



Manufacturing Intelligence:

Workplace Transport





Manufacturing Processes

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Risk Features

Material Damage
and Business
Interruption Hazards

We know that your clients take risk management seriously and that it plays a key role in the service you offer. We've produced this guide to highlight the controls and prevention measures your clients can take to help reduce the risks associated with workplace transport.

Trade overview

The pace of working life and trading demands can result in very congested environments with the movement of vehicles and people, often without segregation. Injury in and around workplace transport is frequent and sometimes can result in fatalities or serious life changing injuries.

In addition, fires resulting from overheating equipment, faulty electrical equipment or from the use of gas fuel are also factors in some very significant and total loss incidents.

Process

Any vehicle used in the workplace is regarded as workplace transport. A common exception to this definition is when vehicles are used on public roads, unless loading/unloading occurs at the roadside.

Transport equipment includes mechanical handling plant, such as fork-lift trucks (FLT) and mobile elevated work platforms (MEWPs). Light and heavy goods vehicles can also be included as well as construction and farming plant such as backhoe loaders, telescopic handlers and tractors.

Business Interruption

Where such equipment is damaged or destroyed in an incident, the resultant business interruption can be considerable if it was highly specialised or modified in any way as there will be disruption to normal operations until replacement. Standard equipment should have no major concerns with a ready market for new and used equipment. The impact of an incident (such as fire) resulting from poor controls, lack of maintenance or management of the equipment itself can have serious consequences which will impact businesses and neighbouring properties.

Additionally, where used on a construction site, a fire incident could spread to the building.



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Employers Liability

23% of all accidents in the workplace involve FLT's according to the Health and Safety Executive (HSE).

A key area for focus is competence in operation. This should start with recruitment and induction of drivers. This is to ensure they have been assessed and have received adequate training which should include familiarity training with the equipment to be used and the particular environment at the premises. Profiling of driving behaviours is also a key essential as many accidents are linked to driving behaviour.

Operator performance should be monitored and regular refresher training completed, with additional instruction deployed in the event of any incident or significant findings from workplace checks.

Fatigue, as a result of the experience of stress or of the demands of irregular working hours, has been found to have a link with both driving and workplace accidents.

The equipment should be suited for intended use and it's imperative that the right machines are procured for the job, with the equipment properly maintained and cared for.

When selecting equipment, attention should be paid to ensuring that the equipment has all the necessary audible (e.g. sounders/warnings) and visual (e.g. mirrors/cameras, strobes) aids to assist in that equipments safe movement around the workplace. The provision of equipment with either factory or retro fitted CCTV and Proximity alert devices should also be considered as a primary means of safeguarding against pedestrians being injured and or collisions.

As always, careful planning and layout of the workplace is essential and tight bends, blind spots and congestion must be avoided. Dedicated pedestrian walkways and crossings should be provided. Consideration should also be given to providing protective barriers, particularly if additional protection is necessary in busy areas. Good lighting should be provided at all times to ensure that moving vehicles can see and be seen. The condition of traffic routes should also be regularly reviewed to ensure they enable the safe passage of vehicles at all times.

Public Liability

Pedestrians (often members of the public) regularly feature in workplace transport accidents, and it's essential that the public are controlled and can't enter areas where FLT's and other equipment may be in operation.

Clear warning signs should be used and it may be necessary in certain instances to mark safe paths and provide permanent or temporary barriers to guide people away, particularly in busy areas. When visitors or contractors call to premises (locations of workplace transport) the dangers posed by them and areas that must be avoided should be clearly explained as part of any site induction.



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Material Damage

Battery charging from electrical equipment such as mechanical handling plant can result in fire if not appropriately managed or controlled. Chargers can generate a high heat output and in some cases, release hydrogen during charging which can be explosive.

Premises may contain workshops for repair and maintenance and on larger sites, these could include spraying facilities for paintwork. This will often mean the storage of flammable liquids needs to be adequately controlled.

High hazard environments, such as premises with flammable liquid storage or flammable atmospheres, require equipment that is intrinsically safe which will mean not allowing any external sparks or creation of static electricity.

