# Safe Operation of Powered Industrial Lift Trucks

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For lift truck operators & people in charge

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(Computer users click on hyperlinks - the ◤ symbol returns you to this index at anytime)


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**Purpose of this resource**

This manual has been designed to assist with the training of lift truck operators but is also useful for those in charge of such operations who may not have had the benefit of attending a full forklift training course.

This along with other online resources will be useful to those due for recertification or studying via Open Distance Learning. Refer to the PILT Module 1 instructions and assessment conditions before opening the assessment pack.

**Acknowledgement**

The contents of this document have been researched from general information including;
Forklift Safety – Reducing the Risk.
The Approved Code of Practice for Training Operators and Instructors of Powered Industrial Lift Trucks (Forklifts).
Safety Code for Forklift Truck Operators #1.
WorkSafe NZ website.
Thanks also to JICOSH for allowing the use of images.

**Disclaimer**

This document includes general information about the rights and responsibilities of workers and employers (PCBU's) under New Zealand health and safety legislation.

It is intended to provide general information about the subject and is not intended to represent a comprehensive statement of the law as it applies to particular problems or to individuals, or substitute for legal advice.

Feel free to contact richard@verifyme.kiwi if you need assistance on the application of the HSWA to your specific situation.

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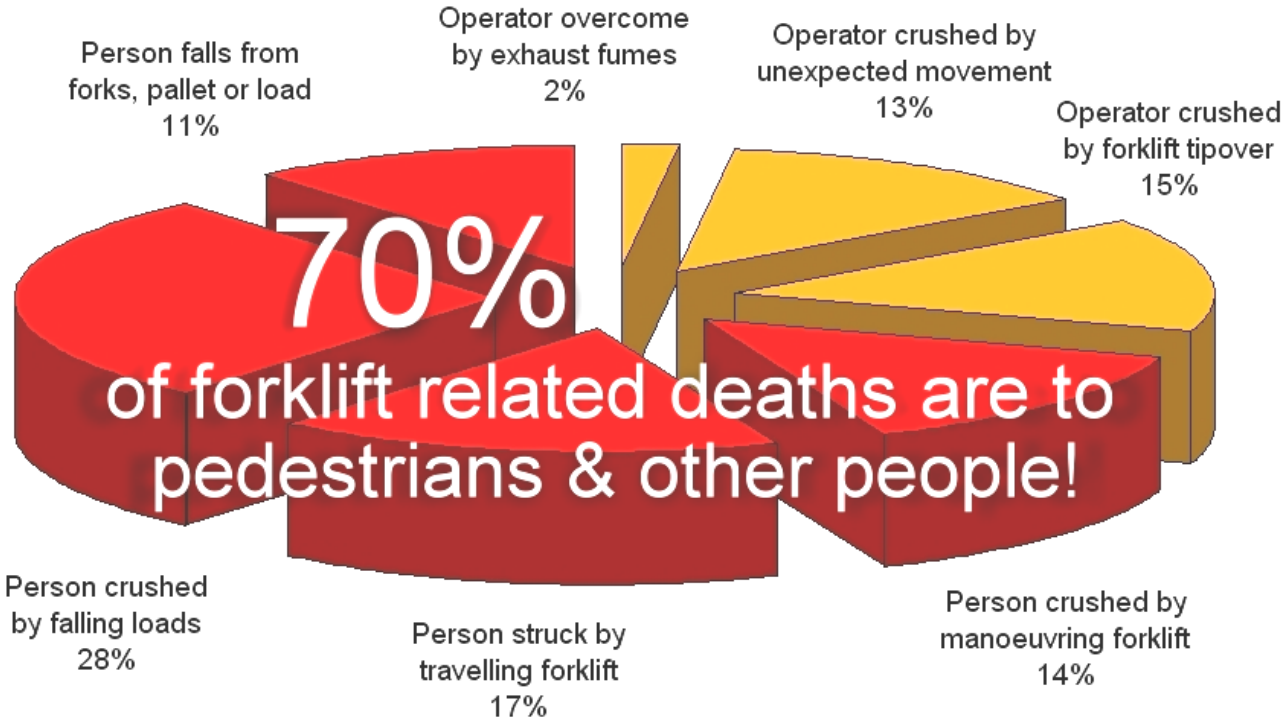
## Introduction

The powered industrial lift truck, commonly known as a forklift, can be one of the most dangerous pieces of equipment in the workplace. A medium sized forklift weighs about 5 tonnes and can cause a great deal of damage and injury when not used properly.

This guide will help you to identify some of the potential risks, and provides solutions and tips to help reduce injuries and fatalities resulting from unsafe forklift operation.

## Overview of Forklift Fatalities

The diagram below shows a breakdown of forklift related **deaths** and the main causes. While there are many contributing factors, it is important to note that excessive speed plays a part in most forklift related accidents. Speed must be controlled and monitored to reduce accidents.




## Pedestrians and Forklifts Don't Mix

The key lesson to be learnt is that pedestrians must be kept at a safe distance from working forklifts. Even at low speeds, an unexpected movement of the forklift can crush a bystander against a fixed structure or another vehicle.

Without significant change to the way forklifts are used, there will be an ongoing and unacceptably high risk of serious injuries and death.

For people suffering severe injury, or the surviving families of people killed, the effects are devastating. For employers and business owners that failed their legal duty to provide a safe workplace, the legal and financial costs can be overwhelming.

Sadly, many employers and employees only become aware of dangerous practices as the result of a serious accident at their workplace. Supervisors and managers must also be aware of how a forklift should be operated, and the hazards involved.

Please take the time to read and understand this information, and then take a look at your forklift operations.

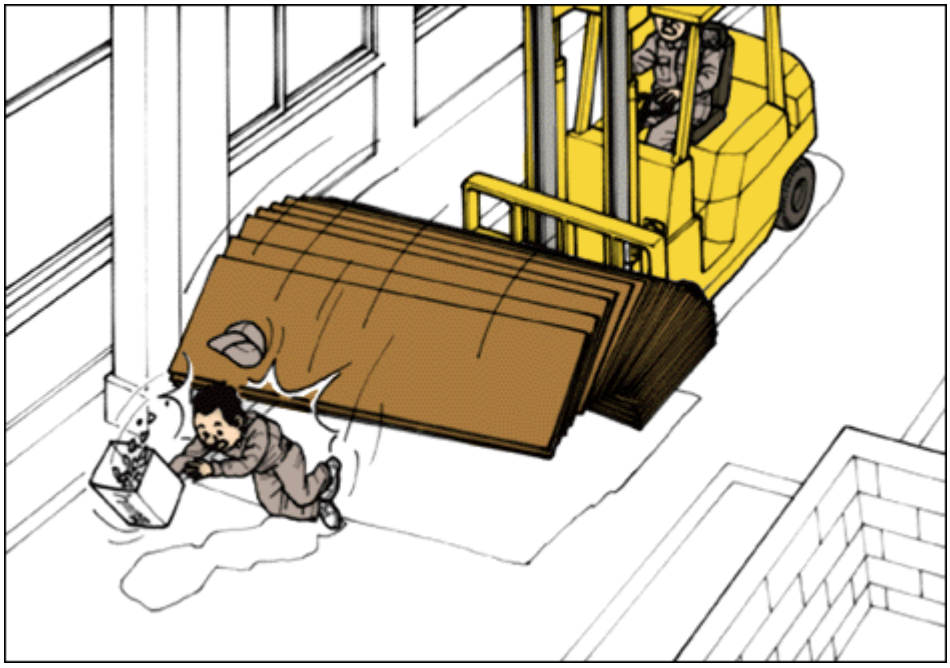
## Lift Truck Traffic Management

When pedestrians work or move in close proximity to operating forklifts, there is a risk of serious injury occurring. Ensuring the safety of pedestrians is a critical aspect of workplace traffic management.

Protecting pedestrians at the workplace requires decisive action to prevent, not just discourage, pedestrians and forklifts from coming into close proximity. **Don't learn forklift safety by accident!**

Pedestrian exclusion zones and forklift exclusion zones must be based on forklift movements, braking distance, stability of the forklift and the loads being handled.

Forklift traffic management is not a matter of "common sense". Forklift traffic management is about minimising risk through the application of systematic controls supported by clearly defined and enforced "rules of the road".



Health and Safety Representatives, forklift operators, other workers and employees should all play a part, and will result in many ideas and observations related to forklift operations, safety and possible solutions.

When identifying risk control measures consider the source of the risk and develop practical, workable controls. Once risk controls are in place they must be regularly reviewed to gauge effectiveness.

## Traffic Management Plans

A traffic management plan is essential to address many of the risks associated with the use of forklifts in the workplace. Safety of pedestrians is the most important aspect of a workplace traffic management plan.

When preparing Traffic Management Plans:

- Carefully study the way forklifts and pedestrians move, or need to move, around your workplace and identify all places where there is potential for collisions between forklifts and pedestrians, or forklifts and other vehicles, columns, racking etc
- Consider the way the forklift mast, load or stacked goods obstruct the operator's view
- Consider the braking distance of laden forklifts, the distance loads could fall (including rolling/ splashing) and the factors affecting forklift stability.

- Consider the most efficient route for traffic flows and reduced frequency of interaction with hazards.

