

Trolley and Platform Truck Risk Assessment

There are four main areas to be considered when risk assessing a trolley or platform truck, the **Equipment**, the **Operator**, the **Load** and the **Environment**.

We have provided an in-depth assessment of the points to consider but use your knowledge when implementing this assessment and tailor it to your own situation. After the initial assessment has been implemented, re-visit it a month later to make it fully relevant to the application.

If you feel there is something we have missed, please email your suggestions to info@handle-it.com and we will add it to the assessment. We will continue to add manual handling risk assessments to the site so that together we build a comprehensive library for public use.

Equipment

Capacity Suits the Load

Make sure that the capacity of the truck is greater than the load being carried, as a rule of thumb ensure that the load is around 75% of the capacity of the truck. The truck maybe designed to carry 500kg but using it at the full capacity will cause premature wear and unnecessary risk.

If the equipment is being used on slopes the capacity should be reduced, also consider the centre of gravity of the load.

Handles

Check that the handles are secure, this includes the welds around the handle. Ensure that there is no sign of rust around the welds and that there are no fractures in the welds themselves. Ensure that the hand grips are secure and that there is no movement in them.

If the handle is a folding handle, please check the mechanism and that there is little wear.

Wheels & Castors

Check that there is no feathering or ingress of foreign bodies around the bearing and the shaft of the axle. and that the wheel is firmly packed with washers. Ensure that there are no fractures of the weld around the bearing hub, this is the small shaft protruding from the wheel hub that houses the bearing (this is a common failure). If the wheel hubs are plastic, ensure there are no cracks on the hub itself and that there are no chips on the rim. If the wheels are steel centred, ensure there is no rusting on the hub and that the wheel nuts are secure and split pins or end caps are secure.

If the wheel is held in place on a castor plate, ensure that all bolts are secure. If the wheel is held with a bolt and captive nut, which is common if the wheels fit directly into a tube that the securing nuts is fastened tight.

Tyres

Trolley and platform truck tyres are as important as the tyres on your car or van, there should not be excessive wear and the tread should be visible across the whole width of the tyre. Check the tyre pressures match the pressure indicated on the tyre wall and that the pressures are equal in both wheels. Unequal tyre pressure causes a “lop sided ride”, where the trolley or platform truck wants to go around in circles and is one the most common cause of accidents. Ensure that the tyre valves are free from foreign bodies and retain their dust caps.

If solid wheels are being used, check for cracks and chips in the wheel material. Always check the head or racer bearing on swivel castors, to ensure there is no play, and the bearings are secure in the head casing.

Platform or Base

This is the part of the trolley or platform truck that supports the load, so it is most imperative that the platform or base is solid. There must be no bending or rusting of the base. If the base does bend, DO NOT under any circumstances bend it back to the correct position and carry on using it. Either replace the truck or the platform.

If the base is wood or plastic make sure that there is no fracturing, or serious splintering, ensure that it is not bowed through water ingress or excessive heat.

Axles

One of the main load bearing areas of any trolley or platform truck, and therefore should be visually checked frequently. There should be no rusting, bending, or fracturing of welds on the axle structure, if the axle is flanged, then ensure that the roll pins or split pins are intact and without foreign bodies.

Play in the Wheels

Ensure there is no play in the wheels and that the bearings are greased and packed tightly with washers. The better the packing and the better the greasing, the longer the wheels and bearings will last, and the safer the truck becomes.

Shelves and Side Panels

There are many ancillary items available for our trolleys and platform trucks, such as shelves, side panels, lids and locks. Contact us for advice regarding the application and the correct use of ancillaries.

Operator

Physical Capability

Operating a Trolley or platform truck may be seen as a job that anyone could manage, however there are many factors that should be considered.

The large initial force required to overcome the inertia and start the trolley moving, is the force exerted by pulling or pushing the handle. Consider the physical strength of the operator, and whether the operator has a physical impairment that may limit their ability to exert the required force.

Also, consider the hours that the operator has worked and whether they are transporting the heaviest loads at the start of the day when fresh, rather than at the end of the day when fatigued.

Operator Training

Every person within the organisation should be trained when using ANY piece of equipment, this is equally true for trolleys and platform trucks.

