LOCKOUT/ TAGOUT
By Scotty Dunlap

Employees and contractors interact with machinery on a daily basis. Periodically, machines must be shut down in order to perform such activities as routine maintenance, repair, or to clear jams. The Occupational Safety and Health Administration (OSHA) has developed a regulation to address this activity to protect against individuals becoming injured from the unintentional startup of a machine while work is being performed on it. This standard, 29 CFR 1910.147, is commonly referred to as lockout/tagout. “Lockout” refers to placing an actual padlock on energy isolation sources to ensure that they cannot be turned on while work is being performed and “tagout” refers to placing a tag on the energy source that communicates a lockout procedure is underway.

Is lockout/tagout just for maintenance personnel?
It is first necessary to understand the activity that is covered by the lockout/tagout standard so that the people involved in the activity can be properly interpreted as “authorized” to perform lockout/tagout. Lockout/tagout involves activity where service and maintenance activities occur on machinery. OSHA defines “servicing and/or maintenance” in 1910.147(b) as:

“Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.”

Though maintenance personnel are most likely to be engaged in the task of locking out equipment, OSHA’s lockout/tagout regulation applies to any individual who is authorized to perform such activity. These individuals will typically be maintenance personnel who are directly responsible for performing servicing and maintenance activities on machinery. However, it is important to understand that activities such as “cleaning or unjamming” machines are included within the scope of activity that requires lockout/tagout. These activities might be performed by an operator. If so, then lockout/tagout requirements apply to these personnel as well as maintenance personnel.

The lockout/tagout regulation also applies to “affected” employees. This category of employee includes those who can be affected by a piece of equipment being shutdown and locked out. This might include an operator who will not be able to perform his/her job until a machine is cleared of a jam or repaired. In such a case, the operator will be considered as an “affected” employee if they are to have no direct involvement in the work being performed on the machine. The individual will merely understand that a lockout procedure is underway and will not interfere with the operation. This situation is much different from an operator who is “authorized” to use lockout/tagout while clearing a jam.

When is lockout/tagout required?
Lockout/tagout is required whenever someone can be injured by the unintentional startup of a piece of equipment. The regulation opens with the following statements:

“This standard covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy could cause injury to employees. This standard establishes minimum performance requirements for the control of such hazardous energy.”

Activity that might easily come to mind is a maintenance technician who needs to perform work on a piece of equipment. The maintenance technician will perform a number of steps:

• Communication will be made to affected employees that the machine will be shut down for maintenance.
• The maintenance technician will turn off the machine and apply a padlock at the point where energy is controlled, such as the on/off switch. The presence of this padlock will ensure that the machine cannot be unintentionally started while he/she is in contact with the machine. The maintenance technician will then have sole control of the energy, thus preventing personal injury or death due to the machine starting unexpectedly.
• The maintenance technician will release stored energy that might be present, such as in capacitors.
• The maintenance technician will test the machine to ensure that energy to the machine has been properly controlled.
• The maintenance technician will perform the work that is needed.
• The maintenance technician will clear the machine of all tools.
• The maintenance technician will then remove the padlock and start the machine to ensure that it is operating safely.
• The final step will be for the maintenance technician to communicate to affected employees that the machine is now safe to operate.

As mentioned earlier, clearing jams is also an activity that is covered by this regulation. In cases where operators are required to engage in the activity of clearing jams, they must engage in...
a similar process of locking out the piece of equipment prior to clearing the jam:

- Communication will be made to affected employees that the machine will be shut down in order to clear the jam.
- The operator will turn off the machine and apply a padlock at the point where energy is controlled, such as the on/off switch. The presence of this padlock will ensure that the machine cannot be unintentionally started while he/she is in contact with the machine. The operator will then have sole control of the energy, thus preventing personal injury or death due to the machine starting unexpectedly.
- The operator will release stored energy that might be present, such as in capacitors.
- The operator will test the machine to ensure that energy to the machine has been properly controlled.
- The operator will clear the jam.
- The operator will clear the machine of all tools that may have been used to clear the jam.
- The operator will then remove the padlock and start the machine to ensure that it is operating safely.
- The final step will be for the operator to communicate to affected employees that the machine is now safe to operate.

