

12. Lockout/Tagout Program

WAC 296-24-110

1.0 Introduction

The purpose of the Lockout/Tagout program at Pacific Lutheran University (PLU) is to establish procedures to ensure that all machines or equipment are stopped and isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where unexpected energization or start up of the machine or equipment or release of stored energy could cause injury, such as an unexpected release of steam.

2.0 Application

The procedures in this program apply to any energy source in which direct or stored energy could cause injury to employees at PLU. These energy sources include, but are not limited to, electrical, mechanical, hydraulic, pneumatic, chemical, and thermal energy.

3.0 Compliance

All effected employees are required to comply with this program. Because of the potential deadly nature of uncontrolled energized equipment or machines, strict disciplinary procedures will be followed for employees violating these rules. .

4.0 Responsibilities

All employees will be made aware of the provisions of this program as those provisions apply to the employee's role. The types of employees covered by this program are:

4.1 Authorized

An employee who locks out or tags out machines or equipment in order to service or maintain that machine.

4.2 Affected

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

Whenever a Pacific Lutheran University employee encounters or observes a machine control or electrical panel switch that has been locked out or tagged out, no attempt shall be made to start the machine or activate the switch. The proper procedure is to contact the person whose name is on the tag or lock. That person may remove the lock or tag.

It is expressly forbidden for any person, other than a supervisor or the one who installed the tag or lockout, to remove the lock or activate a tagged power panel, valve, switch, or piece of power equipment. Failure to follow this procedure could result in serious damage, injury or even loss of life and may result in disciplinary action.

5.0 Training Requirements

All employees who service and/or maintain equipment or machines, or who must remove or bypass guarding during normal production activities, will be trained in this program. Training records containing the employee's name and date of training must be retained by the supervisor and placed in the employee's personnel file.

5.1 Initial Training

Authorized employee training will include:

- Recognition of hazardous energy sources
- The types and magnitude of energy in the workplace
- Methods for energy isolation/control

Affected employee training will include:

- The purpose and use of energy control procedures
- Prohibition on restarting machines or equipment

5.2 Retraining

Retraining will be provided when periodic inspection reveals that an employee may not be aware of procedures, or whenever there is a change in job assignments; a change in machine, equipment, process or a change in energy control procedures that presents a new hazard.

6.0 Responsibilities

6.1 Environmental Health & Safety Manager

The Environmental Health & Safety Manager is responsible for assisting supervisors in arranging employee training and retraining programs on this procedure.

6.2 Management Responsibilities

- Each supervisor will assure that the locks and devices required for compliance with the procedures are provided to authorized employees as needed.
- Each supervisor of authorized and affected employees is responsible for effectively enforcing compliance with the lockout procedure in his/her department. Enforcement includes the use of corrective disciplinary action where necessary for violations of procedures.

6.3 Employee Responsibilities

- Authorized and affected employees are expected to comply with the lockout/tagout policy and procedures.
- When employees are issued personal safety locks, keys, or tags, they will be expected to take care of them; keep them in their possession and not loan them to other employees; and notify their supervisor if the lock, key, or tag becomes damaged or lost.
- Employees should consult with their supervisor whenever there are any questions regarding their personal protection during maintenance, service, or routine operations.

6.4 Outside Contractors

The project or contract manager will notify outside contractors whose employees are engaged in activities that require lockout/tagout of the policy and procedures used within the University. All contractors must abide by the University's lockout/tagout procedures as a condition of their contract.

Outside contractors desiring to use their own locks or tags must first obtain approval from the Maintenance Manager and provide PLU with a master key for emergency purposes.

7.0 General Rules:

- Safety locks are for the personal protection of the employee and are only to be used for locking out equipment. Employees are not allowed to "loan" their locks to other employees.
- No two-safety lock configurations will be the same. Each key will fit only one lock and only one key will be issued to each employee. The University's locksmith will have a master list of key numbers and will keep one extra key to each lock.
- Supervisory locks will be used to lockout equipment for an extended period of time. The supervisor will retain all supervisory locks and keys.
- Only the employee who applies a safety lock may remove it. If the employee is not available to remove a lock, specific procedures in section 12.0 (below) must be followed.

8.0 Placement of Tags or Locks

Each lock or tag must be identified with:

- The name of the person performing the work
- A description of the work
- The date
- The department performing the work.

If more than one person is working on the equipment, each worker must place his or her own lock and tag on the control or switch. A multiple user hasp may be used in cases where more than one person is working on the equipment. In such places where multiple locks are not possible, each employee should affix his/her own tag to the single lock that is in place. If the control or switch is always in sight, the worker may choose to use a tag on the control or switch.

8.1 Verifying

Before starting work, press the "on" switch to make sure that the equipment cannot be started, set in motion or energized by alternate power sources or stored energy. Where there is potential exposure to electrical wiring, test all poles or lines of the power source to ensure that they are all disconnected.

