

## Sack Truck Risk Guidance

There are four main areas to be considered when risk assessing a hand truck/sack truck, the **Equipment**, the **Operator**, the **Load** and the **Environment**.

We have provided an in-depth guidance of the points to consider, but use your knowledge when implementing this guidance 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](mailto:info@handle-it.com) and we will add it to the guidance. We will continue to add manual handling risk guidance to the site so that together we build a comprehensive library for public use.

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### 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 200kg but using it at the full capacity will cause premature wear and unnecessary risk.

#### ***Handles***

Check that the handles are secure, this includes the welds around the handle, and the hand and knuckle guards. 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 sack truck has knuckle guards, ensure that they are intact and there are no fractures in the guards themselves.

#### ***Wheels***

Check that there is no feathering or ingress of foreign bodies around the bearing and the axle shaft. Ensure 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.

#### ***Tyres***

Sack 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 hand truck tends 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.

#### ***Toe Plate, Nose Plate or Foot Plate***

This is the part of the truck that supports the load, so it is most imperative that the plate is solid. There must be no bending or rusting of the plate. If the plate 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 plate.

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### **Axles**

One of the main load bearing areas of the sack 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.

### **Stair Skids, Fixing and Ancillaries**

There are many ancillary items available for our sack trucks, such as stair skids, keg hooks, break back bars, bottle water trays. Contact us for advice regarding the application and the correct use of ancillaries. With stair skids, ensure that any plastic wear strips are intact, and that the fixings are secure and there is no play in the fixing itself, there are no fractures on the weld and no rust.

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## Operator

### **Physical Capability**

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

The large initial force required to tilt the load (break the back of the load), is the force exerted on the handles when pulling backward and determines the load that can be lifted on the plate. Consider the physical strength of the operator, and whether the operator has a physical impairment that may limit their ability to 'break the back' of the load.

Also, consider the hours that the operator has worked and whether they are lifting the heaviest weights 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 sack trucks.

A person may be moving a 250Kg load with a sack 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 sack truck receives a basic induction in the safe use of hand trucks. This induction should cover everything encompassed in this document.

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### **Correct PPE**

As the sack 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. Example, a driver is working flat out breaking the back of load after load, by the end of the day he has a blister, on day 2 he will not be as efficient, so for a simple £3 pair 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.

### **Fatigue**

Fatigue is frequently overlooked when implementing risk assessments, a delivery driver's workday is full of physical exertion.

When route planning, 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 delivery drivers 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 a driver is delivering 5 boxes in a stack at 9am, only expect them to deliver 4 boxes in a stack 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 drivers mate vs 6 weeks sick pay for the driver that has attempted to move something that should have taken 2 people to achieve. The maths is self-explanatory.

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## The Load

### **Size of Load**

There is no set guidance from the HSE with regards to the size of the carrying plate on a sack truck in comparison to the size of the load.

However, to ensure stability we would recommend that the foot plate is 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 long foot plate, as it will create problems when trying to slide the load under the foot plate. Always ensure the load is placed as far back on the plate as possible, ideally against the back of the truck. This will reduce damage to the plate and make it easier to lift the load.

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### ***Weight Distribution***

Weight Distribution is fundamental to the safe use of a sack truck. Stack boxes so the weight is as evenly distributed as possible.

If the load has more weight on one side of the load, i.e. a fridge, ensure the heaviest part of the load is as far back on the truck as possible. Or if there is more weight on the top or bottom of the load i.e. a washing machine, ensure the heaviest part of the load is facing downwards. A front heavy or top-heavy load is very dangerous.

### ***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 200kg but using it at the full capacity will cause premature wear and unnecessary risk.

### ***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 sack 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 sack truck, ensure the load does not inhibit the wheels, or any braking system if fitted.

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

### ***Hand traps***

The most common injury with hand trucks is hand traps, generally trapping the fingers between the frame of the hand 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 ‘break the back’ of the load by using the sides of the hand truck, or the top bracing bars. The handles are positioned so that traps do not occur by keeping fingers away from the load.

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### ***One or Two-Man Job***

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

### ***Ensure a Solid Base***

Ensure the item to be lifted has a solid base, if the base is not solid the foot plate may break through the item rather than lifting it.

This problem is often resolved by ensuring that the plate is larger than the load and the load is correctly positioned, based on its construction.

For example, a case of wine with the neck of the bottle facing downward breaks 2 rules. 1) The heaviest part of the load is not facing downwards, 2) The base is not solid,

Washing machines often have a cavity in the base, if this is not secured to the hand truck with straps, there is a tendency for the load to move forward, tipping off the hand truck.

### ***Liquid loads***

Liquid loads should always be handled with caution, whether using a trolley, hand truck, forklifts, 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 sack truck should not be used to carry more than 150kg of liquids.

### ***Back of the truck***

Ensure the back of the hand truck is suitable for the load being carried, barrels, carpets, kegs, and any cylindrical item should be carried on a truck with a curve back. Small items should be carried on a sack truck with either a lattice back, mesh back or solid back. Always use the correct tool for the job.

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## 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.

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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 sack truck 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 hand 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 hand truck.

### ***Approaching Kerbs***

Sack 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 sack truck.

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 hand truck 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 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.

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# **Handle-IT**

### ***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.