



**DEPARTMENT OF CORRECTIONS
Human Resources**



Title:	Control of Hazardous Energy (Lockout/Tagout)	DOC Policy: 20.6.12
Supersedes:	None	
Applicability:	All Employee's Volunteers, and Contract Providers	
Reference:	OAR 437, Division 2, Subdivision J, 1910.147 and Subdivision S, 1910.333	

I. PURPOSE

To establish safe and effective guidelines for the protection of staff and inmates from the unexpected energization, start-up, or release of stored energy from machines or processes during servicing and/or maintenance. This also includes the lockout – tagout provisions required for individuals performing electrical work.

II. DEFINITIONS

- A. **Affected Employee:** An employee who is required to use machines, equipment, or systems that are being serviced under lockout/tagout or if they are in or must work in the area.
- B. **Authorized Employee:** An employee who implements lockout/tagout on a machine or equipment requiring servicing or maintenance.
- C. **Capable or being locked out:** Designed with a hasp or attachment to which a lock can be affixed; or, has a locking mechanism built in; or, lockout that can be achieved without need to dismantle, rebuild, replace or permanently alter.
- D. **Energized:** Connected to an energy source or containing residual or stored energy.
- E. **Energy Source:** Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
- F. **Isolation:** The isolation of any and all forms of unwanted energy that could be a serious hazard to employees.
- G. **Lockout:** The placement of a lockout device on an energy isolating device, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
- H. **Lockout Device:** A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.

- I. Normal Production Operations: The utilization of a machine or equipment to perform its intended production function.
- J. Other Employee: All employees whose work operations are or may be in an area where energy control procedures may be utilized.
- K. Tagout: The placement of a tagout device on an energy isolating device, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.
- L. Tagout Device: A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device, to indicate that the energy isolation device and the equipment being controlled may not be operated until the tagout device is removed.

III. POLICY

A. Application

- 1. This policy applies to the control of energy during servicing and/or maintenance of machines and equipment or systems. Servicing and/or maintenance that takes place during normal production operation is covered by this program if:
 - a. An employee is required to remove or bypass a guard or other safety device, or
 - b. An employee is required to place any part of his/her body into an area on a machine or equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine cycle.
- 2. This policy also covers exposure to electrical hazards from work on, near, or with conductors or equipment in electrical utilization or installation. See Section H below.

B. Locks and Tags

- 1. It is the responsibility of the Department of Corrections to supply all authorized personnel with the necessary locks, tags, chains, wedges, adaptable pins, and/or the time necessary to fabricate such items.
- 2. Lockout – tagout devices shall identify the authorized employee(s), shall be the only device(s) used for controlling energy, and shall not be used for other purposes.
- 3. Locks shall be individually keyed.

4. If tagout devices are used, they shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: **DO NOT START, DO NOT OPEN, DO NOT CLOSE, DO NOT ENERGIZE, DO NOT OPERATE, ETC.**
 5. Training on the use of tags shall be communicated to all employees where tagout devices are used to isolate energy sources.
 6. Tags are warning devices only and do not provide the physical restraint of a locking device.
 7. When a tag is used to isolate energy, it is not to be removed without authorization of the authorized person responsible for it and is never to be bypassed, ignored, or defeated.
 8. Tags must be legible and understandable by staff and inmates.
 9. Attachment devices for tags shall be non-reusable and have a minimum breaking strength of 25 pounds.
 10. Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
 11. Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
- C. Equipment and Machinery Assessment - An assessment shall be performed in each work section where machines, equipment, or systems are in use to determine if hazardous energy controls are necessary. See Attachment A.
- D. Energy Control Procedures
1. Procedures shall be developed, documented, and used for the control of potentially hazardous energy when employees are engaged in activities that involve energized systems. See Attachment B.
 2. The applicable work section shall maintain energy Control Procedures for their equipment, machinery, or process.
 3. Energy Control Procedures shall be available to all affected employees in work areas.
- E. Machinery/Equipment Lockout Procedure

