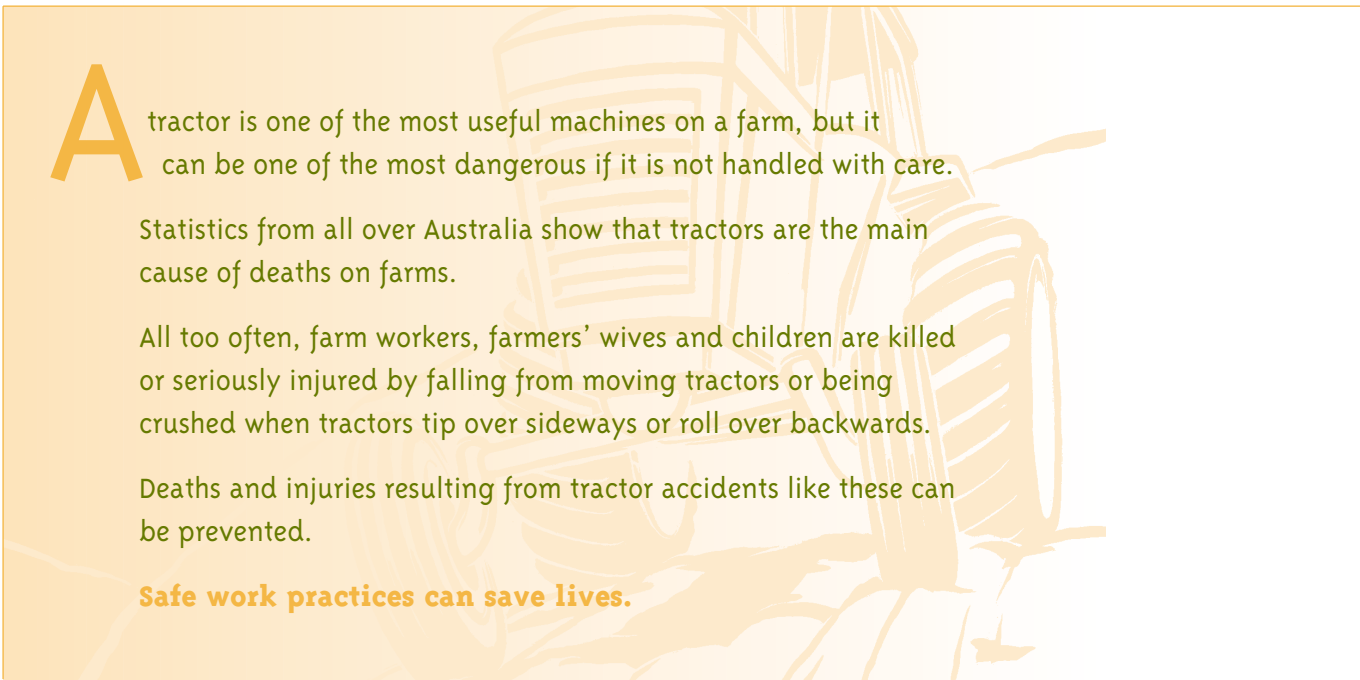


A guide to

Tractor

SAFETY





A tractor is one of the most useful machines on a farm, but it can be one of the most dangerous if it is not handled with care.

Statistics from all over Australia show that tractors are the main cause of deaths on farms.

All too often, farm workers, farmers' wives and children are killed or seriously injured by falling from moving tractors or being crushed when tractors tip over sideways or roll over backwards.

Deaths and injuries resulting from tractor accidents like these can be prevented.

Safe work practices can save lives.

Tipping over sideways or rolling over backwards are the types of tractor accidents that invariably result in death or serious injury. Drivers and passengers involved in these accidents have little or no chance to get clear as the tractor tips or rolls.

Therefore, it makes sense that all wheeled tractors must be fitted with roll over protection structures (ROPS). Falling object protective structures (FOPS) also prevent accidents that happen when trees and other objects fall onto tractors.

The law requires all tractors manufactured, imported or originally purchased after 1 January 1981 and weighing between 560 and 3860 kg to be fitted with ROPS. This is not applicable when the tractor is primarily used under trees or in places too low for ROPS to be fitted, or the tractor is in a fixed position, that is, used as a stationary engine.