**Traffic Management Plan Controls may include:**

- Substituting a forklift with other suitable load shifting equipment and, where reasonably practicable, eliminating the risk altogether.
- Change the workplace layout to minimise cross flow of traffic, intersections and blind spots, and to separate pedestrians from forklift traffic and operations.
- Clearly define forklift operating areas as pedestrian (including truck driver) exclusion zones, and pedestrian walkways/work areas as forklift exclusion zones.
- Provide physical barriers around pedestrian walkways and work areas to define pedestrian safety zones and to prevent pedestrian access to forklift operating areas other than at defined pedestrian crossings. Don't rely only on painted lines and high-visibility vests to keep pedestrians safe.
- Base forklift speed limits and the boundaries of pedestrian and forklift exclusion zones on the braking distance of laden forklifts, the distance loads could fall (including rolling/splashing) and the factors affecting forklift stability.
- Conduct specific workplace proficiency training for forklift operators and include procedures that require forklifts to stop work if pedestrians enter a pedestrian exclusion zone.
- Provide training and procedures on forklift traffic safety to all employees and any visitors at the workplace, and supervise work to ensure that procedures are followed.
- Maintain good area lighting, ensure that high-visibility clothing is worn by pedestrians, and ensure that forklifts, obstructions, low beams/doorways edges, drains etc are marked with high-visibility colours.

Sometimes it is useful to enlist the help of a professional lift truck safety consultant to audit your operations and make recommendations. Contact richard@verifyme.kiwi

## Truck Loading And Unloading

As outlined the key to effective forklift traffic management is to separate pedestrians from operating forklifts.

The following is an example of how an effective traffic management system for the loading and un/loading of vehicles may be implemented.

### Pedestrian exclusion zone

A pedestrian exclusion zone has been established for a distance equal to the height of the load on the ground plus an additional allowance for the nature of the load. Forklift movements within this zone are stopped before pedestrians enter.

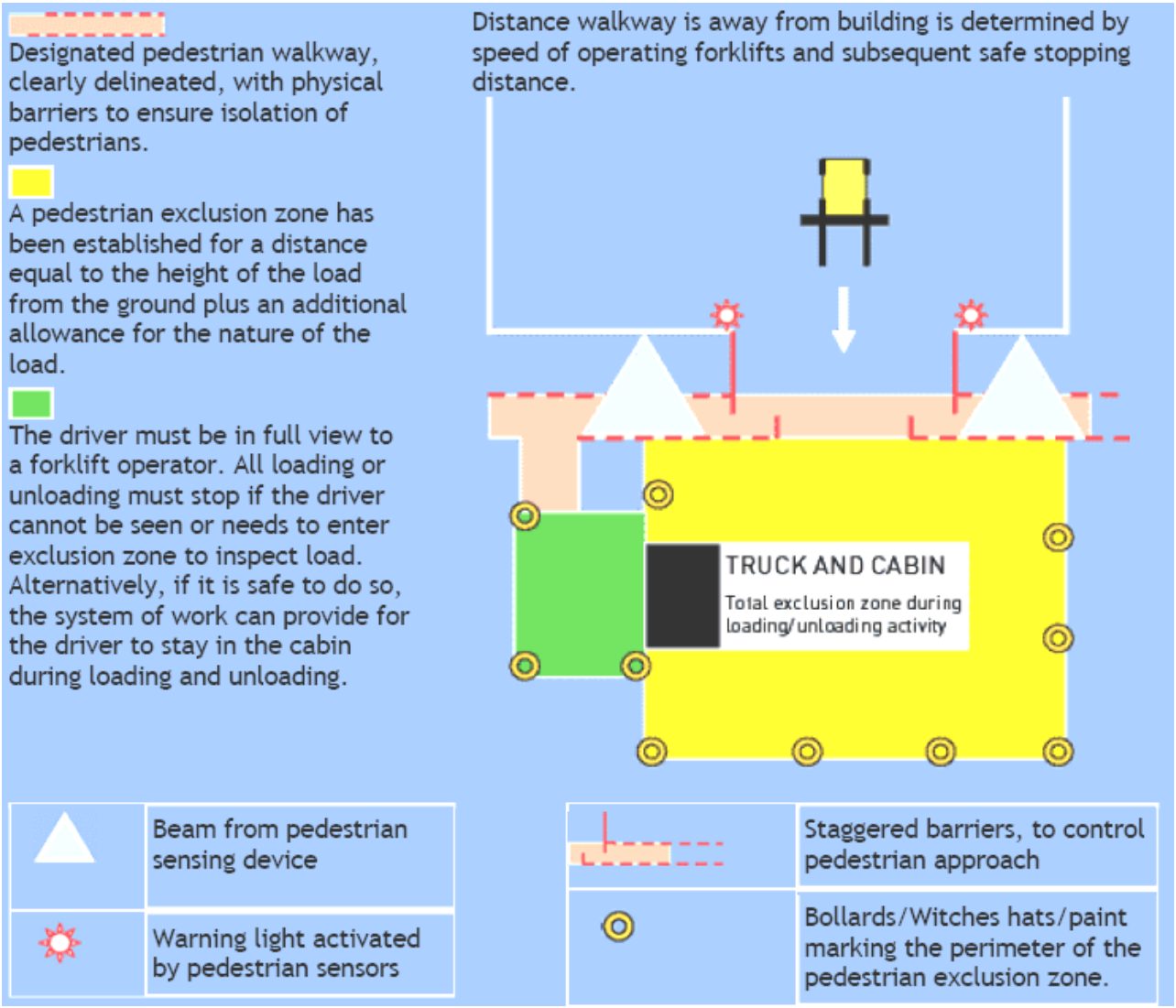
### Safety Zone for Driver

The truck driver must be in full view to a forklift operator. All loading or unloading activity must stop if the driver cannot be seen or needs to enter exclusion zone to inspect load.

Alternatively, if it is safe to do so, the system of work can provide for the driver to stay in the truck cabin during loading and unloading.

### Bollards/Witches Hats/Paint

Bollards marking the perimeter of the pedestrian exclusion zone have been installed.



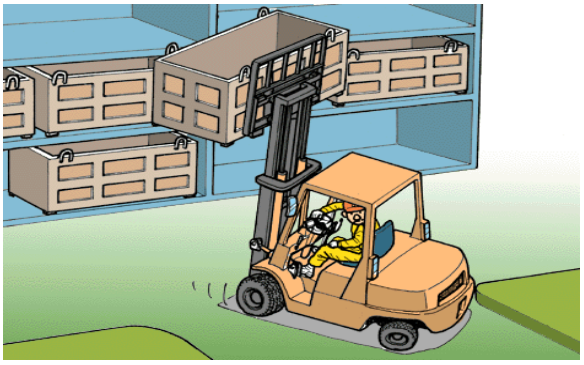
## Forklift Stability

Overturning poses the most danger to forklift operators in the workplace. It is a leading cause of operator deaths involving forklifts, accounting for one in six such deaths.

Driving with raised forks, cornering too fast, striking low doors or beams, driving across inclines and uneven ground are the main causes of forklifts overturning. Colliding with another vehicle, braking too quickly and towing disabled forklifts can also cause overturns and fatalities.

To be effective a forklift must be manoeuvrable. To achieve manoeuvrability, forklifts are designed to be compact, making them less stable than other vehicles and mobile plant.

Forklifts have a range of limitations, from maximum load weight to speed. These factors affect the operator and the forklift itself, employers should ensure the workplace conditions suit the forklift and the tasks it performs.



## Key Risks to Forklift Stability

Research has identified 10 key concerns in relation to forklift stability:

1. Most rollovers involve unladen forklifts, because unladen trucks are less stable than a laden forklift with the load being carried low.
2. When operators apply the brakes on a laden forklift they easily lose stability.
3. Even when stationary, forklifts have a small stability safety margin – 30-50% at rated load with the load down and 15-20% with a fully elevated load and mast vertical.
4. Sales materials do not always detail if the forklift's working capacity has been restricted by stability tests relating to (lateral) overturning or (longitudinal) tipover.
5. Manufacturers do not always include vital information in their sales materials, such as the forklift's capacity at full forward tilt of the mast and at maximum load elevation.
6. Uneven flooring, particularly with a height difference in excess of 40mm across the front wheels, can seriously impact on a forklift's stability when carrying its rated load at full height.
7. The stability of dual wheel forklifts is required when undertaking higher lifts, particularly over four metres.
8. A forklift may become 'dangerously' unstable when driving with a raised load or a raised empty load carriage.
9. Loads attached to a forklift or suspended from a jib attachment are more likely to result in a full forward tipover when braking.
10. Forklifts can easily overturn if they make contact with overhead structures.

**Calculating Load Chart Data**

Lift capacity, that is, the maximum load supported by the forklift is the most important forklift specification to prevent forklift instability incidents.

(return to questions on page 28)

All lift trucks must have a load chart. The chart gives important information including the weight and size of loads that can be safely lifted. This is referred to as forklift capacity.

Load centre (LC) distance is measured when the load is hard up against the face of the forks/backrest, from the face of the forks to the centre of the load. Basically the LC distance is half the load depth (when the weight is evenly spread over the pallet/load).

The curved line shows that as the load centre (LC) distance increases, the weight must be reduced to maintain stability. In other words, the longer the load extends forward, less weight can be lifted. Loads above the curved line are unsafe to lift – this will make the forklift unstable.

Diagram A shows a load measuring 1200mm deep. When the load is snug up against the backrest, the load centre distance is 600mm (or half of the pallet size).

When we refer to the load chart we see that a LC of 600mm intersects the curved line at the 2200kg mark. 2600kg on a 1200mm pallet is in the danger zone and therefore should not be lifted.

