



## Workplace transport safety in food and drink premises

### Food Information Sheet No 21

#### Introduction

Workplace transport-related accidents are the major cause of deaths in the food and drink industries and a significant cause of serious injuries.

The food and drink sector uses a wide variety of vehicles such as fork-lift trucks (FLT), tankers, grain lorries and flat bed vehicles which present a range of risks. Many of these risks can be tackled generically, for example by introducing vehicle/pedestrian segregation. Other risks need to be tackled by vehicle type, for example by modifying tankers and grain lorries to avoid the need for top access.

All aspects of workplace transport require detailed risk assessment to determine the significant risks and actions required to reduce or even eliminate these. This information sheet will help in this process as it indicates the main areas in which attention should be focused.

#### The problem

Over the last 6 years, 16 people have been killed in workplace transport-related accidents in the food and drink industries. This accounts for nearly half the total number of deaths in this sector. A quarter of the deaths resulted from workers falling from unsafe working platforms on FLTs.

During the same period some 2700 people were seriously injured in transport-related accidents - both employees and members of the public. Nearly 60% of these injuries resulted from people being struck by vehicles - in a quarter of cases while the vehicle was reversing. Injuries from FLTs are disproportionately high in the food and drink sector; FLTs are involved in nearly half the injuries where people are struck by vehicles.

Over 20% of transport injuries in the food and drink industry result from falls from vehicles. The remaining 20% of injuries mainly result from people being trapped between two vehicles, or between a vehicle and a wall or other fixed object, or by a FLT overturning.

Table 1 gives a more detailed analysis of the causes of transport-related injuries in the food and drink industries.

**Table 1**

<i>Cause of injury</i>	<i>Percentage injured</i>
Struck by a vehicle, except FLTs (of which 21% were reversing)	31%
Struck by FLT (of which 28% were reversing)	26%
Falls from vehicles (of which 10% were from tankers or sheeted lorries)	22%
Trapped between vehicle and wall or other fixed object	6%
Trapped by overturning FLT	6%
Trapped between two vehicles	5%
Trapped by lorry tail-lift	1%
Struck by load falling from FLT	1%
Collision with wall or other fixed object	1%
Technical failure (faulty brakes, etc)	1%

#### The priorities

From Table 1, it is clear that the priority areas which need to be tackled are:

- pedestrian safety and pedestrian/vehicle segregation;
- vehicle reversing;
- falls from vehicles.

However, other industry-specific hazards and known causes of fatal injuries also need to be addressed, especially:

- overturning of tipping lorries and trailers;
- tailgate safety on bulk delivery vehicles;
- FLTs falling from loading bays.

Consequently the risk assessment should include the following topics, where relevant.

### ***Pedestrian safety and pedestrian/vehicle segregation***

- (a) Have safe traffic routes been planned - preferably with one-way systems and, if needed, pedestrian crossing points?
- (b) Are vehicles and pedestrians kept safely apart both outside and, where possible, inside buildings?
- (c) Do vehicles and pedestrians have separate doors into buildings with suitable barriers where required?
- (d) Are appropriate speed limits enforced and, where required, speed bumps installed?
- (e) Are adequate signs in place, eg indicating direction, speed limit, no entry, etc, and mirrors fitted on blind corners?
- (f) Are vehicles, including private cars, parked in designated areas?
- (g) Is access to loading yards restricted to essential personnel and are they wearing high visibility clothing where necessary?

### ***Vehicle reversing***

- (a) Can reversing be eliminated or at least reduced, for example by one-way systems?
- (b) Do vehicles have adequate all round visibility? Are mirrors or other visibility devices fitted?
- (c) Is there need to mark 'reversing areas' so these are clear to drivers and pedestrians?
- (d) Is there a need for a signaller (banksman) to direct reversing vehicles? Does the banksman have somewhere safe to stand?
- (e) Do the vehicles need to have reversing alarms fitted?

### ***Falls from vehicles***

- (a) On FLT's, are make-shift platforms (eg pallets) used to raise workers on the forks? Deaths regularly occur from this unsafe practice. It is a legal requirement that only properly constructed cages are used - designed especially for lifting persons.
- (b) On grain vehicles, has the need to go on top been eliminated, for example by fitting controls at ground level, providing ground operated manual or powered sheeting systems, etc?

