



Government of **Western Australia**  
Department of **Commerce**

# Elevating work platforms Operational and maintenance instructions

October 2010

These instructions have been approved by the WorkSafe Western Australia Commissioner for the safe operation and maintenance of elevating work platforms used in connection with commercial fruit growing industries in WA.

The aim of these instructions is to encourage the safe use and maintenance of Elevating Work Platforms (EWP) used in the WA fruit growing industry, and to provide a clear and regulated alternative where written manufacturers instructions developed at the time of design or manufacture are not available for a particular machine. Following these instructions will ensure WA growers comply with Regulation 4.54(4) of the *Occupational Safety and Health Regulations 1996*.





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# 1. Introduction

## Occupational Safety and Health Regulations

The *Occupational Safety and Health Regulations 1996* require that a responsible person at a workplace must ensure that all Elevating Work Platforms (EWPs) are operated, inspected and maintained:

- (a) in accordance with written instructions developed at the time of design or manufacture by the person who designed or manufactured the EWP;
- (b) if it is not practicable to obtain those instructions (eg: they are lost, or the machine did not come with the instructions), in accordance with written instructions approved by the WorkSafe Western Australia Commissioner; or
- (c) if it is not practicable for that person to get either the manufacturer or designer's instructions or written instructions approved by the Commissioner, in accordance with the relevant Australia Standard (AS 2550.1 and any relevant parts of AS/NZS 2550, and AS 1418.1 and any relevant part of AS/NZS 1418).

## Responsible Person

You are the 'Responsible Person', and therefore responsible for ensuring your EWPs are operated, inspected and maintained in accordance with these instructions, if you are:

- an employer;
- a main contractor;
- a self-employed person; or
- a person having control of the workplace

at workplaces where EWPs are being used in the fruit growing industry.

All of these people have duties under the *Occupational Safety and Health Act 1984*. Information and guidance on these duties is available in the WorkSafe Western Australia Commission's Guidance Note on 'General Duty of Care in Western Australian Workplaces' which is available at WorkSafe's website at [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au) or by telephoning WorkSafe on (08) 9327 8777.

## These instructions

If it is not practicable to obtain a set of instructions that were developed for your EWP at the time of its manufacture (i.e. you cannot obtain the edition that corresponds with your old machine) you, as the responsible person, may operate, inspect and maintain your machinery in accordance with the written instructions in this document, which have been approved by the WorkSafe WA Commissioner. These instructions apply to EWPs with a maximum extendable height of up to **5 metres**. These instructions have been developed to assist fruit growers to meet the requirements of the new regulations outlined above.

## 2. Definitions

For the purposes of these operation and maintenance instructions only, the following definitions apply:

### **Ballast**

Substance used to assist in rendering an EWP stable, e.g. the tyres are  $\frac{3}{4}$  filled with water.

### **Counterweight**

A weight added to an EWP in such a position as to assist stability.

### **Competent Person**

In relation to the doing of anything, means a person who has acquired through training, qualifications or experience, or a combination of those things, the knowledge and skills required to do that thing competently.

### **Critical Weld**

A weld, the failure of which would cause the failure of a load bearing part. Failure of such a weld can compromise the safety of the operator.

### **Elevating Work Platforms (EWP)**

A telescoping device, scissor device, hinged device or articulating device, or any combination of these devices used in connection with commercial fruit growing activities to position personnel, equipment and materials **at work locations no greater than 5 metres above ground level.**

### **Formal instruction**

A competent person instructs an operator using the induction checklist on pages 15 and 16 of these instructions, and the formal instruction is approved by the Responsible Person.

### **Independent competent person**

An independent competent person is a person that is not employed on a full time, part time or casual basis by the responsible person in the workplace.

### **Lockout and Tag Out system**

A system whereby mechanical devices and visible warning tags prevent the EWP from being operated.

### **Manufacturer**

A person or establishment who makes EWPs for sale either direct to growers or via machinery agents/dealers.

### **Operator**

A person that controls the movements of an EWP.

### **Responsible person**

A person who, at the workplace;

- is an employer,
- is a main contractor,
- is a self-employed person, or
- has control of the workplace.

**Safe Working Load (SWL)**

The SWL is the maximum weight an EWP is designed to safely support under stated conditions. The SWL should be displayed clearly on all EWP. On more recent model machines the SWL may instead be referred to as the Maximum Rated Capacity (MRC).

