

Title:	Lock Out Tag Out	Date of Original Board Approval:	November 2013
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Objectives and Goals

Royal Botanical Gardens (RBG) is committed to building and preserving a safe working environment for its employees, volunteers', contractors and subcontractors. The Lockout / Tagout procedure is intended to ensure that dangerous machines are properly shut off and not able to be started again **prior** to the completion of maintenance or repair work.

Scope

This policy applies to all employees, volunteers, contractors and subcontractors of RBG and all contractors and their sub-contractors working for the organization.

Policy Statement

This policy is intended to protect all employees, volunteers' contractors and subcontractors from injuries resulting from:

- the unexpected or accidental energizing or startup of machines or equipment, and
- the release of stored energy or materials when working with equipment during service, repair, or operating activities.

Definitions

Control Switch: The main power source or disconnect switch.

Start/Stop Switch: A toggle or push-button switch at the point of operation of the machine being used to control power to the applicable machine, or device.

Disconnect Switch: A pull-type switch or circuit breaker that when opened cuts off all electrical power in that circuit.

Locks: Padlocks (combination, or other such type, are prohibited) with a single key. Duplicate keys must be discarded prior to a lock being made available.

Lockout: neutralization of all sources of energy or power in the equipment to be worked on.

Equipment/Machine: A device consisting of fixed and moving parts that modifies mechanical energy and transmits it in a more useful form.

Machine Operator: Person(s) that have received specialized training and who RBG deems to be competent to operate a piece of equipment

Employee: For the purpose of this policy an employee includes volunteers, contractors and subcontractors

Roles & Responsibilities

Senior Management

- Ensure all existing equipment and machinery has the capability for lockout, de-energizing or isolation from all sources of energy including stored energy or materials.
- Provide and maintain necessary equipment to enable lockout / tagout of equipment or machinery.
- Ensure training is provided to workers who operate, repair or maintain machinery or equipment.
- Evaluate machines and equipment and ensure lockout / tagout procedures are developed and followed.

Managers

- When signing a contract with a 3rd party ensure that the contractor is aware of this policy and signs-off acknowledging understanding and compliance with it.
- Be familiar with all aspects of the lockout / tagout procedure.
- Monitor and enforce all aspects of the lockout / tagout procedure.
- Evaluate work operations, machinery and equipment to determine where lockout / tagout procedures, devices and training is needed.
- Ensure that the requirements of the program and related elements of the Occupational Health and Safety Act and regulations, and applicable industry standards are applied.
- Ensure that all employees under their supervision who work on machinery or equipment are competent to do assigned work, are provided with written instructions and training (where required) and are issued an approved lockout permit and lock.
- Conduct appropriate inspections to ensure procedures are followed and when violations are found, take appropriate action.
- When maintenance requires re-energizing for testing purposes or to identify the source of the problem, stands at the electrical panel until testing is complete to prevent accidental recharge (manager may provide a designate provided they are trained on this procedure).
- Keep a list of all equipment and locations where equipment has been locked out pending maintenance; adding and removing items as required.
- Retain used lockout permits for a minimum of one year.

Human Resources

- Maintain a record of training.

Employees, Volunteers, Contractors and Subcontractors

- Participate in lockout / tagout training and apply knowledge acquired in the performance of their work.
- Acquire permission to work on equipment by way of a lockout permit, which shall be returned to the Manager on completion of the work.
- Use lockout / tagout devices provided as specified in the procedures.
- Report to their manager when equipment needs to be re-energized for testing purposes or to identify the source of the problem; and ensure that a manager (or approved designate) stands at the electrical panel until testing is complete.

Joint Health & Safety Committee

- Monitor lockout/tagout log during monthly inspections.
- Development of or on the improvement of existing safe work procedures, as needed.

Standards and Practice

- Lockout/Tagout procedure must be instituted prior to maintenance or servicing of all machinery and equipment, where the **unexpected** energization, start-up or release of energy could cause injury. Typical lockout/tagout situations include the following activities:
 - Repairs, modifications, renovations
 - Unjamming equipment
 - Set-up/Changeovers
 - Tooling change
 - Equipment cleaning
- Lockout and tagout may not be possible during equipment troubleshooting and diagnostic checks, and these activities are exempt only when conducted by qualified employees.
- Individual padlocks, switch and plug locks and lockout bars are numbered for logging purposes.
- Tags are available for lockout.
- A log sheet to sign out locks and when returning them must be completed.
- Only one key is available per lock. Duplicate keys shall be discarded. If a key is lost or broken the lock must be discarded.
- All employees with duties that would regularly require them to maintain or repair equipment will be responsible for the correct application of the procedure.
- After a machine is shut down in the normal manner (i.e., pushing the stop button, shutting off the valve, etc.), the main disconnect switch shall be opened in the open (OFF) position by the person who will work on the machine
- After the disconnect switch has been locked out, the worker must press the master switch which has been disconnected. Generally, when the main disconnect switch is off, the machine will be inoperative; however, some pneumatic or hydraulic equipment might still be operational. This must not jeopardize safety. If it does, then the master valve or control must be locked out. If in doubt, a worker should ask his/her Manager.
- After the machine has been shut down each person working on it shall apply their individual lock and tag. The key for his/her lock will remain on their person while their lock is in place.
- Only the person who locked out the machine shall remove the lock. In exceptional cases (for example, if the person who started the work is sick and the work is completed by another person) the Manager may cut off the lock allowing the replacement worker to apply theirs.
- If a different crew will be working on the same machine on a different shift, each worker or manager shall report the status of the work to the person in charge on the following shift.
- Each worker's lock from the first shift is removed by him/her and the workers from the second shift put on their locks immediately thereafter. At no time will the machine be left unlocked until all work has been completed.
- Before a worker energizes the machine or equipment, the following should be checked:
 - Make sure all locks have been removed by their owners.
 - Make sure safety blocks, stops, or energy control devices are removed.
 - Watch for machine movement.
 - Inform area personnel, if necessary.

- After re-energizing, equipment must be tested for correct operation.
- The worker's task is not completed until he/she makes sure that:
 - The machine is left in safe operating condition.
 - The personnel who need to know the repairs have been completed are informed.
 - No garbage, parts, grease and/or oil are left behind.
 - Complete the log confirming that work has been completed.
- In certain circumstances it may be impossible or impractical to lockout equipment/machinery. These situations might involve testing equipment during or after repairs or moving components for better access. These situations are to be kept at a minimum and are to be used only when necessary and never solely as a means of saving time. The following procedures must be followed in such circumstances:
 - The department manager must be notified that such a procedure is necessary. In some cases, this fact is known prior to the job starting, while in other situations it will arise while maintenance is being conducted.
 - A Manager or competent designate will stand by the source of power or the equipment/machinery start-up location. A second worker will be stationed with the machine/equipment and be in constant contact with the Manager. This individual will have no other duties other than to communicate with the Manager at the control station. Both parties must ensure that the machinery/equipment is started only when it is safe to do so.