

TOOL TYPE	MODEL PROGRAM	LAST REVIEWED	07/1/13
GEOGRAPHY	US	SOURCE: BASED ON CLEVELAND STATE UNIVERSITY MODEL	

MODEL LOCKOUT/TAGOUT PROGRAM

PROBLEM: OSHA [Control of Hazardous Energy \(Lockout/Tagout\)](#) is one of the most frequently cited OSHA Standards (Section 1910.147). And one of the most frequent causes of LOTO citations is failure to have a proper LOTO program.

HOW TOOL HELPS SOLVE THE PROBLEM: Here's a Model Program that lays out the essential elements that must be included in an energy control/LOTO Program. The language in the Model is designed to ensure compliance with the LOTO standard and includes instructions about how to adapt the language to meet your own circumstances.

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LOCKOUT/TAGOUT PROGRAM

[*COMPANY NAME*]

Control of Hazardous Energy (Lockout/Tagout) Program

1. Purpose of Program

[*Company Name*] has created this Control of Hazardous Energy Lockout/Tagout Program (the “Program setting out the procedures for service and maintenance on machinery and equipment capable of generating hazardous energy to:

- Prevent injuries to personnel during servicing and maintenance of the machinery and equipment; and
- Ensure [*Company Name*]’s compliance with Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.147 and The Control of Hazardous Energy (Lockout/Tagout), 29 CFR 1910.333, Selection and Use of Work Practices

Instructions:

You don’t have to adjust the default language. If you want, you can also add after the second bullet: “and the National Fire Protection Association Standard 70E.”

2. Scope of Program

This Program and procedure applies at all times to the control of all potentially injurious energy sources such as, but not limited to electrical, mechanical, hydraulic, pneumatic, chemical, thermal and gravitational. This Program applies to all [*Company Name*] employees, as well as to employees and workers of outside contractors and subcontractors who may be engaged in the service and/or maintenance of [*Company Name*] machines or equipment.

Instructions:

The default language is the minimum for defining the scope of a LOTO Program. If you want, you can clarify things even more by listing the kinds of operations that are **not** covered by the OSHA LOTO requirements:

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“(b) This Program does **not** apply to:

- i. Installations under the exclusive control of electric utilities that generate, transmit, and distribute power, including related equipment of communication or metering;
- ii. Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or start-up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the service or maintenance;
- iii. Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water, or petroleum products when they are performed on pressurized pipelines, provided that it is demonstrated that:
 - a. Continuity of service is essential;
 - b. Shutdown of the system is impractical; and
 - c. Documented procedures are followed and special equipment is used that will provide proven protection for employees.”

3. Definitions

This Program uses some technical terms that you need to understand to carry out your responsibilities for safe lockout and tagout, including:

Affected employee: An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized employee: A person who is trained to lock out or tag out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing, servicing or maintenance covered under this Program.

Capable of being locked out: An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to or through which a lock can be affixed, or
if it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Employee: A [Company Name] employee, or contract employee who may be engaged in the service and/or maintenance of machines or equipment.

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Energized: Connected to an energy source or containing residual or stored energy.

Energy isolating device: A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switch, and other control devices are **not** energy isolating devices.

Energy source: Any source of electrical, mechanical hydraulic, pneumatic, chemical, thermal, or other energy.

Lockout: The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

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 a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Servicing and/or maintenance: Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintenance and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy.

Tagout: The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

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 in accordance with an established procedure to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Instructions:

You need to include these definitions in your Program. If you use any other specialized terminology, be sure to define it in this Section.

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4. Responsibilities of Different Personnel

[*Company Name*] management, supervisors and workers as well as people who don't work for [*Company Name*] that have a role to play in ensuring that this Program is safely carried out:

Supervisors: Must ensure that each new or transferred affected employee, and other employees whose work operations are or may be in the area, be aware of the purpose and use of the lockout/tagout procedure and the terms of this Program.

Authorized employees: Must follow the provisions and protocols set forth in the Program, and are responsible for the proper application of these lockout/tagout procedures when performing the servicing and maintenance of machines and equipment. Authorized employees are to notify affected employees of their activities. Constant awareness of and respect for electrical hazards, and compliance with all safety rules are everyone's responsibility.