**3. Responsibilities****Responsible Person**

The responsible person at a workplace must ensure that:

- all operators have been given formal instruction on how to safely operate each type of EWP they will be using. All operators must read and understand the instructions contained in this document. An EWP operator induction sheet can be found on pages 15-16 of these instructions. A copy of the induction sheet must be provided to and completed by any person operating the EWP;
- daily operation and annual maintenance checks are carried out in accordance with the checklists outlined on pages 12, 13 & 14 of these instructions;
- copies of the daily and annual checklists contained within these instructions are provided for use by operators or competent persons as required;
- if they are aware that the function or condition of the EWP is impaired to the extent that the impairment presents an immediate risk to the safety or health of any operator, then the EWP must be withdrawn from use until it has been repaired;
- an appropriate system is in place, (such as a lock out and tag out system), to ensure that operators cannot use EWP that are not in a safe working condition until they are repaired;
- an adequately trained person, who has been assessed to be competent by the responsible person, undertakes maintenance of the EWP. The person is to be provided with a copy of these instructions; and
- inspection of the EWP is to be undertaken by an independent competent person. The person is to be provided with a copy of these operation and maintenance instructions.

**Operator**

Operators of EWP must ensure that:

- they have received adequate training and a copy of these instructions, and have been assessed as competent to operate the EWP by a competent person and this has been approved by the Responsible Person;
- if they believe the EWP is no longer in a safe working condition then a report must be made to the responsible person at the workplace;
- the EWP is used in accordance with the responsible person's instructions;
- the daily pre-operational checks prescribed by these operation and maintenance instructions have been carried out and recorded; and
- the SWL or maximum rated capacity of the EWP is not exceeded.

## 4. Operating speed

All EWP must be operated at a safe speed, taking into account load, terrain and weather conditions. If the maximum allowable speed for the EWP is known, then it should not be exceeded under any circumstances.

Under no circumstances should the gearing be modified to increase operating speeds.

## 5. Machine stability

The responsible person and/or the operator should exercise caution when operating EWP in the following circumstances:

### Windy conditions

Increased wind loading can alter the machine's centre of gravity and may cause it to overturn and cause injury, especially if screens, shelters or signs have been attached to the machine.

### Sloping ground

The EWP centre of gravity changes as height above ground increases, with an increased risk of the machine overturning and causing injury.

### On or near open drains or uneven ground

A sudden change in the centre of gravity of the EWP could result in the machine overturning, causing injury.

### Safe Working Load

The Safe Working Load (SWL) of each particular EWP must never be exceeded.

The work platform area must not be overloaded as this will alter the machine's centre of gravity and may result in the machine overturning, causing injury.

The maximum potential load should be determined prior to operating the machine, taking into account the weight of equipment, fruit and operator.

### Ballast

All EWP should be operated with the correct ballast (eg.  $\frac{3}{4}$  fill tyres with water). If tyres have to be replaced due to puncture or wear, ensure replacement tyre has equivalent ballast replaced.

### Counter weights

An EWP must not be operated if counter weights have been removed from their mounting bracket.

## 6. Overhead power lines

Extreme caution must be exercised when operating in the vicinity of overhead power lines.

The work must be carried out so that no person or equipment or any part of the elevating work platform being used under or in the vicinity of a power line can enter the 'danger zones' set out below:

The 'danger zones' are:

- within 0.5 metres of a live insulated overhead power line or aerial bundled conductor line of voltage of not more than 1,000 volts;
- within 1.0 metre of a live uninsulated overhead power line of a voltage of not more than 1,000 volts;
- within 3.0 metres of a live overhead power line, whether insulated or not, of a voltage exceeding 1,000 volts but no more than 33,000 volts; or
- within 6.0 metres of a live overhead power line, whether insulated or not, of a voltage exceeding 33,000 volts.

For the purposes of these instructions, an EWP is defined as a telescoping device, scissor device, hinged device or articulating device, or any combination of these devices used in connection with commercial fruit growing activities personnel, equipment and materials **at work locations no greater than 5 metres above ground level.**

Allowance must be made for any extra height above the 5 metres provided by personnel, equipment and materials. To ensure that no person or equipment can enter the danger zones allowance must be made for the height at which the EWP is being operated and the height of any person working on the EWP or equipment or materials being used on the EWP.

## 7. Operator restraint

### Harnesses

Operators of boom type EWP must always wear an approved safety harness, unless the EWP is fitted with a secondary cage gate restraint, such as a 6mm safety chain.

## 8. Orchard safety

### Authorisation

Operators must not operate an EWP without authorisation from the responsible person at the work place.

### Other people

Operators must exercise extreme caution when operating EWP near other people in the orchard.

## 9. Maintenance

### Controls

If any fault with the controls of the EWP is detected, operations must cease until the detected fault is rectified.

