# Compliance Review

## eSafetyFirst Canada

## Online Chainsaw Safety Course

The purpose of this document is to outline the compliance review for the eSafetyFirst Canada (eSafetyFirst) online Chainsaw Safety course. The course was viewed in its entirety and then reviewed chapter by chapter to determine both compliance and alignment with OHS Legislation.

All chainsaw safety courses in Canada need to align with Occupational Health and Safety (OHS) legislation and should be guided by the national standard **CSA Z62.1-15 (R2020)** which outlines the design, operation, and maintenance of portable, handheld fuel and electrically powered chainsaws.

The online course covers the necessary theory for chainsaw safety, there are no practical components. The eSafetyFirst course also provides a robust supplementary information article regarding chainsaw safety and chainsaw training, it can be found here, https://esafetyfirst.com/blog/chainsaw-safety-ensuring-safe-and-efficient-use/. The course and the supplementary material provide the learner with the information necessary for safe chainsaw use. The course confirms theory component understanding using quizzes.

**With the exception of Module 2 Slide 12, there is no need for revision to meet compliance with provincial OHS legislation or corrections to align with CSA Z62.1-15 (R2020).**

~~**Module 2 Slide 12** states that a worker can skip using leg protection when working above ground. This in incorrect and there is no variance in OHS legislation in Canada that permits the omission of leg PPE when using a chainsaw. It also contradicts the information on Slide 13.~~ **This error has been corrected**

There are several content issue that need to be corrected to bring the course up to the high standards that have been set by other eSafetyFirst courses. These can be found in the Suggestions for improvement section.

The information below indicates the outcomes that the course is required to meet.

**Online Chainsaw Safety Theory Evaluation Checklist**

**1. Regulatory & Legal Responsibilities (Provincial OHS Legislation)**

Provincial OHS frameworks (such as WorkSafeBC, Alberta OHS, or Ontario OHSA) place specific statutory duties on workers and employers. The eSafetyFirst course provides the learner with the necessary information to:

- **Identify Rights and Duties:** learners understand the worker's legal obligation to refuse unsafe work and the duty to report any defective equipment or workplace hazards to a supervisor immediately.
- **Identify On-Site Safety Requirements:** Learners are taught several different points regarding on-site safety in addition to other points that are listed below.

---

**2. Design, Components & Mandatory Safety Features (CSA Z62.1 Standards)**

CSA Z62.1-15 dictates the specific manufacturing and mechanical components required to minimize injury. The course provides the learners with information on the following:

- **Chain Brake Function:** how the chain brake is activated (both manually by the front hand guard and via inertia) and its role in stopping the chain instantly during a kickback.
- **Anti-Vibration Systems:** the course covers the presence of AV isolation dampeners and explain how they reduce the risk of long-term injuries like Hand-Arm Vibration Syndrome (HAVS) / Raynaud's phenomenon.
- **Chain Catcher & Guarding:** The purpose of the chain catcher (positioned at the bottom of the powerhead to catch a broken or derailed chain) and the rear hand guard.
- **Throttle Trigger Interlock:** The course explains the mechanical function of the interlock mechanism, which prevents accidental throttle engagement unless the safety lever on top of the handle is fully depressed.
- **Spark Arrestor Screen:** The course covers the purpose of the spark arrestor screen within the muffler for fire prevention in dry canopy environments. ~~(See Suggestions for improvement)~~

---

**3. Personal Protective Equipment (PPE) Compliance**

Under both CSA guidelines and provincial OHS laws, specific protective equipment must be worn. The course covers:

- **Leg Protection Standards:** The mandatory requirements for chainsaw pants or chaps (e.g., labeling showing compliance with ASTM, Workers' Compensation Board (WCB), or BNQ standards, offering a minimum threshold of warp-knit nylon or ballistic aramid fibers).
- **Head, Eye, and Ear Protection:** The course covers the need for a CSA-approved hard hat, CSA-approved safety glasses/mesh face shields to protect against flying wood chips, and hearing protection rated adequately for chainsaw decibel output (typically Class A or minimum NRR 24+).
- **Foot and Hand Protection:** The course talks about the requirement for heavy-duty, steel-toe safety footwear (meeting CSA Z195 standards) with cut-resistant lining, and durable leather protective gloves or mitts. There is additional mention of how padded gloves or mitts can help with HAVS.

---

**4. Hazard Identification & Safe Cutting Mechanics**

The core of chainsaw theory is recognizing dangerous forces before they happen. The course does a great job of covering:

- **Kickback Dynamics:** The "kickback danger zone" (the top quadrant of the guide bar nose) and explain the physics behind rotational kickback.
- **Reactive Forces:** The course explains and differentiates between **Pushback** (occurring when cutting with the top of the bar, pushing the saw back toward the operator) and **Pull-in** (occurring when cutting with the bottom of the bar, drawing the saw forward into the wood). Many new operators think they are one in the same and similar to kickback.
- **Environmental Hazards:** The course covers external situational hazards such as structural trip hazards, nearby workers ("danger tree zones" or maintaining a

minimum 2-tree-length distance during felling), overhead powerlines, and operator fatigue.

