NATIONAL FORKLIFT SAFETY DAY

MAKE EVERY DAY NATIONAL FORKLIFT SAFETY DAY!

BITA

Lifting Industry Standards

SEAT BELTS SAVE LIVES

MAKE SURE YOUR OPERATORS ARE USING THE RESTRAINT PROVIDED

- WHERE SEAT RESTRAINTS ARE FITTED, THEY SHOULD BE WORN
- SEAT BELTS KEEP THE DRIVER SAFE WITHIN THE PROTECTIVE STRUCTURE OF THE TRUCK
- MANAGEMENT IS RESPONSIBLE FOR ENSURING THAT OPERATOR RESTRAINTS ARE BEING USED

CONTENTS

MAKE EVERY DAY

NATIONAL FORKLIFT SAFETY DAY!

1.0 NATIONAL FORKLIFT SAFETY DAY (NFSD)

1.1 INTRODUCTION

As part of a commitment to raise standards and improve the safe operation of materials handling equipment, the **British Industrial Truck Association** (BITA) is championing the UK introduction of National Forklift Safety. Established six years ago by the **Industrial Truck Association** (ITA) in the USA, **National Forklift Safety Day** is a global initiative aimed at raising awareness of the safe use of forklifts and the importance of proper operator training.

1.2 PARTNERS

Promoted by:

BITA
Lifting Industry Standards

Supported by:

AITT

Fork Lift Truck Association

HSE

IMHX 2019
The UK's largest intralogistics event

Industrial Truck Association

RTITB
Setting the Standard

SHD LOGISTICS

Thorough Examination

UKWA

2.0 KEY MESSAGE FOR 2019

MANAGEMENT IS RESPONSIBLE FOR ENSURING THAT OPERATOR RESTRAINTS ARE BEING USED

National Forklift Safety Day focuses on raising awareness of safe working practices with all users of materials handling equipment. The key message for 2019 is to raise awareness that management has a responsibility to ensure restraints in forklift trucks are being used as required. Although seatbelts are the most obvious restraint, other physical barrier devices such as door bars or enclosed cabs, and enforcement solutions such as speed monitoring devices and seatbelt interlocks, are also important.

2.1 SUPERVISION AND ENFORCEMENT

"HSE WILL PROSECUTE SITE OPERATORS WHO DO NOT TAKE ADEQUATE MEASURES TO ENFORCE THE WEARING OF SEAT BELTS. A COMPANY POLICY DOCUMENT COMBINED WITH BASIC TRAINING IS INSUFFICIENT; SUPERVISION AND ENFORCEMENT OF SAFETY POLICY IS A LEGAL DUTY ON MANAGEMENT."

Steve Simmons-Jacobs,
HSE portfolio holder for industrial trucks

2.2 IMPORTANCE OF SEAT BELTS

The primary purpose of the operator restraint on a forklift truck is to keep the operator within the protective structure ("cab") in the event of a tip-over. It prevents the operator from sliding out of, or attempting to jump away from, the cab, and being crushed between the framework and the ground.

The seatbelt won't stop the tip-over accident from occurring, but it will minimise the consequences by preventing the operator from following the natural instinct to escape.

A 2018 study in Europe confirmed that correct use of the operator restraint on counterbalance forklifts effectively prevents operator fatalities due to lateral tip-over

2.3 ACCIDENT HISTORY

Between 1st January 2016 and 6th March 2019 there were 5700 RIDDOR reports involving fork lift trucks, of these, 58 relate directly to the driver restraint system. BITA is aware of 7 fatal accidents in the reporting year 2017-18, and 5 in the reporting year 2016-17. Of these, 3 would probably have been prevented if management had rigorously enforced the wearing of seat belts.

2.0 KEY MESSAGE FOR 2019

"EVERY YEAR HSE INVESTIGATE FATALITIES DUE TO OVERTURN OF FORK LIFT TRUCKS, WHERE OPERATORS ARE NOT USING THE RESTRAINTS PROVIDED. IF MANAGEMENT SYSTEMS WERE ROBUST, WITH EFFECTIVE MONITORING ARRANGEMENTS OF RESTRAINTS SYSTEMS BEING USED BY DRIVERS, MANY OF THESE DEATHS WOULD BE PREVENTABLE."

