## Guidelines for the Safe Use of

# Elevating Work Platforms in the Horticultural Industry




**ACKNOWLEDGMENT**

The authors of this best practice document wish to acknowledge the help and assistance of the various parties who have contributed to, and commented on, this document throughout its somewhat long period of development. These include the industry groups NZ Fruit Growers' Federation, Hawke's Bay Fruitgrowers' Association, Summer Fruit NZ, Avocado Industry Council, Occupational Safety & Health Service, and the Hydralada Company.

Safety in the workplace is an ongoing matter. With the benefit of hindsight there will undoubtedly be issues which arise to be addressed in the future. It is planned to review this document in twelve months from now. Comments any persons may wish to be included in this review should be forwarded in writing to the:

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# Contents

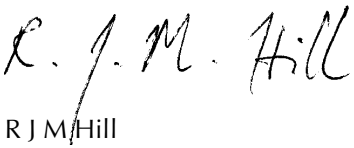
# Foreword

This document has been prepared by the industry groups NZ Fruit Growers' Federation, Hawke's Bay Fruitgrowers' Association, Summer Fruit NZ, Avocado Industry Council, and the Hydralada Company, assisted by the Occupational Safety & Health Service.

The combination of industry and OSH working to produce these *Guidelines for the Use of Elevating Work Platforms in the Horticultural Industry* represents a major step forward by explaining what the industry considers are the minimum requirements and best practice guidelines.

The challenge now is for industry members to put the *Guidelines for the Use of Elevating Work Platforms in the Horticultural Industry* into practice in the workplace. I hope all the industry will demonstrate their professionalism by rising to the challenge. Safer working practices and raising the minimum requirements will bring benefits to employers, employees and the industry as a whole.

I thank those responsible for producing the *Use of Elevating Work Platforms in the Horticultural Industry* and commend it to all those involved in horticulture. It represents a real effort by the industry to raise health and safety standards.



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General Manager
Occupational Safety & Health Service

# 1 Introduction

The aim of the Health and Safety in Employment Act 1992 (HSE Act) is to make provision for the safety of employees and others affected by work activities.

This best practice document has been published to help promote safety by providing recommendations and guidelines for the design, safe use and proper maintenance of the Horticultural-type Elevating Work Platforms (HEWPs) which are used in horticulture.

This is an industry-specific best practice document which is intended to cover only the following industry activities:

- Horticulture;
- Arboriculture;
- Horticulture plant and machinery hire;
- Horticultural contractors;
- Agriculture;
- Nurseries, parks and reserves;
- Building and construction below 8 metres on agricultural and horticultural sites.

# 2 Scope

This best practice document has been developed to assist the safe operation of purpose-built HEWPs while they are being used in horticultural work environments.

The HEWPs to which this code applies are:

- Rough terrain self-propelled platforms of a single, rigid, articulated or telescoping boom type; with a
- Single-person cage; and
- Intended to be driven and operated from the cage with the boom in the elevated position.

This best practice document is NOT intended to cover the following:

- Machines which use legs for stabilising or levelling;
- Scissor lifts;
- Forklift trucks with working platforms;
- Cages or platforms attached to crane hooks;
- Personnel buckets temporarily attached to mobile cranes;
- Suspended scaffolds;
- Building maintenance units;
- Vehicle-mounted work platforms;
- Electrically insulated units;
- Platforms of any type with a nominal lift height in excess of 10 metres.

These types of machine are covered by the provisions and requirements of the *Approved Code of Practice for Elevating Work Platforms,* published by OSH, May 1995.

# 3 Definitions

**HEWPs**

Horticultural-type elevating work platforms. This includes the complete machine including the platform, lifting mechanism and chassis as applicable.

**Best Practice Work Document**

A document which has been developed with consultation of an industry group to be used as a basis for safe work place practices. It could also be further developed into an Approved Code of Practice.

