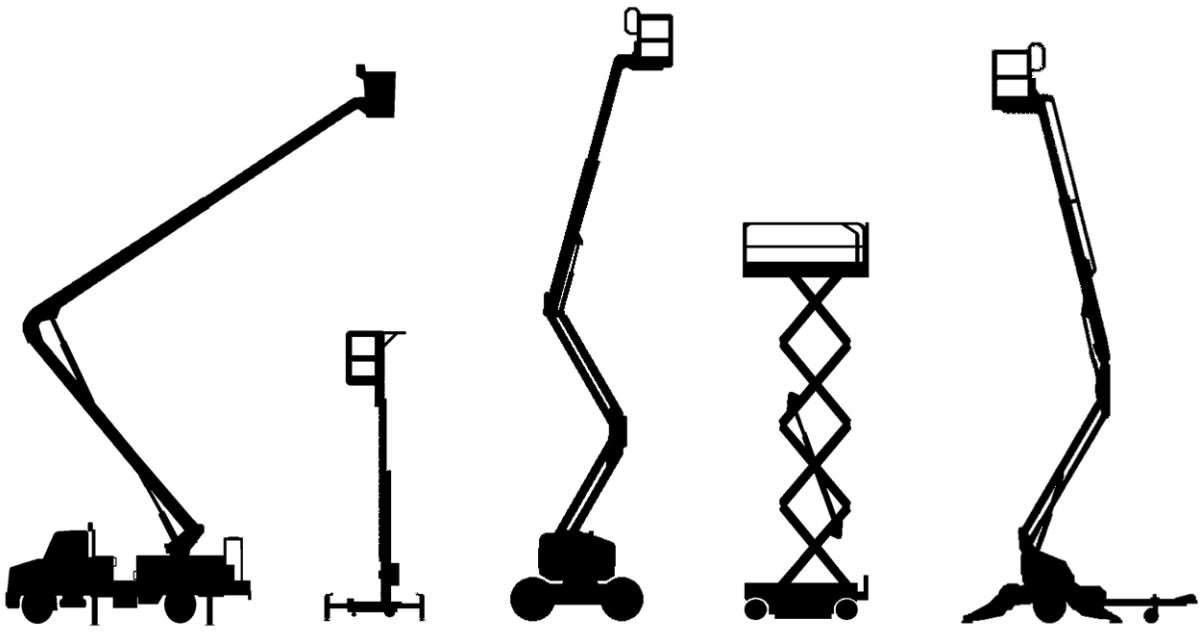
NAME:_____

EWPA

ELEVATING WORK PLATFORM ASSOCIATION OF AUSTRALIA

Participant Workbook

EWP Trained Operators
Yellow Card Licence



IMPORTANT INFORMATION

We use the information you provide to accredit applicants. We may give the information to our auditors for quality control purposes. We do not trade, rent or sell any information you supply. You can check the information we hold about you at any time. For more information ask us for a copy of our privacy policy. Email: **info@ewpa.com.au** or visit our website: www.ewpa.com.au

PURPOSE OF TRAINING

WHS/OHS legislation throughout Australia requires that operators of Elevating Work Platforms (EWP's) are fully aware of safety considerations and potential hazards prior to operating and that all workers and PCBU's (employees and employers) must meet their "duty of care".

The Elevating Work Platform Association of Australia (EWPA) has developed an operator training program known as the "Yellow Card". It has been developed in consultation with industry and regulators. Additional to the Nationally Recognised Training unit, specific industry content has been added to further cover safety, hazard evaluation, pre-operational checks and recognition of individual operation of EWPs; boom type, truck mount, trailer mount, vertical mast, scissor type and for any other EWP type of any height, that do not require a specific national high risk licence to operate.

Upon successful completion of the program, applicants will receive a 'Yellow Card' that acknowledges attainment of the EWPA Yellow Card Training Program as well as a record of the type of EWP practical training was conducted on.

Importantly this card provides documentary evidence for PCBUs that operators have undergone relevant training which assists them to comply with their

WHS/OHS obligations. For more information visit: www.ewpa.com.au

TRAINING OBJECTIVES

To provide the skills and knowledge required to safely operate EWPs boom type, truck mount, trailer mount, vertical mast, scissor type and for any other EWP type of any height, that do not require a specific national high risk licence to operate.

UNDER 18 APPLICATIONS

Minimum age to obtain a Yellow Card is 16 years. Applicants under 18 years of age will have a ***Restricted Yellow Card*** issued, marked with an **R**. The restriction will only allow the Operator to operate an EWP under direct supervision of an Unrestricted (over 18) Yellow Card holder of the same EWP class. When an operator turns 18 the operator will need to contact the EWPA to organise issue of an Unrestricted Yellow Card.

ACCREDITED TRAINER

Training and Assessment can only be completed by an Accredited Trainer (AT) registered with the EWPA who has the following qualifications:

- **Cert. IV in Training and Assessment:** TAE40110; TAE40116
- **HRW Licence WP, Boom type 11m and over:** TLILIC2005; TLILIC0005 or equivalent
- **Work safely at heights:** RIIWHS204D, CPCCCM2010B or equivalent
- **Construction Induction Card / White Card:** CPCCWHS1001 or equivalent
- **EWPA Yellow Card**
- **Operate elevating work platform**: RIIHAN301D; RIIHAN301E

Upon request, the Trainer can produce their EWPA *Accredited Trainer* card.

TRAINING ENVIRONMENT

The training environment should be a controlled area conducive to training. It should not have excessive noise and a Hazard Assessment shall indicate that the area is a safe environment.

METHOD OF DELIVERY

The training will be delivered in the following methods: Visually, Verbal explanation, Demonstration, Observation.
It is at the discretion of the Accredited Trainer (AT), that a verbal assessment can be undertaken for applicants whose writing skills are poor or inadequate. The applicant must still be able to understand the English language. Prior arrangement or a separate appointment may be required for verbal assessment.

TRAINING AND ASSESSMENT TIMING

Training and Assessment time is flexible; however, it is expected to take a minimum of four to six hours for a single module to be completed. This time may vary according to group size, prior knowledge and experience. For example, if the training session was completed in a shorter period of time for one of the previous reasons, AT's should detail the reason in the course comments section of the EWPA App/Web portal, an comments section within the Assessment Document. It is at the discretion of the AT that the knowledge assessment shall be completed in a reasonable time dependent on circumstances.

COMPLAINTS AND APPEALS

Any participants who wish to make an appeal to the Trainer/Assessors decision or would like to make a complaint should do so in writing. Please include the Trainer Name, Accredited Trainer number, date of Training and the appeal or complaint. Submit to: EWPA P.O. BOX 1304, Mona Vale, NSW 1660 or info@ewpa.com.au.

5 YEAR RENEWAL

EWPA Yellow Cards with Photo ID and 5-year expiry are eligible for renewal. Renewal options include face-to-face EWPA Yellow Card training or Online renewal. Online renewal is available to eligible operators only up to 6 months past the expiry date of an EWPA Photo ID Yellow Card. After this point the operator must undertake face-to face training with an EWPA Accredited Trainer for Yellow Card renewal. Operators are required to keep their details up to date with the EWPA, particularly email address, to ensure that they receive relevant communication.

If an operator lets their EWPA Yellow Card expire they may encounter difficulties gaining access to worksites/jobs.