FOPS are required on all earth moving equipment (within the scope of AS 2294) manufactured, imported or purchased after 1 January 1989.

Many people believe that tractors will only turn over in steep or hilly country. The risk in these areas is high, but records show that tractor accidents happen in all kinds of places. An Australian study of over 400 accidents found more than half occurred when the tractors were on flat or slightly sloping ground. Often these accidents involved obstacles like stumps and stones, or ruts and ditches.

The design of wheeled tractors means they can be unstable in many working situations and even very experienced drivers sometimes will find that they cannot overcome all of the hazards.

Safe work practices will reduce the risks and roll over protection structures will help to protect the driver and passengers if an accident does occur.

Passengers falling from tractors is the most common type of tractor accident resulting in death or injuries. One most disturbing fact with these accidents is the number of children involved, some as drivers and others as passengers riding on the tractor or on the trailer.

It is a dangerous practice to allow passengers of any age on a tractor, unless each passenger is sitting in a proper seat that has been shaped or fitted with a backrest so that the person will not slip out of the seat. Passengers also need adequate and convenient footrests and handholds.

Do not allow passengers, especially children, to ride on a tractor unless the tractor has been fitted with the proper equipment and the passengers are securely seated at all times. Power transmission equipment (PTO Shafts) attached to tractors for the purpose of driving other machines is another well known hazard. Guards on power transmission equipment and all associated components will reduce the risk of any part of the body or clothing of a person from coming into contact with the moving parts.

General Safety Precautions

- Read all of the manufacturer's operating instructions.
- Keep all guards securely in place.
- Safety cabs or frames must be fitted and properly maintained in accordance with the regulations.
- Keep children away from tractors and machinery.
- Wear close fitting clothing.
- Ensure that you are competent to drive your tractor.
- Rest if tired. Tired drivers have more accidents.
- Always ride on the seat. Adjust the seat so that all of the controls can be operated comfortably and safely.
- If another person sits in the tractor with you, a safe, secure seat, handholds and adequate footrests must be provided.
- Before starting, check to make sure that the tractor is in neutral and the brake is on.
- Check that the power take-off is guarded.
- Do not start the tractor while standing on the ground.
- Exhaust fumes can kill. Avoid running the tractor in a garage or a poorly ventilated area.



Hitching of Implements

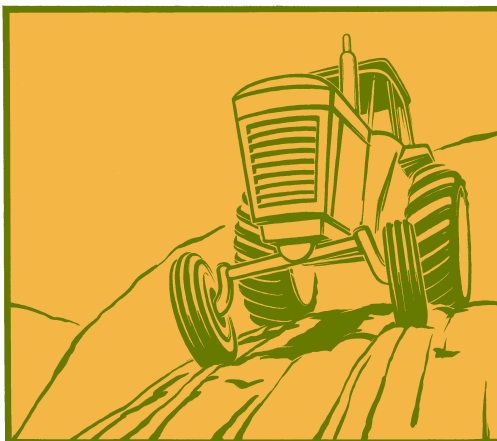
Many tractor operators have been killed because attached equipment or leads were hitched too high.

- Always fit attachments according to the manufacturer's instructions.
- Always use the draw bar, or the mounting points provided by the manufacturer, for attaching equipment. Do not use makeshift methods.
- Do not alter, modify or raise the height of the draw bar.
- When a power implement is attached to the tractor, be sure that all guards are in place before operating.
- Never hitch around the axle housing or to the top link pin. Hitching to the axle or seat bracket or top link can cause the tractor to overturn backwards.
- Do not attempt to adjust implements while they are in motion.
- Do not use or attach implements unless the power shaft, take-off and input are guarded.
- A properly hitched load helps to keep the front wheels on the ground.
- When pulling heavy loads or when pulling vehicles from a bog, use reverse gear and pull from a hitch point on the front of the tractor. The tractor cannot turn over backwards using this method.



