Due to the intensive nature of our EWP course, it is mandatory that you study this manual thoroughly before attending your course. Doing so will ensure you have the best possible chance of completing the course in one day. The written assessment is a closed book assessment. It is vital that you complete the pre-reading and the questions and bring it with you to the classroom session.

Introduction:

An EWP is a powered telescoping device, scissored device, hinged device or articulated device in order to support a platform on which personnel, equipment and materials may be elevated to perform work and if it has a boom length of 11 metres or more requires a Licence to Perform High Risk Work.

Whilst there have been several deaths in WA in recent years involving EWPs, Elevating work platforms are very safe if used, maintained and constructed correctly as they are designed to be very stable and capable of withstanding operation under normal conditions.

The majority of accidents that occur are due to:

1 – Human error – carelessness, lack of concentration;
2 – Unsafe acts – failure to follow established safety procedures, manufacturers recommendations and lack of training
3 – Unsafe conditions – weather, lighting, poorly maintained machinery.
4 – Lack of or poor maintenance.
**Definitions:**

**Counterweight** – A weight added to an EWP in such a position as to assist stability

**Safe Working Load (SWL)** – the maximum load of the EWP which is never to be exceeded. This is always detailed on a decal which is permanently fixed to the machine and stated in the Operator’s Manual.

**Platform** – also called the basket or bucket. The only area in which personnel and goods shall be carried. This is where the main controls (pictured) are usually located.

**Ground Controls** – A secondary set of controls located at an accessible location from the ground (pictured) and are used for daily pre-operational functional checks and in the event of platform control failure to safely lower the platform.

**Slew System** – All boom type elevating work platforms are capable of slewing (or rotating) the upper structure independently to the lower structure in varying degrees; ie: 360° continuous or 360° non-continuous etc.

**Emergency Stop** – Emergency stop buttons fitted to both ground and platform controls.
Extendable Axles – Are an additional feature to widen the wheel base on self-propelled boom type EWP’s for greater stability.

Outriggers/Stabilisers – are additional supports in place to add further stability to a platform.

Harness Anchor Points – approved points on which to attach the operator’s harness/lanyard. Hand rails or the like are not to be used for this purpose.

Operators Manual – This must be fitted in a convenient location on the machine and must be read and fully understood prior to any operation of the work platform is attempted.

Log Book – This is usually stored with the operator’s manual and must be checked for previous entries and the current details entered before the EWP is used.

Emergency Descent Device – If fitted, this is usually located on the outside of the basket with a secured pin fitted to the inside of the basket for use in extreme emergencies where the basket cannot be lowered to the ground by other methods.

**Site/Job Planning:**

You should never use an EWP unless you are wearing the following safety equipment:

- A safety helmet
- A safety harness with a fall arrest lanyard.
- Rubber-soled shoes

The safety harness/lanyard must be secured to the anchor point in the basket of the EWP at all times, to arrest a fall from height.

Before undertaking your job, you need to undertake thorough planning. This includes, ensuring you stick to your workplace policies and procedures and consulting with all relevant parties such as site managers, supervisors, local council and other government departments such as main roads or electrical authorities etc. Talk with other workers and OHS officers before starting work on a site so you know the workplace rules and stick to them.

You will also need to inspect the site thoroughly in order to determine any hazards and take the necessary steps to remove or reduce the potential harm of these hazards. Such hazards could include unstable ground surfaces such as recently filled excavations, overhead services or power lines, trees, bridges and other people/equipment working in the area.

Some examples of hazard controls; Personal Protective Equipment (PPE), traffic controls, Warning signs, barriers and lighting.

Be careful not to position the EWP on top of underground services such as gas, water, electrical or sewer connections as the weight of the machine may damage pipework of these services and result in the EWP losing stability and may tip over.
EWP’s should never be set up on backfilled trenches or near open trenches or excavations. As a general rule, the minimum distance for setting up the EWP away from the trench would be the same distance as the depth of the trench. E.g. if the trench is 3m deep, you would need to set up the EWP at least 3m away from the trench.

When working around power lines, you will need to consider the minimum working distances specified in the Occupational Safety and Health Regulations of Western Australia, as outlined below. You should also barricade the work area and erect warning signs and have a spotter at ground level. Earthing the EWP, wearing rubber soled shoes and a helmet are also required.

Minimum working distances from power lines in WA as per the Occupational Safety and Health Regulations of Western Australia 1996:

- At least 0.5m from a live insulated overhead power line or aerial bundled conductor line of voltage less than 1,000 volts;
- At least 1.0m from a live uninsulated overhead power line of voltage less than 1,000 volts;
- At least 3.0m from a live overhead power line, whether insulated or not, of a voltage of greater than 1,000 volts but no more than 33,000 volts;
- At least 6.0m from a live overhead power line, whether insulated or not, of a voltage of greater than 33,000 volts;

If you need to work closer than these minimum distances you will need to seek and exemption from the relevant authority.

To ensure you operate within the Safe Working Load (SWL) of the EWP, you should add up the weight of all equipment tools and people within the basket of the EWP.

### Pre-Start Checks

Before any use of an EWP you need to undertake pre-operational checks. The operator’s manual will recommend the daily checks specified by the manufacturer.

When using electronic communication devices, such as two way radios always ensure the batteries are charged and you have your own channel to communicate on.

### Set Up EWP

If you need to undertake a job in an EWP on a site that you suspect might have unstable ground (e.g. on ground next to an underground car park), you should get an engineer to confirm the ground is safe to work on BEFORE setting up the EWP. Working on unstable ground, may cause the platform to tip over.

