



Promote and enable the safe, effective use of powered access worldwide

THE SAFE USE OF MEWPS WHEN USING PEDESTRIAN CONTROLS





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1.0 INTRODUCTION

The International Powered Access Federation (IPAF) promotes and enables the safe and effective use of powered access equipment worldwide in the widest sense – through providing technical advice and information; through influencing and interpreting legislation and standards; and through safety initiatives and training programmes.

IPAF is a not-for-profit organisation owned by its members, which include manufacturers, rental companies, distributors, contractors, and users. IPAF members operate a majority of the MEWP rental fleet worldwide and manufacture about 85% of platforms on the market.

IPAF collates incident reports received from around the world, from companies, individuals and IPAF members who share their experiences to allow others to work safer.

MEWPs are provided both with lower and upper platform controls to comply with global MEWP design standards. "Pedestrian Control" is the term used when the MEWP operator operates the platform controls stood on the

ground by walking alongside, or near the MEWP, this is also sometimes referred to as "wander leading" or "dog walking" the MEWP.

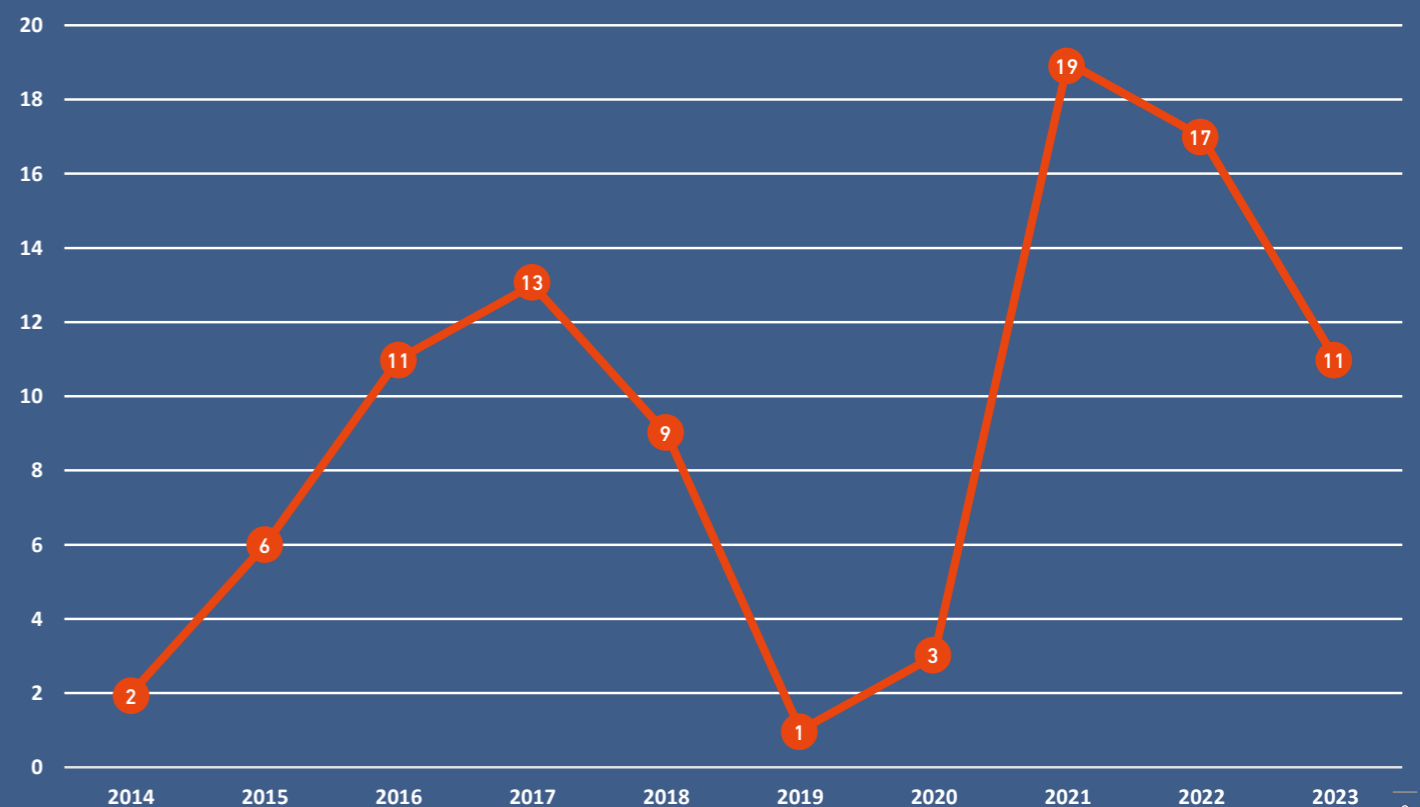
Under normal conditions the operator should be stood in the MEWP platform with both feet on the floor. However, there are times when Pedestrian Control may be valid:

- Manoeuvring under obstructions or similar where operators cannot stand normally when operating
- Manoeuvring through doorways or similar where handrails need to be lowered
- Manoeuvring over rough ground, steps or slopes where standing in the MEWP is considered a greater risk.
- Loading/unloading onto delivery vehicles that do not have full width ramps.

