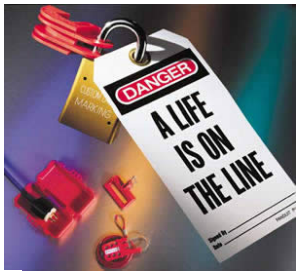
USAG Bavaria Safety Office

Sample Written Program
for
The Control of Hazardous Energy
(*Lockout/Tagout*)



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1910.147

The Control of Hazardous Energy (Lockout/Tagout)

The following lockout/tagout program is provided as a guide to assist USAG Bavaria supervisors and employees in complying with the requirements of 29 CFR 1910.147, Army Pamphlet 385-10, and to provide other helpful information. It is not intended to supersede the requirements of the standards. All personnel should review the standards for particular requirements which are applicable to their individual situation and processes, then make adjustments that are specific to their work place. Work centers will need to add information relevant to their particular facility in order to develop an effective, comprehensive program. Include host nation requirements where warranted.

Excerpts from AR and AP 385-10:

Purpose: The purpose of this program is to establish minimum requirements for the lockout or tagout of energy isolating devices. It will be used to ensure that the machine or equipment is isolated from all potentially hazardous energy, and locked or tagged out before employees perform any servicing or maintenance activities where the unexpected energization, start up, or release of stored energy could cause injury. This program establishes minimum performance requirements for the control of such hazardous energy.

All Army leaders at each echelon will develop and implement functions and written procedures as part of the Army Safety Program and the Army Health Program to fulfill the Army and OSHA requirements for the control of hazardous energy (lockout and tagout).

The control of hazardous energy (lockout and/or tagout) will be developed for ***each piece of equipment*** being used and provided to personnel servicing and maintaining that equipment according to 29 CFR 1910.147.

Required Training: Training for affected employee groups will be provided upon assignment to equipment affected by lockout/tagout requirements. Training will also be required annually, when there is a change in job assignment, machines/ equipment or processes, and when annual inspections reveal deviations from the procedure.

Procedures:

1. Appoint principle staff adviser and technical consultant to conduct periodic inspections to ensure each activity is in compliance with this regulation and other Army and Federal policies governing lockout/tagout of machines or equipment. (Garrison Safety Office)
2. Ensure lockout/tagout safety plans are developed, established, and implemented in each workplace as required, ensuring that consultation and bargaining obligations with the local union are met prior to implementation.

3. Ensure authorized personnel responsible for performing lockout/tagout procedures are identified in activity safety plans (supervisors, line supervisors, operators, maintenance personnel).
4. Ensure **all** machinery and equipment is listed in each section lockout/tagout safety plan.
5. Establish lockout/tagout safety plan isolating equipment and machinery at the energy source.
6. Train affected employees in the purpose and use of the lockout/tagout procedures.
7. Train authorized employees in performing lockout/tagout procedures.
8. Ensure authorized employees perform lockout/tagout procedures as required.
9. List all machinery and equipment in the lockout/tagout safety plan.
10. Obtain required lockout/tagout devices needed to isolate equipment and machinery in the workplace.
11. Assign required lockout/tagout devices to authorized personnel.

1910.147
The Control of Hazardous Energy (Lockout/Tagout) Procedure
Table of Contents

(Shop Name)

Control of Hazardous Energy (Lockout/Tagout)

Lockout/Tagout Procedure

I. OBJECTIVE

The objective of this procedure is to establish a means of positive control to prevent the accidental starting or activating of machinery or systems while they are being repaired, cleaned and/or serviced. This program serves to:

A. Establish a safe and positive means of shutting down machinery, equipment and systems.
B. Prohibit unauthorized personnel or remote control systems from starting machinery or equipment while it is being serviced.
C. Provide a secondary control system (tagout) when it is impossible to positively lockout the machinery or equipment.
D. Establish responsibility for implementing and controlling lockout/tagout procedures.
E. Ensure that only approved locks, standardized tags and fastening devices provided by the work center supervisor will be utilized in the lockout/tagout procedures.

