



Industrial webinar: Be prepared for Ministry of Labour inspection initiative on machine guarding

1.888.730.7821 (Toll free Ontario)
workplacesafetynorth.ca



Welcome to the webinar

MOL inspection initiative regarding machine guarding

- The webinar will begin at **10:30 am Eastern Time**
- For audio, please use headphones or ear buds.
- Please note the '**CHAT BOX**' to the right of the screen and feel free to type in your questions at any time during the presentation.
- Questions may be answered during the presentation, but most will be addressed at the end of the presentation.
- For your reference, this presentation will be emailed to attendees within one business day of the webinar.
- For assistance with the webinar, phone the WSN office at:
1-888-730-7821 ext. 0

Webinar co-hosts

- **Doug Cettina** Northern Region
Industrial Program Coordinator/Emergency
Management Lead
Ministry of Labour
douglas.cettina@ontario.ca
- **Tom Welton** Director, General Prevention Services
Workplace Safety North
tomwelton@workplacesafetynorth.ca

Agenda

1. Introduction and injury statistics
2. WSN information and resources
3. What Ministry of Labour Industrial Health and Safety Inspectors will be looking for during the machine guarding initiative
4. Q & A

Workplace Health and Safety Snapshot for Ontario Forestry, Paper, Printing, and Converting Sector in 2017



62,581

Full-time employees



Work-related fatalities

Events resulting in lost-time injury or illness

Injury or illness severe enough to require one or more days lost from work



37%

Contact with objects or equipment

(struck by or against object, caught in or compressed by equipment or objects, and rubbed or abraded by friction or pressure)



37%

Bodily reaction and exertion
(excessive physical effort, free bodily motion that results in stress or strain on the body, assuming an unnatural position, and repetitive motion)



17%

Falls

(falls or jumps to lower levels, falls on same level)



9%

All others

(non-collision incidents, contact with skin, eye or other exposed tissue; pedestrian struck by vehicle, falls from moving vehicle; exposure to caustic, noxious substances, etc.)

Most common lost-time injuries

183

Contact with objects and equipment, includes struck by or against objects; struck by falling, flying, dislodged, discharged, rolling, sliding, slipping or swinging objects; caught in or compressed by equipment or machinery; rubbed or abraded by foreign matter in eye; stepped on object; struck by or slammed in swinging door or gate; contact with objects and equipment; and compressed or pinched by rolling, sliding or shifting object.

183

Bodily reaction and exertion, includes injuries and illnesses resulting from repetitive motion, bending, climbing, crawling, reaching, twisting, slipping, tripping; overexertion in lifting, pulling, pushing, carrying or turning objects.

84

Falls, includes falls to floor, walkway, or other surface; falls down stairs or steps; falls onto or against objects; falls from ladder; jumps to lower level; falls on same and lower level; and falls or jumps from non-moving vehicle.

Top 3 Occupational Diseases

Based on approved WSIB claims for healthcare, being off work, loss of wages, or permanent disability.

124

Noise-induced hearing loss

15

Injury and poisonings, includes burns, toxic effect of venom, gases, fumes, vapour, and other substances; sprains and strains; and adverse effects of allergies

8

Exposure, includes exposure to chemical agent

*Disease fatality claims with a fatality effective date of 2017. Source: WSIB Enterprise Information Warehouse as of March 31, 2018. RG 030, 033, 036, 039, 041, 333, 338, 341 WSN May 2018.


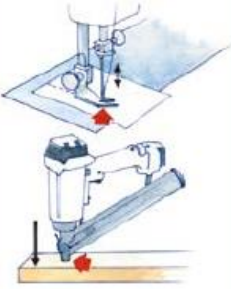
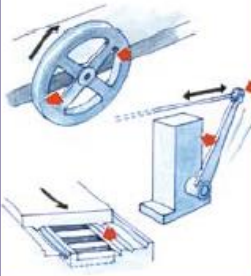

Machine Safety

Resources and tools

- [Machine guarding gauge](#) – Folding pocket size scale helps you assess hazardous openings and appropriate barrier size.
- [Hazard alerts - Workplace Safety North](#)
- [Machine safety videos](#) include Mobile Machine Lockout, Lockout: Control of Energy Hazards, You're Responsible Too, and Planned Workplace Inspection.

