

Guidance on Safe Use of Chainsaws



Introduction

The Health and Safety Authority (HSA) is concerned with the number of serious injuries and fatalities arising from the use of chainsaws at work.

In 2015 the Teagasc National Farm Survey indicated that approximately 6.5% of all injuries in the Agriculture & Forestry sector were chainsaw or wood related, indicating that approximately 120 serious injuries occur each year. Self-employed farmers, farm workers and contractors who only use chainsaws occasionally, lack the training, experience and knowledge required for certain tasks and are particularly at risk.

These Guidelines have been developed to highlight best practice in relation to chainsaw use and important precautions that must be taken prior to use of a chainsaw.



Do not put yourself at risk. Using a chainsaw without appropriate Training and Personal Protective Equipment is extremely hazardous.

Injury

Chainsaw injuries involve cuts and lacerations to the limbs, neck, head and trunk. The major cause of timber related fatalities is being struck by falling trees or branches while felling trees.

Appropriate training in chainsaw use, control of the work site and the wearing of suitable protective clothing to protect against these injuries is essential.

If you do not have the competency and training required and do not have the correct personal protective equipment (PPE) for chainsaw work activities, then you should not be operating a chainsaw. You should engage the services of a competent chainsaw operator.

Risk Assessment

Operating a chainsaw is potentially hazardous, therefore you must complete a written risk assessment of the work to be completed prior to starting the work.

This risk assessment should list the hazards that may cause harm and detail the control measures to be taken to ensure safety.



Step 1: Identify Hazards

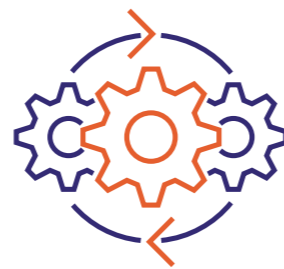
Start by identifying the hazards involved in the work activity to be undertaken and the hazards at your workplace. A hazard is simply anything that can cause harm to you, your employees or other persons.

Identify where and how people could come to harm.



Step 2: Determine the Level of Risk

Assess if people could be harmed and how serious the injury (harm) could be.



Step 3: Put in Controls and Inform

Decide what you are going to do to eliminate or control the risk to make the task safer for you, your employees and other people around you. Advise all involved in the work on the control measures to be followed.

Fitness to operate a Chainsaw

Operating a chainsaw is physically demanding. Therefore the operator should have a level of fitness, both physical and mental.

Medical advice should be sought if there is any doubt about a person's fitness to operate a chainsaw. Medical conditions may also affect a person's fitness to operate a saw, for example, arthritis, heart condition, poor vision, drug or alcohol dependency and conditions that affect balance such as vertigo or epilepsy. Certain prescription medication may affect a person's ability to operate a chainsaw safely, therefore, persons on prescription medication should seek medical advice before operating a chainsaw.



Types of Chainsaw

For the purpose of this document, we are going to consider three types of chainsaws.

Rear Handle Chainsaws

This is the most common type of chainsaw in use. These saws are used in a wide variety of work applications. You must have appropriate training before you use them.

Top Handle Chainsaws

These saws are designed for working in trees by trained arborists. They are not suitable for ground-based operations. They are not suitable for use by persons who do not have the appropriate training to use them.

Pole saws

Are also in common use and persons operating these kind of chainsaws must also have appropriate training before using them.

Training in the Safe use of the Chainsaw

If you need to use a chainsaw to fell a tree, then you must have successfully completed an accredited chainsaw training course suitable for the chainsaw work to be done. It is essential that these courses meet the standards laid down by QQI (Quality and Qualifications Ireland). See www.qqi.ie. Training requirements must be identified by risk assessment.

Chainsaw courses with various levels of training are available. For example, a basic chainsaw course covering the felling of small trees will be 5 days in duration. Shorter courses (2 days) which only cover chainsaw maintenance and cross cutting of felled timber are also available. Such short courses do not demonstrate the techniques required for felling trees safely. Therefore, you should discuss your particular training requirements with an accredited chainsaw training provider before undertaking the training.

There are various courses available to suit particular training needs.

