



FREIGHT TRANSPORT ASSOCIATION



PREVENTING FALLS FROM VEHICLES

An industry guide



Introduction

In 2003/4 falls from heights accounted for 67 fatalities and nearly 4000 serious injuries. Historically they are the biggest killer in the workplace and the second biggest cause of major injuries. The Health and Safety Commission has identified falls from height as a key priority area. The aim is to reduce injury rates by 10 per cent by 2010.

Every year over 700 people are injured falling from vehicles. Falls are currently the second highest cause of fatalities and injuries in the transport industry. The purpose of this guide is to give practical help and advice to users and operators of transport on how to reduce the risk of falls.

Falls can be caused by:

- slipping and falling from loads and access steps and ladders*
- broken ropes or torn sheets causing overbalancing*
- inappropriate footwear*
- a lack of awareness and training*
- bad weather*

Even falling a short distance can be very serious, or even fatal.

This guide is not exhaustive but tries to highlight areas where it is felt that simple risk reduction methods can have most benefit. It also tells you what you need to do to comply with the Work at Height Regulations 2005. These regulations apply to all work at height where there is a risk of a fall liable to cause personal injury and came into force on 6 April 2005. Advice has been taken from members and the Health and Safety Executive to establish current industry good practice.

Legislation

The Work at Height Regulations 2005 have been introduced to implement the European Temporary Work at Height Directive and consolidate existing legislation for work at height.

These regulations require duty holders to ensure:

- that work at height is avoided where possible*
- all work at height is properly planned and organised*
- those involved in work at height are competent*
- the risks have been properly assessed*
- appropriate work equipment is selected and used*
- equipment is properly inspected and maintained*

Work at height means work in any place where, if measures required by these regulations were not taken, a person could fall a distance liable to cause personal injury:

- this includes places at or below ground level (eg pits in vehicle maintenance units)*
- obtaining access or egress from such a place while at work, except by a staircase in a permanent workplace*

Do the rules apply to you?

The Work at Height Regulations 2005 apply to all work at height where there is a risk of a fall liable to cause personal injury. They place duties on employers, the self-employed and any person who controls the work of others.

If you are an employee or working under someone else's control, you must:

- report any safety hazard to them*
- use the equipment supplied (including safety devices) properly, following any training and instructions (unless you think that would be unsafe, in which case you should seek further instructions before continuing)*

Duty holders' responsibilities

The regulations require duty holders to ensure:

- all work at height is properly planned and organised*
- all work at height takes account of weather conditions that could endanger health and safety*
- those involved in work at height are trained and competent*
- work is carried out in a safe manner so far as is reasonably practicable*

- equipment for work at height is appropriately inspected*
- the risks from falling from or through fragile surfaces are properly controlled*
- the risks from falling objects are properly controlled*

Planning

You must:

- ensure that no work is done at height if it is safe and reasonably practicable to do it other than at height*
- ensure that work is properly planned, appropriately supervised and carried out in as safe a way as is reasonably practicable*
- plan for emergencies and rescue*
- take account of the risk assessment carried out under Regulation 3 of the Management of Health and Safety at Work Regulations 1999*

Weather

You must ensure that work is postponed if weather conditions endanger health or safety.

Staff training

You must ensure that everyone involved in the work including the planning, organisation and supervision is competent (or, if being trained, is supervised by a competent person).

Where other precautions do not entirely eliminate the risk of a fall occurring, you must (as far as it is reasonably practicable to do so) train those who will be working at height how to avoid falling, and how to avoid or minimise injury to themselves should they fall.

Competence

A competent person is a person who by virtue of training and/or suitable experience has the necessary skills to carry out specific work in a safe manner.

The place where work is done

Where you cannot avoid work at height, you must ensure that the place where work is done at height (including the means of access) is safe and has features to prevent a fall, unless this would mean that it is not reasonably practicable for the worker to carry out the work safely (taking into account the demands of the task, equipment and working environment)

Equipment, temporary structures and safety features

If the place where work at height is done does not have safety features to prevent a fall, you must provide equipment for preventing (as far as is reasonably practicable) a fall occurring. If it is not possible to entirely eliminate the risk of a fall occurring, you must do all that is reasonably practicable to minimise the distance and the effect of the fall.

When selecting equipment for work at height you must:

- *use the most suitable equipment*
- *give collective protection measures (eg guard rails) priority over personal protective measures (eg safety harnesses)*
- *take account of working conditions and risks to the safety of all those at the place where the work equipment is to be used*

Inspections

Inspection is defined as "such visual or more rigorous inspection by a competent person as is appropriate for safety purposes (including any testing appropriate for those purposes)." The regulations include inspection requirements for work at height equipment including working platforms, guard rails, nets or air bags, personal protection equipment and ladders.

