



241 FW 8

Energy Lockout/Tagout Program

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8.1 What is the purpose of this chapter? This chapter outlines the requirements and responsibilities for controlling the unintentional release of hazardous energy that could cause injury or damage, while machines and equipment are being maintained and/or serviced.

8.2 To whom does the Lockout/Tagout Program apply? It applies to all Service employees, volunteers, Youth Conservation Corps members, seasonal workers, and students who service and/or maintain machines and equipment; **and** to all people who may come in contact with the machines and equipment while they are being serviced and/or maintained.

8.3 What are the authorities for this chapter?

- A. Public Law 91-596, Sec 19, Federal Agency Safety Programs and Responsibilities.
- B. Executive Order 12196, Occupational Safety and Health Programs for Federal Employees.
- C. 29 CFR 1910.147, The Control of Hazardous Energy Sources, Lockout/Tagout.
- D. 29 CFR 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters.

8.4 Who is responsible for the Lockout/Tagout (LOTO) Program?

A. The Chief, Division of Safety and Health must:

- (1) Revise and update this chapter, as necessary.
- (2) Provide interpretation of LOTO Program requirements and serve as a consultant to resolve Servicewide questions or issues.

B. Regional Directors must provide sufficient support and resources to effectively implement the LOTO Program in their areas of responsibility.

C. Regional Safety Managers must:

- (1) As requested, provide interpretation of LOTO Program requirements and serve as an advisor to resolve Regionwide questions and issues.
- (2) Evaluate the implementation of LOTO Program requirements during Regional field station safety program evaluations.

D. Project Leaders and Supervisors, where LOTO Programs are required, must:

- (1) Ensure that written LOTO procedures are in place at their facility.
- (2) Make sure that all of their employees complete the required LOTO Program training.

(3) Maintain written records of all employee training.

(4) Make sure that all aspects of the LOTO Program are implemented in their facilities and work areas.

E. Employees must:

(1) Complete all LOTO Program training.

(2) Comply with all LOTO Program requirements.

8.5 What is the Service policy regarding the control of hazardous energy? You will not be exposed to potentially hazardous energy sources from machines or equipment that are being serviced and/or maintained at your facility. Hazardous energy sources include any potentially harmful source of electrical, mechanical, hydraulic, pneumatic, chemical, or thermal energy. Energy isolating devices will be used whenever possible. In the rare cases when a lockout device cannot be used, authorized employees will use tagout procedures. If tagout procedures are used, it must be demonstrated that a level of safety equivalent to the lockout procedures is obtained. At a minimum, supervisors and employees will comply with the applicable Occupational and Safety Health Administration (OSHA) regulations.

8.6 What definitions are useful in understanding the requirements of this chapter?

A. Affected employee. You are an affected employee if you either:

(1) Operate or use machines or equipment while they are being maintained and/or serviced under lockout/tagout.

(2) Work in an area where machines or equipment are being maintained and/or serviced under lockout/tagout.

B. Authorized employee. You are an authorized employee if you lockout or tagout a machine or equipment before maintaining and/or servicing it.

C. Capable of being locked out. A machine or equipment is capable of being locked out if either:

(1) An energy isolating device has a hasp or other means of attaching a key or combination lock to it.

(2) A locking mechanism is built into it.

(3) You can lockout the energy source without the need to dismantle, rebuild, or replace the energy isolating device, or permanently change its ability to control energy.

D. Energized. The machine or equipment is connected to an energy source or contains residual or stored energy.

E. Energy isolating device. A mechanical device that physically prevents the transmission or release of energy.

(1) Some examples of energy isolating devices are:

(a) A manually operated electrical circuit breaker.

(b) A disconnect switch.

(c) A manually operated switch, if the conductors of a circuit can be disconnected from all ungrounded supply conductors **and** no pole can be operated independently.

(d) A line valve.

(e) A block.

(f) Any similar device used to block or isolate energy.

(2) Devices that **are not** energy isolating include: push buttons, selector switches and other control circuit type devices.

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

G. Hasp. A lockout device that has the capability to accept multiple locks for group lockout.

H. Lockout. Putting a lockout device on an energy isolating device. You have achieved lockout when the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

I. Lockout device. A device that prevents energizing of a machine or equipment. It uses a positive means to hold an energy isolating device in the safe position. Examples of lockout devices include:

(1) A lock, either key or combination type.

(2) Blank flanges.

(3) Bolted slip blinds.