**Manufacturer**

The person or organisation who builds machinery or equipment for distribution to end users, either through dealers or by selling directly to the end user.

**Importer**

A person or organisation who purchases goods in another country for resale in New Zealand, either through dealers or directly to end users.

**Registered Engineer**

An engineer registered under the Engineers Registration Act 1924.

**Contractor**

A person who uses HEWPs to provide services to other parties for hire or reward.

**Employer**

A person who or that employs any other person to do any work for hire or reward; and, in relation to any employee, means an employer of the employee.

**Employee**

Means a person employed by any other person to do any work, (other than residential work) for hire or reward; and, in relation to any employer, means an employee of the employer.

**Direction Controls**

All controls necessary to raise, lower, rotate, telescope, drive or otherwise initiate the powered functions of the HEWP.

**Critical Weld**

One positioned where failure could affect the soundness of the structure and result in injury to an employee on the platform.

**Operator**

A person who controls the movements of the HEWP.

**Instability**

The condition where the overturning moments exceed the restoring moments.

**Stability**

The condition when the total restoring moments exceed the overturning moments.

**Platform/Cage**

That portion of the equipment from which the operators carry out their work.

**Safe Working Load (SWL)**

The maximum weight the HEWP is designed to safely support under stated conditions.

**Foot Rails**

Vertical barriers, or horizontal bars of an appropriate height, placed around floor perimeters to prevent operators losing their footing.

**Pickbag**

A mounted container supplied by the manufacturer to carry fruit as it is picked.

**Tool Carrier**

A mounted container or bracket supplied by the manufacturer on the outside of the cage to carry tools or materials.

**Forward/Reverse, Left /Right**

These refer to the HEWP as if the operator is standing in the cage working on a tree with the machine behind him/her.

**Lift Height**

The maximum elevation of the operator's cage floor of the HEWP to the ground.

**Manual Force**

A side loading imposed on the machine by the operator pulling on an outside object from the cage.

**Free Descent**

Descent at an uncontrolled rate.

**Qualified Person**

Either a registered mechanical engineer, a fitter who holds a New Zealand Trade Certificate, or a person trained and certified by the manufacturer.

# 4 Responsibilities

### 4.1 Manufacturers, Importers and Sellers

Manufacturers, importers and sellers must ensure that:

(a) The HEWP is designed in accordance with a reputable standard. (See Section 5.1)

(b) The HEWP is manufactured in accordance with the design.

(d) The HEWP is fully tested as required in the design standard.

(c) They supply appropriate documentation to the owners of the machine. (See Sections 7.1 and 9.1)

(e) Full operating and maintenance manuals are provided (in English) with each HEWP.

(f) The HEWP has been maintained correctly as recommended by the manufacturer.

(g) Where a used HEWP is sold "as is", the buyer is made aware that the machine is not compliant with this best practice document.

### 4.2 Employers, Owners and Hirers

Employers, owners and hirers must ensure that:

(a) Only HEWPs meeting the requirements of Parts 5-7 of this best practice document may be used.

(b) The HEWP is operated by competent operators and is used in accordance with the manufacturer's operating instructions and this best practice document.

(c) Regular training and instruction is provided for their operators.

(d) Appropriate documentation and records are maintained and that these are available for inspection.

(e) All safety features are in sound condition and that all operating instructions are clearly legible so that it is difficult to misinterpret the requirements.

(f) The HEWP is inspected regularly, repaired and maintained by a person competent to carry out such work, and that periodic testing is carried out in accordance with Part 9 of this best practice document.

(g) The HEWP is ballasted as specified by the manufacturer.

### 4.3 Operators

Operators must:

(a) Have access to safety instructions and manuals.

(b) Read the operator's manual and be aware of the dangers of operating this type of machine.

(c) Operate the HEWP safely and in accordance with the operating instructions of the manufacturer and this best practice document, including Part 8.

(d) Carry out daily maintenance checks (see Part 9 of this document).