You must ensure (as far as it is reasonably practicable to do so) that each existing place of work at which work is to be done at height is checked on every occasion before that place is used. This involves checking the surfaces, permanent rails etc.

Fragile surfaces

You must ensure that no one working under your control goes onto or near a fragile surface where it is reasonably practicable for the worker to carry out the work safely without having to do so, having regard to the demands of the task, equipment or working environment. If anyone does work on or near a fragile surface you must:

- *ensure (so far as is reasonably practicable) that the suitable platforms, coverings, guard rails are provided and used to minimise the risk*
- *do all that is reasonably practicable, if any risk of a fall remains, to minimise the distance and effect of a fall*

Falling objects

Where it is necessary to prevent injury, you must do all that is reasonably practicable to prevent anything falling.

If you can't prevent things falling, you must ensure that the risk of anyone being injured by anything falling is reduced to as low as is reasonably practicable.

You must ensure that nothing is:

- *thrown or tipped from height if it is likely to injure anyone*
- *stored/secured in such a way that its movement is likely to injure anyone*

Danger areas

Where there is a risk that a person could fall a distance, or be struck by a falling object that is liable to cause personal injury, every employer needs to ensure that areas are equipped with devices preventing unauthorised persons from entering the area, so far as is reasonably practicable.

Advice on how to comply

- *employers will need to look at the way they manage risk, in particular reviewing the existing health and safety policy statement*
- *define levels of responsibility to manage the risk*
- *ensure cooperation across departments and customers*
- *review any existing systems in place for managing working at height*
- *ensure that any existing monitoring systems are adequate to encompass the changes*
- *carry out the appropriate risk assessments or review existing ones*
- *from the risk assessment, draw up a safe system of work and communicate to all staff who work at height*
- *provide suitable and sufficient training to allow operators to work at height as safely as is reasonably practicable*

Risk assessments

Risk assessments are required under the Management of Health and Safety at Work Regulations 1999. A standard for these is

recommended by the HSE, to help in monitoring and determining risk. This is:

- *look for hazards*
- *decide who could be harmed*
- *take account of weather conditions – rain, winds, ice, snow, which could be detrimental to safe working*
- *take account of lighting and re assess if necessary for working in dark conditions or at night*
- *evaluate the risk and introduce steps to reduce/control the risk*
- *record the findings (in writing if five or more employees)*
- *review at least annually or following an incident or changes in equipment or working environment.*

Risk assessments should be carried out by a competent person with practical knowledge of the work activity being assessed. It may not be necessary to keep a written record in all circumstances. For example, if the work at height is low risk and of a short duration, following established good practice should suffice. Where the activity is more unusual then you should record significant findings and identify precautions needed.

Practical measures

There is already lots of guidance for working at height on specific types of vehicles, such as tankers and car transporters, and it is not intended to repeat this advice but give reference to where the information can be found, and use that information to form the general guidance that can be used across all types of vehicles and trailers.

The first rule when looking at any risk is 'can the risk be removed'. Whilst initially the answer may be no, it may be that by better specification or a little engineering the need to work at height on a vehicle can be removed. A good illustration is fuel tankers, where in the past all loading and unloading necessitated the driver getting on top of the tank. Most fuel tankers now are fitted with 'bottom loading systems', which negate the need for the driver to go onto the tank top. Others have had guard rails fitted all round (total encapsulation) to protect the driver.

With car transporters, where the need for the driver to load and unload the cars cannot be removed, then a series of measures such as edge protection, guard rails, tensioned steel ropes, non slip walkways etc have been introduced to reduce the risk as far as is reasonably practicable.

People walking on vehicles should always do so carefully, facing in the direction of travel and keeping their feet well apart and free to move. They should pay attention to the stability and grip of the surfaces they are walking on.

To keep their balance at all times, people working with vehicles should not lean backwards, especially near the back of a vehicle (for example, during sheeting).

No-one should rely on ropes, sheets or loads to support their weight as they can rip, tear or move. People should rest their weight only on equipment if that is what it is intended for and it is known to be safe.

If a sheet, rope or strap needs to be pulled tight, the operator should try to keep one foot behind the other, and keep in control of their weight.

People should never use parts of the vehicle not designed as hand or footholds (mudguards, bumpers, tracks, hooks and so on) to gain access to any part of a vehicle.

Sheeting of loads

Many bulk vehicles have automatic sheeting systems fitted. Where sheeting is required and it is not practicable to fit automated systems or remove the need to sheet, then other alternatives must be considered. These may include:

- *use of work platforms*
- *use of suitable fixed gantries*
- *fall arrest or work restraint systems*

Climbing upon the load should be avoided, and the use of ladders to access the load should only be considered in strictly controlled conditions, and following a safe system of work.

