

BEYOND THE PRODUCTS: 5-STEPS TO AN EFFECTIVE LOCKOUT PROGRAM



You have safety padlocks, lockout tags, and circuit breaker, electrical and valve lockout devices. You even installed a few wall-mounted, department-specific lockout stations in your facility. So you should be ready for an OSHA lockout/tagout inspection, right? And your employees should understand your program and how to put it into practice?

Hold that thought and consider this. Within OSHA-recorded equipment lockout violations in 2013, proper lockout/tagout device application was a distant fifth on the list of most cited. In fact, each of the top four sections was cited from three to six times more often than proper lockout/tagout device application. The order of most frequently cited sections of OSHA's Control of Hazardous Energy (Lockout/Tagout) Regulation in 2013 is:

1. Failure to develop, document or utilize equipment ENERGY CONTROL PROCEDURES
2. Failure to conduct PERIODIC INSPECTIONS of the energy control procedures
3. Failure to establish and implement a written PROGRAM
4. Failure to provide TRAINING as described by OSHA
5. Failure to apply LOCKOUT DEVICES



That's not to say that lockout products aren't important, as they certainly are. It does, however, speak to the fact that lockout compliance is first and foremost about having a sound program and machine-specific procedures in place, along with comprehensive training and effective communications for your employees.

Among all OSHA sections, lockout/tagout is a major focus. In fact, it remains the fifth most cited violation of the more than 200 standards written for general industry, even after twenty-five years in effect. But rather than focus on the negative aspects of non-compliance and citations, you should focus on implementing a comprehensive and thoroughly-followed lockout program. This will add value by:

- SAVING LIVES – preventing an estimated 250,000 incidents, 50,000 injuries and 120 fatalities annually
- CUTTING COSTS – significantly decreasing lost employee time and insurance costs
- IMPROVING PRODUCTIVITY – reducing equipment downtime
- IMPLEMENTING BEST PRACTICES – leading techniques being widely adopted across industries and industrialized countries

5-Steps to a Best Practice Lockout Program

In order to be in compliance with OSHA and bring your facility to best practice standards, use this 5-Step Plan to establish an effective energy control program. Doing so will help your organization reach its compliance goals, elevate your level of workplace safety and put you on the road to the greater benefits noted above.

The 5 Steps to a Best Practice Lockout Program include:

- STEP 1: Develop and document your equipment energy control policy/program
- STEP 2: Create and post written, visual equipment-specific lockout procedures
- STEP 3: Identify and mark all energy isolation points
- STEP 4: Train your employees, communicate and conduct periodic inspections
- STEP 5: Equip your employees with the proper lockout tools and warning devices

Step 1: Develop Energy Control Policy/Program

Synopsis of Regulatory Standard:

29 CFR 1910.147 (c)(1) The employer is to establish an energy control policy/program. That summary program is to address energy control procedures, employee training and periodic inspections, all of which help to ensure that the machines or equipment are properly isolated from their energy sources, and rendered inoperative prior to any servicing or maintenance.

Successful Program Development:

A written lockout document is the skeleton of your overall lockout program – It establishes the “nuts and bolts.” When looking for help with successful program development, OSHA provides a Lockout/Tagout Tutorial on its OSHA.gov website that has information on developing an energy control policy/program. Brady also offers a downloadable Control of Hazardous Energy Program template that can serve as a guide as you develop your own comprehensive energy control program.

After you’ve completed this summary, you can continue with what is possibly the most important step for your workers: writing equipment-specific procedures.

Step 2: Written, Equipment-Specific Lockout Procedures

Synopsis of Regulatory Standard:

29 CFR 1910.147 (c)(1) The employer is to establish an energy control policy/program. That summary program is to address energy control procedures, employee training and periodic inspections, all of which help to ensure that the machines or equipment are properly isolated from their energy sources, and rendered inoperative prior to any servicing or maintenance.

Successful Program & Procedure Development:

Lockout procedures must be formally documented and must identify the equipment covered. The procedures should detail the specific steps necessary for shutting down, isolating, blocking and securing equipment to control hazardous energy. Steps for the placement, removal and transfer of lockout/tagout devices should also be included. Visual lockout procedures, which include photos of the energy isolation points, have become recognized as a best practice, as they provide clear, visually-intuitive instructions for employees to follow. When employees can easily understand your lockout procedures, they are more likely to utilize the procedures for safe machine lockout.

Food for thought: An average size, general manufacturing facility will have several hundred pieces of equipment – each of which requires a specific lockout procedure. The equipment list will generally include boilers, chillers, generators, conveyors, automated and production equipment, pumps, compressors and more.



Because of the importance of this step, the expertise necessary to complete the process and the time-consuming nature of procedure creation, many companies trust their written procedure development to outside experts. These experts can evaluate the facility’s operating and production equipment and effectively develop accurate lockout procedures for your facilities.

For example, Brady's Lockout/Tagout Procedure Writing Service is a comprehensive service where Brady's highly experienced field engineers begin by evaluating equipment energy sources. From there, they develop the necessary equipment-specific procedures using a visually instructive format, install energy source tags and procedures on equipment and work with facility stakeholders to help them understand the procedures and how to maintain them in-house.

For additional sustainability, Brady also offers its LINK360® cloud-based software. This software allows users to most effectively create and manage equipment-specific procedures, using a clear and easy-to-follow visual format.