II. ASSIGNMENT OF RESPONSIBILITY

A. ***Responsible Person:*** will be responsible for implementing the lockout/tagout program.
B. ***Responsible Persons:*** are responsible for enforcing the program and insuring compliance with the procedures in their departments.
C. ***Responsible Person:*** is responsible for monitoring the compliance of this procedure and will conduct the annual inspection and certification of the authorized employees.
D. **Authorized employees:** *(those listed in Attachment A)* are responsible for following established lockout/tagout procedures.
E. **Affected employees:** *(all other employees in the facility)* are responsible for insuring they do not attempt to restart or re-energize machines or equipment which are locked out or tagged out.

III. PROCEDURES

The ensuing items are to be followed to ensure both compliance with the OSHA Control of Hazardous Energy Standard and the safety of our employees.

A. Preparation for Lockout or Tagout

Employees who are required to utilize the lockout/tagout procedure (see Attachment A) must be knowledgeable of the different energy sources and the proper sequence of shutting off or disconnecting energy means. The four types of energy sources are:

1. Electrical (most common form);
2. Hydraulic or pneumatic;
3. Fluids and gases; and

4. Mechanical (including gravity).

More than one energy source may be utilized on some equipment and the proper procedure must be followed in order to identify energy sources and lockout/tagout accordingly. See Attachment F for specific procedure format.

B. Electrical

1. Shut off power at machine and disconnect.
2. Disconnecting means must be locked or tagged.
3. Press start button to see that correct systems are locked out.
4. All controls must be returned to their safest position.
5. Points to remember:
   a. If a machine or piece of equipment contains capacitors, they must be drained of stored energy.
   b. Possible disconnecting means include the power cord, power panels (look for primary and secondary voltage), breakers, the operator's station, motor circuit, relays, limit switches, and electrical interlocks.
   c. Some equipment may have a motor isolating shut-off and a control isolating shut-off.
   d. If the electrical energy is disconnected by simply unplugging the power cord, the cord must be kept under the control of the authorized employee or the plug end of the cord must be locked out or tagged out.

C. Hydraulic/Pneumatic

1. Shut off all energy sources (pumps and compressors). If the pumps and compressors supply energy to more than one piece of equipment, lockout or tagout the valve supplying energy to the piece of equipment being serviced.
2. Stored pressure from hydraulic/pneumatic lines shall be drained/bled when release of stored energy could cause injury to employees.
3. Make sure controls are returned to their safest position (off, stop, standby, inch, jog, etc.).

D. **Fluids and Gases**

1. Identify the type of fluid or gas and the necessary personal protective equipment.
2. Close valves to prevent flow, and lockout/tagout.
3. Determine the isolating device, then close and lockout/tagout.
4. Drain and bleed lines to zero energy state.
5. Some systems may have electrically controlled valves. If so, they must be shut off and locked/tagged out.
6. Check for zero energy state at the equipment.

E. Mechanical Energy

Mechanical energy includes gravity activation, energy stored in springs, etc.

1. Block out or use die ram safety chain.
2. Lockout or tagout safety device.
3. Shut off, lockout or tagout electrical system.
4. Check for zero energy state.
5. Return controls to safest position.

F. Release from Lockout/Tagout

1. Inspection: Make certain the work is completed and inventory the tools and equipment that were used.
2. Clean-up: Remove all towels, rags, work-aids, etc.
3. Replace guards: Replace all guards possible. Sometimes a particular guard may have to be left off until the start sequence is over due to possible adjustments. However, all other guards should be put back into place.
4. Check controls: All controls should be in their safest position.
5. The work area shall be checked to ensure that all employees have been safely positioned or removed and notified that the lockout/tagout devices are being removed.
6. Remove locks/tags. Remove only your lock or tag.

G. **Service or Maintenance Involving More than One Person**

When servicing and/or maintenance is performed by more than one person, each authorized employee shall place his own lock or tag on the energy isolating source. This shall be done by utilizing a multiple lock scissors clamp if the equipment is capable of being locked out. If the equipment cannot be locked out, then each authorized employee must place his tag on the equipment.

H. **Removal of an Authorized Employee's Lockout/Tagout by the Company**

Each location must develop written emergency procedures that comply with 1910.147(e)(3) to be utilized at that location. Emergency procedures for removing lockout/tagout should include the following:

1. Verification by employer that the authorized employee who applied the device is not in the facility.
2. Make reasonable efforts to advise the employee that his/her device has been removed. (This can be done when he/she returns to the facility).
3. Ensure that the authorized employee has this knowledge before he/she resumes work at the facility.