CONTENTS

TRAINING OUTCOMES 4
LEGISLATION 4
THE EWP TRAINED OPERATOR YELLOW CARD 4
YELLOW CARD RENEWAL 5
EWP TYPE 5
SITE INSPECTION AND RISK ASSESSMENT 6
CONSULTATION 6
PERMITS 6
HAZARDS 7
Weather 7
Overhead Crush 8
Modifying or Tampering 9
OPERATION OVER WATER 9
OUTRIGGERS ON SLOPES 10
LOADS ON HANDRAILS 10
WALKING WITH SCISSOR LIFTS 9
SAFETY DEVICES AND ALARMS 11
POWERLINES 12
HAZARD CONTROL 13
PERSONAL PROTECTIVE EQUIPMENT 13
CATAPULTING 14
FALL ARREST HARNESS 14
LANYARD LENGTH 15
HARNESS INSPECTION 15
HARNESS FITMENT 16
HARNESS ANCHORAGES 16
EMERGENCY PROCEDURES 16
EMERGENCY LOWERING SYSTEMS 17
EMERGENCY DECENT DEVICE 17
SUSPENSION INTOLERANCE 18
PRE-OPERATIONAL CHECKS 18
LOGBOOK 19
COMPLIANCE PLATE 19
Pre-Checks: Visual 22
Pre-Checks: Function 22
Logbook Entries 24
Set Up Considerations 24
OPERATION 24
TRAVELLING WHILST ELEVATED 25
USING TOOLS AND CHEMICALS 25
ACCESS AND EGRESS WHILST ELEVATED 25
GAINING ADDITIONAL HEIGHT WHILST IN THE EWP 25
WHEN TO CEASE OPERATION? 25
PARKING 25
WASTE DISPOSAL 26
POST-OPERATIONAL CHECKS 26
SECURE THE EWP 26
PREPARE FOR TRANSPORT 27
ATTACHING A TRAILER LIFT EWP TO A VEHICLE: 27
AS2550.10-5.9: ACCESS TO AND EGRESS FROM THE PLATFORM IN THE ELEVATED POSITION 28

TRAINING OUTCOMES

At the successful completion of training, each participant will receive the following:

- Knowledge and skill to operate EWPs safely
- A 60-day interim Yellow Card Email with an Operator Number and completed EWP classes that can be used on the worksite until the official Yellow Card has been received.
- Operators Yellow Card with a Photo ID and 5 year expiry, Operator Number and completed EWP classes (Posted by the EWPA to the supplied postal address in the weeks following completion of training).

LEGISLATION

WHS Legislation states:*…a person conducting a business or undertaking must ensure, so far as is reasonably practicable: the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking…*
WHS Act: Division 2:19.3 (g) (Refer to your state/territory health and safety legislation)

OHS Legislation states: … *provide such information, instruction, training or supervision to employees of the employer as is necessary to enable those persons to perform their work in a way that is safe and without risks to health.… (Refer to your state/territory health and safety legislation).*

Part of your legislative responsibilities are to ensure that you have undergone suitable training for the plant you intend to operate.

High Risk Work (HRW) Licences are the minimum requirement to operate many types of plant, however if there is no HRW licence for the plant in which you intend to operate, suitable training must be completed.

Only ***competent persons*** shall be involved in the operation of the MEWP (*AS2550.10 5.2*)

THE EWP TRAINED OPERATOR YELLOW CARD LICENCE

The HRW licence class **WP** allows a person to operate any Boom-type EWP capable of extending a distance equal to or exceeding 11 metres in height or reach.

Class WP is not appropriate training for the use of Boom lifts under 11 metres, Scissor Lifts or Vertical Lifts. The Yellow card program is designed to fill the void where there is no High Risk Work licence available

Upon successful completion of the appropriate modules, Yellow Card recipients will be able to operate a Vertical Lift, Scissor Lift any height, or Boom type EWP under 11m height or reach.

- Under 18's will be issued a 'Restricted' Yellow Card
- Minimum age 16 years
- Will only be able to operate under direct supervision

This training program has been developed by the EWPA in consultation with industry and the regulators throughout Australia.

This training should not be confused with a nationally recognised Unit of Competence. For those who require a Statement of Attainment for a Unit of Competence, an RPL pathway is available. Speak to your trainer for more information.

YELLOW CARD RENEWAL

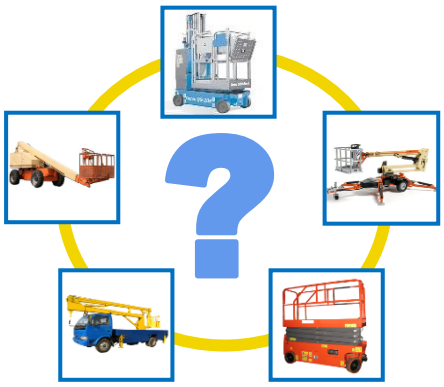
EWPA Yellow Cards with a Photo ID and 5-year expiry are eligible for renewal. Renewal options include face-to-face EWPA Yellow Card training or Online renewal.

Online renewal is available to eligible operators up to 6 months past the expiry date of an EWPA Photo ID Yellow Card. After this point the operator must undertake face-to face training with an EWPA Accredited Trainer for Yellow Card renewal. Whilst the eligibility to access online renewal is open up to 6 months past the expiry date, the expiry date will stand and you may encounter difficulties gaining access to worksites/jobs.

Operators are required to keep their details up to date with the EWPA, particularly email address, to ensure that they receive relevant communication regarding the status of their yellow card.

EWP TYPES

- VL - Vertical lift
- SL - Scissor Lift
- BL - Self Propelled Boom Lift
- TL - Trailer Mounted Lift
- TM - Truck Mounted Lift



Elevating work platform is the term used to describe all configurations of EWP's being self-propelled, trailer mounted (towable) or truck mounted. This term is not used when the work platform is an attachment such as a "personnel basket" or "cage" fitted to plant such as a forklift. Above are pictures of the most commonly found EWP's.

Elevating Work Platform - *AS2550.10; 1.3.7*

A mobile machine (device) that is intended to move persons, tools and material to working positions and consists of at least a work platform with controls, an extending structure and a chassis.

There are many variations of EWP but they can be placed in one of two broad categories:

Boom type

An elevating work platform by which the platform is supported by a hinged member that may be luffed, telescoped or slewed. Boom types can be self propelled, trailer or truck mounted.

Scissor type

Scissor type EWP's can only move the platform in a vertical direction. Unlike the boom type, it has no ability to telescope or rotate. Scissor types can be self propelled, trailer or truck mounted.

Vertical lifts are similar to scissor lifts in that they operate within the vertical plane only.

What will determine the EWP type you select?

- Ground conditions/Stability
- Obstacles/Restrictions
- Hazards Assessed
- Height to Access
- Weight required to elevate
- Indoor/Outdoor

SITE INSPECTION AND RISK ASSESSMENT

Site inspections and risk assessments are required to be carried out before operating EWP's, regardless of location, duration or type of job.

A site inspection will determine: Site layout, access and exit routes, site hazards, job requirements, site specific rules and procedures. You may also be required to do a Site Induction.

All site hazards must be identified, analysed, and effectively controlled to eliminate the danger if possible. If elimination is not possible, then suitable control measures should be implemented.

This should be documented in the form of a Risk Assessment or Job Safety Analysis (JSA).

A Safe Work Method Statement (SWMS) may be required to be completed and submitted along with licences and qualifications for approval before work can commence.

Consultation

During the planning stages of the job you may also need to consult with:

- Owners of the building
- Road/Transport Authorities
- Local Councils
- Site Managers
- Supervisors
- Other Trades Persons

Permits

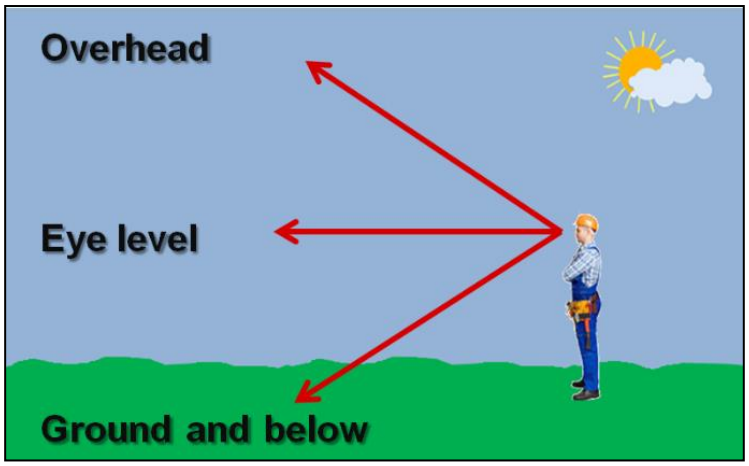
Permits may be required from any number of statutory authorities before using EWP's These may include:

- Relevant transport authority
- Local council
- Electricity
- Water
- Gas
- Telecoms

HAZARDS

Hazards are generally broken into three categories:

Hazards may include, but are not limited to:



- Underground services and pipes
- Underground Cabling
- Trenches and recent excavation
- Soft, wet or unstable ground
- Rough or uneven ground
- Ramps or sloping ground
- Bridges
- Drains, manholes, hatches
- Multi-level car parks
- Wharfs or docks
- Pedestrians, doorways and walkways
- Other equipment working in the area; vehicles, other EWPs
- Surrounding buildings
- Other tradespeople above
- Falling tools/objects
- Obstructions
- Poor visibility or lighting
- Exhaust fumes
- Weather: Wind, Rain, Lightning
- Overhead services (overhead crush)

Weather

Wind

Determine if your EWP is suitable for outdoor use and wind speed does not exceed EWP specifications.

