

Lockout/Tag-out

Machinery or equipment that starts up unexpectedly or releases stored energy while someone is performing maintenance or repairs can cause serious injury. Lockout/tag-out procedures prevent these types of accidents from happening. Although only authorized employees are permitted to perform lockout procedures and to remove locks and tags, all employees need to understand lockout and tag-out procedures.

What Is Lockout?

- Lockout means putting a lock on a machine or piece of equipment to make sure it stays off.
- Electrical, mechanical, chemical, thermal, hydraulic, pneumatic, raised-weight, pressurized and coiled-spring systems must be neutralized for safety during maintenance and repairs.
- A lockout device is a lock, block or chain that keeps a switch, valve or lever in the “off” position.
- Lockout locks must meet special requirements and must be identified by the name of the worker who installs and removes them.
- Only use locks provided by your employer for lockout purposes.
- Never use these locks for toolboxes, storage sheds or other uses.

What is Tag-out?

- When equipment can't be locked out, it must be tagged out with a special tag that warns workers not to start up the equipment.
- A tag is not a physical restraint. But instead tags clearly state: “Do not operate or remove this tag.”
- Tags must be placed on each handle, push button, lever or circuit breaker used to energize the equipment.
- Tags must meet special requirements and show the identity of the authorized employee.
- Both locks and tags must be strong enough to prevent unauthorized removal and to withstand various environmental conditions.

There are specific steps to follow before implementing the lockout system and then specific steps on restarting equipment after maintenance work has been completed. You must be properly trained on these procedures before using the lockout/tag-out system.

LOCKOUT/TAGOUT

Lockout / Tagout procedures are designed to isolate or shut off machines and equipment from their power sources before employees perform any servicing or maintenance work.

Definition:

Lockout is the placement of a lockout device on an energy isolation apparatus (circuit breaker, slide gate, line valve, disconnect switch, etc.) to ensure that the energy isolating device and equipment being controlled cannot be operated until the lockout device is removed. A lockout device utilizes a positive means such as a lock (key or combination type) to hold an energy isolating device in a safe position and prevent the energization of a machine or equipment. The lockout device must be substantial enough to prevent removal without use of excessive force or unusual techniques.

Tagout is the placement of a tagout device (a tag or other prominent warning device and a means of attachment) on an energy isolation device to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Energy-isolating device

Any mechanical device that physically prevents the transmission or release of energy. These include, but are not limited to, manually operated electrical circuit breakers, disconnected switches, line valves and blocks.

Employees performing maintenance or service on machines or equipment shall observe the following procedures:

- Lockout / Tagout of energy isolating devices shall be performed whenever maintenance or servicing is done on machines or equipment. This shall be done by employees who have received proper training on lockout/tagout procedures from Environmental Health and Safety.
- Employees observing a machine or piece of equipment which is locked or tagged out shall not attempt to start, energize or use that machine or equipment.
- Lockout and Tagout devices shall indicate the identity of the employee who attached the devices.
- Lockout and Tagout devices shall be standardized within the facility.
- If an energy isolating device is not capable of being locked out, a tagout system shall be used.
- Tagout devices shall include warning statements such as "DO NOT ENERGIZE!" or "DO NOT OPERATE!"
- Whenever replacement, major repair, renovation or modification of equipment is performed, energy isolating devices for such machines or equipment shall be designed to accept a lockout device.

Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.

Sources for More Information:

- OSHA 29 CFR 1910.147, 1910.212 and 1919.219.
- ANSI Z244.1-1992, Personal Protection Lockout / Tagout of Energy Sources.
- American National Standards Institute (ANSI)
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