

<b>Safety Policy &amp; Procedure Manual</b>		Section:	Date: 12/10/15
		Revision: 7-25-2016	
Subject: <b>Lockout/Tagout Program</b>			

## I. PURPOSE

Lockout and Tagout are safety procedures to protect employees from injury when performing servicing, maintenance and troubleshooting of equipment. This Energy Control Program establishes the minimum performance requirements for control of hazardous energy.

## II. DEFINITIONS

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

**Authorized employee** - A person who locks out or tags out machines or equipment in order to perform the servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing service or maintenance covered under this policy.

**Bleeding** - To slowly empty a liquid or gas from a container or system.

**Energy isolating device** - A mechanical device that physically prevents the transmission or release of energy such as a manually operated circuit breaker or a disconnect switch. Push buttons and selector switches are not energy isolating devices.

**Energy source** - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

**Lockout** - The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

**Lockout Device** - A device that utilizes a positive means to hold an energy-isolating device in the safe position and prevent the energizing of a machine or equipment.

**Servicing and/or maintenance** - Activities such as constructing, installing, setting up, adjusting, inspecting, modifying, maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning, or un-jamming of machines or equipment and making adjustments or tool changes, where employees may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy.

Subject:

**Lockout/Tagout Program**



**Tagout** - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the tagout device is removed.

**Tagout Device** - A prominent warning device, which can be securely fastened to an energy-isolating device.

### **III. RESPONSIBILITY**

**Safety Manager** - The Safety Manager is responsible for the administration of this program. The duties include:

- a. Ensuring operational or equipment-specific energy control procedures are prepared and revised as needed.
- b. Developing Lockout /Tagout procedures before new machines and equipment are used by personnel at the facility.
- c. Making certain personnel follow established Lockout/Tagout practices.
- d. Ensuring appropriate energy control program training is provided to personnel.
- e. Performing an annual review of this program and its effectiveness in controlling injuries.

**Authorized Employees** are responsible for:

- a. Following the Lockout/Tagout procedures described in this program and equipment-specific energy control procedures.
- b. Placing and removing their issued locks and tags. No one is allowed to place or remove someone else's lock and tag.
- c. Receiving and following training in the general requirements of the program, as well as the established equipment-specific procedures.

### **IV. GENERAL LOCKOUT/TAGOUT CONTROL PROCEDURE**

Lockout/Tagout may only be performed by authorized employees. Each of the steps outlined below must be performed when using the equipment specific Lockout/Tagout procedures.

#### **1. When To Use Lockout/Tagout**

Lockout/Tagout is required when performing servicing, maintenance, or troubleshooting on a machine or a piece of equipment where the unexpected startup, or the release of stored energy, could cause injury to personnel. For example:

- a. When removing guards, safety devices or when clearing jammed mechanisms,
- b. When employees are in a position where they may become caught in the machine,
- c. When repairing electrical circuits, or
- d. When cleaning or oiling machinery with moving parts.

Subject:

Lockout/Tagout Program



## 2. Prior to Shutdown

- a. Notify all affected employees or personnel about the Lockout/Tagout on a machine or piece of equipment.
- b. Identify all sources of energy supplying the system, the types of hazards they present, how to control them, and how to verify the hazardous energy is not present. Refer to Light Tower Rentals, Inc. (LTR's) standard operating procedures (SOPs) for the specific machine or piece of equipment when applying Lockout/Tagout. Potentially hazardous energy sources that require control include, but are not limited to;

Electrical	Potential (e.g., gravity)
Mechanical	Hydraulic (e.g., water, oil)
Thermal (e.g., steam)	Pneumatic (compressed air)
Chemical (e.g., methane gas)	

**Warning:** Machines and equipment frequently have more than one energy source and some types of energy are not readily apparent.

## 3. Shutdown Equipment

- a. Identify all sources of energy supplying the system, the types of hazards they present, how to control them, and how to verify the hazardous energy is not present.
- b. Notify all affected employees or personnel about the Lockout/Tagout.
- c. Check with the Safety Officer or Branch Manager if unfamiliar with the operation and shutdown of the specific machine or piece of equipment.
- d. Shut down operating equipment using the normal means.
- e. Follow the correct equipment-specific energy control procedure for each piece of equipment. Refer to Light Tower Rentals, Inc. (LTR's) standard operating procedures (SOPs) for the specific machine or piece of equipment when applying Lockout/Tagout.