(4) Chains, clamps, tongs, or lockout scissors.

J. Servicing and/or maintaining. Workplace activities such as constructing, installing, setting up, adjusting, inspecting, or modifying machines or equipment. **Note:** You are considered to be servicing and/or maintaining the machines or equipment if you might be exposed to the unexpected energizing or startup of the equipment or release of hazardous energy while you lubricate, clean or un-jam machines or equipment, or make adjustments or tool changes.

K. Tagout. Placing a warning on an energy isolating device to tell people not to operate that machine or equipment.

L. Tagout device. A nonreusable, nonreleasable warning device, such as a tag, which can be securely fastened to an energy isolating device by hand. The purpose of a tagout device is to warn people that they must not operate either the energy isolating device or the equipment that is tagged.

8.7 What is a LOTO procedure? A procedure that clearly and specifically outlines the scope, purpose, authorization, rules, and techniques to be used for the control of hazardous energy. [FWS Form 3-2280](#) (Hazardous Energy Control Procedures Energy Source Evaluation) is an evaluation form for determining energy control procedures. [FWS Form 3-2281](#) is used to document the procedures. The procedures should include:

A. A statement of the intended use of the procedure.

B. Specific steps for shutting down, isolating, blocking and securing machines or equipment to control the hazardous energy.

C. Procedural steps for the placement, removal and transfer of lockout devices or tagout devices and

D. Requirements for testing a machine or equipment to determine and verify the effectiveness of the

devices and other energy control.

8.8 What are typical machine or equipment servicing and/or maintenance activities requiring lockout/tagout? Typical activities requiring lockout/tagout include:

- A. Repairing electrical circuits or equipment.
- B. Clearing blocked or jammed mechanisms.
- C. Work on lines carrying hazardous materials, materials under pressure, or materials at dangerous temperatures (cold or hot).
- D. Working under heavy equipment or machinery with all or part of it raised and/or capable of falling.

8.9 What machine or equipment servicing and/or maintenance activities are not covered by this chapter?

- A. LOTO does not apply to minor tool changes, adjustments, and other minor service activities that take place during normal operations. The changes have to be routine, repetitive, and integral to the use of the equipment.
- B. LOTO procedures do not apply to cord and plug-connected electrical equipment if exposure to unexpected start-up is controlled by unplugging it from its energy source. The plug must also be under the exclusive control of the employee performing the servicing or maintenance.
- C. LOTO does not apply to "hot-tap" operations, such as transmission and distribution systems for utilities or water distribution systems in Service applications, if the employee can demonstrate that:

- (1) Continuity of services is essential, and
- (2) Shutdown of the system is impractical, and
- (3) Documented procedures are followed, and
- (4) Special equipment is used that will provide proven effective protection for employees.

8.10 What are the requirements for selecting lockout devices?

- A. Lockout devices must be keyed individually with no more than two keys for each lock. For group lockout, if more than one employee or contractor are working together, the device must be capable of accepting more than one lock.
- B. Lockout devices must be durable and applicable for the environment in which they are used. They may be locks, chains, tongs, lockout scissors, or other approved devices capable of accepting a lock.

8.11 When should I use a lockout device? Lockout devices must be used on disconnects, panels, and other controllers to hold a switch arm or valve in the off position.

8.12 What are the requirements for using lockout devices?

- A. Lockout devices must be used to keep energy isolating devices in the safe or off position.
- B. Key type locks are recommended.
- C. Project leaders should issue locks to each authorized employee who might service and/or maintain machines or equipment.

D. The locking device must not have more than two keys and both of them must be under exclusive control of the individual who owns the lock.

E. No key should fit more than one lock.

8.13 What are the requirements for purchasing/constructing and using lockout and tagout devices?

A. Lockout/tagout devices must:

(1) Be easily recognized by everyone.

(2) Be standardized. Each facility must make sure that their lockout and tagout devices are all the same color, shape or size.

(3) Be strong. Make tagout devices and their attachments strong enough to prevent inadvertent or accidental removal.

B. Locks must be:

(1) Purchased specifically for lockout use.

(2) Used for lockout only.

(3) Designed so that removal by other than normal means would require excessive force or unusual methods.

C. Tags must:

(1) Include the authorized employee's name who attached them.

(2) Warn people about the danger if a machine or equipment is energized.

(3) Have the same size print and format.

(4) Use warnings such as: DO NOT START, DO NOT OPEN, DO NOT CLOSE, DO NOT ENERGIZE, DO NOT OPERATE.

