

Operate elevated work platforms

Learner Guide

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Plan and prepare to work with EWP

When planning and preparing to work with elevated work platforms (EWP) you need to follow plans, specifications, quality requirements and operational details.

In Australia the EWPA (Elevating Work Platform Association of Australia) is the representative body of this specialised industry and members can access information on safety, legislation, training and new products. The EWPA has a program that is designed to assist those who work with various types of EWP's comply with the OHS/WHS regulations in their particular State. The High Risk Work licence (HRW) covers boom type EWPs that are 11 metres and over. In Queensland participants need to complete training either with an RTO or produce a logbook verified by a supervisor who holds a HRW licence to prove you have completed sufficient training to hold a HRW licence. Please refer to www.worksafe.qld.gov.au/licensing-and-registrations website for details of when you need to hold a HRW licence. As a rule, elevated work platforms less than 11 metre in length do not require a HRW licence by law. However, the EWPA recommends all operators attain a unit of competency for the particular types of EWP's they are using (as opposed to a specific length). This unit relates to EWP's with a boom length of under 11 metres.

The website for the EWPA is "www.ewpa.com.au" and is full of useful information for those in the EWP industry.

Power-operated elevating platforms (EWPs) are used to provide access to work above or below ground level. These include scissor lifts, fixed baskets and vehicle extension arms. They are work platforms where the height of the platform can be adjusted using articulation, scissor mechanisms, telescoping booms or towers. The platforms can be vehicle mounted, self-propelled, towed or manually moved.

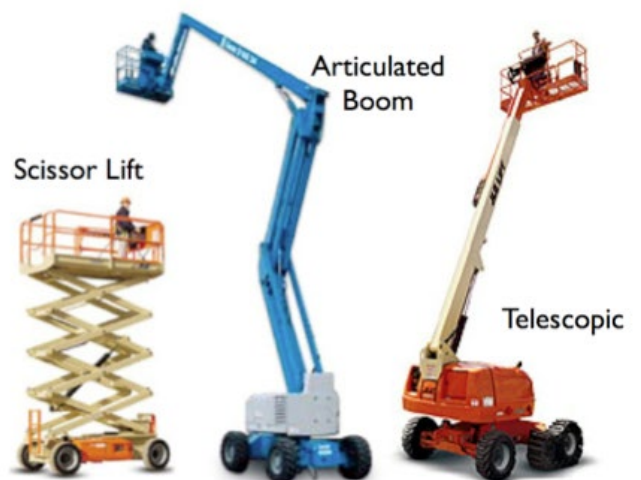
An EWP can be understood as having two parts:

- The carrier or chassis
- The elevating platform, the most common are:

Telescopic – A telescopic boom has a straight boom and can only extend straight to the height designed.

Articulated boom – An articulating boom allows the user to extend up and over an obstacle to reach the needed working height.

Scissor lift – A folding criss-cross "X" pattern in its design provides an up and down motion. The platform may also have an extending "bridge" to allow closer access to the work area, because of the inherent limits of vertical-only movement. The scissor lift can be moved whilst elevated from the platform itself.



EWP Combination

The most common combinations are:

- Trailer mounted telescopic and/or articulated boom
- Truck mounted telescopic and/or articulated boom
- Self propelled telescopic and/or articulated boom
- Self Propelled scissor lift