(e) Be retrained annually by their supervisors.

### 4.4 Property Owners

When hiring a contractor/HEWP operator, the property owner must:

(a) Provide the contractor/HEWP operator with a briefing of the hazards the owner can identify in the work area.

(b) Mark any obstacles or hazards in the work area and draw them to the attention of operators.

(c) Define the areas where the HEWPs are to be used.

(d) Where a property has sloping ground, a topographical map showing the slopes of the land in the various areas should be

made available to the contractor/HEWP operators and their supervisors. HEWP operators must consider the hazards of the terrain, the capability of their machines, and identify any areas on which the machines will not be used.

### 4.5 Contractors

In addition to the provisions of Section 4.2, contractors must:

(a) Provide operators of their HEWPs with proper instructions at the commencement of each new job.

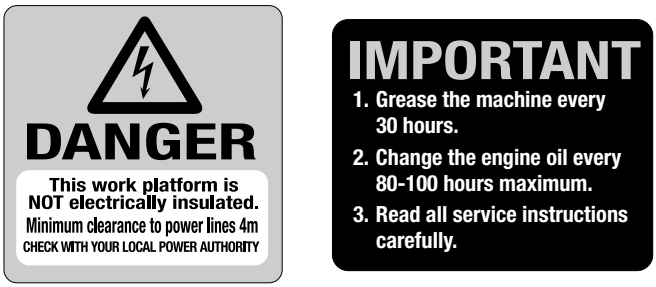
### 4.6 Those Who Hire Out HEWPs

In addition to the provisions of Section 4.2, those who hire out HEWPs must:

(a) Ensure that those who hire a machine are offered appropriate information, advice and training so the machine can be operated safely and maintained according to the manufacturer's recommendations.

(b) Ensure that all essential operating and maintenance instructions are permanently displayed on the HEWP, or issued with the HEWP when it is hired.

(c) Take all practicable steps to ensure that the HEWP is suitable for the proposed use and has been maintained in accordance with the manufacturer's recommendations.




*Examples of instructions to be displayed on the HEWP, or be issued with it when it is hired.*

# 5 General Requirements

## 5.1 General

All HEWPs must be designed in accordance with sound and accepted engineering practice, and must be manufactured using best methods and practices. Structural design and manufacture should be in accordance with AS 1418-10.

## 5.2 Hydraulic Equipment

(a) Hydraulic systems must be designed so that free descent of the cage cannot occur in the event of a hose or fitting failure.

(b) In the event of hose failure, the operator's cage descent should not exceed the normal lowering velocity by more than 50%.

(c) Hydraulic hoses are to be routed to avoid damage by branches, or be suitably guarded.

## 5.3 Wheel Drives

(a) Wheel drive systems may be of different types depending on the application of the machine as follows:

***Type One: Flat Land***

HEWPs of this type are suitable for use on maximum slopes of 2 degrees 55'. They must, however, be stable at maximum elevation when tested on a 5-degree slope. This drive system may use a simple spool valve to control the directional movements of the machine and must arrest the machine within 1 metre on flat ground. This system can only be used on models with lift heights up to 3.6 metres.

*Type Two: Hillside Restraint*

HEWPs of this type must have a drive system capable of restraining the machine under any condition of use, must not overrun when driven down a slope, and must arrest the machine within 1 metre on flat ground. This system may be used on slopes of up to 7 degrees 55′. Type two systems can only be used on models with nominal lift heights up to 5.5 metres, and may only be operated on slopes within the stability limitations set down by the manufacturer. (See Section 5.9b.)

*Type Three: Brakes*

HEWPs operated on slopes greater than 7 degrees 55′ must be fitted with fail-safe spring-applied brakes. These must arrest the machine within 1 metre on flat ground, hold the machine from overrun when travelling down a slope, and without any creeping when parked.