Affected employees: Must be aware of and comply with the provisions and protocols set forth in the Program, including obeying the orders of supervisors and authorized employees.

Instructions:

Describe the obligations of any other persons involved with your Program, which may include:

- * Environment, Health & Safety Coordinator of Your Company:
- * Other Administrative/Management Personnel:
- * Visitors:
- * Others:

5. Energy Control Program

(a) General

Before an employee performing any servicing or maintenance on a machine or equipment where unexpected energizing, start-up, or release of stored energy could occur, the machine or equipment must be isolated from the energy source, and rendered inoperative. If a machine or equipment is not capable of being locked out, the energy control program must utilize a tagout system. The energy control procedures must

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include specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

Instructions:

The procedures and protocols set out in the first paragraph of this section are required by OSHA. Add any additional safety measures not required by the OSHA Standard that you follow, e.g., requiring employees to get permits to carry out LOTO operations.

(b) Lockout v. Tagout

If an energy isolating device is capable of being locked out, the energy control program must utilize lockout. If it's determined that the device is physically unable to be locked out, a tagout system may be used instead as long as it can be demonstrated that using a tagout system will provide full employee protection as described below.

All lockout/tagout devices or any type of protective materials and hardware must meet the requirements of Section 1910.147(c)(5) of the OSHA Standard.

When a tagout device is used on an energy isolating device, the tagout device must be attached at the same location that the lockout device would have been attached. The goal of the tagout process is to provide a level of safety equivalent to that obtained by using a lockout program.

Instructions:

The procedures and protocols set out in the first 3 paragraph of this Section are specific requirements under the OSHA Standard to ensure that tagout provides at least equivalent protection to lockout. List any additional steps you use or consider to ensure tagout is as safe as lockout, such as removing an isolating circuit element, blocking a controlling switch.

6. Applying Lockout or Tagout Control Measures

The lockout or tagout procedures must cover the following elements and actions be

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completed in the following sequence:

Step 1. Before an authorized employee turns off a machine or equipment, the authorized employee must know the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.

Step 2. The authorized employee must notify all affected personnel.

Step 3. The machine or equipment must be turned off or shut down using the procedures established for the machine or equipment.

Step 4. All energy isolating devices that are needed to control the energy to the machine or equipment must be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).

Step 5. When applying a lockout or tagout device, the employee must follow observe these guidelines:

a. Lockout or tagout devices must be affixed to each energy isolating device only by authorized employees.

b. Lockout devices, where used, must be affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position.

c. Tagout devices must be affixed in a manner that will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.

1) Where tagout devices are used, the tag must be fastened at the same point at which the lock would be attached.

2) Should it not be physically capable of affixing a tag directly to the energy isolating device, the tag shall be located as close as safely possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.

3) When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it and it is never to be bypassed, ignored, or otherwise defeated.

4) Information placed on the tag must be legible to all other employees involved in the project

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Step 6. Following the application of lockout or tagout devices to energy isolating devices,
all potentially hazardous stored or residual energy must be relieved, disconnected, restrained, and otherwise rendered safe.

NOTE: If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation must be continued until the servicing or maintenance is completed or until the possibility of such accumulation no longer exists.

Step 7. Before starting work on machines or equipment that have been locked out or tagged out, the authorized employee must verify that isolation and deenergization of the machine or equipment have been accomplished.

Step 8. Return the machine or equipment to service.

Instructions:

The steps and sequence set out in this Section explaining how you put lockout and tagout measures into effect are mandatory requirements under the Standard. So make sure you incorporate the Section without substantive changes into your own LOTO Program.

7. Release from Lockout or Tagout

Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures must be followed and actions taken by the authorized employee(s) to ensure:

1. The work area is inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact; and
2. Employees are notified as to the current lockout or tagout condition.
 - a. The work area must be checked to ensure that all employees have been safely positioned or removed.
 - b. Before lockout or tagout devices are moved and before machines or equipment are energized, affected employees must be notified that the lockout or tagout devices will be removed.

