

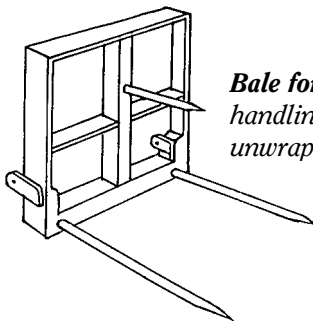
Safety in Handling and Transporting LARGE HAY BALES

Transporting and stacking large hay bales has caused numerous injuries to and deaths of operators of the machinery and people near the scene of operations. Many accidents occur when bales topple off the forks of a front-end loader and strike the operator.

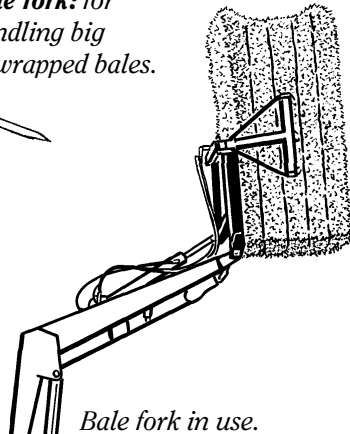
Accidents can be avoided by using suitable equipment for the job and by taking care when using the equipment.

Bale Handling Attachments

It's important to use only properly designed and constructed mechanical handling equipment, for example a loader, lift truck or rough terrain handler, with a proprietary handling attachment to ensure the bale is secure from movement during lifting. Ensure your machinery is properly maintained.



Bale fork: for handling big unwrapped bales.



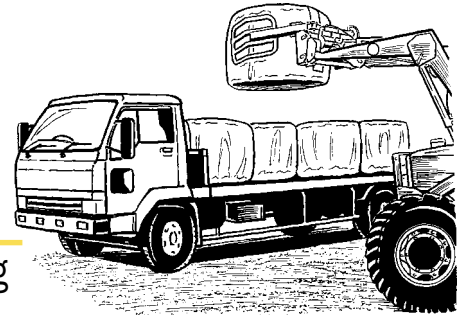
Bale fork in use.

Examples of the correct equipment to use are shown below. The equipment has been purposely designed to secure the bale or to restrain it that it cannot fall when raised.

Modifications to Existing Equipment

Existing equipment can be easily modified to prevent bales falling or rolling backwards. An existing round bale fork can be modified by fitting:

- A hydraulic clamp to secure the bale; or
- Horns to the top of the backrest (similar to logging forks) to entrap the bale in the event of the forks being rotated backward while the forks are elevated; or
- A penetration spike mounted in the back of the forks to secure the bale should the forks be elevated and tipped backwards.

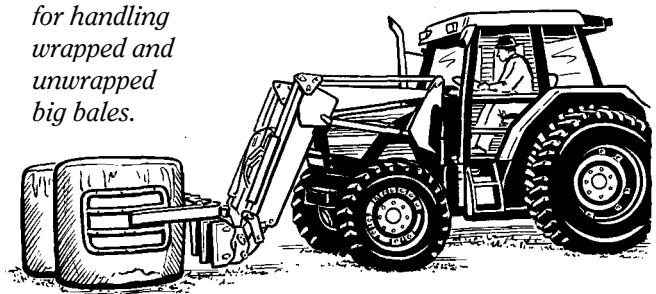


It's important to ensure that bale fork mounting pins are compatible with the loader. Sloppy fitting mounting pins can cause the bale forks to flip backwards and dislodge the bale when the loader is extended to full height.

Where possible, avoid using parts and attachments not purpose-built for the particular model of front-end loader you are using. Any modifications made to existing equipment must be purposely designed and the work should be carried out by qualified persons.

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Bale clamp: for handling wrapped and unwrapped big bales.



Hydraulic Controls

Where the existing control valve fitted to the tractor is used to operate the front-end loader, a recommended safety precaution is to fit a new control valve specifically for the front-end loader. The new valve should be a self-centering, deadman or hold-to-run type control. This will ensure that if the operator's hand is removed from the control valve, the movement of the loader will cease.

The direction of movement of controls should correspond logically

to the motion of the moving parts. Controls should also be clearly identifiable and guidance on actuating principles should be provided through appropriate labelling.

Free Guidelines Available

OSH has published a free booklet called *Guidelines for the Safe Handling, Transportation and Stacking of Large Hay Bales*. To get your copy, contact your local branch of the Occupational Safety and Health Service.