Important note: If there is a gap between the load and the backrest, the LC distance is increased by the size of the gap. ALWAYS keep heavy loads against the backrest!

So, even though this forklift has a maximum capacity of 3000kg, it would be overloaded and unstable when picking up this particular load.

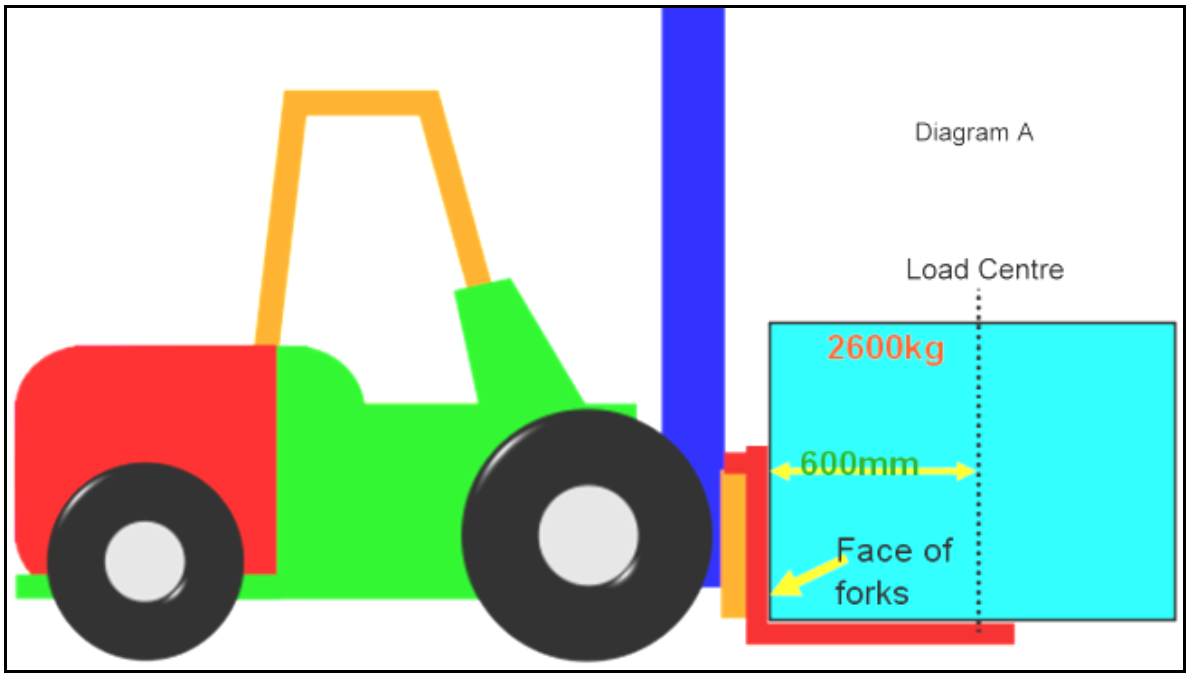
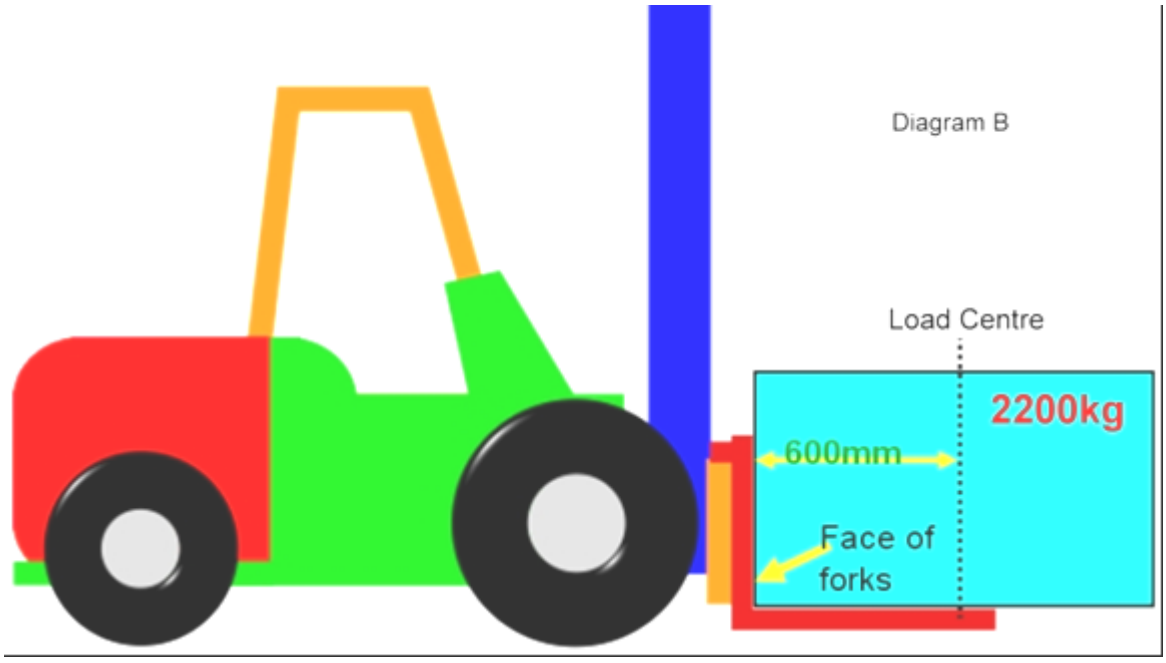



Diagram B below shows the same size load but 400kg has been removed.




When we refer to the load chart we see that a LC of 600mm intersects the curved line at the 2200kg mark.

2200kg on a 1200mm pallet is bang on the line and therefore in the safe zone and may be lifted with caution.

Extra caution must be taken when lifting heavy loads because you are right on the verge of becoming unstable.

**Remember:** Keep the load low when travelling to maintain stability and avoid tipover.

**Managing Rollover Risk for Forklift Operators**

When an operator jumps or is thrown from an overturning forklift, there is a very high likelihood that they are trapped under the overturned forklift and a fatality occurs.

When a forklift overturns, the safest place for the operator is in the cabin with a seatbelt on. If body restraints have been fitted they should be worn. The operator is advised to hold on, stay with the truck and lean in the opposite direction of the overturn. While seatbelts may be an inconvenience, they may save the operators life.

**Managing Rollover Risks, for Employers (PCBU's)**

Employers have a primary duty to provide a safe workplace.

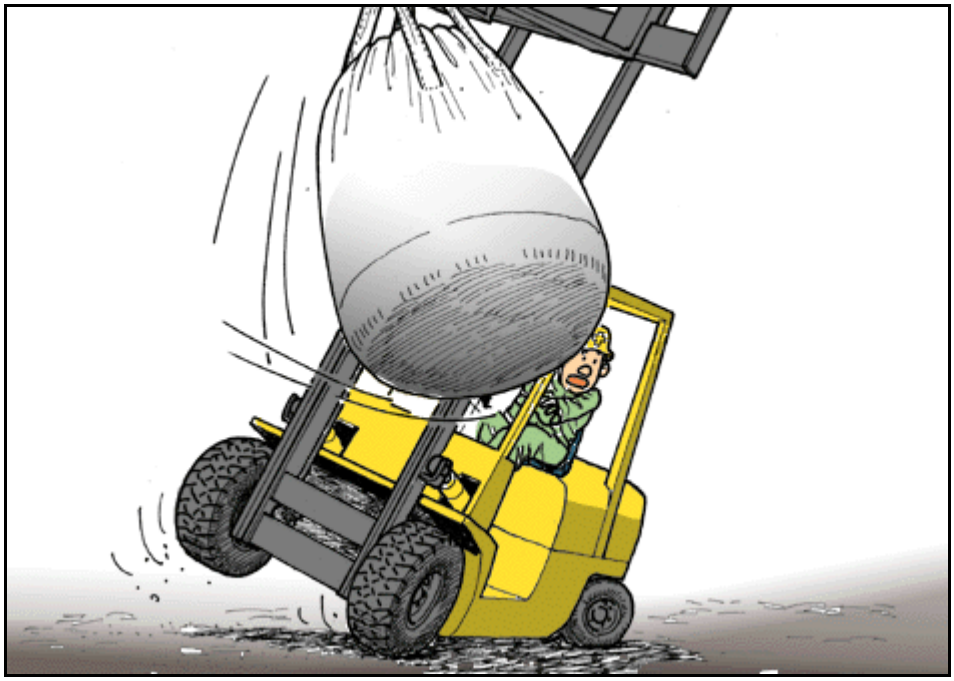
Providing a safe work environment, training, well maintained machinery and effective traffic management plans all play an important part in reducing the risks posed by forklifts in the workplace.

All employees, including managers and supervisors, have a duty to ensure the actions they take, or don't take, do not put themselves or others at risk.

Employers can help mitigate the effects of forklift instability by:

- Ensuring seatbelts are fitted, correctly worn. Installing intelligent systems can prevent forklifts being started unless the seatbelt is fastened.
- Purchasing forklifts with speed limiting devices.
- Removing incentives that may encourage forklift operators to drive too quickly.
- Reduce the speed limit around the workplace.
- Using forklifts with a greater capacity for a given load.
- Using dual wheeled forklifts that provide an extra margin of safety in lateral stability when lifting loads above 4.5 metres.

