AGRI TRUST OF GEORGIA

Safety Alert

If you operate machinery, hopefully you know what LOTO is. LOTO is a safety procedure for **Lockout/Tagout**, which prevents dangerous equipment from accidentally being turned on during maintenance or repair. It involves isolating all energy sources, physically locking the equipment in an "off" position, and attaching a warning tag that identifies the worker and the reason for the lockout. This process protects workers from hazards like unexpected startups, stored energy, and other dangers that could lead to serious injury or death. LOTO is a standard practice that all businesses operating machinery should have. But if it is so standard, then why are there so many accidents involving failure to use LOTO? This month's Safety Alert helps shed some light on what the root cause might be.

The Human Factor: Why Proper Lockout Tagout Procedures Still Fail

Herbert Post June 24, 2025

On June 22, 2023, a worker at a rubber hose manufacturing plant suffered severe crushing injuries when powered belts that were still energized and unguarded pulled him into a machine. OSHA later determined that the company had failed to follow lockout/tagout (LOTO) procedures, ultimately proposing more than $389,000 in penalties. This incident, unfortunately, is not news when it comes to lockout/tagout violations as it consistently ranks among OSHA's top 10 most frequently cited standards each year.

Most facilities cited for LOTO violations would claim to have the right equipment, procedures and safety protocols in place, so why do we still get alarming numbers of LOTO-related accidents? The answer may lie in the human factors that are behind every safety procedure.

Why LOTO Is Important for Industrial Safety?

Basically, a lockout/tagout procedure, when implemented 100% of the time, is designed to prevent the unexpected startup or release of stored energy in machinery. OSHA's standard for The Control of Hazardous Energy (Lockout/Tagout) (29 CFR 1910.147) outlines the specific actions employers must take: isolate all potential energy sources, apply the correct locks and tags, and verify that the machinery truly can't be re-energized before any maintenance or servicing begins.

Why are these standards in place? It is because uncontrolled energy can pose fatal risks. As OSHA points out, a "jammed conveyor system" can suddenly release, or an "automatically turned-on steam valve" can burn unsuspecting workers in seconds.

This makes the lockout / tagout procedure a critical, life-saving practice that should be integrated into the culture of every industrial facility. Employers who fail to prioritize LOTO compliance risk more than getting hefty OSHA fines; they also risk the health and lives of their workers.

Why Proper LOTO Procedures Still Fail?

While it's clear how essential lockout/tagout is to industrial safety, the reality is that even well-designed LOTO procedures can fail because of several human factors.

1. Inadequate Training

Employees who are not properly trained may lack awareness of lockout/tagout procedures or misunderstand their importance. OSHA frequently cites inadequate training as a leading cause of LOTO violations, including failing to establish or communicate an energy control procedure and neglecting to conduct periodic evaluations.

Even when management invests in lockout/tagout devices and written policies, gaps in training create a disconnect between policy and practice. When employees either do not understand or undervalue the significance of LOTO, they are more likely to take shortcuts and ignore established procedures. Without thorough instruction and regular reinforcement of safe practices, workers may view LOTO as a cumbersome compliance checkbox rather than a life-saving protocol.

2. Productivity Demands

When production quotas and deadlines pressure workers, lockout/tagout procedures can be viewed as inconvenient, time-consuming steps that hinder operations.

Such was the case of a fatality at a furniture facility, where workers left power on during a minor maintenance task to minimize downtime, rather than performing a full lockout. In this case, the rollers on a laminator line continued to turn to prevent the glue from hardening, but boards were often left on the conveyor "a large majority of the time" to reduce stoppage. Workers bypassed a crucial step meant to disengage the system, and an employee was fatally injured as a result.

Safety experts point out that employees under high production pressures are more likely to bypass proper lockout procedures, not because they are negligent, but because of competing motivations to maintain productivity. When employees sense that production goals override safety considerations, they may rationalize taking risks to avoid slowing the line. Risks such as bypassing an interlock or a guard with the mentality that "this will only take a second" sometimes have grave consequences.

3. Complacency

Routine familiarity with machinery or systems can build overconfidence, leading to complacency. Workers who have serviced the same equipment for months, or even years, may feel like they know every inch of the process, making them more inclined to overlook or dismiss crucial safety steps.

