



Preventing Vehicle Transport Accidents at the Workplace

Every year about 5500 people are killed in workplace accidents in the EU, of which about a third are related to transport (1). These accidents usually involve people: being struck or run over by moving vehicles (e.g. during reversing); falling from vehicles; being struck by objects falling from vehicles; or vehicles overturning. These **accidents can be avoided by effective management and prevention measures.**

The incidence of accidents is higher in **Small and Medium Enterprises (SMEs)** with fewer than 50 employees. The advice in this factsheet is relevant to vehicle transport in all types and sizes of enterprises.

Employers' responsibilities

Relevant European Directive (2) requirements include:

- Adhering to minimum **workplace** or **construction** site safety and health requirements for emergency routes and exits, traffic routes, danger areas, loading bays, ramps
- Ensuring safe **work equipment** (covers suitability, selection, safety features, safe use, training and information, inspection and maintenance). There are minimum requirements for mobile work equipment (e.g. fork-lift trucks turning over or rolling over).
- Providing **safety and/or health signs** where hazards cannot be avoided or adequately reduced by preventive measures
- Providing **personal protective equipment** (e.g. hard hats, reflective clothing) appropriate for the risks involved and where they can not be prevented by other means. It should be comfortable, well maintained, and not lead to increase in other risks.
- Following a general **Framework** to manage health and safety, including: assessment and prevention of risks; giving priority to collective measures to eliminate risks; consultation with employees, providing information and training; and, co-ordination on safety with contractors.

The minimum requirements set by Directives have been implemented **in national legislation** that may include additional requirements.

Employees have duties to co-operate actively with employers' preventive measures, following instructions in accordance with training given.

Consulting the workforce is a requirement. Using their knowledge helps to ensure hazards are correctly spotted and workable solutions implemented.

Practical accident prevention:

The first step is a **suitable and sufficient risk assessment**:

1. Identify the hazards associated with activities involving workplace vehicles - e.g. reversing operations, loading and unloading. Ask *'What might go wrong and why?'* e.g. Could people be struck or run over? Could they fall while loading vehicles?
2. Identify who might be harmed by each hazard. This is likely to include drivers and other workers, and may include visitors and the public.

3. Evaluate the risks for each hazard - likelihood that harm will occur and severity. Are existing precautions adequate or should more be done?
4. Set priorities for action and implement them
5. Review the risk assessment periodically and especially when there are changes, e.g. new vehicles, changes of traffic routes.

Collective **measures to eliminate risks** - such as improved design and layout of the workplace to minimise transport accidents - must be considered first. Signs etc. are used as a backup where risks can not be eliminated. Some areas to consider during risk assessment and selection of prevention measures are given below.

Safe workplaces and systems of work

Avoid the need for reversing by: better design of the workplace; using safe systems of work for reversing.

Ensure safe systems of work for **loading and unloading** vehicles.

Check that the **layout of routes** is appropriate for vehicle and pedestrian activities.

Where possible **segregate pedestrian and vehicle traffic** routes. If not, adequate warnings must be in place. Ensure there are suitable pedestrian crossing points on vehicle routes. Consider introducing a one-way traffic system to reduce the risk of collisions.

Check that **vehicle traffic routes are suitable** for the types and quantity of vehicles that use them. Ensure they are wide enough and that floor and road surfaces are kept in good condition. Remove obstructions where possible, otherwise, make sure they are clearly visible. Avoid including sharp bends in road layouts. Provide suitable fixed mirrors at blind corners.

Check that suitable **safety features** are provided. Direction, speed limit and priority signs may be needed. Determine whether physical speed restrictions such as speed bumps are necessary. Edges of loading bays, pits etc must be clearly marked and fitted with a barrier if possible.

Ensure that **vehicles are maintained** appropriately. Preventive maintenance programmes are required. Drivers should carry out basic safety checks before using vehicles, e.g pre-shift check of brakes and lights.



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(1) Accidents at work in the EU in 1996, Statistics in Focus, Theme 3 - 4/2000, Eurostat.

