



Industrial webinar: How to prepare for Ontario inspection blitz on machine guarding

1 888 730 7821 (Toll free Ontario)
workplacesafetynorth.ca



Welcome to the webinar

Minister of Labour, Training and Skills Development (MLTSD) inspection blitz 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, Training and Skills Development
douglas.cettina@ontario.ca
- **Tom Welton** Director, Prevention Services and Education Programs
Workplace Safety North
tomwelton@workplacesafetynorth.ca

Agenda

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

Workplace Health and Safety Snapshot for Ontario Forestry, Paper, Printing, and Converting Sector in 2018



61,541

Full-time employees

3 Injury
2 Disease*
Work-related fatalities

2,221
Total injuries

558
Lost-time injuries

3.61
Total injury rate per 100 workers

+12.1%
Change in injury rate from previous year

Events resulting in lost-time injury or illness

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

45%
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)

31%
Contact with objects or equipment
(struck by or against objects, caught in or compressed by equipment or objects, and rubbed or abraded by friction, pressure, or vibration)

14%
Falls
(falls or jumps to lower levels, falls on same level)

10%
All other
(contact with temperature extremes, highway or non-highway incidents, exposure to caustic, noxious, allergenic substances, radiation, traumatic or stressful event; assaults, violent acts and harassment by persons, etc.)

Most common lost-time injuries

251 **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.

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

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

Top 3 Occupational Diseases

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

131 **Noise-induced hearing loss**

28 **Injury and poisonings**, includes toxic effect of venom from bee or wasp stings, from other gases, fumes, vapour; superficial injury of hands, fingers; burns of face, head, neck and limbs; cornea burn; heat, sunstroke, heat exhaustion; allergic reaction

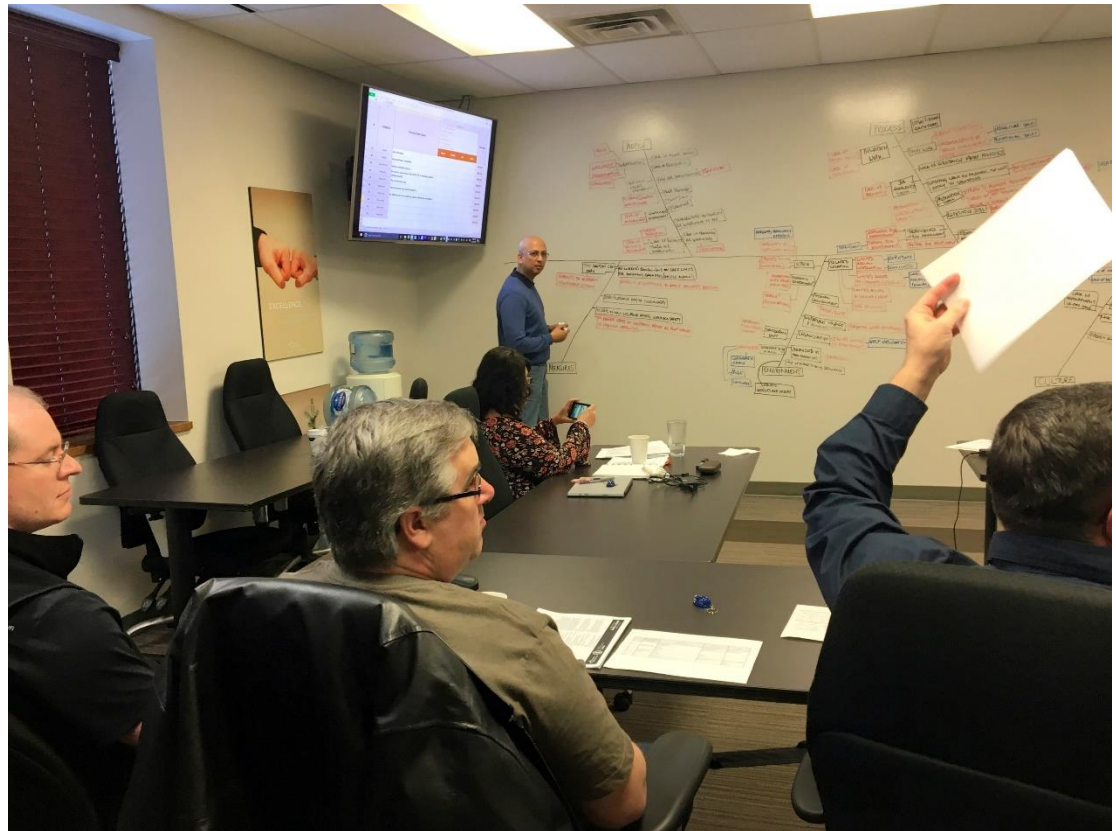
11 **Exposure**, includes exposure to chemical agent, dust, and chemical hazards

Industry risk assessments

Inadequate/improper lock out of machines is top health and safety risk for pulp and paper workers

[Distracted driving top health and safety risk for logging operations](#)


