. And never remove or tamper with locks and tags!