(2) <http://europe.osha.eu.int/legislation/> provides links to **EU legislation**, details of Commission guidance for SMEs and on risk assessment and to Member State sites where **national** legislation to implement the Directives and guidelines may be found.

Driving and work practices

Check that **selection and training procedures** ensure that drivers are capable of working safely. Drivers should be competent to operate their vehicles and carry out daily maintenance. Drivers should be medically fit, with good mobility, hearing and vision. Only people who have been selected, trained and authorised to do so should be allowed to drive vehicles.

Check that **lighting and visibility** provide safe passage through the work site (both inside and outside). Potential hazards, e.g. road junctions, pedestrians and obstructions must be clearly visible. High visibility clothing may be needed for drivers and/or pedestrians if they cannot be segregated adequately.

Vehicle safety

Ensure that a **safe and suitable vehicle** is being used. Vehicles should be purchased with appropriate safety features and comply with required standards. There must be safe means of access to and exit from the vehicle. The driver may need protection against overturning or being hit by falling objects. Consider using audible warning devices, e.g. on reversing lorries, and flashing beacons on vehicles to increase their visibility.

Safe use of forklift trucks

Forklift trucks are involved in many workplace accidents, often while reversing. Factors that increase the likelihood of accidents include: inadequate training; inadequate warning signs; poor truck maintenance; insufficient lighting and lack of space.

Where it is not possible to segregate pedestrian and vehicle traffic routes:

- Use suitable warning signs and clear markings to show that routes have mixed use
- Consider using one side of the route for pedestrians and marking a pathway
- Ensure there are clearly signed crossing points that are visible to pedestrians and forklift users
- Introduce a one-way system if it would reduce the risk of collision
- Pay attention to areas where forklifts may meet other traffic, e.g. loading bays

Poor visibility

- Forklifts need to be clearly visible to people nearby, e.g. with flashing beacons, reflectors and reversing lights. Similarly, these people should be visible to the driver, e.g. by wearing high visibility clothing.
- Keep warning lights flashing when the forklift is in use
- Consider using audible signals, particularly in busy and noisy workplaces. Sound a warning before going through doorways, around blind corners or starting to reverse.
- Minimise the need for reversing operations, e.g. by use of a one-way system. Provide well-placed mirrors to give drivers all-round visibility. Make sure they are used.
- When working near forklifts, always make sure the driver has seen you. Do not walk behind forklifts.

Safe driving

- Busy areas need lower speed limits, particularly where pedestrians and traffic are not segregated
- Keep routes clear of rubbish and movable obstructions
- Avoid sharp bends. Fixed mirrors can improve vision where blind corners are unavoidable
- Watch your surroundings while working or driving
- Be aware of doorways, passages or pathways where pedestrians or vehicles may suddenly appear

Drivers' checklist

- Do not drive when your abilities are impaired, e.g. by ill health or poor vision
- Make sure you understand the operating procedures and safe operating limits of your vehicle
- Carry out daily checks and report all problems
- Know and comply with site rules and procedures, including those for emergencies
- Understand the system of signals
- Keep your speed within safe limits. Take care when approaching bends
- Before reversing, check behind the vehicle for pedestrians, vehicles or obstructions
- If there is restricted visibility from your driving position, use visibility aids (e.g. mirrors) or a person to signal. If you lose sight of the signaller or the visibility aid becomes defective - STOP!
- Turn the engine off before making any adjustments or removing guards

Getting more information / References

More information on good safety management practice is available from the *Agency website* <http://osha.eu.int>. All Agency publications can be downloaded free of charge. 'Preventing work-related accidents' is the theme for the European Week for Safety and Health at Work being run by the Member States during October 2001 and more information is given at <http://osha.eu.int/ew2001/>. The Agency site links to *Member State sites* where national legislation and guidance on workplace transport may be found: <http://ie.osha.eu.int/> for Ireland <http://uk.osha.eu.int/> for UK