Rain

Most EWP's are capable of operating in the rain, however consider how your site conditions may change with rain. ie: Ground may become soft and muddy.

Lightning

No EWP should be used in stormy conditions where lightning may strike. Doing so may result in serious injury or death.

Overhead Crush

Crushing from overhead structures is an ongoing issue usually resulting in serious injury or death. The possibility for overhead crush in a boom type EWP can be greater as there are a number of different raise functions which raise the platform in an arc.

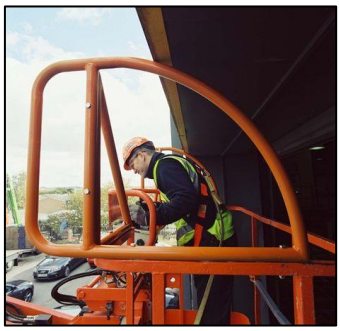
Often crushing is a result of EWP operators not being properly aware of their surroundings or being distracted whilst operating.

Crushing can be caused through a number of circumstances including:

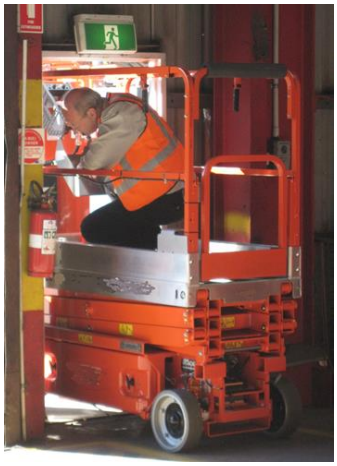
- Distractions whilst operating (E.g. Mobile phones, conversations with other personnel)
- Manoeuvring the platform into confined areas
- Mobiling at height around structures
- Rough operation of the controls

Where overhead crush hazards are identified, considerations into suitable controls methods must be addressed. Control methods may include:

- Remaining vigilant and avoiding distractions
- Selecting the correct EWP for the task (consider: platform size, boom deflection, sensitivity of controls, drive over-run, etc)
- Remaining fully within the platform when moving (Do not climb handrails or place body parts between rails and a structure)
- Avoid leaning/hunching over the controls
- Utilising a Spotter/Safety observer for guidance
- Secondary Guarding
- (Pressure sensing or Physical barriers)



Walking with Scissor Lifts



Driving a scissor lift through doors/openings with fixed handrails in place can result in the operator becoming trapped between the handrails and the door frame. This may cause structural damage to the scissor lift or the building structure.

Driving a scissor lift up/down a ramp or onto a delivery vehicle/trailer can result in the scissor lift being driven off the edge, the ramp can give way or the scissor lift can bottom out at the apex of the two different angle's causing the chassis to pivot, and loose traction.

Driving "into or out of" a confined space (for example a shipping container or delivery vehicle), can cause temporary blindness with the operator moving from visible light to the darkened void.

A scissor lift should only be operated from outside the platform using the upper control box in the following conditions:

- When performing certain maintenance or testing, the guardrails are folded or there is a risk of injury such as overhead obstructions or during loading/unloading, etc.
- If upon review, a Risk Assessment has determined that operating from the platform is not possible or practical.

The EWPA has published a guidance document detailing recommended considerations when operating the platform when outside the basket; this is available on the information section of the EWPA website: www.ewpa.com.au

Modifying or Tampering

Some injuries and deaths have been caused by tampering with the controls. (ie. jamming dead man pedal).

Under no circumstances is modifying or disabling of any controls permissible. Any modification or disabling of safety devices could enable the EWP to work outside of its safety envelope which could cause injury or death to the operator or bystanders

If any modification or tampering is detected, the machine should be removed from service and the fault recorded in the logbook.

Operation Over Water

If a boom type EWP is required to be set up over a body of water, it is important to consider the hazards when setting up the EWP.

If the EWP is set up in close proximity to the edge of the water, operators must ensure that the ground can support the weight of the EWP. Consideration must also be given to an escape plan if operators were required to evacuate the platform whilst over the body of water.

Considerations may include:

- Height of platform over the water (falling distance)
- Managing the risk of catapult into water (Mobiling whilst elevated, risk of impact from other vehicles)
- Use of life jackets
- Ground conditions are suitable

Outriggers on Slopes

Before levelling the EWP on a slope or ramp, ensure that the slope does not exceed the maximum gradeability specified for the EWP.

If the gradeability of the slope exceeds specifications, there is a risk of the EWP sliding down the slope.

Caution should be taken on icy, wet, oily, sandy, loose or newly painted surfaces as this can increase the potential for sliding.

Guidelines for levelling an EWP:

- Consult the operator's manual for correct EWP set up
- Do not exceed the specified gradeability of the EWP
- For 2WD EWPs, place the braked wheels uphill
- Do not use packing underneath wheels for levelling on slopes
- Do not exceed the rated capacity of the EWP
- Ensure the surface can support the total weight of the EWP (including rated capacity)

Loads on Handrails

Adding brackets or carrying loads on hand or basket railings is not permissible.

To do so could cause structural damage by overloading, or tip the EWP over causing injury or death.

Only manufacture approved attachments are allowed to be used and the EWP must be configured to suit the attachment.

Safety Devices and Alarms

Every EWP is fitted with safety devices which alert the operator when the EWP has (or is about to) operate outside its capabilities, or it may limit or stop the EWP's operation in certain circumstances.

Common alarms or safety devices may be:

Tilt Alarm

The EWP has exceeded its safe operating incline. Most EWPs will disable the elevating functions when this is exceeded.

If the tilt alarm sounds, stop operation, lower the platform and reassess EWP set up and ground conditions.

Load-Sensing Alarm

The rated capacity (SWL) has been exceeded and weight must be removed before proceeding. Most EWPs will disable the elevating functions if this is exceeded.

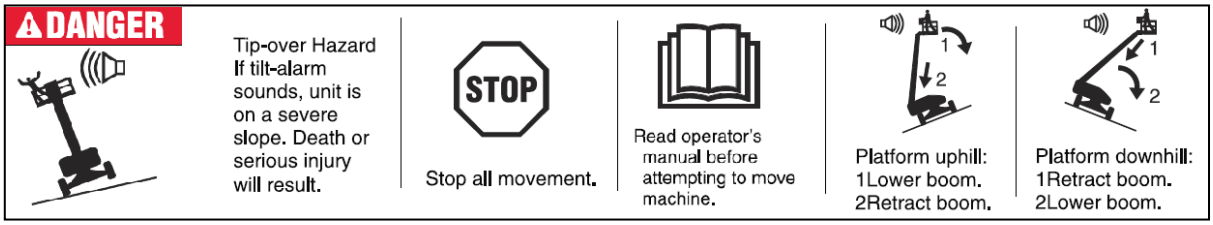
Deadman Pedal/Trigger

The deadman is a safety device which will disable all functions until depressed. It should not be used to stop normal movements of the EWP unless in an emergency situation.

Scissor/Mast Position Sensor

Some EWPs may be fitted with function cut-outs to prevent the EWP elevating in an unsafe position (ie sequential lifting) and some may be fitted with a drive enable function which will cut-out driving when slewed past the drive wheels.
If the EWP functions cut out, procedures for returning to safe operation may vary between models and manufacturers. Refer to the operator's manual for procedures.

NOTE: Operators must not ignore alarms or warning lights. It is illegal to disconnect any safety devices and any tampering or modification renders the EWP unsafe for use.



Powerlines

Working near powerlines is inherently dangerous due to the risk of the EWP contacting the lines or the power earthing through the EWP. Extreme caution must be shown when operating under or over powerlines, particularly when the EWP is capable of entering the exclusion zone. The likelihood of contact is higher in this situation and for this reason, the use of EWPs under overhead powerlines is strongly discouraged.

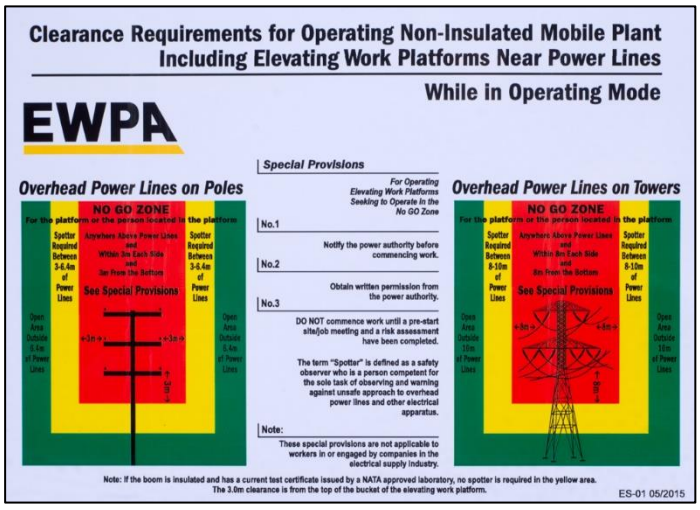
The Australian Standard AS2550.10; States that EWP's need to maintain minimum clearances from power lines.

