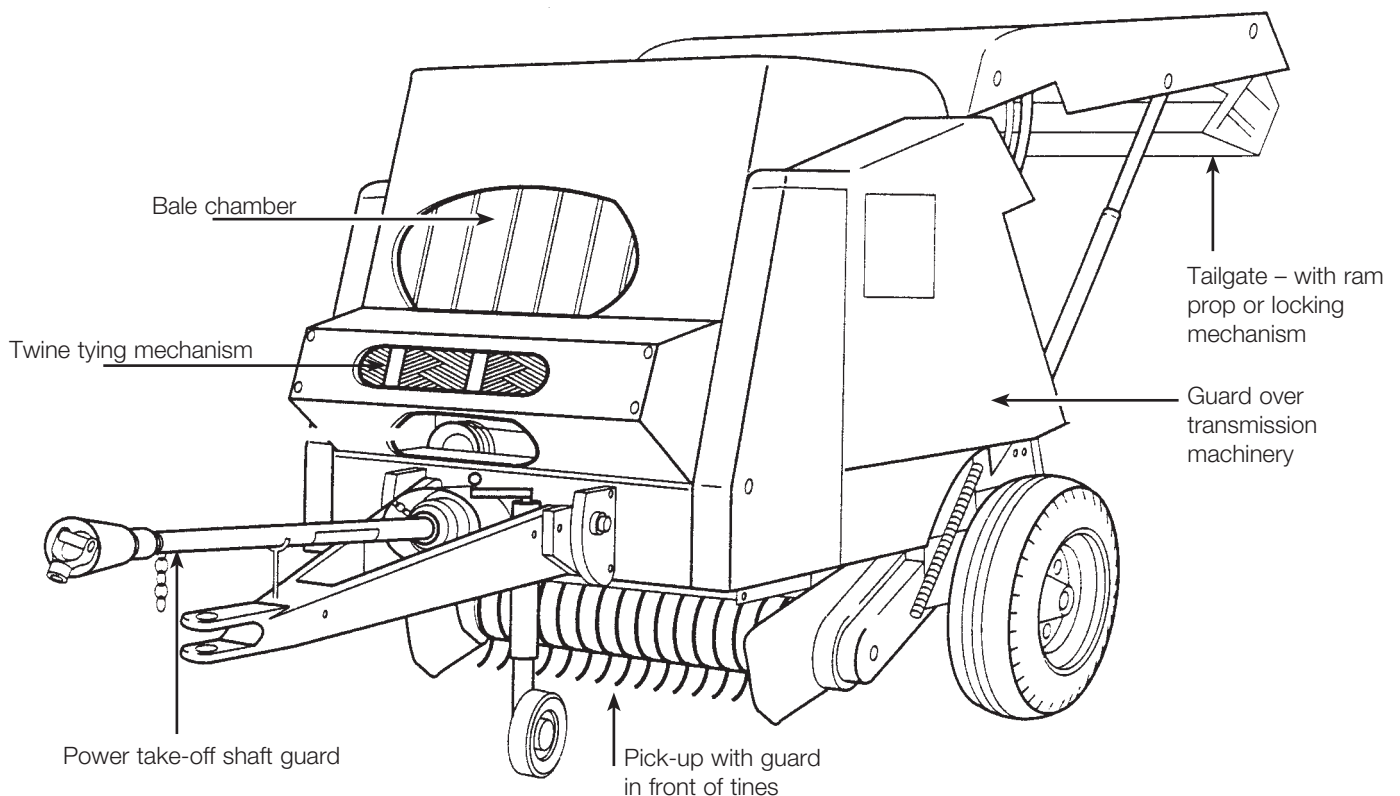


Safe use of big round balers

HSE information sheet

Agriculture Information Sheet No 4 (Revision 1)



Introduction

This information sheet describes typical hazards from the use of big round balers. It provides guidance to minimise risks to the operator and others during baling work. It does not cover safety issues from the handling or stacking of bales, which are dealt with in the leaflet *Safe working with bales in agriculture* (see Further reading).

Different types of big round roll-type balers have particular features which should be taken into account when considering the hazards, risks and precautions. This information sheet covers the typical hazards likely to be found when using most types of round baling machine.

Hazards

Many fatal and serious accidents involving amputations occur when operators are pulled into the bale chamber. The greatest risk of injury comes from contact with the machine's moving parts including:

- being pulled into the chamber at the pickup;
- being pulled into the powered pressure rollers or other parts of the machine when attempting to rethread the baler – the twine often catching around an operator's arm or wrist;
- being trapped by the various parts of transmission or moving machinery such as drive belts, pulleys, chains or sprockets;
- being struck by the rear door/tailgate;
- being entangled by an inadequately guarded power take-off shaft.

