

19.16 LOCK OUT, TAG OUT

Lockout Procedures – Woodworking Technical Area

Purpose

Implementation and enforcement of the use of lockout procedures are used to prevent injury during maintenance and repair of machinery. This system is also used when equipment requiring repair or maintenance needs to be prevented from use or start up. A lock and tag system ensures everyone's safety.

Procedure

During service, repair, maintenance or cleaning, proper lockout procedures shall be implemented at all times, as legislated for the protection of the worker.

All electrical equipment, machinery and pressure systems shall be locked out prior to conducting any service, repair, maintenance or cleaning. Or in the event that equipment is in need of repair or maintenance it will be locked if needed or in the case on non-equipment items such as ladders, tagged out for repair or replacement.

Definition

Lock out: A written method to ensure that a machine, or process that is shut down for maintenance or other procedure is secured against accidental start-up or movement for the duration of the procedure.

Tag out: A physical tag that indicates the status of the piece of equipment.

Energy Sources: Mechanical, electrical, hydraulic, pneumatic, gravity, thermal and chemical.

General Information

Keys

There are two (2) keys for the Master Key Lockout located at the main entrance to the Woodworking Technical Area. 1. The Teacher for the area has one on a *Key Neck Lanyard*. The Custodial Supervisor has one key.

There are two (2) keys for each piece of machinery/equipment that has a *Magnetic Controller Lockout* box. The Teacher has one set and the Custodial Supervisor has one set. The Custodial Supervisor's set of keys, are secured in his office.

The *Key Neck Lanyard* is in the control of the Teacher.

Procedures

Specific procedures for lockout are provided in the Safe Operating Practices (SOP) for the equipment and machinery in the workplace these are found under the SOP menu in the Board Health and Safety program manual.

- Only employees trained in lockout procedures (authorized) will lock out equipment.
- Teacher/Custodial Supervisor shall provide awareness training regarding specific lockout systems and procedures in their department.
- Employees/students affected by the lockout procedure will be notified through the use of a lock and tag. A visual indication that the equipment has been removed from use.
- All electrical equipment, machinery and pressure systems shall be locked out prior to conducting any service, repair, maintenance or cleaning (except for testing purposes).
- The Teacher/Custodial Supervisor who initiated the lockout will maintain control of the key.
- When two or more persons are working on a machine, each person will lockout and tag the isolating device(s) and attach their own tag.
- If the person who has initiated the lockout must leave the job prior to completion (shift change vacations etc.), their tag must be removed. The replacing person must place their own Tag, verify zero energy, and control their key. There will be no time lapse between the changing of locks.
- When the job is complete and equipment is ready for testing or normal service, notify all affected Employees/Students and check the equipment area to see that no one is exposed. When equipment is all clear for operation, remove all Tags and turn on the magnetic controller keys. The energy isolating device(s) may be operated to restore energy to equipment.

Initiating Lockout

Plug in Equipment

- For minor work of any machinery that does not have a *Magnetic Control Lockout Key*, the "zero energy" state will be achieved by unplugging the equipment prior to initiating actions in the working area of that equipment.
- For maintenance work (e.g. Disassembly and cleaning), the additional step of tagging the plug is required.
- If the equipment is unsafe to operate and is not going to be repaired for several days, the machine will be "tagged" by the Teacher/Custodial Supervisor by securing a "lockout" tag at or over the operating control.

Electrical Equipment

- For cleaning/maintenance, the Teacher/Custodial Supervisor will place a tag on the operating controls of the equipment and coil the power cord and attach a tag to the coil as close as is possible to the plug. The breaker switch at the main panel box by the entrance will be switched off and tagged out. A tag will be attached identifying the reason for the lockout. A tag will be attached identifying the reason for the lockout.

- Multiple Power Source Equipment (i.e. Electrical, Hydraulic, Air Pressure, Kinetic, Pressured Liquids, and gases and Potential energy).
- Follow the same process for major repairs of equipment, however, for lockout to be achieved; all power sources must be locked out. The Teacher/Custodial Supervisor shall ensure that all power sources are locked out prior to beginning maintenance work by attaching tags to these locks as outlined above. All energy sources are to be tested to ensure that "zero energy" status has been obtained prior to work commencing.