- Require suppliers to provide detailed information on all stability limitations, capacities at different lift heights and lift positions, and how the limiting capacity was obtained.
- When buying or leasing a new forklift, look for stability-enhancing features and the capacity to meet all workplace needs.
- Ensure operators possess a competency certificate, have received detailed site/task-specific training, and demonstrate high levels of competency in all tasks.
- Ensure floor imperfection do not exceed 20mm across the front wheels where off centre loads may be manoeuvred at full height.



**Design Features and Intelligent Systems**

Design features and intelligent systems that can help eliminate risks posed by forklifts in the workplace include:

- mechanisms that prevent forklifts from starting when the driver is not restrained by a seatbelt or another device.
- limiting travel speeds to as low as 8km/h (9km/h for dual tired forklifts), except where manufacturers can provide stability figures to show otherwise. This would assist in reducing the occurrence of side tipovers. (Uneven operating surfaces could require a lower speed limit)
- speed limiters that reduce the maximum speed of a forklift depending on the load, its height and turning radius.
- systems that monitor and limit the number of wheel rotations while the forks are elevated, to prevent forklifts being driven with raised forks; and
- load weighing devices on forklifts.
- maximum hydraulic pressure to mast lift cylinders can be set at about 110% of the rated load at full height with the mast vertical to prevent overloading.

## Speed and Braking Distance

While a forklift's brakes are less effective than other vehicles', they could still cause a tipover or loss of load when applied heavily in an emergency.

Too many workplaces rely on the operator to apply 'just the right amount' of brakes to quickly stop the forklift without causing it to tip over. Usually, the only warning a driver will receive of this happening is when the back wheels come off the ground. This is unacceptable.

Employers should purchase forklifts with speed limit devices and, where practicable, retro-fit older trucks to ensure speed limits are observed and safety precautions taken.

At all workplaces, speed limits should be prominently displayed, observed and enforced. Signs must be placed so that they can be easily seen by forklift operators. However, most lift trucks do not have a speedometer so operators must use their best judgement and drive at a speed consistent with the load and the conditions.

The speed at which a forklift can stop in an emergency is determined by the speed at which it was travelling, the weight of its load and road surface. As such, forklift braking distances must be considered when planning for, and managing, forklift travel paths.

The emergency stopping distance of a fully loaded forklift is often significantly underestimated when planning for pedestrian safety. Monash University Accident Research Centre (MUARC) research showed that a laden forklift cannot use its maximum braking as the load will slide or fall from the forks, or the forklift will tip over forwards. The table below shows the minimum braking distance for common forklifts travelling on an even surface.

## Minimum Actual Emergency Stopping Distance

Monash University Accident Research Centre findings on emergency braking distances for typical forklifts on a level surface - based on a driver reaction time of 1.5 seconds.

| REACTION DISTANCE AND TOTAL STOPPING DISTANCE | | | | | | | |
|---|---|---|---|---|---|---|---|
| Speed (km/h) | 6 | 12 | 14 | 16 | 18 | 20 | 22 |
| Speed (m/sec) | 1.7 | 3.3 | 3.9 | 4.4 | 5 | 5.6 | 6.1 |
| Distance travelled while driver reacts and begins to apply the brakes in an emergency (m) | 2.5 | 5 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 |
| Total emergency stopping distance (m) | 2.9-3.2 | 7-8 | 8-10 | 9.5-12 | 11-14 | 13-16.5 | 14.5-19 |

**NOTES:**

The Theoretical Emergency Stopping Distance (m) is the calculated minimum emergency stopping distance under full braking with no allowance for stability.

The Actual Emergency Stopping Distance (m) is the minimum result of forklift braking tests without losing load or tipping over but decelerating at the extreme limits of stability.

The values given are based on an alert and skilled driver braking on a level, non-skid surface. The reaction distance may be doubled if the driver is distracted.

**So, what does this data mean?**

It tells us that at a speed of 14km/h, a forklift will travel four metres in one second and needs at least 10 metres to stop safely. And that even at 6km/h (walking pace) a forklift needs at least three metres to stop.

It also indicates that emergency stopping distances must be taken into consideration when developing a traffic management plan.

Effective traffic management planning, intelligent systems fitted to forklifts (Smart Forklifts) and appropriate operator behaviour are the three major contributors to minimising the incident of pedestrian injuries.

**Loads and Load Handling**

Even without a load, forklifts are extremely heavy and can be the cause of serious injury even when travelling at low speeds. Just like other heavy vehicles (such as dump trucks) their use is dangerous if it is not correctly and carefully controlled.

Forklift operators must ensure each load is carried, lowered and set down in compliance with the manufacturer's recommendations and company procedures.

A forklift's capacity is the maximum weight it can safely carry at a specified load centre. Load capacity data plates are a useful tool, that allows the manufacturer to detail the load each truck can safely lift.

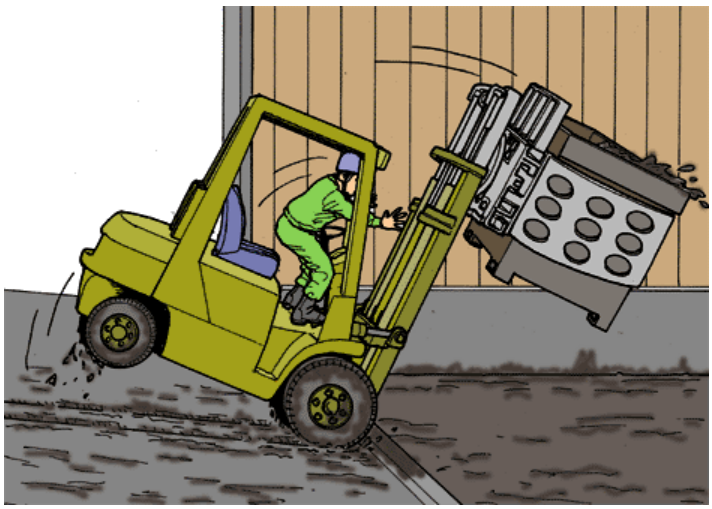
The rated capacity of a forklift must always be noted and never exceeded. Marked weight, a weight gauge or scale can be used to weigh loads and ensure they do not exceed the forklift's capacity at a given load centre.

Overloading can damage the forklift as well as present additional health and safety risks to operators and pedestrians in the workplace.

Together with the weight, the shape and size of a load affects the way it should be lifted.

When a load is raised, the forklift is less stable. Tilting forwards or backwards with a raised load will also affect stability.

Driving with a raised load is a dangerous practice impairing stability and easily leads to tipovers and turnovers, particularly if the forklift is being driven at speed or around a corner or on an uneven surface.



## Operator Checks

It is in an operator's interest to ensure all precautions are taken.

- Familiarise yourself with a new type of load or a new forklift.
- Check that the load is within the forklift load limit listed on the load capacity plate.
- When operating a forklift at grade, the load must be tilted back and raised only as far as needed to clear the road surface.
- If it's not placed correctly, reload it.
- If it's particularly long or wide, check if you need to take an alternative route.
- If pallets are damaged, remove them.
- Ensure pedestrians are not present during forklift operations.

## Forkarm Attachments

Where other types of loads are required to be moved, specialist removable attachments should be used. For example, 200 litre drum-lifting attachments are available and jibs are commonly used to sling loads.

- When an attachment is fitted to a forklift the dynamic and operating characteristics may change, making it necessary to de-rate the forklift capacity and restrict some operating controls.
- Attachments such as side shift devices, jibs and extension forks must have rated capacities and information on the type of forklift that is suitable for use in connection with the attachment.
- If an attachment is designed and manufactured on site, design calculations must be done by, or checked by, a competent engineer.
- Unintentional detachment from the fork carriage or the fork arms must be prevented
- Sideways displacement must be prevented.

A competent welder must be used for any required welding. The attachment should be weighed, and the weight marked on it, together with any safe-working-load restrictions.

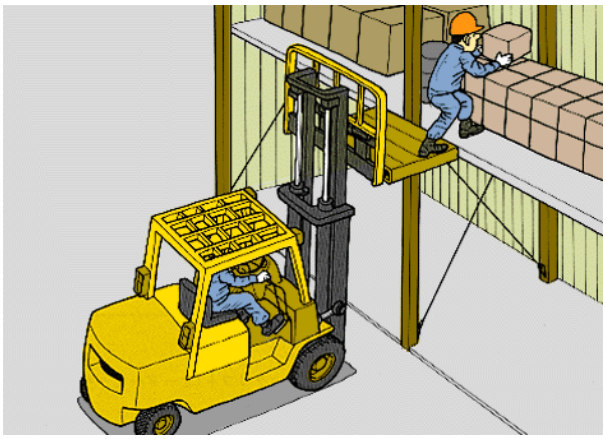
Before any attachment is used, the forklift manufacturer (or the manufacturer's operating manual) must be consulted to ensure that it is safe to be used on that model forklift truck, and the load plate is to be annotated for any attachment(s) likely to be used.

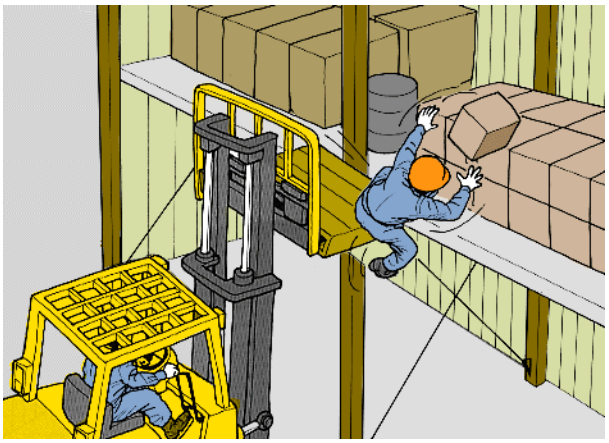
Training in the use of all removable attachments for operators must be provided and documented, and supervision provided where necessary.