Complacency is one of the major human factors contributing to LOTO failures. When employees believe a task is "quick" or "minor," they may decide that a lock or tag is unnecessary, assuming no harm will come from saving a few extra minutes. Over time, these habits can spread throughout the workforce. Even if no incident occurs the first few times, the false sense of security can grow stronger. Ultimately, it only takes one misstep to trigger a serious accident.

How Can You Build a Strong LOTO Safety Culture?

Just as human factors can cause a well-designed lockout/tagout (LOTO) program to fail, they can also be used to create a safer environment. Here are strategies on how you can build a stronger LOTO safety culture.

1. Start a Safety Culture from the Top

When managers and executives make it clear that safety is nonnegotiable, employees are far less likely to take shortcuts. Leading by example means actively participating in LOTO procedures, verifying equipment isolation alongside frontline workers, and consistently praising teams for following protocols, even if it slows production.

In the furniture facility incident cited earlier, an alternative lockout method was used to keep adhesive rollers powered to avoid downtime. This practice allowed production to continue but tragically led to a worker's death when steps were skipped. A leadership-driven safety culture could have changed that outcome by openly acknowledging the importance of proper LOTO even if it meant halting the line. We all know a fatal incident means much more downtime than a LOTO procedure implemented properly.

For instance, if top management had established a clear policy that workers would not be penalized for stopping production to lock out and tag out equipment, employees would feel empowered to follow all safety steps without fear of losing time or facing disciplinary measures. This leadership approach would show that a brief pause in production is always preferable to risking a worker's life.

2. Empower Employees

When employees are encouraged to take ownership of their own and others' safety, they become active participants rather than passive observers. This begins with creating an environment where workers feel free to raise concerns, suggest improvements, and report near-misses without fear of reprimand or retaliation.

Recognizing and rewarding safe behaviors such as properly tagging out equipment or suggesting a brief production halt for a thorough lockout can also further encourage a culture where safety is a shared responsibility.

In the furniture facility incident, employees reportedly kept boards on a conveyor to save downtime, even though it compromised safety. Empowering employees could have given workers the confidence to speak up immediately about the risky practice and to stop the line without fearing backlash for lost production.

3. Invest in Continuous Improvement

Effective lockout/tagout training progresses on ongoing instruction, frequent refreshers, and practical, hands-on drills. Emerging technologies such as IoT-connected lockout devices or smart sensors that monitor machine status in real-time are beginning to reshape the future of LOTO compliance. Companies that proactively integrate these tools through continuous training can detect unsafe conditions before human error occurs with mechanical risk.

Consider a facility that previously struggled with high LOTO violations, driven partly by a lack of thorough employee training. Rather than relying on an annual “check-the-box” training session, the company can adopt continuous improvement initiatives. These may include quarterly virtual reality-based drills where authorized and affected employees practice identifying hazardous energy sources and properly applying locks and tags.

Proper LOTO Procedure Is Not Enough

Both the furniture facility tragedy, where production demands led to unsafe alternative lockout practices, and the severe crushing injuries suffered by a worker at a rubber hose manufacturing plant share a critical truth: No matter how comprehensive a lockout/program may appear, it will ultimately fail if the culture behind it does not value safety above convenience or speed.

Looking ahead, what we need is a holistic approach that blends technical LOTO procedures with a strong safety culture. Managers must lead by example and conduct audits that examine the effectiveness of the program, employees must feel empowered to speak up, and ongoing training should establish how serious LOTO protocols are. When each individual understands and takes responsibility for preventing the unexpected release of hazardous energy, lockout/tagout becomes a genuine safety solution.

So, does your workplace culture truly align with the principles of LOTO safety, or are you just checking boxes for compliance?

Post, Herbert. “The Human Factor: Why Proper Lockout Tagout Procedures Still Fail.” *EHS Today*, www.ehstoday.com/safety/article/55297407/the-human-factor-why-proper-lockout-tagout-procedures-still-fail?o_eid=1692A2149045H8V&oly_enc_id=1692A2149045H8V&rdx.ident%5Bpull%5D=omeda%7C1692A2149045H8V&utm_campaign=CPS251120033&utm_medium=email&utm_source=OZ%2BEHS%2BToday%2BDaily%2BUpdate. Accessed 5 Dec. 2025.

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