8.14 What steps should I take before servicing and/or maintaining machines or equipment under lockout/tagout? If you are an authorized employee, you must:

A. Prepare for lockout/tagout:

(1) Know the type and amount of energy the machine or equipment uses.

(2) Tell all affected employees that you will be using lockout/tagout procedures on the machine or equipment.

B. Shutdown the machine/equipment:

(1) Turn off or shut down the machine or equipment using the proper procedures.

(2) Dissipate or restrain any stored energy in the machine or equipment (i.e., air, gas, steam, or water pressure, springs, elevated parts of the machine, rotating flywheels, hydraulic systems).

C. Put lockout/tagout devices on the machine or equipment. When you use locks, you must also use a tag that identifies you as the authorized employee who applied the lockout device.

(1) Locate all energy isolating devices and place them in the safe position, to make sure that the machine or equipment is isolated from all energy sources.

(2) Attach a lockout and/or tagout device to each energy isolating device. If there is more than one energy source, or that source is not readily identifiable, written LOTO procedures must be available that identify the energy sources and control methods.

(3) You must test to ensure that the energy has been isolated before work is to begin.

(4) When servicing or maintenance of equipment is being performed by more than one Service employee, or a Service employee with a contractor, each and everyone working on the equipment must lock it out using appropriate locks and devices.

8.15 What should I do to release a machine or equipment from lockout or tagout?

A. If you are the authorized employee who attached the lockout or tagout devices, before you remove the devices and reenergize the machine or equipment you will:

(1) Inspect the work area to make sure it is clear of debris and tools that could create a hazard when you reenergize the machine or equipment.

(2) Inspect the machine/equipment to make sure you have completely reassembled it and that all the safety guards are in place.

(3) Make sure that everyone in the work area is a safe distance away from the machine/equipment when you reenergized it.

(4) Remove each lockout or tagout device from each energy isolating device.

(5) Tell the affected employees that you have removed the lockout or tagout devices.

B. If the authorized employee who attached the lockout or tagout devices is not available to remove them, the supervisor may direct that another authorized employee remove them.

(1) The project leader must verify that the authorized employee who applied the device is not at the facility.

(2) The project leader should try to contact the employee who attached the devices to tell him/her the devices are being removed.

(3) Before the authorized employee who attached the lockout or tagout devices is allowed to resume work at the facility, the project leader must tell him/her that the lockout or tagout device was removed.

8.16 What are the training requirements for the LOTO Program? A safety talk on general LOTO control procedures and devices will be given for all new affected employees, and at least annually for all other employees.

A. Training for authorized employees will include:

(1) The purpose and requirements of the LOTO Program.

(2) Recognition of hazardous energy sources.

(3) Type and magnitude of the energy in the machines/equipment at their workplace.

(4) Methods of energy isolation and control.

(5) The dangers of ignoring or removing a lockout/tagout device from a machine, circuit, or system.

B. Training for affected employees will include:

(1) The contents of this chapter.

(2) Rules against removing energy control devices from locked out or tagged out machines or equipment.

(3) Rules against attempting to restart or reenergize machines or equipment that are locked out or tagged out.

(4) Statement that project leaders will notify them before energy control devices are installed and after energy control devices are removed.

C. Retraining is required for all authorized and affected employees whenever:

(1) Their job assignment changes.

(2) There is a change in machines or equipment at their work sites.

D. Project leaders will keep a written record of LOTO training.

(1) The record will include employees' names, date of training, description of training, and signature of the person giving the training.

(2) The record will include annual inspections of the energy control procedures and certifications for every employee who is authorized to use LOTO procedures. It will identify the machine or equipment on which the procedure was reviewed, the date of the inspection, the individual performing the inspection, and the names of those who participated.

8.17 What are the requirements for periodic inspections?

A. Annually, an authorized employee will perform an inspection of the energy control procedure to ensure the procedure is being followed and to correct any problems identified.

(1) Where lockout is used, it will include a review between the inspector and each authorized employee of the employee's responsibilities under the procedure being inspected.

(2) Where tagout is used, it will include a review between the inspector and each authorized and affected employee of the employee's responsibilities under the procedure being inspected. It will also include a review of the employee's training on the limitations of the tags.

B. This inspection must be certified as having been performed and will identify the equipment/machine, the date of the inspection, the names of employees included in the inspection, and the person who performed that inspection.

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