

| BOARD ADMINISTRATIVE PROCEDURE | |
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| Administrative Procedure Safe Work Procedure: Lock-out/Tag-out of Energy Sources | Administrative Procedure Number 815 |
| Directional Policy Healthy Schools and Workplaces - 800 | |

TITLE OF ADMINISTRATIVE PROCEDURE:

Safe Work Procedure: Lock-out/Tag-out of Energy Sources

DATE APPROVED: October 1, 2019

PROJECTED REVIEW DATE: October 1, 2024

DIRECTIONAL POLICY ALIGNMENT: This Administrative Procedure aligns with the Healthy Schools and Workplaces Directional Policy by ensuring compliance with regulatory requirements and that all reasonable steps are taken to minimize exposure to hazardous energy sources for staff and/or contractors/constructors.

ALIGNMENT WITH MULTI-YEAR STRATEGIC PLAN: The Lock-out/Tag-out of Energy Sources Administrative Procedure supports our vision of *Achieving Excellence in Catholic Education* by ensuring our structures, processes, relationships and actions reflect our Gospel values and Catholic Social Teachings.

In particular, this Administrative Procedure will contribute to the Board's Mission by establishing safe learning and working communities for both staff and students. This Administrative Procedure will also support the Board's Strategic Priorities of Learn, and Lead. When staff follow safe work procedures such as those outlined in this Administrative Procedure, students are LEARNing workplace safety through

demonstration by staff. We are fostering critical thinking and communication amongst staff and students in regards to workplace safety (LEADing).



Strategic Priorities 2017-2020

Vision

Achieving Excellence in Catholic Education
LEARN • LEAD • SERVE

Mission

To educate students in faith-filled, safe, inclusive Catholic learning communities by nurturing the mind, body and spirit of all.

LEARN

Achieve excellence in instruction and assessment to enable all students to become reflective, self-directed, lifelong learners.

LEAD

Foster critical thinking, creativity, collaboration, and communication, to enable all students to realize their God-given potential.

SERVE

Inspire engagement and commitment to stewardship for creation to enable all students to become caring and responsible citizens.

ACTION REQUIRED:

This Lock-out/Tag-out of Energy Sources Administrative Procedure applies to all Peterborough Victoria Northumberland and Clarington Catholic District School Board (PVNCCDSB) staff who may reasonably, in the course of their work, be expected to isolate energy sources, and to contractors/constructors who may work on a PVNCCDSB worksite where hazardous energy sources are present.

Procedures:

All equipment, machinery or systems will be disconnected, locked out and tagged prior to any work (which may include maintenance work) being done. It is mandatory that all PVNCCDSB employees, contractors and constructors comply with this program. Failure to comply may result in disciplinary action.

Where equipment specific Lock-out/Tag-out procedures are not available the following provisions will apply:

General Provisions

a. Initiating Lock-out/Tag-out

- Identify the machine/ equipment that needs to be locked out;
- Notify all affected employees that a Lock-out is required and is about to take place;
- Identify all sources of energy being used to power the equipment and what controls will be used to ensure against accidental start-up or release of energy. If unsure, ask your Supervisor.

b. Machine/ Equipment Shutdown

- Ensure the act of shutting off the equipment will not pose a hazard to other employees or members of the public;
- Follow normal shut-down procedure for the equipment;
- Ensure all moving parts come to a complete stop;
- Disconnect the power supply where possible by unplugging the machine (Lock-out the plug in a Lock-out Tag-out device).

c. Machine/ Equipment Isolation

- Check all operating switches to ensure against accidental start-up;
- Apply energy isolation devices (eg. blanks, locks);
- Check for secondary sources of energy;
- Never isolate equipment by pulling electrical switches or fuses while under load. Electrical disconnects should be carried out by a qualified electrician or competent person.

d. Control Stored Energy

- Ensure all parts have stopped moving;
- Install ground wires to discharge electrical capacitors (performed by a competent person only);
- Relieve the residual pressure in the lines, reservoirs or accumulators by bleeding the lines, leave vent valves open, or otherwise dissipate all residual energy;
- Blank pipe flanges;
- Release spring tension or block the movement;
- Block parts that could fall or move due to gravity;
- Block hydraulic and pneumatic systems that could move from loss of pressure;
- Purge tanks and process lines whose contents could create a hazard;
- Monitor for any possible re-accumulation of energy.

e. Apply Lock-out/Tag-out Devices

- Lock-out/Tag-out shall be performed only by authorized employees who are performing the servicing or maintenance. No person will be permitted to perform

the Lock-out/Tag-out who is not thoroughly familiar with the machinery/ equipment involved, and who has not been trained in Lock-out/Tag-out;