Related articles

- [Top 5 health and safety tips for small business](#)
- [Ghost in the machine: Protect yourself from injury](#)

EXAMPLES OF MECHANICAL HAZARDS ASSOCIATED WITH COMPONENTS AND TOOLS			
Hazard	Possible consequences	Hazard	Possible consequences
	<ul style="list-style-type: none">• Impact• Crushing• Drawing in		<ul style="list-style-type: none">• Stabbing• Puncture• Punching• Projection
	<ul style="list-style-type: none">• Shearing• Severing• Winding• Entanglement• Impact• Crushing• Drawing in		<ul style="list-style-type: none">• Impact• Crushing

Machine Safety

Training

- [Safe Use of Machinery](#) – Forestry, and Paper, Printing and Converting sectors
- [JHSC Certification Part 2 Workplace-Specific Hazard Training](#): Machine Safety – Paper, Printing and Converting Sector
- [Resources for JHSC Certification Training Part 2](#) – Printing and Converting Sector includes hazard identification tools, employee discomfort and machine safety surveys, risk matrix, etc.



**Health and
Safety**

Machine Guarding Initiative



February 1 to March 31, 2019

Note

This presentation has been prepared to assist workplace parties in understanding their rights and duties under the Occupational Health and Safety Act (OHSA) and its regulations. This presentation does not constitute legal advice. To determine your rights and duties under OHSA, please contact your legal counsel or refer to the legislation.

Focus

The primary focus of this inspection initiative is machine guarding and lockout.

In support of the many other ministry health and safety priorities, inspectors will also check for:

- Internal responsibility system (IRS)
- electrical hazards
- activities associated with the risk of developing musculoskeletal disorders (MSD)

Workplace Selection

Inspectors will focus on the following sectors during this initiative:

- automotive
- food and beverage
- wood and metal fabrication
- textiles and printing
- chemical, rubber and plastics
- ceramics
- logging (sawmills)
- pulp and paper

Rationale for Guarding and Lockout Focus

In 2017, the Workplace Safety and Insurance Board received 2,829 claims from workers for lost-time injuries related to machine guarding and electrical hazards in the following event groups:

- 2107 caught in or compressed by equipment or objects or collapsing material
- 92 contact with electric current
- 630 rubbed or abraded by friction, pressure or jarred by vibration

Examples of the nature of these injuries that resulted in workers having to take time off work include:

- 173 amputations or enucleations
- 15 burns (electrical)
- 57 electrocutions, electric shock
- 403 fractures

Rationale (continued)

The MOL enforcement statistics for the 2017 calendar year are as follows:

- Approximately 20% of all orders (written under Regulation 851) were related to guarding contraventions
- Approximately 3% of all orders (written under Regulation 851) were related to lockout and blocking contraventions

Internal Responsibility System (IRS)

Inspectors will focus on the following key priorities to ensure employers are complying with OHSA requirements (as applicable to the workplace), including but not limited to:

- Health and safety policy and program to implement the policy
- Workplace violence and harassment policies and programs
- Joint Health and Safety Committee or Health and Safety Representative
- Posting requirements (e.g. OHSA, Health & Safety at Work poster, etc.)
- Mandatory health and safety awareness training (O. Reg. 297/13)
- Review of the workplaces injury record

Roles and Responsibilities

Employers, supervisors and workers have responsibilities under the *Occupational Health and Safety Act* (OHSA) and the Regulation for Industrial Establishments (R.R.O. 1990, Reg. 851). Some of the responsibilities may include:

Employers must:

- Provide appropriate information, instruction and supervision to protect workers [OHSA, clause 25(2)(a)] (i.e. training in lock-out and guarding procedures)
- Ensure that the equipment and protective devices provided are maintained in good condition [OHSA, clause 25(1)(b)] (i.e. by replacing/ repairing damaged components of a machine)

Roles and Responsibilities (continued)