**Critical Safety Point: The Drop-Start Prohibition**

Online courses must strictly enforce the student's understanding of safe starting procedures. CSA and provincial OHS guidelines strictly forbid **"drop-starting"** a chainsaw (holding the pull-start cord in one hand and dropping the saw with the other). The course ensures learners are aware of:

1. **Ground Start:** The saw is placed flat on level ground, the operator's right foot is placed inside the rear handle loop, the left hand grips the front handle firmly, and the right hand pulls the starter rope.
2. **Knee Start:** The rear handle of the saw is locked securely between the operator's thighs, the left hand holds the front handle straight, and the right hand pulls the starter rope. (See suggestions for improvement)

---

**5. Safe Operational & Handling Procedures (Theory Only)**

The course covers the procedural steps for managing the saw during a shift:

- **Safe Transport Protocol:** The requirement to shut off the motor completely (or engage the chain brake for short distances under 10 meters if allowed by local policy), fit the protective scabbard over the guide bar, and carry the saw with the bar pointing backward and the hot muffler facing away from the body.
- **Fuelling and Ignition Boundaries:** The course warns learners to never refuel a hot or running engine, use an approved fuel safety container with a spout/funnel, and move at least **3 meters (10 feet)** away from the refueling site before attempting to start the saw.
- **Ergonomic Cutting Position:** The requirement to maintain a firm, two-handed grip (thumbs wrapped completely around the handles) and stable footing, along with the strict rule to **never cut above shoulder height**.

---

**6. Technical Maintenance & Inspection Logic**

Having a well-maintained tool is necessary in all occupations and settings. The course covers some of the necessary points of chainsaw maintenance, particularly sharpening:

- **Pre-Use Inspection Checklist:** The course covers things like correct chain tension (snug but free to pull by gloved hand), adequate chain lubrication, and verifying that the chain *does not move* when the engine is idling.
- **Sharpening Fundamentals:** The course covers the theory behind cutter teeth geometry, including the role of filing the depth gauges ("rakers") to regulate how deep the cutter tooth bites into the wood.

---

## Suggestions for improvement:

~~**Module 1 Slide 18, Module 2 Slides 23 ,25, and 27** – The operator is not wearing any PPE, possibly steel toed boots but it is not clear. He is not wearing a hard-hat, ear defenders (muffs), eye protection, or leg chaps. It is advised to change this picture out.~~ **This error has been corrected**

~~**Module 1 Slides 28 and 45** – The slides show an old-style Stihl chainsaw (possibly an old 056). It has only a hand guard on it, not an inertia chain brake. They are no longer permitted for industrial use in Canada as there is no inertia chain brake.~~ **This error has been corrected**

~~**Module 1 Slide 33** – Two different views of chainsaw use with one showing cutting with the tip. The slide has no sound. Is this intentional?~~ **This error has been corrected**

**Module 1 Slide 38** – Talks about vibration and how the handle bars absorb some of the vibration. Modern chainsaws also have anti-vibration mounts. See the image on **Module 2 Slide 29**, just below the on/off switch there is what looks like a horizontal spring, that is actually an anti-vibration mount. **This does not adversely affect the content**

~~**Module 1 Slide 48** – The slide is meant to depict a spark arrestor which is actually a small steel screen on the outlet side of the muffler. The image is actually a leaf blower, it doesn't matter but there is no spark arrestor shown. See the image below:~~ **This error has been corrected**




~~**Module 1 Slide 47** – Talks about the muffler as a safety feature. Saws cannot be sold without one and if they are used without one it will result in damage to the motor quite quickly. Talking about the muffler as a safety feature doesn't make much sense.~~ **This error has been corrected**

~~**Module 2 Slide 8** – Talks about hand protection. It should be mentioned that gloves have to be worn when sharpening a saw. It is mentioned in a later slide but reinforcement is a good thing.~~ **This error has been corrected**

~~**Module 2 Slide 18** – Shows a person sharpening a saw without wearing gloves. That image should be changed out~~. **This error has been corrected**

~~**Module 2 Slide 24** – Shows someone using the Push down – Pull up method of starting a saw. He is also wearing simple work pants that do not have any chainsaw protection. It is easy to tell as the pants do not show any padding in them. This image should be changed out.~~ **This error has been corrected**

---

## References:

CCOHS Chainsaws - https://www.ccohs.ca/oshanswers/safety_haz/chainsaws

CCOHS Chainsaws Maintenance and Service - https://www.ccohs.ca/oshanswers/safety_haz/chainsaws/maintenance.pdf

Kevin Barrett CRSP CRM 13-4856