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- c. After lockout or tagout devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.

Instructions:

As with Section 6 above, the steps and sequence set out in this Section 7 on release from lockout or tagout are mandatory and should be incorporated into your Program without substantive changes.

8. Lockout or Tagout Devices Removal

Each lockout or tagout device must be removed from any energy isolating device by the employee who applied the device.

Instructions:

Although you can state it differently, this is an OSHA requirement that you must include in your own Program.

9. Temporary Removal of Lockout/Tagout Devices

In the event that lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, employees must follow the following sequence of actions:

Step 1. Clear the machine or equipment of tools and materials;

Step 2. Remove employees from the machine or equipment area;

Step 3. Remove the lockout or tagout devices.

Step 4. Energize and proceed with testing or positioning.

Step 5. De-energize all systems and reapply energy control measures according to Section 6 of this Program to continue the servicing and/or maintenance.

Instructions:

The procedures and sequence for temporary removal of lockout and tagout devices comes from the Standard and needs to be part of your LOTO Program.

10. Involvement of Outside Contractor Personnel in LOTO Activities

Whenever outside servicing personnel are to be engaged in activities covered by this Program, [*Company Name*] and the outside employer will inform each other of their respective lockout or tagout procedures. The department supervisor affected by the contractor's lockout/tagout procedures will then ensure that its employees understand and comply with the restrictions and prohibitions of the outside employer's energy control program.

Instructions:

The language in Section 9 is recommended, not required by the Standard. But while you can follow different procedures, your Program needs to explain how you coordinate and carry out your LOTO activities when they involve or affect employees of contractors and subcontractors at your own site.

11. Shift & Personnel Changes that Occur During Lockout or Tagout

Instructions:

Describe the specific procedures you follow to ensure continuity of lockouts or tagouts that are still taking place when shift or personnel changes occur so that the incoming shift is totally aware of the lockout/tagout process and the shift or personnel changes doesn't disrupt the lockout/tagout protection. OSHA says such procedures are required but doesn't specify what those procedures should be.

12. Group Lockout or Tagout

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When servicing and/or maintenance is performed by a crew, craft, department or other group, it must follow a procedure that affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device. **No employee may perform work under another employee's lock.**

Group lockout or tagout devices must follow the protocols and procedures set out in Section 5 of this Program as well as the following additional requirements:

- a. When more than one crew, craft, department, etc. is involved, an assignment of overall job-associated lockout or tagout control responsibilities must be made to an authorized employee to coordinate affected work forces and ensure continuity of protection.
- b. Primary responsibility lies with the authorized employee coordinator working under the protection of a group lockout or tagout device.
- c. The authorized employee coordinator must determine the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment.
- d. Each authorized employee must affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

Instructions:

Although you don't have to follow the exact same procedure, if you permit group lockout your Policy needs to designate an authorized employee to be in charge and require him/her to coordinate the various LOTO activities taking place, notify the affected employees, and ensure the proper sequence is followed.

13. Personal Protective Equipment

[Describe required PPE].

Instructions:

Your LOTO Program should list the PPE you furnish and require employees to use. At a minimum, the PPE should comply with OSHA requirements. You could also follow a more stringent standard like NFPA 70E. Example:

Personal protective equipment (PPE) appropriate for use with electrical hazards will be provided to employees as recommended by National Fire Protection Association Standard 70E – 2004.

14. LOTO Training

Training shall be provided to applicable employees to ensure that the purpose and function of this Program are understood and to provide the knowledge and skills for the safe application, usage, and removal of the energy controls. Training shall include:

- Purpose and use of the energy control procedure;
- Recognition of applicable hazardous energy sources
- The type and magnitude of the energy available in the workplace;
- The methods and means necessary for energy isolation and control;
- The lockout/tagout process; and
- The ban on attempts to restart or re-energize machines or equipment which are locked out or tagged out.

Instructions:

The training language is based on the actual requirements of the LOTO Standard. While you may add to the clause if you provide additional training, you can't remove any of the bulleted items. In other words, the bulleted items must be covered in your LOTO training.