Kanwal Kanda,
Head of Transport Sector for HSE

3.0 REGULATORY REQUIREMENTS

The **Health and Safety at Work Act 1974** requires that employers, and the self-employed, ensure, so far as is reasonably practicable, the health and safety of those who may be affected by what they do or do not do. It applies to all work activities and premises.

Employees also have responsibilities under the Act. They must take reasonable care for their own health and safety and that of other people and must co-operate with their employer (and others) to help comply with legal duties relating to health and safety.

The **Management of Health and Safety at Work Regulations 1999** require employers and the self-employed to assess risks and take suitable and sufficient measures to address them. Regulation 4 refers to the hierarchy for combating health and safety risks so that the risk of overturning is prevented wherever possible. Regulation 14 requires that employees should use transport equipment in accordance with any training and instructions which have been provided.

In the **Provision and Use of Work Equipment Regulations 1998** (PUWER), regulation 27 requires the provision of restraining systems to prevent crushing of the operator between the truck and the ground where there is a foreseeable risk of overturning. Regulation 4 requires work equipment to be suitable for the purpose for which it is used.

"SITE OPERATORS AND EMPLOYERS SHOULD CHECK THAT OPERATORS ARE WEARING SEAT RESTRAINTS. WHERE SEAT RESTRAINTS ARE FITTED, THEY SHOULD BE WORN AT ALL TIMES, UNLESS A RISK ASSESSMENT CONCLUDES OTHERWISE. EXCEPTIONS MIGHT BE A WAREHOUSE LIFT TRUCK OPERATOR PICKING ORDERS IN A WAREHOUSE (OR SIMILAR WORK), WHERE THE SURFACE IS GOOD, VEHICLES MOVE SLOWLY, AND OPERATORS NEED TO GET IN AND OUT OF THE TRUCK FREQUENTLY. WHERE THIS IS THE CASE, INSTRUCTIONS SHOULD BE CLEAR AND ENFORCED."

HSE guidance on workplace transport safety

4.0 OPERATOR RESTRAINTS

4.1 PURPOSE

The risk of operator injury as a result of a vehicle tip-over will be significantly reduced if the vehicle is fitted with operator protection measures, and the operator uses them, and remains in the cab or seat.

Lift trucks should be fitted with restraint systems (such as a seat belt) where appropriate. If used correctly, this will prevent the operator being crushed between the truck and the floor in the event of a tip-over.

In exceptional circumstances a thorough and sufficient risk assessment may determine that the risk of truck tip-over has been effectively eliminated by other measures to void the requirement to use the restraint system. Operator preference and frequency of entry/exit to/from the truck do not justify non-use of the restraint. Operator training does not sufficiently mitigate the risk to justify not using the seat belt because experience shows that this will be overridden by panic.

"WE EXPECT THERE TO BE STRONG DOCUMENTARY EVIDENCE SUPPORTING ANY DECISION TO ACCEPT NON-USE OF OPERATOR RESTRAINTS. THE RESPONSIBILITY FOR ANY CONSEQUENCES LIES WITH THE DUTY HOLDER."

