



Jackson Hole Fire/EMS

Operations Manual

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Title: Hazardous Energy Control
Procedure (Lock Out/Tag Out)
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PURPOSE

This procedure establishes minimum requirements for the lock-out/tag-out of hazardous energy during emergency situations involving rescue or fire. Jackson Hole Fire/EMS officers (or designated personnel) will use approved equipment and this procedure to ensure machines or equipment are stopped, isolated from all potentially hazardous energy sources and locked-out/tagged-out prior to exposing responders to hazards of machinery/equipment.

Examples include: Elevator Rescue, Confined Space Rescue, Victims Entangled in Equipment, Fire or Potential Fire Where Utilities are Controlled for Responder Safety.

OSHA 29 CFR §1910.147, Lock-out/Tag-out Requirements, hereafter abbreviated as LOTO has been referenced to establish safety procedures.

LOTO is a method of controlling hazardous energy using a system of locks and/or tags to prevent de-energized equipment from being re-energized while workers are performing service/maintenance or rescuers are in the hazardous area. It involves placing equipment in a **zero-mechanical state** (i.e. "shutting it off"). If a lock is unable to be attached, a tag may be affixed to indicate the requirement for zero mechanical state.

Contractors and authorized employees performing service or maintenance on fire department machines or equipment will utilize the Teton County LOTO policy and their specialized knowledge to safely lockout and/or tag out the machine or equipment.

During an emergency, responders need to be able to recognize machines or equipment with LOTO performed. The victim(s) could have performed LOTO incorrectly, which would indicate the need for responders to take additional LOTO methods. Authorized employees at the facility/location should be consulted, as improper LOTO can cause an even greater hazard. Turning off power to the facility/location should be considered as part of LOTO in an emergency.

In situations where LOTO has not been performed by authorized employees at the facility/location, responders will identify the need for LOTO during the scene size-up and will utilize the following procedure to isolate energy.

SECTION I: OPERATIONS

1. A company officer (or designee) will prepare for LOTO, locating all potential sources of hazardous energy. **Consider consulting incident/employee/or agency representatives.**
 - a. Consider general categories of energy:
 - i. Mechanical, electrical, pneumatic, chemical, gravity, stored, potential, and/or thermal energy
2. Notify crews that LOTO operations are being implemented.
3. Assigned personnel will obtain LOTO equipment.
 - a. Example LOTO equipment includes:
 - i. Padlocks, safety hasps, circuit breaker lock-outs, valve wheel lock-outs, and appropriate ID tags
4. Firefighter will go to *each* identified hazardous energy device and de-energize that device using appropriate method(s).
 - a. This is most often using normal equipment “shut down” methods.
5. Isolate equipment by turning off energy at main power source.
6. Apply lock-out devices and/or tags.
7. Mark locks and/or tags with firefighter last name and assigned apparatus.
 - a. Secure key with Incident Command.
8. If applicable, release stored energy from system.
 - a. Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air-, gas-, steam-, or water-pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
9. If applicable, verify equipment/machinery is in a **zero-mechanical state**.
 - a. Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the Equipment will not operate.
 - b. **Caution: Return operating control(s) to neutral or “off” position after verifying the isolation of the equipment**
10. Company Officer/Incident Command will announce verification of LOTO over command channel. A Safety Officer will record LOTO.
11. Only after the equipment has been properly Locked-out/Tagged-out shall emergency personnel begin to work to remove/rescue victim(s).
12. Once the removal/rescue victim(s) has occurred, equipment shall remain Locked-out/Tagged-out until proper notification is made and any required investigation has been completed.
13. In the case of Utility Control following a fire or potential fire, LOTO devices will be removed once Lower Valley Energy or appropriate energy provider is on scene and in control of the utility.

All firefighters and emergency providers are required to comply with the restrictions and limitations imposed upon them during the use of lockout-tagout. Apart from necessary steps needed to verify zero mechanical state (see #9 above), any firefighters observing a machine or piece of equipment which is locked out/tagged out **will not attempt** to start, energize, or use that machine or equipment.

WARNING: If a lock cannot be attached to the device, a tag shall be applied and a firefighter with a portable radio shall be posted to provide security.