

Tyre handling workshops

High racking



Photo courtesy of Goodyear Dunlop Tyres UK Ltd

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.

The solution

If you want to store heavy tyres at a high level, then use an access platform to avoid the need to lift above shoulder level. Safety platforms 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 an access platform or ladder, consider reducing the levels of tyre stored or extending aisle widths so smaller platforms or ladders can be used safely.

If it is not practicable to use an access platform or 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 10 kg.

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