## Raising People

Forklifts (other than purpose-built order-picking lift trucks) are designed for lifting loads – not people. Raising people on pallets or on the bare fork arms is extremely dangerous and is not to be done.

You must ensure that the crucial safeguards, risks and legal duties involved with raising people are fully understood in your workplace.





## Maintenance Work Platforms

Maintenance work platforms with a meshed in work area securely attached to the forks can be used to raise people performing minor maintenance tasks.

In considering the use of a maintenance work platform on a forklift the following points must be observed:

• Platforms should not be used by workers who have not completed the necessary safety training.

• These platforms should only be attached to a complying designated forklift with a load capacity data plate stating attachments that may be used.

• Before anyone is raised on a forklift, safe work procedures must be in place to ensure they can be rescued if an incident or breakdown occurs.

• The risks associated with using the forklift must be assessed and determined to be no greater than the risks involved in using plant or equipment specifically designed to raise people

It should be noted that where a task is carried out on a regular or longer-term basis (e.g. stock picking or stock taking in a warehouse or general production work), the use of plant or equipment specifically designed to raise people will generally be practicable and should therefore be used.

**Poorly Ventilated Workplaces**

Forklifts powered by internal combustion engines (petrol, diesel or LPG) should not be used in an enclosed space. Where ventilation may be inadequate - electrically powered forklifts are the safer alternative.

The health effects associated with internal combustion engine emissions can quickly become fatal, particularly as a result of carbon monoxide (CO) poisoning, a deadly, colourless and odourless gas produced by combustion engines.

LPG forklift trucks generally have a 'cleaner' exhaust than petrol or diesel powered engines. However, they can still produce dangerous levels of airborne contaminants such as carbon monoxide if they are used in a poorly ventilated place, such as a cold store or freezer room.

As an example, a working forklift with a 1.8 litre LPG engine operating in an unventilated 60,000 cubic metre warehouse (10m x 60m x 100m) could take just 30 minutes to exceed exposure standards for carbon monoxide.

Forklift engines also produce other gases that can be harmful or fatal, as well as consuming available oxygen.

The dangers are compounded by the fact that exposure to gases or reduced oxygen levels impairs judgement and reflexes, causes dizziness and increases fatigue - creating further serious hazards.

**Slips, Trips and Falls**

Believe it or not, almost a third of all forklift injuries involve slips, trips and falls while getting on or off forklifts often resulting in musculo-skeletal back injuries.

The high incidence of slips, trips and falls clearly shows a need to review and change work practices.

The design of access steps, grab-rails and the layout of the foot pedals, steering wheel and cabin floor surface of exiting forklifts are important. These factors should be considered when purchasing a new forklift.

**To manage risks associated with slips, trips and falls, it is necessary to:**

Purchase or refit forklift so that each forklift has;

- steps that give a good footing
- anti-slip surfaces and
- grab handles

to provide three points of contact (hands & feet) while mounting or dismounting the forklift.

Ensure that uneven surfaces are removed or minimized.

Ensure forklift operating and parking areas are well lit and clear of obstructions.

Redesign work practices to minimise the need for operators to get on and off the forklift

When getting off a forklift, do not jump - always check

- the parking brake is set,
- the forks are lowered and
- the controls neutralised.

## Sprains and Strains

Body stresses, such as muscular sprains and strains and other soft-tissue injuries, incurred while driving forklift typically represent 20% of injuries.

Common body-stress injuries include straining the neck while looking up during high stacking, and back or neck strains caused by looking behind while driving in reverse. Work practices that require the operator to twist around while driving should be reviewed. Vision aids that reduce neck 'craning', particularly during difficult high-level stacking, can assist in reducing these types of injuries.

Injuries such as back strains often arise as a result of hitting bumps or driving on an uneven surface. These injuries indicate a need to review the quality and condition of forklift seats, which are often in a poor or damaged condition. Road surface conditions in areas where forklifts operate must be maintained.

Sprains, strains and soft-tissue injuries to the neck and back can cause long-term health problems if the cause remains unchecked, severely limiting operator efficiency. These injuries can also result in long-term costs and human suffering. Obviously, the initial outlay in purchasing or leasing an 'operator friendly' forklift can be easily recouped by preventing these types of injuries.

**To manage risks associated with sprains and strains, it is necessary to:**

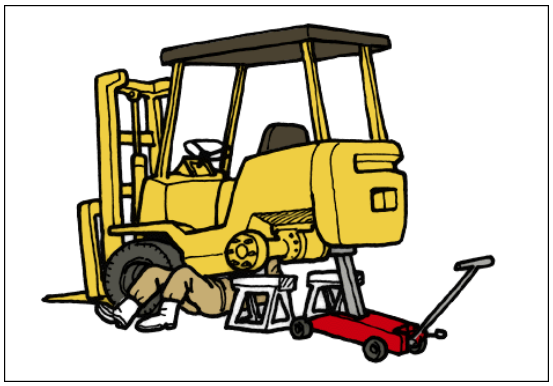
- Purchase forklifts that employ a good ergonomic design that reduces the effort required to operate controls, steering, brakes etc (e.g. air over hydraulic controls)
- Purchase or re-fit forklifts to include vision aids (e.g. closed-circuit video systems) which reduce neck craning or twisting
- Maintain level ground surfaces in the forklift operating area
- Maintain the operator's seat and cabin area, so that they are always in good condition.

## Maintenance

Regular forklift maintenance, carried out in accordance with manufacturers' recommendations, plays a critical role in preventing breakdowns and other mechanical failures that can affect safety.

**Common faults affecting safe operation of Forklift trucks are:**

- Faulty brakes
- Worn hydraulic hoses
- Low hydraulic fluid levels
- Sub-standard tires
- Sub-standard seat
- Operator controls that are not marked correctly or working properly
- Lights and warning devices that are not working



## Maintenance Program

Employers, managers and supervisors need to implement an effective program that ensures proper forklift inspection, fault reporting and maintenance are conducted.

This program should include the following key elements:

- Nomination of a manager to be responsible for maintenance of the forklifts
- An effective system for ensuring scheduled inspection and maintenance work is carried out
- Competent in-house mechanics to repair and service the forklifts as necessary, or a contract with a competent organisation to provide repairs and servicing in accordance with manufacturer's recommendations
- Supervision of maintenance work to ensure safe performance of the work
- The provision of adequate information, instructions and training to inspection and maintenance workers (including written procedures for the work, hazards associated with the work, safety procedures etc)
- An up-to-date maintenance register for each forklift in the workplace:
  - detailing the people responsible for undertaking the inspection and maintenance work
  - identifying the frequency and type of inspection or maintenance to be carried out
  - records of the date and nature of inspection and maintenance tasks carried out, including the name of the person who performed the inspection and/or maintenance, and any (or all) recommendations made.

**Note:** A service report should contain a statement that the forklift has been maintained to manufacturer's specifications. If ongoing faults prevent the making of this statement, these faults should be clearly recorded, together with any recommendations on the serviceability of the forklift.

**Note:** Where tyres are replaced with non-original equipment, the manufacturers recommendations and information on the effects of different tyre types on dynamic stability should be recorded in the maintenance register.

## Pre-Operational Checks

Before any forklift is operated in your workplace each day or shift, make sure that the forklift operator checks that the forklift is ready to be used, capable of doing the required tasks and safe to operate.

If a defect affecting the safe operation of a forklift is detected, the forklift must be immediately taken out of service and is not to be used until the fault is rectified.

### After Start Function Test

Some things can only be tested after the engine is started and warmed up. It is important that **hydraulics, steering and brakes** are tested for proper function before continuing on to work.

Any faults or damage should be reported in accordance with established site procedures.

| Lift Truck Daily Pre-Shift Checklist - Pet/D/LPG | | Month/Year: | Hour meter start of month: |
|---|---|---|---|
| Truck Number: | Shift: | Department: | Hour meter end of month: |
| DO NOT OPERATE UNSAFE EQUIPMENT - REPORT ALL FAULTS TO A SUPERVISOR IMMEDIATELY | | | Total hours for month: |

| Check the box by the date if OK ▶ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Leaks under truck - hydraulic oil, coolant etc | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tire and wheel condition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forks - retaining pin, heel condition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Load backrest and carriage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hoses, chains, mast condition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Overhead guard condition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engine oil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coolant, fan belt and radiator condition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Battery condition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hydraulic fluid level | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seat belt or driver restraint system | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity plate in place and legible | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parking brake | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Service brake | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Steering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drive controls | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lift controls | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tilt controls | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other controls - reach, side shift etc | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Attachment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Horn, lights, warning devices | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No excessive smoke or engine noise | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OPERATOR INITIALS and HOUR METER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

### Legal Requirements

To prevent harm to workers, the Health & Safety at Work Act 2015 (HSWA) sets out the principles, duties and rights in relation to workplace health and safety.

To do this, it imposes duties on businesses, officers, workers and other people, and promotes excellent health and safety management by PCBU's.

It also provides for the making of regulations and codes of practice.

### Businesses have the most Duties

PCBU's have a primary duty of care to ensure the health and safety of workers at work.