Working on platform vehicles and trailers

Where the necessity to get onto these vehicles cannot be removed and other restraint or protection systems are not appropriate then other measures should be considered. These should include:

- *suitable hand holds and steps to allow easy mounting and dismounting to the platform*
- *trip guards along the platform edge*
- *ensuring that the platform is kept clear of rubbish and the floor is secure and in good condition*
- *ensuring that the operator wears appropriate personal protective equipment and it is in good condition*
- *ensuring work areas are well lit*
- *taking account of weather conditions*
- *ensuring that work equipment is well maintained, that any damage or excessive wear is reported, and that this results in suitable action to manage risks*
- *workers should avoid walking backwards at all times*
- *no-one should jump from a vehicle or load*

Steps and hand holds

Where these are fitted to assist the operator mounting or dismounting the body or cab then the following guidelines should be considered:

Steps should

- *be at a suitable height and spacing*
- *allow the foot to sit fully on the step*
- *of suitable strength, secure and free of damage*
- *be fitted with anti-slip or self-cleaning surface(s) if the risk assessment identifies that this would be appropriate*

Handholds should

- *be at a suitable height and spacing*
- *be suitable for use with a gloved hand*
- *be of a suitable strength, secure, and free of damage*
- *be anti-slip if the risk assessment identifies that this would be appropriate*

Drivers should be trained where necessary to use the '3 point hold' principle (there should always be at least three of the four hands/feet in contact with the steps or handholds) whenever mounting or dismounting. Looping an elbow around a support is not a secure enough hold – people should use their hands to grasp supports. The 'three-point hold' rule is less important for people using stairs, although hand holds are still important.

Tasks that are carried out from ladders or steps should allow the worker to keep the centre of their body between the sides of the ladder or steps, and both feet on the same rung or step. Drivers should never jump to the ground.

Articulated vehicles

Where there is a need to connect air lines and electrical hoses between the tractor and trailer then suitable provisions should be made to protect the driver from falls. These may be suitable steps and hand holds.

Consider specifying hose connections which can be operated from the side of the vehicle at ground level, eliminating the need for access to the vehicle catwalk.

Tilt trailers

These pose special problems as they are designed to be capable of being stripped to allow for various size and shape of load.

The stripping procedure entails working at height on the vehicle platform as well as accessing tilt body parts for removal or refitting.

The risk assessment and safe systems of work must be carried out in conjunction with a competent person experienced in this operation and entail the cooperation of the customer at loading and delivery points.

Tail lifts

The use of tail lifts should not be underestimated regarding falls. Drivers are required to work on a small platform whilst managing

roll cages or pallet trucks which creates a potentially difficult working environment with numerous trip and fall opportunities.

Tail lifts should be properly maintained (including regular inspections under LOLER), and clearly marked with the safe working load. The platform deck should be kept clean and free of any defects and kick plates and guard rails must be used and subject to regular inspection and repair.

Drivers must be trained to use equipment, and the tail lift and its components inspected as part of a daily check.

Cab access/egress

Vehicle cab heights continue to increase and it is vital that drivers follow good practice to minimise the possibility of a fall from height.

- *use steps provided*
- *use grab handles to assist, not the steering wheel*
- *before egress visually check the ground for obstructions*
- *do not jump out of the cab*
- *use steps and grab handle provided and exit the cab backwards*

Maintenance

Where maintenance of vehicles or trailers requires the engineer to work at height then suitable provisions should be made to protect him from the possibility of a fall. These should include:

- *removing the need to work at height*
- *provision of suitable equipment to assist him – gantries, working platforms etc*
- *suitable fall arrest or work restraint systems – essential if carrying out vehicle roof repairs*

Where the repair provision is mobile, such as fridge servicing on site, then discussions should take place with the maintenance provider and the vehicle operator to ensure the risk of falls is properly managed.

Pits

If a workshop is equipped with vehicle maintenance pits then there is a risk of fall from height.

- *pits should be well lit with white painted walls*
- *access/egress to be by steps at each end, which must be kept clean and faced with anti slip material*
- *pit edges should be well defined and lined out, preferably in yellow and hatched for one metre around the perimeter*
- *pit guards to be in place at all times when a vehicle is not present over the pit*

Use of ladders

Ladders can be used for work at height where a risk assessment has been carried out which shows that the use of more suitable equipment is not justified because of the low risk and it is for short duration of use, or, existing features on the site cannot be altered.

There are conditions of use which need to be applied when using ladders and these can be found in the regulations. www.legislation.hms.gov.uk/si/si2005/20050735.htm

Ladders should only be used for 'low risk – short duration' operations. Short duration is usually taken as between 15 and 30 minutes.