## 4. Isolate the Equipment

- a. Isolate the equipment from its energy sources by using the disconnect switch, valve, removing battery connectors from the battery terminals, or other energy-isolating device.
- b. Isolate all energy sources, including secondary sources.

## 5. Apply Lockout/Tagout Devices

- a. Place a durable locking device on each energy-isolating control.
- b. Use an identifying tagging device.
- c. Be sure each worker in the crew attaches his or her personal durable locking device if more than one is necessary.

Subject:

**Lockout/Tagout Program**



- d. When devices such as blocks, jack stands, or chocks are required to complete the lockout, they shall be used in addition to the lockout and tag procedure, not as a substitute.

**Lockout/Tagout devices must be:**

- a. Substantial and durable. LTR has issued lockout devices and weather resistant tagout devices to Authorized Employees solely for the purpose of energy control. These devices are not used for any other purpose
- b. Standardized in size, color, and/or shape. When applied, both must indicate the identity of the employee applying the device(s).
- c. Keyed individually. Each lockout device (i.e., a padlock) must unlock with a different key (pattern) to prevent inadvertent removal of the lockout device by someone other than the individual who applied it. No duplicate keys are permitted for lockout locks.
- d. Constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible. Tagout devices must contain a warning against hazardous
- e. conditions if the machine or equipment is started (e.g., DO NOT START, DO NOT OPERATE, etc.).

Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

Energy isolation must be accomplished with a lockout device and tag where possible. Where a lockout device cannot be used, additional precautions, such as removal of a switch or handle, must be implemented to provide the same level of protection as with a lockout device.

## **6. Control Stored Energy**

Release or restrain any stored energy by methods such as blocking, bleeding down, and discharging energy stored in capacitors or other effective methods. If necessary, make equipment safe by disconnecting wiring, removing fuses, uncoupling drive shafts, removing belts, or by using other means. Use danger tags in these cases.

## **7. Verify Isolation of Equipment**

- a. Make sure no one is exposed to any areas of danger.
- b. Verify using appropriate test equipment, or other means, that all the energy sources are controlled, dissipated, and disconnected, including the main disconnect switch or circuit breaker.

Subject:

**Lockout/Tagout Program**



- c. Operate the start buttons and other equipment controls to make certain the equipment will not operate.
- d. Return all operating controls to their off or safe position after the test is completed.

## **8. Work Safely**

- a. Do not attempt to restart the equipment.
- b. Do not bypass the lockout, for example, by putting in new wiring or piping.

## **9. Shift or Personnel Change**

- a. Locks and tags remain in place until the job is completed.
- b. At shift or personnel change, an incoming authorized employee attaches his or her lock or tag as the outgoing employee removes his or hers.

## **10. Properly Remove Locks and Tags Following Maintenance/Service Work**

- a. Inspect the work area and clean up all rags, tools, and materials.
- b. Replace guards on machines and equipment.
- c. Conduct a head count and make sure all employees are in a safe position.
- d. Notify affected employees that the Lockout/Tagout device is being removed.
- e. Personnel must remove only their own locks or tags. **This is the key OSHA required step for preventing injuries.**

## **11. Temporary Removal**

Workers must follow all of the above procedures before temporarily removing locks and tags to test equipment.

## **12. Emergency Removal**

**Only a supervisor, in the presence of another employee, can remove another person's locks and tags.**

This can occur only under the following conditions:

- a. The supervisor must verify the employee who put the lock or tag on the equipment is not at the facility.
- b. The supervisor must inform the employee that his or her lock was removed before the employee resumes work at the facility.
- c. The supervisor must prepare a report explaining why the protective device was removed, when and where it occurred, and how the affected employee was informed prior to starting work.
- d. The employee must receive a new lock and key as soon as possible.

Subject:

Lockout/Tagout Program



### 13. Group Lockout/Tagout Procedures

Where more than one individual is required to Lockout/Tagout a machine or piece of equipment, a group lockout device, such as a multiple lock hasp, must be provided and used.

Each person assigned to the work will be responsible for removing their individual lock and tag when their phase of the work is complete. Supervisors will have primary responsibility for coordinating group lockouts and ascertaining the exposure status of individual group lockout.