If the outriggers/stabilisers of the EWP are on soft or unstable soil, you should look to set up the EWP in an alternative position. If this is not possible, you should add further stability by inserting steel plates or pig-sty packing plates under the outriggers. If the use of outriggers or packers does not stop the EWP...
from sinking into the ground, you will need to consult a competent person (such as an engineer) for advice on the ground conditions.

If you need to set up an EWP on a suspended floor of a building you must ensure the floor can support the EWP, barricade the area and you may need to complete a safe work method statement. While it is always safer not to work over workplace facilities such as; sheds, toilets, offices and first aid facilities it is allowable if precautions (overhead protection, alternative access/exits, fencing and barricades) are used prior to operation.

If you notice the machine is leaning to one side, you must lower the platform to the ground check the stabilisers and check the ground conditions before trying to raise the platform.

Some platform vehicles are not fitted with outriggers/stabilisers, these vehicles are kept stable with spring lock outs or a bar which transfers forces across the machine (torsion bar)

**Operate EWP**

A “Dead Man’s” control is a safety device that unless activated will mean that nothing works. It is usually a foot pedal that you keep your foot on whenever operating the EWP. As soon as pressure is removed from this pedal, all movement of the machine will stop. The diagram below shows two types of possible dead-man controls.
The dead-man control should only be used as a safety precaution and **NOT** simply used to stop the machine in normal operation.

If the machine doesn’t stop when placed into neutral and you are forced to release the dead man control, you should stop operating the EWP immediately, manually bring the basket down and report the fault to your supervisor, note it in the EWP log book and tag out of service.

It is important that you **DO NOT** use an EWP in strong winds beyond those set out in the manufacturer’s guidelines.

**BE CAREFUL** when driving an EWP across the side of hill or across sloping ground. Depending on the degree of slope, the machine may tip over.

When driving an EWP up a hill/slope, always keep the basket facing up the hill.

When driving an EWP with the boom elevated (i.e. with the basket in the air), you should travel at very low (creeping) speed and never across the side of a hill exceeding the level of the manufacturer’s recommendations.

If light is fading when you are performing work in an EWP you should either postpone further work until light improves or install lighting to ensure safe operation of the EWP can continue.

Any faults you identify with the EWP need to be reported to your supervisor immediately, recorded in the log book and tagged out of service.

Any tools needed for the job you are doing in your EWP need to be stored safely. Leaving them on the floor of the platform may cause a trip hazard.

If you are on the ground and have a workmate in the basket who faints to the bottom of the basket so you can’t see them, you should call out to the person and if they don’t respond, lower them to the ground using the ground controls. Then call for or apply emergency first aid procedures.

If your controls in the basket fail when working at height, you will either need to ask a colleague to lower you to the ground from the ground controls or use the Emergency Decent Device (EDD).

The EDD procedure in the JLG 450AJ Series 2 is a 12 volt device and from the platform the procedure is as follows:
1. Power on
2. Engage the Deadman
3. Engage the EDD switch
4. Engage the function (boom) switch

If you are working but feel the platform drop slightly you must cease work immediately, lower to the ground then check for defects and set up.
If your EWP touches power lines you need to:
- Notify all other nearby people;
- Move the basket away from the power lines; or
- Stay in the basket until the power is disconnected
- Report to the power authorities.

### Shut down EWP

When performing a post-operational check for inclusion in the logbook, you should include a visual inspection of:
- the basket
- the slew ring
- hydraulics for leaks
- outriggers/stabilisers (if fitted)
- safety devices (e.g. alarms and lights)
- check the booms for cracks or welds etc.

When all work is completed make sure all tools have been removed from the basket. When preparing the EWP from removal of site ensure the use of the boom strap and insert the slew pin.

Any defects noted should be reported to your supervisor immediately.

All tools must be safely packed away or removed and if outriggers were used, these should be stowed in line with manufacturer’s guidelines.
Quick Quiz

Please complete the following quiz questions to be submitted to your trainer at the start of the EWP course:

1. List four (4) hazards that are likely to exist in the workplace.
   a) __________________________
   b) __________________________
   c) __________________________
   d) __________________________

2. Likely hazards need to be controlled and actions are required to ensure a safe working procedure is maintained and steps have been taken to prevent accidents. Circle any/all Hazard control strategies listed below.
   a) Warning signs
   b) Lighting
   c) Traffic control
   d) PPE
   e) Barriers
   f) Spotter

3. If you need to undertake a job in an EWP on a site that you suspect might have unstable ground should you get an engineer to confirm the ground is safe to work on BEFORE setting up the EWP?
   a) Yes
   b) No

4. What is the hazard to the EWP if it was set up on the unstable ground pictured here?
   a) No hazard
   b) The EWP could tip over
   c) The car park wall could collapse and the EWP may tip.
5. Who should any defects be reported to?

6. When all work is completed, should all tools be removed from the basket?
   a) Yes
   b) No

7. You are on the ground and have a workmate in the basket who faints to the bottom of the basket so you can’t see them, you call out to the person and they don’t respond. What should you do next?
   a) Lower them to the ground using the ground controls.
   b) Call for or apply emergency first aid procedures.
   c) Both of the above.

8. All EWP’s have a Safe Working Load (SWL) which must never be exceeded. This weight is clearly marked on the platform. From the following diagram, is this a Safe Working Load?
   a) Yes
   b) No

9. You are forced to release the dead man control, you stop operating the EWP immediately, manually bring the basket down and report the fault to your supervisor. Should you note it in the EWP log book and tag out of service.
   a) Yes
   b) No

10. When performing a post-operational check for inclusion in the logbook, you should include a visual inspection of:
   a) Safety devices
   b) Outriggers/stabilisers
   c) The basket
   d) The slew ring
   e) All of the above.