



## Chainsaws

This page is for: [Employee / worker](#) [Employer](#)

### Did you know? \*

A chainsaw in untrained hands is a lethal weapon. Most injuries are deep gashes to the hands, knees, feet and head. In logging operations, chainsaw injuries are as common to the head, shoulders and upper arms as to the hands, legs and feet.

The first line of defence against injury is instruction and training, under the supervision of a trained and experienced person.

The sharper the chain, the safer the job. A blunt chain requires more effort and increases fatigue, both of which can lead to kickback accidents.

The major injury risk is from kick-back, the violent reaction triggered when the upper quadrant of the chain bar tip meets resistance.

Even modern safety features, such as the chain brake and inertia brake, cannot be guaranteed to prevent kickback injury, which can happen faster than human reflexes. The safest way is to avoid kickback situations.

More than 50 people are injured by chainsaws at work in WA each year.

### For Beginners

If you are buying or intending to operate a chainsaw for the first time, start on one with a short chain bar, 30cm to 40cm long. However even a person starting with a small bar chainsaw requires initial instruction, training and supervision, and a sound knowledge of basic maintenance and safe work procedures.

A formal chainsaw course is best, but minimum training can be provided by an experienced person, preferably one who has received formal training.

Together you should go through the manufacturer's manual following the steps of starting and stopping, using the chain brake when not cutting, correct safe grips and stances, correct sharpening, and simple cutting exercises on pieces of felled timber.

The period of instruction should be long enough to ensure the trainee has a good understanding of all aspects of safe chainsaw operation - and should possibly include an hour's exposure to normal operating conditions and methods.

Certificated chainsaw courses are compulsory for all forest industry workers who use chainsaws in their work. Courses are also available for non-forestry workers, such as farmers and council workers.

## General safety precautions

Read the manufacturer's chainsaw manual from cover to cover and ensure you understand the manual.

- Check your chainsaw thoroughly before every use.
- Make sure the bar, chain and sprocket are in top condition.
- Check that bar oil is flowing and the chain brake is working.
- Sharpen your chainsaw and top up with bar oil each time you stop to re-fill with fuel.
- Always wear suitable protective clothing.
- Never use the saw to cut anything above shoulder height (between knee and waist-high is safest.)
- Never operate the saw beyond your ability.
- Carry a chainsaw with the motor off and the saw blade pointing to the rear.
- Always have a properly equipped first aid box with you.

## A safe environment

- Keep other people and animals away from the working area.
- Make sure there is a second person within calling distance.
- Use the saw to cut only wood.
- If tired, stop the saw and rest a little.
- Avoid using a chainsaw in wet or windy conditions or in poor light.
- Wait a few minutes for the motor to cool before refuelling.

## Safe starting

You should always cold-start a chainsaw on the ground. Get down on your left knee, with the toe of your right boot firmly on the base plate of the trigger guard. Have the chain brake off, as you will be using the choke in cold starting.

You should NEVER 'drop-start' a chainsaw by thrusting the saw down with your left hand and pulling the starter cord up with your right. (This is an extremely hazardous practice.)

The approved safe way to warm-start a chainsaw while standing is by bracing the trigger guard between your knees, ensuring the chain brake is engaged, and keeping your left forearm rigid while pulling the starter cord with your right hand.

You should always choose a flat piece of ground, clear of debris, before cold-starting a chainsaw on the ground.

## Safe chainsaw operation

While cutting, always:

- run the chainsaw motor at full revs. This makes the job safer, as there is less chance of pull-in or kick-back;
- position your body to the left of the chainsaw so if it kicks back uncontrollably, it goes over your right shoulder;
- keep a firm grip with your left hand on the front handle, with your thumb securely below the handle. The swivel of your wrist in a kick-back situation will activate the chain brake;
- make sure the chain is tensioned correctly; and
- observe the size of wood shavings. (If they become dusty your chain could need sharpening).

## Avoiding kickback

To avoid kickback:

- be constantly aware of the position of the upper quadrant of the blade tip. (This is the part that triggers a kickback when it hits resistance);
- never engage the upper quadrant of the guide bar with whatever you are cutting and avoid contact with any hidden branches or obstructions. Ensure there is a clear work area;
- always clear away brush, vegetation and any obstructing debris before attempting a cut that might trigger a kickback; and
- avoid cuts that will cause the chainsaw to jam in a tree trunk or limb.