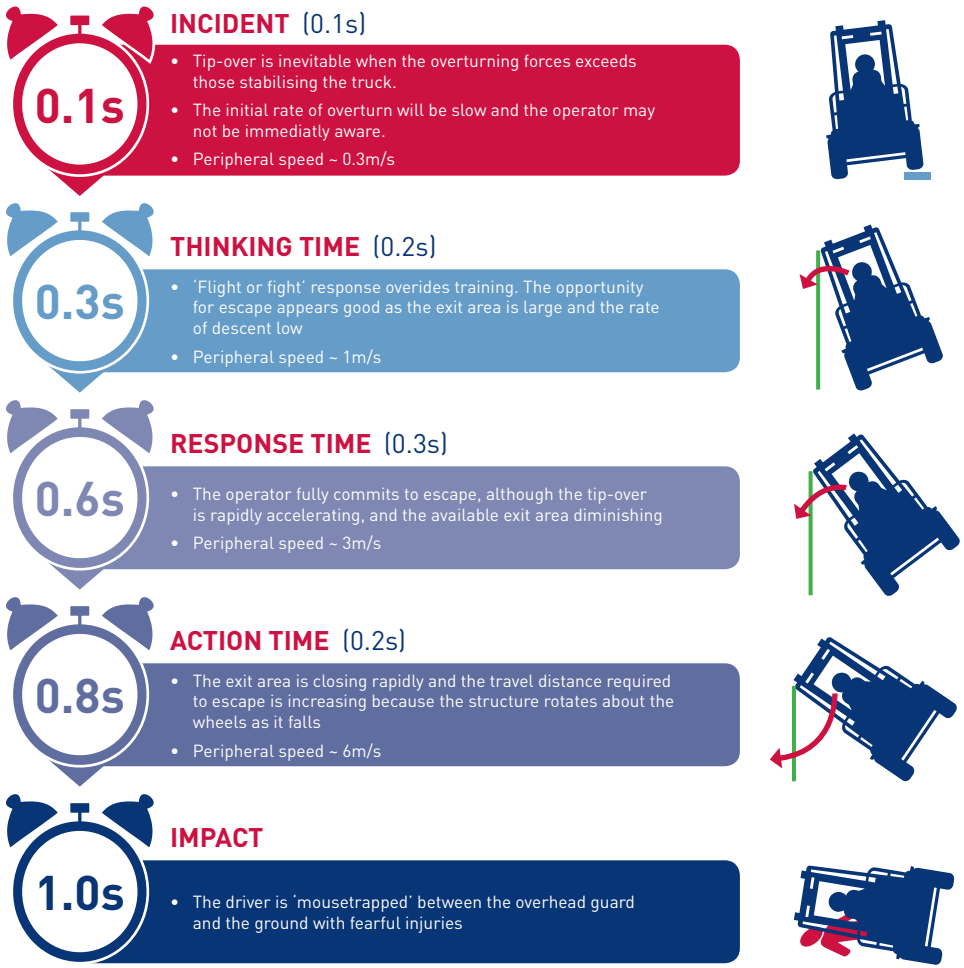
Steve Simmons-Jacobs,
HSE portfolio holder for industrial trucks

The risk assessment must be specific to the actual site, equipment and loads being handled, and must demonstrate that all significant risks affecting truck stability have been adequately addressed. Physical implementations, such as a traction speed restrictor (i.e. traction software setting), are more effective than instructions to the operator, such as speed limit signage. Requirements for monitoring of site conditions and working practices should be included as part of any assessment.

4.0 OPERATOR RESTRAINTS

OPERATOR RESTRAINTS KEEP THE DRIVER WITHIN THE PROTECTIVE STRUCTURE

4.1.1 MOUSETRAPPING



Note: Actual figures depend on incident type and truck characteristics. Only one figure is consistent, and that is the chalk mark around the body.

4.0 OPERATOR RESTRAINTS

4.2 TRUCK TYPES

Sit-on counterbalance trucks with a rated capacity up to, and including, 10 tonnes, and sit-on single side-loading trucks, must be fitted with a restraint, device, or enclosure which addresses the risk of entrapment of the operator's head/body between the truck and the ground in the event of a tip-over.

TYPICALLY, THIS IS A LAP SEATBELT, AND THE REQUIREMENT APPLIES TO ALL TRUCKS IRRESPECTIVE OF AGE.

For trucks over 10 tonne rated capacity, seat belts are not required if the stability characteristics of the truck are sufficient to prevent overturning, taking into account all the situations in which it is used.

Seat belts are not required on masted trucks which can only roll over through 90° if the operator cannot be trapped between the truck and the ground, e.g. if the truck has a cab with self-closing and latching doors which have no facilities for retaining them open in use.

For other truck types, principally end control and/or stand on operator position e.g. side seated reach trucks and straddle trucks; risk assessment shows that the risk of being trapped by the truck structure is low and it is better that the operator is not restrained but can step off and away from the truck.