1. Employees authorized to implement Lockout shall be certain which switch(s), valve(s), or other energy isolating devices apply to the equipment or machine being locked out.
2. All affected and other employees shall be notified that a lockout procedure is going to be implemented and the reason for the procedure.
3. The authorized employee shall know the type and magnitude of energy that the machine or equipment uses and shall understand the hazards.
4. If the machine or equipment is operating, shut it down by the normal stopping procedure. Operate the switch, valve or other energy isolating device(s) so the equipment or machine is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
5. Lockout the energy isolating devices with assigned individual lock(s) with attached identification tag.
6. Locks used to lockout machines or equipment shall have a key that is unique to that lock.
7. Duplicate keys used to lockout machines, equipment, or systems shall be kept on a master key system under lock and key that is strictly controlled by the work section manager or supervisor.
8. After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. **CAUTION: Return operating control(s) to “neutral” or “off” position after the test.**
9. The equipment is now locked out.
10. In the proceeding steps, if more than one employee is required to lockout the machine or equipment, each employee shall place his/her own personal lock and identification tag on the energy isolation device(s). When the energy isolation device cannot accept multiple locks, a multiple lockout device must be used.

F. Restoring Machines or Equipment to Normal Operations

1. After the servicing or maintenance is complete and equipment or machine is ready for normal production operations, check the area

around the machines or equipment to ensure no employees are exposed.

2. After all tools have been removed from the machine or equipment, guards have been reinstalled, and employees are in the clear, remove all lockout devices. Remove the energy isolating devices to restore energy to the machine or equipment.

G. Procedure Involving Shift Changes

1. Specific procedures shall be developed and utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection. This shall include provisions for the orderly transfer of lockout or tagout device protection between off-going and oncoming employees.

H. Electricians Lockout – Tagout

1. Electrically energized parts to which an employee or inmate may be exposed shall be de-energized before work is started on or near them, unless it can be demonstrated and documented that de-energizing adds additional or increased hazards or is unfeasible due to equipment design or operational limitations.
 - a. Examples of increased or additional hazards include interruption of life support equipment, deactivation of emergency alarm systems, shutdown of hazardous location ventilation equipment, or removal of illumination for an area.
 - b. If the exposed live parts are not de-energized other safety related work practices shall be used to protect staff and inmates who may be exposed to the electrical hazards involved. Only qualified persons may work on electric circuit parts or equipment that has not been de-energized under the procedures of this section (H). Such work practices shall protect staff and inmates against contact with energized circuit parts directly or indirectly through some other conductive object. Such persons shall be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.
2. Safe procedures for de-energizing circuits and equipment shall be determined before circuits or equipment are de-energized.
3. Circuits and equipment to be worked on shall be disconnected from all electric energy sources. Control circuit devices, such as push buttons, selector switches, and interlocks, may not be used as the

sole means for de-energizing circuits or equipment. Interlocks for electric equipment may not be used as a substitute for lockout and tagging procedures.

4. Stored electric energy, which might endanger workers, shall be released. Capacitors shall be discharged and high capacitance elements shall be short-circuited and grounded if the stored electric energy might endanger workers.
5. Stored non-electrical energy in devices that could re-energize electric circuit parts shall be blocked or relieved to the extent that the device could not accidentally energize the circuit parts.
6. A lock and tag shall be placed on each disconnecting means used to de-energize circuits and equipment on which work is to be performed.
7. Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.
8. If a lock cannot be applied and if it can be demonstrated that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock, a tag may be used without a lock.
9. A tag used without a lock shall be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by use of a lock.
10. A lock may be placed without a tag only under the following conditions:
 - a. Only one circuit or piece of equipment is de-energized, and
 - b. The lockout period does not extend beyond the work shift, and
 - c. Workers exposed to the hazards associated with re-energizing the circuit or equipment are familiar with this procedure.
11. Circuits and/or equipment shall be verified as de-energized before work can begin.
 - a. A qualified person shall test the equipment operating controls or otherwise verify that equipment cannot be restarted.
 - b. A qualified person shall use test equipment to test the circuit elements and electrical parts of equipment to which workers

may be exposed and shall verify that the circuit elements and equipment parts are de-energized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage backfeed even though specific parts of the circuit have been de-energized and presumed to be safe.

