

SAFETY GUIDANCE

20 September 2024

The Elevating Work Platform Association of New Zealand Inc. (EWPA) is the peak Industry Association representing manufacturers, suppliers, rental fleet owners and end users of Mobile Elevating Work Platforms in New Zealand.

SUBJECT: WHEEL NUT TORQUE SETTING AND INSPECTIONS

Following a recent incident where a wheel 'fell off' a scissor lift during use and fortunately there were no injuries, The EWPA has issued this safety bulletin.

SUPPORTING INFORMATION:

Any number of issues could affect a wheel, causing it to fall off. This could have fatal consequences if it happens while you are operating the MEWP.

Wheel nut tightness, wheel impact damage, hub damage or poor inspection and maintenance of wheel assemblies are most common.

The incident described occurred because of fastening failure. This may be because the lug nuts worked their way off, the wheel has broken lugs, or because the wheel studs themselves broke.

Following research, the EWPA has found that most Manufacturers call for wheel condition inspection on a regular basis and in some cases, require confirmation of condition prior to operation.

The Best Practice Guidelines for Mobile Elevation Work Platforms 2014 (BPG), published by Worksafe NZ section 5, Maintenance, Inspection and repair; calls for regular inspection of wheel and tyres.

EWPA RECOMMENDATIONS:

The EWPA recommends the following:

Wheel rim nuts should be visually inspected as part of pre-operational checks, every 3 months and at a 6 monthly inspection.

Where wheel nuts have been torqued to manufacturers specifications, wheel nut indicators or 'witness marks' should be added to the nut and rim for ease of checks and reference on whether a wheel nut 'worked itself loose'.

1. Owners Responsibilities:

- Ensure that all wheels on all machines are torqued to Manufacturers specification and have indicators or witness marks fitted for future inspection.
- At minimum a check of 'witness marks'/indicators and/or re-torque of wheel by owners, Routine safety inspection, carried out at 3 months intervals.

2. Operator Responsibilities:

- As part of training and the requirements of the BPG, the pre-operational checklist on the front cover of the MEWP logbook, item 6: Check tyres for correct inflation, steering linkages, tyres, wheels, wheel nuts, castors damage/security.
- A visual inspection is required on tyres and wheels, checking for loose and/or missing parts
- Use the wheel indicators/witness markings to check the wheels are secure. Any movement or miss alignment should be reported immediately and the MEWP taken out of service until rectified.

3. Inspectors/Technician Responsibilities:

- Ensuring that all wheels are torqued to Manufacturers specification, this can be done by visually inspecting 'witness marks'/indicators or by using the appropriate tools to confirm torque setting of wheel nuts against manufacturers recommendations.
- Should the wheel nuts not be correctly set, the machine should fail its inspection and have the owner appoint a Technician to set the wheel nuts to the correct torque setting.
- Do not over torque or use a non-torque setting wrench on the wheel nuts as this may excessively stress the wheel nuts, leading to potential failure.
- Where a torque setting cannot be found for the machine, contact the manufacturer to receive their recommendations.

Using a torque wrench on wheel nuts, tighten to manufacturer's specification.



Below are examples of 'witness marks' and indicators on wheel nuts.

