



Facility Safety

How to Master the Rules for Lockout/Tagout

Don Sears | Jun 13, 2019

The language used in the OSHA lockout/tagout standard can be hard to decipher. The things you need to include in your written lockout/tagout program can be extensive. What if there were resources that could help? Learn about the compliance directive and the minor services exception. Also, gather a few smart tips for documenting your program—and get guidance on periodic inspections from independent auditors and industry insiders.

The lockout/tagout standard (*CFR 1910.147*) is consistently among the Occupational Safety and Health Administration's **Top 10** most frequently cited violations—usually right in the middle of violations at No. 5.

In part, it is because a lot of the information regulators look for to be in compliance isn't in the regulation itself. It's also because of the difficulty of managing a program across an entire department or maintenance staff—whether shift or contract teams—say environmental, health and safety consultants and auditors.

At the American Society of Safety Professionals conference, "Safety 2019," experts weighed in on ways to remove some of the complexity in managing lockout/tagout by isolating what to look out for in the standard and where to spend your energy in practice.



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Use the Information a Lockout/Tagout Auditor Uses: Compliance Directives and ANSI Z244.1

There is a lot to know about lockout/tagout when it comes to preventing injuries—and racking up violations and fines from OSHA. Luckily, there are some additional ways to get more detailed information than the standard itself.

One is publicly available and one is not. Care to guess which one?

ANSI is always under copyright protection, so OSHA's compliance directive or "CPL" (*CPL 02-00-147*) is easier to access, though it's no easier to interpret, explains Debby Shewitz in her ASSP presentation

“Lockout/Tagout: What You Won't Find in the Standard.”

The level of information in compliance directives is more detailed than the standard—and gives auditors more direction for interpretation of areas including authorized employees beyond your standard maintenance teams.

“The CPL definition talks about some circumstances where somebody who may not be doing all of the maintenance work could still be considered an authorized employee for doing just little portions [of work],” says Shewitz, owner of Shewitz Consulting and an environmental and safety expert with 28 years of field experience. “So that's the piece you never pick up just from the standard itself. An even more obvious difference is the definition for control reliability. The standard does not mention it at all.”

The CPL does have a definition for control reliability, which is a method of evaluating the integrity of formats, cards, device and other control systems. Control reliability is a very big topic for those working with advanced machinery, including robotics and electronic technology, Shewitz explains.

And when it comes to ANSI Z244.1, there are additional standards related to hazardous energy that are “very useful resources” including the B11 series which is a “whole series of standards about machine tool safety,” and **B11.19** which is the *machine guarding* standard.

What are the latest innovations in machine guarding? Read “Machine Guarding: What’s Changed in Industry 4.0 – Smart Factory.”

What Are ‘Periodic Inspections’ for Lockout/Tagout?

Perhaps one of the reasons that there are so many violations for lockout/tagout is that safety managers are confused about many of the common terms and their required actions.

Here’s a good example: What does OSHA mean when it says “periodic inspection?” Just like the term “normal production” in the minor service exception rule, this term causes some confusion.

“We think of inspection as looking at something, you know, walking around during inspection or inspecting a piece of equipment and that's not at all what they have in mind for periodic inspections,” says Barbara Jo Ruble, president of **Speciality Technical Consultants**, an EHS firm, and an independent auditor.

“The standard says conduct periodic inspections on the energy control procedure at least annually to ensure that it's meeting requirements, that it's by one authorized employee other than who's using the control energy procedure and review the employee's responsibilities.”

Yet again, the standard isn't as clear as it could be—so safety managers can turn to the compliance directive (**CPL 02-00-147**) for help. The CPL says that what OSHA is looking for is a demonstration of the procedure while being performed during servicing and maintenance.

“So this inspection process isn't a paperwork exercise. It's not a training exercise. It's not a make-work exercise. It's intended for the inspection to occur during service and maintenance,” says Ruble. “And it also says in the directive that each energy control procedure must be separately inspected.”

Who does the periodic inspection? Each authorized employee.

"They have to be observed. The inspection has to be done by a different authorized employee who is doing the lockout/tagout," Ruble explains. "So there is no self-inspection. You need at least two people."