- (c) On grain vehicles where access to view the top is still essential, are safe access arrangements in place, for example a front platform fitted with a handrail and secure access ladder?
- (d) On tankers has the need to go on top been eliminated, for example by 'bottom filling', fitting level gauges and controls at ground level?
- (e) On tankers where access to man-lids is required, are access arrangements safe? For example, by providing:
  - side access ladders with handrails to each man-lid;
  - a top walkway with collapsible handrails operated from the ground (interlocked with the engine to avoid the tanker moving with the hand rail raised);
  - a platform at the front of the tank fitted with a handrail and secure access ladder? (The first two examples are shown in BS 3441: 1995.)
- (f) For both grain vehicles and tankers can a gantry be provided at permanent loading stations to avoid the need to climb on top of vehicles?
- (g) On flat bed vehicles can loading/unloading/sheeting be done without getting onto the vehicle? For example, by using FLT's to put the load on and take it off the vehicle, and using sheeting gantries.
- (h) On flat bed vehicles where access onto the vehicle is required, can this be achieved from loading bays to stop injuries while ascending/descending?
- (i) On all vehicles, are access to cab arrangements well designed with suitable slip-resistant steps and hand-holds?
- (j) On refrigerated vehicles, is access to controls and instruments possible without ascending ladders?

### ***Overtipping of tipping lorries and trailers***

- (a) Are tipping lorries and trailers required? For certain applications non-tipping tankers (eg with bottom discharge) may be better.
- (b) If tipping lorries and trailers are required, have you considered fitting wind down or powered stabilisers at the rear - especially on trailers?
- (c) Have you considered fitting air suspension dump valves (in combination with rear stabiliser legs) so the vehicle is not riding on air suspension when it tips?
- (d) Are effective systems in place and driver training provided to prevent vehicle overturns during discharging of viscous loads?

- (e) Are vehicles loaded evenly and checked for even distribution by the driver before tipping? If half the load sheds before the other half, overturn may occur.
- (f) Are vehicles always tipping on level and stable ground?
- (g) Are drivers trained in how to anticipate and deal with loads sticking or 'freezing' by lowering the body and freeing the load before raising the body again?
- (h) If the vehicle begins to topple over is the driver trained:
  - to brace him/herself against the back of the driver's seat and hold the steering wheel firmly; and
  - never to try and jump out?

### **Tailgate safety on bulk delivery vehicles**

Do you use bulk delivery tipping vehicles with tailgates? Deaths have occurred when a slug of viscous material slides down the tilted trailer and hits the latched (or unlatched) tailgate. Tailgate latches are not designed to withstand such forces and drivers standing at the rear of vehicles have been fatally injured after being struck by the tailgate as it flies open. This can occur when the driver is 'rodding' through the grain hatch.

- (a) Are drivers and others instructed to stand clear of tailgates when tipping is in progress?
- (b) Is tipping done through the full tailgate (as opposed to through a grain hatch) into a banded hopper where possible?
- (c) Have you considered fitting the trailer with vibratory equipment which might reduce blockages and discharge times?
- (d) Is dust controlled during tipping? For example, by fitting a sock to the grain hatch or providing dust extraction at hoppers. If dust extraction is not reasonably practicable, is respiratory protective equipment worn by drivers and others?

### **FLTs falling from loading bays and stability of lorry floors**

- (a) Do you load into the rear of vehicles from loading bays using FLTs running between the vehicle and loading bay? Injuries to the FLT driver frequently occur when the FLT falls down the gap between the vehicle and loading bay as the vehicle moves off.
- (b) Have you a system in place to prevent 'drive-offs' while the FLT is still in use? Options include:
  - a solid mechanical restraint attaching the rear of the lorry to the loading bay which is only removed as part of a safe system of work, eg when the driver's keys are returned;

- a key exchange system returning the driver's keys only when the lorry/trailer rear doors are locked closed.

- (c) Do FLTs run on uncoupled articulated trailers? Trailers have been known to tip up when the FLT moves forward of the trailer legs. Is the strength of the trailer floor sufficient for a loaded FLT?

### **Tail lifts**

Are employees trained in the safe use of tail lifts and have trapping points been designed out? Injuries to hands and feet have occurred in tail-lift mechanisms as the lift is being raised and lowered.