Truck mounted articulated telescopic boom



Self propelled scissor lift



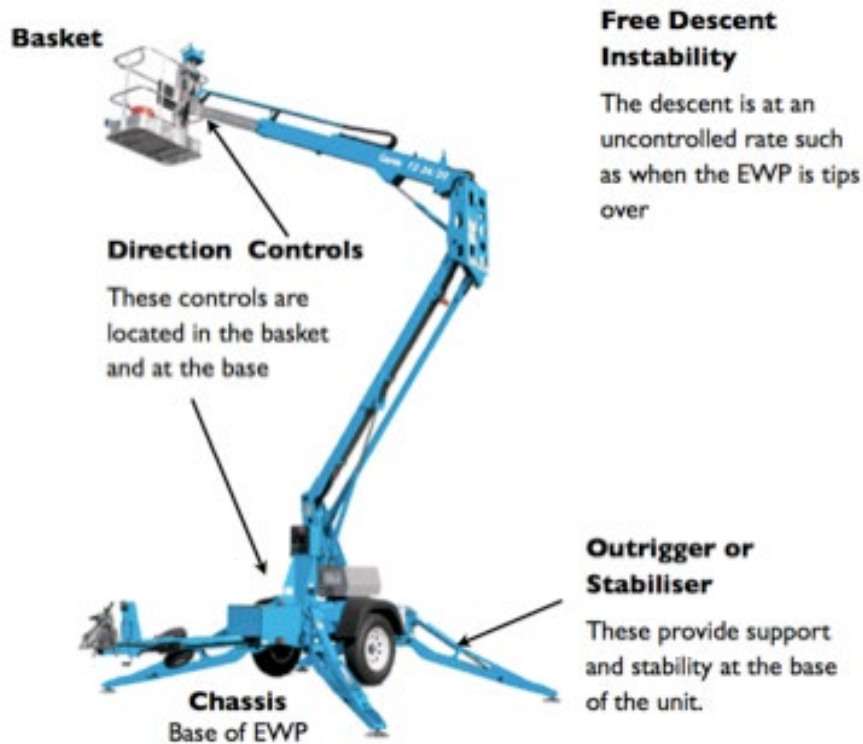
Self propelled articulated boom



Self propelled Vertical lift



Trailer mounted articulated telescopic boom



Operators working on an EWP must wear a safety harness. The harness must arrest the fall before the user strikes the ground.

Tools and equipment that may be required in order to operate an EWP including logbooks, service and operation manuals, safety harnesses and lanyards. There may also be special attachments installed if equipment has to be shifted with the EWP. You are not allowed to lift loads with an EWP using ropes or cables - that is not what they were built for.

The following list can be used to develop pre/post and operational checklist. They can also be used in developing the work method statements or job safety analysis.

Safe use of EWP

Prior to any operation involving the use of an elevated work platform, the person responsible for the machine operation should provide a safe system of work for the operation. This includes the employer and the contractor responsible for the construction site and the person having the management or control of the machine operation.

Safe system of work can be achieved by following the provided steps below:

- Carrying out a risk assessment
- Planning the operation
- Safety working procedures
- Implementation
- Reviewing
- Auditing

Safety WHS requirements relate to:

- Handling of materials
- Hazard control
- PPE and clothing
 - Gloves
 - Hard hat
 - Safety boots
 - Sun protection
- Proper use of tools and equipment including signage and barricades

Conduct routine checks

- Do not use high speed in restricted or close areas or when driving in reverse.
- Reverse travelling is intended for work site mobility only.
- Ensure proper orientation of turntable for intended direction of travel. Check directional arrows on machine.
- Always position boom in line with direction of travel.

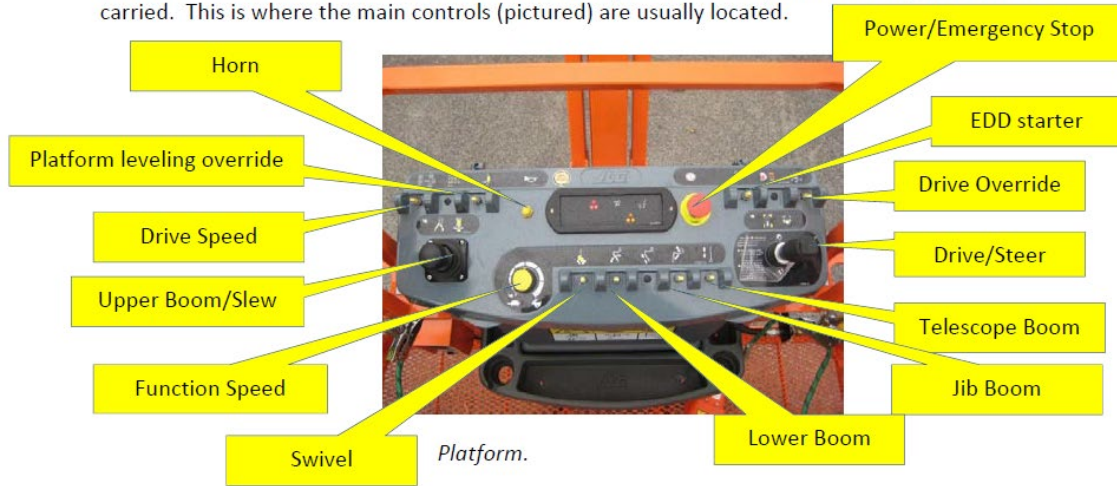
Responsibilities

All persons involved in the use of all EWPs must ensure that:

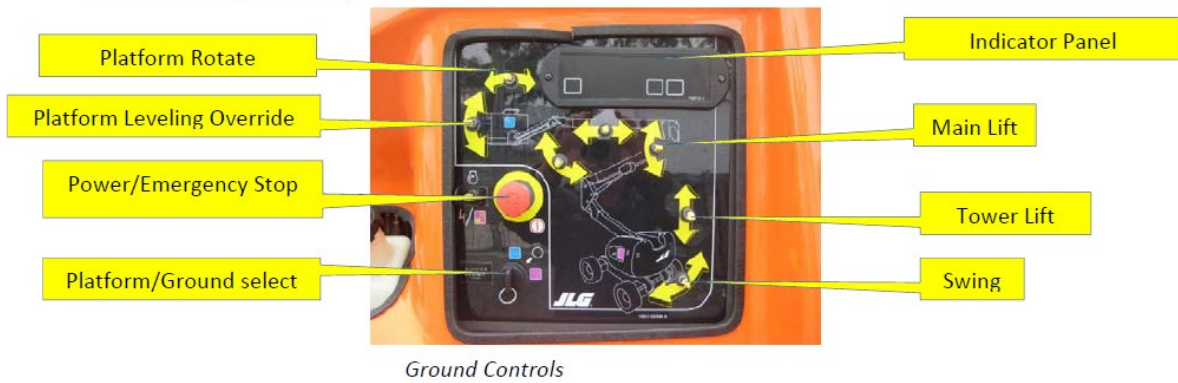
- the work platform is operated safely by a properly trained and accredited user and is used in accordance with its operating instructions and these notes.
- the machine is inspected regularly and is repaired and maintained by those competent to carry out the work.
- the SWL of the work platform is not exceeded.
- all parts of the EWP and vehicle are kept well clear of all wires, etc which might be live and to use as if the EWP is non-insulated.
- where any power operated hoist work platform is used in a public place or thoroughfare the user shall prevent any person from passing under the work platform. It shall be up to the user to provide such safety measures as may be required. This may be in the form of witches hats, guard rails or fences, or any traffic diverting methods.
- read and understand local council and government regulations relating to use in public areas.

Controls and Arrows

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.



Elevate platform to work location

Responsibilities of the person using the EWP

It is the responsibility of the user to operate the EWP in a safe and proper manner. Safety measures need to be taken at all times and in particular, attention is drawn to the dangers of working on soft or unstable ground or close to overhead obstructions.

- Do not elevate the platform in high wind conditions. (refer to operations manual)
- Do not adjust or alter any safety devices, eg pressure relief valves.
- Do not drive machine with platform elevated except on hard level ground, free of obstructions and holes.
- Where stabilisers or outriggers are fitted, they must be positioned correctly at all times.
- READ and OBEY all warnings and cautions on the machine and user instructions.
- ALWAYS post a lookout when users view is restricted.
- Assure that machine is in stowed position and turntable is secured when towing.
- Be aware of clearances when travelling or towing.
- Do not tow machine unless equipped with the optional tow package from the manufacturer.
- Never operate on soft or uneven surfaces
- Never permit personnel on machine, or in platform when towing
- Always position boom over drive wheels prior to any towing operations.
- Do not travel or work machine with boom elevated or extended on soft or uneven surfaces as tipping will occur.
- Always look in direction of travel
- Assure steer/tow selector valve pulled out; drive hubs disconnected prior to starting tow operations
- Check that tyres are inflated to correct pressure before starting operations.

Safety Features of the EWP's

- Self-propelled work platforms must be fitted with an alarm or other audible warning device that will activate when the machine's base is more than five degrees out of level. Non-self propelled machines must be fitted with a chassis level indicator.
- EWPs must be equipped with a horn or audible warning device or flashing lights which can be used to signal that the machine is being used.
- Scissors-actuated machines must include a captive chock within the scissors mechanism in order to prevent trapping of persons doing maintenance work.
- Placement or removal of the chock must be possible without hazard.
- Machines must be fitted with 2 sets of controls, which are positioned on the platform itself and at ground or chassis level.
- The direction of all movements of the elevating work platforms should be indicated by arrows on the control device. Where possible should be positioned for logical operation.
- All controls must be clearly marked to show their function in permanent legible letters or symbols.

- Controls must be positioned and protected to prevent accidental operation or damage. They must be of robust construction and waterproof.
- An emergency stop control which will cut off power to all systems must be provided at each control position. It must be in a prominent position.
- Any special warnings, cautions or restrictions necessary for safe operation must be displayed in clearly visible permanent lettering, eg where a work platform has a variation of capacity for various platform outreach or outrigger settings, the safe working load (SWL) of each must be shown.
- Where the EWP is made available for hire, essential operating instructions must be permanently displayed on the EWP or issued with the machine when it is hired.
- This list is not exhaustive:
- Know the capacity of your machine and operate within it.
- Never use boom for any purpose other than positioning personnel and their tools and equipment
- Keep oil, mud, grease, and slippery substances cleaned from footwear and platform deck.
- Ensure machine is positioned on a firm, level and uniform supporting surface before raising or extending the platform.
- Maintain safe clearance from electrical lines and apparatus.
- This machine does not provide protection from contact with or proximity to an electrically charged conductor.
- Minimum clearance should be stated, ie uninsulated equipment should have a minimum clearance of 3 metres.
- Thoroughly check all clearances before positioning the platform.
- Check tail swing (counterweight) clearance before swinging turntable.
- Do not operate machine when wind conditions exceed the maximum indicated wind speed
- Never disable or modify the footswitch (Deadman) or any other safety device. Any modification of the machine is a safety violation.

