

Control of hazardous energy

The Control of Hazardous Energy, also known as Lockout/Tagout (LO/TO), is an OSHA regulation designed to prevent unexpected equipment startup or release of hazardous energy which could result in employee injuries. The purpose is to develop a set of procedures which, when used properly, will ensure that machinery or equipment is safely de-energized, isolated from energy sources, and cannot be operated during maintenance or servicing. The Occupational Safety and Health Administration (OSHA) implemented the “Control of Hazardous Energy” standard (29 CFR 1910.147) in 1989. Although the standard has saved many lives since its inception, it continues to fall on OSHA’s Top 10 violations coming in at number 6 in 2022.

Major program elements include:

Written Energy Control Program: Employers are required to develop and implement an energy control program that outlines procedures, training, and documentation related to lockout/tagout. The program should establish a clear policy, assign responsibilities, provide employee training, and include periodic inspections.

Identify the Equipment Needing LO/TO Procedures: Audit your facility for equipment needing LO/TO procedures. Facilities may have many types of powered equipment, so be sure you do a thorough audit.

Evaluate and Document Energy Sources: Energy sources come in a variety of forms. Ensure you look at all energy sources, such as electrical, mechanical, hydraulic, pneumatic, chemical or thermal. When performing the energy audit for each piece of machinery, keep an open mind. There may be more than one source of energy. If you are unsure about specific energy sources, find someone within the organization that is knowledgeable, such as maintenance.

Lockout Procedures: The procedure to properly lockout the energy source is important to ensure its effectiveness and prevent accidental re-energization. Procedures may vary from machine to machine but a standard lockout/tagout procedure includes:

- 1) Notify affected employees about the lockout/tagout process.
- 2) Shut down the equipment using normal shutdown procedures.
- 3) Isolate energy sources by deactivating switches, valves, or other controls.
- 4) Apply lockout devices to energy isolation points.
- 5) Verify that all energy sources are effectively locked out and the equipment is inoperative.
- 6) Perform the necessary maintenance or servicing tasks.
- 7) Before re-energizing, remove lockout devices and notify affected employees.

In addition to the locks, tags are used to notify employees that the piece of equipment is under repair or maintenance and should not be started. Tags, alone, do not offer the same level of safety as a lock. They should not be used by themselves as a replacement. Instead, they can be used in addition to the locking device. There are many types of tags available so find the one that is best for your facility.

Employee Training: Employers are responsible for ensuring that employees involved in maintenance or servicing activities receive comprehensive training on lockout/tagout procedures. Training should cover the purpose of the program, hazardous energy sources, proper application of lockout/tagout devices, and the importance of following established procedures.

OSHA defines three groups within the standard that require training.

- 1) Authorized Employees - Is a person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.
- 2) Affected Employees - An employee whose job requires him/her to operate or use a machine or equipment on which servicing, or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
- 3) Other Employees – An employee whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

Periodic Inspections: Finally, periodic inspections must be conducted to ensure ongoing compliance with lockout/tagout procedures. Typically, the Authorized employees need to demonstrate and verify that energy control procedures are being followed correctly. A competent person should perform the periodic inspections and if any deficiencies are witnessed, the employee should be retrained on the program.

Once the program and training are complete, be sure to update your program whenever new equipment is brought in, additions to or changes in energy sources occur or there are new authorized employees. There may be other changes so be sure to keep the policy up-to-date. It is important to comply with the LO/TO standard to comply with the regulations, but more importantly protecting workers from hazardous energy-related incidents.

If you have any further questions or comments about OSHA's Lockout Tagout Standard, please contact Andy Sawan at 330-819-4728 or by email Andrew.sawan@sedgwick.com.