A person may be moving a 500Kg load with a platform truck, would you expect the same person to move the same load with a forklift without training.

One of the best ways to minimise accidents is by making people aware of risk, so ensure that everyone who uses a trolley or platform receives a basic induction in their safe use. This induction should cover everything encompassed in this document.

Correct PPE

As a trolley or platform truck is not viewed as a highly dangerous piece of equipment, the use of PPE is often overlooked.

Hi-Vis jackets and steel toe caps boots must be considered as the minimum, but good personal protection will also improve efficiency. For example, an operator is working flat out moving loads around the warehouse, by the end of the day he has a blister, on day 2 he will not be as efficient, so for a simple £3pair of rigger gloves, the organisation is safer and more efficient.

Also consider additional ancillary items such as retention straps, ratchet straps and velcro blankets, as these will help secure the load to the trolley or truck.

Fatigue

Fatigue is frequently overlooked when implementing risk assessments, an employee's workday is full of physical exertion.

When planning workload, consider scheduling the lighter loads at the end of the day, and allow more time for loads late in the day. Studies in America have shown that workers can be as much as a 1/3 less productive between the hours of 4-5pm, than they are between the hours of 9-10am, so make sure that the dictated work speed does not compromise safety.

If an employee is moving 300Kg loads at 9am, only expect them to move 200Kg loads later in the day.

One or Two-Man Job

There are certain loads that should always be handled by two people, the financial choice is simple, one person's labour as a warehouse assistant vs 6 weeks sick pay for the employee that has attempted to move something that should have taken 2 people to achieve. The maths is self-explanatory.

The Load

Size of load

There is no set guidance from the HSE with regards to the size of the base of a trolley or platform truck in comparison to the size of the load.

However, to ensure stability we would recommend that the base is at least 2/3 of the width of the load and at least 2/3 of the overall length of the load

Be careful not to specify an overly large truck or trolley, as it will create problems when trying to manoeuvre the trolley in tight space.

Weight Distribution

Even weight distribution is fundamental to the safe use of a trolley or platform truck. The capacity of the trolley or truck is quoted as a Uniformly Distributed Load (UDL). So, always ensure the load is uniformly distributed across the entire base of the trolley or truck.

For example, if transporting stacked boxes, ensure an even weight to each stack.

If the load has more weight on one side of the load, i.e. a fridge, ensure the heaviest part of the load is placed on to the trolley base. A front heavy or top-heavy load is very dangerous.

When working on slopes remember that the centre of gravity will move, and if moving liquids, the centre of gravity will change constantly. In these situations, consider reducing the capacity of trolley or platform truck accordingly.

If the trolley is abruptly stopped as in an emergency, the load will have its own momentum and will continue moving forwards, making the trolley unstable.

Obstructions of Operators View

If the load obstructs the operators view this cannot be considered as a safe operation and must be a "Two-Man" operation.

Capacity Suits the Load

Make sure that the capacity of the truck is greater than the load being carried, as a rule of thumb ensure that the load is around 75% of the capacity of the truck. The truck maybe designed to carry 500kg but using it at the full capacity will cause premature wear and unnecessary risk.

If the equipment is being used on slopes the capacity should be reduced, also consider the centre of gravity of the load.

Stability of Stacked Loads

If handling boxes of different sizes the load must be secure, always try to load the next box on a flat surface, even if this means on top of 2 boxes of the same height. If this is not possible then reduce the number of boxes being carried.

It is not safe practice to operate a trolley or platform truck with one hand on the load and one hand on the truck. If an uneven surface or pothole is encountered the likelihood of injury to the operator and damage to the load is greatly increased. Moreover, stopping to pick up the load is more time consuming than making an extra journey.

Load does Obstruct Wheels/Brake Mechanisms

When handling loads which overhang the width of the trolley or truck, ensure the load does not inhibit the wheels, or any braking system if fitted. Ensure that any loose material is firmly secured.

If the load fouls the wheels, the truck may abruptly stop and the forward momentum of the load and operator will throw the load forwards and the operator into the handle, potentially causing severe injury to the operator and damage to the load.

