



Control of Hazardous Energy (Lockout/Tagout) Fact Sheet

Why is controlling hazardous energy important?

Employees servicing or maintaining machines or equipment may be exposed to serious physical harm or death if hazardous energy is not properly controlled. Hazardous energy sources include, but are not limited to: electrical, mechanical, hydraulic, pneumatic, chemical, and thermal. Craft workers, machine operators, and laborers are among the 3 million workers who service equipment and face the greatest risk. Compliance with the lockout/tagout standard prevents an estimated 120 fatalities and 50,000 injuries each year. Workers injured on the job from exposure to hazardous energy lose an average of 24 workdays for recuperation.

What must employers do to protect employees?

The employer must establish procedures to control hazardous energy sources and provide training to each employee who will use the procedures in the workplace.

What do employees need to know?

Employees need to be trained to ensure that they know, understand and follow the applicable provisions of the hazardous energy control procedures. The training must cover at least three areas: aspects of the employer's energy control program; elements of the energy control procedure relevant to the employee's duties or assignment; and the various requirements of the standards related to lockout/tagout.

What are the OSH standards for controlling hazardous energy (lockout/tagout)?

The following are OSH standards adopted for lockout/tagout:

- **29 CFR 1910.147** – for general industry

This standard establishes requirements that employers must follow when employees are exposed to hazardous energy while servicing and maintaining equipment and machinery. Some of the most critical requirements from these standards are outlined below:

- Develop, implement and enforce an energy control program.
- Use lockout devices for equipment that can be locked out. Tagout devices may be used in lieu of lockout devices only if the tagout program provides employee protection equivalent to that provided through a lockout program.
- Ensure that new or overhauled equipment is capable of being locked out.
- Develop, implement and enforce an effective tagout program if machines or equipment are not capable of being locked out.
- Develop, document, implement and enforce energy control procedures. [See the note to 29 CFR 1910.147(c)(4)(i) for an exception to the documentation requirements.]

- Use only lockout/tagout devices authorized for the particular equipment or machinery and ensure that they are durable, standardized and substantial.
 - Ensure that lockout/tagout devices identify the individual users.
 - Establish a policy that permits only the employee who applied a lockout/tagout device to remove it. [See 29 CFR 1910.147(e)(3) for exception.]
 - Inspect energy control procedures at least annually.
 - Provide effective training as mandated for all employees covered by the standard.
 - Comply with the additional energy control provisions in OSHA standards when machines or equipment must be tested or repositioned, when outside contractors work at the site, in group lockout situations, and during shift or personnel changes.
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- **29 CFR 1910.333** sets forth requirements to protect employees working on electric circuits and equipment.
 - **29 CFR 1926.417** – for construction industry

How can you get more information?

Please review our **Lockout/Tagout Subject Index** ([link to new subject index page](#))