The use of gas, as vehicle fuel, such as Liquefied Petroleum Gas (LPG), needs to be controlled to a high standard. External bulk supplies can be present for large operators, otherwise storage of cylinders (both full and empty) require special attention.

Recognition should also be made of the theft attractiveness of this equipment, especially construction based plant with a ready market, often overseas with little chance of repatriation or recovery.



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The tables below highlight some specific hazards present for the use of workplace transport, along with the associated controls which will help prevent major loss of physical property. Generic risks resulting from arson, electrical sources and waste aren't mentioned here.

Features always present

| Hazard | Control |
|--|--|
| Fire as a result of battery charging operations from mechanical handling plant | <ul style="list-style-type: none"> Provision of a dedicated area and suitable maintenance of equipment, particularly electrical systems. Clearance of combustible materials to at least 2 metres and frequent inspection to ensure any build up is avoided. Barrier rails and floor hatching can remind employees of the required controls. Adequate natural or mechanical high level ventilation to avoid the build-up of hydrogen from battery charging. |

| Hazard | Control |
|---|--|
| Fire risks generating from maintenance and repair workshops | <ul style="list-style-type: none"> Use and storage of flammable liquids. Ensuring paint spraying only takes place in designated paint spraying booths/enclosures with a minimum of 30 minutes fire resistance. Ensuring suitable ventilation and extraction arrangements are in place to remove flammable vapour. Ensuring all heating in paint spraying areas comes from a heat source located outside the area, preferably in a separate building or compartment. Hot work adequately controlled. |



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Features always present

| Hazard | Control |
|--------------------------------|--|
| Release of flammable gas (LPG) | <ul style="list-style-type: none">▪ Bulk storage site to allow natural dispersal from leaks (i.e. tank not to be sited in a hollow or sunken area).▪ Trained operators used for refuelling to/from bulk stores.▪ Storage of cylinders to always be within a lockable cage and protected from sunlight. Segregation of full and nominally empty cylinders.▪ Enforce no smoking rules around the storage of tanks and cylinders at all times. |



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Features sometimes present

| Hazard | Control |
|---|---|
| Use in high hazard environments, such as flammable or explosive atmosphere premises | <ul style="list-style-type: none">▪ Strict avoidance of static build up (e.g. from tyres)▪ Maintenance of equipment.<ul style="list-style-type: none">» Undertake an assessment in compliance with the Dangerous Substances and Explosive Atmospheres Regulation 2002 (DSEAR) and implement the recommendations. |
| Loss of equipment from theft | <ul style="list-style-type: none">▪ Overnight/weekend security arrangements included fenced compounds.▪ Immobiliser systems.▪ Tracking devices including geo-fence systems that report if the item moves outside a pre-defined area.▪ High strength physical security devices. |



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Employer's Liability and Public Liability

| Hazard | Control |
|---|--|
| Struck by moving plant/fork lift truck and unloading operations | <ul style="list-style-type: none"> Proper selection of workplace equipment fit for intended environment and use. Assessment and training of both new and existing drivers. Monitoring of fatigue/irregular working hours with consideration of break periods. Application of workplace transport rules including speed limits as appropriate. Monitoring of adherence to standards required with disciplinary procedures communicated to all staff. Segregation of workplace transport from pedestrian routes. Audible and visual warning aids. Hi-visibility clothing. Well lit circulation areas. |

| Hazard | Control |
|---------------------------|--|
| Overturning of vehicle. | <ul style="list-style-type: none"> Operator training/profiling and competence review. Monitoring of operations. Roll Over Protection. Maintenance of floor surfaces and avoidance of severe changes in level (e.g. steep ramps). |
| Third party impact/damage | <ul style="list-style-type: none"> Driver behaviour profiling. |



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Products Liability

| Hazard | Control |
|---|---|
| Incorrect storage and handling | <ul style="list-style-type: none">Follow manufacturers guidelines for storage and handling. |
| Failure to suitably control temperature where there are temperature sensitive goods | <ul style="list-style-type: none">Ensure appropriate monitoring devices are in place, with procedures for recording data and acting upon deviation from permitted parameters. |



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