

Four Components of
OSHA 1910.147
Lockout Compliance



What if an OSHA inspector knocked on your door today?

Is your lockout program tried, tested and watertight with all documentation in order? Would your facility pass a safety audit right now—avoiding any and all penalties? If not, or you're not certain, this guide can help you mitigate risk, save time, save money and provide you with clear guidance for creating a successful lockout management strategy within your organization.

Lockout/tagout (LOTO) rules and requirements for North American facilities and equipment are frequently misunderstood and often violated. Few regulations can be as costly if you get them wrong. What's more, the potential risks are serious for those organizations who play outside the lines. Workers injured from exposure to hazardous energy lose an average of 24 workdays a year for recovery and recuperation. In fact, failure to control hazardous energy today accounts for 10% of the serious accidents in most industries.

Streamline, simplify and succeed in meeting OSHA lockout requirements

When it comes to lockout and OSHA compliance, which approach is best? Where do you start—and how do you maximize efficiency and ensure no requirement is overlooked or safety protocol missed?

The following four components, based on requirements in the OSHA standard, will bring clarity and help you navigate the journey to a successful lockout management strategy for your organization.

# 1 Policy and Program	3-7
• Understand critical inclusions for your OSHA lockout policy and program.	
# 2 Equipment Specific Procedures	7-9
• Establish and roll out clear instructions for the control of hazardous energy.	
# 3 Training	10-11
• Strengthen your training protocols to ensure companywide knowledge, motivation and adherence to the your lockout program.	
# 4 Inspections, Audits and Reviews	12
• Ensure you are prepared and OSHA-ready all year long through a series of safety checks and reviews.	

#1 Policy and Program

Essential elements to include in your LOTO strategy

Do you currently have a site-specific lockout program that aligns with a steady-fast policy for your organization? Do you fear you could be missing something or could benefit from a few best practices to ensure you are safe and fully in compliant with OSHA? There are several critical inclusions organizations often miss that we recommend you incorporate within your policy and/or program.

Policy or program? Defining the difference.

Some organizations are not sure how to differentiate their policy from their program. Are they one and the same thing—and do you really need both? Here is a helpful definition:



The OSHA inspection:

Could you be next?

8 million workplaces are under the jurisdiction of either OSHA or its state/province plans. An average of 73,000 inspections are conducted each year... most with little or no advance notice to management.



Lockout policy: Provides an auditing standard or benchmark

Your policy should be your overall auditing standard to guide the practices of each individual site. It should govern the elements of your lockout management system with which your individual sites need to comply.

Lockout program: Identifies lockout activities mandatory within your facility

Your program outlines a site-specific lockout activity (or series of activities) required within your facility. It should identify equipment, training, procedures, accountability and also the actions needed to comply with your overall lockout policy.

Critical Inclusions to your LOTO program

Your LOTO program is a multifaceted plan to address the many hazards workers face during maintenance and servicing activities in order to avoid risk. A well-designed LOTO program not only ensures OSHA compliance, but mitigates risks, and safeguards your organization against worker injuries—and even deaths.

Most lockout programs generally copy and paste 1910.147 as their lockout policy. This includes general procedures for lockout, defining authorized, affected, and other employees, shutdown and re-start of equipment protocol, and general training requirements. There are a few critical components to include in your LOTO program that organizations often fall short or overlook:

LOTO roles and responsibilities

In order to enforce standards and ensure accountability, your lockout program should clearly define roles and responsibilities of program administrators, managers, supervisors, authorized workers and affected employees.

LOTO program administrator

Assigning an overall administrator entrusted to oversee your lockout policy or program is an important first step. With an administrator at the helm, you'll be better able to implement the standard that you have set and enforce the rules and regulations with which your facility needs to abide.

In addition to assigning an LOTO administrator, other roles and responsibilities should be clearly listed.

Your program should specify who will be responsible for:

- Training (is this one person or multiple people?)
- Auditing and periodic inspections
- Enforcement of LOTO program rules and regulations—with stop work authority within your facility when problems arise
- Documentation, review and updating of your LOTO program guide and policies

Working with contractors

Commonly, independent contractors are tasked with certain machine maintenance responsibilities.

Without proper training on both your equipment and your safety procedures, they could present an additional risk for your organization. For this reason, it is essential to include in your program a set of clear protocols for how independent contractors will work to ensure security and compliance.