Hand traps

The most common injury with trolleys and trucks is hand traps, generally trapping the fingers between the frame of the trolley or truck and the load. With light loads this is rarely an issue, but this bad practice can lead to injury when the size and weight of the load increases.

Never operate the load by using the sides of the handle. The handles are positioned so that traps do not occur by keeping fingers away from the load.

Lifting

Trolleys and platform trucks are solely designed for pushing and pulling operations. No attempt should be made to lift the trolley, either from the main frame or especially the handle.

The handle on many products is detachable, and in no circumstances should the handle be ever used to lift the trolley.

One or Two-Man Job

There are certain loads that should always be handled by two people, the financial choice is simple, one person's labour as a warehouse assistant vs 6 weeks sick pay for the employee that has attempted to move something that should have taken 2 people to achieve. The maths is self-explanatory.

Liquid loads

Liquid loads should always be handled with caution, whether using a trolley, platform truck, fork lifts or lorries.

Any sudden halt in forward momentum and the fluids inside the container will continue to move forwards, therefore adjusting the centre of gravity of the load, making it unstable.

When handling liquids always make movements slower and more deliberate. Avoid any immediate stopping or sharp cornering unless in an emergency. Always ensure over capacity, a 300Kg capacity trolley or truck should not be used to carry more than 150kg of liquids.

The Environment

Ground Conditions

Ground conditions will have a dramatic effect on the speed of the operation, as well as the security of the load, but most importantly the safety of the operator.

Solid wheels are best used in internal warehouse or production areas, however for external delivery purposes they are not suitable. There will be less control on rough ground, loose concrete, grass or gravel.

Pneumatic wheels (air filled) will cope with many types of terrain but have the disadvantage of punctures and keeping the tyres inflated.

Polyurethane or puncture proof wheels (foam filled) offer the best of both, they are remarkably durable, but ride like a pneumatic tyre. This provides safety to the operator, the load, and the truck itself.

Temperature

The trolley or platform operator must be provided with suitable PPE for the conditions.

To prevent painful ice burns, cold store operators should be issued with suitable gloves when using steel or aluminium trucks.

Pedestrians

Extra care should be taken when operating in pedestrianised areas or in unfamiliar locations. Pedestrians may not be aware of the activity taking place or the risks involved. Therefore, make deliberate actions, slow down especially when cornering and try not to come to abrupt halts. Consider fitting a bell or horn attachment to the truck.

Approaching Kerbs

Trolleys and trucks should never be bumped up and down kerbs, as this will damage the truck itself and the load.

More importantly, the action of bumping up/down a kerb causes intense short bursts of muscular movements which can lead to torn muscles, ligaments and tendons.

In the UK, the Disability Discrimination Act regulations mean there is usually a pedestrian ramp nearby. If not Handle-iT can supply portable kerb ramps which can also be used to bridge thresholds on the customer's entrances.

Surfaces

Slippery surfaces, wet surfaces, ice, and oil spills are treacherous enough, without trying to move a 250Kg load on a trolley or platform truck.

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If the conditions are dangerous, find another route, reduce the load, improve the surface, and allow more time. If these adaptations are not possible, rearrange the delivery for another day when the conditions are better.

Entrances and Doorways

Opinion is split on this subject, some say to take one hand off the trolley handle and push the door open, others while say to push the door open using the load on the truck.

We disagree and recommend reversing through the doorway using your back to open the door.

Alternatively carry a small door stop, stop the truck, open the door, wedge it open. move the truck through the doorway and immediately close the door afterwards. It is vital that fire doors are immediately closed afterwards.

Up or Down Slopes

When using a trolley or platform truck on a slope try not to move across the slope, always try to move up or down. When moving up or down the slope, always have the load facing down the slope, then if the load slips it will not fall on the operator.

Bear in mind the centre of gravity will have changed, the two wheels facing down the slope will be carrying more load. Compensate by reducing the load on the platform truck or trolley or increasing the equipment's capacity.

Work Speed

Demanding work targets or time pressures will inevitably lead to corners being cut and risks being taken.

Health and safety should never be a barrier to making your Company profitable, and should be integral to increasing productivity, efficiency, and profitability.

Allow adequate time to complete the task safely, and used aids such as kerb ramps, puncture proof tyres and ratchet straps to save time.