4.0 OPERATOR RESTRAINTS

4.3 TYPES OF RESTRAINT

The most common operator restraint is a seat belt, however, retention of the operator within the cab can also be achieved, for instance, by an enclosed cabin, with self-closing doors, or by door bars.

Door bars may be a preferential alternative where frequent dismounting by the operator is required. Where door bars are used in place of a lap belt, they should be interlocked to the drive system, and should comply with prEN 17314, **Operator restraint systems other than lap-type belts**. Door bars should not replace seatbelts when working on slopes/ramps, or where there is a risk of driving off a dock edge, or of lorry/trailer drive away.

SEAT BELT – most common and practical mode of operator restraint

ENCLOSED CABIN* – either with self-closing doors or door bars

DOOR BARS* – may be preferred option for frequent dismounting but when used in place of a lap belt these should be interlocked to the drive system

***** Unlike seatbelts, door bars and enclosed cabs provide no protection against impact injuries with the cab interior. This risk must also be considered, especially where truck speed is relatively high. For this reason, many trucks with enclosed cabins are also fitted with seat belts, and these should also be used as they are protecting against a different hazard from ejection.

5.0 BEHAVIOUR MODIFICATION AND MONITORING SYSTEMS

Whilst it is the duty holder's responsibility to ensure that safe systems of work are being followed, there are a number of solutions that truck manufacturers can supply that may assist with this. The optimum solution will depend on the particular site conditions.

These are available to encourage drivers to adopt best practice and work safely. Please discuss the options with your truck supplier:

WARNING LAMP – an indicator to the driver that the restraint is not being used

FUNCTIONAL RESTRICTION – inhibits drive or restricts speed and functionality (available as modification to existing trucks and an option for new ones. Likely to become a requirement on new trucks within five years)

SEQUENTIAL LOCKING – prevents driver from sitting on fastened seat belt (an option for some new trucks and likely to become a requirement on new trucks within five years)

BEACON – lights up when the truck drive is engaged but restraints are not being used

TELEMETRY – logs restraint use (a function now offered on some new trucks)

COLOURED BELTS – an orange seat belt won't contrast effectively against an orange high-vis jacket, therefore there is no 'one size fits all' solution to safety; every site must consider and address its own specific circumstances

MECHANICAL BELT INDICATOR – products are available which hold the unfastened seat belt in a position which is obvious to the operator and supervisor. The positioning of the belt makes use simpler and more intuitive

6.0 TRAINING

6.1 OPERATOR

6.1.1 COMPETENCE

There is no such thing as a forklift licence so before authorising any employee to operate a truck, the employer must ensure proper training has been completed to guarantee competency.

COMPETENCE REQUIRES:

- **BASIC TRAINING –** such a provided by a third-party training provider. This will include an explanation of safety systems and truck stability.
- **SPECIFIC JOB TRAINING –** covering the actual truck, loads and site. This should include site conditions, rules and hazards, and instruction in load handling and safe systems of work.
- **FAMILIARISATION TRAINING –** supervised practical experience of specific work activities

6.1.2 REFRESHER TRAINING

Operators, even those who are trained and experienced, need to be routinely monitored in the workplace and, where necessary, retested or refresher trained to make sure they continue to operate lift trucks safely.

6.1.3 WHAT TO DO IN THE EVENT OF A TIP OVER

If your truck is about to tip over:

COUNTERBALANCE TRUCKS:

Stay with the Truck – **DON'T** Jump
Hold on Firmly
Brace the Feet
Lean Away from the Point of Impact

STAND-ON TRUCKS:

Step Off the Truck
Exit Away from the direction of the Fall
DON'T attempt to pass under
the falling structure

On counterbalance trucks the risk of serious injury – or even death – to an operator in the event of tip-over will be significantly reduced if they wear a seat belt and it is the responsibility of the management to ensure they do so.

6.0 TRAINING

6.2 SUPERVISOR

The Health and Safety at Work Act requires employers to provide adequate supervision. It is essential that supervisors have enough training and knowledge to recognise safe and unsafe practices.