- Novice Chainsaw Training
- Chainsaw Course for Farmers
- Tree Surgeon Chainsaw Training
- Forestry Professional Chainsaw Training
- Arboriculturist Chainsaw Training
- Horticulturist Chainsaw Training

Providing or undertaking this training helps to:

- ensure you, your employees or other persons are not injured or made ill by the work involved,
- develop a positive health and safety culture, where safe and healthy working becomes second nature to everyone,
- find out how you could manage health and safety better, and
- meet your legal duty to protect the health and safety of your employees and persons who may be affected by your work activities.

Persons undergoing chainsaw training must be adequately supervised. They should also be closely supervised post training until such time as they are experienced and fully competent. They should always complete a pre-task risk assessment.

Farmers who wish to use a chainsaw for such tasks as clearing fallen branches and pruning trees to maintain clearance for machines on their land should complete full certified chainsaw training. Before attempting even small tasks, farmers must complete a risk assessment to ensure appropriate control measures are put in place.



Personal Protective Equipment

To protect against fatalities or life-changing injuries, in addition to appropriate training, it is important that suitable protective clothing and equipment is worn when using a chainsaw. No matter how small the job you must ensure you have the appropriate training and PPE.

PPE cannot provide complete protection against cuts or other injuries while operating chainsaws, but should provide protection against serious life-changing injuries. Using chainsaws also exposes operators to high levels of noise and hand arm vibration which can lead to hearing loss and conditions such as vibration white finger. It is also important to understand that PPE doesn't protect you against falling trees. Chainsaw operators should refer to the manufacturer's handbook for safety instructions and advice.

The following safety equipment should be used:

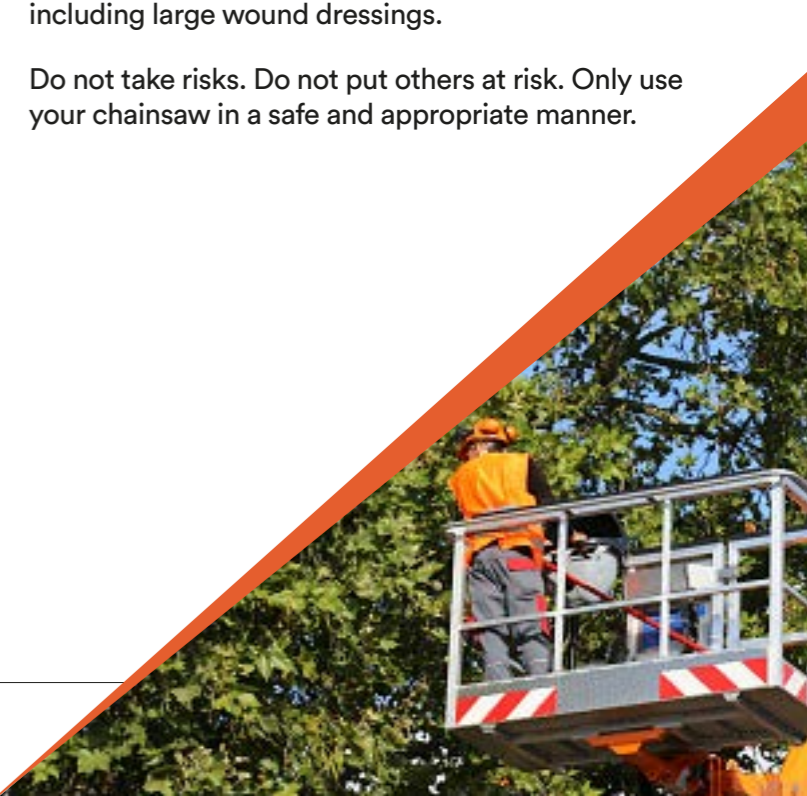
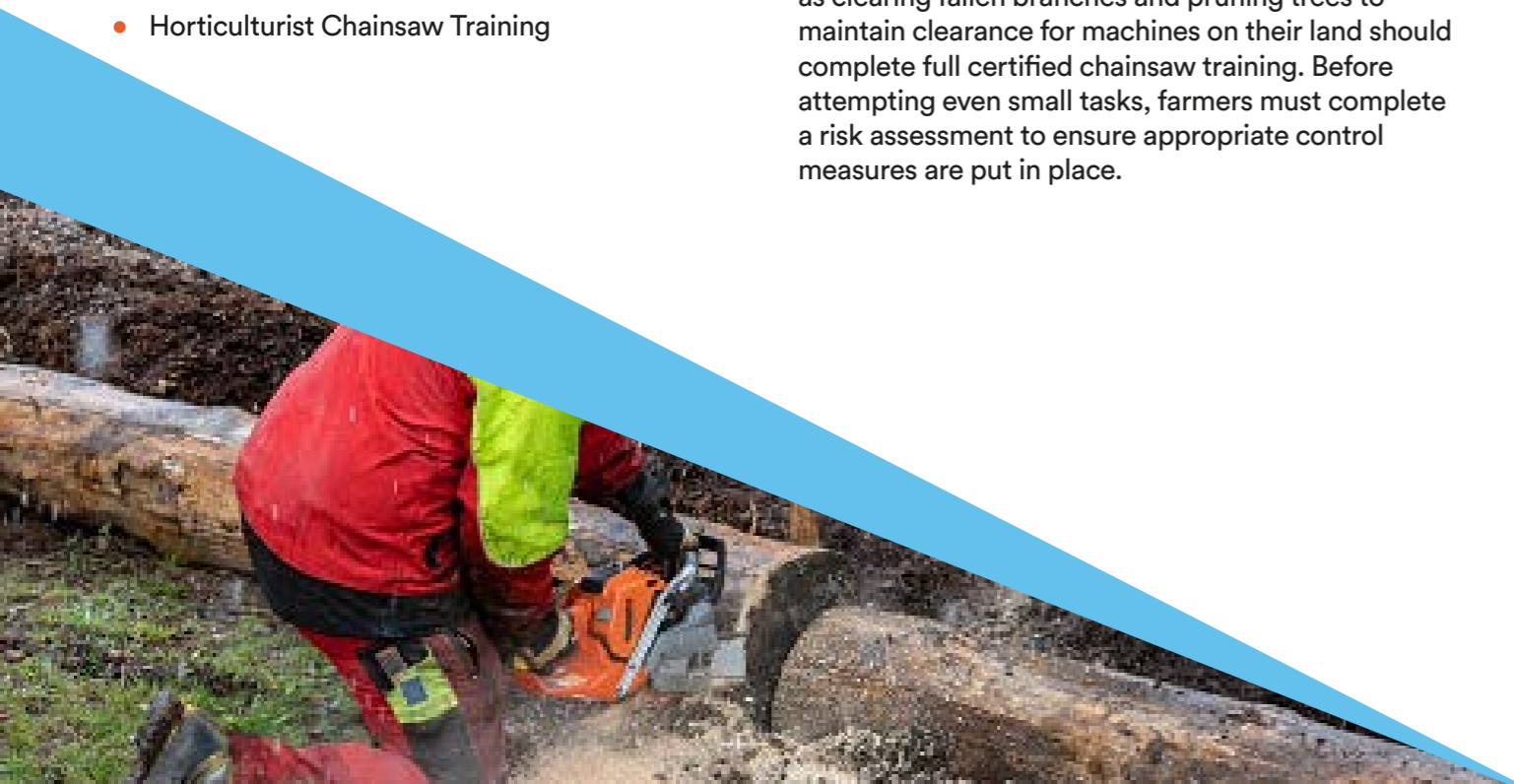
- A safety helmet (to conform to EN 397), suitable eye protection (Visor to EN 1731) or safety glasses (to EN 166) and ear defenders (to EN 352).
- Chainsaw gloves with protective pad on the back of the left hand, leg protection incorporating clogging material (EN 381-7).
- Safety boots with steel toecaps with good grip (EN 381/345).

- Non-slag close-fitting outer clothing.
- Chainsaw trousers (EN 381-5).

No personal protective equipment can ensure 100% protection against cutting by a hand-held chainsaw.

Note: A first aid kit should be readily available, including large wound dressings.

Do not take risks. Do not put others at risk. Only use your chainsaw in a safe and appropriate manner.