If a MEWP operator chooses to use the MEWP in the pedestrian control mode it can significantly increase the risk of the operator being crushed/trapped if not done safely.

The table below highlights the number of incidents involving the use of pedestrian control over the last ten years:

Pedestrian control of MEWPs - total incidents by year



NOTE: While every care has been taken to ensure the accuracy of the material contained within the guidance, no liability is accepted by the authors in respect of the information given. Compliance with this guidance does not give automatic assurance of compliance with legislative requirements. It is the duty holder's responsibility to ensure they comply with legal requirements relevant to safe work equipment.

Front cover image courtesy of Hinowa

2.0 SCOPE

This guidance is intended to:

- Provide information for those who plan and manage MEWP operations
- Provide information on the main hazards when using a MEWP in pedestrian control mode
- Provide information on the risk control measures to adopt when using pedestrian controls
- Provide general global guidance for those who undertake tasks to prevent incidents occurring

3.0 WHO SHOULD READ THIS GUIDANCE

Employer or User: Person or organisation that has control of the planning, management, and use of the MEWP on site and is responsible for ensuring the MEWP is kept in a safe working condition.

The MEWP Operator: The MEWP operator is a person using the MEWP from the work platform or the base/ground controls. They may be employed or self-employed.

The MEWP Owner: A company, firm or person owning the MEWP including those hiring it out to a user.

4.0 TERMS AND DEFINITIONS

- **Competent person** - A person having sufficient professional or technical training, knowledge, actual practical experience, and authority to enable them to carry out their assigned duties at the level of responsibility allocated to them
- **Entrapment** - A situation in which the operator or occupant of a MEWP becomes trapped or crushed between the MEWP controls or platform guardrails and an immovable object or external structure
- **Gradeability** – The maximum angle a MEWP can drive up or down a slope in the stowed position
- **MEWP** – Mobile Elevating Work Platform
- **Nominated ground rescue person(s)** - Person(s) familiar with the ground controls and auxiliary/ emergency controls of the MEWP who have practiced lowering the MEWP platform for each make and model for which they are responsible
- **Pedestrian control** – The MEWP operator operates the platform controls stood on the ground by walking alongside, or in close proximity to the MEWP
- **PPE** – Personal Protective Equipment
- **Stand-off distance** – The distance between the operator and the MEWP when the machine is being manoeuvred in pedestrian mode

- **SSoW** – Safe System of Work
- **Umbilical cord** – The cable in the platform connected to the upper control box
- **User** - A person or organisation that has control of the planning, management, and use of the MEWP on site and is responsible for ensuring the MEWP is kept in a safe working condition

Note 1: This can include the person responsible for the site, principal contractor, or sub-contractor

Note 2: This is not necessarily the same as the operator

- **Vehicle driver** – A person who delivers and collects MEWPs from sites
- **Vehicle marshaller** - A site worker who directs the movement of plant and vehicles on or around a site. Sometimes referred to as a banksman

5.0 ACCIDENT DATA

2014 – 2023, all incident types:

Filtered to – 1a, 1a PAV, 1b tracked/spider, 3a, 3b, and “unknown” only

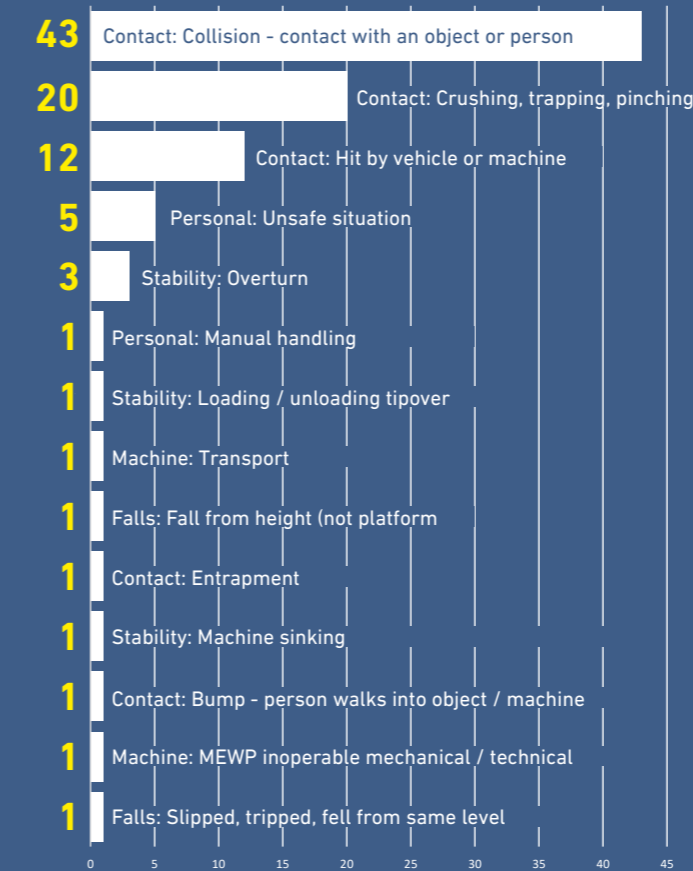
92	Incidents in total
4	Fatalities
15	Major injuries
23	Minor injuries
30	First Aid
11	Damage to machine/property
9	Near miss

Analysing this data from the ten-year period we can see several standout facts:

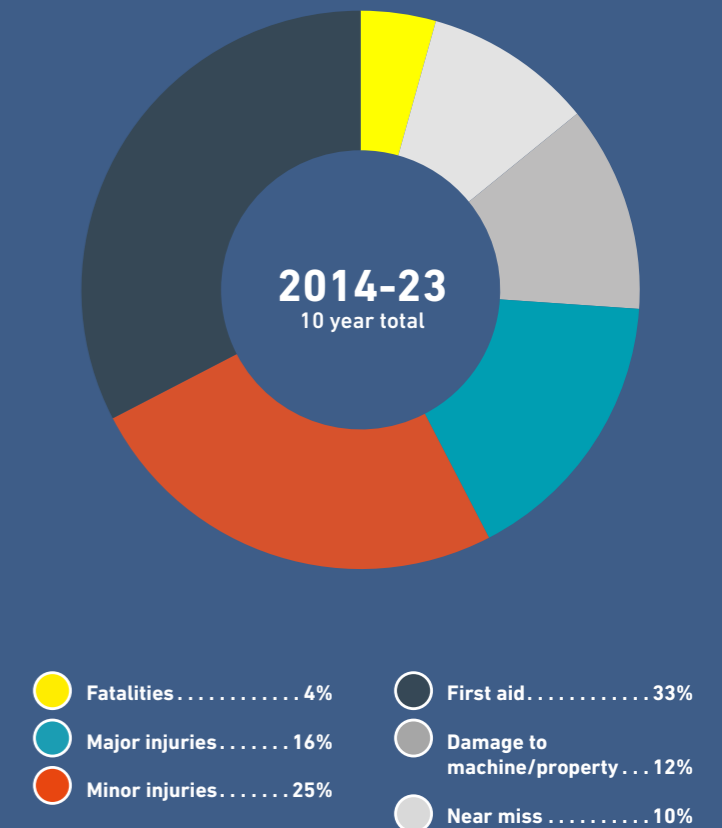
In this period there were 27 incidents on construction sites, and 28 in yard areas. Most incidents happened with delivery drivers followed by service technicians/engineers. However, incidents have still occurred in other industries.

90% of incidents occurred on 3a type MEWPs and predictably the most common body part to be injured were lower limbs, including feet which indicates that operators are standing/walking too close to the MEWP when manoeuvring is taking place. This could be because the stand-off distance is too short, or the umbilical cord is not long enough to allow the operator to maintain a safe stand-off distance.

