Lockout-Tagout Awareness Toolbox Talk

WHAT'S AT STAKE?

Lockout/Tagout (LOTO) is a safety procedure used to ensure proper shut-off and prevent the inability to start up machines prior to completion of maintenance or repair work. It is a necessary part of working in industrial settings. These practices are required to protect everyone who works with and around potentially dangerous equipment. For that reason, it is important that training takes place for employees authorized to carry out LOTO procedures as well as employees who will be affected by the use of these practices.

WHAT'S THE DANGER?

Lockout/Tagout (LOTO) is the number one most-cited regulation by OSHA in manufacturing. Further, LOTO ranks among the top 10 for all industries. Almost 95 percent of citations involve improper training for LOTO. Workers injured due to improper LOTO procedures results in 24 days away from work on average.

About 3 million workers in the U.S. are employed to repair or service equipment and machinery. OSHA reports that the number of Lockout/Tagout (LOTO) deaths each year ranges from 150 to 200 people. Additionally, each year about 60,000 LOTO accidents occur. To prevent these accidents from happening, follow planned LOTO procedures.

Lockout Devices hold energy-isolation devices in a safe or "off" position. They provide protection by preventing machines or equipment from becoming energized because they are positive restraints that no one can remove without a key or other unlocking mechanism, or through extraordinary means, such as bolt cutters.

Tagout Devices by contrast, are prominent warning devices that an

authorized employee fastens to energy-isolating devices to warn employees not to reenergize the machine while he or she services or maintains it. Tagout devices are easier to remove and, by themselves, provide employees with less protection than do lockout devices.

HARMFUL EFFECTS OF HAZARDOUS ENERGY

Workers servicing or maintaining machines or equipment may be seriously injured or killed if **Hazardous Energy** is not properly controlled. Injuries resulting from the failure to control hazardous energy during maintenance activities can be serious or fatal! **Injuries may include electrocution, burns, crushing, cutting, lacerating, amputating, or fracturing body parts**, and others.

- A steam valve is automatically turned on burning workers who are repairing a downstream connection in the piping.
- A jammed conveyor system suddenly releases, crushing a worker who is trying to clear the jam.
- Internal wiring on a piece of factory equipment electrically shorts, shocking worker who is repairing the equipment.

Craft workers, electricians, machine operators, and laborers are among the millions of workers who service equipment routinely and face the greatest risk of injury.

HOW TO PROTECT YOURSELF

FIVE IMPORTANT CATEGORIES OF LOTO TRAINING

1. **Maintenance and Testing**

While you are running through training, the team effort allows for all the relevant parties to assess any potential issues with the equipment. It is always a good idea to know what problems you are likely to face when working with machinery, so training can be a perfect time troubleshoot your technology while using the LOTO procedure. As LOTO is about reducing the risks of hazardous energy, it is helpful to know how equipment is working.

Going through the process of demonstrating a LOTO procedure makes you stop and focus. With a more meticulous training assessment where other people are looking on with authorized employees, it can be easier to identify issues. Even with proper shut off procedures, hazards can still crop up when equipment is malfunctioning. You could also have broken LOTO devices causing issues. Training directs focus, and with that, you can anticipate hazards from damaged or improperly functioning equipment.

2. **Increased Familiarity with Relevant Devices**

It is easy to take it for granted that employees will know the right way to use LOTO devices, but when it comes to safety, you never want to rely on assumptions. The best way to know that everyone using the tags and locks correctly is to train everyone on the usage. Not only how things are meant to affix to equipment and machinery but also the mistakes that can be made.

Everyone who is trying to follow the rules thinks they are following the rules. Training allows everyone to check up on one another. This is also very important for getting workers familiar with common misconceptions about the devices. How tags can fall off and the devices that require group lockouts. There may also be certain equipment that is rarely used, so training might be the only opportunity to practice procedure with it before use becomes a necessity.

3. **Improved Issue Identification**

With everyone trained on the expectations and usage of lockout/tagout practices, there will be more people that can tell when something’s not right. A team is only as strong as its weakest link, and sometimes that link can be higher up in the chain. Because daily operations will limit the use of LOTO procedures to authorized workers, training might be the only opportunity affected workers will get to become familiar with the protocols being used for their benefit.

Safety meetings can be significantly improved by having more employees be knowledgeable about the safety expectations of their peers and their superiors. More people can have something to say

about the way procedures are being used and feel more involved and invested in these meetings. Training in this way creates safety nets for human error. Expecting perfection is a great way to keep yourself blind to problems. Anticipate the need for universal oversight, and if the authorized users never have an issue, you can have that fact corroborated throughout the chain of command.

4. **Make the Process Less Daunting**

Anything can seem complicated if you have no experience with it. What training does is demystify the procedures. It allows for questions to be asked and mistakes to be made when they will not be harmful or lead to a tremendous disaster. But along with making those using the LOTO procedures comfortable with using them, it can also make supervisors or at ease about inspections and general safety.

LOTO inspections should take place once a year, and when training has not taken place effectively, everyone can be rather hesitant or stressed out about the processes. Instead of waiting for an assessment to tell you that mistakes have been made consistently or processes have been misunderstood, training can sort these issues out to avoid any type of post or pre-assessment unpleasantness.

5. **Safety Plan Refinement**

Training with safety gets everyone thinking about safety. While training with LOTO procedures you might find that you are unwittingly violating an OSHA requirement. Going around to simulate a practice LOTO inspection can double as a general practice safety inspection. Practice serves as a great reminder of what is expected in terms of safety.

You can also use training to find out what types of issues crew members are having when they use LOTO devices or procedures. If there is an issue with keys breaking off in locks, slowing down padlock removal or generally creating the problem of constantly replacing lockout equipment, you can work out procedures for when existing procedures go awry. Tags could be falling off all the time and require the use of secondary securing. Whatever the issue

is with the plans you have, you can find them by training.

LOCKOUT PROGRAM RESPONSIBILITIES

Management is responsible to:

- Draft, periodically reviewing, and updating the written program.
- Identify the employees, machines, equipment, and processes included in the program.
- Provide the necessary protective equipment, hardware and appliances.
- Monitor and measure conformance with the program.

Supervisors are responsible to:

- Distribute protective equipment, hardware, and any appliance; and ensuring its proper use by employees.
- Make sure that equipment-specific procedures are established for the machines, equipment and processes in their area.
- Make sure that only properly trained employees perform service or maintenance that require lockout.
- Make sure that employees under their supervision follow the established lockout procedures where required.

Authorized individuals are responsible to:

- Follow the procedures that have been developed.
- Report any problems associated with those procedures, the equipment, or the process of locking and tagging out.

FINAL WORD

The test for lockout – tagout procedures is to control hazardous energy while servicing or performing maintenance or machinery or other equipment. Types of hazardous energy included electrical, hydraulic, mechanical, pneumatic, gravitational, chemical and thermal.