

## Sack Truck Risk Assessment

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 in which the equipment is being used. We have tried to give an in-depth assessment of what you need to look for, but please use your common sense when implementing this assessment and tailor it to your own situation, also after this assessment has been implemented, re-visit it after a month to make it more relevant to your application.

If you feel that there is something that has been missed, please email your suggestions to [it@handle-it.com](mailto:it@handle-it.com) and we will add it to the assessment, we will continue to add handling risk assessments to the site so that together we build a comprehensive library for public use.

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### The Sack Truck

#### **Capacity suits the load**

make sure that the capacity of the truck is greater than the load which you are carrying, as a general rule of thumb ensure that the load is around 75% of the capacity of the hand truck. Your truck maybe designed to carry 200kg but using it to the total capacity all of the time will cause wear and unnecessary risk.

#### **Handles**

You should be checking that the handles are secure, this includes the welds around the handle structures, the hand and knuckle guards. Ensure that there is no sign of rusting around the welds and that there are no fractures in the weld themselves. Please ensure that the hand grips are secure and that there is no movement in them. If your 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 for foreign bodies around the bearing and 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 very common failure). Ensure if your hubs are plastic that there are no cracks on the hub itself and that there are no chips from the rim. If your wheels are steel centred ensure there is no rusting taking place on the hub and that the wheel nuts are secure and split pins or end caps are secure.



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## **Tyres**

Tyres on your sack truck are as important as tyres on your car or van, there shouldn't be too much wear on the tyres; the tyre tread should be visible on the whole surface of the tyre. Check the tyre pressures and that they equate to the pressure indicated on the tyre wall. Check that the pressures are equal in both wheels, it is one of the main causes for accidents when using the sack truck which is caused by a "lop sided ride" where the hand truck wants to go around in circles due to uneven tyre pressures. 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 holds the load it is most imperative that the plate is solid. There must be no bending of the plate, no 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.

## **Axle**

One of the main weight bearing areas of your sack truck and visual check should be frequent. There should be no rusting, bending or fracturing of welds on the axle structure, if the axle is a flanged axle then please ensure that the roll pins or split pins are intact and without foreign bodies.

## **Play in wheel**

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 then the longer your wheels and bearings will last, and the safer the truck becomes.

## **Stair Skids, Fixing and ancillaries**

There are many ancillary items now available for your sack truck, stair skids, keg hooks, brake back bars, bottle water trays. If you would like to call us we will write amendments for your particular ancillaries but here are some standard indications for you to consider. Ensure that if there are plastic wear strips that they still have plastic coat intact, that the fixings are secure and there is no play in the fixing itself, there are no fractures on the weld and no rust.

*Free downloadable daily check sheets available at [Handle-iT.com](http://Handle-iT.com)*

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## The Operator

### **Physical Capability**

Operating a sack truck may seem as though it is a job that anyone can manage, however there are many restrictions that should be applied, or many restrictions to capability that can affect the way that the task should be fulfilled. The initial force needs to tilt the load (brake the back of the load), quite simply the force that is exerted on the handles when pulling backward determine the load that can be forced upward on the plate. So take the physical strength of the operator, whether the operator has physical disablement that may impair the strength needed to break the back of the load. 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.



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## **Operator Training**

Every person within your business should be trained when using ANY piece of equipment, that goes for the sack truck as well. You have one man moving sometimes over  $\frac{1}{4}$  of a ton in weight, would you expect them to do that job on a fork lift without any kind of instruction, no of course you wouldn't. Make sure that everyone who uses the sack truck has had a basic induction course on the safe use of the hand truck. Make sure this covers many things that are encompassed in the risk assessment. One of the best ways to avoid risk is by making people aware of risk.

## **Correct PPE**

Again PPE is one of those things are overlooked when using a sack truck as the sack truck is not viewed a highly dangerous piece of equipment. But good personal protection will also assist in making your operation more efficient. Example a driver is working flat out breaking the back of load after load, by the end of day one he has a blister, day 2 he will not work as efficiently as day 1, so for a simple £3.00 pair of rigger gloves, you are making your business safer and more efficient. Hi-Vis jackets and steel toe caps. You should also consider additional ancillary items such as retention straps and ratchet straps or Velcro blankets this will help secure the load.