Chainsaw Care and Maintenance

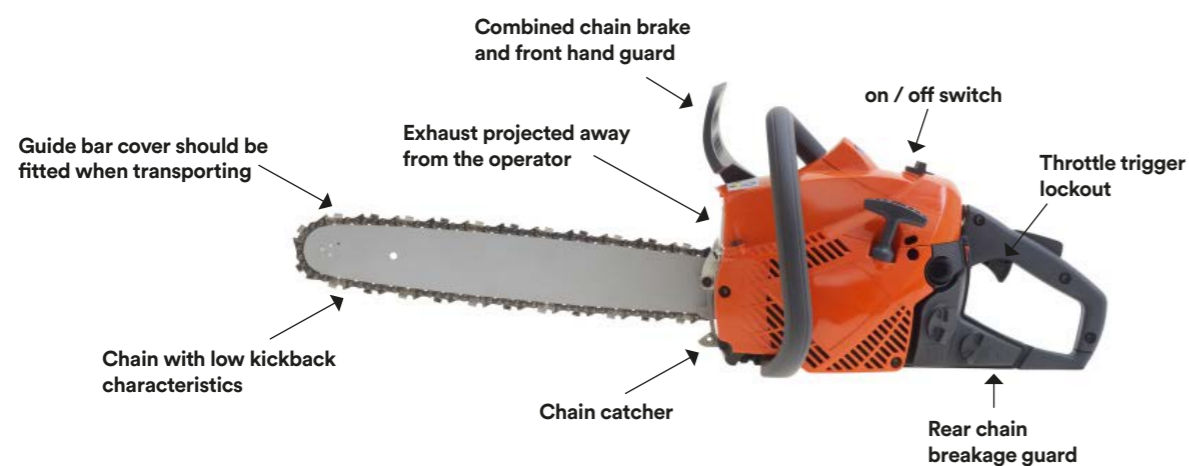
It is important that your saw is maintained correctly to ensure that it will work properly and safely.

The following safety features should be in working order:

1. On/Off Switch.
2. Chain Brake.
3. Chain catcher.
4. Handguard.
5. Exhaust pointing away from the operator.
6. Chain bar.
7. Bumper spikes.
8. Chain bar cover in place for transportation and storage.
9. Chain sharpened and tensioned correctly.
10. Correct chain oil.
11. Correct fuel mix for the saw.
12. Safety labels in place and visible.

Before starting your chainsaw ensure that you do the following safety checks:

1. Check that the chainbrake is engaged and working.
2. Ensure that the chain is sharp and is tensioned correctly.
3. Check that the chain bar is not worn, is clean and undamaged.
4. Ensure the chain catcher is in place.
5. Make sure that the chain oil reservoir is filled with the correct oil.
6. Ensure that you have the correct fuel mix.
7. In the case of battery powered chainsaws, ensure that your battery is fully charged and that you have a spare fully charged battery.