12. Re-energizing equipment or circuits, even temporarily, shall be done in the following order:
 - a. A qualified person shall conduct tests and visual inspections as necessary to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed so that the circuits and equipment can be safely energized.
 - b. Workers exposed to the hazards associated with re-energizing the circuit or equipment shall be warned to stay clear of circuits and equipment.
 - c. Each lock and tag shall be removed by the worker who applied it or under his or her direct supervision. However, if this worker is absent from the workplace then the lock or tag may be removed by a qualified person designated to perform this task provided that:
 - (1) The employer ensures that the employee who applied the lock or tag is not available at the workplace, and
 - (2) The employer ensures that the employee is aware that the lock or tag has been removed before he or she resumes work at that workplace.
 - d. There shall be a visual determination that all workers are clear of the circuits and equipment.

I. Contractors, Subcontractors

1. All contractors performing maintenance, repairs, or other service on Department of Corrections equipment, machinery, or systems shall be informed of this policy and lockout or tagout procedures.
2. All contractors shall inform the Department of Corrections on their respective lockout/tagout policy and procedure.
3. The Department shall ensure that affected staff and inmates understand and comply with the restrictions and prohibitions of the outside contractor's lockout/tagout policy and procedures.

J. Roles and Responsibility

1. Employees shall:
 - a. Implement lockout/tagout as defined in this policy, and
 - b. Report all changes or deficiencies of energy control procedures to their managers or supervisors immediately, and
 - c. Not attempt to remove any lockout/tagout device(s) not installed by themselves.

2. Managers/Supervisors shall:
 - a. Ensure this policy is implemented and followed in their areas of responsibility, and
 - b. Ensure an Equipment and Machinery Assessment is completed for all energized systems within their areas of responsibility, and
 - c. Ensure specific lockout/tagout energy control procedures are developed for all energized systems identified in the equipment and machinery assessment, and
 - d. Identify and ensure adequate training for all employees that are authorized to implement lockout/tagout.

3. Safety Managers shall:
 - a. Provide consultation to managers and supervisors or others as necessary on matters related to the implementation and compliance of this safety policy, and
 - b. Assist in developing or procuring the necessary training required by this program, and
 - c. Monitor and audit the lockout/tagout program for compliance and continual safety improvement.

K. Training Requirements

1. Other Employees shall be trained:
 - a. On the purpose and use of the energy control policy, and
 - b. On the prohibition on restarting machines, equipment, or systems, that are locked and/or tagged out.

2. Affected Employee(s) shall be trained in the above plus the following:
 - a. In the recognition of hazardous energy sources where maintenance may be required, and
 - b. In the types and magnitude of the energy in the work place.
3. Authorized Employee(s) shall be trained in the above plus the following:
 - a. To be knowledgeable of the function and process of the machines or equipment they are required to perform lockout/tagout on, and
 - b. In the various methods and/or types of lockout devices necessary to lockout equipment, machinery, or systems, and
 - c. In the purpose, use, and limitations of tags used in lockout/tagout.
4. All training shall be documented and maintained at the facility with copies forwarded to training staff.

L. Inspection and Review

1. The Department shall conduct periodic inspection of all energy control procedures at least annually to ensure that this policy and the requirement thereof are being followed. See Attachment C.
2. An authorized employee other than the one(s) using the energy control procedure being inspected shall perform the inspection.
3. Periodic inspections shall correct any deviations or inadequacies observed.
4. A copy of all periodic inspections shall be maintained at each work section.

IV. IMPLEMENTATION

This policy will be adopted immediately without further modification.

LOCKOUT – TAGOUT MACHINE AND EQUIPMENT SURVEY FORM

TYPES OF HAZARDOUS ENERGY AT THIS WORK SITE		
Type	Yes / No	Description
Electrical	ρ Yes ρ No	
Pneumatic	ρ Yes ρ No	
Hydraulic	ρ Yes ρ No	
Stored (Spring)	ρ Yes ρ No	

ELECTRICAL EQUIPMENT			
Equipment Name	Service Panel or Source	Identification Number	Lockout – Tagout Device for Isolation
Comments:			

PNEUMATIC EQUIPMENT			
Equipment Name	Isolation Point	Identification Number	Lockout – Tagout Device for Isolation
Comments:			

HYDRAULIC EQUIPMENT			
Equipment Name	Isolation Point	Identification Number	Lockout – Tagout Device for Isolation
Comments:			

STORED ENERGY			
Equipment Name	Isolation Point	Identification Number	Lockout – Tagout Device for Isolation
Comments:			