6.4m from Distribution lines or **3m** with a competent spotter present

10m from Transmission lines or **8m** with a competent spotter present

Distances however do vary between states/territories, check local regulations:

VIC / ACT / SA / TAS / NT	**Distribution:** 6.4 metres		3 metres with a spotter present
	Transmission: 10 metres		8 metres with a spotter present
NSW / QLD	Up to 132Kv - 3m	132Kv up to 330Kv - 6m	Above 330Kv – 8m
WA	Less than 33Kv – 3m	Over 33Kv up to 330Kv – 6m	More than 330Kv–8m



Tiger-tail style coverings are NOT considered to be an insulator. They are a visual aid to make people aware of their presence. Having covered lines will not reduce minimum specified clearances.

HAZARD CONTROL

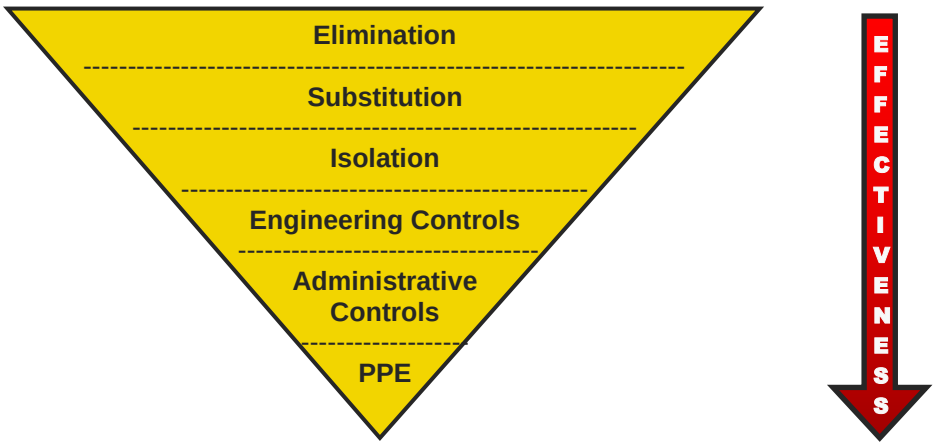
A duty imposed on a person to ensure health and safety requires the person:

(a) to eliminate risks to health and safety, so far as is reasonably practicable, and

(b) if it is not reasonably practicable to eliminate risks to health and safety, to minimise those risks so far as is reasonably practicable.

WSH Act Part 2, Division 1, Subdivision 1, Section 17- Management of risks

Under WHS/OHS Act, hazards must first try to be eliminated. If this is not possible, control measures must be implemented to lower the risk of the hazard causing harm



Control measures may include:

- Lights, lighting
- Traffic control
- Warning signs
- Flashing lights
- Fencing
- Watch person
- PPE
- Barriers, barricades, marker cones
- Using packing under stabilisers
- Stabilising the ground
- Contact competent persons
- Relocation
- Safe Operating Procedures (SOP)

PERSONAL PROTECTIVE EQUIPMENT

PPE may not prevent injury, but it is designed to provide protection and limit damage for individual workers.

PPE must be supplied by your PCBU (employer). Any PPE item that you are given must be explained to you on how to fit and use it correctly.

Task appropriate PPE can be selected after the outcome of a Risk Assessment.

Catapulting

Falling can be the result of an EWP platform levelling system failure or from the 'catapulting effect' associated with operating boom type EWPs.

Catapulting is a specific hazard to boom-type EWPs due to the platform being located horizontally away from the wheels/chassis of the EWP.

If the wheels quickly descend from one level to another, such as driving off a step, it will also cause the platform to rapidly ascend or descend at a magnified rate, potentially propelling the occupant(s) from the platform.

Fall Arrest Harness

When fitted and attached correctly, fall arrest harnesses are used to reduce the risk of injury if an operator falls or is propelled from the platform.

All personnel in the platform of a Boom type EWP must wear a full body fall arrest harness with leg and shoulder straps, sternal and dorsal attachment points and an energy absorbing lanyard.

Scissor lifts and vertical lifts do not have an identified catapulting hazard as found with boom type EWPs. Therefore, wearing a fall arrest harness is not mandatory unless a risk assessment indicates it is a necessary control measure.

There are several considerations which need to be addressed prior to using a harness system in any EWP. Considerations may include, but not limited to:

- Is there a fall hazard that is not controlled by the platform handrails?
- If so, what type of system is required to control the hazard;
  *Fall Restraint: "…physically preventing the person reaching a position at which there is a risk of a fall."
  *Fall Arrest: "…stop a worker falling an uncontrolled distance and reduce the impact of the fall."
- Is the EWP capable of withstanding the falling forces of a person? (ie will the EWP remain upright?)
- Is the falling zone clear of impact hazards?
  Safe Work Australia: MANAGING THE RISK OF FALLS AT WORKPLACES: Code of Practice

Lanyard Length

Consideration should also be given to the length of lanyard used.

The fall arrest lanyard should allow adequate movement but should also minimise the amount of possible free fall distance.

Standard length EWP lanyards are generally 1.8 metres, however consideration of shorter lanyards (such as 1.2m or less) should be given for EWPs fitted with high anchorage points and/or when the platform is under a height of 5 metres.

LOW ANCHORAGE
1.8m LANYARD SUITABLE

MEDIUM HEIGHT ANCHORAGE
SHORTER LANYARD RECOMMENDED

Harness Inspection

The operator must check and inspect their fall arrest harness before use:

- Manufacturers tag is present, legible and indicates harness is within its service life.
- Harness should be fitted with a tag indicating it has been inspected by a competent person at the required interval; 6 months or more often in harsh operating environment.
- Check for damage to webbing; burns, cuts, rotting, frays, stitching, chemical damage, excessive UV damage, etc.
- Check, damage to buckles, keepers, and hooks.
- The hook must be at least two action to open.
- Check the energy absorber has not been separated and the outer sheathing is undamaged.
- Check the harness and lanyard assembly is Australian Standard approved and check the use by or remove from service date.
- The fit should be snug, but not restrictive of movement.
- Check there is no twisting or bunching of straps.
- Avoid letting the lanyard drag on the ground.

Harness Fitment

Place harness over the shoulders

Pull the chest strap across and attach the buckle

Pull leg straps between legs and attach the buckles

Harness Anchorages

- **Upon entering the EWP, all occupants must clip their harness onto the specified anchorage.** Normally the anchorage will be marked with a decal.
- Do not connect your harness to anywhere on the platform, except the specified anchorage.
- Each anchorage is designed for use by ONE PERSON ONLY

EMERGENCY PROCEDURES

WHS Regulation 80

A person conducting a business or undertaking who implements a fall-arrest system as a measure to control risk must establish emergency and rescue procedures

- Working at height introduces the need to develop response procedures in the event of an emergency.
- Types of emergency response may be task specific and the required rescue equipment may be identified through completion of a risk assessment.
- Rescue procedures should not put any other people at risk.
- Examples of emergency procedures may include: EDD/CDD, use of another EWP, use of a ladder, etc.

OHS Regulations

…the employer must ensure that emergency procedures are established in accordance with this regulation before the task is undertaken…

- Working at height introduces the need to develop response procedures in the event of an emergency.
- Types of emergency response may be task specific and the required rescue equipment may be identified through completion of a risk assessment.
- Rescue procedures should not put any other people at risk.
- Examples of emergency procedures may include: EDD/CDD, use of another EWP, use of a ladder, etc.

AS2550.10 5.14
In addition to the WHS/OHS Regulations, the Australian Standards 2550.10 5.14 details the requirements for assistance from support personnel.

Arrangements shall be made for rescue in the following events:

a) Failure of the elevating mechanism
b) Disabling injury or sickness of the operator
c) The MEWP coming into contact with overhead powerlines
d) The operator being suspended in a safety harness after being expelled from the MEWP.

Ground personnel shall be trained in the use of emergency retrieval systems.