Other risks created by baling work can include:

- being struck by moving bales ejected from the machine;
- being struck or run over by the tractor and baler;
- working on sloping ground.

Control measures

It is extremely dangerous to carry out any work on a machine while it is under power. The most important safety measure is to follow the **safe stop** procedure before carrying out any maintenance or adjustments, including dealing with a blockage or other problem:

- Handbrake on.
- Controls neutral.
- Stop engine.
- Remove key.

Many serious and fatal accidents have occurred where operators have tried to clear blockages; tried to rethread twine or correct a twine fault; or worked on the machine with the engine running or power engaged. So always make sure you follow the **safe stop** procedure.

Dealing with blockages

- Never reach into the pick-up reel area with an arm or leg, or attempt to clear a blockage unless you follow the **safe stop** procedure.
- Develop a safe system of work for dealing with any problems that arise with the baler. This may be written down and form part of your written safety policy or risk assessment but should include as a minimum a safe system for clearing any blockages that occur and for rethreading the baler.
- Spread out large clumps of material in a windrow to help avoid a potential blockage. If the windrow is uneven or has been damaged by bad weather, move it or reform it.
- Blockages will occur if there is a mismatch between pick-up and windrow widths. Use a baler with sufficient capacity for the windrow/crop.
- Avoid baling wet or damp hay and straw, or excessively wet silage, as these cause poor core formation and blockages. Some manufacturers supply pick-ups for use on wet hay or silage.

Guarding

- Guards are there to prevent contact with any dangerous part of the machine when it is in motion or use. Guards should be fitted at the front, sides and rear of the machine to prevent access to

chains, sprockets, rollers and other parts that can cause injury.

- The pick-up reel guard should extend in front of the tines. Guarding should also prevent access at the sides and between the pick-up reel guard rail and the top of the bale chamber.
- The power take-off shaft should be fully enclosed in a guard along its entire length from the tractor power take-off to the power input connection on the baler.
- Make sure all guards are in position, correctly fitted and secure before starting work. Do not use it if the guards are missing or damaged.

General guidance on safe working practice

- Avoid baling light material in windy conditions and when starting to form a fresh bale. This can lead to poor core formation and uneven bales.
- Operators should receive adequate instructions and training.
- Take advantage of relevant training/courses provided by manufacturers/dealers. They will help ensure your safety and that of your staff, and help you get the best performance from your baler.
- Make the instruction manual available to the operator. The manual should give instructions on clearing blockages, rethreading, refilling netting and dealing with poor core forming.
- Keep people clear of the rear of the baler before ejecting a bale and before reversing or moving off. A big round baler is a bulky machine and operator vision to the rear may be poor. Make sure you keep reversing mirrors clean and properly adjusted.
- Use the tailgate ram prop or safety stops at all times when working under the open rear door.

Precautions for work on sloping ground

- Select a tractor appropriate to the size of baler and conditions likely to be encountered. Insufficient traction on grassy slopes may cause the wheels to slide and a loss of control.
- Large round bales can roll downhill after being ejected from the machine on sloping ground. You should take this into account when assessing safety risks and decide where you can eject bales safely to minimise the risk of them rolling away. If you are using a contractor to carry out the work you should discuss this and agree the system of work to be followed before they begin working.
- Always orientate the baler correctly before ejecting the bale from the bale chamber. You may need to reverse the machine to achieve a position where the bale can be ejected so it comes to rest safely on the hillside.

- It may be safer on steep slopes to transport the bale within the baler to a flat part of the field before ejection. This will also help make bale collection easier.
- Never try to stop a rolling bale, even with a tractor. A round bale may weigh up to 500 kg and will gain momentum as it moves. People have been killed trying to stop a rolling bale.
- Follow any special instructions given in the operator's manual for safe work on slopes.

Further reading

Safe working with bales in agriculture Leaflet
INDG125(rev2) HSE Books 2006
ISBN 978 0 7176 6161 9
www.hse.gov.uk/pubns/indg125.pdf

Power take-offs and power take-off drive shafts
Agricultural Safety Leaflet AS24(rev1) HSE Books 1997
ISBN 978 0 7176 6360 6
www.hse.gov.uk/pubns/as24.pdf

Tractor action: A step-by-step guide to using tractors safely Leaflet INDG185(rev2) HSE Books 2009
ISBN 978 0 7176 6374 3
www.hse.gov.uk/pubns/indg185.pdf

Further information

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This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

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