Travelling and Operating

- Drive at speeds slow enough to retain control over the unexpected. Hidden hazards, such as rabbit holes and stumps, can be killers. Recommended top speed is 12km/hr, except when travelling on a good level road surface.
- Reduce speed before turning or applying turning brakes. Speed may cause the tractor to overturn.
- When working on silage stacks, do not drive too near the edge. Always back up the slope.
- Watch out for ditches, embankments and depressions. Crumbling and slippery banks have caused many overturns.



- When stuck in mud or a hole, do not put planks, poles or other objects in front of the back wheels and attempt to drive forward. The back wheels may dig in and the front of the tractor will rise causing the tractor to roll over backwards.
- When stuck, *back out*. If that does not work, get help.
- On very steep slopes, if you have no trailing implements, *back up* for greater safety.
- Engage the clutch gently when going up hill or towing.
- Use as wide a wheel track as possible when working on hillsides and sloping ground.
- Descend slopes cautiously. Keep the tractor in low gear and allow the motor compression to act as a brake.

Working in Timber

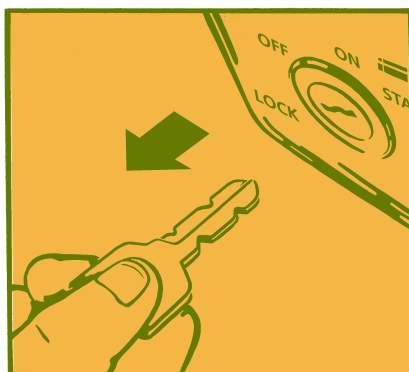
- Protect the driver from falling objects by fitting an adequate canopy to tractors used for logging or working under timber.
- Do not use wheeled tractors for the direct pulling of trees.



- When winching logs, do not back the tractor against a tree to gain extra anchorage.
- Keep all cables and chains in good condition and store correctly when not in use.
- Watch out for dead limbs on trees - any movement of the tree could bring them down.

Stopping Tractors

- Do not attempt to dismount from a moving tractor.
- If you dismount from a tractor while the engine is running, make sure that the parking brake is on and the gear lever is in neutral.



Maintenance Safety

- Regularly service your tractor. Make sure that your tyres and brakes are always in top condition.
- Do not remove or replace belts while the pulleys are under power.
- Stop the engine before refuelling, servicing or greasing. If possible, wait until the engine is cold before refuelling.
- If the engine overheats, allow time for it to cool off before removing the radiator cap. When removing the cap, be extremely careful to avoid being scalded by steam, which has built up pressure in the radiator.



- Before removing any tractor wheel, chock the other wheels.
- Avoid improvised lifting arrangements. Use a wide-based jack of adequate lifting capacity. When the tractor is jacked up, block it evenly for additional support. Use wood for chocks, not bricks or building blocks. These have been known to crumble causing the tractor to crush the operator. Before removing a tyre from the rim, make sure that all the air pressure has been released.

Commonsense and a sound knowledge of tractor safety will prevent many accidents.

Safety and the Law

The Occupational Health, Safety and Welfare Act, 1986 places a general duty of care on every person in a workplace - employers and employees - to do all that is possible to make sure that the workplace is safe and healthy.

On 3 April 1995 the consolidated Occupational Health, Safety and Welfare Regulations, 1995, were introduced. These regulations cover health and safety in the workplace, including farm safety.

The duty of care for a farming-related employer is to ensure that employees are not exposed to hazards while they are working. Employers have to organise safe systems of work, provide information, instruction, training and supervision, provide adequate protective equipment and consult with employees when health and safety issues arise.

For farmers, there is the added responsibility of ensuring the safety of children, who view the farm more as their home and playground, than as a workplace.

Equally, there is a responsibility on employees to cooperate with their employers, observe health and safety provisions and to take reasonable care to protect themselves and others.

All of the people who design, manufacture, import, supply, erect or install machinery must make sure that operators are not exposed to hazards when they are using the machinery properly.

The legislation applies to all farm workplaces and any other place where farmers are likely to be in the course of their work. It covers all of the work activities on a farm and the use of all farming machinery, including tractors. With tractor safety, it means that farmers are responsible for their own safety, for the safety of any employees, their families, and, in certain situations, for the safety of the general public when they are in a place where tractors are operating.

For further information about tractor safety, contact the Department for Administrative and Information Services:

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February 2001

