



Toolbox Talks

Lockout/Tagout - LOTO

Lockout/Tagout is more than just putting a yellow lock on the main electrical disconnect to a machine or part of a machine.

LOTO - More Than A Lock Part 1

There are 7 very important steps you must do when putting Lockout/Tagout in place.

SEVEN STEPS FOR SHUTDOWN:

1. **NOTIFY** – Notify all affected employees that you are going to be conducting a lockout/tagout.
2. **PREPARE** – Before you begin, be sure you know all the types of energy involved, hazards presented by energy, and how to control the energy.
3. **SHUTDOWN** – Turn off machine or equipment.
4. **ISOLATE** - Isolate machine or equipment from its energy source(s). (For example, turn off main circuit breaker.)
5. **LOCKOUT** – apply your lock. Be sure that it holds the isolating device in the “off” or “safe” position.
6. **RELEASE** - Release stored energy. Relieve, disconnect, restrain, block, or otherwise ensure, that all energy sources – electrical, mechanical, hydraulic, compressed, etc. – are de-energized.
7. **VERIFY** – Try the on-off switch or other controls to be sure the machine won't start. Return the switch to the “off” position.

YOUR LOCKOUT IS COMPLETE

LOTO - More Than A Lock Part 2

When you are done, there are 3 very important steps you must do when removing a machine from a Lockout/Tagout state.

THREE STEPS FOR RESTART:

1. **INSPECT** – inspect the equipment to be sure that –
 - a. All tools and other materials are remove.
 - b. Machine is fully reassembled
 - c. Guards and other safety devices are reinstalled
2. **NOTIFY** – Be sure that –
 - a. All employees are safely positioned.
 - b. All affected employees are notified of the restart

3. **REMOVE** – Remove lockout devices.

Remember that only the person who put the lock on may remove it.

LOTO - More Than A Lock Part 3

Knowing what and where to lockout something is critical. Prior to servicing that requires Lockout/Tagout, you must evaluate the potential energy that could be released while working in that area or on a specific device.

There are several types of energy:

- Electrical energy** to operate the device.
 - Pneumatic energy** or commonly known as air that controls various devices.
 - Steam** that heats various devices.
 - Natural Gas** that is used in compustion devices
 - Water** that may be used to cool devices
 - Hydraulics** that may be used to control devices
 - Gravity** that may play a part in something lifted off the ground.
 - Thermal energy** that may cause things to remain hot after the source has been turned off.
- As OSHA states in their standard, the purpose of LOTO is to prevent the *“unexpected” energization or start up of the machines or equipment, or release of stored energy could cause injury to employees.*
- Depending on the task you are performing, you need to evaluate and isolate the systems and sources of energy that could cause injury.**

LOTO - More Than A Lock Part 4

Knowing how to lockout something is critical. Various energy sources and devices have different methods for ensuring the energy is isolated. For **electrical cabinets**, in most case it is just a matter of placing a lock on the built-in hasp to the disconnect. However, other energy sources may require the use of additional lockout devices to accomplish the task. We have many devices available to lockout different types of valves and the like. For **gate valves** similar to your home's outside water hose valve, there are covers that encase the entire handle to prevent anyone from turning it. For **ball valves** that do not have a place for a lock, there are devices built that will hold it in the off position (either parallel or perpendicular to the pipe) and can be locked in place. For **larger valves** for large gas pipes we have lockable bags where the handle can be removed after being shut off and placed inside the bag and locked in place. For **pneumatic (air) quick disconnect hoses** there is a device we have that the male end of the coupling goes into and gets locked into this device with a padlock. There are numerous devices available for very specific needs and applications. If you are in a situation where you are unsure how to lockout a specific energy source, just ask . . . we have a device that can do it.