### **Noise**

Noise levels within the driver's cab and outside the vehicle during loading/unloading operations should be reduced so far as reasonably practicable to protect the hearing of both the driver and other workers nearby. Ideally workers should not be exposed to noise levels over 85 dB(A)Leq and at 90 dB(A)Leq action should be taken to remedy the problem. This should entail reducing the noise to an acceptable level by design, enclosure, etc, rather than providing hearing protection.

Noise sources which may need attention may occur, for example:

- in drivers' cabs;
- at blowers on grain lorries (land based blowers may reduce noise levels);
- at vacuum pumps on tankers;
- rolling wheeled trolleys in metal-floored lorries.

### **Driver training and health issues**

Drivers should be trained, competent and authorised to drive. Drivers' health, eyesight and hearing ability need to be taken into account.

Apart from noise, other potential health issues to consider are the ergonomics of the cab seat, the effects of cab vibration and exposure to exhaust fumes in enclosed areas.

### **The law**

The principal legal duty on employers is, so far as is reasonably practicable, to provide and maintain safe systems of work and to take all reasonably practicable precautions to ensure the health and safety of all workers and members of the public who might be affected. These are requirements of the Health and Safety at Work etc Act 1974.

There are also general duties under the Management of Health and Safety at Work Regulations 1992 to carry out

risk assessments and have arrangements in place to effectively manage risks. The Health and Safety (Consultation with Employees) Regulations 1996 are also important for workplace transport safety.

Additionally there are a number of specific legal duties applicable to workplace transport activities. The particular regulations being:

- Workplace (Health, Safety and Welfare) Regulations 1992 which sets out duties in respect of organisation of traffic routes, etc;
- Provision and Use of Work Equipment Regulations 1998 which sets out duties in respect of having suitable equipment (which includes vehicles);
- Health and Safety (Safety Signs and Signals) Regulations 1996; and the
- Noise at Work Regulations 1989.

#### Further help and guidance

#### Priced publications

1 *Management of health and safety at work Management of Health and Safety at Work Regulations 1992 Approved Code of Practice* L21 HSE Books 1992 ISBN 0 7176 0412 8

2 *Workplace health, safety and welfare Workplace (Health, Safety and Welfare) Regulations 1992 Approved Code of Practice* L24 HSE Books 1996 ISBN 0 7176 1071 3

3 *Safe use of work equipment Provision and Use of Work Equipment Regulations 1998 Guidance on Regulations* L22 HSE Books 1998 ISBN 0 7176 1626 6

4 *Safety signs and signals: Guidance on regulations Health and Safety (Safety Signs and Signals) Regulations 1996* L64 HSE Books 1996 ISBN 0 7176 0870 0

5 *Reducing noise at work: Guidance on the Noise at Work Regulations 1989* L108 HSE Books 1998 ISBN 0 7176 1511 1

6 *Workplace transport safety: Guidance for employers* HSG136 HSE Books 1995 ISBN 0 7176 0935 9

7 *Safety in working with lift trucks* HSG6 HSE Books 1993 ISBN 0 7176 1440 9

8 *Rider operated lift trucks: Operator training - Approved Code of Practice* COP26 HSE Books 1988 ISBN 0 7176 0474 8 (Being revised)

9 *Sheeting and unsheeting tipper lorries* HSG 148 HSE Books 1996 ISBN 0 7176 0888 3

10 *A guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995* L73 HSE Books 1996 ISBN 0 7176 1012 8

11 *Specification for tanks for the transport of milk and liquid milk products* BS3441: 1995 (BSI Sales Department, Tel: 0181 996 7000)

#### Free leaflets

1 *The Management of Health and Safety at Work Regulations 1992* MISC079 HSE Books 1997

2 *Five steps to risk assessment* INDG163(rev1) HSE Books 1994

3 *Managing vehicle safety in the workplace* INDG199 HSE Books 1995 (Priced packs of 10, ISBN 0 7176 0982 0)

4 *Reversing vehicles* INDG148 HSE Books 1993 (Priced packs of 15, ISBN 0 7176 1063 2)

5 *Introducing the Noise at Work Regulations: A brief guide* INDG75 HSE Books 1989

6 *Everyone's guide to RIDDOR 95* HSE31 HSE Books 1996 (Priced packs of 10, ISBN 0 7176 1077 2)

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