## V. SPECIFIC LOCKOUT/TAGOUT PROCEDURES

### 1. Procedure Description

Machine and equipment groups have been identified through a facility survey and consultation with maintenance, production, safety, and workers. The procedures include the following sections:

- a. Identity of the type of machine or equipment;
- b. Type of energy source(s) that may be encountered;
- c. Description of device to lockout;
- d. Location of device to lockout;
- e. Identification label on device to lockout (on/off switch);
- f. Requirements for testing the machine or equipment to determine and verify the effectiveness of lockout devices,
- g. Tagout devices, and other energy control measures;
- h. Lockout notes which may include steps for shutting down equipment or procedures for placement, removal, and transfer of lockout devices or other lockout/tagout devices to be used.

### 2. Listing of Procedures

Written procedures or equipment-specific procedural steps have been prepared for each machine and piece of equipment within LTR. LTR has created standard operating procedures (SOPs) for each machine and piece of equipment. These procedures are available for review by all authorized and affected employees. These equipment-specific procedural steps will be followed when applying Lockout/Tagout. The following types of equipment are used at this operating location (check as applicable):

- Diesel Generators
- Operation Center
- Trailer Houses and Meeting Centers
- Light Towers
- Allmand Maxi-Heaters

Subject:

Lockout/Tagout Program



- MAC 550F/750F Heaters
- MAC 800G Heaters
- RED DOG Mobile Shelters
- Pole Trucks
- Winch Trucks
- Diesel Pumps
- Electric Pumps
- SuperVacs
- Emergency Shower Trailers
- Cooling Trailers
- NG Generators TG - 60/80
- NG Generators TG – 200/250/350/400
- Forklifts
- Skid Loaders
- Other \_\_\_\_\_
- Other \_\_\_\_\_

## VI. EXCEPTIONS FROM LOCKOUT/TAGOUT PERMITTED BY OSHA

1. Work on electrical equipment containing a cord and plug as it's only energy source and the worker has exclusive control over the plug while servicing or maintenance is being performed.
2. Usual and normal production operations including repetitive minor adjustments because equipment must be guarded which provide protection for personnel. However, adjustments by personnel to maintain normal production operations are covered by this policy when;
  - a. The operator must remove or bypass guards or other safety devices, or
  - b. The operator must place any part of his or her body into the point of operation of the machine or equipment, or where an associated danger zone exists during a machine operating cycle.
3. Written equipment-specific lockout/tagout procedures are not required when all of the following conditions exist:

Subject:

Lockout/Tagout Program



- a. The machine or equipment has no potential for stored, residual or re-accumulation of energy after shutdown.
- b. The machine or equipment has a single energy source, which can be readily identified and isolated.
- c. The isolation and locking out completely de-energizes and deactivates the machine or equipment.
- d. The machine or equipment is isolated from the energy source and locked out during service or maintenance.
- e. A single lockout device achieves a locked-out condition.
- f. The authorized employee has exclusive control of the lockout device.
- g. The servicing or maintenance does not create hazards for other employees.
- h. There have not been any accidents involving the unexpected activation or energization of the piece of equipment or machine during service or maintenance.

If all the conditions listed in a – h exist, lockout/tagout must still be used; but, written equipment-specific procedures are not required.

## VII. TRAINING

Training will be provided to all employees covering the purpose and procedures of LTR's Lockout/Tagout policy and the employee's responsibilities. New employees will receive Lockout/Tagout training during their orientation period. **All Training will be documented and certified by supplying name, signature and date of training.**

1. **Authorized Employees** have been instructed in the following before assignment to duties requiring Lockout/Tagout:
  - a. Recognition of hazardous energy source type and magnitude.
  - b. Methods and means for energy isolation and control.
  - c. The purpose, procedures, and use of the energy control procedure.
  - d. Instruction on the prohibition relating to attempts to start or energize locked or tagged out equipment.
  - e. The limitations of tags.
  - f. Methods and means for verifying no hazardous energy is present.
  - g. Review of the SOP for the equipment being serviced.
2. **Affected Employees** have been instructed in the following before using or operating vehicles, machines or equipment which require lockout or tagout during service or maintenance:
  - a. The purpose and use of Lockout/Tagout;
  - b. The prohibition relating to attempts to restart or reenergize machines or equipment that are locked out or tagged out.



