


# HAZARD & RISK ASSESSMENT SHEET – BOOM LIFTS





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## HAZARD & RISK ASSESSMENT – ACCESS EQUIPMENT – BOOM LIFTS

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Articulating or Telescopic Boom lifts

### **Operator Requirements**

Operator(s) must be trained and competent to use this equipment safely or hold the appropriate EWPA ticket to operate.

### **Purpose For Which Equipment Is Designed**

For safely elevating men, materials and tools to work at height not exceeding the manufacturer's SWL of the platform with all wheels in contact with the ground. To be used on firm stable ground, capable of supporting the weight of the machine and not to exceed the maximum design incline when elevated.

### **Hazards and Risks of Operating This Type Of Equipment**

The hazards and risks detailed here are generic for all Boom lifts and are intended to give the user a brief summary before operating this type of equipment. For any model specific hazards and/or further user information, reference should be made to the operating instructions supplied with the equipment.

### **Hazards & Risks**

### **Suggested Control Measures**

**Machine not used in a serviceable condition.**

Prior to daily use, the operator is to refer to the logbook on the machine and perform "Operator Daily Safety Checks", as detailed.

**Hydraulics lowering without warning.**

Can cause serious crush injuries or death.

- (i) Never work under raised hydraulics unless they are fully supported by a correctly positioned and approved safety device (most commonly a safety prop).
- (ii) Never put any part of your body through or under a raised scissor stack unless it is fully supported by an approved manufacturer's safety prop.
- (iii) If there is work to be conducted underneath the raised hydraulics and they cannot be supported by an "approved support device" a full assessment (ie a JSA) must be undertaken to identify all risks and specified control measures (in order to complete the work safely) MUST be implemented prior to the work being commenced.

### **Crush Hazards.**

Being crushed between the plant and fixed structures or materials whilst operating the Boom lift.

- (i) The operator MUST ensure that they are aware which is activating the drive control lever to move the machine.

**Tools or materials falling from platform.**

Barricade work area and place appropriate warning signs.

**Crush injuries while raising or lowering the platform.**

Clear personnel from work area before raising or lowering platform.

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**Danger of Boom lift to not be able to be safely Stowed or stopped.**

Operate at a speed appropriate for the ground conditions and do not exceed the gradeability of the machine either going up or down a slope.

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**Boom lift tipping or rolling over.**

- (i) Prior to operation, inspect the work site and assess the ground conditions where the machine will operate.
  - (ii) Ensure the load is evenly distributed on the platform and within the manufacturer's SWL for that machine.
  - (iii) Only drive the machine on a stable, level surface, capable of supporting the machine's weight, when elevated. Use outriggers if the machine is equipped with them.
  - (iv) Never "tie off" the Boom lift to any fixed structure or plant or use the Boom lift as an anchor point for attaching rope, wire, cable, chain etc.
  - (v) Never use the Boom lift to lift, steady or pull any materials, structures or other objects.
  - (vi) Never use or elevate the Boom lift in winds that exceed the manufacturer's maximum wind rating.
  - (vii) Never attach signs, banners, shade cloth etc. to the platform and exercise extreme caution when carrying items with a large surface area, such as roofing sheets or plasterboard as these can act like a "sail" and cause the machine to tip over in windy conditions.
  - (viii) Never perform work that will subject the machine to a side force greater than the machine's rated side loading.
  - (ix) Loads overhanging the handrails (such as pipes) can only be lifted using manufacturer approved racks fastened to the deck of the Boom lift which would be accompanied with additional operation manuals which may alter the machines SWL and wind rating.
  - (x) If one or more of the wheels are not making full contact with the ground, exercise EXTREME caution and slowly lower the platform so that the machine may be repositioned so that all the wheels make full contact with the ground again.
  - (xi) If driving near the edges of formations, drop offs or back filled areas, firstly assess that it is safe to do so and then constantly scrutinise the ground for possible soft spots.
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**Being trapped between the Boom lift and/or materials or fixed structures.**