REGULATION 9(2) OF PUWER STATES:

"EVERY EMPLOYER SHALL ENSURE THAT ANY EMPLOYEE WHO SUPERVISES OR MANAGES THE USE OF WORK EQUIPMENT HAS RECEIVED ADEQUATE TRAINING FOR PURPOSES OF HEALTH AND SAFETY, INCLUDING TRAINING IN THE METHODS WHICH MAY BE ADOPTED WHEN USING THE WORK EQUIPMENT, ANY RISKS WHICH SUCH USE MAY ENTAIL AND PRECAUTIONS TO BE TAKEN."

Contact your training provider for courses on Managing and Supervising Material Handling Equipment Operations.

Supervisors should monitor for, recognise and intervene when unsafe practices or behaviour occur.

7.0 THOROUGH EXAMINATION

The **Health and Safety at Work act 1974** gives every employer a duty of care, and, for industrial equipment, this is reinforced by the **Provision and Use of Work Equipment Regulations 1998**, (PUWER 98).

PUWER REGULATION 6, STATES:

Every employer shall ensure that work equipment exposed to conditions causing deterioration which is liable to result in dangerous situations is inspected:

a) at suitable intervals; and

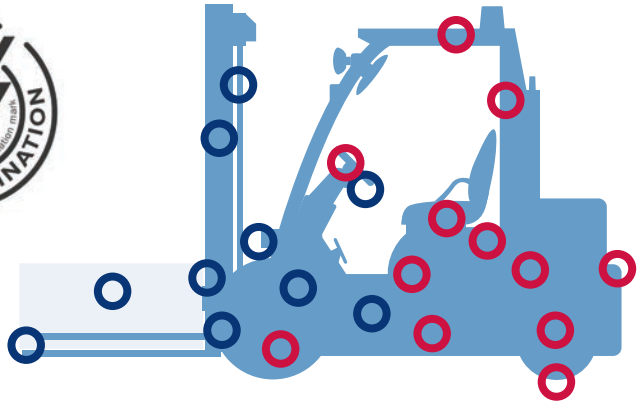
b) each time that exceptional circumstances which are liable to jeopardise the safety of the work equipment have occurred, to ensure that health and safety conditions are maintained and that any deterioration can be detected and remedied in good time.

7.0 THOROUGH EXAMINATION

EVERY EMPLOYER SHALL ENSURE THAT THE RESULT OF AN INSPECTION MADE UNDER THIS REGULATION IS RECORDED AND KEPT UNTIL THE NEXT INSPECTION UNDER THIS REGULATION IS RECORDED.

Some examinations only cover a fork truck's lifting mechanism, fulfilling the minimum requirements of Lifting Operations and **Lifting Equipment Regulations 1998 (LOLER 98** – shown in blue).

The **Provision and Use of Work Equipment Regulations 1998 (PUWER 98)** also requires a much more detailed examination (additional requirements shown in red).



The **Health & Safety at Work Act 1974** tasks every employer with a duty of care to maintain industrial equipment in a safe condition.

BITA and the FLTA's **Consolidated Fork Truck Services Ltd (CFTS)** administers the industry's national accreditation scheme for Thorough Examination which covers the requirements of both **LOLER and PUWER.**

For full legal compliance, ensuring that all safety components, including seat belts, are inspected, operators can choose a Thorough Examination provider accredited by the CFTS. This can be verified by the presence of the "Thorough Examination" certification mark on the next inspection due date sticker on the truck.

Membership of the CFTS scheme is free of charge, but members are audited for compliance with the strict procedural code.

For more information visit www.thoroughexamination.org

8.0 CASE STUDIES

8.1 COMPANY FINED AFTER WORKER FATALLY CRUSHED BY FORK LIFT TRUCK

Lincolnshire based firm Vacu-Lug Traction Tyres Limited was fined after a worker died when the fork lift truck he was driving overturned at the company base in Grantham.

Lincoln Crown Court heard the worker was transporting tyres on 30 July 2014 when the fork lift ran over a loose tyre in the road. He was crushed between the fork lift truck and the ground and later died from his injuries. He was not wearing a seat belt.

