



Significant Incident Summary No. 7

Working safely around agricultural equipment - Hobbs Hoist fatal incident

Background

Farming equipment used to lift, transfer and support bins and crates on and off a truck bed is commonly known as a Hobbs Hoist. A farmer was fatally injured when a Hobbs Hoist supporting a seeder bin failed crushing the worker underneath.

A Hobbs Hoist consists of four rolling frames (stands), two holding rods with adjustable chains and two support pipes. When unloading an item such as a crate from a truck bed, the operator places the two support pipes through holes that run through the floor of the crate (Figure 1).

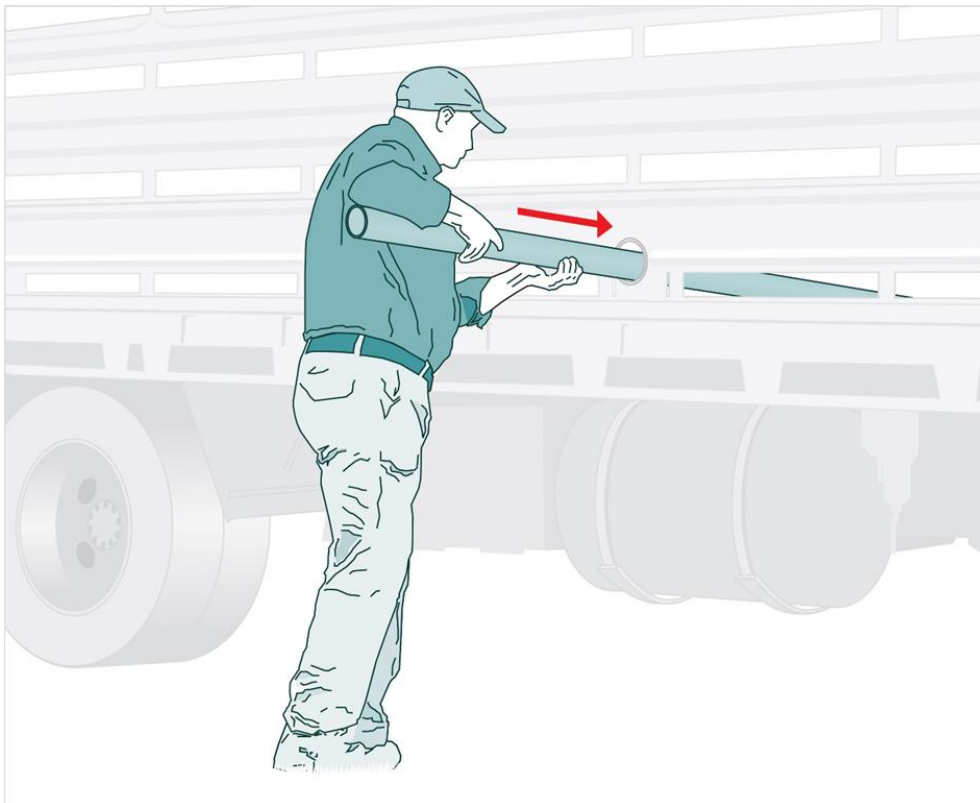


Figure 1 Support pipes

The operator then attaches the rolling frames to each end of the support pipes (Figure 2) The base of each of the four rolling frames sits on the ground.

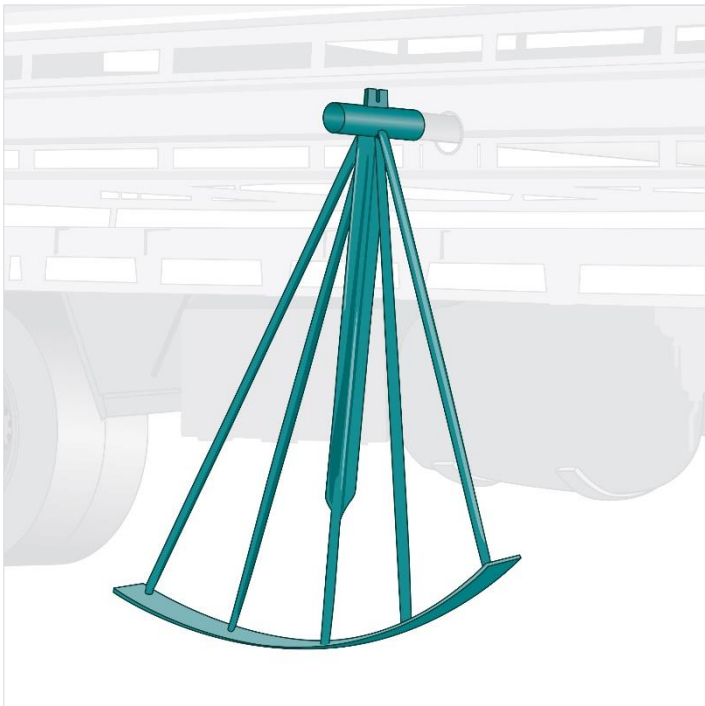


Figure 2 Rolling frame and base (stand)

The operator then moves the truck backwards, rotating the rolling frames which in turn raises the crate from the truck bed. The operator then attaches the two holding rods to the rear rolling frame (Figure 3)

