

Secondary Guarding on MEWPs

What do I need to know about Secondary Guarding Systems for Mobile Elevating Work Platforms (MEWPs)?

Secondary Guarding Systems are designed to help reduce the risk of crushing incidents. The need for a secondary guarding system must be evaluated having considered the work environment, the risk assessment, the type of MEWP, and the work procedure.

A secondary guarding system will not completely eliminate the risk of crushing and should be assessed for suitability on each job.

To use MEWPs safely requires proper planning, appropriate training and familiarisation. The MEWP must be compliant to Australian Standard AS/NZS1418.10 and in a safe working condition.

Introduction

Mobile Elevating Work Platforms (MEWPs) assist in making working at height safer however there are still risks present that can endanger life.

There is a risk that the MEWP operator or platform occupants can become trapped or crushed between the MEWP platform and an external obstruction during the movement of the MEWP. Secondary guarding systems, in conjunction with safe work planning, MEWP selection, operator training and familiarisation, plus existing MEWP design features, may further minimise the risk of crushing and entrapment plus reduce the harm if an entrapment occurs.

Availability

Secondary Guarding has been introduced in the past decade by MEWP manufacturers and 3rd party suppliers but is not yet available on all MEWP types.

Secondary guarding systems are available for self propelled boom lift MEWPs. Some systems have been introduced for scissor lifts in 2020 although currently these have been primarily designed for slab / flat terrain scissors.

At this time systems are not readily available for rough terrain scissors, vertical mast lifts, spider lifts, trailer lifts, truck mounted and van mounted boom lifts.

There continues to be significant development and innovation to improve the systems and introduce new technology.

Refer to your equipment provider for information on the latest availability.

Risk Factors

A risk assessment conducted during the planning of the task will identify any hazards that can lead to the crushing of the operator or platform occupant. The assessment needs to cover travel and positioning of the MEWP on the worksite plus the elevation of the platform to the work position.

Factors to be considered are

- Worksite environment
- Ground conditions such as obstacles, holes and drop-offs on the travel path that may cause the platform to jolt upwards (catapult effect)
- Doorways on the travel path
- Fixed structures and other obstructions
- Confined spaces within structures
- Type of work
- Suitability of the MEWP for the task
- MEWP movements (travel, elevation, slew, telescope)
- Speed and control of movement (on/off, proportional and ramping)
- Familiarisation with the control functions, safety devices and characteristics of the MEWP
- Lack of visibility / lighting
- Incorrect operation of the platform (for example selection of lift not drive, loss of spatial awareness, unsafe speeds) due to insufficient training and familiarisation.

Existing MEWP Design Protections

MEWPs are manufactured with safety systems that reduce the risk of crushing incidents including

- An Emergency Stop at each control panel which stops all movements when activated
- Function enable (also called Deadman switch) which helps protect against inadvertent activation that is not initiated by the operator
- Control Panel Guards (stand-off bar, joystick guards) that physically protect against objects activating the controls
- Barriers on Platform controls to limit incorrect selection (individual controls for each movement, controls return to neutral, detent switches, individual control guards)
- Operator manuals
- A pre-start inspection as described in the operator manual and recorded in the logbook

Evaluating the need and selection of a Secondary Guarding System

During the work task planning phase assess the following:

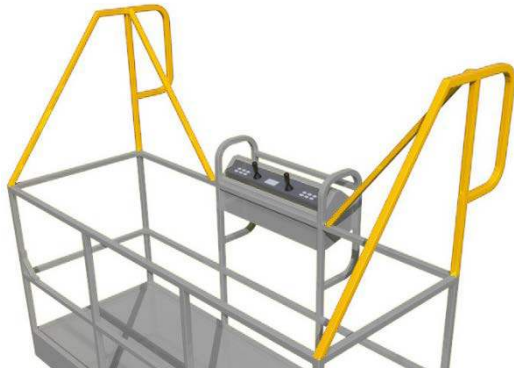
1. Do the existing MEWP design protections adequately mitigate the risks?
2. Consider if protection is required at the platform controls or across the platform.
 - Will there be multiple people in the platform?
 - Is the control panel fixed or can it be moved away from the secondary guarding system?
3. Review the position of the platform controls (for example if the controls are mounted outside and below the guardrails the risk of the operator being pushed onto the controls is reduced).
4. Assess the environment and worksite conditions. High noise, sound absorbent surfaces, dust, or vibration may reduce the effectiveness of a system (Consult the supplier instructions).
5. Confirm the proposed system is intended for use on the specific MEWP model.
6. Assess the functionality of the secondary guarding system and its effectiveness in reducing the risks identified in the risk assessment.
7. Check if the secondary guarding system would restrict moving the platform into position.
8. Assess that the system does not introduce additional risks that outweigh the benefits or impair the normal safe functioning of the MEWP.
9. Identify how the system will alert the worksite if an incident occurs.
10. Is the use of the selected MEWP with the secondary guarding system the best way to reduce the identified risks? Consider alternative MEWPs or methods.

Secondary Guarding Systems

Examples of types of Secondary guarding systems

Protective Structures

A mechanical barrier fitted to the guardrails at the platform controls or around the platform.



Operator contact device

A device at the platform controls that is activated by the operator's body if pushed towards the controls and then restrict MEWP movements.



Proximity Systems

Sensors that may detect an object near (eg above and behind) the operator and then restrict MEWP movements
Multiple sensors are typically used.



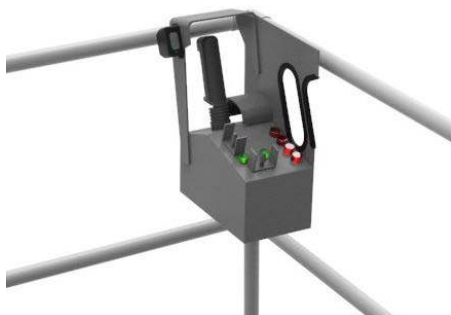
Contact switches

Contact switches that activate when contact is made with an object and then restricts MEWP movements. Typically fitted on poles or whisksers.



Operator Presence System

The system monitors the position and movement of the operator with respect to the controls and enables MEWP movement.



Functionality of systems

Different systems have different functionality.

The Secondary guarding system may only be active when the MEWP is in certain configurations.

It may be designed to protect either

- the MEWP operator standing at the platform control panel
- the operator and other occupants in the MEWP platform

It may activate

- when the platform is above a certain height
- in creep or slow speed
- during a specific movement only (for example lift)

Once activated the secondary system may:

- signal an alarm
- slow or stop movements
- automatically move in the opposite direction
- allow movements in the opposite direction
- require a reset before movements are allowed

It is necessary that the operator and ground personnel understand how the system will activate and what movements are possible when activated.

Installing a Secondary Guarding System

A secondary Guarding System may be a factory-fitted option; it may be an option supplied by the MEWP manufacturer or it may be a third-party product.

If installing a secondary guarding system to a MEWP, undertake a specific engineering risk assessment to verify the integrity and safe functioning of the MEWP. The MEWP manufacturer and the supplier of the system should be consulted to assess the impact on safe operation of the MEWP, compliance and design registration and that no new hazards are introduced.

The Secondary Guarding System must be installed as per the instructions provided by the supplier.

Remember...

Secondary guarding systems are intended to further reduce the risk of crushing.

Select an appropriate MEWP and secondary guarding system. A Secondary guarding system alone must not be solely relied upon to protect the platform occupants from harm. It must not introduce other hazards that increase the overall risk to personnel when using MEWPs.

Follow manufacturer instructions (i.e. operator manual) for the specific MEWP and Secondary Guarding System being used.

Continue to monitor and assess the hazards to confirm the risk controls measures are sufficient.

About the EWPA

As the voice representing the access industry, the EWPA is at the forefront of best practice and safety. The aim of the EWPA is to advance the safe use of MEWPs in Australia and to support a safe and skilled workforce. We do this by providing safety and technical resources plus training programs including the [EWPA Yellow Card](#).

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