Lockout/Tagout
Control of Hazardous Energy

The purpose of lockout/tagout guidelines is to control the unsafe release of energy during maintenance and repair procedures. Before any employee services equipment where the potential exists for unexpected energization, start-up of the equipment, or the release of stored energy the machine or equipment must be isolated from the energy source, rendered inoperative, and locked or tagged out as appropriate.

Any individual working on machines/equipment without the protection of a lockout/tagout device, the unauthorized removal of a lock/tag, or operating any part of the machine that has been locked/tagged out of service without all parties removing their locks/tags may result in disciplinary action up to and including dismissal.

Responsibilities

Supervisors:

- Stress the importance of lockout/tagout procedures.
- Train or coordinate training for employees in lockout/tagout procedures prior to any repairs, service, adjustment, or inspections on machinery or equipment.
- Initiate discussion and agreement on lockout procedures with contractors or outside service personnel when working with them or in close proximity.
- Keep employees informed of any procedure changes and ensure their understanding
- Supply employees with needed hardware.
- If employee seems unsure of machinery/equipment hazards or expresses any concerns, find a knowledgeable person to assist them before any work is started.

Employees:

- follow the procedures as outlined in this document
- maintain lockout/tagout supplies needed on a regular basis
- if not comfortable about machine/equipment and its hazards, seek assistance from your supervisor

General

Lockout/tagout procedures will be used whenever a piece of machinery or equipment is being repaired, serviced, adjusted or inspected unless for troubleshooting purposes that equipment must be left in the energized state to determine the cause of a problem. Once the cause has been identified and prior to any repairs being made, the machine/equipment will be locked/ tagged out.

Only if an energy isolating device is not capable of being locked out, must the tagout system be used.

Lockout/tagout hardware should be kept in a separate box in a convenient location (service truck, toolbox) for the individual using it. Extra devices and hardware should be kept in a common location designated by the supervisor along with other safety equipment. Locks must be physically different in appearance from other common lock types used in the area to designate them as lockout locks.

Procedures

The following is a base-line procedure for all lockout/tagout operations. It is recommended to have a specific procedure developed for each machine/equipment in the work area.

1. Scene survey – Identify all potential hazards associated with the job and locate which switches, valves, etc. need to be locked or tagged out. Be aware that electricity may not be the only source of energy. Other sources of energy may include things such as compressed air, hydraulic pressure, capacitors, or springs under pressure. If you do not have the appropriate tools/supplies or knowledge to do the job safely, do not attempt to do the job!
2. Notify all affected people of the lockout/tagout and the reason for it.
3. If the machine/equipment is operating, shut it down by normal stopping procedures.
4. Operate the switch, valve, or other energy isolating device so that the machine/ equipment is isolated from its source. Stored energy (such as springs, elevated machine parts, rotating flywheels, hydraulic systems, and air/gas/steam/water pressure) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc.
5. Lockout/tagout the energy isolating device with an assigned, individual lock or tag. The key must remain with the person who applied the lock. Because tags are essentially warning devices affixed to energy isolating devices and do not provide the physical restraint on those devices that is provided by a lock, use additional safety measures to provide a level of equivalent safety. This might include removing and isolating a circuit element, blocking a controlling switch, opening an extra disconnecting device, or removing a valve handle to reduce the potential for any inadvertent energization while the tags are attached.
6. Test
   A. Operate the push button or other normal operating controls to make certain the machine/equipment will not operate.
   CAUTION: Always return operating controls back to the neutral or off position.
   B. For electrical work, verify the component and/or circuits in close proximity are de-energized using an appropriate electrical test device before start of work.
7. The machine/equipment is now locked/tagged out. Proceed with repairs/work.
8. When all repairs/work is completed, remove all tools from work area, reinstall any guards or covers, and be sure everybody is clear of machine/equipment.
9. Take locks/tags off and restore energy. Each lock/tag must be removed from the energy-isolating device by the employee who applied it.
10. Proceed with a normal start-up.

Temporary Removal of Lockout/Tagout Devices

In some circumstances, employees need to temporarily restore energy to a machine or piece of equipment during servicing or maintenance to test and /or reposition the machine or piece of equipment. Lockout or tagout devices may be removed temporarily in order to perform these tasks under the following procedures:

1. The machine or equipment must be cleared of tools and materials.
2. Employees must be removed from the machine or equipment area & clear of possible hazards.
3. All lockout or tagout devices may then be removed.
4. Authorized employees may then proceed to energize and test or position the equipment or machinery.
5. Following testing or positioning, all systems must be deenergized and energy control measures reapplied to continue the servicing and /or maintenance.

Who Can Remove a Lockout/Tagout Device

A lockout/tagout device should only be removed by the person who applied it. Only in unusual circumstances and under the direction of the supervisor, may that device be removed by someone other than the applier. The following must be ensured:

1. Verify that the authorized employee who applied the device is not at the facility.
2. Make all reasonable efforts to contact the authorized employee to inform that his lockout/tagout device will be removed.
3. Ensure that the authorized employee knows that the lockout/tagout device has been removed before he resumes work.

Maintenance Requiring an Energy Source or Supply

Where maintenance, service, adjustment, or inspection operations cannot be accomplished with the energy source disconnected, such operations may only be performed under the following conditions:

* The control panel or where the equipment may be activated must at all times be under the control of a qualified technician.
* All participants must be in clear view of the technician or in positive communication with each other.
* All participants must be beyond the reach of equipment elements which may move rapidly and present a hazard.

Group Lockout

Each person working on the machine/equipment must have his lock in the group lockout hasp. This way no energy is restored until each individual has removed his lock and is therefore aware start-up is about to begin. Or, primary responsibility is vested in an authorized employee for a set number of employees working under the protection of this authorized employee's lock. This authorized employee must ensure continuity of protection for his assigned employees and not take the lock off until each individual on the job gives permission and #8 of the above Procedures is completed. NOTE: This option can not be used while working with contractor or outside service personnel.

Tags

Each tag must be legible and understandable by all employees. It should identify the person who installed it, the date, and the time. Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered. Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

Locks

Locks used for a lockout procedure must be physically different in appearance from other common lock types used in the area. Each lock must always be identifiable as to who installed it. This can easily be done with a personalized tag given when each lock is issued & available with other LO hardware when replacement is needed. This personalized tag must stay on the lock itself.

Training

Employees directly involved in the placement of lockout/tagout devices must receive training on the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control specific to the areas of their job tasks.

Affected employees should be informed on the purpose and use of the energy control procedures.

Other employees (those whose work activities are or may be in an area where energy control procedures may be utilized) must be instructed about the procedure and about the prohibition relating to attempts to restart or reenergize machines or equipment that are locked out or tagged out.

Retraining should occur when there is a change in job assignment requiring such, a change in machinery/equipment that presents a new hazard, a change in energy control procedures, or a recognized hazard.