Safety

Your Guide to OSHA Lockout/Tagout Rules: Preventing Deadly Accidents

James Langford | Dec 12, 2024

The consequences of violating the government's lockout/tagout rules for manufacturers and machine shops can be harsh: fines, lost productivity and costly health insurance claims.

For workers, the situation is even more dire: Exposure to uncontrolled energy that lockout/tagout policies are meant to prevent is often debilitating and even deadly.

Despite the grim repercussions, the number of citations for violating the rules in U.S. Occupational Safety and Health Administration ***Standard 1910.147*** climbed again during the 2024 fiscal year, which runs from Oct. 1 through Sept. 30, reaching at least 2,676.

That marks a 5 percent increase from the previous year, underscoring the importance of constant vigilance. The system requires "action by people to be effective," an article in the American Society of Safety Professionals monthly journal, ***Professional Safety***, explains.

"For that reason, lockout is subject to human error," the article says. "Consider, for example, a machine that requires seven points of lockout. Despite proper training and the use of machine-specific procedures, the fact remains that a person may inadvertently fail to lock out one of the points, thus presenting a risk of injury."

High-Tech LOTO

That's a factor OSHA considered ***when it began gathering information*** five years ago about whether its lockout/tagout policy should be updated to include control-circuit devices and robotics, though the agency has yet to issue a draft regulation, a key step in the federal rulemaking process.

While lockout/tagout systems and technology are constantly improving, some of the biggest obstacles to digitizing such procedures in machine shops are the same ones you contend with using your smartphone in everyday life. Connectivity, for instance.

MSC offers Lockout/Tagout safety services. Click here to connect with an industrial safety consultant and learn more.

In manufacturing facilities, it's easy for wireless signals to get lost in sometimes cavernous workspaces, be dampened by thick masonry walls or disrupted by interference from high-powered ***CNC cutting tools*** and other equipment.

Because digital LOTO systems may not be a good fit for every manufacturing location, equipment supplier ***Master Lock*** offers other digital safety products and services such as its subscription-based ***eLOTO software***.

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The software, which includes an online database of lockout/tagout procedures as well as two mobile apps—one for policy writers and one for inspectors—helps customers run safety audits and keep logs of physical lockouts.

Designers solved the problem of internet connectivity gaps by building the apps to work offline if necessary, so that collected data including photos may be uploaded later.

Preventing Injuries and Fatalities

Until OSHA develops procedures for further integration of digital capabilities with LOTO procedures, however, manufacturers, machine shops and other employers must comply with the agency's existing rules for installing lockout/tagout devices to prevent accidental startup or operation of equipment during maintenance.

Doing so protects workers from electrical, mechanical, hydraulic, pneumatic, chemical, thermal and other potentially hazardous energies, the agency says.

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"Craft workers, machine operators and laborers are among the 3 million workers who service equipment and face the greatest risk," OSHA explains. "Compliance with the lockout/tagout standard prevents an estimated 120 fatalities and 50,000 injuries each year."

While lockout and tagout sound virtually interchangeable, there's a significant difference between the two, according to ***Safety Culture***, a technology firm that helps businesses improve operational safety. A lockout device stops operation of a piece of equipment, while a tagout device informs workers that it shouldn't be used.

Employers' Lockout/Tagout Responsibilities

Among the most ***important components of OSHA's lockout/tagout rule***, the agency says, are requirements to:

- Establish and enforce an energy-control program and procedures.
- Use lockout devices for equipment that can be locked out. Tagout devices may be used instead only if they provide protection equivalent to a lockout.
- Make sure new or overhauled equipment can be locked out.
- Use only lockout/tagout devices authorized for particular pieces of equipment or machinery and ensure they're durable, standardized and substantial.
- Set a policy that permits only the worker who applied a lockout/tagout device to remove it.

- Inspect energy control procedures at least once a year.
- Provide effective training for all workers covered by the OSHA standard.
- Comply with OSHA's additional energy-control requirements for situations when machines must be tested or repositioned, outside contractors work at a site, group lockouts are required and shift and personnel changes occur.

Overall, OSHA's lockout/tagout rule ranked fifth among the standards for which the agency issued the most citations in the year ending in September 2024. According to an analysis by the ***National Safety Council***, individual requirements violated most often were:

- **Developing, documenting and enforcing energy control procedures:** 738 violations.
- **Communicating LOTO procedures to workers and training them in compliance:** 477 violations.
- **Periodic inspection to correct any deviations**: 377 violations.

Overall, OSHA charged ***$21.6 million*** in penalties for violating the lockout/tagout rule, with 83 percent imposed on manufacturing companies.

For businesses trying to improve lockout/tagout systems, ***Master Lock*** has identified five areas to consider:

- **Lockout policy:** It's the all-important starting point that puts in place essential elements of your program and is required by OSHA. ***Policies*** should include identification of hazardous energy types in a workplace, who is responsible for using lockout/tagout devices to isolate the energy, who's responsible for training and who will write specific procedures.
- **Lockout procedures:** These are specific steps that an authorized person can follow to correctly shut down a piece of equipment so that it can be safely repaired or maintained. Procedures should include scopes and purposes and should address issues such as potential for residual energy and how to verify that energy has been cut off.
- **Lockout training:** Communication of company procedures and expectations should be thorough and consistent. Training should target: authorized employees (who perform lockouts); affected employees (who work in lockout areas but aren't involved with locking out machinery or maintaining it); contractors and other employees.
- **Auditing and review:** At least once a year, energy control procedures should be examined and each employee's responsibilities under those procedures reviewed.
- **Equipment strategy:** Companies should make sure that proper locks and lockout devices are available and authorized employees have what they need to succeed. There's no one-size-fits-all strategy; it will vary depending on the function and size of operations.

What parts of your lockout/tagout system need improvement? Tell us in the comments below.