Outline mandatory steps for approving, training and monitoring contractors working at your facility in your program, including clear protocols to:

- Select, onboard and work safely with contractors
- Ensure contractor adherence to your (agreed upon) safety policies and procedures
- Verify adequate training and equipment experience, in writing
- Obtain signed working agreements before work commences
- Provide easy access to all lockout procedures, safety padlocks and lockout devices

Providing contractors with your safety program and policy is not enough. Nor is posting it at the site. It is essential that all parties agree on safe work practices prior to commencement of the job. A best practice approach would be to include an auditing program of contractors on site. This demonstrates and establishes the host sites' commitment to safe work practices for outside personnel, and adds a layer of accountability to your lockout program.

OSHA-ready facilities will provide contractors with clear guidelines to set them up for success and avert danger when they're isolating hazardous energy on a piece of equipment.

Exceptions to lockout

If you're like most organizations, you do allow some exceptions to lockout within your facility. Do you allow tagout? Do you allow single source equipment/cord and plug exceptions to lockout? If so, you need to document this within your program and policy.

Protocols around tagout

38% of organizations allow tagout, but it is seldom implemented, discussed, nor are the rules clearly communicated to workers. Be sure you include specifics of the required additional protocols around tagout in your facility within your program and policy documents.

When tagout is not an option

Tagout (specifically, the act of placing prominent warning tags on energy isolating sources as opposed to locking out) can only be implemented in certain scenarios, with care, proper worker identification and explicit warnings.

Where an energy isolating device is designed with a hasp or other parts to which the lock can be attached (or has a locking mechanism built into it) you must apply lockout. If, however, the device does not readily accommodate a lock or lockout device—or requires dismantling or rebuilding to be locked out—then tagout is usually an acceptable strategy. In these scenarios, however, additional measures must be implemented to protect the authorized employee.

An additional safety protocol is required with tagout

While all equipment made after 1990 requires lockable isolation devices built into the system, equipment made before 1990 often does not. When working with equipment that functions without lockable isolation devices,

tagout or a tags-plus system is a viable option. When using tagout, however, you must also include at least one additional safety measure to isolate hazardous energy or prevent someone from turning it on. Without this additional protection, you would be not be compliant with the OSHA regulation around tagout.

Additional safety measures you can use in tagout include:

- Removing a ball valve handle on the device
- Opening an extra disconnect device
- Having a multiple tags-plus system (including a paper trail and permissions)

Importance of adhering to machine-guarding standard

If you're allowing a minor servicing or maintenance exception and relying on control power to complete the task at hand, be certain you have protocols in place to uphold the OSHA machine-guarding standard.

Reliance on control power (including light curtains, interlocks, pressure sensing devices) is allowed as long as you have a safety process to ensure that no hazardous energy will be unexpectedly released, compromising worker safety. The task being done must also fall under OSHA's minor servicing exception. All tasks that are other than "minor" must be done under full isolation lockout. This is achieved through a comprehensive hazard assessment that documents the minor servicing or maintenance task to ensure the control power used will adequately protect the worker. If the task goes beyond minor servicing, or the hazard assessment demonstrates the potential for the release of hazardous energy, lockout is required.

Clearly document your shift change or transfer lock process

A final item we recommend within your lockout program is the shift change or the transfer lock process. It is essential to clearly document how your organization handles shift changes. Be sure to plainly outline in your program the coordinated exchange protocol between one shift to another that you have in place at your facility. Ideally, this is through a transfer lock system or continuity device (that maintains the zero-energy state on a piece of equipment from one shift to another). This standard stipulates that another lockout tagout continuity device be applied prior to the time an employee removes his device at the end of a shift.

This transfer lock or continuity device ensures safe operation for the next shift. When the new worker comes on, it provides a clear signal that it is safe to proceed. In short, it's an instantly recognizable protocol through which your organization can ensure the safe exchange of continuity between one shift and the next. This whole process needs to be outlined in your documentation.

Abandoned lock removal process

A documented process is also required for situations where safety locks need to be removed by someone other than the authorized worker who applied the lock. There are times when locked out equipment must be turned on, and the individual that applied the lock is verified to no longer be at the facility. Clear communication stating you took that lock off and that the machine is no longer safe must be provided.

#2 Equipment Specific Lockout Procedures

Efficiently manage all the elements of your lockout program

Equipment specific lockout procedures come in a wide range of acceptable formats and templates. Many safety directors, however, are unsure about what to include and which procedures are necessary requirements for OSHA compliance.