8.2 Removal

When the job is finished, each worker must remove his or her lock and tag. One worker must not remove the lock or tag of another worker.

In some circumstances supervisors may need to remove or grant permission to remove a worker's lock or tag. This may only be done after a thorough inspection has been made of

the area, by the supervisor, to assure that no person will be exposed to dangers as a result of activating the system.

The supervisor must insure that the person whose name is on the lock or tag is contacted and notified that their lock or tag is being or has been removed.

Each padlock will have only one key, which is used by the employee, and a master, which must be retained by the supervisor. If a key is lost, report it immediately to the supervisor.

9.0 Locking and Tagging Equipment or Machines

The following procedures must be followed when locking and tagging equipment to work on.

- The authorized employee will notify affected employees that equipment is to be locked out. The equipment under repair is to be locked and tagged by ALL workers performing service on the equipment. Each authorized employee will use his/her own personal lock on the equipment. The lock may be removed ONLY by the authorized employee who placed it on the equipment, except in special circumstances as described in this chapter.
- All electric power to the equipment must be turned OFF and locked OFF with the padlock. Energy must be isolated so that it is not possible to inadvertently re-energize the equipment.
- A red tag reading “Danger: Do Not Operate” must be attached, initialed, and dated by the authorized employee.
- Before work is started, all pneumatic, hydraulic, or other fluid lines in the machine must be checked for stored energy. All pressure must be vented or safely isolated from the area where work is to be done.
- Contents of line accumulators or tanks must be drained as necessary. Valves must be locked in either the open or closed position as the situation requires to prevent a buildup of pressure.
- Any mechanisms under spring tension or compression must be blocked, clamped, or chained in position if the stored energy cannot be safely released.
- Any suspended mechanisms or parts which might drop or cycle through a lower position must be moved to a safe position, or if necessary blocked, clamped or chained in place.
- All moving parts must be at rest and the start button must be activated to assure that the machine is in a *zero mechanical state* before starting work. Operating controls must be returned to the OFF position after the isolation of the equipment is verified.
- Equipment with power panels at public locations must be locked out or positively disabled at two separate locations.
- Plug-in cord equipment operated by a single electrical source will be unplugged and a TAGOUT sign attached to the plug, unless the plug is under the exclusive control of the employee or constant sight of the employee.

10.0 Ongoing Repairs

- If repairs must continue beyond the authorized employee’s shift, he/she must confer with his/her supervisor to determine whether another authorized employee will continue repairs.
- If another authorized employee will be continuing the repair, then the status of the repair must be forwarded to that employee. The initial lock and tag must be removed in the

presence of the replacement employee, and the replacement employee must install his/her own lock and tag before continuing with the repair.

- If repairs will be suspended in the time between shifts, the employee must remove his/her lock and tag in the presence of his/her supervisor and the supervisor must install a supervisory lock and tag.

11.0 Removing Locks and Tags

Locks and tags may ONLY be removed by the authorized employee who initially put them in place except as noted in this chapter. Before the last lock/tag is removed from machinery or equipment, all of the following conditions that apply must be completed.

- All guards must be installed.
- All exposed electrical wiring must be covered.
- All open pipes must be closed and properly connected.
- Verify that all controls are in neutral position.
- The authorized employee must insure that systems and equipment are safe to operate and that all nonessential items have been removed from the work area.

The authorized employee must check to insure that all other employees have been safely positioned or removed from the area.

The authorized employee must notify effected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.

Remove the lock/tag.

12.0 Supervisory Removal of Locks and Tags

In very unusual cases, a supervisor may remove a lock/tag installed by an authorized employee. The supervisor must verify the following:

- The authorized employee who installed the lock/tag is not at PLU at that time.
- All reasonable efforts have been made to contact the authorized employee and inform him/her that the lock/tag has been removed.
- The authorized employee is informed that the lock/tag has been removed before he/she resumes work at PLU.
- All other criteria of section 11.0 Removing Locks and Tags have been met.

13.0 Procedures for Locked/Tagged Equipment or Machines

If another employee or person at PLU comes across a machine or equipment that has been locked/tagged out and that machine or equipment must be operated, the authorized employee who placed the lock/tag must be contacted.

If the locked/tagged equipment must be operated during normal working hours, notify Facilities Management at x7380. Give the location of the equipment and the initials of the individual who signed the tag.

If the locked/tagged equipment must be operated outside of normal working hours, notify Campus Safety & Information at extension x7441. CSIN will contact the maintenance manager. Give the location of the equipment and the initials of the individual who signed the tag.

Under no circumstances may any PLU staff other than the authorized employee who placed the lock/tag or his/her supervisor (Section 12.0) remove any locks or tags.

Failure to follow these rules may result in disciplinary action.