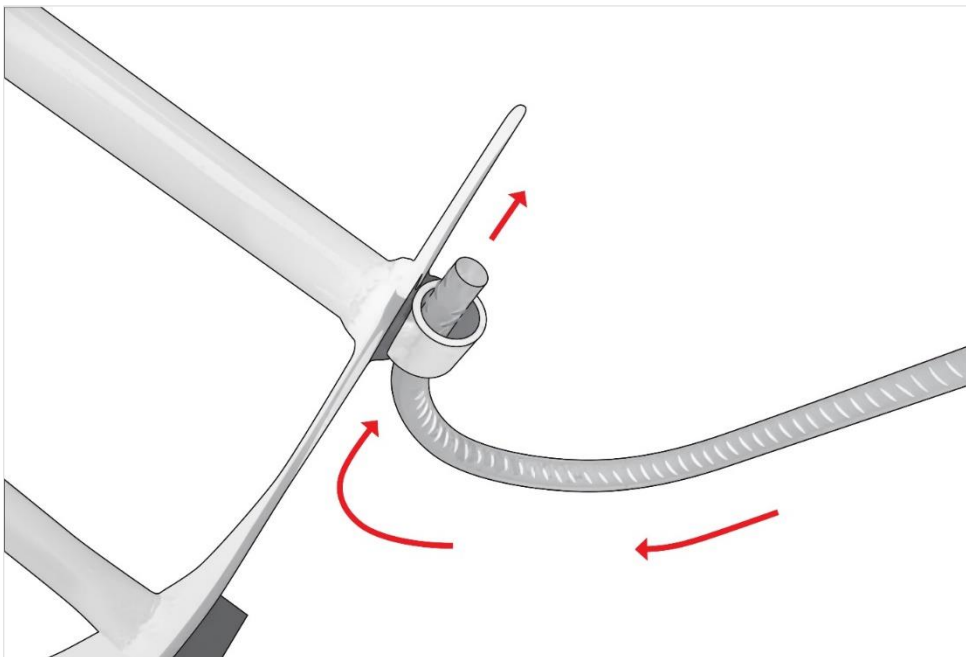


Figure 3 Holding rod connected to rear rolling frame

The adjustable chains (Figure 4) are connected to the front pair of rolling frames, which hold the crate in the lifted position

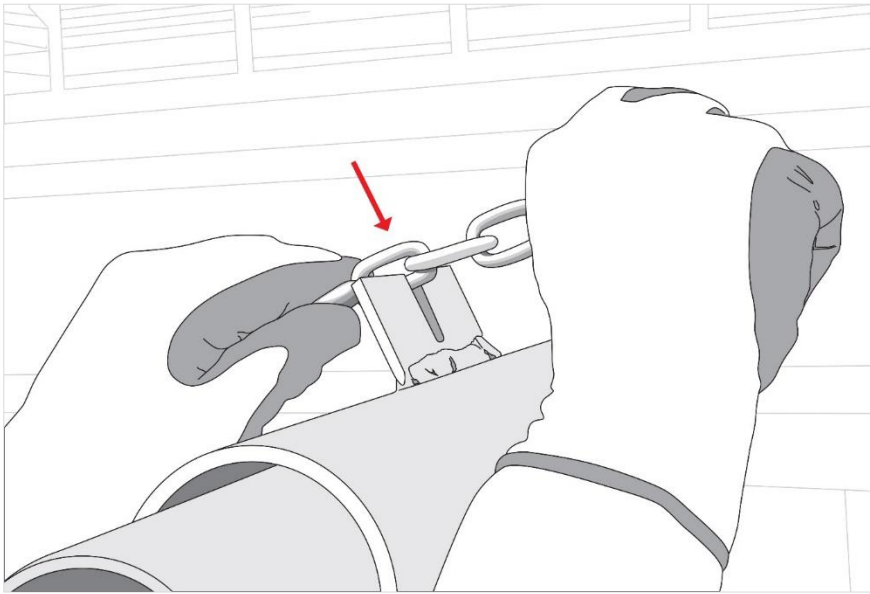


Figure 4 Adjustable chain connected to front rolling frame

Once the adjustable chain is secured and tensioned (Figure 5), the operator then drives the truck out from under the crate.

