

TYRE HANDLING WORKSHOPS

High Racking

The problem



While storing tyres in racking is common, this may not reduce all potential handling risks. It is natural to put frequently handled tyres on the lower racks and those less frequently handled high up. But, unless other aids are used, this will create unnecessary risks, including:

- lifting heavy loads above head height which can increase the risk of lower back and shoulder problems;
- long vertical lifts;
- injury to operatives due to heavy tyres falling whilst being stored or retrieved from the racking.

The solution



If you want to store heavy tyres at a high level, then use safety stairs to avoid the need to lift above shoulder level. Safety stairs are better than ladders, as they provide full-sized steps, a more stable working platform and have a handrail. Most types can easily be moved around on castor wheels, but are braked by resting on the floor once a weight is placed on them. If the space between the racks will not take safety stairs or a ladder, consider reducing the levels of tyre stored or increase aisle widths so safety stairs or ladders can be used safely.

If it is not practicable to use safety stairs or a ladder, then store the heavier tyres at ground level. Workers can then roll them off the rack or lift them out at around waist/chest level. Only the lighter tyres should be stored above shoulder level, ie those under 10kg.

Risk assessment

A typical risk assessment for high racks giving numerical scores for the risks mentioned above, using HSE's Manual Handling Assessment Chart, is shown below.

Load weight/frequency G0 ■ A4 ■	The load is between about 10 kg for a 225/70 R15 van tyre, but up to 18 kg for a 295/40 R20 4x4 tyre. Typically, the combination of load weight and frequency of handling will put the task within the low risk zone.
Hand distance from lower back A3 ■	There is some reaching away from the body when placing tyres into racking at both the high and low levels. Tyres are often handled with one hand.
Vertical lift distance R3 ■	The tyres are handled between floor level and above shoulder level.
Trunk bending/sideways bending A1 ■	There is often some trunk twisting associated with this operation.
Postural constraints G0 ■	There is not usually a significant problem with space.
Grip on the load G0 ■	The grip on the tyres is good as they will be new, dry and clean.
Floor surface G0 ■ A1 ■	Since the task is performed inside, the floor surface is typically good. When a step ladder or ladder is used the risk is increased.
Other environmental factors G0 ■	Since this operation is usually performed inside, the lighting and thermal environment is usually good.
Overall Score	7-12

This guide has been prepared by the Tyre and Rubber Industries Safety Action Group (TRISAG) in consultation with the Health and Safety Executive (HSE). It has the support of the Retread Manufacturers Association (RMA) and the British Tyre Manufacturers Association (BTMA). TRISAG wishes to record its appreciation and thanks for the help given and information provided by the Health and Safety Executive.