

TEXAS STATE TECHNICAL COLLEGE
STATEWIDE OPERATING STANDARD

No. GA 1.6.8	Page 1 of 5	Effective Date: 03/04/16
DIVISION:	General Administration	
SUBJECT:	Lockout/Tagout Procedures	
AUTHORITY:	29 CFR 1910.147	
PROPOSED BY:	Tom Hooker	
TITLE:	Executive Director, Governance, Risk, and Compliance	Date: 03/04/16
RECOMMENDED BY:	<i>Original Signed by Ray Rushing</i>	
TITLE:	Vice Chancellor & Chief Legal Officer/General Counsel	Date: 03/04/16
APPROVED BY:	<i>Original Signed by Mike Reeser</i>	
TITLE:	Chancellor	Date: 03/04/16

STATUS: Approved by VCs 03/04/16

HISTORICAL STATUS: New/Proposed 10/2015

COMPLIANCE

The purpose of this standard is to prevent personal injury and property damage due to the unexpected energization or start-up of machines and equipment or release of stored energy where repair and maintenance is under way.

DEFINITIONS

Affected Employee - An employee whose job requires him or her to work in an area where repairs or maintenance is being performed under Lockout/Tagout procedures.

Authorized Employee- A person who has received training in the Lockout/Tagout procedure, therefore, qualified to place locks or tags on a machine or equipment in order to perform repairs or maintenance safely. The authorized employee can be both; the Lead person and/or the affected employee.

Energy Isolating Device - A mechanical device that physically isolates the energy source which should prevent the accidental release of energy. Some of the examples are: a circuit breaker, a disconnect switch, a line valve, a blind flange, etc. Note: a push button or a selector switch is not considered an isolation device.

Lockout Device - A device with the positive means to hold an energy isolating device in the safe position and to prevent the energizing of a machine or equipment. This could be a keyed lock or combination type which can only be removed by the employee who placed it, or by the supervisor upon receiving authorization from this employee.

Tagout Device - A warning device, such as a tag with means of attachment securely to an energy-isolating device in order to prevent its operation. A piece of equipment may return to service only when all the tags are removed.

Energized - Equipment/component containing residual or stored energy e.g. steam, gas, water, electricity, etc.

Energy Source - Any source such as: electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy source.

Servicing and/or Maintenance - Maintenance and repair activities such as; constructing, installing, setting up, adjusting, inspecting, unjamming machines, servicing, lubricating, etc.

Lead Person- Authorized employee initiating the Lockout/Tagout procedure who is also responsible for preparing paperwork and obtaining proper signatures.

LOTO Log - A record of a job performed under the Lockout/Tagout procedure which contains; the equipment being serviced, signatures of the employees involved, the job number, and the tag number.

Tag Number - A specific number assigned to each tag which was placed at isolation points.

PERTINENT INFORMATION

29 Code of Federal Regulations 1910.147, The Control of Hazardous Energy (Lockout/Tagout) and the *Accident Prevention Manual Engineering and Technology*, 10th Edition 1996.

OPERATING PROCEDURES

General Provisions

1. As per OSHA requirements implemented in January 1990, new equipment that is installed or being serviced should be designed in such a way that it will accommodate a locking device.
2. A lockout device and tag shall be affixed to an energy-isolating device to disable machines or equipment from unexpected energization, startup or release of stored energy.
3. When a lockout device cannot physically be attached to an energy isolation device, then the Tagout system shall be utilized.
4. Protective materials and hardware such as locks, tags, etc., shall be provided with the sole intent to isolate the energy source, and they shall meet the following requirements:

- a. Lockout devices shall be capable of withstanding the environment in which they will be exposed.
 - b. Tagout devices shall be constructed and printed in such a way that exposure to weather conditions, corrosive environment or damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.
 - c. All tags shall be standardized in the following criteria: print format (color, shape, size). Tags shall include the legend such as the following: DO NOT START, DO NOT ENERGIZE, DO NOT OPERATE, etc.
5. Training should be conducted at annual basis. Employees will receive a certificate of completion and a copy of the certificate should be placed in their personnel file.
6. Procedures shall clearly outline rules and techniques to be utilized for the control of hazardous energy and the means to enforce compliance including:
- a. Specific steps for placing and removing a Lockout/Tagout utilizing the guidelines of the LOTO log.
 - b. Specific steps for shutting down, isolating, blocking and securing machines or equipment and warning of employees.
 - c. Specific requirements for testing and verify effectiveness of lockout devices and other control measures.
 - d. Specific steps in situations when you must remove a lock or tag to do a run-test.
 - e. Specific procedures when group Lockout/Tagout is required.
 - f. Specific procedures when there is a shift change or personnel change
7. When tags are used, employees shall be trained in the limitations of tags.
- a. Tags are only warning devices and do not provide the physical restraint of a lock.
 - b. Tags must be attached securely to prevent accidental detached. Once tags are placed at the isolation points, they can only be removed when all the employees who worked on the equipment have signed-out on the LOTO log.
 - c. Tags must be made of material that will withstand the environmental conditions in which they are used.
8. Retraining shall be provided if there is a change in the process, job assignment, change in machines, or changes in the energy control procedure. Retraining shall also be performed if the periodic inspection reveals any deviations from the energy control procedures.
9. Evaluations of the Lockout/Tagout procedure shall be performed at least annually to ensure the requirements are being followed and deficiencies are corrected

