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Sheeting and unsheeting of Vehicles

Every year, about 70 people are killed and 2,500 seriously injured as a result of accidents involving vehicles in and around workplaces. 44% of falls from tipper lorries occur during sheeting and unsheeting.

Many tipper sheeting accidents could be prevented if **automated sheeting devices** were used and there was **better co-operation** between the parties involved.

Sheeting is used for a variety of reasons:

- to keep materials dry;
- to prevent loss of load during transit as required by Road Traffic Act 1991;
- to keep materials hot;
- to comply with authorisations issued under the Environmental Act 1990.

Falling may occur due to:

- slipping or tripping on the material or strappings and ropes when climbing on the load
- trimming the load when the level is uneven or too high;
- spreading or unfolding the sheet over the load;
- pulling the sheet tight;
- inadequate access to the body of the tipper resulting in poor positioning of the worker;
- high winds creating a sail-effect of the sheeting

What the law requires

Companies operating tipper vehicles should take all reasonably practicable steps to prevent falls during the vehicles' operation. People in control of **sites** where tippers operate should make sure adequate steps have been taken to prevent falls during tipper sheeting and unsheeting.

Under the Management of Health and Safety at Work Regulations, you need to assess risks and reduce them 'so far as is reasonably practicable'. What is considered reasonably practicable will vary depending upon the circumstances but if an accident occurs at a particular site then it will be for all parties to show that all reasonable steps were taken to prevent the accident. In addition to the use of sheeting aids etc. you may have to show you took reasonable steps to **co-operate** with other companies or people to prevent falls. This is particularly important with respect to tipper lorries where a tipper operator picks up a load from one site and delivers and unloads at a second site.

- Delivering safely: co-operating to prevent workplace vehicle accidents

There are also legal duties placed on employers by the Workplace (Health, Safety and Welfare) Regulations; these are more specific for reducing risks from **falls**.

A risk assessment should:

- identify the hazards;
- give the likelihood or risk of these hazards causing an injury;
- propose ways for removing or reducing these risks.

Identifying the sheeting hazards

- Does the driver need to access the top of the vehicle?
- Does the driver need to use a ladder or steps to access the top of the vehicle?
- Does the driver need to get onto the load?
- Has the material been loaded unevenly requiring trimming?
- Has too much material been loaded that will have to be removed manually?
- What is the condition of the ground when sheeting is carried out?
- Where are the operations carried out in relation to other traffic and pedestrians?

All of these hazards can present the risk of a fall from either the side of the vehicle or the top edge leading to serious injury or death.

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What are the solutions ?

There are a selection of solutions but some options are better than others. It is sometimes useful to think of the solutions as being in a hierarchy with a method of sheeting and unsheeting that does not involve getting onto the vehicle or even touching the sheet as the first choice.

A hierarchy of solutions would look something like this:

- Leave the load unsheeted (if road traffic and environmental law allows it);
- Use automated or mechanical sheeting systems, which don't require people to go up on the vehicle;
- Use manual sheeting systems which don't require people to go up on the vehicle;
- Use work platforms to provide safe access to carry out sheeting from the platform without having to access the load (Figure 9);
- Use gantry/harness systems to prevent or arrest a fall.

Leave the load unsheeted

This may be possible if the load will not blow off in transit and does not produce dust and the load does not need to stay dry.

Automated or mechanical sheeting

This is at the top of the hierarchy because these systems can allow the driver to sheet the load from ground level. These systems also remove or reduce the risks from manual handling. They are readily available from many manufacturers. They may vary in design but can be adapted to fit most vehicle body types.

There can also be financial savings from automated sheeting systems, because they reduce vehicle turn-around times. It is important to remember that automated sheeting systems do not only protect the driver while sheeting up at the pick-up point but also when unsheeting at other sites.

Automated systems are generally purpose-built assemblies attached to the vehicle body. They can be electrically, pneumatically or hydraulically powered and can work by:



unrolling sheeting from front to back of the vehicle body (Fig.1)



unrolling sheets from side to side (Fig. 2)



unrolling sheets from side to side (Fig. 3)



sliding the sheet along runners or wires from front to back or side (Fig. 4)



sliding the sheet along runners or wires from front to back or side (Fig. 5)



levering or 'flipping' sheets from centre to side or from front to back (Fig. 6)

Powered systems are preferable to manually operated mechanical systems. Because the driver does not need to use any physical strength to operate powered systems, manual handling risks are reduced. Power systems also allow the driver to operate away from the vehicle.

Manual sheeting systems

Manual sheeting from the vehicle is to be discouraged unless it is not reasonably practicable to use automated sheeting systems or sheet from the ground. Loads can be sheeted from platforms removing the need to climb onto the vehicle or the load.

In a limited number of situations automatic sheeting systems will not be fitted and suitable gantry arrangements may not be available. In these circumstances containers must be placed on the ground for sheeting and un-sheeting. The driver must perform these tasks from the ground.

In order to minimise the risk of manual handling injuries, the task of sheeting and unsheeting is best performed by two operatives. However, on driver-only collections this will not be possible and the operative may have to use a long pole with a hook. This is likely to result in a change in the operative's centre of gravity and a resultant increase in the load on certain parts of their body. For this reason it is important to choose the correct size of container and ensure operatives have received appropriate training in manual handling techniques.

The training in manual handling should take account of the various tasks undertaken during the sheeting operation. This will typically involve the following actions:

- roll out sheet;
- attach rope to sheet and throw rope over front end of container and secure (this step may not be required for skips and other smaller containers);
- pull sheet across the length of container;
- pull sheet over from opposite side of container;
- pull sheet over front end of container; and
- even up the sheet and secure ropes to container

For large containers, where full access from ground level may not be possible, or where excessive stretching or twisting by the operator is required, platforms or secure steps with handrails should be provided.

Under no circumstances should anyone be allowed to stand or walk on the load and operatives should be aware of the procedure in the event of automatic sheeting systems not working.