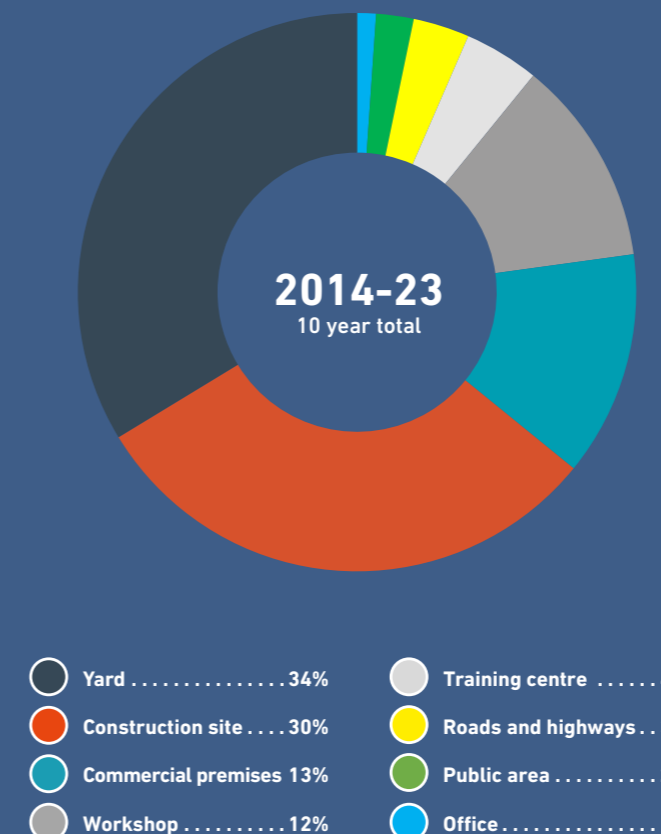
Pedestrian control - Incident Classification



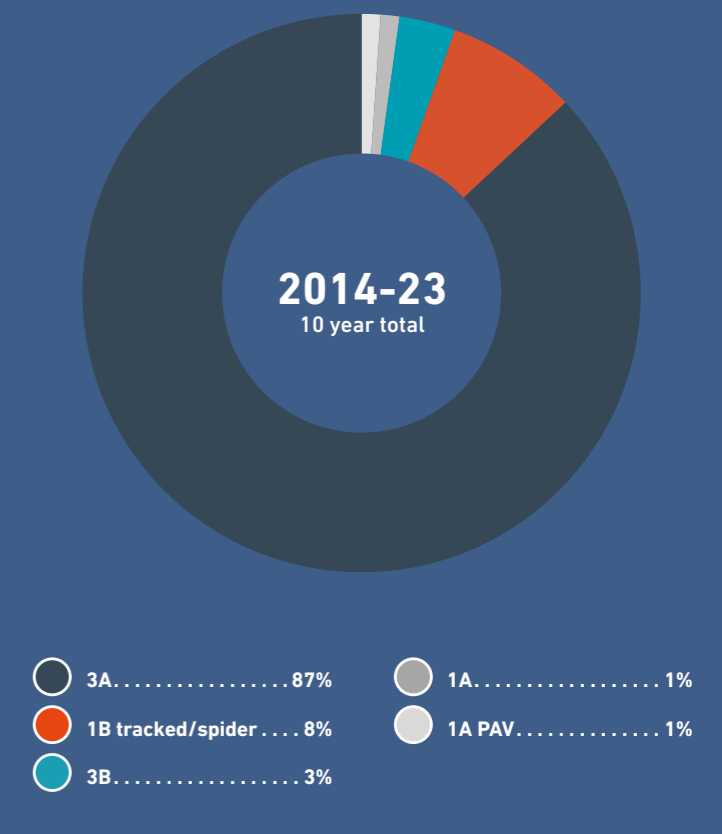
Pedestrian control - Incident Outcome



Pedestrian control - Worksite Location



Pedestrian control - Machine Category



6.0 TRAINING AND FAMILIARISATION

Before using a MEWP, you should be trained to the applicable MEWP classification/category. IPAF recommends that all operators attend, and successfully complete an IPAF MEWP Operator training course. IPAF operator training courses do not make operators experts in the safe use of MEWPs when training takes place, this is because there are so many makes and models. What the IPAF operator course does provide is the basic skills an operator needs to operate a MEWP safely and where to find the information they need if they are unsure of anything. For more information on IPAF training courses visit www.ipaf.org/courses

MEWP familiarisation is not training, it is the demonstration of the control functions and safety devices to a trained operator carried out by a demonstrator.

MEWPs are different in size, shape, weight, complexity, and functionality, so it is important that familiarisations are carried out when a trained operator needs to use a MEWP that they have not used previously. For more information on familiarisations visit www.ipaf.org/f1

IPAF training is not just for operators and demonstrators, it is also important that managers and supervisors understand their responsibilities when managing the safe use of MEWPs on site. Identifying misuse and knowing the correct procedures to follow will ultimately reduce the number of incidents that take place on site, for more information on these courses visit www.ipaf.org/courses

The IPAF Safe Loading and Unload training course is recommended for delivery drivers.



7.0 PEDESTRIAN CONTROL OF MEWPS

When it has been decided to use the pedestrian control method to manoeuvre the MEWP to its intended position it requires careful planning to reduce the risk of injury to operators and other personnel. Planning should take into account that the risk of trapping and entrapment still exists when operating in the pedestrian control mode at ground level.