## **Fatigue as indicated above in the physical capability section**

fatigue is frequently overlooked when implementing risk assessments, a delivery driver's work days is one which is full of physical exertion. When route planning if you can help the driver by leaving the lighter load until the day's end, build in more drop time for the later day loads, tests in America have shown that delivery drivers can be as much as a  $\frac{1}{3}$  more 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 inhibit the operator's ability to fulfil his or her role safely. If a driver is delivering 5 boxes in a stack on a hand truck at 9am, only expect them to move 4 in a stack for the later hours in the day.

## **One or two-man job**

There are certain loads that should always be handled in a two man drop, the financial choice in a very simple one, one man's labour as a drivers mate vs 6 weeks off for sick pay for the driver that has attempted to move something that should have taken 2 people to achieve..... I think the math 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, when we have asked in the past we are told to use our common sense. We would recommend that with an evenly distributed load there are some good basics that can be used to ensure stability. Make sure that the foot plate is  $\frac{2}{3}$  of the width of the load that you are lifting and at least  $\frac{1}{3}$  of the overall length of the load. Be cautious not to make the plate too long as it will create a problem when trying to place the load on the foot plate. Make sure that the load is also tucked on the plate as far as you can, to the back of the truck, this will reduce damage to the plate.



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### ***Weight distributions is fundamental to the safe use of a sack truck***

if your load is boxes try to ensure an even weight to the stack. In the event of the product having more weight on one side of the load, i.e. a fridge, where the working in the back will be a lot heavier than the front, then make sure that the heaviest part of the load is as far towards the back of the truck as possible. Or if there is more weight on the top or bottom of the load i.e. as in a washing machine then ensure that the heaviest part of the load is facing downward. A front heavy or top heavy load is very dangerous.

### ***Obstructions of operators view***

Any item that obstructs the operators view IS A TWO MAN OPERATION. It is impossible not to be able to see where you are driving, and consider it a safe operation.

### ***Capacity suits the load***

Make sure that the capacity of the truck is greater than the load which you are carrying; as a general rule of thumb ensure that the load is around 75% of the capacity of the hand truck. Your truck maybe designed to carry 200kg but using it to the total capacity all of the time will cause wear and unnecessary risk.

### ***Stability of stacked loads***

If you are handling differing sizes of boxes then the load must be secure, always try to load the next box on a surface that is flat even if that mean on top of 2 boxes of the same height. If this is not possible then reduce the amount of boxes that you are trying to carry, it's not safe practice to operate a sack truck with one hand on the load and one hand on the truck. If you were to encounter an uneven surface or a wheel hit a pot hole while operating the truck with one hand, then the likelihood of damage to the operator and the load is very high, moreover stopping to pick up the boxes is a lot more time consuming than making an extra journey.

### ***The load does obstruct wheels/brake mechanisms***

If you are handling loads which overhang the width of your sack truck, you must always use caution to ensure that it does not inhibit the wheels, or if fitted the braking systems on the wheels. In the past we seem to have replaced more wheels that have been caught up in the load than for any other reason (excluding misuse). A sudden stop to a load which has forward momentum always runs the risk of leaving the truck off the front of the plate. This has implications for the driver and anyone else who is in the vicinity.

### ***Hand traps***

The most common accident with hand trucks is trapping, generally fingers between the frame of the hand truck and the load. This happens all day every day, with small boxes and is very rarely an issue, but this bad practice will at some point result in injury when the loads increase in size and weight. Never break the back of the load by using the sides of the hand truck, or the top bracing bars. The handles are angled backwards so that traps don't occur by keeping fingers away from the load.

### ***One or two-man job***

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



### **Ensure solid base**

You simply cannot lift something with a sack truck if the load you are about to lift does not have a solid base to it, unless the base is bigger than the item you are lifting. This problem is frequently resolved by ensuring that the load is correctly positioned, based on its weight dispersal. 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 downward and 2 – the base is not solid, therefore the upward motion of the plate can break through the box rather than lifting it, causing the whole load to move away from the truck. Frequently washing machines will have a cavity in the base, if this is not secured to the hand truck with straps again the tendency is for the load to move forward tipping off the hand truck.