Employers must ensure:

- Any machine, prime mover, or transmission equipment that has an exposed moving part that may endanger the safety of a worker is equipped with and guarded by a guard or other device that prevents access to the moving part [Reg. 851, section 24]
- Any part of a machine, device or thing that has an in-running nip hazard that may endanger the safety of a worker is equipped with and guarded by a guard or other device to prevent access to the pinch point [Reg. 851, section 25]

Roles and Responsibilities (continued)

Employers must ensure:

- An operating control that acts as a guard for a machine not otherwise guarded shall:
 - be in a location where the safety of the operator is not endangered by moving machinery,
 - be arranged so that it cannot be operated accidentally, and
 - not be made ineffective by a tie-down device or other means.

[Reg. 851, section 28]

Roles and Responsibilities (continued)

Employers must ensure:

- The power supply to electrical installations, equipment or conductors is disconnected, locked out of service and tagged on or near live exposed parts of the installations, equipment or conductors
 - Before any work is done, and
 - While it is being done

[Reg. 851, section 42(1)]

Roles and Responsibilities (continued)

Employers must ensure:

- Machinery, equipment or material that is temporarily elevated and under which a worker may pass or work must be securely and solidly blocked to prevent the machinery, equipment or material from falling or moving [Reg. 851, section 74]
- A part of a machine, transmission machinery, device or thing is only to be cleaned, oiled, adjusted, repaired or have maintenance work performed on it when motion that could endanger the worker has stopped and any stopped part that could move and endanger a worker has been blocked to prevent its movement [Reg. 851, section 75]
- Where the starting of a machine, transmission machinery, device or thing may endanger the safety of a worker, control switches or other control mechanisms are to be locked out, and other effective precautions necessary to prevent any starting are to be taken [Reg. 851, section 76]

Roles and Responsibilities (continued)

Supervisors must:

- Take every precaution reasonable in the circumstances for the protection of workers [OHSA, clause 27(2)(c)]
- Ensure workers comply with the OHSA and its regulations [OHSA, clause 27(1)(a)]
- Ensure workers use or wear any equipment, protective devices or clothing required by the employer [OHSA, clause 27(1)(b)]
- Advise workers of any potential or actual health and safety dangers [OHSA, clause 27(2)(a)]

Roles and Responsibilities (continued)

Workers must:

- Participate in training including lockout and guarding [OHSA, clause 28(1)(a)]
- Follow lock-out and guarding procedures [OHSA, clause 28(1)(a)]
- Report machine hazards and other workplace hazards to their supervisor [OHSA, clause 28(1)(d)]
- Use or operate machinery in a safe manner [OHSA, clause 28(2)(b)]

Why is Lockout necessary?

If a lockout is not performed, uncontrolled energies could cause:

- cuts
- Bruises
- Serious abrasions
- crushing
- amputations
- death

As a result from contact with:

- belts
- chains
- conveyors
- rollers
- shafts
- impellers

Blocking

- Every year workers die or are critically injured because the equipment they are working on does not have adequate blocking installed.
- It is critical to block all forms of hazardous energy, including gravity, hydraulic pressure, or stored electrical or mechanical energy.
- The lack of blocking allows equipment to move or drop, striking workers, leading to fatal and critical accidents.

Pre-Start Health and Safety Reviews (PSR)

Inspectors will check that employers have conducted a PSR when required by section 7 of the Industrial Regulations 851/90 (related to the relevant provisions of the Regulation that are listed in the Table) when a workplace is a factory as defined by the OHSA.

Depending on the relevant provisions listed in the table, generally, the written report shall contain:

- details of the measures to be taken for compliance
- if testing is required before it can be used, measures to be taken to protect the worker before testing is carried out
- details of the structural adequacy of the apparatus or structure

PSR for Guarding

What is a Pre-Start Review (required by section 7 of Regulation 851)?

It is an in-depth examination of an apparatus, structure, protective element or process identified in the section 7 table that is undertaken to identify any potential or existing non-compliance with the applicable provisions of the Industrial Establishments Regulation (as listed in the section 7 table).