The best place to begin is with the intended purpose for your lockout procedures. This should include:

- a) Safety: to provide a validated set of instructions for creating a safe working environment at your facility
- b) Visual reference: to provide a visual reference for authorized employees to enable them to easily follow equipment lockout instructions and identify the energy isolation points
- c) Compliance: ensuring compliance with OSHA 1910.147
- d) Grouping lockout procedures: creating one procedure for multiple pieces of equipment that are the same in their construction, installation, magnitude of energy, make and model. Some other criteria for grouping include a) limiting the number of pieces of equipment that are grouped, [usually 3-5] b) locating the equipment in the same area, and c) limiting the lockout procedure to 2-4 steps. Complex pieces of equipment should not be included in a grouped methodology

Once you have your intended purpose, the steps you should include become more evident.

Here are a few essential requirements for OSHA compliance:

- a) Intended purpose/scope: A clear scope will allow you to hold others accountable and ensure they employ the correct procedures. Be specific regarding the applicable equipment types and the processes you require.

b) Shut down steps that your procedures must address:

- Location of energy isolation point
- Instructions to shut down the lockout point
- How to release residual energy
- How to apply the energy isolating (lockout) device
- What lockout device will be used for the given energy isolation point

c) Residual energy (single energy source): Detail how and by what method you will dissipate residual energy.

d) Magnitude of energy: all information critical to identification of the hazardous energy the authorized employee will isolate must be provided.

e) Pictures of isolation points: not required but used as a best practice for authorized employees to identify the isolation device.

f) Verification of isolation: After going through the lockout procedure, how will the authorized employee verify that the piece of equipment has achieved that zero-energy state?

Establish unique identification of hazardous energy isolation points

When it comes to the identification and labeling of hazardous energy and the isolation points, a specific and serialized approach is best. Best practices dictate you individually serialize each isolation point, specifically identifying each ball valve and disconnect with its own alpha-numeric code. For example, your list would include P1002 and P1003, each unique in the facility, rather than utilizing a more generic and sometimes confusing P1, E1 methodology that is repeated on other equipment.

Sectional and task-based lockout procedures: hazard analysis is critical

In completing certain tasks, sometimes challenges arise: maybe a worker can't lockout the entire machine or losing total power might deny critical components of a piece of equipment to function, such as a PLC. An efficiency you can employ in these scenarios is a sectional and task-based lockout procedure. But be advised: these procedures will always require a hazard analysis in order to ensure safety and OSHA compliance. Be sure you document your hazard analysis and how you will be ensuring that no other hazardous energy could potentially injure any authorized employee during the task.

When implementing a sectional and task-based procedure you must also rely on compliant energy isolating devices, such as:

- Breakers
- Valves
- Disconnects

“ *Lockout/tagout ranks consistently in the Top 10 OSHA Violations*
For the last 5 years, lockout/tagout has consistently ranked among OSHA's top ten most cited workplace safety violations. **”**

Importance of equipment deployment: define and detail the type, quantity and placement of safety padlocks and lockout devices

Looking to increase safety, efficiency and OSHA compliance in your processes?

We recommend you also conduct an assessment to determine:

- Color and type of locks
- Color scheme assigned to different trade groups
- Lockout device types (ball valve, cable, group)
- Lockout device quantities needed for each department
- Location of lockout equipment throughout your facility

Be sure all your assessment findings are clearly documented in your lockout program

Use the 15-second rule in your lockout equipment deployment strategy

It's been observed that if an authorized employee has to walk more than 15-seconds to get their lockout equipment they may think twice about physically locking out that piece of equipment before commencing servicing or maintenance. Strategically placing lockout equipment throughout your facility will not only increase the likelihood of authorized employees locking equipment out when required; it decreases the time that an authorized employee uses to locate the locks and devices needed, creating efficient lockout practices.

For this reason, a 15-second rule for equipment deployment is a highly recommended addition to your program and policy.

#3 Training

Empower your personnel to maintain a safer working environment

Regular training is a very important component of your lockout strategy. A good policy and program should outline the various ways you approach training that will inform and equip your employees to move forward in a safe working environment.