The length of the umbilical cord/cable on a MEWP determines the stand-off distance when using the upper platform controls from the ground, you should always ensure you can stand a safe distance away from the MEWP. When used correctly, longer cables enable the operator to stand further away from the MEWP potentially reducing the risk of crushing and entrapment. However, using the platform controls from the ground, rather than the normal (platform) position can add additional risks of crushing or entrapment if the incorrect drive or steer direction is activated.

THE INCORRECT USE OF THE PEDESTRIAN CONTROL FUNCTION CAN CAUSE BOTH FATAL AND SERIOUS INJURIES TO MEWP USERS AND OTHER PERSONNEL WHEN USED FROM THE GROUND POSITION IF NOT DONE SAFELY.



PLATFORM CONTROLS WHICH REMAIN FIXED IN THE UPPER PLATFORM SHOULD NOT BE USED TO MANOEUVRE THE MEWP WHILST STANDING AT THE GROUND POSITION

This guidance note includes those types of MEWPs which have an umbilical cord, radio/remote, or a fixed point of control on the chassis. Generally, the types of MEWPs that can be used in pedestrian mode are 3a Mobile Vertical (scissor) and 1b Static Boom (tracked) MEWPs.

Scissor lifts have drive and steer direction arrows located at the platform controls, but often there are no drive direction arrows at the chassis, the reason being is scissor lifts do not slew/rotate the upper structure like boom type MEWPs.

Instead scissor lifts are fitted with a decal on the platform control box which normally shows an image of the scissor depicted as seen from above. The image may show the steer axle and the direction arrows, so the operator can identify which way to move the drive joystick controller in the desired direction.

The risks of trapping or crushing are increased when:

- There is a lack of planning and a suitable and sufficient risk assessment
- There is lack of training and familiarisation of the operator
- The operator is unaware of the SSoW
- Platform control decals are not clear or covered by debris/paint
- The incorrect drive direction or steer function is selected
- The operator positions themselves too close to the MEWP whilst manoeuvring
- The platform control box has been placed or hung on the side of the MEWP while walking alongside it
- There is poor visibility causing a risk of collision with pedestrians, vehicles, or structures
- The operator is not familiar with the potential drive speed of the MEWP
- MEWP operator positioning themselves too close to a structure whilst manoeuvring
- Driving off a kerb, driving up or down a slope or when loading or unloading which could lead to a MEWP overturn
- Manoeuvring the MEWP in pedestrian mode over uneven ground which could cause the operator to slip or trip and be crushed by the MEWP



Where no overhead hazard exists, the safest place to be is stood on the platform with both feet on the floor. Pedestrian control should only be considered when there is an overhead hazard or for (un)loading purposes when required.

8.0 RISK CONTROL MEASURES

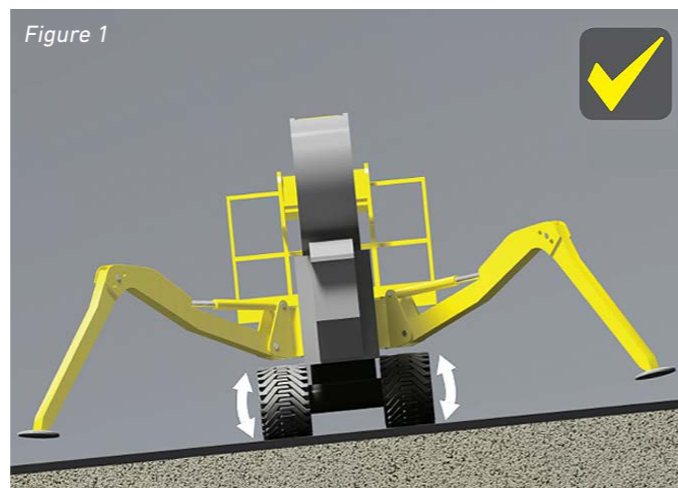
Risk control measures can be separated into three different groups:

1. Before manoeuvring the MEWP in pedestrian control mode
2. Manoeuvring the MEWP from the ground position with the platform controls (pedestrian control)
3. Completion of the task

8.1 BEFORE MANOEUVRING THE MEWP

Prior to any intended pedestrian control of a MEWP, the operator should:

- Ensure a risk assessment is in place
- Follow the SSoW for carrying out the task
- Be trained and familiarised with the MEWP
- Wear appropriate PPE (as identified by the risk assessment) e.g., safety footwear, eye protection, gloves, and a hard hat with chin strap
- Conduct a pre-use inspection of the MEWP to confirm it has no defects. Any warning lights or audible alarms such as a horn must be functional
- Always walk the intended route to identify any height, width restrictions, poor ground conditions, slopes, trip hazards or other obstacles
- On MEWPs which are capable of pedestrian control, check the drive and steer directional arrows on the platform control box to confirm the correct drive/steer orientation before attempting to move the machine. This is to ensure that travel will be in the anticipated direction when the drive/steer controller is moved



- On 1b (tracked) type MEWPs ensure the boom is fully stowed before manoeuvring. If you intend to manoeuvre the MEWP up or down ramps, across uneven or sloping ground extend the MEWP tracks where possible and partially deploy the outriggers to prevent tip over. Refer to figure 1.

ALWAYS FOLLOW THE MANUFACTURER'S INSTRUCTIONS FOR MANOEUVRING 1B (TRACKED) MEWPS

- If required, lower the platform guardrails in line with the manufacturer's instructions
- Ensure there is no-one on the platform prior to manoeuvring the MEWP using the pedestrian controls
- Ensure that any loose objects are removed from the platform before manoeuvring the MEWP
- Be aware of the turning circle of the MEWP. Note Some tracked MEWPs can quickly turn on their own axis with minor operator control adjustments
- Maximise the stand-off distance from the MEWP taking into consideration the space available and the length of the umbilical cord. Operators need to ensure they maintain a safe distance from the MEWP while manoeuvring

- Some MEWPs are fitted with connection points for the platform control box to allow the upper platform controller to plug into a separate point located on the chassis, this can add length to the cable which increases the stand-off distance. Always refer to the MEWP operator manual for this procedure
- Be aware of the machine specifications and limitations such as gradeability
- Select a slow drive speed mode if fitted
- Where visibility may be obstructed, consideration should be given to using a banksman to assist and to be able to react to any developing situation

8.2 MANOEUVRING THE MEWP FROM THE GROUND POSITION WITH THE PLATFORM CONTROLS

Whilst manoeuvring the MEWP, the operator should:

- Hold the platform control box firmly and in the correct drive/steer orientation. Do not hang it from any part of the MEWP structure when using pedestrian control
- Travel the MEWP in slow speed mode whenever this option is available and use the proportional controls
- Stand clear of the MEWP when manoeuvring

- Never drive or steer the MEWP towards yourself or others
- Never drive the platform in the elevated position when manoeuvring the MEWP in pedestrian mode
- Never allow personnel on the platform while the MEWP is being manoeuvred
- Take extra care when manoeuvring the MEWP on slopes or uneven ground
- Be aware of the risk of entanglement between the platform control box umbilical cord and other objects
- Allow for MEWP ramping up and down speeds, some MEWPs can continue to move a short distance when the drive controller is released
- Be vigilant, always be aware of your surroundings
- Always concentrate on the task; do NOT be distracted when manoeuvring the MEWP
- Ensure continual observation and be aware of other pedestrians, equipment, vehicles, structures in the vicinity
- Sound the horn (if fitted) when approaching bends, corners, or going through doorways



8.3 COMPLETION OF THE TASK

Once the manoeuvre has been completed it is important to ensure that the platform controls are returned to their normal operating position in the platform and secured in place. If guardrails have been lowered, they must be returned to their original position and locked in place in accordance with manufacturer's instructions.

Failure to carry out these tasks correctly could result in pedestrian control being undertaken when it is not required, the control box being in the wrong orientation and therefore incorrect drive selection being selected, or a fall from the platform.

9.0 PEDESTRIAN CONTROL WHEN LOADING & UNLOADING MEWPS

Delivery vehicles can carry multiple types of machines and it is common to see MEWPs in close proximity to each other during transportation. Some MEWPs may require the assistance of a winch during the loading/unloading process, this could be due to the type of MEWP, company policy or if a machine is inoperable.

Winches can provide a safe solution to the loading/unloading process, but they can also introduce additional risks if not used safely. Winches should be used in accordance with the information supplied by the winch manufacturer, failure to follow these instructions can result in damage to equipment and serious injury/death to personnel.