(b) HEWPs may only be operated on slopes within the stability limitations set down by the manufacturer. (See Section 5.9d)

(c) HEWPs shall be fitted with decals indicating the drive type which is fitted.



*Sample decals indicating the drive type.*

### 5.4 Welding

For HEWPs manufactured in New Zealand, all welding specifications shall be detailed on the manufacturing drawings. Where machines require welding while being repaired, the manufacturer shall be consulted for their approval and any special instructions before the work is undertaken.

Any welds listed on the manufacturing drawings as critical should be carried out in accordance with NZ 4701:1981 *Metal-arc welding of steel structures by welders qualified to NZS4711:1984 Qualification test for manual metal arc welding.*

### 5.5 Fuel and Exhaust Systems

(a) Fuel lines of internal combustion engines must be protected from engine and exhaust heat. Note that some industries may have additional requirements such as spark arrestors, external fuel cut-offs.

(b) Exhaust systems must include mufflers and be positioned so as to exhaust engine fumes away from the operators.

### 5.6 Cages and Guard Rails

(a) The cage is to be fitted with side walls, or guard rails with mid-rails and foot rails.

If the cage is a single-person design not more than 650 mm square, the mid-rail and foot rails may be optional.

The side walls or guard rails should be of a minimum height of 950 mm and be able to stand, without obvious deflection, a horizontal force of 440 Newtons or a vertical force of 690 Newtons applied separately at any position.

(b) The floor of the cage must be slip-resistant and free-draining.

(c) Cage gates in the top guard rail are not permitted.

(d) Opening mid-rails, where fitted, must be able to be secured in position, and be self-closing.

If the cage dimensions are less than 650 mm square, provided the gate does not include the top rail, it may open outwards provided it can be securely latched.

(d) A safe means of access to the cage must be provided. If access is by means of steps or a fixed ladder, the rise of the steps or rungs must be uniform and must not exceed 300 mm. The steps or rungs must be slip-resistant.

(e) Machines designed for specific activities may have different cage and guardrail layouts, provided an equivalent level of safety is afforded operators.

### *5.7 Machine Controls*

(a) HEWPs with a work height in excess of 5 metres must be fitted with two sets of cage lift controls, so that in the event of an emergency, the cage can be lowered to the ground safely. They must be positioned:

(i) on the cage itself; and

(ii) at ground or chassis level.

If these controls are not obviously located, suitable decals must be fitted to allow them to be easily located by persons unfamiliar with the machine.

(b) All controls must be of the deadman type which automatically return to neutral or the off position when released, or alternatively all controls may be overridden by a single deadman control.

(c) Controls should be positioned for logical operation.

(d) All controls must be clearly marked to show their function in permanent legible letters or symbols. Any words should be in English.

(e) Controls must be positioned to avoid accidental operation by branches or the operator. Where this is not practical, they should have appropriate protection. Where foot controls are

used in a cage, adequate space must be allowed for the operator to work without actuating the controls accidentally.

(f) An emergency stop control which will cut off power to all systems must be provided at the cage, and at the machine's base. It must be in a prominent position and be coloured red.

(g) The slewing mechanism should be provided with effective means of controlling the slewing superstructure of the HEWP over the range of slew, either at a series of positions, or at infinitely variable positions.

Where interlocks are fitted, they must be of a type not easily overridden.

### 5.8 Safety Features

(a) HEWPs with a lift height of more than 6.5 metres must be fitted with an alarm or other audible device to warn the operator, when the lifting mechanism is raised, that the machine's base has reached the rated inclination.

(b) Rotating shafts, gears, sprockets, and any other dangerous parts must be guarded so that operators using the HEWP or persons nearby are not endangered by the operation of the machinery.

### 5.9 Stability Test

(a) HEWPs which have been designed and manufactured in accordance with this section must be subjected to a prototype stability test. The test procedure must be in accordance with the manufacturer's specifications and include operational checks throughout the full operating range of all functions.