- Attach a lock or comparable device to each and every energy isolating device to prevent anyone from re-energizing the equipment during service or maintenance. Ensure the lock holds the energy isolating device in a “safe” or “off” position;
- All locks shall have only one key. Keep this key in your possession at all times;
- Individual Maintenance staff may have a set of locks with common keys which are not shared;
- Multiple lock hasps shall be used if more than one person is working on the equipment. Daisy chaining is prohibited;
- Tag-out devices shall be attached to each lock and filled out completely;
- Tag-out devices should clearly show the name and department of the person who applied the device, the date of disconnection and reason for the Lock-out;
- Locks and tags must be durable enough to withstand the environment in which they are used and substantial enough to prevent removal without excessive force.

f. Isolation Verification

- Ensure all danger zones are clear of personnel;
- Verify the main disconnect switch or circuit breaker cannot be operated;
- Test switches with a volt meter or voltage potential testing device;
- Ensure the correct system has been locked out and isolated by testing all operating buttons and activating controls. If the Lock-out is effective the machine should not start;
- Return the equipment controls to the neutral or off position when testing is complete;
- Periodically verify isolation until service or maintenance is complete (especially after extended periods of absence, lunches, breaks, or if left overnight).

Equipment Start-up and Testing

At the completion of the maintenance/servicing requiring the Lock-out/Tag-out, the following steps shall be taken prior to, during and after the equipment is returned to service:

- Inspect the area, ensure that non-essential items and tools have been removed;
- Ensure the machine has been placed back in normal operating condition;
- Ensure all guards are in place and controls are at their proper setting;
- Check that all blocks, chains, etc. have been removed;
- Ensure that all valves are in their run/open position;
- If fuses need to be re-installed or main switches activated, this shall only be done by a qualified electrician or competent person;
- Clear all employees from the area and advise affected employees that the machine/equipment is going to be placed back in service and Lock-out devices removed;

- Ensure all personal Lock-out/Tag-out devices are removed only by the person who installed them (see section for Removal by Other than Authorized Employee);
- Restart machinery to ensure proper operation and proceed with testing;
- Advise employees that they may re-enter the area once testing is complete.

Group Lock-out

When a machine/ equipment is being serviced by more than one worker the following steps shall be followed to ensure that workers receive the same level of protection as when performing individual Lock-out.

- Lock-out hasps shall be used for group Lock-out situations;
- Each worker shall affix a personal Lock-out/Tag-out device to the energy isolating device when he/she begins work;
- Each worker shall leave their Lock-out/Tag-out device attached for as long as they are involved with the Lock-out;
- All workers shall confirm the Lock-out is conducted properly. Do not rely on the word of a fellow worker; test the Lock-out for yourself;
- Each worker shall personally remove their Lock-out/Tag-out when their work is complete;
- The worker removing the last lock will be responsible to ensure the machine/equipment is put back into service following the correct procedure as outlined in this program or the equipment specific procedure.

Shift Changeover/ Extended Lock-out Tag-out

Should the authorized employee leave before the machinery or equipment can be restored to service, the lock and tag must remain in place. If the task is reassigned to another worker, the following shift change provisions apply.

Shift changes or personnel changes will be coordinated by the authorized employee or Supervisor. The following steps are to be followed:

- The oncoming authorized employee shall verify the equipment is in a state of zero energy before proceeding with work;
- The oncoming authorized employee shall install their own personal locks/ tags before the outgoing authorized employee's locks and tags may be removed;
- At no time will the machine/ equipment be left unlocked until all work has been completed.

Lock and Tag Removal by Other than the Authorized Employee

Removal of a Lock-out/Tag-out device is the responsibility of the individual who installed it. If the equipment is required to be locked out beyond the shift or if an employee is called to another task, their lock shall remain in place or a shift changeover may take place (see

Shift Changeover/ Extended Lock-out Tag-out). Departmental/ Shop locks are not to be used.

