



Lockout/Tagout

Basic safety rules and procedures for controlling hazardous energy.

OSHA Rule

- 29 CFR 1910.147 is referred to as the “Lockout/Tagout” rule.
- It applies to servicing and maintenance of machines in which the unexpected energization or start-up of the machines or equipment, or release of stored energy could cause injury to employees.
- This rule is sometimes called “Control of Hazardous Energy.”

What is Hazardous Energy?



- This energy usually exists in one of three forms:
 - Electrical
 - Hydraulic
 - Fluids or Gases
- It may also be potential energy such as, an elevated object that has the “potential” to fall on an employee.

General Safety Guidelines

- Identification
 - Locate the machine.
 - Identify the energy sources.
 - Check for other locks/tags.
 - Check service logs for other scheduled maintenance.



General Safety Guidelines



- Evaluation
 - Assure that all possible energy sources are isolated.
 - Inspect for installation of locks/tags.
 - Notify all employees in the area of your intentions.

Precautions for Working with Electricity

- De-energize the machine at the source!
- Apply padlock or other type of key/lock device to the circuit.
- Reduce the machine to a “Zero Energy State.”
- Use a voltage tester to ensure that no energy is present.



Precautions for Pneumatic and Hydraulic Circuits

- Ensure pump or compressor controls are in the off position.
- Isolate the circuit by means of closing and locking the valve.
- “Bleed” the circuit to a Zero Energy State.
- Ensure that machine components are blocked to prevent motion in “potential energy” situations (i.e. hydraulic jacks, pneumatic drive trains, etc.).



Precautions with Fluids and Gases

DANGER

Do Not Open
This Valve!

The circuit is
closed for
REPAIR.

6/15/24 - 1:15PM
Andy Hutton

- Check and verify all hoses and valves for the circuit that you intend to work on.
- Follow company policies regarding using line isolation devices (leak detecting flow switches, etc.).
- Apply lock/tag devices to the supply valves.
- “Bleed” the circuits to a Zero Energy State.

Documentation

Each tag should contain:

- Date
- Equipment ID and location
- Time of day
- Type of work being performed
- *Some companies may ask for additional information

Other documentation may include:

- Time schedules
- Management/ supervisor “sign off” for the job
- Maintenance/ inspection forms for the machine

Group Lockout

If more than one person or crew is performing work on the same machine or circuit:

- Each individual or crew shall have a lock/tag device attached to the energy source.
- Means shall be provided for multiple or group lockouts.
- Managers/supervisors must be informed when group lockout/tagout situations are required.



Restoring Equipment to Normal Operation

When work is completed:

- Re-check the work to ensure that the repairs are proper and complete.
- Make sure that the area is clear and safe for machine start up or energizing the circuit.
- Make sure that guards and other safety devices have been reinstalled.
- Remove locks/tags.
- Energize the machine or circuit.
- Final check for leaks or other problems associated with the repair.

Summary

- OSHA requires that a Lock/Tag program be implemented.
- Employees must be trained concerning the program and its procedures.
- Remember, the rule for working on machines and circuits is:

- WHEN IN DOUBT - 