



Manual handling in the tyre retailing industry

Manual handling is the most common hazard in the tyre retailing industry and employees are at most risk when moving and working with tyres.

Manual handling injuries account for approximately more than a third of the total lost time injuries/diseases (LTD's) in the tyre retailing industry.

Injury data shows that tyre fitters are most at risk, accounting for two thirds of all lost time injuries in the motor vehicle part and accessories fitters industry. Most of the injuries occur when lifting/handling loads and most commonly result in sprains and strains.

The Commission for Occupational Safety and Health *Code of practice: Manual handling* outlines a three-step approach to control any manual handling risks:

- Identify all hazards associated with manual handling.
- Assess the risk arising from the hazards.
- Decide on and use appropriate control measure.

The purpose of this bulletin is to identify risks and suggest possible control measures to assist retailers in meeting their obligations under the *Occupational Safety and Health Act 1984*.

Identified manual handling hazards and possible controls

Storing and accessing tyres

Stacking tyres

Many tyre retailers stack tyres vertically requiring workers to lift and move stock above shoulder height. When reaching above shoulder height, the back is arched and the arms act as long levers, making the load difficult to control and significantly increasing the risk of injury. There is high force required to move tyres across each other due to the amount of friction.

Tyres should not be stacked vertically and where possible should be stored in appropriate racking.

If stacking cannot be avoided then a safe system of work should ensure there is a procedure to limit the height of the tyres that are stacked vertically. The number of tyres stacked will depend on the size and weight of the tyres.

Racking tyre storage

Well designed and maintained racking systems are the preferred method of storage for tyres. Location of these racks must take into consideration car movement to reduce traffic hazards and accessibility for load lifting equipment.

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To reduce the added risk from working at heights, the racking should be kept at, or below shoulder height.

If this is not practical, a safe work platform, i.e. a platform ladder, may be used and those tyres stored above shoulder height should be lighter with easier dimensions for handling.

Wheel balancing and tyre fitting

The risk factors involved with wheel balancing and tyre fitting are varied.

Most wheel balancing machines are at a fixed height and are not adjustable. In lifting the wheel onto the spindle of the balancer, the risk factors include twisting of the trunk, lifting from below mid-thigh height, sudden jerky movements and repetitive handling.

The best way to reduce the risk of manual handling injury is to introduce an automated system for tyre balancing and tyre fitting.

If this is not practical, a hydraulic lifter to lift wheels up from ground level to spindle height would reduce the amount of vertical lifting.

Wherever possible, repetitive tasks, such as wheel balancing, should be limited by ensuring that there are frequent and adequate breaks from the task.

Movement of tyres around the workplace

Simple control measures to minimise the risk of injury while moving tyres around the workplace include:

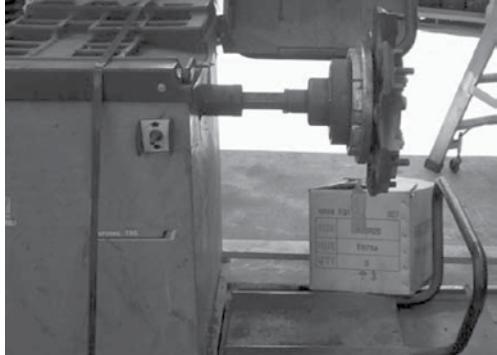
- limiting the amount of double handling;
- ensuring that the distances tyres are carried are minimised;
- ensuring that clear pathways are maintained so that tyres can be rolled instead of carried; and
- using mechanical aids such as trolleys and hoists.

Where a mezzanine floor is used for storage, consider using a tyre conveyor or lift to reduce the risk of unsafe manual handling and work at heights.

Ensuring that stock can be moved around by load lifting equipment is essential. Stillages are a form of racking system designed to be moved with ease by load lifting equipment and should be considered for the movement of stock around the workplace.



High racking system with platform ladder



Hydraulic tyre lifter retrofitted to a wheel balancer

Handling tyres while working on ladders

Use platform ladders where employees have to work above shoulder height. This enables employees to maintain a balanced position to handle tyres and allows freedom of movement which limits the amount of twisting required.

Reducing other manual handling hazards

- Where possible, eliminate or minimise manual handling by using automated or mechanised equipment.
- Stock levels need to be managed to ensure there is adequate room to store tyres in appropriate racking systems.
- Store heavier and more frequently used items between knee and chest height.
- Where possible, repetitive tasks should be limited using frequent breaks and varying tasks.
- Vehicles should be raised to appropriate heights on hoists when removing and fitting tyres.
- Isolate tyre fitting and balancing work from traffic areas.
- Ensure that lighting levels are adequate.
- Ensure that properly designed and maintained mechanical equipment is available for the removal and fitting of wheel nuts.
- Ensure that staff are trained in the risk assessment approach to manual handling.
- The workplace needs to be tidy to minimise slip, trip and fall hazards.

What the law says

Employers have a responsibility under the *Occupational Safety and Health Act 1984* (the Act) to provide and maintain a safe working environment. Fulfilling this obligation includes abiding by the requirement that it is the responsibility of the employer to, as far as practical:

- identify each hazard to which a person is likely to be exposed;
- assess the risk of injury or harm to a person resulting from each hazard;
- consider the means by which that risk may be reduced; and
- reduce the risk.

Employees have a responsibility under the Act to take reasonable care for their own safety and health and that of others.

More information?

Further information on the manual handling risk management process can be found in the *Code of Practice: Manual handling*.

Contact WorkSafe on 1300 307 877 for more copies of this document or download it from the WorkSafe website at www.worksafe.wa.gov.au