The primary duty of care includes (but is not limited to) taking all reasonably practicable steps to:

- Provide and maintain safe plant, structures and safe systems of work;
- Provide and maintain a safe and healthy environment and facilities for workers;
- Provide safe systems of work which includes procedures that outline safe methods and mandatory control measures to minimise risk.
- Provide adequate information, training, instruction, or supervision to protect all persons from risks to their health and safety; and
- Ensure compliance including the safe use, handling and storage of all plant, structures and substances.

### Worker Engagement and Participation

PCBU's need to ensure that all workers have reasonable opportunities to participate effectively in improving health and safety in the business on an ongoing basis.

Businesses must engage with workers who carry out work for them on health and safety matters that may directly affect them.

### Workers Duties

Workers, contractors and self-employed persons have a responsibility for their own health and safety while at work.

- They must also ensure that their own actions OR inactions do not harm anyone else.
- However, these responsibilities do not detract from the PCBU's responsibilities.
- Workers can also refuse to do work they believe is likely to cause harm.

### Policies and Procedures

Clearly documented policies and procedures help ensure that all people involved in forklift operations can develop a clear understanding of actions and issues that can contribute to a safer workplace.

Policies and procedures cover areas such as hazard identification and risk management including a Traffic Management Plan, purchasing, incident reporting and investigation.

### Selecting a Suitable Forklift

Before purchasing, hiring or leasing a forklift, you should know what safety and ergonomic design features a forklift needs to suit your particular workplace.

Making smart decisions when selecting a forklift for your business is your first and most cost effective way of avoiding inherent, ongoing safety problems.

Consult with your health and safety representatives and other employees about how to 'buy in' good safety features and practices, and avoid future problems.

In selecting a forklift for a particular operation, make sure that the forklift is capable of safely handling the different types of load. Do this by referring to its load chart, and allowing a safety margin, so that the forklift is not operating at the edge of its capacity.

You should also ensure that it is suitable for the particular environment. If a forklift is required to work in a flammable or explosive atmosphere, make sure that a specially designed forklift for such purpose is used (by referring to the manufacturer's recommendations). Similarly, select electric forklifts for use in poorly ventilated areas.

### Incident Reporting

**All incidents and near misses involving forklift trucks need to be promptly reported to the appropriate managers or supervisors.**

Reporting helps ensure that a record is kept of the factors that contributed, allowing changes to be made to address the causes of the incident, and prevent further similar problems.

Developing and encouraging a culture of incident reporting is important, particularly in relation to 'near misses' and other incidents that might otherwise go unreported.

Invariably, the cause of an incident involves many factors, and it is important to avoid pointing the finger at individuals. Instead, approach the investigation as a learning process that can help to prevent future incidents that could result in serious injury or death.

### Training and Supervision

Section 9 of the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 requires a PCBU to provide information, supervision, training, and instruction.

In New Zealand, Competenz are responsible for the auditing and registering of forklift operator instructors on behalf of WorkSafe. Competenz is the trading name of the New Zealand Engineering, Food and Manufacturing Industry Training Organisation.

The Approved Code of Practice for Training Operators and Instructors of Powered Industrial Lift Trucks (Forklifts) provides PCBU's with one means of meeting their obligations under the HSWA.

In deciding whether PCBU's have fulfilled their obligations under the Act, the Courts may have regard to good practice guidelines, a code of practice and/or regulations.

Possession of a certificate of competency indicates that the holder has achieved a basic standard of competency in forklift operation. It is important that site-specific training and ongoing refresher training be provided by the PCBU, to build and maintain operator competency.

Additional training is required for use of forklift attachments and also other lift truck types such as Reach Trucks, Side Loaders and Articulated Forklifts. The basic training

certificate for safe lift truck operation is a minimum qualification based on general use with standard fork arms on a front loading counterbalanced lift truck.

PCBU's requiring operators to use purpose-designed attachments such as a jib attachment, push/pull or raised work platforms must make sure that the operator has received sufficient extra instruction and training in their proper use.

Trainees are permitted to operate forklift trucks, provided they are under direct supervision of a person holding an appropriate certificate or equivalent qualifications (competent person). Direct supervision generally means that the trainee is within sight and hearing range of the competent person supervising the work.

All workers in a workplace must be properly supervised, regardless of certificates of competency and should be corrected immediately or retrained when incorrect operating is displayed.

**Certification and Authorisation**

Trainees who have passed both knowledge and practical tests of basic operating skills should receive a verification of competency or certificate as proof.

Essentially, the certificate or VOC is intended to note what basic training has been provided and to record the trainee's known standard of operating ability.

A register should be kept of all documentation issued and it is recommended that retraining be undertaken at regular intervals with a three year maximum.

PCBU's should not allow personnel to operate forklifts or any other mobile plant without written authority. This authorisation should be issued only after training, including job specific training and familiarisation training, is satisfactorily completed.

Authorisations to operate may only be issued by the business; they are the PCBU's acknowledgement that the named holder is authorised to operate a specified forklift or forklifts unsupervised. The authorisation may be limited to specific environments or place of work, which may include certain public roads on which forklifts may be driven (by a route specified by the PCBU).

Authorisations should be kept by the PCBU. A copy should be issued to the named holder, and it may usefully be combined with a statement or summary of the company's own rules affecting working with forklifts within a defined area or place of work.

Authorisations are not transferable to other employment, as they relate to the named PCBU's forklifts for use with the loads in the operator's work situation.

When training is given for additional forklifts in all three aspects, the individual's authorisation should be amended to include the extra details.

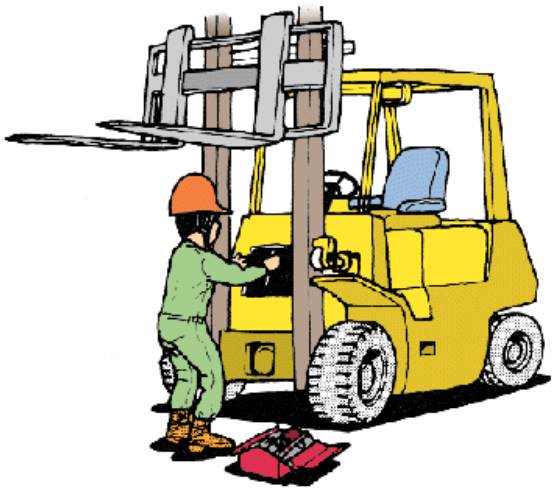
Certification and authorisation will normally be acceptable as the basis of satisfactory evidence that a PCBU has fulfilled their duty, under the HSWA 2015, to provide adequate training for their forklift operators.

A drivers licence endorsement is not proof that a person has been trained in the safe use of a forklift and only allows driving of a legally compliant forklift on a public road.

**Basic Safety Rules For Operators**

- Forklift trucks are to be driven only by trained and competent operators acting under proper authority.

- Operators should be physically fit, to ensure satisfactory speed of reaction and a high standard of vision and judgement of distance.
- Operators must be alert at all times to avoid accidents.
- Operators must check that their forklift truck is in good working condition and has been properly maintained.
- If at any time the forklift truck develops a fault, or if there is reason to think it unsafe, stop and report immediately to the appropriate authority. Do not use again until repairs have been made.
- Unless specifically authorised, and able, do not attempt repairs or adjustment to forklift trucks.
- Load pallets evenly; avoid building up unstable loads which could collapse when moved.
- Look all around you before moving the forklift truck.
- Loads must be strictly within the weight and load centre capacity limits of the truck as shown on the load plate.



- Never operate the forklift truck on gradients with the load elevated more than necessary.
- When turning from one aisle into another, exercise caution, driving with load as low as is convenient. Cross intersections with care.

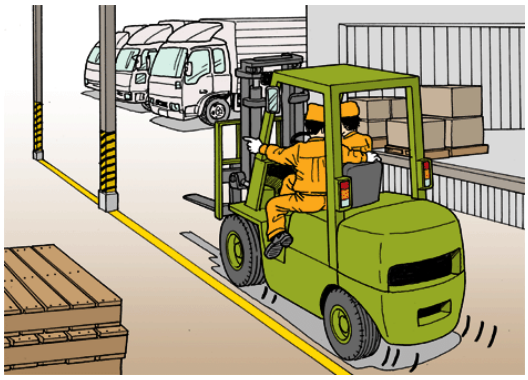
**Workplace Inspection**

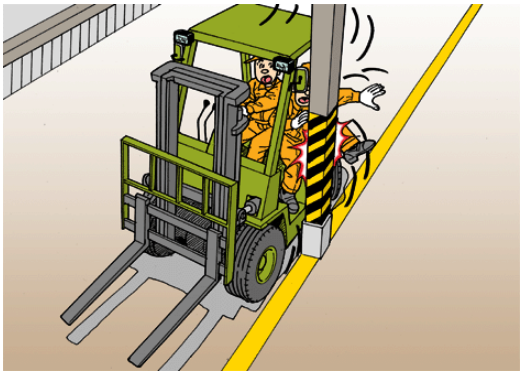
- Note low clearances such as pipes, sprinklers, doorways, overhead power lines, etc.
- Be sure that the floor and bridging plates can support the combined weight of your forklift truck and load.
- Check the floors for damage, wetness, greasy or oily surfaces or obstructions in aisles. These may affect the stability of the forklift truck.