(b) This test is to include checks as follows:

***Sideways Stability***

This test should be carried out on a minimum of a 5-degree slope with the machine in its least stable position. The

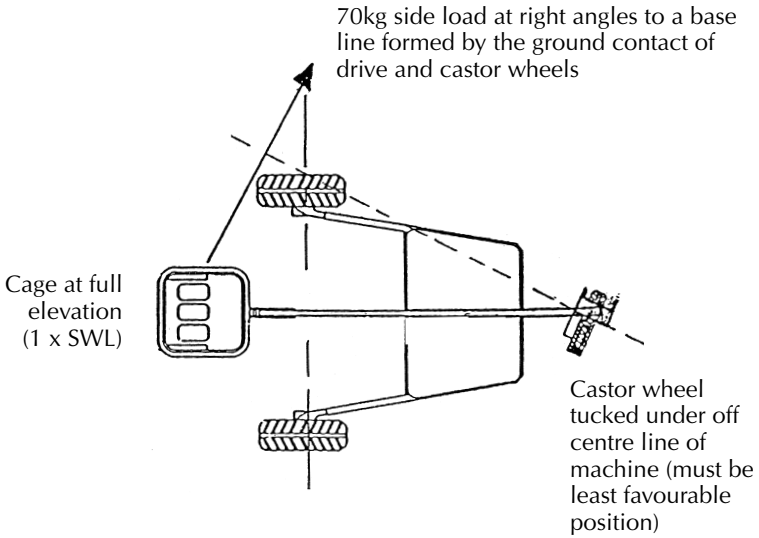
machine must remain stable when supporting a vertical static load of 1.00 times its SWL, while being loaded with a static horizontal load of 70 kg at the top cage rail in the direction most likely to cause overturning (diagram below).

***Static Fore and Aft Stability***

The machine must be parked on a minimum 5-degree forward slope, or greater as may be required. It must lift and support a load equal to 1.5 times its SWL until the boom is horizontal without any loss of stability or structural deformation.

***Dynamic Fore and Aft Stability***

The machine must be parked on a minimum 5-degree forward slope. It must lift a load equal to 1.25 times its SWL through a full operational cycle with an emergency stop on lowering the boom when it reaches the horizontal position.




*Sideways stability test layout.*

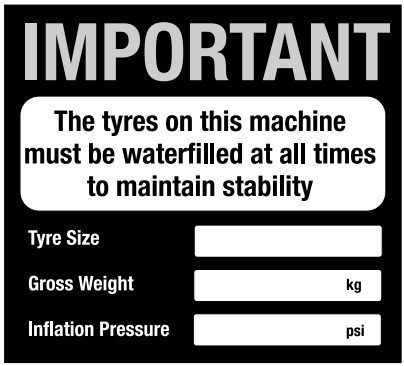
***Braking Ability***

With the cage at maximum elevation and carrying its maximum SWL, the machine must stop from its maximum travel speed within 1 metre in both forward and reverse directions.

(c) For HEWPs intended to be used under "rough terrain" conditions, a rigorous prototype testing will be required, intended to emulate the conditions under which the machines may operate. Such a test should include the requirement for the HEWP to remain stable while an applied test load of 1.3 times its SWL is applied through its entire range of operation.

(d) A certificate must be provided recording the details of the machine and the test. A sample is shown in Appendix 2.

(e) Where water ballast in the tyres is used to achieve stability, decals must be fitted to the chassis of the machine and the wheel detailing this requirement.




*Decal required when water ballast is used in tyres.*

# 6 Markings and Documentation

### 6.1 Information to be Displayed

The following information must be displayed in clearly visible permanent lettering on all HEWPs.

(a) Make, model, serial number, year of manufacture, and the manufacturer's name and address.

(b) Safe working load (SWL) in kilograms and the number of people.

(c) Maximum platform height.