In the event that a personal lock is found in place and a need arises to remove it, the following precautions must be exercised:

- Verify that the individual who installed the Lock-out/Tag-out device is not in the facility;
- All reasonable efforts shall be made to contact the authorized employee and have them return to remove the Lock-out/Tag-out device;
- Only a Supervisor shall remove the Lock-out/Tag-out device in the presence of an affected employee after testing and/or inspection has been completed by a competent person. All parties involved in the removal of another individual's Lock-out device shall agree to the removal of the locking/ tagging device;
- The authorized employee whose Lock-out/Tag-out device has been removed shall be informed at the start of their next shift and re-issued Lock-out/Tag-out devices;
- Ensure that affected employees are aware that the lock/tag has been removed and that start-up may occur;
- A "Removal of Lock-out/Tag-out Device by Other than Authorized Employee Form" must be completed at the time of the removal. Copies of the completed forms are to be sent to the Authorized Employee, the Department Manager/ Supervisor, the Health and Safety Officer, and the Joint Health and Safety Committee.

Training

All positions named shall be made aware of their responsibilities under this program.

Training for supervisors, workers, contractors and constructors who are required to employ Lock-out/Tag-out shall contain a minimum of the following elements:

- recognition and control of hazards;
- legislative requirements;
- Lock-out/Tag-out program and procedures;
- Lock-out/Tag-out devices;
- lock/ tag removal;
- reporting of hazards and non-compliance;
- types of energy sources;
- isolation of energy sources;
- practical demonstration by attendee to confirm understanding.

The full training course will be taken at a minimum of every 3 years by staff involved in Lock-out/Tag-out activities and those who supervise staff involved in Lock-out/Tag-out activities.

Contractors/ Constructors may be asked to demonstrate proof of compliant training.

Supervisors are responsible to identify workers in need of training/ retraining and advise the Health and Safety Officer. Training for Board employees will be arranged and tracked by the Health and Safety Officer.

At least once per year this program shall be reviewed with each authorized employee by their Supervisor. This training and review shall be documented by the Supervisor, signed and dated by both the employee and supervisor, and kept in the employees personnel file. A form is provided as an appendix to this program.

RESPONSIBILITIES:

The Board of Trustees is responsible for:

- Ensuring alignment with the Healthy Schools and Workplaces Directional Policy.
- Reviewing the Lock-out/Tag-out of Energy Devices Administrative Procedure as part of its regular policy and procedures review cycle.

The Director of Education is responsible for:

- Designating resources for ensuring the implementation of and compliance with this Administrative Procedure.

Superintendents are responsible for:

- Ensuring principals/vice-principals, supervisors and managers are consistent with the application of this Administrative Procedure.
- Ensuring that all employees for whom they have supervisory responsibility are aware of the requirements under this Administrative Procedure.

Principals/Vice-Principals/, supervisors and Managers are responsible for:

- Ensuring staff whom they supervise are aware of the requirements under this Administrative Procedure
- Maintaining familiarity with the Ontario Occupational Health and Safety Act and the regulations that apply to the work
- Identifying workers in their employ in need of training/ re-training and advising the Health and Safety Officer
- Supervisors shall themselves attend, and ensure all employees have received the necessary training in Lock-out/Tag-out before being authorized to perform Lock-out
- Annually performing a Lock-out Tag-out of Energy Sources Administrative Procedure review with each authorized employee and documenting this review, filing the paperwork in the employee personnel file

- Communicating procedures to affected workers and contractors/ constructors and enforcing compliance with the Lock-out/Tag-out of Energy Sources Administrative Procedure by taking disciplinary action as required
- It is the responsibility of the person who tenders, arranges or brings in a contractor/constructor to work, where any part of the work entails the potential to Lock-out/Tag-out to ensure the contractor/constructor has been trained by a competent person and adheres to this Administrative Procedure at a minimum.
- Maintaining records of non-compliance or exception reports (eg. Removal of Lock-out Device by Other Than Authorized Employee Forms)
- Providing each authorized worker with the necessary Lock-out/Tag-out devices (ex. locks and keys, lockout hasps, tags, lockout equipment) and ensuring these are maintained in good condition
- Providing any departmental Lock-out/Tag-out equipment specific procedures or directives

Health and Safety Officer is responsible for:

- Arranging and tracking training of Board employees in Lock-out/Tag-out of Energy Sources
- Assisting in sourcing of Lock-out/Tag-out devices

Staff are responsible for:

- Only authorized employees shall apply Lock-out/Tag-out devices
- All workers involved in the servicing or maintenance of equipment shall comply with the Lock-out/Tag-out of Energy Sources Administrative Procedure and any related departmental procedures or directives
- Attending and maintaining current training as identified by their Supervisor and requesting training if work activities involve the repair, maintenance or servicing of equipment or machines
- Ensuring lock-out locks are used only for their intended purpose and not removed by another person unless the procedure for Removal by Other Than Authorized Employee is followed
- Identifying any hazards in the work or absence of/ defect in equipment or protective devices to their Supervisor
- Where unsure of the source of energy for a piece of equipment or machinery, contacting their Supervisor prior to continuing with Lock-out/Tag-out

Contractors/ Constructors are responsible for:

- It is the responsibility of the person who tenders, arranges or brings in a contractor/constructor to work, where any part of the work entails the potential to Lock-out/Tag-out to ensure the fore mentioned have been trained by a

competent person and adhere to this standard. Contractors/ Constructors are expected to adhere to this Administrative Procedure at the minimum.