Machines Equipped with Magnetic Controller Lockout

For all machinery/equipment that is equipped with Magnetic controller lockout key systems, the following procedure shall be used:

- The teacher/custodial supervisor will turn off the *Master Key Switch* located at the main entrance door and remove key.
- The teacher/custodial supervisor will then lock the magnetic controller lockout switch on the machine and remove the key and place a tag on the magnetic controller lockout box.
- The teacher/custodial supervisor will then turn off the breaker switch on the main panel located at the main entrance door and place a tag on the breaker panel switch.
- The teacher/custodial supervisor will maintain *personal* control of the key neck lanyard at all times while the machinery/equipment is locked and tagged out.
- The teacher/custodial supervisor will then test the machinery/equipment to ensure that a "Zero Energy" state has been attained.
- The teacher/custodial supervisor will inform all workers/students that may have occasion to operate the machinery/equipment that that it is out of service.
- The teacher/custodial supervisor will then test the machinery/equipment to ensure that a "Zero Energy" status has been achieved.
- The teacher/custodial supervisor will complete the "**Lockout Record**" form that will be stored in a binder in the teacher's office.

Set up and Adjustment

It is recognized that some pieces of equipment must be "jogged" during set up and adjustments, and that hazards remain. When required, only qualified operators will be assigned to the work to be done.

Purchasing of New Keys for the *Magnetic Controller Lockouts*

- Only one (1) key shall be kept by the teacher on the key neck lanyard. The second key will be secured in the office of the custodial supervisor.
- The new lock's key is to be tested in all other locks to ensure that it does not open any other lock.
- Each new key will have a unique identification number engraved on it and a log will be kept on all keys put into circulation.

Removing Lockout

Operator Locks, Unplugged Equipment, Mobile / Materials Handling Equipment

- When satisfied that the work is complete and that all guards, etc. are in place, the person that initiated the procedure may remove it. The Teacher/Custodial Supervisor will review the condition of that equipment to ensure that it is safe prior to beginning operations.
- If a person other than the worker who initiated the procedure is required to remove Lockout/Tag, then the appropriate Lockout/Tag Removal Worksheet must be filled in and authorized prior to that work being completed.
- Once approval has been given, the worker must follow the proper procedure for removal and start-up of the equipment/machinery.

Contingencies

Lockout beyond Shift

- If a piece of equipment is required to be locked out beyond a shift, the teacher/custodial supervisor will develop a detailed plan of how the equipment will remain locked out:
 - Keep existing procedures in place.
 - Install Supervisor Tag on Master Key Lock at front entrance.

Lost or Missing Keys

Where a key is lost for the lock, it is the Supervisors responsibility to ensure that the equipment is safe and ready to return to production prior to the lockout procedure being removed. The Teacher/Custodial Supervisor will authorize the removal of the lockout procedure in coordination with a follow-up report to the Safety Committee. If the Teacher/Custodial Supervisor is not available, the Administrator is to be contacted.

Additional Tags

Additional lockout tags are available in the Custodial Supervisor's office.

Training

Employees responsible for lockouts will be trained how to properly conduct a lockout and the use of SOPs to use to complete the lockout procedure. This training will be conducted during Orientation and the Teacher/Custodial Supervisor/Safety Supervisor will conduct job evaluations to ensure the employee is conducting Lockouts properly.

This training is repeated every 3 years or, when audits reveal that the lockout program is not being adhered to or when legislation changes.

Evaluation

The Safety Committee will review lock-out/tag-out logs during the monthly inspections and report the findings in the Monthly Workplace Inspection Report Form.

Contractors

Contractors and other outside non-board employees will at a minimum utilize and follow this lockout procedure as a minimum guide or utilize procedures as per their industry standards.

Contractors will sign a Contractors Safety Declaration stating that all Board Policy and Procedures at a minimum will be followed and all appropriate industry standards. This must be completed and signed prior to any work being done for the Board. A copy of this form shall be kept in the Safety Supervisor's office.

Required Forms

Lockout Record Form

Lock Out/Tag Removal Form

Monthly Workplace Inspection Report Form

Legislation/ Standards/ Regulations

Ontario Occupational Health and Safety Act, R.S.O. 1990