



**Anyone who operates, cleans, services, adjusts, and repairs machinery or equipment should be aware of the hazards associated with that machinery.** Authorized employees are qualified and trained to clean, repair service, adjust, or unjam energized equipment. Affected employees are those employees who work with or around energized equipment.

**All employees need to be trained in lockout/tagout (LOTO) procedures specific to the piece or type of equipment they work with.**

Any powered machinery or electrical equipment that can move in a way that would put people in danger is a hazard that can be prevented by following locking or tagging procedures. Failure to lock out or tag power sources on equipment can result in electrocutions, amputations, and other serious—sometimes fatal—accidents.

**What are the most common causes of these accidents?**

- **The machine or equipment was not completely shut off** before a maintenance or repair operation. Not only must the machine be turned off, but the power source that goes to it must be disconnected or locked out and the potential energy released.

- Employees believed that the machine’s interlock device would prevent inadvertent movement but sometimes interlock devices fail!
- **The machine was turned on accidentally**, either out of carelessness or because the person who turned it on did not realize that another worker was there and could get hurt. Care must be taken to ensure continuity of LOTO protection during shift changes.
- **The machine was not working correctly** but was not fixed, turned off, locked, or tagged, and someone who did not know about the problem used it.
- **Moving equipment was not blocked.**
- **Safety procedures were inadequate**, or employees had not been provided appropriate training.

**Remember the danger, be on guard around machinery and moving equipment**

Even if you do not operate the machinery, you could get caught in it and injured if it is not properly disconnected.

**What can you do to prevent accidental injury from moving machinery?**

- **Identify all jobs and equipment that require lockout of power sources.** Types of power sources include mechanical, hydraulic, pneumatic, chemical, electrical, thermal, or other hazardous energy sources. Care must be taken to de-energize all potential sources of energy or potential energy.

- **Post warning signs** wherever possible to indicate that lockout is required or underway.
- **Develop specific written procedures** explaining how lockout is to be done. Remember that each piece of equipment or type of equipment must have its written LOTO procedure. For example, if there are two identical mixers, then a single procedure can be used for both. However, if the two mixers are different, then a separate procedure needs to be in place for each one.
- **Train all personnel** in the lockout procedures for their particular job and provide periodic refresher training.
- **Allow no deviation** from the written policies and procedures and take swift and appropriate action if violations are observed or discovered.
- **Use engineering and administrative controls** as much as possible to eliminate the need for lockout.
- **Perform regular maintenance** to prevent malfunctioning equipment.
- **Conduct periodic inspections** of your LOTO policy annually to evaluate its effectiveness, and update your procedures as needed.
- **Maintain good documentation** of inspections and employee training.

**Written LOTO procedures can be laminated and attached to each piece of equipment for easy accessibility or fast use during an emergency.**

Be aware of your personal safety and the safety of others when working with or around moving equipment and machinery. Always follow proper lockout and tag-out procedures, even for a quick or minor repair!