- Provision of required lock-out/tag-out devices to affected workers in their employ
- Provision of training to affected workers in their employ in lock-out/tag-out, which is in accordance with this Administrative Procedure
- Providing proof of training with a competent trainer to meet the requirements of this Administrative Procedure if requested

PROGRESS INDICATORS:

- Authorized employees and Supervisors will maintain current (minimum every three years) training and records of such training will be available from the Health and Safety Officer
- Authorized employees will have the necessary lock-out/tag-out devices
- Annual Lock-out/Tag-out of Energy Sources Administrative Procedure reviews will be available in employee personal files

DEFINITIONS:

Affected Employee – An employee who operates or uses a machine or equipment on which service or maintenance is being performed under Lock-out, or whose job requires him/her to work in an area in which service or maintenance is being performed.

Authorized Employee – A person who locks-out or implements a Tag-out system on machines or equipment in order to perform service or maintenance. An authorized employee and an affected employee may be the same person.

Competent Person– A person who is;

- qualified because of knowledge, training and experience to organize the work and its performance,
- is familiar with the Occupational Health and Safety Act and the regulations that apply to the work, and
- has knowledge of any potential or actual dangers to health or safety in the workplace.

Control Stored Energy – To control stored energy means to release, disconnect, block or restrain affected energy sources, machine components or work pieces after isolating the main energy supply.

Daisy Chaining – The attaching of one lock to another is an unacceptable alternative to the use of a multiple Lock-out device except for locks which prevent the first worker from removing his/her lock. This practice is prohibited.

Disconnect – A device that isolates the source of power from the equipment. An acceptable disconnect must be lockable so that no one except the worker operating the disconnect can re-energize the equipment.

Dissipate Stored Energy – To dissipate energy involves allowing it to run down or be used up after shutting off the main energy source. Normally, mechanical motion (momentum) and thermal energy are energies which must dissipate.

Energized – Anything connected to an energy source or containing residual or stored energy.

Energy Isolation Device – A mechanical device that physically prevents the transmission or release of energy (eg. manually operated electrical circuit breaker, disconnect switch, a block, a line valve).

Energy Source – Any source of electrical, kinetic, chemical, thermal radiation, pressure or other energy associated with a machine or piece of equipment.

Lock-out – The placement of a Lock-out device(s) on a Lock-out device, in accordance with an established procedure, which ensures the equipment cannot be operated or energy sources cannot be released during the servicing or maintenance work and until the locking device(s) is (are) removed.

Lock-out Device – Device that utilizes a positive means such as a single keyed lock to render switches, valves, equipment, moving parts, etc. inoperable, thus preventing the energizing of a machine or equipment.

Servicing/Maintenance – Constructing, installing, setting up, adjusting, inspecting, modifying, maintaining or servicing machines or equipment. These activities include lubrication, cleaning, or un-jamming of machines or equipment, and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy.

Tag-out – The placement of a written notice at the control switch/energy isolation device of an electrical circuit, line, valve, machine, equipment, or other location as indicated in department specific procedures, indicating that the energy isolating device and/or the equipment being controlled may not be operated until the Tag-out device is removed.

Tag-out Device – A prominent warning device, such as a tag, which can be securely fastened to a lockout device to indicate that the energy being controlled may not be operated until the Tag-out device is removed. Tags must indicate the name of the person who installed the Tag-out device, date and time the tag was attached, and the

reason for the tag. Removal of a Tag-out device is the responsibility of the person who installed it.

RELATED FORMS

Appendix A - Removal of Lock-out/Tag-out Device by Other Than Authorized Employee Form

Appendix B - Annual Lock-out/Tag-out of Energy Administrative Procedure Review Form

REFERENCES:

Ontario Occupational Health and Safety Act

Ontario Regulation 851/90- Industrial Establishments, Section 42, 42.1, 68, 75, 76

Ontario Regulation 213/91- Construction Regulation, Section 188-195

Ontario Regulation 67/93, Section 62-73

Operator's Manuals for specific equipment

[PVNC Catholic District School Board Vision, Mission and Strategic Priorities](#)