



Training

5 Ways to Improve a Lockout/Tagout Program and Promote Workplace Safety

Julie Sullivan | Jan 11, 2018

What You Need to Know:

Accidents involving improper lockout/tagout processes are particularly deadly—and violations involving the danger consistently make it on OSHA's Top 10 list.

On top of knowing OSHA regulations inside and out, you'll need to tailor your company's procedures and equipment to a lockout/tagout training program that's unique to your business.

If your staff isn't properly trained on lockout/tagout procedures and rules, those efforts will ultimately be futile.

Safety starts from the top. If there are incentives for employees to get the job done quicker and bypass certain LOTO procedures, they are susceptible to danger.

Accidents involving improper lockout/tagout processes are deadly serious—and violations have consistently appeared on OSHA's Top 10 list. Here, we highlight where employers might be going wrong—and how to rectify improper procedures with the right LOTO program.

In **2013**, a lumber company that had repeatedly ignored Occupational Safety and Health Administration citations for safety violations involving improper lockout/tagout programs was continually exposing workers to amputation hazards during maintenance and cleaning duties. That negligence came to a head one day when an employee suffered a partial finger amputation—and another a severe hand injury—when working on machines that hadn't been properly locked out or guarded. The company was cited by OSHA 24 times.

That same year at a Wisconsin cheese factory, an employee lost two fingers when operating an unguarded machine. When OSHA investigated the accident, it found that the injury could have been prevented by a better lockout/tagout program, and that a similar injury had occurred a year before under the same conditions. The company was cited 10 times.

Lockout/tagout violations have consistently appeared on OSHA's Top 10 list, currently ranking at **fifth in 2017** with more than 2,800 documented violations. Accidents involving lockout/tagout account for 10 percent of the total amount of serious accidents in the workplace despite OSHA providing strict lockout safety requirements for businesses to follow. As the guidelines outline, the only viable way of avoiding

injuries stemming from hazardous (or unaccounted for) energy is by implementing an effective lockout/tagout program.

The best way to prevent tragedies in the workplace is to follow the OSHA rules for lockout/tagout programs, *says* Brian Drake, assistant regional administrator for enforcement programs in OSHA Region 7.

“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.”

A successful program is more than a matter of switching the “on” button “off”—it requires a comprehensive assessment of your company’s current procedures. Unlike the new requirements for *fall protection* training, the dangers associated with—and citations stemming from—improper lockout/tagout procedures is not news. OSHA *outlines* very specific practices and procedures to safeguard employees from hazards associated with energy released from seemingly inactive equipment. Here, we outline five ways to boost the effectiveness of your lockout/tagout program and keep your employees and company safe.



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1. Understand Your Specific Lockout/Tagout Program Requirements

Aside from understanding what is required of your business, you’ll also need to identify what exactly is required to build your lockout/tagout program. Does your shop floor contain industrial machines, circuit breakers, plugs, switches, push buttons and valves? As an article from *OH&S* explains, you’ll definitely need lockout devices for all those pieces of equipment.

First, determine exactly what you need, as each workplace is unique. Create a list of all machines or electrical components that may need lockout devices. This will make buying the most appropriate device easier because most lockout devices are designed to meet a specific application. As *OSHA* details, if your employees service machines where unexpected startups, energization or stored energy releases could cause injury, you’ll need to provide proof that you’ve enacted a solid lockout/tagout program. Industries that produce mechanical, electrical, hydraulic, pneumatic, chemical and thermal energy should pay special attention.

Just because your business has purchased the locks, however, doesn’t mean the program is in place. Standardization is key, according to the *OH&S* article, which recommends implementing a “lockout station” to store devices and save space and time. Be sure to coordinate by size and color so workers can identify which locks they need easily.

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2. Understand Your Lockout/Tagout Program's Isolation Points Inside and Out

Although identifying when and where specific locks and tags can be used to visibly show where energy control points are placed within your facility, you should also be considering how isolation points—or areas where machines are completely removed from energy sources—can be enacted. Stuart Grant, a global solutions architect for asset management at DuPont Sustainable Solutions, outlines in an article for *EHS Today*, that the isolation process requires oversight and tremendous care.

"Isolating equipment is a hazardous process in itself. Preparation of the isolation is a process that is best carried out in a planned—not ad hoc or reactive—manner," he explains. "There are some basic principles for safe isolation of a job so that maintenance can be performed."

