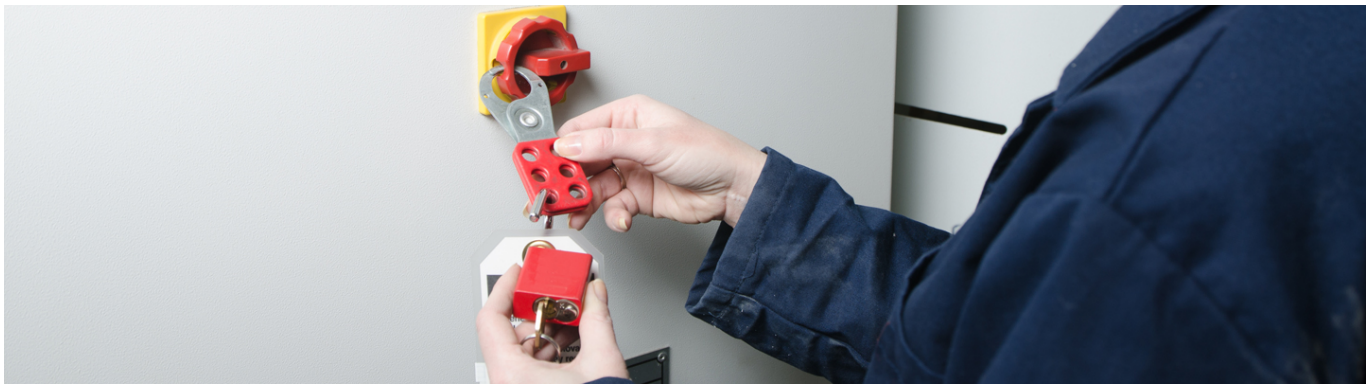

Regulatory Compliance

Preventing Safety Hazards with Effective Lockout/Tagout Programs

Holly B. Martin | Jul 13, 2017

What You Need to Know

Unfortunately, there were nearly 900 amputations on the job in the U.S. in 2016, according to OSHA.
A lockout/tagout initiative should identify all energy sources and place them in a state of "zero energy" before anyone repairs, tests or examines machines and equipment.
OSHA advises companies to create step-by-step processes with specific directions for every piece of equipment and clear use of a padlock.
Remember: Annual auditing must detail that required annual training and all documentation meets lockout/tagout standards, for which rules continuously evolve.
Best practice calls for both document control and for verifying directions work on-site (which means testing).

It's too easy to be hurt when performing maintenance, so regularly evaluate and tweak your lockout/tagout program to keep it current and ensure safety hazards are avoided.

In FY2016, the Occupational Safety and Health Administration received reports of 868 amputations caused by workplace incidents nationwide. Each and every one of these life-altering accidents was preventable in some form or fashion, says Brian Drake, assistant regional administrator for enforcement programs in OSHA Region 7.

The best way to prevent tragedies in the workplace is to follow the OSHA rules for lockout/tagout programs, Drake says. Though not every company needs a LOTO safety program, any employer whose associates service or maintain equipment that could put them in harm's way should develop one, he says.

What Is a Lockout/Tagout Procedure and Why Is it Important?

The key to a lockout/tagout procedure is to determine all possible sources of energy used to operate a piece of equipment and return those sources to a zero energy state—meaning they can no longer move

or be activated—before anyone begins maintenance on the machine.

“Employees going inside a piece of equipment might be exposed to potential hazards from moving belts, pulleys, gears, sprockets, chemicals or hot steam,” Drake says. “They could also be crushed as a result of pneumatic or hydraulic energy, or even gravity.”

For example, a mechanical power press holds a large metal die mounted above the press table. If an associate is working in the area underneath that die and the power is turned on, the press could cycle, leading to a catastrophe.

How to Develop a LOTO Energy Control Program

“Once an employer determines that they have machines that associates must work inside, OSHA requires them to develop a lockout/tagout program to protect their associates,” Drake says.

Employers need to look at each piece of machinery and develop a step-by-step process for returning that machine to a zero energy state, he says. “There should be no possibility of it unintentionally starting up or cycling on while a person is inside.”

