

**SCOTTS VALLEY FIRE
PROTECTION DISTRICT**



STANDARD OPERATING PROCEDURES	ARTICLE: II	SOP: 2114
	SECTION: 2100 SAFETY	
	SUBJECT: LOCK OUT TAG OUT	
	DATE APPROVED: 03/03/2010	
APPROVED:	<i>Mulvan P Mulvaney</i>	

Purpose: The purpose of this program is to lock out and tag out energized equipment and to block out any fluid or other material, which may engulf those who are working in or around the area.

Scope: To assure that all Scotts Valley Fire Protection District employees are adequately protected when working on or near energized equipment during emergency response or providing routine maintenance and service. To assure compliance with Cal-OSHA's Lock Out Tag Out (LOTO) regulation.

Procedure:

The Scotts Valley Fire Protection District's Lock Out Tag Out (LOTO) Program includes the following requirements:

1. All equipment shall be locked out, tagged out and tested to protect against accidental operation when such operation could cause injury to personnel. Only authorized employees shall perform implementation of the LOTO procedure.
2. Special procedures shall be communicated and documented to the oncoming shift to ensure continuity of LOTO protection. The employee performing the work requiring LOTO procedures shall inform his/her captain of the status of the work assignment prior to the end of his shift.
3. Emergency lock out removal shall only be used if the on-duty Captain has made verification of the specific operation and is aware of the hazards, which may pose risk to employees. This can usually be done by speaking to the employee whose lock and tag are on the equipment under repair or maintenance.
4. All LOTO controls must be in place during any maintenance or servicing activity except when the nature of the work requires the system to be temporarily energized. In limited instances where systems must be energized for troubleshooting, testing or special positioning, clear additional measures must be in place to prevent injury to personnel.
5. As required by Cal-OSHA's LOTO requirements, the Duty Chief will assure that specific written LOTO instructions are written for all lockouts. This information

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should clearly and specifically outline the scope of task, individual responsibility, types and magnitude of energy, isolation and test procedures, hazards and controls to implement.

6. LOTO training shall be provided to all Scotts Valley Fire Protection District Personnel who are required to work on energized equipment subject to LOTO procedures. The training should cover the safe application, usage and removal of energy controls utilized in LOTO situations. Refresher training shall be provided annually for authorized and affected employees, whenever there is a change in job assignment, a change in machines, equipment or processes that present a new hazard, or when there is a change in LOTO procedures. Retraining will also be conducted when there is a deficiency in the LOTO procedure.
7. Whenever an outside contractor engages in activities covered by this procedure the Scotts Valley Fire Protection District and the contractor shall inform each other of their respective LOTO procedures.

IV. RESPONSIBILITIES

It is the responsibility of all Scotts Valley Fire Protection District personnel to ensure that this guideline is followed. All employees shall be instructed in the safety significance of the lockout guide by the Training Officer.

V. GUIDELINES

A. Preparation for Lockout

District personnel who perform lock out / tag out shall be certain as to which switch, valve, or other energy isolating devices apply to the equipment being locked out. More than one energy source (electrical, mechanical, or others) may be involved. Any questionable identification of sources shall be cleared by the employees with their supervisors. Before lockout commences, job authorization should be obtained.

B. Sequence of Lockout Guideline

1. District lead type one engines will carry a lockout / tagout kit. Each kit contains a lock that is assigned to the specific engine along with all necessary identification tags.
2. District personnel will check to be sure that no one is operating the machinery **before** turning off the power. The machine operator is informed before the power is turned off. Sudden loss of power could cause an accident.

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3. Steam, air, and hydraulic lines should be bled, drained, and cleaned out. There should be no pressure in these lines or in reservoir tanks.
4. Any mechanism under load or pressure, such as springs, should be released and blocked.
5. Each person who will be working on the machinery should put a lock on the machine's lockout device(s). Each lock must remain on the machine until the work is completed. Only the person who placed the lock should remove his/her lock.
6. All energy sources which could activate the machine must be locked out.
7. The main valve or main electrical disconnect must be tested to be sure that the power to the machine is off.
8. Electrical circuits must be checked by qualified persons with proper and calibrated electrical testing equipment. An electrical failure could energize the equipment, even if the switch is in the off position. Stored energy in electrical capacitors should be safely discharged.
9. **CAUTION:** Return disconnects and operating controls to the off position after each test.
10. Attach accident prevention tags which give the reason for placing the tag, the name of the person placing the tag, how he/she may be contacted, and the date and time the tag was placed. No one removes the lock without proper authority.

C. Locks, Blocks, & Accident Prevention Tags

1. Locks

Each engine must have its own lock and the only key to that lock.

The lock should be substantial and durable, and should have the engine number on it.

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2. Tags

Do not use tags alone. Use tags or signs in addition to locks.

Tags must state:

1. Reason for the lockout.
2. Name of the employee who is working on the equipment and how that person may be contacted.
3. Date and time the tag was put in place.
4. Tag out devices shall be capable of enduring at least 50 pounds of pull, and a non-reusable type.

3. Blocks


Suitable blocks are another important safety device for making a piece of equipment safe to be repaired or serviced. Blocks must be placed under raised dies, lifts, or any equipment that might inadvertently move by sliding, falling or rolling.

Blocks, special brackets, or special stands such as those commonly used under raised vehicles, must be available and always used. Another form of blocking is the placement of a blind. A blind is a disk of metal placed in a pipe to ensure that no air or other substance will pass through that point if the system is accidentally activated.

Before installing blinds or blocks, bleed down air, or hydraulic lines to get rid of any pressure. Coiled springs, spring-loaded devices, or suspended loads must also be released so that their stored energy will not result in inadvertent movement.

D. Restoring Equipment to Service

1. When the job is complete and equipment is ready for testing or normal service, check the equipment area to see that no one is exposed.
2. When equipment is clear, remove all locks. The energy isolating device may be operated to restore energy to equipment.

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E. Guideline Involving More Than One Person

In the preceding steps, if more than one crew member is required to lockout equipment, each shall place his/her engine lock on the energy isolating devices(s). One designated crew member of an engine crew may lock out equipment for the whole crew. In such cases, it will be the responsibility of the individual to carry out all steps of the lockout guideline and inform the crew when it is safe to work on the equipment. Additionally, the designated individual shall not remove an engine lock until it has been verified that all individuals are clear.

F. Rules for Using Lockout Guideline

1. All equipment shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do no attempt to operate any switch, valve, or other energy-isolating device bearing a lock.
2. Examples of situations that require lock out/block out include, but are not limited to:
3.
 - a. Non-emergency
 - (1) Working under vehicles or on vehicles engines.
 - (2) Working on automatic starting equipment such as compressors or generators.
 - (3) Working on any energized electrical equipment.
 - b. Emergency
 - (1) Securing utilities (electric, gas and water).
 - (2) Changing sprinkler heads.
 - (3) Removing victims trapped in power equipment.