(d) Any special warnings, cautions or restrictions necessary for the safe operation, e.g. where a variation of capacity for varying platform outreach, the SWL for each location must be shown.

(e) An indication of the type and specification of the wheel drive (Section 5.3) which is fitted to the HEWP and the maximum incline it is designed to be operated on.

(f) The instruction: "Read manual for operating and servicing details".

### 6.2 Hire of HEWPs

Where the HEWP is to be made available for hire, essential operating and maintenance instructions must be permanently displayed on the machine, or be issued when it is hired.

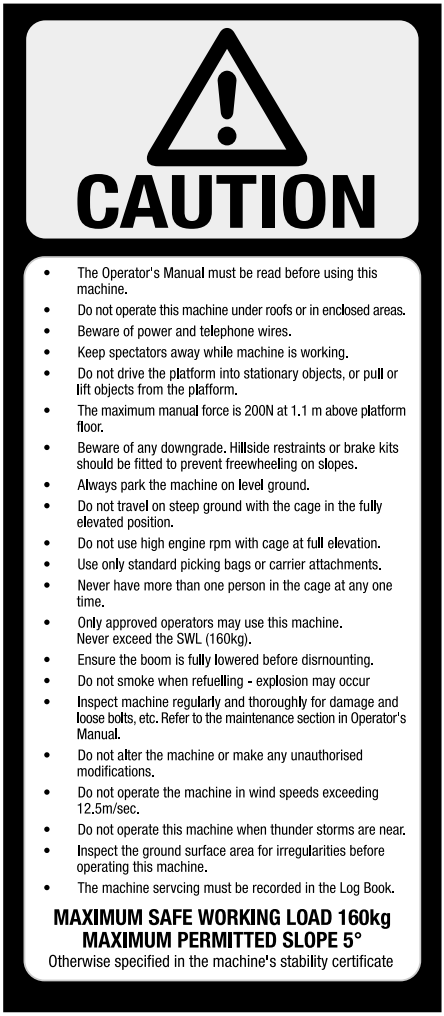
### 6.3 Owner's Record

Owners must keep and maintain a full record of the HEWP, including:

(a) Log book recording all maintenance details;

(b) Maintenance certificates or log book entry;

(c) Stability certificate.




*Sample of information to be included on a HEWP.*

# 7 Acceptance of Horticultural-Type Elevating Work Platforms

### 7.1 New Machines

Before designs and models not previously sold in New Zealand are introduced, it will be necessary to provide a certificate from a registered engineer stating that the HEWP complies with the requirements of this best practice document and AS 1418.10 as applicable. A comprehensive operating and maintenance manual, in English, must also be supplied.

New machines of a model already sold in New Zealand must be delivered with:

(a) A comprehensive operating and maintenance manual, in English.

(b) Either:

(i) A copy of the registered engineer's test report; or

(ii) Where a manufacturer is producing a HEWP as a regular production model, a standard test certificate may be issued provided that an original physical test report is held by the manufacturer.

### 7.2 Imported HEWPs

When "used" or "second-hand" HEWPs are imported into New Zealand, the machine must:

(a) Meet the requirements of this best practice document and AS 1418.10 as applicable.

(b) It will be necessary to subject the HEWP to a complete major examination (see Section 9.5).

(c) A certificate must be provided by a registered engineer as per paragraphs (a) and (b), stating that the HEWP meets these requirements, the major examination has been carried out, and that the machine is safe for use.

(d) Where the HEWP has had a complete major examination prior to being imported, a certificate from a reputable body may be accepted as proof that it complies with this code.

(e) A comprehensive operating and maintenance manual, in English, must be supplied with the machine.

(f) A stability certificate as described in Section 5.9 of this best practice document.

(g) The certificates and test reports are to be kept with the log book or file records (see Sections 6.3 and 9.1) of the machine by the owner.