Grant goes on to outline five distinct questions that safety managers must ask themselves prior to attempting to control the energy process via isolation:

- What type of energy is involved?
- What is the worst that can happen?
- Is the risk of isolation higher than the risk it mitigates?
- Is a "line break" involved? (Or the "intentional opening of a pipe, line or duct that is or has been carrying flammable, corrosive or toxic material, an inert gas, or any fluid at a volume, pressure or temperature capable of causing injury," according to *OSHA*.)
- Will the work be completed in one shift?

"One of the most important mantras is: As far as possible, each person who interacts with the isolated equipment must have his own personal control (usually a lock) on the energy that could harm him," stresses Grant.

3. Standardize Your Lockout/Tagout Training

Color-coding and isolation point emphasis aside, if your staff isn't properly trained on your lockout/tagout procedures, those programs are ultimately rendered futile.

The most critical point to starting a training program for lockout/tagout is to identify who needs to know what, relays *OH&S*. Roles are typically segmented into three categories:

- Authorized employee: Staff directly involved in locking out equipment or machinery
- Affected employee: An individual whose work is affected by a lockout
- Other: An individual who simply works near a machine without interacting with it

Although training will obviously be the most intensive with affected individuals, strong communication among all workers who are near potentially unsafe devices is critical.

Furthermore, you'll need to standardize your training procedures—meaning that apprenticeship can't be your only option for educating new staff (that same logic applies to most all aspects of employee training, but safety with lockout/tagout is especially pertinent), advises *OH&S*. OSHA offers a

lockout/tagout **training program** that businesses can take advantage of, but tailoring training to your facility's unique machinery and requirements is key.

In a final component, keep meticulous documentation throughout your training efforts. What types of training has your facility conducted, and on what levels? Not only will this kind of record-keeping keep your business free from OSHA violations and legal complications, but it can ensure that you are able to identify any major gaps in training and understand how to proceed, finds *OH&S*.

As for frequency, OSHA recommends that a lockout/tagout training session occur at least annually for all employees—but that's the bare minimum. Training should be ongoing throughout the year to ensure total safety.

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Stuart Grant

Global Solutions Architect, Asset Management, DuPont Sustainable Solutions

4. Evaluate Your Internal Lockout/Tagout Procedures

Although well-prepared training programs and a firm understanding of LOTO regulations and procedures are both necessary steps in keeping your staff safe, if your company creates a culture that incentivizes employees to conduct their work fast and furiously (in the hopes of clocking out at 5 o'clock), those steps are ultimately nullified.

Jimi Michalscheck, director of market development for ESC Services, offers this example in an *article* for Safety.BLR.com:

“A work order allows 35 minutes for changing a belt on an exhaust fan, and the maintenance employee feels pressure to stay on schedule. If the employee has the parts and knows how to lock out the fan, 35 minutes may be sufficient. But if the employee approaches the task and realizes he or she does not know the procedure, the temptation might be to bypass lockout altogether rather than conduct the necessary research to do it properly. In a different type of work environment, such as a manufacturing plant, production pressures may be the reason the employee fails to lock or tag out the equipment before performing service or maintenance.”

As long as there are “incentives” for bypassing proper lockout/tagout safety procedures, your workplace will never be completely free from dangers associated with extra energy, emphasizes Michalscheck. Take a long, hard look at your company's culture. Are employees pressured to complete tasks on tight deadlines? And are unnecessary injuries occurring because of that pressure? Safety for your staff should always take precedence.

5. Continue to Evolve the Lockout/Tagout Program

Just as is the case with any aspect to our ever-evolving industry, there is no such thing as keeping with the status quo—which includes your lockout/tagout training programs.

“OSHA may introduce more requirements or more stringent guidelines. It is important to make sure your program is up to date, notes *OH&S*.

Whether it's an updated OSHA or ANSI requirement or simply the addition of new technology onto your

shop floor, solid lockout programs should always be changing, says *OH&S*. Additionally, that evolution should always be communicated clearly and matched with frequent retraining exercises. Above all, the right lockout/tagout program should be tailored to your workplace and its ever-changing needs.

"A program that encourages communication can identify strengths and weaknesses much more efficiently than a program that remains static and unchanging after initial training," writes Eric Prinzing of *OH&S*.

Does your shop implement a lockout/tagout program for workers? How do you ensure it is effective and protects employees? We want to know.

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