Emergency Lowering Systems

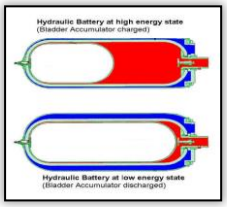
All EWPs are fitted with at least one lowering device for use in emergency situations. Types of devices include:

Battery Back-up Pump
Modern EWPs are often fitted with an auxiliary hydro-electric pump. This system allows the platform to be lowered even when the motor is stopped. Controls are located both in the platform and at the base.

Bleed Valves
The platform can be lowered by either pressing or unscrewing the bleed down valve. Some boom lifts may also have a manual slew function fitted. Bleed valves are usually located on the base or on the lifting mechanism of the EWP.

Hand Operated Jack/Pump
The platform can be lowered by selecting the required switch/lever and then pumping the jack. This provides manual operation for most of the EWPs functions. Jacks are usually located on the base, however some units may have a jack fitted in the platform.

Hydraulic Accumulator
A hydraulic accumulator stores hydraulic pressure in tanks whilst the engine is running. When emergency lowering is needed, the accumulator can be activated to allow the platform to be lowered and slewed when the truck engine is stopped.



Emergency Decent Device

Also known as a Controlled Descent Device

- *Commonly found on EWP's used for work on utilities*
- *Provides alternate lowering of the occupant in an emergency i.e. EWP has struck power lines*
- *EDD/CDD is only briefly explained in this program. Users must seek specific training for any rescue equipment as per WHS regulation.*

WHS Regulation 80

The procedures must be tested so that they are effective. Workers must be provided with suitable and adequate information, instruction and training in relation to the emergency procedures.

AS2550.10 Section 2

Requires emergency retrieval procedures to be addressed for the evacuation of personnel from the MEWP, and that procedures are established for foreseeable situations and emergencies. Evacuation procedures must be considered by ***competent persons.***

Suspension Intolerance

Suspension Intolerance occurs when a person is suspended in a harness for a prolonged period of time.

Blood pools in the lower limbs due to lack of movement of muscles and tissue, and toxins build in the blood as a result of lack of circulation, which may very quickly cause unconsciousness or even death.

RESCUE

- Call for immediate medical assistance
- Rest the victim in a position of comfort, ideally lying down, provide reassurance
- Loosen or remove harness
- Manage associated injuries or wounds
- Monitor for signs of life at frequent intervals

The hazard of suspension intolerance following a fall highlights the necessity of a well-planned and rehearsed rescue plan. The above rescue procedures are given as a guide only and may not be applicable to all situations. In addition to the rescue plan procedures, the rescuer should seek guidance from emergency services or medical staff on how to manage the victim until professional help arrives.

Note: Any persons, who have been subject to hanging in a harness, should be treated as a victim of suspension intolerance until medical staff confirm otherwise.

PRE-OPERATIONAL CHECKS

Pre-operational inspections shall be carried out at the beginning of each working shift in accordance with the pre-operational checklist, and the results entered in the Logbook.

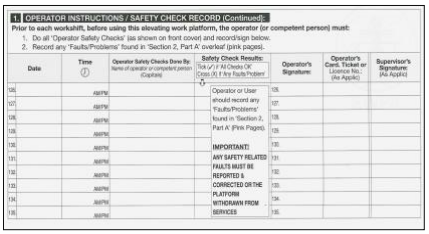
Where pre-operational inspections reveal a safety malfunction or potential risk, the MEWP shall not be put in service until the risk has been assessed by a competent person and the appropriate action carried out and recorded.
AS2550.10: 5.1.2 Operating instructions

Logbook

Every EWP in Australia will be fitted with a logbook which can be found in the yellow pouch attached to the platform. The logbook should be the first reference when conducting your pre operational inspection to check if the EWP is in serviceable condition for use. The logbook is the method of communication between the owner and the operators.

If the Logbook is missing, the EWP must not be used. Tag out the EWP and report to supervisor

The logbook has three main sections:


1 OPERATOR INSTRUCTIONS / SAFETY CHECK RECORD (Continued)

Prior to each workshift, before using this elevating work platform, the operator (or competent person) must:

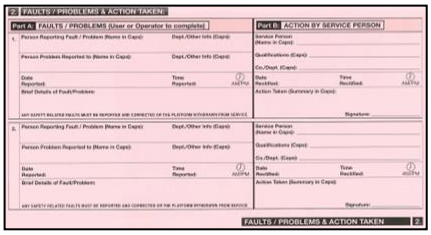
1. Do all 'Operator Safety Checks' (as shown on front cover) and record/sign below.
2. Record any 'Faults/Problems' found in 'Section 2, Part A' overleaf (pink pages).

Date	Time	Operator Safety Checks Done By: Name of operator or competent person (Capitals)	Safety Check Results: Tick ✓ if 'All Checks OK' Cross (X) if 'Any Faults/Problems'	Operator's Signature:	Operator's Card, Ticket or Licence No. (As Applic.)	Supervisor's Signature: (As Applic.)
125			Operator or User should record any 'Faults/Problems' found in 'Section 2, Part A' (Pink Pages).	125		
127				127		
129				129		
131			IMPORTANT! ANY SAFETY RELATED FAULTS MUST BE REPORTED & CORRECTED OR THE PLATFORM WITHDRAWN FROM SERVICE	131		
133				133		
135				135		

1. OPERATORS' LOG

This is filled out by the operator after the pre-operational checks have been carried out.

2. FAULT REPORTING


2 FAULTS / PROBLEMS & ACTION TAKEN

Part A FAULTS / PROBLEMS (User or Operator to complete)

Part B ACTION BY SERVICE PERSON

FAULTS / PROBLEMS & ACTION TAKEN 2

PART A; is filled out by the operator once a fault is detected.

PART B; must be completed by the authorised repairer before it can be returned to service.

3. SERVICE HISTORY


3 OWNER INSTRUCTIONS / ROUTINE MTCE & SAFETY CHECKS

At intervals relative to frequency and severity of use, but in no case more than 3 months apart, the owner (or owners representative) must:

1. Do all 'Owner Routine Maintenance & Safety Checks' (see back cover), record and sign below.
2. Record/rectify any 'Faults/Problems' in 'Section 2' (pink pages).

IMPORTANT! ANY SAFETY RELATED FAULTS MUST BE REPORTED AND CORRECTED OR THE PLATFORM WITHDRAWN FROM SERVICE

Details of last 'Owner Routine Maintenance & Safety Check' (Brought forward from previous Logbook)

Date / Hourmeter:	'Owner Routine Maintenance & Safety Checks' Done By:	Notes / Service Reference: (Optional)
1.		
2.		
3.		

OWNER ROUTINE MTCE & SAFETY CHECKS 3

The owners log of the servicing of the EWP.
EWP's are required to be serviced/inspected every 3 months regardless of the frequency of use.

EWPs should also meet annual inspection and major inspection requirements under AS2550.10 section 6.

Compliance Plate

Every EWP must have a readable compliance plate. This allows the operator to determine the specifications and capabilities of the EWP. The compliance plate may be found on the chassis or under engine covers. It is recommended that the operator also clarify any specifications they may be unsure of by looking at the operator's manual.

Compliance plate information may include:

Platform Height

The vertical distance from the surface upon which the EWP is supported to the floor of the platform at its maximum height. This is normally written in metres or feet.

Platform Reach

The horizontal distance from the axis of rotation of the boom to the outer edge of the platform when fully extended. This is normally written in metres or feet.

Weight
How heavy the EWP is. This does not include the people and equipment inside the platform unless otherwise stated. This is usually stated in kilograms.

Rated Capacity (Safe Working Load)
The compliance plate will state maximum weight and number of people allowed in the platform.
Operators, tools and equipment must not exceed the Rated Capacity.
Any load in the platform should be distributed as evenly as possible.

(Manual) Side Force
The maximum allowed sideways force (push or pull) that can be applied to the platform. Side force is stated in Newtons. The general rule for converting Newtons to kilograms is: Newton rating divided by 10. ie: 400 ÷ 10 = 40 kg.