### *7.3* Modification of HEWPs

If, subsequent to acceptance, a HEWP is significantly altered or modified, the owner must comply with the requirements of Sections 5 and 9.5 of this best practice document.

# 8 Operation of HEWPs

## 8.1 General: the Effects of Wind

Owners and users of HEWPs that may be used under strong wind conditions must be aware of the wind speeds the machine is designed to operate in, and work within these limits.

Some standards require a design wind speed of 12.5m/sec (Beaufort wind force of 6). Where owners require the use of the HEWPs in high wind conditions, they may need to specify a higher design wind speed when purchasing machines.

## 8.2 Travel

Where it is proposed to move a HEWP while the machine is elevated, ensure that the route chosen is safe before starting travel, and avoid operating the machine at high throttle settings. During travel the operator must always have a clear view of the ground, and keep a safe distance from changes in slope, depressions, debris, buildings, overhead power lines and other obstacles.

Wherever possible, avoid moving the HEWP while the cage is at maximum elevation.

## 8.3 Safety Harnesses

A safety harness should always be worn with its lanyard attached to the platform on any HEWP with a cage larger than 675mm square, or on all HEWPs with a nominal lift height greater than 5 metres. The safety harness must meet the requirements of AS/NZS 1891.1:1995 or an equivalent standard.

### 8.4 Safety Procedures

(a) HEWPs must never be operated by children under the age of 12 years.

(b) Be aware of the maximum slope rating of the HEWP, and its suitability for the working environment (see Section 5.9).

(c) Always inspect the area for obstructions, and ascertain the degree of any slopes are within the machines capability (see Section 5.3) before beginning work.

(d) Be aware of the maximum SWL of the HEWP and ensure it is not exceeded.

(e) A HEWP must not be used as a prop, tie or crane. Never exceed the maximum manual force as specified by the manufacturer.

(f) Safety devices such as pressure relief valves must not be adjusted outside the manufacturer's specifications. They must not be altered in any way, and can only be adjusted by a qualified person.

(g) Only approved attachments can be used with the HEWP. The manufacturer's operating instructions and loading specifications must be strictly adhered to.

(h) Do not operate a HEWP near children or spectators.

(i) Never operate a HEWP close to the edge of banks, drains or fences.

(j) Ensure the HEWP is suitable for the terrain, and beware of slippery conditions

(k) HEWPs must be only operated in the areas defined by the supervisor or owner.

(l) HEWPs fitted with internal combustion engines should not be used in a confined or enclosed space unless adequate ventilation is provided.

(m) Operators must not operate the HEWP without authorisation.

(n) If any fault in the control system is suspected, operations must cease until the suspected fault is rectified.

(o) Ensure that operators do not operate the HEWP so as to cause harm to themselves or any other person, and never allow spectators near the machine or position it over persons or allow employees to go under the HEWP unless it is essential to the operation, and on these occasions take special precautions.

(p) Don't start moving it unless the way is clear and will remain clear.

(q) When towing the HEWP, ensure that the approved pins and clips are used.

(r) Never tow more than two machines at a time.

(s) Always remove the pickbag before towing the machine on a public highway.

(t) Never exceed the manufacturer's speed recommendations when towing.

(u) Never approach within the minimum approach distance of the overhead power lines without the written consent of the electricity distributor/operator.

NOTE: See Table 1 (page 28). This table has been extracted from NZECP 34:1993. The requirements in any future revisions of this code should take precedence over the requirements of Table 1.

If an uninsulated HEWP comes into contact with live electrical lines or equipment, persons in the personnel bucket at the time should remain there and warn any other persons in the vicinity to stay clear. If it is safe to do so, operate the controls to break contact.

The safest course of action is to do nothing until the line is de-energised or help arrives. Only as a last resort should an operator attempt to jump clear.