An investigation by the HSE found there was no company policy in place instructing workers to wear seatbelts when operating fork lift trucks. The investigation also found if the tyres had been stored securely this would have prevented them rolling onto the roadway and would have reduced the risk of the fork lift truck overturning.

Vacu-Lug Traction Tyres Limited of Hill Foot, Grantham, Lincolnshire pleaded guilty to breaching section 2(1) of the Health and Safety at Work Act 1974 and was fined £300,000 and ordered to pay costs of £25,000.

"THIS TRAGIC INCIDENT COULD HAVE EASILY BEEN PREVENTED IF THE COMPANY HAD ENFORCED AND MONITORED THE WEARING OF SEAT BELTS FOR FORK LIFT TRUCK DRIVERS".

David Butter,
HSE Principal inspector David Butter

8.2 FIRM FINED AFTER FORK LIFT TRUCK OPERATOR KILLED

A large steel fabrication company based in North Yorkshire was fined after a forklift truck (FLT) operator was killed when the truck he was operating overturned. However, the offence to which the company pleaded guilty was not a significant cause of the fatal accident.

Teesside Crown Court heard how 27-year-old Kelvin McGibbon was reversing the forklift truck when it struck some steps, causing it to overturn. Mr McGibbon was not wearing a seatbelt and suffered crush injuries which proved fatal

An investigation by the Health & Safety Executive (HSE) into the incident, which occurred on 13th March 2013, found that Severfield (UK) Limited failed to manage forklift truck driving operations. They did not enforce the wearing of seat-belts or control the speed at which some operators drove their trucks.

Severfield (UK) Ltd pleaded guilty to a non-causative breach of Regulation 5(1) of the Management of Health and Safety at Work Regulations 1999, and was fined £135,000 and ordered to pay costs of £46,020.

"A COMPANY HAS A LEGAL DUTY FOR THE HEALTH AND SAFETY OF PEOPLE WORKING ON ITS SITE, WHETHER THEY ARE EMPLOYEES OR NOT. THEY ARE REQUIRED TO ASSESS RISKS, ELIMINATE THEM WHERE POSSIBLE AND ENFORCE PROPER CONTROL MEASURES, SUCH AS SEAT BELT WEAR, BY CHECKING THAT SAFE DRIVING PRACTICES ARE BEING FOLLOWED TO DEAL WITH THE RISKS THAT REMAIN. SADLY, IN THIS CASE, THE PROSECUTION SHOWS THAT THE COMPANY'S MANAGEMENT OF FLT DRIVING OPERATIONS AND RISK CONTROL MEASURES FAILED WHICH EXPOSED EMPLOYEES TO DANGER."

David Welsh.
HSE inspector

8.0 CASE STUDIES

8.3 COMPANY FINED AFTER DEATH OF WORKER USING A FORK LIFT TRUCK

A Derbyshire-based company was fined after the death of a 19-year-old worker, when a fork lift truck (FLT) overturned at the company's site in Chinley, Derbyshire.

Manchester Crown Court (Minshull Street) heard how, on 10 February 2015, Ben Pallier-Singleton was driving a FLT during night time hours down a sloping roadway, when it overturned and the employee suffered fatal crush injuries.

This investigation by the Health and Safety Executive (HSE) had initial involvement from Derbyshire Constabulary and found the employee was not adequately trained nor was he wearing a seatbelt at the time of the FLT overturning. It was also found the company did not inform their employees of the speed limit on-site, had not put measures in place to control the speed of vehicles, and failed to have adequate lighting and edge protection in place to avoid FLTs overturning.

Vinyl Compound Ltd of Stephanie Works, High Park, Derbyshire pleaded guilty to breaching Section 2(1) of the Health and Safety at Work Act 1974 and Regulation 3 of the Management of Health and Safety at Work Regulations 1999. The company was fined £450,000 and ordered to pay costs of £71,778.20.