- (i) Avoid congested work areas.
  - (ii) Remain within the confines of the platform when operating.
  - (iii) Ensure sufficient clearance between the platform and any overhead or other obstructions.
  - (iv) Keep clear of any obstructions that could interfere with the raising or lowering of the scissor and watch for overhead obstructions.
  - (v) NEVER overload the machine
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**Striking or coming into contact with sharp objects.**

- (i) Remove control panel cover before operating machine.
  - (ii) Allow sufficient safe clearance from any protruding hazards.
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**Running into bystanders or unexpected movement of Boom lift.**

- (i) Ensure all audible and visual alarms are operational.
- (ii) Clearly define the work area.
- (iii) Keep all other personnel clear of the work area.

<b>Raising and lowering on uneven ground.</b>	<p>Boom lifts ONLY to be elevated on uneven ground using the outriggers, as follows:</p> <ul style="list-style-type: none"> <li>• Assess the ground to ensure that it is firm enough to support the weight of the machine on it's outriggers without risk of slippage or tipping over.</li> <li>• Utilise timbers or pads underneath the outriggers if there is any uncertainty about the stability of the ground.</li> <li>• Always use the "auto-level" system to lower the outriggers, if fitted as it ensures all four feet make contact at all times.</li> </ul>
<b>Electrocution from powerlines.</b>	<ul style="list-style-type: none"> <li>(i) Maintain mandatory minimum distances from powerlines as defined by Regulatory Authorities.</li> <li>(ii) Insulate all "live" powerlines within the work area.</li> <li>(iii) Barricade the work area and provide appropriate signage.</li> <li>(iv) Always remember to "Look Up And Live" whilst elevating.</li> </ul>
<b>Boom lift coming into contact with "live" wires.</b>	<ul style="list-style-type: none"> <li>(i) If the Boom lift does come into contact with "live" wires DO NOT touch or move the machine.</li> <li>(ii) Keep bystanders away from the area and ensure the power to the electrical line is turned off before touching or trying to move the machine.</li> <li>(iii) Drive the machine away from the hazard if it is safe to do so.</li> </ul>
<b>Electric shock from damaged cords.</b>	<ul style="list-style-type: none"> <li>(i) Inspect cords and plugs for any damage before use.</li> <li>(ii) Ensure cords are protected from falling objects and/or pinch points during operation.</li> <li>(iii) Do not pull cords around corners or sharp edges.</li> <li>(iv) Use with an RCD protected power supply.</li> <li>(v) Do not allow extension cords to hang over side of machine.</li> <li>(vi) Where equipped, extension cords must be plugged in at the base of the machine and tools run from the power outlet on the platform.</li> <li>(vii) Never overload the electrical circuit and exceed the maximum allowable amperage.</li> <li>(viii) Ensure all cords are correctly tagged and within date.</li> </ul>
<b>Recharging the machine (Electric Models)</b>	<ul style="list-style-type: none"> <li>(i) Only turn power source on after the cord has been plugged into the battery charger.</li> <li>(ii) Refer to Operator's Manual for more instructions.</li> </ul>
<b>Water near electrical equipment.</b>	<ul style="list-style-type: none"> <li>(i) Use weatherproof equipment and fittings outside.</li> <li>(ii) When cleaning the machine, do not use pressurised water near the control box or other electrical components.</li> </ul>
<b>Entanglement.</b>	<ul style="list-style-type: none"> <li>(i) Keep personnel clear during machine operation.</li> <li>(ii) Barricade off designated work area.</li> <li>(iii) Wear appropriate dress (ie no loose clothing).</li> <li>(iv) Ensure all long hair is tied back and out of harm's way.</li> </ul>
<b>Equipment not in use.</b>	<ul style="list-style-type: none"> <li>(i) Do not leave Boom lift fully elevated when not in use, as it could be subjected to excessive wind loads.</li> <li>(ii) If the Boom lift must be left elevated and unattended for security reasons, it must be assessed as safe to do so and the platform is not to be raised more than one third of it's full extension height.</li> </ul>

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**Unauthorised use.**

- (i) Remove the machine's ignition key.
  - (ii) Lock all lockable cabinets and side covers when unattended.
  - (iii) Padlock the battery isolate switch (if fitted).
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**Explosion.**

Explosion of gases, dust, vapours, liquids or other substances.