MEWP delivery drivers can be exposed to additional risks when using pedestrian controls to load/unload MEWPs, some examples are shown below: -

- Risk of trapping or entrapment
- Risk of crushing between MEWPs
- Additional risk of machines overturning



image credit: Skyjack



The risk of crushing or entrapment to delivery drivers is increased when: -

- There is inadequate planning and a lack of supervision at a customer site
- The winch is used incorrectly to assist the loading of certain types of MEWPs, meaning insufficient hands to use the winch, hold the control box and actuate the driver/steer controller of the MEWP
- Loading/unloading operations are carried out during the hours of darkness or poor weather
- Incorrect drive/steer direction is activated on the drive controller joystick
- Standing between MEWPs while being unloaded or loaded on the trailer
- Distractions exist i.e., noise, movement of other machinery nearby
- There are complex loading patterns
- Repositioning of MEWPs on the bed of the vehicle to displace weight over axles correctly
- There are time constraints
- Loading/unloading on the highway. Note: Consider the use of a Banksman/Spotter

Risk control methods for delivery drivers: -

- The User needs to have adequately planned for delivery/collection, offloading/loading of MEWPs. This includes the provision of suitable lighting, level ground, segregation from other equipment, time, banksman (if and when required)
- A generic risk assessment should be in place before loading and unloading in the customer's site. Dynamic risk assessments should be carried out for loading and unloading activities when on site
- Drivers should familiarise themselves with the MEWP's drive direction arrows and drive controller orientation before loading and unloading
- Stand clear of the MEWP, it is preferable to stand behind the direction of travel where practical
- Ensure all MEWP controls, including the winch controls are used in accordance the manufacturers instructions and follow your SSoWand follow your SSoW.

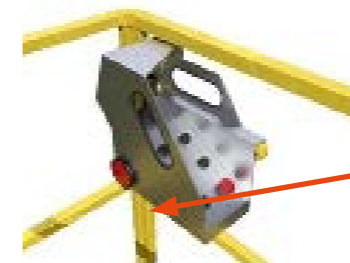
- Always select a slow drive speed on the MEWP if available
- Never stand or position any body part between equipment when it is being manoeuvred or winched on a trailer; always remember to stand in a safe place where you can get out of the way if required
- Always be aware of your surroundings
- If MEWPs are to be loaded during the hours of darkness, ensure that it is carried out in a well-lit area
- Drivers should stay focused on the task at hand and not be distracted by other equipment
- Do not overload the winch or the trailer
- When loading or unloading is complete, always return and secure the platform control box to its normal position in the platform when this is possible

10.0 MEWPS FITTED WITH SECONDARY GUARDING DEVICES

Some 3a type MEWPs are fitted with secondary guarding systems at the platform controls, examples of these devices include:

- Two hand control systems
- Operator Presence Systems (OPS)

If a MEWP is required to be manoeuvred from the ground using the pedestrian controls, it must have a detachable platform control box. MEWP operators should always follow the manufacturer's instructions when using the platform controls in pedestrian mode.



Two hand control promoting operator positioning –
Requires dual-handed input for movement.



Operator Presence System (OPS) –
Senses the position of the MEWP operator.

Note: when using the OPS in pedestrian mode, the sensor should always be pointed at the MEWP operator.

When the pedestrian control task has been completed, the platform control box must be returned to its original position on the platform in the correct orientation and secured in place following the MEWP manufacturer's instructions.

IPAF recommends that the manufacturer's instructions for the safe use of the secondary guarding equipment are followed, these instructions should be supplied with the MEWP.

If there is a foreseeable risk of crushing/pinching/entrapment on site, the familiarisation should include a demonstration of the MEWP being used in pedestrian control mode. The familiarisation should be recorded in the MEWP operator's IPAF ePAL app, or logbook.

11.0 EMERGENCY PROCEDURES IN THE EVENT OF CRUSHING OR ENTRAPMENT

The use of pedestrian control on MEWPs can be a high-risk activity if it is carried out incorrectly, therefore relevant site personnel should be aware of the emergency procedures to follow if there is an incident involving entrapment, trapping, or crushing.

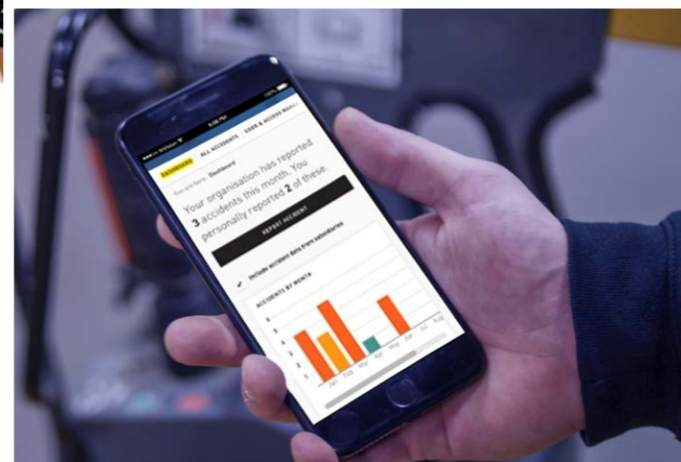
If pedestrian control is required, then a suitable and sufficient risk assessment should be carried out by a competent person to identify the hazards and put in place the relevant control measures.

