

Lock Out/Tag Out (LOTO) The Control of Hazardous Energy

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Risk Related Activities

Objectives

- Identify sources of hazardous energy.
- Describe the three different types of employees recognized in a LO/TO program.
- Distinguish a lockout from a tagout.
- Recognize exceptions to lockout and tagout requirements.

Control of Energy

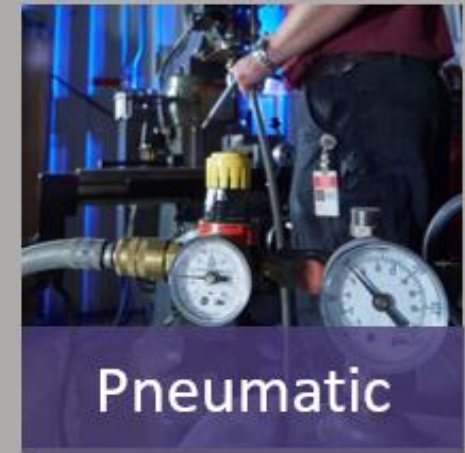
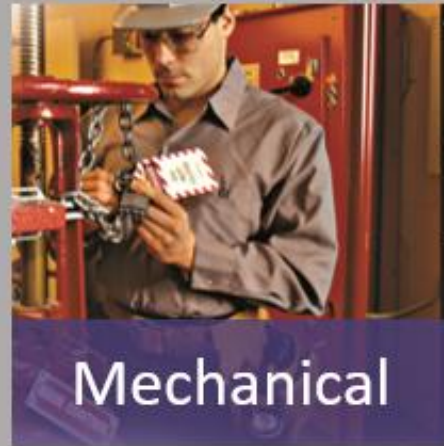
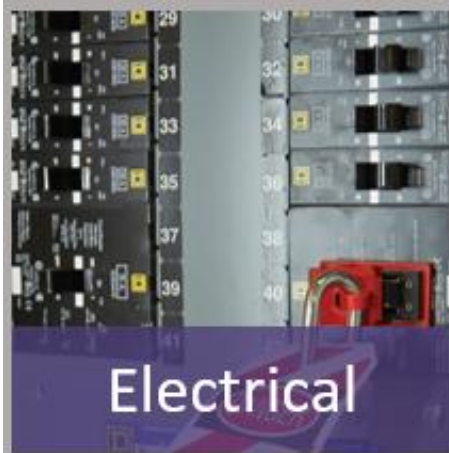
- The concept of LO/TO is centered around mitigating the unexpected activation of an energy source that could cause harm to a person.
- This includes controlling an energy source or sources associated with a piece of equipment, or the unexpected start of the piece of equipment while maintenance is being performed.

Hazardous Energy

- Hazardous energy is the **unexpected** startup or release of stored energy that could injure someone.



Hazardous Energy Types



Unexpected Startup

- The piece of equipment may turn on before the employee is ready, causing harm.
- Removing or bypassing machine guards or other safety devices can cause this.
- Examples include not unplugging an electrically powered device, or not depressurizing a tank.



How Injuries Happen

- Injuries can happen when there is a failure to control energy sources.



Different Levels of Employee

- There are three different levels of employees within a Lockout/Tagout program:
 - Authorized Employees
 - Affected Employees
 - Other Employees

Authorized Employees

- Responsible for initiating the lockout/tagout process.
- These employees physically apply the lock/tag.
- Example: Facilities employees.



Authorized Employees

- An authorized employee is the **only** employee who may either apply or remove a lockout/tagout device.
- All LO/TO devices must clearly identify the name of the authorized employee who applied the device.



Affected Employees

- Normally operate a piece of equipment that is currently in LO/TO status.
- Normally work in the area where the LO/TO is being performed.
- Affected employees should **NEVER** touch or remove a LO/TO device.

Other Employees

- Those individuals who may have access to an area but usually work away from where the LO/TO is being performed.
- Still falls under the same as affected employees: other employees should **NEVER** touch or remove a LO/TO device.

Lockout: Definition

- The process of physically placing a lock on all energy-isolating device(s) for a piece of equipment to ensure that it cannot be operated.



Lockout Exception: Tagout

- When an energy-isolating device **cannot** be physically locked out, it must be tagged out.



Tagout: Definition

- Placing a special tag on an energy isolating device to indicate the device must stay in the “Off” or “Safe” position until the tag is removed by the authorized person who applied it.



When to Use LO/TO

- Anytime anything is being done to a piece of equipment besides normal operation:

Adjusting

Calibrating

Changing

Cleaning

Clearing

Constructing

Inspecting

Installing

Lubricating

Maintaining

Modifying

Repairing

Setting Up

Servicing

Troubleshooting

Unjamming

Lock Requirements

- Exclusive – Must be used for LO/TO purposes only.
- Standardized – Standard and easily identifiable by either color, shape or size.
- Durable – Locks must be able to withstand environment they're exposed to.
- Substantial – Must be substantial enough to prevent removal without the use of excessive force (such as bolt cutters).
- Identifiable – Must clearly identify the name of the authorized employee who applied the lock.

Lockout with a Tag

- Lockout is always preferred to tagout because it provides a greater level of safety.
- A durable tag with the name of the authorized employee is sometimes hung **in addition to** a lock.



When to Use Tagout Procedure

- A lock cannot be applied;

OR

- The District can demonstrate that tagout or other protective measures are just as effective as lockout.

When to Use Tagout Procedure

- If you are an affected or other employee, **NEVER** remove or ignore a tag.



Tag Requirements:

- Durable
- Legible
- Understandable
- Clearly marked with authorized employee's name.
- Clear warning statement.
- Securely attached.



LO/TO Exceptions

- Cord & Plug
- Temporary Testing & Positioning
- Minor Servicing

Cord & Plug Exception

- Electrical energy source can be completely controlled by unplugging the power cord.
- Applies to portable power tools and equipment in a fixed location.
- One person must have exclusive control over the plug.



Temporary Testing Exception

- LO/TO can be removed for testing and repositioning purposes only. During all other service work, LO/TO shall still be followed.
- Six steps must be followed:
 - Remove all tools and materials from the area.
 - Clear the area of all other employees.
 - Remove the LO/TO device(s).
 - Energize the machine and proceed with testing or repositioning.
 - Turn off all systems.
 - Resume all LO/TO measures before continuing to work on the machine.

Minor Servicing Exception

- Servicing must be routine, repetitive and integral.
- Employees must be effectively protected.
- Energizing must be under exclusive control of the person performing the minor service work.



Questions?