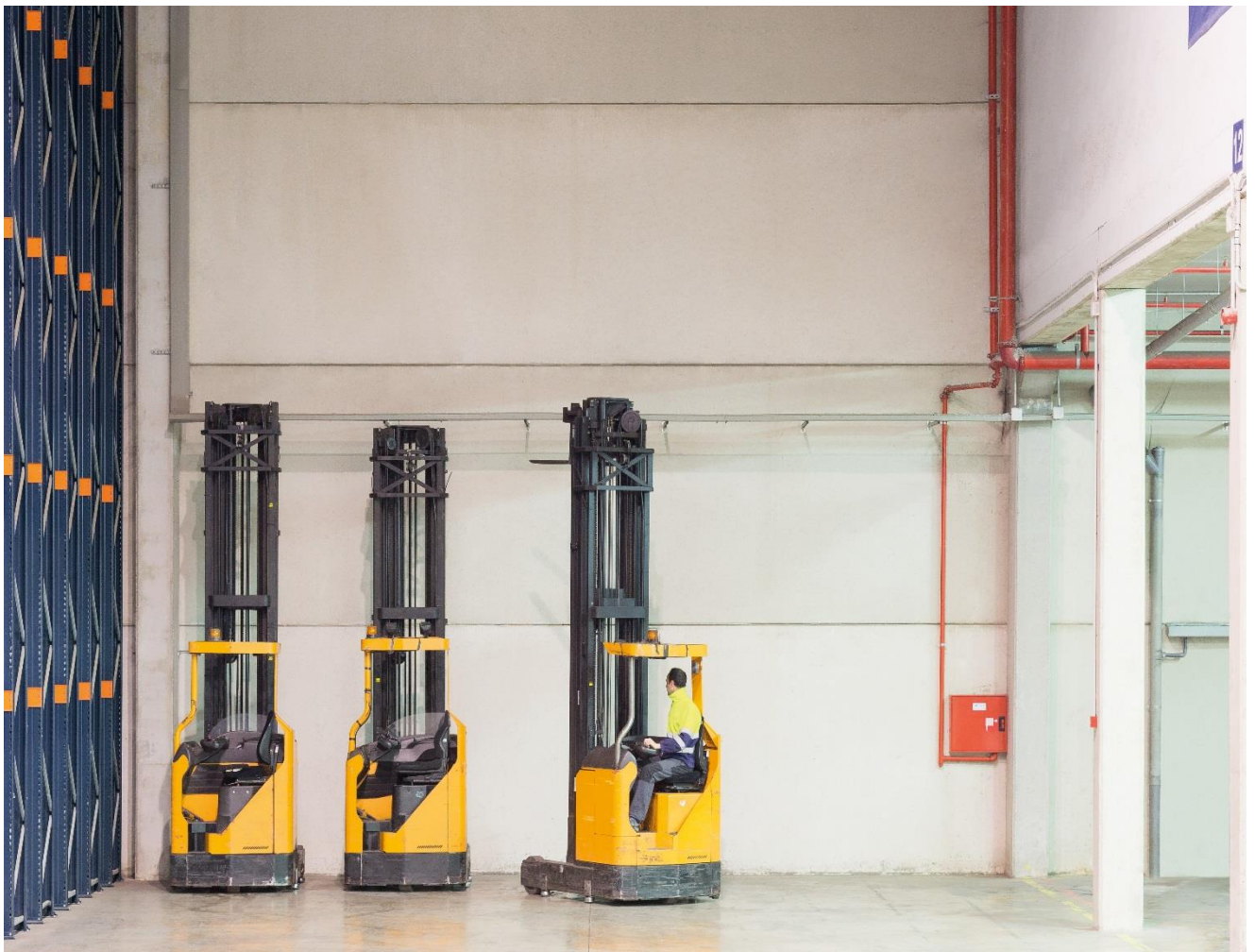


# Risk Topic

Forklift trucks in the workplace



This risk insight has been developed to highlight some of the incidents that are being reported to Zurich Insurance, and in turn provide general guidance as to the proactive controls which could be implemented to reduce the risk of similar incidents involving vehicles and pedestrians occurring within their own environment.

## Introduction

Materials handling is something that a wide range of business sectors experience, with organisations often using mechanical handling solutions to meet their own individual requirements.