Whether it is a maintenance technician repairing a machine or an operator clearing a jam, the unintentional startup of a machine while one of these individuals is performing work has the potential to cause significant injury or death. It is critical that whenever such work is being performed that the individual performing the work utilize lockout/tagout procedures to ensure that energy has been fully controlled and that no one else can energize the machine.

**What training needs to occur?**

Authorized employees, such as maintenance technicians will require one level of training whereas affected employees, such as wash floor employees will require another. The OSHA regulation delineates training requirements in 1910.147(c)(7). Employees who are authorized to perform lockout, such as maintenance technicians and operators responsible for clearing jams, must be trained in the following topics:

- Recognition of applicable hazardous energy sources
- Type and magnitude of the energy available in the workplace
- Methods and means necessary for energy isolation and control
- Limitations of tags

Affected employees, such as operators who may not be able to use their machine for a period of time due to the lockout/tagout condition, must be trained in the following topics:

- Purpose of the energy control procedure
- Use of the energy control procedure
- Limitations of tags

In addition, “All other employees 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”.

These requirements create the need to train employees based on the category in which they exist. Authorized employees need to be trained in detail, affected employees need to be made aware of why and how lockout/tagout procedures are used, and other employees must be made aware of procedures and prohibitions against the removal of lockout/tagout devices. This training can be understood as “initial training” that is performed when an employee is placed in a role that is impacted by the lockout/tagout program. Ongoing training is also required for authorized and affected employees in the following circumstances according to 1910.147(c)(7)(iii):

- Whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard
- When there is a change in the energy control procedures
- A periodic inspection reveals, or whenever the employer has reason to believe that there are deviations from or inadequacies in the employee’s knowledge or use of the energy control procedures

The training must also be documented. 1910.147(c)(7)(iv) states, “The employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee’s name and dates of training.”

---

What if contracted equipment personnel work on equipment? A component of a comprehensive safety and health management system should include a process to accommodate contractor management. A best management practice is to
ensure that all contractors who do work in your facility have safety programs that address the issues for which you are hiring them to do work. This applies in the area of lockout/tagout. Contractors should meet or exceed safety requirements that are established within your organization. They should be informed of your lockout program requirements and be required to comply with at least what is communicated in your program. In addition to contractor management being a best management practice, OSHA addresses the integration of contractors into lockout/tagout requirements in 1910.147(f)(2)(i-ii):

“Whenever outside servicing personnel are to be engaged in activities covered by the scope and application of this standard, the on-site employer and the outside employer shall inform each other of their respective lockout or tagout procedures. The on-site employer shall ensure that his/her employees understand and comply with the restrictions and prohibitions of the outside employer’s energy control program.”

The goal of this process is to ensure that both the contractor and the on-site employer have open communication regarding lockout/tagout and that procedures are in place to safely address the work that will be performed.

About the author... Dr. Scotty Dunlap earned his Doctorate of Education from the University of Memphis and his MS in Loss Prevention and Safety from Eastern Kentucky University. He is a professional member of the American Society of Safety Engineers (ASSE) and is a board certified safety professional (CSP). He is currently an Assistant Professor in the EKU College of Justice & Safety and teaches at the American Laundry & Linen College.

Additional Resources

- OSHA Lockout/Tagout Regulation
- OSHA Lockout/Tagout Compliance Directive
- OSHA online Lockout/Tagout e-Tool Training
- Lockout/Tagout Program
- National Institute of Occupational Safety and Health (NIOSH) Lockout/Tagout Alert

LINT FREE ZONE

Innovative Products for ALL Laundry Situations

We can turn any type of lint situation...into a trouble free LINT FREE ZONE!

Health Care, Hotels, Co-ops, Commercial & Guest Laundry Situations

Turn this into

DLF-500 Series
Large or Multiple Dryer Situation (shown with rain hat)

OPL Series
No Utilities Necessary!

Lint Sock
EZ to Install & Affordable

Call today for additional information or for your local representative 800-826-1245 or email: ccsystems@tqind.com

Visit us at booth 2964!