Tiered training

Within your lockout management system, most individuals in your organization have specific roles and responsibilities. These roles should be broken down clearly and groupings made to expedite your training programs:

Management

- Requires training to understand OSHA 1910.147 in order to support and instill best practices with their supervisors and reports

Supervisors/floor leads

- Require training to understand their responsibilities within the lockout program such as: observations of lockout in their area, when lockout audits are due, and ensuring new and modified equipment isn't put into service before a lockout procedure is written.
- Good candidates to train as lockout leaders

Authorized personnel

- Require training to understand their responsibilities within the lockout program such as: observations of lockout in their area, when lockout audits are due, and how to ensure new and modified equipment isn't put into service before a lockout procedure is written.
- If knowledge and experience dictate, are great candidates to be trained as lockout leaders

“ Did you know?
In addition to tens of thousands of dollars in potential fines, there are other indirect costs such as higher insurance rates, impact on public relations, and additional time spent on additional lockout activities related to abating the OSHA citation.

”



Affected and other personnel

- Require training to understand their role within the lockout program; that is, not to participate in a lockout unless they have been trained to do so at the authorized level.

From an instructor standpoint, there are four key areas to focus on for the success with your teams. They are: 1) establishing rapport, 2) reinforcement and review, 3) assigning lockout leaders, 4) creative training methods.

Establishing rapport

Through building good rapport with trainees, you will be in a better position to empower and motivate them to learn, follow the rules more precisely and uphold established safety standards.

Trainers can establish good rapport by:

- Spending time on the floor with workers
- Engaging within a lockout procedure by participating with the authorized employees during an actual lockout

Training reinforcement and review

Reinforcement of the training you conduct, or the message delivered, can be either positive or negative. Use positive reinforcement to drive home new skills you are teaching and negative reinforcement to help eradicate bad behaviors and poor safety practices.

Assigning lockout leaders

One tactic is the designation of lockout leaders throughout your facility. Once trained, these individuals would be on the floor to reinforce knowledge and correct behaviors by doing some hands-on training with your employees. Lockout leaders should be trained to operate as the eyes, ears and auditors of your lockout program. They are not enforcers or disciplinarians, but overseers, serving to reinforce knowledge, demonstrate hands-on practices, and answer lockout questions on a section or a piece of equipment within their designated area.

Creative training methods

Instead of showing the same video or PowerPoint each year, we recommend that you take a more dynamic, interactive approach to training, one that will better engage and motivate your workers.

Consider these creative lockout training ideas:

- Articles: Distribute and discuss current articles, industry-leading periodicals or interesting papers that cover different approaches to lockout, including case studies and best practices
- Trade shows: Send key individuals to state and local safety trade shows to attend breakout sessions on lockout/tagout
- Webinars: Either arrange authorized personnel to attend a LOTO safety webinar or create one of your own using your LOTO experts

#4 Inspections, Audits and Reviews

Practice safe and productive lockout on a regular basis

Are internal audits and reviews necessary? The answer is yes. The long-term benefits more than make up for the costs. Proper annual reviews and inspections will allow you to achieve OSHA preparedness, safety buy-in with your workers and, most importantly, safety incident reduction throughout your sites.

Here are some tips and guidelines for more efficient inspection/audit/review practices:

“

Did you know?

Workplace OSHA 300 and 300A injury and illness documentation should be up to date, going back 5 years.

”



- Equipment used less frequently still needs to be inspected annually
- A desktop review of your safety procedures can be done on equipment not used and not locked out over last year or more
- Group together similar machines (same make, model and type) to streamline your inspection/review process
- Inspect a representative number of employees, implementing one procedure within each equipment group
- Deploy lockout leaders (in each department within your facility) as observers and auditors, responsible for overseeing your successful lockout in spection. Lockout leaders can implement an audit and inspection process in real time as opposed to a scheduled inspection
- Include your periodic inspection form with your lockout paperwork or lock out permitting system (if applicable)
- Incorporate a complete lockout program review within your annual training

Reviews, inspections and audits are important dress rehearsals to an OSHA inspection. Conduct them properly and they will help ensure you maintain a safe, compliant and efficiently run facility. What's more, they also serve to keep everyone in your organization, from management to authorized and affected employees, informed, prepared, protected—and fully accountable for their actions within your lockout program.

Master Lock: A Leader in Lockout Tagout

As a global leader in Lockout Program and Procedure Development, Master Lock Professional Lockout Services has the expert guidance and industry-leading experience to help you meet your safety goals.

Questions? Or looking for further assistance with your LOTO strategy?

Contact us today at 800-604-9258 to develop a custom lockout solution for your organization.