**Driving Procedures**

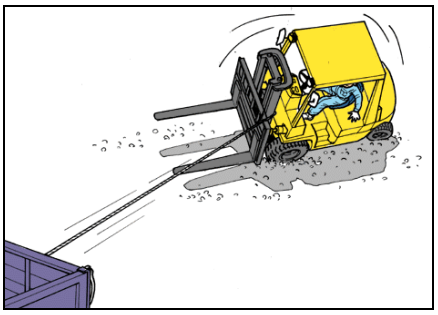
- Always carry loads as near to the ground as practicable. In the event of brake failure, lower the load to the ground.
- Look in the direction of travel and keep a clear view of the way ahead.
- (If vision is obscured, seek assistance or travel in reverse.)
- Remember the effect of tailswing. To make a turn, drop the speed and take care that the tip of the fork (or load) or rear side of the machine does not touch or bump against any object or person nearby.
- If a bulky load obscures forward vision, drive in reverse. However, the load must lead (be on the uphill side), when travelling up gradients.
- Only carry loads that are supported by the carriage or the backrest extension.

- Drive at a speed consistent with your load and existing conditions. Slow down for wet or slippery surfaces.
- Keep a safe braking distance from the lift truck in front and never overtake when approaching cross roads or in blind areas.
- When approaching crossings in aisles or gangways, slow down, sound horn, and if vision is obstructed keep well to the correct side of the aisle.
- Because of the varying needs of industry, it is not practical to recommend driving on the left or right, but it is suggested that the broad principle of the Road Code be observed.
- Passengers must not be permitted to ride on the forks or load or any other part of a forklift truck.





- The use of a forklift as a hoist for personnel must not be permitted unless a work platform complying with NZ Standard 5426 has been fitted.
- Avoid making fast starts, jerky stops, and quick turns, particularly if materials are being stacked at height.
- Do not run over loose objects. Stop the forklift truck, remove objects (dunnage, etc) to the side of the aisle and report to supervisor.
- Never attempt to handle loads that exceed the forklift truck's rated capacity. This involves not only weight, but the load centre. Remember the allowable load to be carried is reduced if a high lift is involved (refer to the forklift truck load chart rating).
- Never cross railway lines unless the lines have been recessed into the surface.
- Never park a forklift so that any part is closer than 2.5m from any railway line.
- Never use a forklift truck to tow or push railway cars or wagons.
- Never push on the point of one or both forks.
- Never attach a tow rope to the mast to pull or drag loads.



- Forks should always be driven well under the load, preferably for their full length. When travelling, the back of the load should be firmly located against the fork carriage or back-rest and the mast tilted back sufficiently to safeguard load.
- When a forklift truck is travelling without a load, its forks should be around 150mm above the ground and tilted back. This is called “Safe Travel Mode”.
- Do not allow anyone to stand or walk under the elevated forks, whether or not a load is being carried.
- Before moving off look around, use mirror if fitted, and when clear move off without inconveniencing other users of the aisle.
- When traffic signs and signals are in use, learn and act upon them.
- Where no traffic signs or signals exist, try to give a clear indication of your intention to other aisle users.
- Drive slowly when pedestrians are about. Remember the stopping distances.

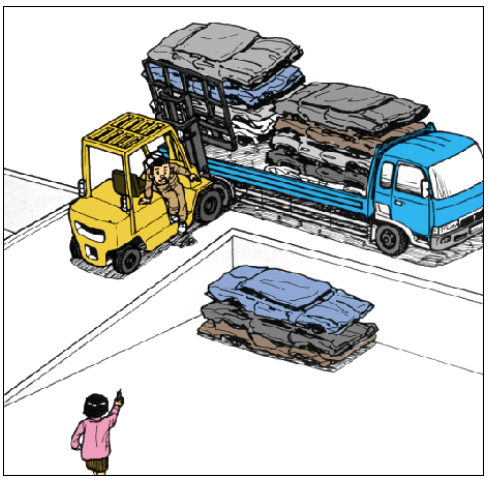
**Ramps and Loading Docks**

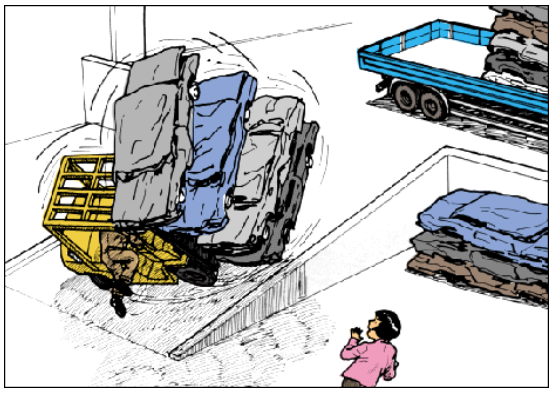
- Never drive over a bridge plate unless you are satisfied that it will support the weight of your forklift truck and load and it is securely fixed. Then drive over very slowly.
- Before entering a truck, trailer, or railwagon, its brakes should be set and its wheels chocked. Semi-trailers must have fixed jacks to prevent upending.

A forklift truck must never be left on an incline.

1. When travelling on an incline and carrying a load, the load must always be on the uphill side of the forklift truck.
2. When travelling on an incline without a load, the forks must always be on the downhill side of the forklift truck.

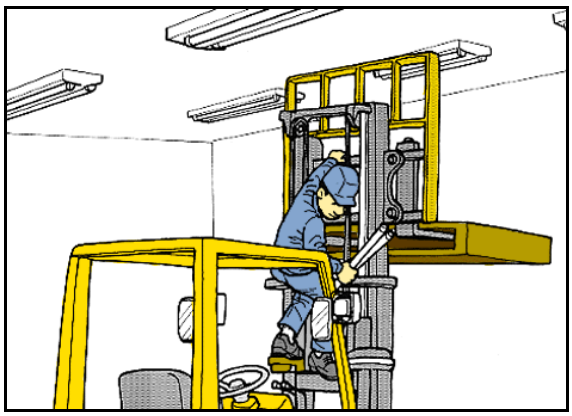
- On all gradients, the mast must be tilted back sufficient to safeguard the load and the forks raised high enough to clear the ground.
- Never stack on gradients.

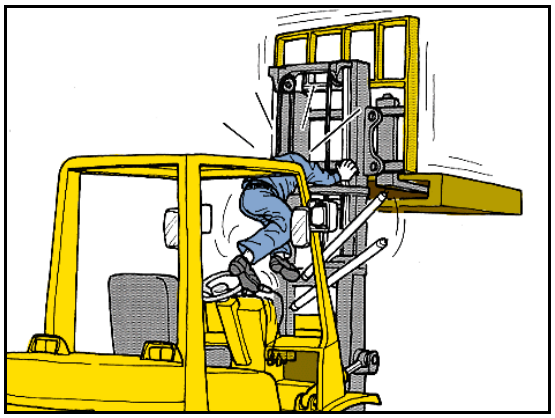




## General Forklift Safety

- Never remove a back-rest extension or overhead guard unless specifically authorised.





- Never place arms, hands, legs, or head between the uprights of the mast or outside the limits or the forklift truck's body or cab (except when hand signalling a turn or other manoeuvres).
- Never allow an engine-powered truck to remain stationary in confined spaces for long periods with its engine running. The build-up of fumes and gases can be dangerous.
- When leaving the forklift truck, ensure that the controls are at "neutral", power is shut off, brakes applied, forks fully lowered, and the ignition key or starter switch key removed. (This helps prevent unauthorised people from using the machine.)
- Under no circumstances must additional counterweights be added to forklift trucks to increase their load-carrying capacity without prior reference to the manufacturer. No person should stand or sit on the counterweight.
- Do not fit extensions to forklift trucks unless their use is authorised. Only fork extensions of a design approved by the manufacturer may be used.
- All repairs, rebuilds or adjustments shall be made in accordance with the manufacturer's design criteria.
- When flashing lights or reversing beepers are fitted, ensure that these are operating correctly.
- Horns are to be used only when necessary. For example, intersections and doorways etc.
- When a forklift truck or any part of its load has to be closer than 4 metres to any live electrical wire or installation, the Electrical Supply Authority should be contacted.
- In the event of a forklift truck contacting a power line:

1. Stay where you are and keep others away.
2. If possible, move the truck off the power line.
3. If you must leave the truck because of fire or other immediate risk, jump well clear. DO NOT touch the truck—you may be killed.

If the power line is broken:

1. DO NOT get off the truck.
2. Wait until the power is shut off before leaving the truck or allowing anyone to come near.

**Basic Stacking Rules**

- Approach the stack with the load low and tilted backward.
- Slow down and stop at the face of the stack, reducing backward tilt to an amount just sufficient to stabilise the load. Handbrake on, gear lever into neutral.
- Bring mast forward retaining only sufficient back tilt to secure load.
- Raise the load to the desired stacking height.
- When the load is clear of the top of the stack, move slowly forward.
- When the load is over the stack, bring the mast to the vertical position and lower the load on to the stack.
- When the load is securely stacked, lower forks until free of pallet or dunnage strips, check behind and withdraw by reversing the forklift truck. At this position slight forward tilt may be of assistance, other wise it should seldom be necessary to use forward tilt.
- When clear of the stack, lower the forks to just above the ground level, then tilt the mast backward to the normal travelling position.
- The stack should not be straightened by pushing against the stack with the forks or the end of the forklift truck.