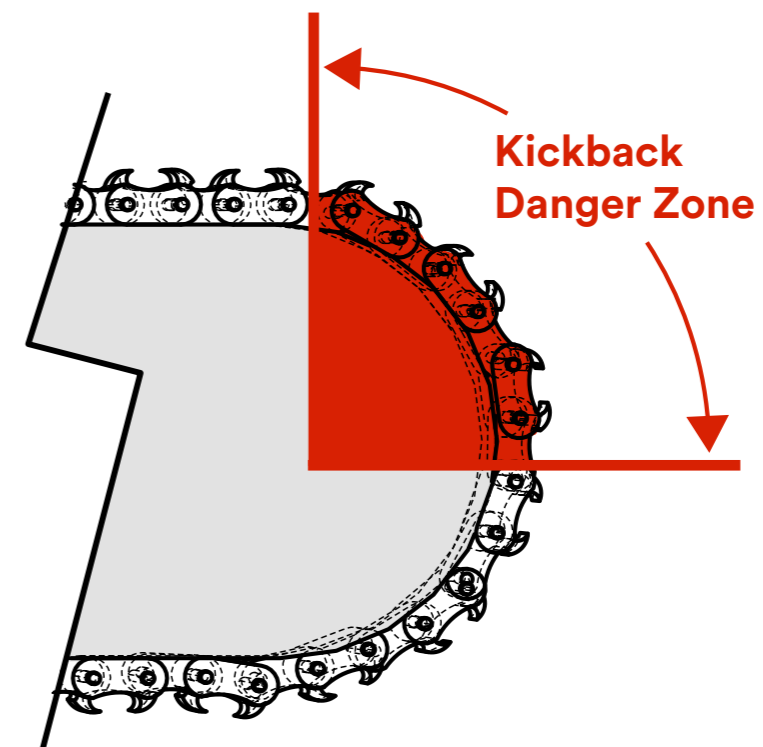
Kickback

Kickback is one of the more common causes of serious chainsaw injury.

The kickback zone is at the top tip of the chainsaw bar. It may occur when the moving chain at the nose or tip of the bar touches an object such as a branch or a log, if this happens it can cause a rapid upward motion of the bar back towards the operator who may suffer a very serious or fatal injury.

Avoiding Kickback

- Do not cut with the top tip (Kickzone) of the chainsaw.
- Ensure the saw is sharp and is tensioned correctly.
- Cut one piece at a time.
- Hold the saw firmly.
- Ensure the chain break is working correctly.
- Ensure you have a good footing before you start.
- Wear appropriate PPE.
- Do not stand directly behind the saw. Stand to the side of the cutting path of the saw.



Adverse Weather and Fallen Trees

Fallen trees can be very hazardous. The most common cause of fatalities while using chainsaws arises from felling storm damaged trees and clearing branches during clean-up operations.

The HSA advises anyone encountering fallen or storm damaged trees not to try to clear or fell such trees unless they are fully competent and experienced in that type of work activity. Instead, they should contact their local authority who have trained crews with specialist equipment to deal with storm damaged and windblown trees.

Trees can also bring down utility lines (electric or telephone), which creates an added hazard. You have to assume that any cable taken down by a fallen tree or branch is live (energised). If a fallen tree or branch has damaged utility lines, do not approach or inspect the lines yourself. Contact the utility service providers emergency line and they will check the line remotely or send a crew when available to assess the situation. Trees lying on utility cables can also create a large amount of tension in the utility cable and this poses another hazard to anyone trying to remove the branch from the utility cable.

- Only those with appropriate training in the use of chainsaws should operate chainsaws
- Never work on your own
- Ensure that bystanders are at a safe distance from cutting activities
- Wear suitable head and face guard protection
- Wear protective clothing
- Do not walk or work under unstable windblown trees
- Tell someone your estimate time of return

Do not compromise on these essential safety requirements. Otherwise, you may be at risk of causing a serious injury to yourself or to others.



Summary

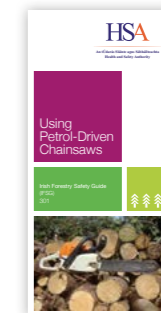
If you intend to operate a chainsaw at work, you must ensure that:

- a risk assessment on the task to be undertaken is carried out before commencing the work,
- you are not working on your own (you should have someone working with you or near you checking in on you at regular intervals),
- you are competent and have successfully completed a chainsaw training course including an assessment suitable for the type of chainsaw work planned,

- you wear the Personal Protective Equipment necessary for chainsaw work activities,
- any person working for you in connection with chainsaw use and tree felling work activities are also competent and wearing appropriate Personal Protective Equipment, and
- the chainsaw is suitable for the work involved and properly maintained.

For further guidance on use of chainsaws, please see the following:

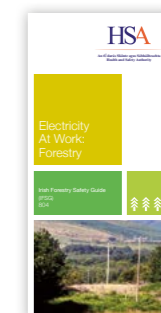
**Irish Forestry Safety Guide (IFSG) 301
Using Petrol Driven Chainsaws**



**Irish Forestry Safety Guide (IFSG) 302 Basic
Chainsaw Felling and Manual Takedown.**



**Irish Forestry Safety Guide (IFSG) 804
Electricity at Work: Forestry**





An tÚdarás Sláinte agus Sábháilteachta
Health and Safety Authority

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