## Avoid jamming

To avoid jamming the saw:

- always cut into the compression wood first until the cut starts to close;
- always make the compression cut beneath if the log or limb is suspended from one end, (and on top if it is supported at both ends);
- cut from the other side towards the compression cut; and
- make a habit of using a wedge to prevent the compression cut jamming tight on the chainsaw blade.

## Safety controls

To maintain safety control:

- hold the chainsaw firmly, making sure the left hand encircles the top handle squarely, with the thumb underneath;
- ensure the chainsaw is fitted with a chain brake - preferably inertia activated; and
- always set the depth gauge in accordance with manufacturers' recommendations (refer to operator's manual).

## Preventing fire

To avoid starting a fire:

- never smoking while filling or operating the saw;
- refuel in a clean area;
- refuel the saw only after the motor has cooled down (e.g., after re-sharpening.);
- make sure fuel caps are screwed on tight and any fuel spillage is wiped off;
- move at least three metres away from the fuelling area before starting;
- use only safety-approved fuel containers which comply with AS/NZS 2906: 2001; and
- keep a fire extinguisher, knapsack spray or water pump and shovel nearby.
- ensure persons who would need to use the firefighting equipment are properly trained.

## Personal protective equipment

When using a chainsaw, always wear personal protective equipment that complies with the relevant Australian / New Zealand Standards:

- either a face shield or safety glasses;
- a safety helmet;
- approved ear plugs or muffs;
- gloves;
- safety boots with non-slip soles; and
- leg protection (safety trousers or 'chaps').

## Field maintenance

When using a chainsaw for extensive cutting, always have nearby:

- a supply of ready-mixed two-stroke fuel;
- bar oil;
- tools for tightening the chain - or removing the drive sprocket outer casing to clean out debris - or re-seat the chain should it dislodge;
- cloth or absorbent material to wipe any spilt fuel or oil from the chainsaw after refuelling;
- a file and file guide for sharpening the chain after every refuel;

- some sort of portable vice to grip the chain bar during sharpening; and
- a small brush to regularly clean the air filter and around the chain sprocket.

Always:

- store fuel and tools at least 10 metres from where you are cutting; and
- choose a flat place for tools and fuel, where the ground is free from flammable vegetation.

## Maintenance after use

After completing chainsaw work, always:

- reverse the chain bar, top to bottom, to avoid wear on one side;
- clean out the groove on the chain bar;
- clean the chainsaw, particularly the air filter, cooling inlets and inside the sprocket cover; and
- clean the chain brake mechanism.

Have your chainsaw serviced regularly - in accordance with the manufacturers instructions.

## For specialists only - tree felling

In this information bulletin, tree felling is covered only briefly, because from an occupational safety perspective it should not be attempted without special chainsaw and felling training.

As well as having to make particularly accurate and defined cuts that vary greatly according to the type of tree being felled, the felling of trees presents additional hazards, related to the risk of falling trees and limbs.

Even trained, experienced fellers who fell trees for a living are required to undergo retraining if supervision shows they are overlooking any fine points of safety.

This item is mainly about cutting logs and timber that is already felled. The following section is about tree felling, which should not be attempted without special training.

## The main risks

- The main risks in tree felling are from falling trees and limbs, rather than chainsaw injury.
- It is important to check the work area for hazards before you start felling or cutting. Look for overhead hazards and branches of other trees likely to be contacted as the tree falls.

- Check no other person is likely to be affected or put at risk by work you are about to do.
- Check no children are in the work area, or could enter the work area.
- Do not work in adverse weather conditions such as heavy winds, rain or poor light.
- Ensure your work area is clear of debris or obstructions, and you have a stable footing while cutting.
- Do not over-reach or work off balance. Stand comfortably close to the job.
- Shut off the saw before carrying it. Carry it by the front handle, with the chain bar pointing to the rear. Don't carry a chainsaw on your shoulder.

## Safe felling advice

If you are felling trees:-

- place warning signs prior to commencing work;
- keep other people at least three tree lengths away;
- always ensure there are two escape routes at approximately 45 degrees backward of the chosen line of fall;
- always check tree tops for branches (widow makers) that may dislodge and fall into the work area or escape paths as the tree falls; and
- wedges are indispensable in directional felling, or to hold open cuts that may bind or pinch the chain bar.