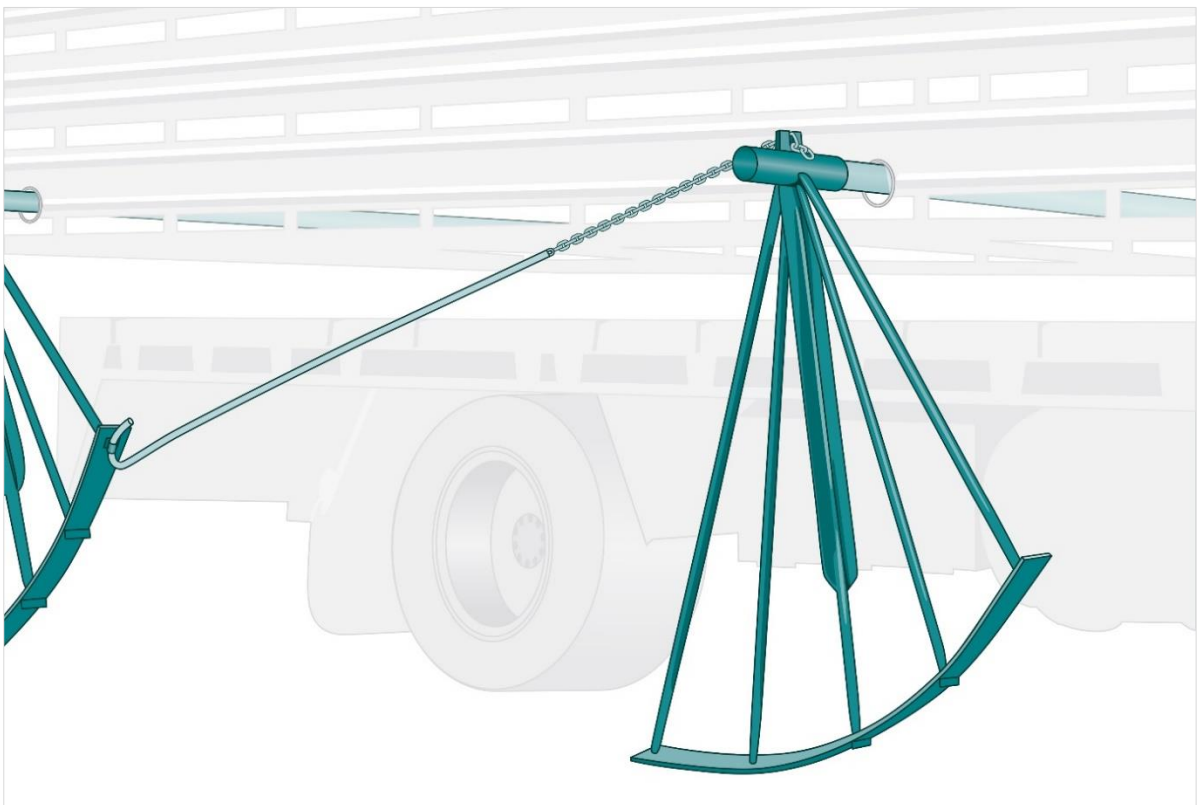


Figure 5 Secured and tensioned rolling frames

Contributory factors

A Hobbs Hoist does not provide a stable and secure mechanism to support or elevate heavy equipment. Many of the devices inspected by WorkSafe inspectors were found to have design flaws which potentially expose operators or persons working in the vicinity to the risks of crush injury.

- The base of many rolling frames inspected was as narrow as 50 mm. The narrower the weight bearing base on the ground, the higher the likelihood that the Hobbs Hoist will be unstable.
- Some support pipes were manufactured with a solid rod; however, a hollow pipe is stronger and less likely to bend.
- Unrated chain was sometimes used to secure and tension the holding rod to the rolling frame. The chain grade and diameter determine the working load limit of the chain.
- The safe working load was often not indicated or marked on the device.
- The section where the rolling frame attaches to the support pipe does not have a locking device to prevent the frame from being released unexpectedly.
- The structural integrity of the Hobbs Hoist may be compromised by multiple uses, incorrect use, corrosion, or damage.

WorkSafe inspectors also found that instructions prepared by a competent person were often unavailable. This may lead to:

- setting up the device on uneven ground
- setting up on ground which changes stability over the period of use under the weight of the load
- impact by mobile plant if an exclusion zone is not established
- impact from livestock who may rub up against the holding rod, causing it to dislodge
- overloading when the crate or bin is unrated as to tare weight (the weight of the unloaded container)
- overloading the of crate or bin with additional weight, such as manure, grain, fertiliser or water.

Actions required

Plant that is used in the workplace must be designed, constructed, inspected and maintained so that it is safe. Operators required to use plant in a workplace must be provided with information, training, instruction and supervision as necessary to protect all persons from risks to their health and safety.

Consider alternative ways to lift or transfer bins and crates from the rear of trucks, such as constructing an engineered support stand.

If you do use a Hobbs Hoist:

- do not allow people to work underneath a bin or crate supported on the Hobbs Hoist
- review and inspect the Hobbs Hoist at regular intervals to ensure it is in good working order, fit for purpose and suited to the task
- ensure workers are given information, instruction, training or supervision on how to identify lifting hazards and safely operate the hoist

- assess the ground condition before lifting and transferring the bin or crate. Choose a level, uncluttered and where possible a hard surface or well drained site
- create an exclusion zone to prevent access to the supported bin or crate
- if manufacturer's specifications (including safe use information that incorporates inspection and maintenance requirements) are not available, seek advice from a suitably competent person before the hoist is used.

References and further information

WorkSafe, Department of Energy, Mines, Industry Regulation and Safety

- [Managing risks of plant in the workplace: Code of practice](#)
- [How to manage work health and safety risks: Code of practice](#)

Safe Work Australia

- [Guide for safe design of plant](#)
- [Guide for managing the risks of machinery in rural workplaces](#)