As it is difficult to determine the amount of side force being applied, the following operating precautions should be followed:

- *Do not brace yourself against the handrails/toe boards of the platform whilst pulling an object towards them or pushing on a structure (ie. drilling into a wall).*
- *Observe whether the platform or basket is moving backwards or forwards while working and if so, modify the work method or use equipment that will lessen the amount of sideways motion.*
- *If too much side force is applied on the basket/platform, damage may occur including: overstressing welds, bending or twisting scissor stack or boom components, damaging basket rotator bolts, damaging slew ring/motor teeth etc.*

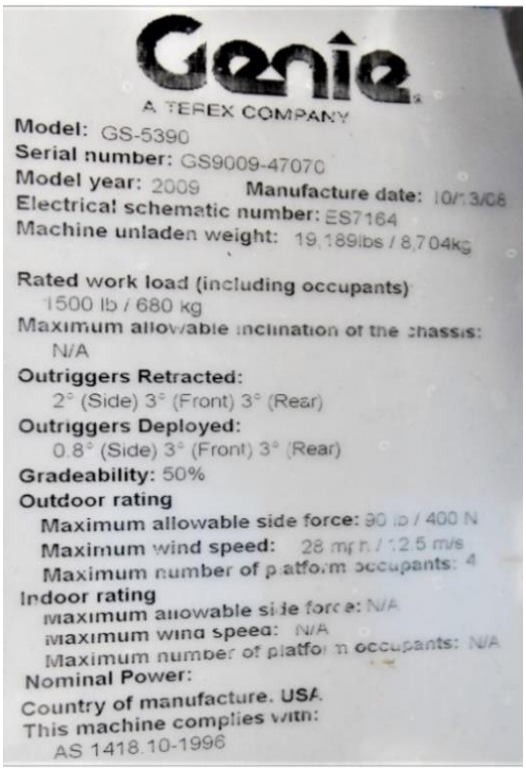
Operating Angle
The maximum angle/slope the EWP is designed to be elevated on as specified by the manufacturer. This will be between 0°and 5°.

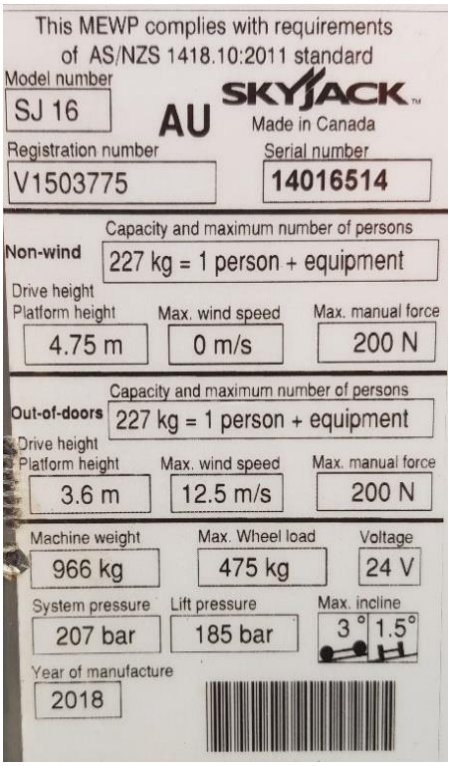
Gradeability (percent gradient)
The gradeability of an EWP is the maximum gradient that it can travel when in the stowed (fully retracted/lowered) position. This is particularly important when travelling downhill; will the brakes hold the EWP when stopping? Gradeability is usually stated as a percentage between 10%-50%
The general rule for converting percentage to degrees is: Percentage rating divided by two.
ie: 40% ÷ 2 = 20°

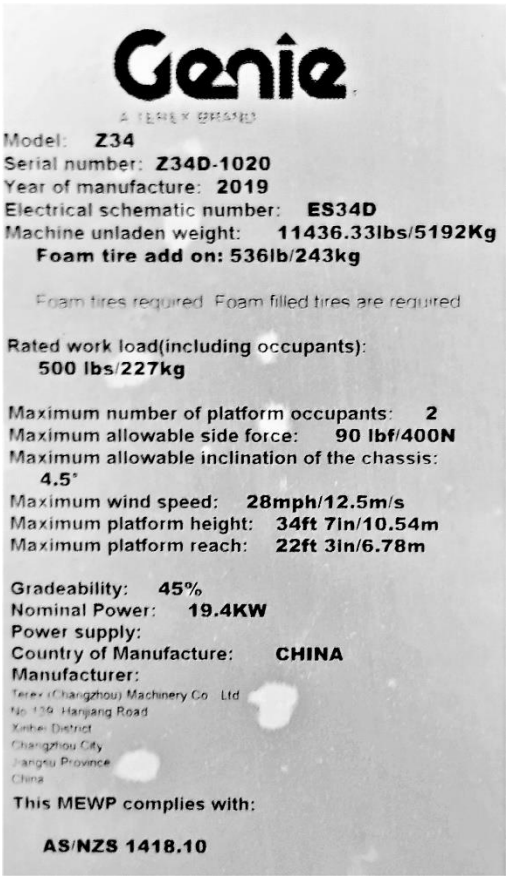
Wind Rating
AS2550.10 states that to use an EWP outdoors it must be wind rated 12.5m/s or higher.
If there is no wind rating, or the wind rating is 0m/s, it must only be used indoors.
Wind rating is stated in Metres per Second (m/s) 12.5m/s = 45 kmph = 28 mph

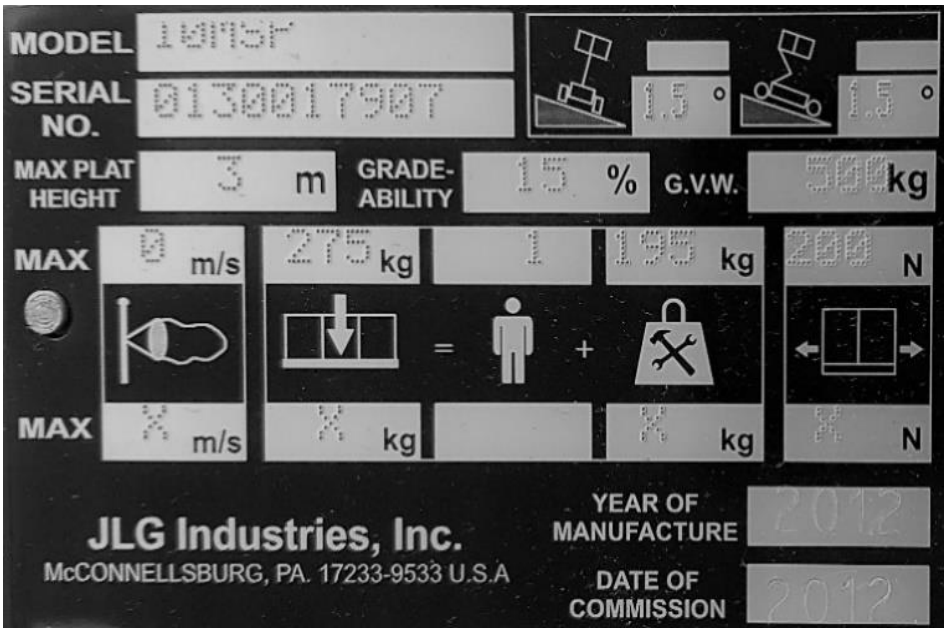
A wind rating of '0 m/sec' means the EWP should only be elevated whilst indoors.

Examples of MEWP Compliance Plates









How to Determine Wind Speed

It is recommended as part of the operators PPE, that they obtain an anemometer, a device used to measure wind speed.

If an operator does not have an anemometer, there is a chart used as a guide to determine wind speed called the *'Beaufort Wind Scale'*

Wind	Description	Speed (m/s)	Speed (Km/h)
Light Breeze	Wind felt on face leaves rustle, ordinary wind vane moved by wind	1.7 – 3.1	6 - 11
Gentle Breeze	Leaves and small twigs in constant motion. Wind extends light flags	3.6 - 5.3	12 – 19
Moderate Breeze	Raises light dust and loose paper. Small branches are moving	5.6 – 7.8	20 – 28
Fresh Breeze	Small trees and leaves begin to sway, creates waves on inland water	8.1 - 10.6	29 – 38
Strong Breeze	Large Branches in motion. Umbrella used with difficulty	10.8 - 13.6	39 – 49
Near Gale	Whole trees in motion; inconvenience felt when walking against the wind	13.9 – 16.9	50 - 61

If operating in any windy conditions and the above resources are not available or suitable, you should seek advice from the local weather service. Additionally, consideration as to whether the particular environment they are working in has the potential to amplify the wind.eg. working in narrow areas between tall structures, near the coast or ocean etc.

Pre-Checks: Visual

1. Structural damage to booms/scissors/mast/basket/components
2. Fluid Levels/Leaks (Hydraulic oil, engine oil, coolant etc)
3. Wheels and Stabiliser Condition and Security
4. Slew Mechanism
5. Signage/Decals/Operators Manual
   Operators must have access to the operator's manual. If it is missing or damaged, request a copy from the hire company, or it may be possible to access a copy from the manufacturer's website.