A Pre-Start Health and Safety Review includes, but is not limited to:

- a written report on the installation of a protective element or process or modifications to an existing protective element or process
- details of the measures necessary to bring the installation or modification into compliance with the applicable provisions of Regulation 851 (Industrial Establishments) under the OHSA.

PSR for Guarding (continued)

When is a PSR for guarding required?

A PSR would be required in a factory, when an employer

- Installs a new apparatus or new guarding, or
- Modifies existing guarding,

And the following types of guards are used as protective elements:

- A safeguarding device that signals the apparatus to stop, or
- A barrier guard that uses an interlocking mechanical or electrical safeguarding device

PSR

Intent

- To ensure that a timely professional review identifies specific hazards and completed during the design phase.
- To ensure that hazards are removed or controlled before the apparatus or process is started up.
- To ensure worker protection as required under the applicable provisions of the Regulation 851 (Industrial Establishments).

For more information see MOL Guideline at:

<https://www.labour.gov.on.ca/english/hs/pubs/psr/index.php>

Documents for PSR Exemption - Guarding

Even when a PSR is required, there still may be exemptions available for guarding as outlined in subsections 7(5) and 7(6) of the Industrial Establishments Regulation.

If one of these exemptions is being claimed or considered, the documents to establish the exemption must be available.

If the documents are not readily accessible in the workplace, then they need to be made accessible. If such documents do not exist, there is no exemption from the requirement to carry out a PSR.

Documents for PSR Exemption (continued)

In order to demonstrate that a pre-start health and safety is not required, the employer must have documentation establishing that:

- The protective element was installed at the time the apparatus was manufactured and
 - The apparatus and protective element have been manufactured or modified to meet current applicable standards (procurement/purchasing documentation verifying that the apparatus and protective element have been manufactured or modified to meet current applicable standards may be acceptable)
 - The apparatus and protective element is installed in accordance with the manufacturer's instructions and current applicable standards

Documents for PSR Exemption (continued)

- If the protective element was not installed when the apparatus was manufactured, the following documentation is needed to establish that a pre-start health and safety review is not required:
 - The apparatus and protective element was manufactured with and meets current applicable standards, or it has been modified to meet current applicable standards
 - The apparatus and protective element is installed in accordance with the manufacturer's instructions and current applicable standards
 - As an example, the employer may provide a notice from the installer or certification from an accredited organization (where such organization exists) verifying that the apparatus and protective element have been manufactured or modified to meet current applicable standards.

Additional Focus – Musculoskeletal Disorder (MSD) Prevention

Focus is on potential MSD hazards associated with activities that may be in an industrial establishment. Employers should address the following MSD hazards:

1) Loading and Retrieving Items into/from a Machine

- MSD hazards that can be associated with loading or retrieving items into/from a machine can include repetition, force, awkward or sustained postures, prolonged standing, or prolonged sitting.

2) Installing/Removing Guards

- Awkward postures and/or high forces can be associated with installing or removing guards.

More information on MSD and Ergonomics is available on the MOL website at:
<https://www.labour.gov.on.ca/english/hs/topics/pains.php>

Additional Focus – Power Line Contact

Inspectors will check that employers have taken every precaution reasonable in the circumstance for the protection of workers at workplaces where there is potential for overhead power line contact. For example, repair or maintenance tasks on the roof of the building being conducted in close proximity to power lines.

Additional Resources

- **Health & Safety Ontario:** <http://www.healthandsafetyontario.ca/>
- **Hazard Alerts:** <https://www.labour.gov.on.ca/english/hs/pubs/alerts/>
- **Inspection blitz results January 15-February 28, 2018:**
<https://www.ontario.ca/page/inspection-blitz-results-machine-guarding-and-electrical-hazards>

Questions?

Thank You

Thank you

Thank you for attending today and helping make workplaces safer.

WSN Contact Information

1-888-730-7821 Toll free Ontario

705-474-7233

info@workplacesafetynorth.ca

workplacesafetynorth.ca

Twitter: [@WSN_news](https://twitter.com/WSN_news)



workplacesafetynorth.ca

