

SUBLIMITY FIRE DISTRICT

Operational Guide

SUBJECT: Tag out/Lock out Program	O.G. NUMBER:
PURPOSE: To describe the Tag out/Lock out Program	Original Date: 5/21/98
	Revision Date:

POLICY

The use of the Tag Out-Lock Out is to prevent an unexpected operation or release of energy of electrical or electronic equipment. The unexpected starting of motors may injure persons working on them, or unexpected energizing of equipment can produce an electrical shock and/or damage to the equipment. Tag Out-Lock Out combines the use of tags and locks, or other electrical or physical systems to lock out power to the equipment while it's broken, or being worked on.

Locking and tagging key points are proven methods of controlling the release of energy or hazardous materials, and an important way of safeguarding workers who operate or repair machines or processes in the plant. This document will define lock out-tag out, list specific procedures to follow to properly lock out-tag out, define responsibility for lock out-tag out, and show the importance of both education and discipline in these procedures.

INTRODUCTION

The majority of accidents happen around machinery of some type. Often, the accident involves electrical shock, burns or exposure to hazardous materials or moving machinery. These accidents share one thing in common: the uncontrolled release of energy.

To protect yourself and your co-workers from danger in the workplace, you must understand that energy, left uncontrolled, can be very dangerous. Energy, simply defined, is the capacity for doing work. Kinetic (moving) energy is the force caused by the motion of an object, such as spinning flywheel. Potential (stored) energy is the unseen force inside an object when not moving, such as a spring under tension. There are many sources of energy which can provide power to machinery. These include:

- A. Gravity
- B. Electrical
- C. Mechanical
- D. Chemical
- E. Hydraulic
- F. Pneumatic
- G. Thermal
- H. Nuclear

A LOCKOUT is simply a locking device, such as a padlock, placed on a power source to prevent the release of hazardous energy that could set a machine in motion or otherwise endanger an

employee working on the machine. Locks may be used with a lockout device that holds an energy control point, such as a switch, lever or valve, in the off position, making it impossible to operate.

A TAG OUT is a written warning telling all others not to operate a switch or valve that could release hazardous energy or set a machine in motion. The tagout is placed prominently on the switch or lever so as not to be missed.

RESPONSIBILITY

Locking and tagging key points are proven methods of controlling the release of energy or hazardous materials, and an important way of safeguarding workers who operate or repair equipment, or machines, and processes in the plant. This document lists specific procedures to follow to properly lockout/tagout, and shows the importance of both education and discipline to these procedures.

It shall be the responsibility of all district officers to enforce the lockout-tagout procedure. New members shall be instructed during recruit training in the purpose and use of the lockout-tagout procedure. District officers shall be responsible for enforcing the specific lockout-tagout procedures listed below.

1. All District members shall be responsible for adhering to this procedure. No locks shall be removed from equipment without first consulting the individual who placed it.
2. If more than one individual is required to lockout or tagout equipment, each shall place their own lock or tag on the affected equipment in such a way as to be certain the equipment is locked out. If the affected equipment cannot accept multiple locks or tags, a multiple lockout or tagout hasp shall be used.

EQUIPMENT

Equipment shall consist of the following:

1. Padlocks. Sufficient quantities of padlocks, each lock to have an individual key, and one master key controlled by the Fire Chief.
2. Multiple lock tongues. To be used in case more than one member is involved in a job.
3. Danger/Warning tags. To be used wherever it is necessary to warn maintenance employees, and operators of a repair.
4. Equipment shall be stored in the storage cabinet next the MSDS cabinets in the apparatus bays.

WHEN TO-LOCKOUT-TAGOUT

Most equipment is designed with safe switches, disabling the equipment for minor repair or calibration during normal operation. In general, these switches provide adequate protection for

minor repair which is routine, repetitive, and necessary to the normal use of the equipment. Lockout-tagout procedures shall be used for the following situations:

1. Major repair or overhaul.
2. When working alone, out of visual contact of the controlling switch.
3. Anytime there is danger of injury from an unexpected release of energy.
4. Any situation that threatens an employees safety.

PROCEDURES LOCK/TAG OUT

The following are specific procedures to be followed for lockout-tagout:

1. Notify the Duty Officer and Fire Chief of the impending lockout situation, the reason for it and estimated start and duration times.
2. Equipment shutdown and isolation. Place all switches in the "off" or "safe" position. Disconnect sources of power, ensuring all sources of both primary and secondary power to the equipment are interrupted.
3. Dissipate residual energy. Shutting down equipment does not mean there is no energy left in it. Check for trapped pressure or residual electricity in the system.
4. Lockout or tagout all in-line points of control. In most cases, this may be more than one place, or more than one lock, if several people are working on the equipment.
5. Lockout verification. Take nothing for granted. Verify that the locked-out switch or control can not be overridden. Test the equipment to be certain that the locked-out switch is de-energized & not simply malfunctioning. Press all start buttons or valves to see if the equipment starts. Ensure the system you will be working on is the same one that has been locked out.
6. Perform the work scheduled. Try to foresee all possible hazards. Ensure the new/repair work does not bypass the lockout and reactivate the system.
7. Lock and/or tag removal. All locks and tags are to be left in place until work is completely finished. This is especially true when more than one employee is working on the equipment. A lock is never to be removed except by the person who placed it there.
NOTE: Only immediate supervisors are to authorize emergency removal of a lock or tag.
8. Equipment start up. Make a final safety check before restarting equipment, to be certain it is safe to operate. Make sure of the following:
 - A. All tools and other items have been removed.
 - B. All machine guards are returned to their proper position.
 - C. All electric, hydraulic, pneumatic or other systems are properly reconnected.

D. All employees are clear of equipment.

Specific procedures for :

Apparatus: Out of service apparatus shall be identified by a placard stating OUT OF SERVICE. The ignition key shall be removed if so equipped, and an OUT OF SERVICE RED Tag will be attached to the steering wheel.

Electrical: Breakers that are taken out of service shall be tagged with a RED Out of service tag.

Equipment: Equipment taken out of service will be tagged with a RED Out of service tag

Stored Energy: Stored energy equipment (Air cylinders, O2 Cylinders, SCBA Cylinders, compressors fire extinguishers shall be secured to prevent damage and be tagged with a RED Out of Service tag.

Many of the tag out-lock out procedures appear to be common sense, and they are. Following them will ensure safe operation calibration, maintenance and repair of equipment and/ or processes, without dangerous surprises or injury.

EDUCATION AND DISCIPLINE

The key to worker safety is education. The purpose of this document is for everyone to understand the importance of lockout-tagout and how to recognize when it is in use. These elements shall be covered during recruit training and during annual in-service training. By educating all employees to the importance of following proper safety procedures, we ensure a safer working environment.

As with all safety procedures, a fair uniform enforcement of discipline must be in place. Members are responsible for their own safety, the safety of their fellow employee and the safety of the facility. Violating lockout-tagout procedures is a major safety violation and will subject the member to immediate discipline.

REFERENCE: 20 CFR 1910.147 - The Control of Hazardous Energy (Lockout/Tagout)