Pre-Checks: Function

Check all controls with engine or power off.

- Check that switches or levers return to centre when released.
- Check key switch and emergency stop.
- Emergency Stops are located at the Ground Control and Work Platform / Basket.

Set outriggers / stabilisers as required

If the EWP is fitted with outriggers or stabilisers, ensure to deploy these prior to operating.

If the EWP is not fitted with outriggers, ensure it is set up on suitable ground.

If ground stability is questionable, heavy timbers or packing may need to be set up under the footplates.

NOTE: Avoid lowering outriggers/stabiliser one at a time. This may cause damage to the chassis from twisting.

Either lower two at a time or if fitted with auto levelling, all four may be lowered simultaneously.

Check all functions from ground and platform controls with engine or power on

- Check operation and stability of stabilisers
- Check raise and lower of boom sections or scissor stack
- Slew left and right
- Boom extensions
- Extra jib raise / lower, rotate left / right
- Basket rotate, basket level, deck extend / retract
- Emergency Lowering
- Check the deadman's control pedal / trigger switch are operational

  Do not check by releasing the switch whilst travelling, check by releasing while operating e.g. boom raise. As the boom is raised and deadman control released, the movement should stop.

- Check the steering and brakes while moving in forward and reverse direction.

  Caution: some EWP's momentarily over-run before the brakes apply. Allow ample braking distance.
- Check audible warning devices, flashing lights, gauges, battery charge.

Logbook Entries

IF the EWP checks OK
If all of the functions and controls are operating correctly from the ground and from the platform then tick the "Safety Check Results" section and sign as the Operator in the "Operator Safety Checks" section of the logbook.

If a fault is detected
If a fault is detected put a cross in the "Safety Check Results" section and record the details in the pink "Faults/Problems/Action Taken" section of the logbook. Tag out and isolate the EWP and report to an authorised person.
The EWP is not to be used.

Set Up Considerations

Ensure the EWP is appropriately located for the task being conducted:

- Can the ground/structure support the weight of the EWP?
  If unsure, consult with a competent person. This may include a supervisor, site engineer or geotechnician.
- Will load mats or hardwood packing be required?
  If the ground stability is questionable, such as soft dirt, stabilising methods such as hardwood timber packing, load mats or steel plates with friction material may need to be used to spread the weight of the EWP and prevent sinking.
- Can the Ground Controls/Emergency Lowering system be accessed if parked close to a structure?
  If the EWP is parked very close to a wall or structure, the ground controls/emergency lowering controls may not be accessible, especially if a cover requires opening to gain access. The EWP may need to be turned around to ensure these controls are not obstructed if an emergency occurs.
- Are there any hazards in the platform operating zone? If so, are these hazards being controlled?
  Hazards may include building protrusions, balconies, trees, powerlines, low roof and door heights etc. Any hazards which may pose a risk to any personnel during operations must be controlled before operation commences.

OPERATION

It is important to keep a constant look out for changing work site conditions:

- Changing weather conditions
- Hazard control measures no longer sufficient
- Ground conditions are still sufficient
- Increased site traffic (personnel/machinery)

During operation, ensure the EWP continues to function correctly and safely and never work outside the EWP's specifications!

Travelling Whilst Elevated

An EWP can only be driven at height on a level and stable surface which is clear of personnel and obstructions, when the site conditions, weather conditions and all other factors make it safe to do so.

When traveling at height be cautious of piping, drains and potholes, exclusion zones should be set up.

Using Tools and Chemicals

Operators should select tools appropriately, according to the task, i.e. Use a battery drill instead of a 240v drill in wet conditions. Operators should make sure tools do not impede safe access or operation and tool lanyards should be considered to prevent dropping tools from the platform.

When using chemicals, personal safety and environmental requirements must be considered. Safety Data Sheets provide all the relevant information for using the chemical safely.

Access and Egress whilst Elevated

Using an EWP to gain access whilst elevated is only permissible if carried out in accordance with AS2550.10,5.9 (refer to Appendix A, page 25 of this workbook). Access and Egress should not be attempted on a vertical lift due to their unstable nature whilst elevated.

Gaining additional height whilst in the EWP

The EWP occupants must only stand within the platform floor. Dangerous practice such as using handrails or other items such as ladders, scaffolding or boxes within the platform to gain extra height are not permissible and may lead to serious injury or death.

When to Cease Operation?

An operator should stop using an EWP when site or weather conditions become unsafe or the operator deems it to be unsafe.

PARKING

Park the EWP in a suitable location away from:

- doorways / access ways
- walkways
- facilities or fire fighting equipment
- sloped / soft ground

SHUTDOWN PROCEDURES

- Lower the boom into the rest cradle and lower the platform as low as practical to the ground to enable exit from the platform. Do not contact the ground or apply any downward force.
- Scissor stacks should be lowered fully

- Ensure the park brake is applied if applicable
- Truck and Trailer mounted booms require the park brake to be engaged
- Select the appropriate gear if applicable (Neutral / Park)
- Outriggers / stabilisers raised / retracted and locked into place
- Ensure all systems are off
- Remove all tools/gear and dispose of waste appropriately
- Remove the key
- Ensure slew lock pin is engaged (if applicable)
- Ensure boom lock downs are in place (pins/straps/clips)
- Isolate battery

Waste Disposal

It is important to dispose of any waste materials appropriately to prevent personal and environmental harm.

- Sensitive oils, fluids or materials must be disposed or recycled as mandated by legislation, codes of practice, safety data sheets and work site requirements.
- Recyclable materials placed in the appropriate disposal unit
- General waste placed in the rubbish bin

Post-Operational Checks

Carry out a visual walk around check of:

Safety devices, controls, basket, booms, hydraulics, electrics, slew gear, outriggers. Pay particular attention to fibreglass insulated boom sections for crazing, cracks, abrasion.

Report any faults to an authorised person for repair or replacement and record the details in the EWP logbook.

Charging batteries / refuelling

Batteries connected to battery charger if required or fuel tank filled as required.

SECURE THE EWP

- Check & secure all engine and access covers, ensure battery box trays and doors are secure, secure tool bin lids.
- Check the EWP logbook yellow pouch is closed to keep water out.
- Remove and store safety harnesses.
- Remove keys.

Boom Up or Down & Why?

It is common practice to leave booms elevated in order to “save space” or “prevent tampering”. If the platform must be raised to prevent unauthorised usage or tampering, make sure that there are no present hazards (e.g. soft ground) or forecast hazards (e.g. high wind).

PREPARE FOR TRANSPORT

- Clean excessive mud and dirt from the EWP prior to transport.
- Remove all loose items, tools and equipment from the platform and deck or tray.
- Place packing in a designated location, not lying loose on the tray.
- Check & secure all engine and access covers, ensure battery box trays and doors are secure, secure tool bin lids.
- Ensure turntable lock pins are engaged (slew lock pin).
- Ensure boom lock downs are in place (pins/straps/over centre buckles).
- Self-propelled booms require the boom and basket to be secured during transport as per manufacturer’s instructions.

Attaching a Trailer Lift EWP to a vehicle:

- Position the vehicle to allow attachment to the trailer
- Lower the tow coupling with the jockey wheel onto the vehicles hitch and ensure the trailer coupling is in the lock position
- Connect the electrical plug and safety chain(s)
- Ensure handbrake is disengaged and chocks are removed from the wheels
- Be aware that most trailer mounted lifts have a restricted towing speed

AS2550.10-5.9: ACCESS TO AND EGRESS FROM THE PLATFORM IN THE ELEVATED POSITION

Personnel shall not enter or leave the platform when elevated (except in an emergency) unless each of the following conditions are met:

(a) Risk analysis shows that this means of access is safer than all other means of access.

(b) The structural adequacy of the landing area has been established, and the landing area is clear.

(c) The risk of falling from the landing area is considered and controlled.

(d) The working envelope of the MEWP is at least 1.2 times greater than that required to access the landing (e.g., if the landing is positioned 10 m vertically and 5 m horizontally from the support surface, then the work platform shall be able to access a point located 12 m vertically and 6 m horizontally (see example 1).

(e) The work platform floor is capable of being located within 300 mm vertically of the landing (see example 1 & 2)

(f) Where the work platform is located over the landing, the landing point is not less than 2 m from the edge of the structure, unless a safety harness is properly worn and attached to a suitable anchorage, where any potential fall is in excess of 2 m (see example 1)

(g) Where the work platform is located adjacent to the landing, the maximum gap between the platform and landing does not exceed 100 mm, and access and egress does not take place unless a safety harness is properly worn and attached to a suitable anchorage on the structure (see example 1).