In many cases, organisations turn to the utilisation of “powered” work equipment, which often increases productivity but also reduces the potential for staff to be exposed to manual handling operations in the workplace.

However like many risk control mechanisms, the removal or reduction of one risk can often increase the overall risk potential by the introduction of another, perhaps more significant workplace risk. In this case, the interaction between people and moving vehicles.

Over recent years we have seen an ever increasing number of workplace incidents involving vehicles in the workplace, and perhaps more specifically incidents involving the use of forklift trucks.

This risk insight has therefore been produced to highlight some of the incidents which have been reported to our claims teams, and in turn where the Zurich Risk Engineering team feel that through good risk management interventions these types of incident can be reduced within the workplace.

## Discussion

In line with the comments previously made, discussions with our claims teams across the UK have identified an increase in the number of workplace incidents where personal injury claims have occurred as a result of interaction with forklift trucks in the workplace. The details below are some of the headline commentary from a number of such incidents:

- The claimant was assisting in the unloading of timber, when a reversing fork-lift truck ran over his foot
- The claimant was working close to the vehicle entrance at an insured's loading area, when he was run over by a fork-lift truck
- The injured party was struck from behind by a fork-lift truck, running over his leg, whilst working in the warehouse of the Insured's premises. Injuries sustained resulted in the leg being amputated below the knee
- The injured party was reversed into by a fork-lift truck. Serious injury and subsequently died 14 days after the accident.

The above are just four typical examples of the type of workplace incident which can occur when a company does not implement appropriate risk controls.

# Guidance

## Risk assessment

In order to evaluate any workplace risk, an organisation must first understand where its risks and hazards are, and therefore in line with a company's overarching risk assessment programme, they should look to evaluate which operations can cause harm to personnel on site.

When completing the risk assessment process, a number of key factors should be considered:

- the specific hazard which may cause harm, such as in this case vehicles striking pedestrians, other vehicles and structures
- the risk, which is the chance that the incident could occur. Is it high or low that somebody could be harmed, together with an indication of how serious the level of harm could be.

With the above in mind the risk assessment can be broken down into the following stages:

- Identify the hazards
- Decide who might be harmed and how
- Evaluate the risks and decide on precautions
- Record your findings and implement them.
- Review your risk assessment regularly and update it if necessary.

## Segregation

A review of good practices adopted by our clients shows that one of the best methodologies for identifying the above is through the development of a formal "traffic management" risk assessment.

As a starting point the assessment should identify the organisation of traffic routes, identifying pedestrian and vehicle movements and how they should interact safely.

The overarching principle should always be that where practicable pedestrians should be segregated from areas where vehicles are working, unless they need to be there.

Effective ways to keep vehicles away from pedestrian areas include:

- protective barriers
- clear markings to set apart vehicle and pedestrians routes.

Barriers or guard rails should be erected at primary access points such as entrances and exits to buildings, at the corners of buildings or to prevent pedestrians from walking directly into work areas where vehicle movements are taking place.

Where pedestrian and vehicle routes cross, consideration should be given to the provision of appropriate crossing points to prevent personnel walking directly into the flow of onsite vehicles, with further consideration being given to the provision of traffic lights in busy areas.

An overarching factor for consideration in all the above is that barriers should be constructed suitably robustly to take into account the potential level of impact.

With changes in technology and construction methods, there are now many examples of preparatory products that are easy to install and provide adequate protection from the heaviest of impacts.

## **Operators**

It should always be remembered that many workplace incidents are down to the behaviours of personnel, with both staff and operators having a responsibility to comply with onsite safety requirements.

From an operational standpoint the manner in which vehicles are used will play a key part in managing workplace safety.

With this in mind, there is well defined guidance to allow an organisation to develop their own internal standards to ensure personnel understand and follow best practice in respect of vehicle use.

Firstly are operators "fit" to use the work equipment they will be required to use. Although there is no "legal" requirement to do so, as a part of a company's occupational health programme consideration should be given to verifying the physical health of operators through the following:

- Medical history questionnaire
- Blood pressure check
- Vision screening for distance, depth perception, visual fields
- Trunk and neck mobility and general agility check.

