

# MACHINERY GUARDING

## A quick guide for safety

Entanglement and amputation of arms, legs, hands and fingers in unguarded farm machinery is all too common. Each year, the limbs of many workers are crushed or amputated when caught in unguarded machinery and workshop equipment.

The most serious of these are often associated with unguarded power take-off (PTO) shafts, grain augers, pulleys and belts, exposed tractor and pump engine radiator fans, and alternator drive belts.

### PTO SHAFTS

Do not operate or use power take-off (PTO) drive shafts that are not guarded. Replace all damaged PTO guards.

- Check that PTO guards spin freely before using PTO powered machinery such as slashers.
- Service all PTO guards regularly to prevent them binding.
- Check that Powered Implement Covers guard clutch plates and universal joints.



### GRAIN AUGERS

Grain augers have been responsible for hundreds of missing fingers, hands, toes and feet, making the auger one of the most dangerous machines on Australian farms.

- Never use an auger with the flight intake unguarded.
- Ensure there is an emergency cut-off switch located near the flight and that it is working.
- Don't forget about overhead potential hazards such as overhead power lines



### TRACTORS

To reduce the risk of injury it's important to adequately guard radiator fans, water pumps and alternator drive belts.

- Replace radiator fan and alternator guards after changing or adjusting fan belts.
- Check that the tractor Master Guard is not damaged and protects the PTO coupling.

## WORKSHOP MACHINERY

Unguarded bench grinders and air compressors in workshops contribute to eye and hand injury.

- Do not use bench grinders where grinding wheels or wire brush guards have been removed.
- Regularly dress grinding wheels and adjust tool rests to prevent injury when grinding.
- Keep bench grinder spark deflectors clean; replace broken deflectors.
- Repair and replace damaged guards on air compressors.
- Ensure drop saw and other power tool guards are in place before use.



## PUMPS AND MOTORS

The Australian Standard - AS 4024.1 2014 Safeguarding of machinery Part 1: General Principles - should be used as a guide when designing and fabricating machinery guards.

- Make sure all drive shafts, pulleys and belts are properly guarded. Guards should completely enclose belts and pulleys.
- Repair and replace damaged guards before restarting pumps.
- On older pump motors, build and install guards to prevent injury to workers.
- Guard vacuum pump drive shafts, pulleys and belts.
- Fit interlocks to machinery to prevent workers removing guards while pumps and motors are running.
- Ensure workers are trained to service machinery safely. Keep records of machinery safety maintenance.



## OTHER MACHINERY ISSUES

Nearly all machinery is noisy to some extent, so it is important to ensure that you protect your hearing by minimizing noise exposure to yourself and other workers. This can be done by purchasing quieter equipment if buying new gear or locating noisy workshop equipment near the front of the shed so that the noise can be directed outside the shed. Always try to minimize noise exposure to everyone working in the area.

As with noise, other personal protective equipment such as eyewear, steel capped boots and gloves are frequently required. Make sure these items of PPE are freely available, in good condition and that they are used - everyone on the farm has a joint responsibility for safety, there are no exceptions.

If you want more information, or if you have your own suggestions that you would like to share with other farmers, please go to [www.farmsafe.org.au](http://www.farmsafe.org.au) or contact:

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