"BEN WAS AND ALWAYS WILL BE MY BELOVED SON, AND MUCH-LOVED BROTHER TO DAN AND SOPHIE. BEN WAS A YOUNG MAN AT THE START OF HIS LIFE, FULL OF LIFE, FUN AND THE EXCITEMENT OF PLANS AND IDEAS FOR THE FUTURE WITH HIS GIRLFRIEND, KENSEY. HE WAS THE SHINING LIGHT OF OUR FAMILY AND BROUGHT EVERYONE TOGETHER. I AM HEARTBROKEN AND ANGRY THAT BEN COULD GO TO WORK AND BE KILLED BECAUSE HIS EMPLOYER, VINYL COMPOUNDS, TOOK SO LITTLE CARE OF HIM, FAILED TO TRAIN HIM OR MAKE SURE THE WORKPLACE WAS SAFE. IT IS UTTERLY SHOCKING THAT THIS CAN HAPPEN EVEN NOW. THE DIRECTORS WHO MADE THE DECISIONS WILL BE NOW ABLE TO GET ON WITH THEIR LIVES BUT WE ARE SERVING A LIFE SENTENCE. ANY FINE THEY HAVE PAID IS NOTHING, NO PENALTY AT ALL COMPARED TO THE PENALTY WE FACE: LIFE-LONG TORMENT, ENDLESS SADNESS AND GRIEF WITHOUT BEN."

Kathryn Pallier,
Ben's mother

"THIS TRAGIC INCIDENT COULD HAVE EASILY BEEN PREVENTED. THE COMPANY'S MANAGEMENT OF FORK LIFT TRUCK DRIVING OPERATIONS AND ITS FAILURE TO PROVIDE VARIOUS MEASURES TO ENSURE THE SAFETY OF THE EXTERNAL YARD AREA COUPLED WITH THE LACK OF SAFE DRIVER MEASURES, SUCH AS WEARING A SEAT BELT, EXPOSED EMPLOYEES TO SERIOUS SAFETY RISKS. SADLY, IN THIS CASE, THESE FAILURES RESULTED IN THE NEEDLESS LOSS OF MR PALLIER-SINGLETON'S LIFE."

Berian Price
HSE inspector

9.0 RISK ASSESSMENT

9.1 DUTY HOLDER RESPONSIBILITIES

The Management of Health and Safety at Work Regulations 1999 require employers to carry out a suitable and sufficient risk assessment to protect employees and others.

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

A hazard is anything that may cause harm, such as striking pedestrians, other vehicles and structures; loss of stability; falling loads; falling from the carrier if someone is being lifted; or being crushed;

The risk is the chance, high or low, that somebody could be harmed by these and other hazards, together with an indication of how serious the harm could be.