They should be:

- *of sound construction (to industrial classification standard, not domestic quality)*
- *fitted with anti slip feet, or the stiles should be supported near the upper or lower ends or any other arrangement with equal effectiveness*
- *well maintained*
- *inspected at suitable intervals and any defects reported (a record of the inspection should be kept until the next inspection is due)*
- *given a visual pre use check by the user*
- *placed as close to the relevant part of the vehicle as possible sloping inwards to the top at an angle of about 75°*
- *placed with the rungs horizontal and give good foothold*
- *be used in such a way that a hand hold is always available to the user*

Ladder pre use check sheets can be downloaded from www.ladders-blma.co.uk



Refrigeration units

Where drivers are required to carry out checks on ancillary equipment that requires work at height (such as temperature control units), then employers should remove the need to carry out such checks at height (eg by the fitting warning lights or gauges at low level) or by providing platforms that offer suitable protection against falls and do not require the use of a fixed ladder.

Working at height risk assessment

The following may help when carrying out or revising a risk assessment. Is there a risk of a person falling a distance that is liable to cause personal injury? If the answer is yes then:

1 Initially consider:

- the task that needs to be carried out
- the frequency of the task
- the length of time at risk
- the variables – weather, light conditions, individuals concerned, place of risk etc
- number of people at risk
- suitability of equipment currently in use
- any fragile surfaces

2 Avoidance – consider:

- can the task be avoided
- can the access be from a safe place – ground level?

3 Prevention – consider:

- Providing safe systems – guard rails etc
- restricting access
- controlling the activity to avoid reaching, stretching etc
- the risk of falling objects
- PPE
- fall arrest systems
- information instruction and training
- correct level of supervision

4 Reducing the effects – consider:

- protection for all – nets or airbags
- personal systems where collective measures are impracticable
- dealing with the rescue
- maintenance of equipment

Now ask the question – have I reduced the risk of falling from height to an acceptable level?

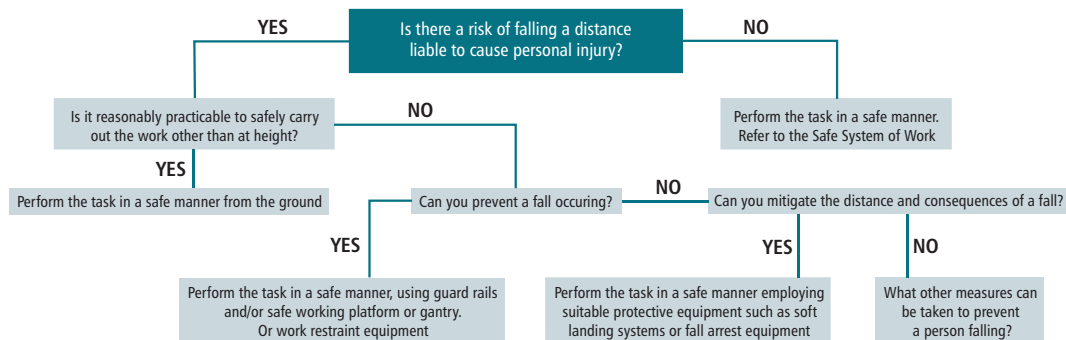
If yes then;

- complete the risk assessment in writing
- inform/train staff
- carry out a revue at a pre determined time (or sooner if required)

If no then:

- re assess
- consult with those undertaking the task
- seek help from HSE and trade and industry bodies

Working at height on vehicles – safety flowchart



The assistance of Wincanton Logistics is appreciated in the compilation of this flow chart

Conclusion

The HSE has set out some simple messages for employers:

- those following good practice for work at height are likely to already be doing enough to comply with the Work at Height Regulations
- follow the risk assessments you have carried out for work at height, and make sure all such work is planned, organised and carried out by competent people
- follow the hierarchy for managing risks from work at height: take steps to avoid work at height, prevent falls, or mitigate the distance and consequences of a fall
- choose the right work equipment and use collective measures to prevent falls before other measures which may only provide individual protection

If operators follow these messages, it could be as simple as 'falling off a log'!

More information about risk assessment, safety regarding work at height, and work around vehicles, can be found on the HSE website at www.hse.gov.uk, and in the following HSE publications:

- INDG 401 Work at Height Regulations – A brief guide
- The Work at Height Regulations 2005 (S.I.2005 No 735) is accessible via the HMSO website at: <http://www.legislation.hmso.gov.uk/si/si2005/20050735.htm>
- Workplace Transport Safety, Guidance for Employers HSG136 HSE Books 1995 ISBN 0 7176 0935 9
- Five steps to risk assessment INDG163REV1 HSE Books 1998 ISBN 0 7176 1565 0
- A guide to risk assessment requirements INDG218 HSE Books 1996 ISBN 0 7176 1211 2



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