General Precautions

- Never exceed the safe working load (SWL).
- Never operate on more than 5° of slope.
- Never position ladders, steps or similar items on units to provide additional reach for any purpose.
- Wear safety belts or harness where specified.
- Be aware of clearances when travelling or operating.
- Do not enter or exit from platform when elevated.
- During travel, keep a safe distance from changes in slope depressions, debris, buildings, overhead power lines and other obstacles.
- Allow no personnel to service, tamper with or use the machine from the ground station while the platform is in use.
- Distribute tools, materials and equipment evenly on platform deck.
- Do not operate malfunctioning machine
- Do not use the platform as a prop, tie or crane. The machine may overturn or exceed SWL.
- Never enter or leave the platform while elevated.
- Never operate a malfunctioning machine. If a malfunction occurs, shut down the machine and notify the proper authorities.

- Never operate or raise boom when machine is loaded on a truck, other vehicle or above ground structure.
- Allow only those authorised and qualified personnel to operate machine who can demonstrate that they understand the proper operation and maintenance of the unit
- Read your manual; understand what you have read – then begin operations
- Be familiar with locations and operation of all alternate and override controls.
- Machine should always be shut down and grounded when refueling. No smoking is mandatory. Never refuel during an electrical storm. Ensure that cap is closed and secure at all other times.
- Keep every one clear of a working platform
- Approved head gear should be worn by all operating and ground personnel
- Mobile phones not to be used when operating any E.W.P.
- When riding in or working from platform, both feet must be firmly positioned on the deck
- Always use a safety belt, secure belt lanyard to proper attach bar on platform, never to adjacent object or structure.

Modification and maintenance to EWP's

Before modification or alteration is undertaken to any elevating work platform, the owner should first contact the relevant Statutory Authority for guidance on whether approval is first necessary.

EWP Maintenance

The following checks are to be made:

- fuel, water and oil levels in EWPs powered by internal combustion engines, to be checked daily
- battery water and hydraulic oil levels to be checked daily
- batteries to be kept charged
- hydraulic lines for leaks or damage
- that the supporting structure is free from distortion or cracking
- that the powered mechanism for operating the platform is working properly
- that emergency controls function correctly and any safety equipment (eg safety belt) is in good condition.
- Periodic General Check
- Work platforms should be checked by a person trained and qualified for that purpose at least once a month, and in the case of a hired machine, at the termination of each hire.
- The procedure should include:
 - all daily checks listed under maintenance
 - an operational check of the work platform
 - a check of the condition of the chassis, support structure, powered mechanism and the platform
 - lubrication
 - where a machine is electrically insulated, check that all fibreglass components are clean
 - check that all warning and safety decals are in place and legible.

Any faults discovered must be corrected or the working platform withdrawn from service. Tag out report to supervisor.

- Never attempt to free machine by lifting off the ground with the boom.
- Never attach wire, cable or any similar items to platform for the purpose of lifting loads.
- Make sure machine is positioned on a firm, level and uniform supporting surface before raising or extending boom.
- Never push/pull the machine, or other objects, by telescoping/retracting the boom.
- Do not attempt to use the boom for crane functions.
- Shut off all power controls before making adjustments, lubricating or performing any other maintenance.
- Use caution when checking a hot pressurised engine coolant system.
- Do not accept operating responsibility of the machine until having been trained in its operation by competent and knowledgeable personnel.
- Do not operate any machine that warning, caution, danger and functional control placards are missing or illegible.
- Never allow a machine to be operated until all necessary service and maintenance has been performed.
- Never “slam” a control lever through neutral to opposite direction, return lever to neutral; stop – then proceed.
- Always actuate controls with slow even pressure.
- Ladders are for climbing – not booms.
- Never position ladders, steps or similar items on unit to provide additional reach for any purpose.
- Stow boom and shut off all power before leaving machine.
- Check load capacities of floors or bridges before crossing or operating on the structure, check to assure they will support a weight greater than **the** combination of machine and load.

Lower platform, shut down and clean up

EWP controls are operated to manufacturer’s recommendations to raise and lower platform

The engine, if applicable, should be shut down while fuel tanks are being filled. The fuelling areas should be well ventilated, free of flame, sparks or other hazards that may cause fire or explosion.

When work is completed, relevant personnel must be notified according to workplace procedures.

The work area must be cleared and tools and equipment must be clean and stored appropriately. Materials may be disposed of if necessary or reused/recycled according to workplace procedures.