"After any major injury for lockout/tagout, OSHA is likely to come in to your facility and want to see your energy control procedures, training records of those involved—and see when was the last time you had any periodic inspection," says John Robinson of Brady Corporation. "Periodic inspections have been by far the biggest gap most companies do not have."

The good news: You can use an authorized third party, consultant or trainer as an inspector if they are trained and qualified, per OSHA.

"One of the things that the CPL directive says is that you can group procedures for the purposes of the inspection," says Ruble. "And you could have a singular group procedure if you meet certain criteria."

The benefit of grouping is to be able to consolidate inspection for the same or similar equipment, as long as you are following the criteria.

That criteria include:

- A scope statement in the procedure that lists all the equipment—and it has to be written.
- The steps for shutting down, isolating, blocking, securing and dissipating the energy have to be the same or similar.
- You must have the same procedures for placement and removal of lockout/tagout devices.
- You must have the same basic process for testing that the lockout procedure has been effective.

What Is the 'Minor Servicing Exception' and What Does it Mean for Lockout/Tagout?

To best understand exceptions, it means fully comprehending the parameters of the standard for which the exception was created. The standard says a minor servicing exception applies to the "servicing and maintenance of machines and equipment in which the unexpected energization or startup on machines or equipment or release of stored energy could cause injury to employees."

The terms "service and maintenance" are actually defined in the CPL with some very specific examples, which include: constructing, installing, setting up, adjusting, inspecting, modifying, maintaining, and servicing machines and equipment, Shewitz explains.

"So there are two key things to whether an activity is covered by the lockout/tagout standard," says Shewitz. "Energy exposure: Are employees exposed to hazardous energy that could cause injury while they're doing the task?"

The other key item to understand from OSHA is what it means by "normal production."

The compliance directive takes the applicability statement and turns it around a little bit: The standard says this applies to service and maintenance where there is an exposure to hazardous energy.

The CPL says “it *doesn't* apply to service and maintenance where there is *no exposure* to hazardous energy. And it gives a list of some things that can be used to make sure the new employee does not get exposed,” says Shewitz.

“You want to be a little careful about not having a narrow thought process about ‘production’ as just being out on the manufacturing floor making a product,” she says.

Really what OSHA is talking about is using equipment and machinery for its intended use—so it’s more about normal operation than normal “production.”

“So if you're using machines or equipment to perform its intended function that is *not* covered by the lockout/tagout standard, even if there are hazards that an employee might be exposed to while that equipment is running, even energy hazards,” Shewitz explains.

In this exception, the lockout/tagout standard is *not* what you use to protect them. “You go primarily to subpart O on machine guarding, and do something to guard the equipment so that employees can’t get exposed to whatever that hazard is, and therefore normal production is typically just not subject to lockout/tagout at all.”

The Importance of Documenting Lockout/Tagout Processes

What are the challenges in documenting a written lockout/tagout program? In part, it’s about understanding the level of detail that needs to be captured in a written policy.

“How do you handle lockout situations when you have either a mix of internal maintenance teams or you have outside contractors coming in: Who's going to issue them locks? It has to be spelled out and that's not always thought of,” says Tom Smith, a regional product manager for lockout/tagout and printing systems at **Brady Corp.**

There are other situations where you have maintenance teams on first shift who don't complete the task on that first shift. Then, the second shift maintenance teams arrive.

How do you maintain that continuity of lockout? Do the first shift teams take their locks off? Do the second shift teams put their locks on? What if the first shift team leaves before the second shift starts? These need to be spelled out.

There is also the nuance of managing a key system in a standardized way. Companies often do not spell out a standardized approach of how they're going to have keys set up. By department? By individual trades?

“Say that you want a supervisor or a facility manager to have a master key system or a ‘grandmaster’ key system,” says Smith. “This also needs to be spelled out in the written document.”

Another area of nuance: Documenting the details for managing abandoned locks.

“We often see companies miss that they need to include an appendix in their written program and include all the required documentation for abandoned locks,” says John Robinson, a lockout/tagout solutions owner at **Brady**.

How has your plant handled minor service exceptions and periodic inspections? Do you have a better sense of it now?

