A modern chainsaw must be fitted with the following safety features:

1. **KICKBACK GUARD AND CHAIN BRAKE**
   The chain brake is designed to be activated in two ways. Or three, if the saw is fitted with TrioBrake™:
   A. If your left wrist forces the kickback guard forwards, the chain brake will activate.
   B. Following kickback the chain brake will trigger from the inertial forces generated.
   C. With TrioBrake™: If your right wrist lifts the guard on the rear handle, the chain brake will activate.

2. **THROTTLE LOCK**
   The throttle lock is designed to prevent accidental throttle advance. The throttle will only work if the lock is pressed in, i.e. if you hold the saw’s rear handle with a firm grip while accelerating.

3. **CHAIN CATCHER**
   The chain catcher is designed to catch the chain, if the chain should break or derail.

4. **RIGHT-HAND GUARD**
   The right-hand guard is designed to protect the user’s hand, if the chain should break or derail.

5. **EASY ACCESSIBLE STOP CONTROL**
   The stop control must be placed where it is easy to access on the saw so that the engine can be stopped quickly in a critical situation.

**Saw chain and guide bar with a reduced risk of kickback**

Some saw models can be fitted with a saw chain with reduced kickback. The chain has protective links between the cutting teeth and the guide bar has a nose radius that is less than the guide bar you normally use. Overall, this means that the saw is much less susceptible to kickback. The chain’s cutting capacity is reduced slightly, which means you need a greater feed pressure.

**Alkylate petrol and vegetable chain oil**

By using alkylate petrol, such as Aspen, you can lower the amount of harmful emissions from your chainsaw. There are also vegetable chain oils that are biodegradable and therefore significantly more environmentally friendly than conventional oils. Using a petrol/oil can with top-up protection prevents unnecessary waste being released into the open.

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**Canadian Centre For Occupational Health and Safety**

What are some general tips to know when using chain saws?

- Only use chain saws that you have been trained to use properly and safely.
- Read the owner's manual carefully.
- Make sure you understand instructions before attempting to use any chain saw.
- Review pertinent health and safety legislation before operating a chain saw.
- Operate, adjust and maintain saws according to the manufacturers' directions and the CSA Standard Z62.1-03 "Chain Saws" (reaffirmed 2008) or ANSI standard B175.1-2000 (Gasoline
Powered Chain Saws, Safety Requirements for). Both standards describe safety requirements for the design of chain saws and include recommendations on how to use chain saws safely.

- Operate the chain saw in well-ventilated areas only.
- Wear personal protective equipment and clothing. See OSH Answers Chain Saws - Personal Protective Equipment for more detailed information.
- Ask questions if you have any doubts about doing the work safely. Safety procedures that you follow will also depend on where the sawing is carried out (e.g., on the ground or at height in a tree or elevating device) and on the presence of trip, slip, snag, and fall hazards.
- Only operate saws when you are well rested. Fatigue causes carelessness. Be cautious before breaks and end of shift.
- Have all required supplies and equipment with you before you start the work.
- Be aware of your surroundings -- weather conditions, terrain, wildlife, buildings, powerlines, vehicles, and other people.

What are some safety tips to know when starting the saw?

DO

- Use only chain saws that have been manufactured and maintained according to standards like the CSA Standard Z62.1-03 (R2008) "Chain Saws" and that are equipped with a safety chain and chain brake. Check legislation in your jurisdiction for other requirements.
- Know how to use the controls before starting a chain saw.
- Remove the chain guard (scabbard) and inspect the saw and machine for damaged, loose, missing parts, or other signs of wear, or leaks around the engine before starting. See OSH Answers document Chain Saws - Maintenance and Service.
- Ensure that the guide bar is tight and chain fits snugly without binding; adjust the chain tension, if required.
- Inspect the saw chain to ensure it is properly lubricated and is sharp. Sharpen and lubricate, as needed.
- Check the air filter and clean when needed.
- Check the muffler spark arrestor screen, if present. Spark arrestor screens help reduce the risk of fire, especially in dry forest conditions.
- Inspect the chain catcher - it helps reduce the risk of injury when a chain breaks or comes off the guide bar.
- Ensure that chain is clear of obstructions before starting.
- Engage the chain brake before starting the chain saw.
- Ensure that you have secure footing and that your stance is well balanced.
Hold the saw firmly on the ground using your foot, or by holding the powerhead down with one hand. Point the chain away from your body and nearby obstructions. Use a quick, sharp motion on the starter cord.

Warm up the saw prior to cutting. The saw should idle without the chain turning. If the chain continues to turn after the throttle switch is released, stop the saw. Then adjust the idle as shown in the owner's manual.

Check that the throttle trigger, throttle trigger interlock, master control lever, etc. are operating properly.

**DO NOT**

- Do not use a saw if it has damaged, improperly adjusted, or has loose or missing parts.
- Do not "drop start" (starting a saw in hands) or when a chain saw is touching your body. This method leaves only one hand to control a running saw and can result in leg cuts.
- Do not start a saw unless it is at least 3 meters (10 feet) from any approved fuel safety containers.
- Do not make adjustments to the chain or guide bar when the motor is running.

What precautions should I take when fuelling a chain saw?

- Follow manufacturer's directions for oil/gas mixture to be used.
- Use only safety containers for storing and dispensing fuel that have been approved by standards like the CSA International B376-M1980 (R2008) titled "Portable Containers for Gasoline and Other Petroleum Fuels" or by agencies like Underwriters' Laboratories (UL or ULC [Canada]).
- Do not refuel a running or hot saw.
- Use funnel or spout for pouring. Wipe off any spills.
- Mix fuel in a well-ventilated area. Keep a well-maintained fire extinguisher near by.
- Do not smoke or allow any ignition sources while refueling.

What should I do and not do when cutting?
DO

- Plan each job before you start. Arrange to have help.
- Carry the chain saw by its front handle, with the muffler away from your body and the guard bar pointing behind you.
- Know the location of the persons working with you at all times.
- Use the correct saw. The weight, power, and bar length should all be suitable for the job.
- Operate the chain saw in a firm two-handed grip with fingers and thumb surrounding the handles. Keep both feet firmly positioned when operating a chain saw.
- Maintain full power throughout each cut.
- Ensure that the chain does not move when the chain saw is idling.
- Turn off the chain saw before refuelling or doing any maintenance.
- Keep your saw clean -- free of sawdust, dirt and oil.
- Wear safety gloves or mitts when sharpening the chain.

DO NOT

- Do not start a chain saw when it is resting against any part of your body.
- Do not refuel a chain saw within 3 m (10 ft) of a fuel storage container.
- Do not stand directly behind the saw.
- Do not leave a saw running unattended.
- Do not carry chain saws while it is running.
- Avoid contact with the muffler. Serious skin burns may result.
- Do not cut alone.

Web Sites

Canadian Centre for Occupational Health and Safety
http://www.ccohs.ca/oshanswers/safety_haz/chainsaws/safeuse.html

Husqvarna

Government of New York
http://www.health.ny.gov/publications/3132/logging_section_two.htm

British Columbia Health and Safety

Ontario Ministry of Labour