**Basic Destacking Rules**

- Halt at the face of the stack, bringing mast to the vertical position.
- Raise forks to a position permitting clear entry into pallet or dunnage strips.
- Slowly drive forward until the back-rest is against the load.
- Slight forward tilt may be of assistance at this stage. Ensure the lower parts of the mast do not hit the stack when moving forward.
- Lift load until clear of stack and apply backward tilt just sufficient to stabilise the load.
- When the load is clear of the top of the stack, check behind and then move slowly backward to clear face of stack.
- Lower the load to the correct carrying height, before applying further backward tilt, to bring into normal travelling position.
- Extreme care must be taken to avoid jerking when tilting a load forward or backward, especially when the load is at height.

**ALLWAYS LOOK BEFORE REVERSING!**

**PRACTICE QUIZ** Test your safety knowledge.

1. Regarding weight distribution: When a forklift is EMPTY, aproximately 60% of the weight is over the rear axle and 40% over the front axle. However, when you are loaded to the max, are you heavier or lighter at the rear axle?
a) Heavier
b) Lighter

2. Can the counterweight have it's weight increased to improve load capacity?
a) Only if the loads are always too heavy.
b) The forklift manufacturer can increase a counterweight and adjust the load plate accordingly.
c) Yes, but any weight placed on the back must be strapped on securely.
d) You may place weight on the back to allow more steering control.

3. Use the Load Chart on page 8 to decide which of these loads is SAFE to lift?
a) 2400kg on a 1400mm pallet
b) 2600kg on a 1200mm pallet
c) 3000kg on a 1000mm pallet

4. Use the Load Chart on page 8 to decide which of these loads is NOT SAFE to lift?
a) 1800kg on a 1600mm pallet
b) 2800kg on a 1000mm pallet

5. Which of the points below can cause SIDEWAYS tip over? (or lateral instability)
a) Side shifting with a high load.
b) Driving on uneven surfaces.
c) Unbalanced loads too heavy on one side.
d) Cornering at speed.
e) All of these answers.

6. A forklift is travelling forward at approximately 15 kph. If the brakes are applied heavily, in which direction will the centre of gravity shift?
a) Backward.
b) To the right.
c) Forward.
d) To the left.

7. Which of the following can cause FORWARD tip over? (or longitudinal instability)
a) Overloading.
b) Exceeding the load centre distance.
c) Heavy load on downhill side of ramp.
d) Heavy braking with load raised.
e) All of the above.

8. What is the best way to prevent overloading?
a) Check the weight
b) Check the load centre distance
c) Check the weight and load centre distance
d) Lift the load to see if the rear wheels rise up

9. Should you turn a forklift on a slope?
a) Only if no load is carried.

b) Only if travelling down the slope.
c) Turning on slopes should be avoided.
d) Only if travelling up the slope.

10. When is it allowable to move a forklift with it's load fully raised?
a) Only when stacking and destacking.
b) To assist when turning.
c) Any time.
d) When your load is very wide so you can see under it.

11. When driving an empty forklift on a ramp, the counterweight should be on the ...
a) Downhill side
b) Uphill side
c) Right side
d) Left side

12. When driving a loaded forklift down a ramp, the load should be on the…
a) Downhill side
b) Right side
c) Uphill side
d) Left side

13. How quickly a forklift can stop in an emergency depends on;
a) The speed at which it is travelling
b) The weight of its load
c) The road surface
d) All of these answers

14. Forward tilt at high lift HAS NO EFFECT on the stability of a forklift.
a) TRUE
b) FALSE

15. A forklift licence endorsement "F" is required to operate on a closed worksite.
a) TRUE
b) FALSE

16. With a person raised in a work platform, which statement is most accurate?
a) You may leave the forklift unattended
b) You must remain at the controls at all times
c) You must not smoke
d) You may smoke but any stereo music volume must be lowered to be able to hear instructions from above.

17. How often should you check the brakes?
a) Daily
b) Weekly
c) As time permits
d) Monthly

18. May you cross rail tracks on a forklift?
a) Yes, as long as the train is not coming.
b) Cross at right angles to the track.

c) Never cross rail tracks.
d) You should cross diagonally and only if the tracks are level with the road surface.

19. What action should you take if the brakes fail on your forklift?
a) Toot the horn constantly to warn others.
b) Change gear to reverse wheel direction.
c) Lower the forks and load to the ground.
d) Jump well clear.

20. With regard to rear end swing, if the driver makes a full lock turn without first reducing his speed, what will be the approximate speed of the rear end swing?
a) Same as the forward speed
b) Approximately 1 and a half times the forward speed
c) Approximately 2 times the forward speed
d) Approximately 3 times the forward speed

21. Is any person allowed to operate a forklift in a place of work?
a) Only if trained and authorised to do so.
b) Only if experienced with that size of machine.
c) Only if the holder of a driver licence F endorsement.
d) Only if they can prove they are good at it.

22. Are you allowed to tow a trailer with a forklift?
a) Only if there is no truck available.
b) Not at any time.
c) Only if moving it a short distance.
d) Only if there is no other way of moving the trailer.

23. Light conditions may effect visibility contributing to a lift truck accident.
Choose which one of the following statements is most accurate.
a) Safety glasses are compulsory in all New Zealand workplaces.
b) Visibility is reduced when using cell phones.
c) Fog and mist is a common hazard encountered by lift truck operators.
d) The eyes may take a few seconds to adjust when driving from bright sunlight into a dimly lit warehouse.

24. What distance should there be between a forklift following another?
a) Close up to allow communication between them
b) Pass the forklift so there is no need to worry about following distance.
c) As far apart as possible.
d) A safe braking distance.

25. When is the forklift horn to be used?
a) If an attractive person walks by, you should toot to acknowledge this.
b) Only on a public road.
c) Only when necessary.
d) To acknowledge your mates.

26. At what speed should you drive your forklift?
a) Very slowly at all times.
b) Fast enough to keep up with the pressure of work.
c) At a speed consistent with the type of load and general work conditions.

27. If your lift truck becomes unsafe while driving - What action should you take?
a) Ignore it, let someone else deal with it.
b) Carry on until a convenient break and then report it.
c) Try to repair the fault yourself.
d) Park safely, remove the key and report the fault to your supervisor.

28. What should you do when you discover a patch of oil on the floor or roadway?
a) Tell your supervisor the next time you see him.
b) Stop your forklift and clean it up then look for the cause of the oil leak.
c) Drive carefully around it.
d) Do a big skid in it.

29. Who is responsible for the safety of pedestrian workers with regard to your forklift operations?
a) You the forklift operator must look out for others in your area.
b) Each person within the area must look out for themselves.
c) The manager.
d) Their parents.

30. If you have to cross a bridge plate, what precautions should be taken?
a) Calculate your gross laden weight to check that the plate can take the load.
b) Make sure the bridge plate is properly secured
c) Drive slowly and carefully over the plate
d) All of these answers

31. Are you permitted to lift people with a forklift?
a) Only if they use a pallet and hold on tight to the backrest.
b) Only if an approved work platform or safety cage is used.
c) Only if a strong wooden crate is used.
d) Only if there is no other way of doing the task.

32. It's OK to push an obstacle from your path with the tips of your forks.
a) TRUE
b) FALSE

33. Is it OK to carry passengers on a single seat forklift?
a) Only if travelling a long distance.
b) Only if the supervisor says it's OK.
c) Only if the load is a stable one.
d) Not at any time.

34. When is the forklift operator required to look in the direction of travel?
a) All the time.
b) When working around pedestrians.
c) Near exits and railway tracks.
d) After several near accidents, it is wise to start looking.

35. What should you do if the goods on your pallet look unstable?
a) Back tilt the load.
b) You may carry on as long as the goods are not fragile.
c) Call for assistance to support the load.
d) Stop and restack it.

36. You should always leave a parked forklift with the steer wheels turned out to prevent the machine rolling away.
a) TRUE
b) FALSE

37. Most forklift accidents are caused by
a) excessive swerving
b) excessive braking
c) excessive overloading
d) excessive speed

38. What is the risk of leaving an engine powered forklift in a confined space with its engine running?
a) Noise pollution
b) Fumigation
c) Excess fuel consumption
d) Fumes cause carbon monoxide poisoning

39. What is the nearest you can park to a railway line?
a) 1.5 metres
b) 2 metres
c) 2.5 metres
d) 3 metres

40. Which of the following should be inspected daily?
a) Hydraulics
b) Steering
c) Brakes
d) Maintenance service sticker
e) All of these answers

41. Which of the following should be considered when parking a forklift?
a) Forks fully lowered with tips touching the ground.
b) Steer wheels facing straight ahead.
c) In a safe place not blocking exits or safety equipment.
d) Key out to prevent unauthorised use.
e) All of these answers.

42. In which of the following publications would you find safety standards, rules and procedures?
a) Safety Code for Forklift Truck Operators.
b) The forklift manufacturer operator manual.
c) The Code of Practice for Training Operators & Instructors of PILT's (Forklifts).
d) All of the above.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. (b) | 7. (e) | 13. (d) | 19. (c) | 25. (c) | 31. (b) | 37. (d) |
| 2. (b) | 8. (c) | 14. (b) | 20. (d) | 26. (c) | 32. (b) | 38. (d) |
| 3. (c) | 8. (c) | 15. (b) | 21. (a) | 27. (d) | 33. (d) | 39. (c) |
| 4. (a) | 10. (a) | 16. (b) | 22. (b) | 28. (b) | 34. (a) | 40. (e) |
| 5. (e) | 11. (b) | 17. (a) | 23. (d) | 29. (a) | 35. (d) | 41. (e) |
| 6. (c) | 12. (c) | 18. (d) | 24. (d) | 30. (d) | 36. (b) | 42. (d) |