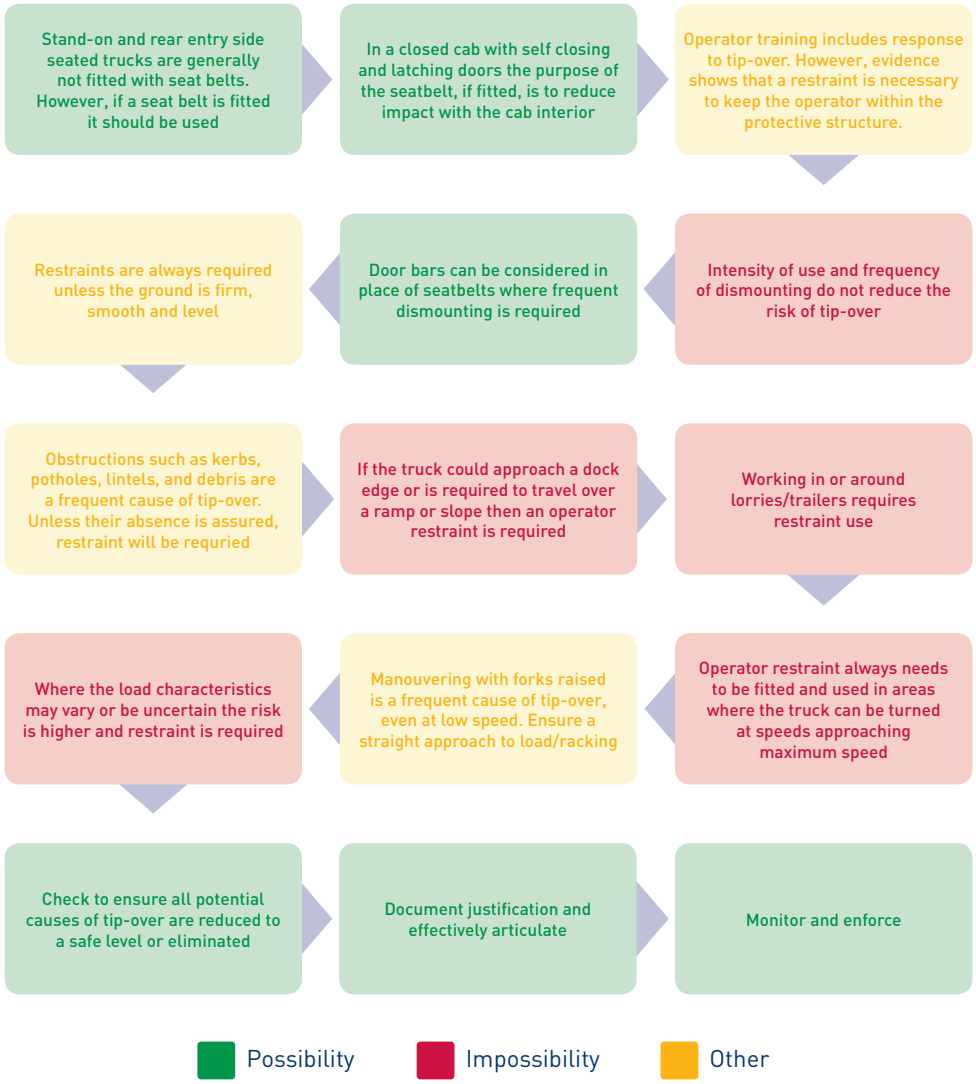
9.2 COMMON CAUSES OF TIP OVER INCLUDE:

- turning too quickly, especially when unladen;
- sudden changes in speed and/or direction;
- driving with an elevated load or load carrying device;
- impact with kerb, pothole, or other object, e.g. discarded pallet
- impact with overhead obstruction, e.g. doorway
- driving with a side-shifted or uncentered load;
- turning on, or traversing across, a slope or ramp;
- driving with the load downslope;
- wide loads;
- suspended (swinging) loads;
- driving off the ramp or dock edge;
- drive away, e.g. of lorry/trailer;
- manoeuvring with load raised;
- tilting the mast forward with an elevated load;
- driving on uneven surfaces;
- overloading;
- transporting large loads in strong winds;
- transporting liquids.

9.0 RISK ASSESSMENT

9.3 JUSTIFICATION FOR NOT USING A SEAT BELT

Any justification for not using a restraint requires strong documentary evidence, including a risk assessment, demonstrating that all potential hazards have been sufficiently mitigated, and that the measures are rigorously enforced.



10.0 BIBLIOGRAPHY

BITA SAFETY BOOKLETS:

- B.0.1 Operator's safety code for powered industrial trucks,

BITA GUIDANCE NOTES:

- GN28 Thorough examination and safety inspections of industrial lift trucks
- GN40 Handling of single suspended loads by rider controlled counterbalanced and reach trucks
- GN43 Integral attachments for forklift trucks
- GN52 Industrial trucks – Floor surfaces & gradients
- GN60 Operator restraint

For ordering information and a full list of BITA publications visit **www.bita.org.uk**

HSE GUIDANCE:

- Approved Code of Practice (ACOP) L117, Rider-operated lift trucks – Operator training and safe use
- Approved Code of Practice (ACOP) L113, Safe use of lifting equipment – Lifting Operations and Lifting Equipment Regulations 1998
- HSG136, A guide to workplace transport safety
- INDG457, Use lift trucks safely: A brief guide for operators

Available for free download from **www.hse.gov.uk/pubns/books/index.htm**

BITA
Lifting Industry Standards