I. **Shift or Personnel Changes**

Each facility must develop written procedures based on specific needs and capabilities. Each procedure must specify how the continuity of lockout or tagout protection will be ensured at all times. See 1910.147(e)(4).

J. Procedures for Outside Personnel/Contractors

Outside personnel/contractors shall be advised that USAG Bavaria has and enforces the use of lockout/tagout procedures. They will be informed of the use of locks and tags and notified about the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

USAG Bavria will obtain information from the outside personnel/contractor about their lockout/tagout procedures and advise affected employees of this information.

The outside personnel/contractor will be required to sign a certification form. If outside personnel/contractor has previously signed a certification that is on file, additional signed certification is not necessary.

K. Training and Communication

Each authorized employee who will be utilizing the lockout/tagout procedure will be trained in the recognition of applicable hazardous energy sources, type and magnitude of energy available in the work place, and the methods and means necessary for energy isolation and control.

Each affected employee (all employees other than authorized employees utilizing the lockout/tagout procedure) shall be instructed in the purpose and use of the lockout/tagout procedure, and the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

Training will be certified using Attachment B (Authorized Personnel) or Attachment C (Affected Personnel). The certifications will be retained in the employee personnel files.

L. Periodic Inspection

A periodic inspection (at least annually) will be conducted of each authorized employee under the lockout/tagout procedure. This inspection shall be performed by the (***Responsible person)*** . If ***(Responsible person)*** is also using the energy control procedure being inspected, then the inspection shall be performed by another party.

The inspection will include a review between the inspector and each authorized employee of that employee's responsibilities under the energy control (lockout/tagout) procedure. The inspection will also consist of a physical inspection of the authorized employee while performing work under the procedures.

The ***(Responsible person)*** shall certify in writing that the inspection has been performed. The written certification (Attachment D) shall be retained in the individual's personnel file.

ATTACHMENT A

List of Authorized Personnel for Lockout/Tagout Procedures

NAME	JOB TITLE

ATTACHMENT B

Certification of Training
(Authorized Personnel)

I certify that I received training as an authorized employer under ***Shop Name*** Lockout/Tagout program. I further certify that I understand the procedures and will abide by those procedures.

_____ _____

AUTHORIZED EMPLOYEE SIGNATURE DATE

ATTACHMENT C

Certification of Training
(Affected Personnel)

I certify that I received training as an Affected Employee under ***Shop Name*** Lockout/Tagout Program. I further certify and understand that I am prohibited from attempting to restart or re-energize machines or equipment that are locked out or tagged out.

_____ _____

AFFECTED EMPLOYEE SIGNATURE DATE

ATTACHMENT D

Lockout/Tagout Inspection Certification

I certify that ***Equipment*** was inspected on this date utilizing lockout/tagout procedures. The inspection was performed while working on ***Equipment*** .

AUTHORIZED EMPLOYEE SIGNATURE _____ DATE _____

INSPECTOR'S SIGNATURE _____ DATE _____

ATTACHMENT E

Lockout/Tagout
Energy Control Procedures
(Specific to each machine)

Preparation for Shut Down

1. Identify equipment to be shut down: _____
2. Location in facility: _____
3. Procedures to notify all **affected employees**: _____
   _____
4. Identify **all** power sources:
   a) Electrical: _____
   b) Air: _____
   c) Steam: _____
   d) Hydraulic: _____
   e) Gravity: _____
   f) Other: _____
5. Identify lockout/tagout devices to be used: _____
   _____
   _____
   _____

Shut Down

Description of the shut down procedures: _____
_____
_____
_____

Isolation

Procedures for isolation of equipment from **all** power sources: _____

_____

_____

_____

Lockout/Tagout Device Application

Procedure for locking out or tagging out equipment: _____

_____

_____

_____

Release of Stored Energy

Procedures for the release of stored energy (where applicable): _____

_____

_____

_____

Verification of Isolation

Procedures to ensure that equipment is isolated from **all** power sources: _____

_____

_____

_____

Start-Up

1. Visual inspection of the machine and equipment. Ensure all tools have been removed. Return guards to place.

2. Notify all **affected employees** and **other** employees of the start up.

3. Remove all lockout/tagout devices and restore power.