## High risk trees

Felling of the following trees is particularly hazardous:

- trees with a heavy lean;
- a tree propped or leaning against another tree, or under tension;
- abnormally large trees;
- trees on steep terrain or unstable ground; and
- trees with hollow, split or otherwise defective trunks.

And remember: Small trees can be just as dangerous to fell as big trees.

## Safety and health responsibility

The safety and health of all employers, employees, self employed people and other people at a workplace (it can be a bush site or a farm fence) is covered by occupational safety and health legislation.

If the chainsaw owner is an employer, and the chainsaw is used by an employee, it is the employer's responsibility under the *Occupational Safety and Health Act 1984* to provide a safe working environment and to introduce safe work procedures to prevent employees being exposed to hazards.

The employer must also provide adequate information, instruction, training and supervision to enable employees to work in a safe manner.

Employees must follow instruction and training provided, must use the personal protective equipment provided, and must point out hazards to their supervisor.

Self employed people must take reasonable care for their own safety and health and of others in or near the workplace. This includes people like farmers, who are major users of chainsaws.

Hire service managers should, as far as practicable, provide safety information, preferably with a safety demonstration, to customers hiring chainsaws.

A first aid box should be kept close by when a chainsaw is being used. The box should contain the sort of bandages and absorbent padding needed to deal with a major chainsaw injury. As far as practicable a first aid trained person should be available at the workplace.

## Consultation

Under occupational safety and health law, an employer must consult and co-operate with employees and safety and health representatives, if any are elected, on occupational safety and health matters at the workplace. Employees must report to the employer any situations believed to be a hazard or likely to cause injury or harm, that they are unable to correct.

## Checklist

### **Chainsaw checklist**

Do NOT operate a chain saw with one hand. Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one-handed operation.

A chain saw is intended for two-handed use only.

DO NOT operate a chain saw when you are fatigued, under the influence of drugs, alcohol or medication.

Use safety footwear, snug-fitting clothing, protective gloves and eye, hearing and head protection devices.

Use caution when handling fuel. Move the chain saw at least 3 metres from the fuelling point before starting the engine.

DO NOT allow other persons to be near when starting, or cutting with the chain saw.  
Keep bystanders and animals out of the work area.

DO NOT start cutting until you have a clear work area, secure footing, and a planned retreat path from the falling tree.

Keep all parts of your body away from the saw chain when the engine is running.

Before you start the engine, make sure that the saw chain is not contacting anything.

Carry the chain saw with the engine stopped, the guide bar and saw chain to the rear, and the muffler away from your body.

DO NOT operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled. Be sure that the saw chain stops moving when the throttle control trigger is released.



Shut off the engine before setting the chain saw down.

Use extreme caution when cutting small size brush and saplings because slender material may catch the saw chain and be whipped towards you or pull you off balance.

When cutting a tree limb that is under tension, be alert for spring back so that you will not be struck when the tension in the wood fibres is released.

Keep the handles dry, clean and free of oil or fuel mixture.

Operate the chain saw only in well-ventilated areas.

DO NOT operate the chain saw in a tree unless you have been specifically trained to do so.

All chain saw service should be performed by a competent person.

When transporting your chain saw, use the appropriate guide bar scabbard.

DO NOT operate your chain saw near or around flammable liquids or gases whether inside or outside. An explosion and/or fire may result.

Do not fill fuel tank or oil tank, or lubricate, when the engine is running.

USE THE RIGHT TOOL: Cut wood only. Do not use the chain saw for purposes for which it was not intended. For example, do not use the chain saw for cutting plastic, masonry, or non building materials.

The first time user should have practical instruction in the use of a chainsaw and the protective equipment from an experienced operator.

DO NOT SMOKE when operating or servicing a chain saw.

***Please Note: This document has been copied from the Government of Western Australia Department of Mines, Industry Regulation and Safety, website.***

***<https://www.commerce.wa.gov.au/worksafe/chainsaws>***

***Disclaimer: The information shown in this document is not endorsed by the Darling Downs Residence Association (DDRA). This document is for initial information purposes only, and you should do your own extra research to become a proficient operator of a chainsaw.***