Step 3: Identify Energy Control Points

Synopsis of Standard:

29 CFR 1910.303 (e) and (f) Subpart: Electrical. All disconnecting means must show the magnitude and shall be legibly marked to indicate the purpose, with exceptions. ANSI Z244.1-2003, Control of Hazardous Energy, states that all energy isolating devices should be adequately labeled or marked unless they are located so that their purpose is clearly evident. Identification shall include the machine supplied and the energy type and magnitude.

Related Incident & OSHA Citation:

OSHA cited a manufacturer for failing to protect workers from electrical hazards that contributed to the death of a worker. The employee was working on electrical equipment that had not been properly labeled and disconnected. OSHA issued a willful citation for failing to properly label electrical equipment and a serious citation for failing to have adequate procedures in place to render machinery inoperable while maintenance and repair work were performed.

Successful Training, Communication & Inspections:

Locate and mark all energy control (isolation) points, including valves, switches, breakers and plugs, with permanently placed labels or tags. Cross reference each label and tag with the corresponding step number in the posted energy control procedure for that equipment. Include information about the magnitude and purpose of the control point as stipulated by OSHA for electrical disconnects and recommended by ANSI for all isolating devices. Brady offers a complete line of labels and tags for various energy sources being disconnected. For greatest convenience, Brady's portable and industrial label makers will produce custom labels, and also link to the LINK360® software procedure output.



Step 4: Training, Communication & Inspections

Synopsis of Standard:

29 CFR 1910.147 (c)(7) The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees ... (iv) The employer shall certify that the employee training has been accomplished and is being kept up to date.

29 CFR 1910.147 (c)(6) The employer shall conduct a periodic inspection of the energy control procedure at least annually.

Related Incident & OSHA Citation:

OSHA conducted an investigation following the death of a fleet mechanic who was pinned between two trucks while performing maintenance on one of the vehicles at the company's worksite. "This was a preventable tragedy" stated the director of OSHA's area office. OSHA issued one willful violation for alleged failure to implement and train employees on a lockout/tagout program to be used when performing vehicle maintenance.

Successful Training, Communication & Inspections:

First, establish formal training programs for each of the three categories of employees for lockout, including "Authorized," "Affected" and "Other" employees. OSHA provides advice on how to train and verify that the training is up-to-date. To align with this need, Brady offers safety training and seminar services for both Authorized and Affected employee groups, and creates custom lockout training programs. Other communication products, including USB-based training movies, DVDs, handbooks and posters, are available as well.



Step 5: Provide Proper Protective Products

Synopsis of Standard:

29 CFR 1910.147 (c)(5) Lockout devices must be provided by the employer, be standardized by size, shape or color, be distinguishable from locks used for other purposes, identify the individual who applied the lock, be durable, be strong enough to prevent removal except by using excessive force and remain under the exclusive control of the individual who attached them.

29 CFR 1910.147 (c)(5)(iii) Tagout devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: Do Not Start ... Do Not Operate.

Related OSHA Citation:

OSHA opened an investigation after receiving notification that an employee was crushed while servicing a hydraulic press that had been disabled, but not protected against accidental energizing by locking out potentially hazardous energy sources. OSHA issued four willful and fifteen serious citations, alleging in part, that the company failed to control potentially hazardous energy during machine repair or maintenance and was deficient in having personal identification of lockout devices.

Equip Your Employees with the Proper Lockout Tools & Warning Devices:

Ultimately, it's the proper and consistent application of the lockout hardware per the established procedures that makes for a successful lockout program. To this end, it's very important to know and document which devices are acceptable for use at each and every lockout point. There is a tremendous range of sizes and shapes when it comes to valve operating handles, circuit breaker switches and various other energy control means. A leading lockout device provider will have a product series that properly fits the majority of these, with some versatile products that fit a broader range of the spectrum. Brady takes it a step further by publishing a [Circuit Breaker Lockout Reference Guide](#), along with other fit-advisory information.



Improving Lockout/Tagout with On-Site Audits

Along with our five recommended steps to creating an effective lockout program, you can continue to elevate your lockout program with additional services, such as on-site audits.

On-site audits bring a safety professional to your facility to evaluate your lockout program and compliance with safety organizations like OSHA. They utilize a continuous improvement approach to ensure areas of audit scope are covered in-depth and the necessary issues are addressed. In fact, comprehensive audits will ideally go above and beyond compliance to also create a visually instructive workplace. This will help to optimize overall safety and productivity. To align with this, Brady offers a Visual Workplace Audit Service that can address lockout and other compliance and efficiency risks as prioritized with the customer.

In Conclusion:

Best practice lockout programs extend beyond the products and take into account the employees, facility and machine-specific requirements. This article reminds us that it's not just about the products and it's not just about avoiding a fine. Establishing and maintaining a comprehensive lockout/tagout program that is understood and embraced by your employees will improve productivity and worker morale, cut costs and, above all, potentially avert an incident or employee injury.

This program should include 5 steps:

- STEP 1: Develop and document your equipment energy control policy/program
- STEP 2: Create and post written, visual equipment-specific lockout procedures
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Brady's Background with Lockout/Tagout

Brady is the global leader in providing lockout/tagout solutions. It was first to respond to the OSHA legislation in 1990 and has maintained its position as the leading lockout solutions provider ever since. Today, Brady provides the broadest, most comprehensive product range for lockout, including OSHA-compliant locks, tags and lockout devices to cover almost every application, as well as services such as lockout procedure writing services, visual workplace audits and safety training, and our LINK360® program management software.