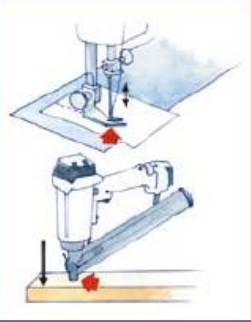
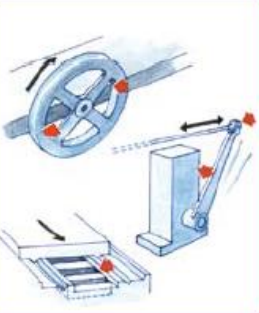

[Substance use top health and safety risk at sawmills](#)



Machine Safety

Training

- [Effective Machine Guarding](#) – Forestry, and Paper, Printing and Converting sectors – updated with CSA Z432-2016 standard
- [JHSC Certification Part 2 Workplace-Specific Hazard Training](#): Machine Safety – Paper, Printing and Converting Sector
- [Resources for JHSC Certification Training Part 2](#) – includes hazard identification tools, surveys for employee discomfort and machine safety, risk matrix, etc.

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

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](#)



Ministry of Labour, Training and Skills Development

Machine Guarding Initiative

January 20 to March 31, 2020

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.

Timing

Phase 1: Education, outreach and awareness

January 20 – March 31, 2020

Compliance support with Workplace Safety and Prevention Services (WSPS)
and Workplace Safety North (WSN)

Phase 2: Inspection blitz

February 17 – March 31, 2020

Ministry focused inspections

Focus

The primary focus of this inspection initiative is machine guarding.

Ministry health and safety inspectors will also focus on:

- locking and blocking
- electrical hazards
- power line contact
- Internal Responsibility System (IRS)

Workplace Selection

Ministry inspectors will focus inspections in:

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

Rationale for Blitz Focus

In 2018, the Workplace Safety and Insurance Board received **2,979** claims from workers for lost-time injuries related to the following:

- 2053 caught in or compressed by equipment or objects or collapsing material
- 78 contact with electric current
- 848 rubbed or abraded by friction, pressure or jarred by vibration

Number of Lost Time Injuries in 2018 (Schedule 1 and 2) classified as:

- 285 amputations or enucleations
- 16 burns (electrical)
- 47 electrocutions, electric shock
- 430 fractures (caught in/or compressed by equipment or object or in collapsing material)

Machine Guarding Initiative Results - February 1 to March 29, 2019

Ministry inspectors:

- conducted 737 field visits
- visited 602 workplaces
- issued 2,998 orders and requirements under the OHSA and its regulations
 - including 98 stop work orders
- an average of 4.98 orders and requirements issued per workplace visited
- an average of 4.07 orders and requirements issued per visit

- Full results report visit:

<https://www.ontario.ca/page/inspection-initiative-results-machine-guarding>

Machine Guarding Results continued:

The most frequently issued orders under [Regulation 851: Industrial Establishments](#) were for employers' failure to:

- prevent access to a moving part [s. 24] — **291** orders or 9.71% of the total orders and requirements issued
- prevent access to an in-running nip hazard [s. 25] — **213** orders or 7.10%

Top three sectors where orders issued.

Sector	Orders and requirement issued	Stop work orders issued	Workplaces visited	Field visits	Support role activities
Wood and Metal Fabrication	1,144	36	178	230	44
Vehicle sales and service	263	8	47	54	4
Food, beverage and tobacco	203	2	39	48	13

Internal Responsibility System (IRS)

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

- Health and safety policy and program to implement the policy
- Joint Health and Safety Committee or Health and Safety Representative
- Posting requirements (e.g. OHS, 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 lockout is not performed, contact with uncontrolled energies from:

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

Could result in:

- cuts
- bruises
- serious abrasions
- crushing
- amputations
- death

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 critical accidents or death.

What is a Pre-Start Review?

- 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 PSR 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.

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

When is a PSR for guarding required?

A PSR is 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

What is the intent of a PSR?

- To ensure that a timely professional review identifies specific hazards and is 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 MLTSD 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 PSR.

Documents for PSR Exemption (continued)

If the protective element was installed at the time the apparatus was manufactured the employer must have documentation to establish that:

- The apparatus and protective element was 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 at the time the apparatus was manufactured the employer must have documentation establishing that:
 - 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
- For example the employer may provide a notice from the installer or certification from an accredited organization (where one exists).

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/>

Machine Guarding Inspection blitz results (February 1 to March 29, 2019)

<https://www.ontario.ca/page/inspection-initiative-results-machine-guarding>

Some related Court Bulletins

[Mushroom Grower Fined \\$90,000 After Worker Pulled into Conveyor](#)

[Moving Equipment Causes Injuries, \\$65,000 Fine for London Mill](#)

[Worker's Injuries Result in \\$100,000 Fine for Cambridge Manufacturer](#)

Questions?

Thank You

Thank you

Thank you for attending today and helping make Ontario workplaces safer.

Workplace Safety North

1-888-730-7821 Toll free Ontario

705-474-7233

info@workplacesafetynorth.ca

Stay connected

Twitter: @WSN_news

LinkedIn, Facebook: Workplace Safety North

Instagram: @workplacesafetynorth



1 888 730 7821 (Toll free Ontario)
workplacesafetynorth.ca