Explosion during battery charging.

Explosion during refuelling.

- (i) Charge the batteries in a clear, well ventilated area.
  - (ii) Never charge the batteries near fire, flame or any other source of heat (as the batteries produce highly flammable and potentially explosive hydrogen gas during charging).
  - (iii) 240V power must be turned off when plugging in or removing leads from the battery charger to minimise any possible explosion risk.
  - (iv) Never refuel the machine whilst it is elevated.
  - (v) Never refuel the machine whilst it is being operated or the engine is running.
  - (vi) Always refuel the machine in a well ventilated area.
  - (vii) Ensure there are NO naked flames or ignition sources.
  - (viii) NEVER smoke during refuelling.
  - (ix) Avoid spilling fuel and immediately clean up any spilled fuel.
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**High temperature or fire.**

Welding from the basket.

When welding from the basket, ensure that the machine is covered to prevent any sparks or hot fragments coming into contact with the batteries or the hydraulic hoses and always be aware of the fire risk in this situation.

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**Inclement weather.**

Do not operate the Boom lift in bad weather conditions, ie high winds, heavy rain, thunder and lightning etc.

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**Shearing or cutting of body or limbs.**

Never put any part of your body through or under a raised hydraulics unless it is absolutely necessary to do so and an approved manufacturer's safety prop is in place.

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**Slipping, tripping or falling out of the machine.**

- (i) Always remain within the confines of the platform.
  - (ii) Fall restraint must be properly attached to a designated Anchorage point when driving or operating the machine. Attach only one fall restraint to each anchorage point.
  - (iii) Never sit, stand or climb on the handrails.
  - (iv) Never elevate the platform if the handrails have been removed.
  - (v) Never use ladders or scaffolding on the platform.
  - (vi) Never enter or exit the platform whilst it is elevated.
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**Slipping on the deck.**

- (i) Ensure the deck is clean and in good condition.
  - (ii) Avoid oil, grease and mud on work boots.
  - (iii) Maintain a clean platform, clear of rubbish and tools.
  - (iv) Maintain a good foot and hand hold when climbing in and out of the platform.
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**Striking or hitting.**

Striking or hitting bystanders during travel.

- (i) Ensure audible and visual travel alarms working correctly.
  - (ii) Barricade work areas and place appropriate warning signs.
  - (iii) Ensure operators are correctly trained and aware.
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**Suffocation.**

Exposure to exhaust fumes.

- (i) Use confined space procedures, where applicable.
  - (ii) Use equipment in well ventilated areas, where possible.
  - (iii) If working in poorly ventilated areas, monitor exhaust fumes at regular intervals.
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<b>Noise.</b> Exposure to noise.	Wear appropriate hearing protection.
<b>Personal Protective Equipment (PPE).</b> Eye or lung injuries possible.	Take precautions and wear the appropriate equipment for the type of environment you are working in i.e. using safety glasses and a particle mask if working in dusty conditions.
<b>UV exposure.</b> Excessive exposure to sunlight.	Take precautions that reduce the exposure of the skin to sunlight, such as: wearing a hat, long pants, long sleeves and regularly applying sunscreen to skin that is exposed to the sun.

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#### **Additional Hazards & Risks**

As per manufacturer's operating handbook (supplied with each machine).

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**Note:** This Hazard & Risk Assessment has been produced as an aid to workplace safety and is a combination of information from OH&S authorities, equipment manufacturers, suppliers, the industry and end users. It has been set out in this format as a user friendly, quick reference document. Each machine has a specific and more detailed explanation of the hazards and risks contained in the manufacturers operating handbook provided in the weatherproof container on the platform.

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