NOTE: When egressing from a MEWP, where a person is required to use a fall arrest system and remain connected to an anchorage at all times, the MEWP should incorporate a double lanyard.

(h) The base controls are tagged to indicate the equipment is in use and to caution against interference.

(i) The resulting deflection that occurs when access and egress is performed at elevated positions are assessed and allowed for.

NOTE: To avoid excessive deflection, scissor lifts should be placed end on, when the work

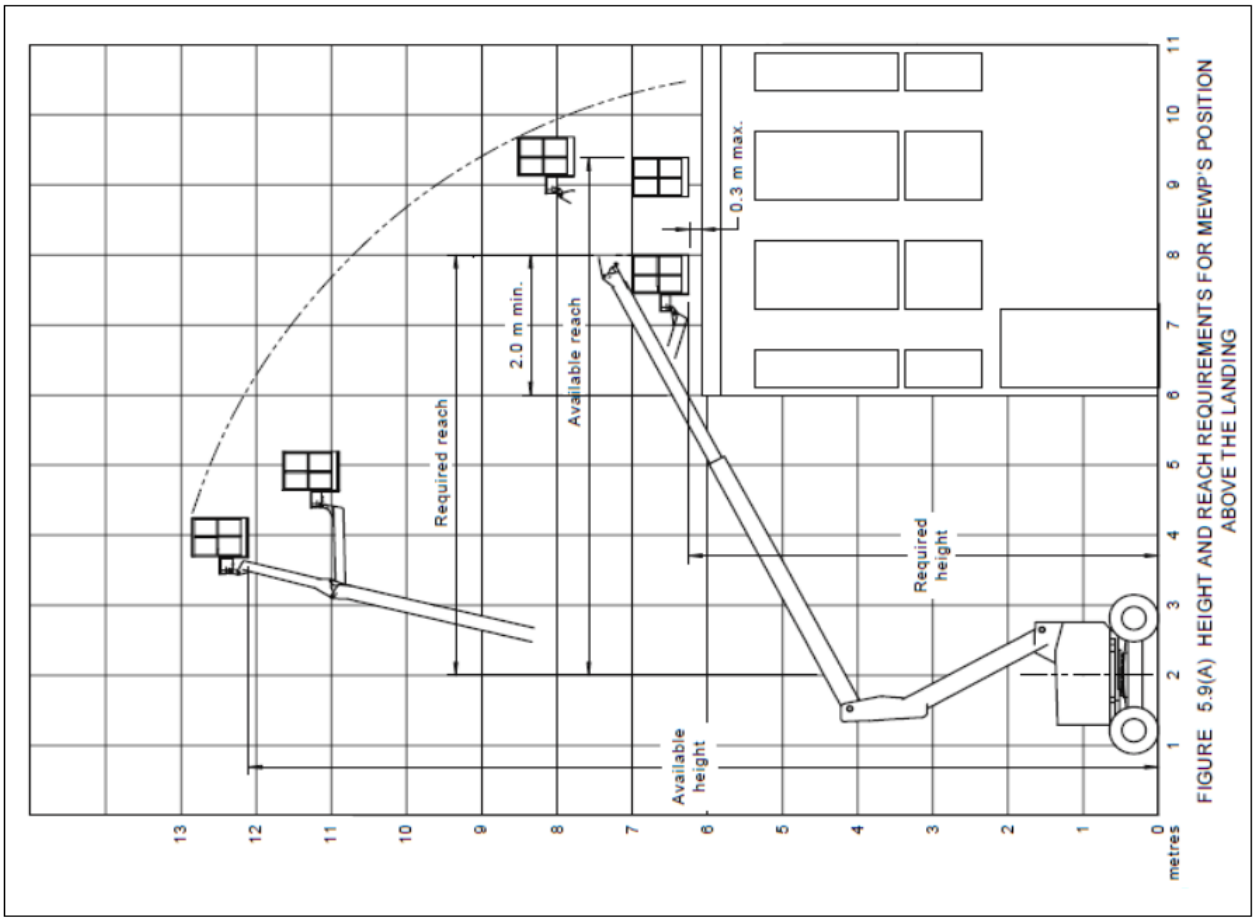


FIGURE 5.9(A) HEIGHT AND REACH REQUIREMENTS FOR MEWP'S POSITION ABOVE THE LANDING

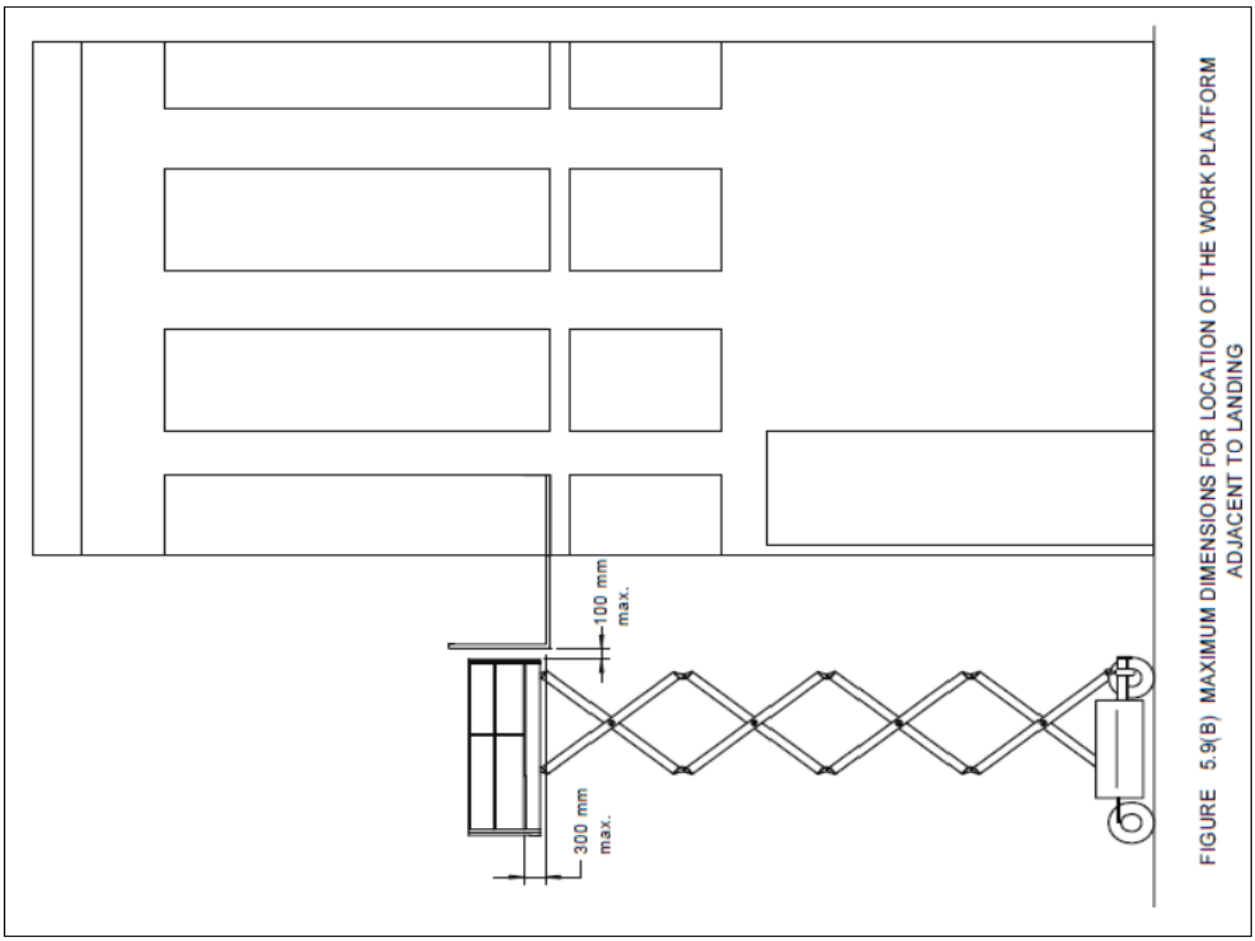


FIGURE 5.9(B) MAXIMUM DIMENSIONS FOR LOCATION OF THE WORK PLATFORM ADJACENT TO LANDING

ELEVATING WORK PLATFORM ASSOCIATION OF AUSTRALIA

WWW.EWPA.COM.AU