Written LOTO safety procedures should include directions for turning off all potentially hazardous energy sources using the appropriate on-off switches, valves, knobs or buttons. Next, employees must isolate equipment from all energy sources by padlocking the source and adding name tags. Each associate entering the equipment should add their own individual lock and tag—making sure they have the only key.

“That way, while the associate is in the machine working, nobody else can come up to it, see that the switch is off and then turn the switch back on,” Drake says. “In this region of OSHA, we’ve had many instances where that has in fact happened.”

> **“Lockout is a human procedure that relies on associates following the right method completely, so it’s important to verify that they fully understand their responsibilities.”**
> Todd Grover
> Master Lock Company, Global Senior Manager for Applied Safety Solutions

Keep Your Safety Policy and Records for Annual OSHA Inspection

“Lockout is a human procedure that relies on associates following the right method completely, so it’s important to verify that they fully understand their responsibilities,” says Todd Grover, global senior manager, applied safety solutions for the ***Master Lock Company***.

To do this, OSHA requires an annual audit of authorized personnel by an observer who will ensure that each associate follows the lockout/tagout procedure correctly, including putting locks in the right places, testing the machine for active energy sources and warning others to stay away from the equipment. This lets authorized personnel know that they will be evaluated for doing the job properly, allows for retraining if needed and emphasizes the importance of proper LOTO, Grover says.

OSHA also requires annual audits of written lockout procedures to identify changes in the machinery that may have rendered any documented procedure obsolete and to ensure regular refreshes of LOTO processes.

Follow These Four Lockout/Tagout Best Practices

Grover recommends adhering to industry ***best practices*** to help ensure a lockout/tagout program prevents harm to associates.

1. Start with a good lockout program.

Best practices start with a compliant lockout program that covers all associates involved, as well as details when and how they will be trained, what they will be taught, and how they will be audited. It also breaks out specific situations, such as transfer of responsibility between shifts, interactions with contractors and emergency removal of a lock.

At the heart of the program are well-written, machine-specific lockout procedures that provide a step-by-step road map of what is required to achieve safe working conditions. A good policy also requires testing to make sure the machine will not operate during lockout, and it gives guidance on how to release the lockout and restore the machine to operation in an occupied area where others could be affected.

2. Make timely updates.

Rather than wait a year between audits, set up a document control policy and manage the change process. When a machine is modified or a new machine comes online, a system should alert floor chiefs to update lockout procedures and train personnel before the machine goes into service.

3. Verify by effective physical application and testing.

Teams or managers who don't work directly with the equipment produce lockout/tagout procedures. Therefore, a company should not approve any LOTO policies until they have cleared physical use and testing.

4. Deploy lockout equipment in lean fashion.

Too often locks and tags are stored separately from where they will be used. The lockout equipment should be treated as a vital part of the manufacturing process, Grover says. Applying lean manufacturing principles requires that all necessary lockout equipment should be easily accessible to workers securing their machinery, eliminating the temptation to do the job unprotected.

When It Comes to Workplace Maintenance Accidents, "Even One Is Too Many"

According to Drake, workplace injuries and fatalities are preventable if employers develop lockout/tagout programs to protect their associates, and then follow and reinforce those programs.

"It's important for employers to be proactive when it comes to safety. If you don't, associates may get lax and not follow policies and procedures," he says. "It only takes less than half a second for something to go wrong and an associate's life is changed forever—and it's too late."

Key Takeaways

- Any company that services or maintains equipment should put a lockout/tagout program together that follows OSHA guidelines and uses industry best practices.
- The importance of well-documented "power off" instructions tailored for each piece of equipment cannot be understated—as well as the use of padlocks, keys and tags (with individuals' names).
- The LOTO safety process is a human one, and so frequent audits and physical testing are a necessary check and balance to help keep associates safe on the job.
- Lean manufacturing principles can be wisely employed in LOTO work—specifically, companies can and should store locks and tags in an easily accessible location for associates close to their equipment.

What are some of the best lockout/tagout program approaches your shop is using right now? Share your experience.