### Hydraulic pressure, pneumatic systems and electrical systems

Only a competent person may adjust hydraulic pressure, pneumatic systems and electrical systems.

### Safety devices

Only a competent person may adjust safety devices such as pressure relief valves.

### Fuel lines

Fuel lines must be kept in good condition and remain protected from the engines exhaust system.

### Exhaust system

The EWP exhaust system of the EWP must have a muffler component that is kept in good working order.

## 10. Inspection

An independent competent person must undertake inspection of each EWP annually. For the purposes of these instructions an independent competent person is a person that is not employed on a full time, part time or casual basis by the responsible person in the workplace.

## 11. Transportation

### On a vehicle or trailer

If the EWP needs to be transported on another vehicle or trailer, it must be securely fastened to prevent the EWP from shifting during transportation.

### On a public road

Transporting an EWP on a public road must be carried out in accordance with relevant road transport regulations.

### Towing

When towing an EWP behind another vehicle, ensure that all attachment pins on the drawbar assembly are securely fastened and all loose items removed from the platform (secateurs etc). Under no circumstances should the towing speed exceed 30 kph.

The mass of a towed implement being towed on a road by a towing vehicle other than a tractor must not exceed twice the tare of the towing vehicle. [Regulation 16 (1), Road Traffic Regulations (Towed Agricultural Implements), Regulations 1995]

## 12. Further information

Should you wish to access further information about the safe operation, maintenance and inspection of EWP, the following documents are available from the WorkSafe WA website:

- *Occupational Safety and Health Act 1984* and *Occupational Safety and Health Regulations 1996*
- Codes of practice
- Guidance notes
- National Certification Standard [NOHSC: 1006 (2001)]

The Road Traffic (Towed Agricultural Implements) Regulations 1995, contains more detailed information on the requirements for towing agricultural implements. Contact the State Law Publisher on (08) 9321 7688 if you wish to obtain a copy of the regulations.

## 13. Record keeping

The owner or the person in charge of the workplace must ensure that records of operation, maintenance and induction checklists are kept for the following time periods.

| Checklist                                       | No of years records are to be kept   |
|---|--|
| 1. Daily EWP pre-operative checklist.           | 1 year.  |
| 2. Annual EWP pre-harvest inspection checklist. | For the life of the machine.   |
| 3. EWP operator induction checklist.            | As long as operator remains employed (retain records for longer if you think it is likely the person will be re-employed in the future). |

Master copies of these checklists can be found on pages 12, 13 and 15 of this document.

### EWP Pre-operative Checklist (Daily)

| Date: _____ |   |                             | Inspection conducted by: <i>(operator)</i> _____           |  |  |
|-------------|---|-----------------------------|--|--|--|
|             | Item to Check   | Tick this box if item is OK | Place a cross in this box to indicate item needs attention | Description of problem and action required | Person responsible for further action. |
| 1.          | Check engine and hydraulic oil levels.  |                             |  |  |  |
| 2.          | Visually check tyre inflation and general condition.  |                             |  |  |  |
| 3.          | Visually check hydraulic hose/system for leaks. (Look for puddles on ground)                    |                             |  |  |  |
| 4.          | Grease/oil pivot points and wearing parts where applicable.                                     |                             |  |  |  |
| 5.          | Check cage gate locking systems.  |                             |  |  |  |
| 6.          | Check wheel nut tension.  |                             |  |  |  |
| 7.          | Visually check stress areas such as boom and stabiliser bars for signs of cracking and fatigue. |                             |  |  |  |
| 8.          | Check condition and tension of chains and sprockets (if applicable).                            |                             |  |  |  |
| 9.          | Check fuel level.   |                             |  |  |  |

| <b>EWP Pre-Harvest Inspection (Annual)</b> |  |                                    |   |   |   |
|--|--|------------------------------------|---|---|---|
| <b>Date:</b> _____                         |  |                                    | <b>Inspection conducted by: (<i>operator</i>)</b> _____           |   |   |
|  | <b>Item to Check</b>   | <b>Tick this box if item is OK</b> | <b>Place a cross in this box to indicate item needs attention</b> | <b>Description of problem and action required</b> | <b>Person responsible for further action.</b> |
| 1.   | Ensure that paintwork is always kept in good condition (this will provide early warning of structural cracking).                         |                                    |   |   |   |
| 2.   | Jack up and rotate all wheels to check on wheel bearing condition – adjust, repack or replace as necessary.                              |                                    |   |   |   |
| 3.   | Jack up and rotate castor wheel assembly (where applicable) to check for pivot bearing condition – replace as necessary.                 |                                    |   |   |   |
| 4.   | Remove boom/hydraulic ram pivot pin and check for wear – replace as necessary.   |                                    |   |   |   |
| 5.   | Closely examine all stress points (such as the boom and stabilizer bars) and critical welds for signs of cracking – repair as necessary. |                                    |   |   |   |
| 6.   | Closely examine the condition of all bearings and bearing castings for signs of cracking and wear – replace as necessary.                |                                    |   |   |   |