Subject:

**Lockout/Tagout Program**



3. **Authorized** and **Affected Employees** are provided retraining when:

- a. There is a change in job assignments to a new machine, equipment, or operation;
- b. There is a change in machines, equipment, or processes that presents a new hazard;
- c. There is a change in energy control procedures;
- d. The results of Periodic Inspection reveal that there are inadequacies in the employee's knowledge or use of the energy control measures.
- e. A personal injury or property damage has occurred because Lockout/Tagout procedures were not properly followed.

Supervisors of authorized employees shall be trained to the level of an Authorized Employee, as well as trained in supervisor responsibilities for Lockout/Tagout compliance.

## **VIII. OUTSIDE CONTRACTORS**

Prior to performing any work at an LTR facility, contractors will be informed of this program and certify their understanding and compliance with this program before commencing work. All outside contractors are required to adhere to these Energy Control (LO/TO) Program requirements. Contractors are responsible for following this program or an equivalent program of their own.

## **IX. PERIODIC INSPECTION**

The Safety Manager must conduct a periodic inspection to find out how well each work area has implemented the program. The inspection consists of:

- a. A review of work practices;
- b. Deviations from procedures;
- c. Any corrective actions taken; and
- d. A review with each affected employee on the use and limitations of tags.

The Lockout/Tagout Program must be reviewed at least once a year to ensure that the LO/TO procedures are being followed. The purpose of the periodic inspection is to identify and correct any deviations from or inadequacies in the energy control program.

The Safety Manager, or administrator of the program, who is not one of the employees performing the Lockout/Tagout procedure must perform periodic inspections. This inspection will include direct observation of an authorized employee using an energy control procedure.

Certification of the most recent inspection is documented by completion of a Lockout and Tagout Periodic Inspection Checklist (Form 1002). Completed checklist forms are maintained for a minimum of one year. Lockout/Tagout procedures will be updated as necessary in conjunction with the results of these periodic inspections.

Subject:

**Lockout/Tagout Program**



## **X. ENFORCEMENT**

The Branch Manager and Safety Officer are responsible for enforcement of the Energy Control (LO/TO) Program. Anyone who directs someone to violate, or has knowledge of a violation, and takes no corrective action will receive appropriate disciplinary action.

All personnel are responsible for following the procedures in this program. Personnel found in violation of this program will be subject to disciplinary action.

*(A periodic inspection is conducted to correct any deviations or inadequacies identified and to review each employee's responsibilities under the energy control procedure being inspected. The completed inspection record is to be stored until it is replaced with a newer inspection record).*

Subject:

Lockout/Tagout Program



## Periodic Assessment – Form 1002

*Check off the procedures that were followed:*

- Equipment was properly shut down?
- Appropriate employees or personnel were notified of the start of Lockout/Tagout procedures?
- All applicable energy isolating and lockout devices were installed properly?
- Where group Lockout/Tagout was needed, all devices that were to be locked with a padlock were secured first with a multi-lock capable hasp; or a lock from a lock box and the required locks were properly placed on the lock box?
- All stored energy (e.g., air pressure) was released properly?
- After the lockout devices were applied the energy isolating devices were tested by:
  1. Attempting to open or operate the device(s) that have been locked out;
  2. Pressing the start button on the control panel; or
  3. Where work involves potential for contact with energized conductors, using a voltmeter to check if circuits are dead.
- Temporary removal of Lockout/Tagout device(s) for testing the equipment was only authorized when:
  1. All tools and other employees were safely positioned or removed from the area before beginning testing; and
  2. An authorized employee was in attendance at all times during testing.
- Lockout device(s) and tag(s) were replaced at the end of testing and remained in place until such time as the maintenance or servicing is complete.
- Removal of Lockout/Tagout device(s) through a personnel or shift change was only permitted when an authorized employee who was to begin the work placed his/her lock on the hasp or lock box (as appropriate) before the employee who was leaving removed his/her lock from the hasp or lock box.
- Before the equipment was restarted the appropriate employees were notified that the Lockout/Tagout procedure had ended.

Equipment Reviewed: \_\_\_\_\_

*Names of employees observed using this procedure:*


- Check if deficiencies observed were reviewed with employees and appropriate corrective measures taken.*

Review performed by: \_\_\_\_\_ (signature) \_\_\_\_\_ (date)