From a vehicle utilisation standpoint an organisation should implement appropriate training mechanisms for staff in the use of work equipment with the provision of initial and refresher training. There are many third party training organisations who can provide a company with the appropriate competency training and assessment for a wide range of work equipment. Organisations must also realise that not all equipment is the same, and as such "generic" training is not recommended.

Best practice also suggests that formal authorisation should also be considered for operators.

By utilising a formal authorisation process an organisation can remove or suspend an operator's licence if an individual's operational standards are not maintained.

## **Loading and unloading**

Although the points noted above are appropriate for any working environment it is also worthy of note that our claims teams have also had to address a number of workplace incidents occurring around loading docks or bays.

The loading dock or bay is an area in an industrial building where products are either loaded or unloaded from delivery vehicles.

In the simplest of terms a delivery vehicle backs up to the loading bay door, which is often raised above the general road surface to allow a docking plate to be placed between the vehicle and the building to bridge the gap to allow loading and unloading activities to take place.

Our claims records show that a range of workplace incidents can occur with this type of operation:

- The vehicle being loaded or unloaded accidentally moves resulting in a gap between the building and the vehicle allowing the forklift truck to fall and endangering the fork-lift truck operator or associated staff by falling from height
- The vehicle being loaded "intentionally" moves as a result of the driver either not following loading procedures or becoming impatient and driving off without informing the fork-lift operator of his or her intention to do so.

With the above in mind best practice suggests that organisations should adopt formal loading and unloading procedures to reduce the risk of similar workplace incidents, including the following:

- Ensure the wheels of trailer units are suitably “restrained” using chocks or similar devices to prevent vehicles moving
- Utilise “key control” procedures which require drivers to relinquish their vehicle keys during loading and unloading operations
- To reduce the risk of personnel falling from height during loading and unloading operations loading bays should be provided with suitable guarding
- Loading bay doors should be closed at all times when loading or unloading operations are not taking place to again reduce the risk of personnel falling from height. Many organisations utilise a “traffic light system” which is activated when a vehicle accesses the loading bay.

### **Advances in Technology**

Technological changes have also seen work equipment such as forklift trucks being fitted with equipment to assist the operator in carrying out their duties in a safe and consistent manner.

Many new types of forklift truck are fitted with electronic pre-start safety checks which if not completed in a set manner will not allow the forklift truck to be operated (too quick and the inspection will not be validated).

In many cases fork-lift trucks are now fitted with fobs or key pad controls that can only be operated by a defined user, thus reducing the risk of none trained or authorised personnel using a forklift truck.

As previously noted within this risk insight, fork-lift trucks do hit objects, and in some cases not just general building infrastructure.

To monitor workplace incidents or near misses, fork-lift truck manufacturers are now supplying equipment with additional control devices to “track” workplace incidents.

Many vehicles are now fitted with a “G-Force” detection device which when activated will immobilise the forklift truck.

The operator is then required to get the vehicle “re-set” by his line manager or supervisor who should at that point formally review what caused the incident in the first place.

This method is used to great effect to identify poor driving behaviours and as an aid to identifying where additional controls such as re-training or disciplinary action should be utilised.

Additional recent innovations have also seen the utilisation of what is termed “blue light” technology which alerts personnel in the work area that a forklift truck is moving and also the operator that other personnel are close by.

As a standard additional audio and visual warnings should also be provided with work equipment, with manufacturers also allowing a user to set defined speed limits to take into account specific operational conditions. Camera systems are also regularly fitted to equipment to give the operator 360 degree visibility around his vehicle.

From an operator standpoint the overarching vehicle risk assessment should also identify if there is a requirement for an operator to wear a seat belt during normal workplace operations. This is often enforced by the fork-lift truck itself as many items of new equipment will not operate unless the seat belt is engaged.

## Conclusion

Fork-lift trucks are large pieces of work equipment, and as such need to be treated with respect, as when operated in an inappropriate manner they can not only damage inanimate objects but also people.

This risk insight has been produced to provide the reader with guidance in order that a better understanding of the risks associated with fork-lift truck usage can be obtained, and help to review their own current operational standards against the best practices which have been noted.

By considering the aspects noted within this risk insight, we are of the view that by adopting a formal process of identifying workplace hazards, deciding who might be harmed and how, evaluating the risks and deciding on relevant precautions, organisational arrangements will reduce the risk of workplace transport events.

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