|     | <b>Item to Check</b>  | <b>Tick this box if item is OK</b> | <b>Place a cross in this box to indicate item needs attention</b> | <b>Description of problem and action required</b> | <b>Person responsible for further action.</b> |
|-----|---|------------------------------------|---|---|---|
| 7.  | Check that all foot/hand hydraulic controls return unassisted to centre position.   |                                    |   |   |   |
| 8.  | Closely examine platform handrails, stanchions and cage gate restraints for signs of wear and cracking – repair as necessary.                 |                                    |   |   |   |
| 9.  | Check with appropriate tools that all bolts and nuts (particularly bearing casting bolts and wheel nuts) on the machine have not come loose). |                                    |   |   |   |
| 10. | Closely examine tyre condition for side wall cracking and any other defects – replace as necessary.   |                                    |   |   |   |
| 11. | Closely inspect all structural welds and stress points.   |                                    |   |   |   |
| 12. | Check engine, fuel and exhaust system appropriately guarded, sealed and serviceable.  |                                    |   |   |   |

| <b>EWP Operator Induction Checklist</b>  |  |   |
|--|--|---|
| <b>Date:</b> _____   |  |   |
| <b>Operators name:</b> _____   |  |   |
| <b>Induction conducted by: (<i>responsible person</i>)</b> _____   |  |   |
| <b>Item of Operational and Maintenance procedure training.</b>   | <b>Date of training (if trained over more than one day).</b> | <b>Operators initial to indicate training has been received &amp; understood.</b> |
| <p><b>Operating Speed</b><br/>Operator instructed that the EWP must be operated at the speeds they were originally designed for and that under no circumstances should the gearing be modified to increase operating speeds.</p>   |  |   |
| <p><b>Correct Maintenance Procedure</b><br/>Operator shown hydraulic pressure, pneumatic systems and electrical systems and instructed that a competent person should only adjust these systems.<br/><br/>Operator instructed that a qualified person can only adjust safety devices such as pressure relief valves.<br/><br/>Operator instructed that if any fault with the controls of the EWP is detected, operations must cease, the fault is to be reported and the EWP is to be tagged out of use until the detected fault is addressed</p>  |  |   |
| <p><b>Machine Stability</b><br/>Operator instructed that they must always exercise caution when operating near open drains or uneven ground, as a sudden change in EWP centre of gravity could result in the machine overturning causing serious injury.<br/><br/>Operator instructed that they must not overload the work platform area as this will alter the machines centre of gravity and may result in the machine overturning causing injury.<br/><br/>Operator instructed to exercise caution when operating the EWP in windy conditions, especially if screens, shelters or signs have been attached to the machine. Increased wind loading can alter the machines centre of gravity and may cause it to overturn causing injury.</p> |  |   |

|  |  |  |
|--|--|--|
| <p>Operator instructed that if the EWP is used on sloping ground the EWP centre of gravity changes as height above ground increases, with an increased risk of the machine overturning causing serious injury.</p> <p>Operator instructed not to exceed the safe working limit (SWL) or maximum rated capacity of the EWP.</p> <p>Operator instructed that the EWP should be operated with the correct ballast (ie ¾ fill tyres with water).</p> <p>Operator instructed not to operate the EWP if counter weights have been removed from their mounting bracket.</p> |  |  |
| <p><b>Overhead Power Lines</b></p> <p>Operator instructed to exercise extreme caution when operating in the vicinity of overhead power lines and keep a minimum distance of 6 metres away. Operator will not work closer than 6 metres from a power line unless they have checked with person in charge of the workplace that it is safe to do so.</p>   |  |  |
| <p><b>Operator Restraint</b></p> <p>Operator of boom type EWP instructed to always wear an approved safety harness, unless the EWP is fitted with a secondary cage gate restraint such as a safety chain.</p>  |  |  |
| <p><b>Orchard Safety</b></p> <p>Operator instructed that they must exercise extreme caution when operating an EWP near other people in the orchard.</p> <p>Operator instructed that they must not operate the EWP without authorisation.</p>   |  |  |

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