### **Liquid loads**

Liquid loads are something that should always be handled with caution whenever moved whether you are using trolley, hand truck, fork lifts or lorries. Any sudden halt in forward momentum and the fluids inside the container will still be moving with forward momentum, therefore, adjusting the centre of gravity of the load, thus making it unstable. When handling liquids there are some simple rules to follow, which will help with safe moving. Always make your movement slower and more deliberate. Avoid any immediate stopping unless in an emergency. Always ensure over capacity of the carrier, for a sack truck with a 300kg capacity should only carry 150kg in weight and avoid sharp cornering at speed.

### **Back of the truck**

Make sure the back of your hand truck is suitable for the load you are carrying, barrels, carpets, kegs, and any cylindrical item should be carried on a truck with a curve to the back. Small items carried should be carried on a sack truck with either a lattice back, mesh back or solid back. Always make sure that the tool you are using is the correct tool for the job, not just something that will do.

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## The Environment

### **Ground condition**

The ground conditions that your hand trucks are used on, can 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 brilliant for internal use in the warehouse or production, however for delivery purposes they are verging on pointless. If the driver turns up to a yard where there is a pot hole or loose concrete or needs to traverse over mud or grass, the control that they will maintain will be minimal. Pneumatic tyres will cope with the terrain that you need them to, but when we looked at the wheels and wheel maintenance in part 1, they create their own issues. Some hand truck companies are now supplying sack trucks on Polyurethane wheels these are a solid air blown compound of foam that is remarkably durable as with a solid tyre, but ride like a pneumatic tyre. This will give you safety to the operator the load and the truck itself.

### **Temperature**

Anyone who has ever been on a skiing holiday and has touched a metal object will understand how much it will hurt to the touch. Cold store operators are aware of this and should use the same rules when using a steel or aluminium hand truck.



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### ***Pedestrians around you***

When operating in pedestrianised areas or on your customer's premises, the other pedestrians don't always know that you are there, so again make your actions deliberate, try not to come to an immediate halt. When cornering, consider a bell or horn attachment to the hand truck. But most importantly slow down.

### ***Approaching kerbs***

Kerb Bumping your hand truck up and down kerbs not only is bad for the sack truck itself, it will also cause damage to the load that you are moving. Most importantly it can cause damage to the operator, because the movements needed are intense short bursts of muscular movements the chances of tears to muscles, ligaments or tendons is high, especially at the start and end of shift of in cold weather conditions. In most areas of the UK, DDA regulations will mean that there is usually a ramp nearby. If not there are small kerb ramps available in the market for drivers to use to cope with these obstacles, moreover they will also help your drivers with the deliveries over the thresholds on the customer's entrances.

### ***Surfaces***

Slippery surfaces Rain water, spills and ice make ground conditions treacherous enough, without trying to move a ¼ of a ton. Reduce the load, take more time or try to rearrange the delivery for another day if the conditions are deemed dangerous.

### ***Entrances and doorways***

This is a difficult one, some will tell you that you should take one hand off your hand truck to push the door open, others will tell you to push the door open using the loads on the truck. I would disagree; the safest way for you and the pedestrians around you is to either reverse through the doorway using your bum to open the door, if the door is a push door. Alternatively carry a small door stop if it is a pull door. Stop the truck, open the door leave the door move the truck through the doorway the close it afterward and remember it may be a fire door so always shut it 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 rather across the slope. When moving up or down the slope, always have the load facing downward.

Working speed dictate pressures. Health and safety should not be a barrier to making your company profitable, it should be part of your business that can help you increase your productivity, efficiency and profitability. Use tools that make the job quick easy and safe. As we have mentioned a few times in this risk assessment, kerb ramp, puncture proof tyres and ratchet straps amongst them. But one of the biggest dangers is making the pressure and speed of work such that the jobs you are asking staff to do becomes dangerous because you are not giving them adequate time to do them safely.