Your rescue plan should include a contingency if someone has been crushed in pedestrian mode and the procedures to follow.

12.0 RESOURCES

- IPAF Operators Safety Guide (available via the ePAL app www.ipaf.org/ePAL)
- IPAF Best Practice Guidance - Load and Unload
- IPAF Safe Loading, Unloading & Transportation of MEWPs
- IPAF Loading and Unloading MEWPs on the Public Highway
- IPAF The Pedestrian Control of MEWPs Toolbox Talk
- IPAF Technical Guidance on Emergency Rescue
- IPAF Guidance on the Assessment of Ground Conditions
- IPAF Familiarisation (F1) Statement
- Andy Access poster Danger Keep Well Clear
- Andy Access poster Caution When Loading and Unloading
- Reducing Trapping and Crushing to Persons in the MEWP Platform

(All IPAF documents available at www.ipaf.org resources).



IPAF ACCIDENT REPORTING

www.ipafaccidentreporting.org

IPAF and its members analyse anonymised data on incidents involving powered access to identify areas of risk and common trends, which informs guidance, training and safety campaigns. We aim to increase our understanding of working practices and reduce incidents in every country. Reporting is not restricted to IPAF members; any person or organisation can report an incident. In 2021, IPAF launched ePAL, a mobile app for operators and supervisors, which enables quick on-the-spot reporting direct to the IPAF portal of all incidents – including near misses.

How to report

All accidents, incidents and near-misses can be reported quickly and easily at www.ipafaccidentreporting.org via desktop or laptop PCs, most web-enabled mobile devices, or through the IPAF ePAL app (www.ipaf.org/ePAL) for operators and supervisors. Please register first to report accidents on the database. Reports can also be made anonymously via the portal. Companies wishing to have multiple persons reporting accidents should appoint a nominated person (a senior person who will manage reporting). This nominated person should register first in the company name. Once registered, the nominated person will be able to give others access to report accidents and be able to track their accidents and manage their incident records. Information entered into the database will be kept confidential and will be used strictly for the purposes of analysis and improving safety.

What is reported

All reported incidents involving powered access are collated by IPAF. This includes incidents that result in death, injury or a person requiring first aid. It also includes near-miss incidents that didn't result in injury or damage to machines or structures, yet still represented a potentially dangerous situation for machine occupants or bystanders.

The machines

The report analyses incidents that occurred when using, delivering and maintaining Mobile Elevating Work Platforms (MEWPs). IPAF also collates incidents involving other machinery including Mast Climbing Work Platforms (MCWPs), all types of construction hoists and telehandlers.

Who can report?

Anyone involved in working at height can report an incident to the IPAF portal. The data presented in this report is based on information collected either directly reported via the IPAF portal; obtained by IPAF staff worldwide; using data from regulatory bodies; and through information collated from media reports. IPAF also now offers a special customisable dashboard for all members reporting, which enables them to benchmark their company's performance against regional, national and global data.

Confidentiality of data

The information provided to IPAF is confidential and private. Information that can identify a person or company involved in a reported incident is removed prior to analysis by IPAF and its committees, and thereafter remains redacted. IPAF has a privacy policy that can help you understand what information we collect, why we collect it, and how you can update, manage, export and delete your information. The full IPAF privacy policy can be found at www.ipaf.org/privacy

ABOUT IPAF

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IPAF is a not-for-profit organisation owned by its members, which include manufacturers, rental companies, distributors, contractors, and users. IPAF has members in more than 80 countries, who represent the majority of the MEWP rental fleet and manufacturers worldwide. Visit www.ipaf.org for local office information.

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Become an IPAF member

By joining IPAF you are joining a global movement to ensure a safer and more productive powered access industry. Membership also brings a host of special services and benefits including access to the members' safety analysis dashboard. IPAF brings multiple benefits including the following:

- Global harmonisation with regional focus on standards development;
- Resources for technical experts;
- A wide range of products and technical guidance to assist MEWP users, supervisors and user meet their responsibilities;
- Opportunities to network and promote your company;
- A consensus voice for all industry stakeholders, large and small;
- Certified training program to ensure complete, consistent and compliant training.

For more information about becoming a member of IPAF visit www.ipaf.org/join

IPAF would like to thank the members of the International Safety Committee Working Group below who helped in the development of this document:

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IPAF Safety & Technical Department.

In conjunction with

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