Lockout/Tagout Procedures

1. The Lockout/Tagout procedure to work safely on a piece of equipment will follow the sequence as follows:
 - a. A thorough Job Hazard Assessment shall be performed e.g. energy source, employees affected, personal protective equipment (PPE) etc.
 - b. Enter all pertinent information in the (LOTO) Lockout/Tagout log.
 - c. All energy isolating devices shall be installed in a manner to eliminate the energy hazard and to hold the machine or equipment in a safe on/off position.

- d. Tags will be fixed to the isolation device, whether mechanical or electrical, in such a way that operation of them is prohibited by an authorized employee.
 - e. When tags are used in conjunction with locks, they shall be placed at the same location as the lock. If this is not possible, the tag shall be placed in such a place as to make it obvious not to operate the device. Whenever possible and for extra protection, remove circuit elements, valve handles, etc.
 - f. Authorized employees working under the Lockout/Tagout procedure will be issued locks that are keyed alike.
 - g. Verification shall be made that any stored or residual energy is either; released, disconnected or restrained before maintenance is performed. Periodic checks shall be performed to ensure that re-energization of the equipment does not occur.
2. Group Lockout/Tagout shall utilize same level of protection as the regular Lockout/Tagout procedure. The procedure is as follows:
 - a. An authorized person will be responsible for a set number of employees working under the protection of a group Lockout/Tagout device.
 - b. Each authorized person shall attach their lock and tag to a group lockout device such as a scissor device for multiple locks and removing it after completing their part of the job.
NOTE: A group lockbox will be maintained by one authorized person in the event there is not enough room to install a scissor type device to a main isolating switch. This will be a box with a multiple locking device that each employee can attach their lock to before beginning work. The lockbox will contain the key to the main isolating device. After all employees have finished their job and removed their lock from the lockbox, the responsible employee will take the main isolating device key and clear the Lockout/Tagout procedure.
3. Whenever outside servicing people is engaged in the Lockout/Tagout procedures of TSTC, the supervisor/lead person will ensure that the contractor has a copy of our Lockout/Tagout procedures. If the contractor has a Lockout/Tagout procedure of their own, an evaluation of their procedure must be done to ensure they are equivalent to the safe practices of TSTC.
4. The procedure to release a Lockout/Tagout procedure after the completion of a task shall be executed in the following order:
 - a. The work area shall be checked to ensure that all employees are clear, the area is cleaned, and the tools are away from the equipment,.
 - b. All employees working under the Lockout/Tagout Procedure have signed-out on the LOTO log before tags are to be removed.
 - c. All locks and tags placed at the isolation points or drains are removed with the assurance that the numbers of tags placed equals to the number of tags removed.
 - d. If an employee is still signed-in and his lock is still in place and he/she is unavailable, the supervisor will be authorized to sign-out and remove the lock in his/her behalf providing the following steps are taken:
 - i. Every reasonable effort has been made to contact the employee and let him or her know that the supervisor will be signing-out in his behalf and that his lock will be removed as well.
 - ii. Ensure that the authorized employee is informed before returning to work that his or her device has been removed.
 - iii. ocumentation will be placed in a file to verify that this procedure was followed.

5. In situations where Lockout/Tagout devices must be removed temporary to do a test run, the following procedures shall be followed:
 - a. Notify all employees involved to clear the machine from tools and material.
 - b. Removed all tags and locks
 - c. Make sure all employees involved have signed-out
 - d. Re-apply the Lockout/Tagout Procedure.

PERFORMANCE STANDARDS

1. TSTC implements the Lockout/Tagout SOS for the safety of TSTC employees and students.
2. The Lockout/Tagout SOS is reviewed and updated annually by the TSTC Risk Manager and Safety Committee.