

Workplace Health and Safety Queensland

Information guide – Rural industry

10. Machinery guarding

Using adequate guarding

A guard is any shield, cover, casing or physical barrier which, by reason of its form or its location, is intended to prevent contact between that machine part and a person, or part of that person's clothing.

Machinery on farms can be extremely hazardous. Guarding aims to increase the personal safety of operators and others involved in the normal operation, servicing and maintenance of machines. When using these machines, an operator may reach over, under, around or through the machine. Any hazards that you could encounter must be fitted with appropriate guarding.

AS 2153 - Tractors and machinery for agriculture and forestry and the *Rural Plant Industry Code of Practice 2004* provide advice on the guarding of agricultural tractors and machinery.

The code of practice advises that people in control of rural plant should adopt risk management to reduce the risks associated with rural plant.

Risk management means:

Step 1: Identify the hazards.

Step 2: Determine potential effects of the hazard.

Step 3: Assess the risk.

Step 4: Determine appropriate control measures.

Step 5: Implement and review risk control measures.

Following is a list of hazardous parts which are likely to cause injury:

- any rotating shafting (including joints, coupling, shaft ends and crank shafts),

- gearing (including friction roller mechanism), cable, sprocket, chain, clutch, coupling, cam or fan blade
- the run-on point of any belt, chain or cable. Belts themselves are not considered hazardous, provided that their joints are smooth and without hazardous projections or jointing
- keyways, keys, grease nipples, set-screws, bolts or any other projections on rotating parts. Any pulley or flywheel that incorporates any openings, spokes or protrusions that render it anything other than totally smooth
- any crushing or shearing points e.g. augers and slide blocks, roller feeds, conveyor feeds
- ground wheels and track gear that incorporates any openings, spokes or protrusions which are adjacent to an operator's position (standing platform, seat, footrest) or passenger's seat
- rotating knives, blades, tines or similar parts of power-driven machines which operate in or near the ground or engage crops
- any machine component which cuts, grinds, pulps, crushes, breaks or pulverises farm produce, and
- hot parts of any machine where the surface temperature exceeds 120°C in normal operation.

Reducing the risks

As a general rule, guards should:

- be designed in a practical way to protect the user, but allowing easy access
- be in place on dangerous parts of machinery unless they are, by any reasonable definition, located out of reach of users, operators or bystanders
- be conveniently placed so that users, operators and service and maintenance people are less likely to remove them permanently
- be strong and durable enough to suit the machine and its intended use
- protect users, operators and bystanders against dangers caused by ejected material and burns caused by hot parts
- be ventilated where applicable to avoid the machine overheating, and
- not be removed before the machine is stopped, isolated and all sources neutralised, e.g. pressure in the hydraulic, LPG gas lines.

Children and machinery

Children on or visiting your farm are more at risk of being injured in an incident.

To minimise risks, teach children about safety on the farm.

Agricultural machinery is not a playground.

- Make sure guards are on machines, especially when children are in the vicinity.
- Accidents on farms are preventable; little fingers can reach into places you may not realise is possible.
- Guarding increases personal safety
Reduce or eliminate risk by:
 - redesigning work processes
 - using correctly designed and properly fitted equipment
 - replacing machinery, material or processes with less hazardous ones.

More information

Further information is available from www.worksafe.qld.gov.au or by calling the WHS Infoline on 1300 369 915.

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