**TABLE 1: MINIMUM DISTANCE FROM ELECTRICAL CONDUCTORS FOR THE USE OF ELEVATING WORK PLATFORMS**

| Line Voltage/Span | Minimum Distance (Metres) |
|---|---|
| Below 66kv /125 metres | 4.0 |
| Above 66 kv/125 metres | 5.0 |
| Any voltage/125-250 metres | 6.0 |
| Any voltage/250-500 metres | 8.0 |
| Any voltage/Over 500 metres | As agreed with the owner of the line but not less than 8.0 metres |

If they decide to jump, they should:

(a) Warn all other persons to keep clear and call for assistance to de-energise the lines; or

(b) If contact cannot be broken, and assistance is unavailable, as a last resort, leave the platform thus:

- Switch off the motor and, where applicable apply brakes.
- Remove any loose clothing.
- Climb to a point about 1 metre above the ground from where you can safely jump to the ground.
- JUMP so that you clear the platform BEFORE any part of you touches the ground.
- Fall away from the machine and not towards it.

DO NOT retouch the machine until the lines are de-energised.

# 9 Maintenance of HEWPs

### 9.1 Log Books or File Records

Log books or file records are to be kept by the owner of the HEWP showing details of certification, repairs, modifications, inspections and examinations. The person accepting responsibility must sign each entry.

### 9.2 Daily Checks

These are to be carried out by the operator before the HEWP is operated.

(a) Check that tyres are undamaged and correctly inflated.

(b) Check that all wheel studs are tight.

(c) Check that fuel, water and oil levels are correct.

(d) Check hydraulic lines for leaks and damage.

(e) Check that the supporting structure is sound and free from distortion and cracking.

(f) Check that the powered mechanism for lifting and driving the HEWP is working properly.

(g) Check that all brakes where fitted are working efficiently.

(h) Check that the emergency controls function correctly where applicable and any safety equipment (e.g. safety harness) is in good condition.

Operators should also carry out any other checks which may be specified in the manufacturer's instructions. The operator must bring any faults to the employer's notice, to ensure that these are fixed before the work platform is used again

### 9.3 Monthly Inspection

This is to be carried out by the owner, or a specifically delegated person other than the regular operator.

In the case of hired HEWPs, this check shall also be made at the termination of each hire contract.

The procedure should include:

(a) All the daily checks above (see Section 9.2).

(b) An operational check of the machine.

Any faults discovered must be corrected or the HEWP withdrawn from service.

This check shall be recorded in the machine's log book.

### 9.4 Twelve-Monthly Inspection

This is to be carried out by a person experienced in the maintenance and repair of HEWPs.

(a) The person carrying out the check should have access to the manufacturer's check list for each HEWP being certified.

(b) Any parts replacements, or modifications recommended by the manufacturer for safety reasons, shall be actioned as part of this inspection.

(c) Any faults discovered during the examination and test must be corrected before the work platform is used again.

(d) All checks as detailed in Sections 9.2 and 9.3 shall be made.

(e) This inspection must be recorded in the machine's logbook.

### 9.5 Ten-Yearly Major Examination

This is to be carried out by, or under the supervision of, an independent qualified person who is not directly involved with the day-to-day operation and/or maintenance of the HEWP.

In addition to the previous tests, HEWPs are to be thoroughly examined at an interval not exceeding 10 years from new and thereafter every 10 years, or after an accident, major repair or

modification. Such checking must be in accordance with the requirements of clause 10.4 of AS 2550.10. 1994 *Cranes safe use Part 10. Elevating work platforms or equivalent.*

The qualified person should have access to the manuals of each HEWP being certified.

The thorough examination should include:

(a) All checks as detailed in Sections 9.2 - 9.4 above.

(b) The disassembly and removal of paint, grease, corrosion from critical components as defined by the manufacturer to allow a complete and thorough inspection.

(c) The detailed visual inspection and tolerance checking of all wear components, and non-destructive testing of all critical areas for evidence of cracking, fatigue and excessive stress.

**Annual Check Certificate**

| | |
|---|---|
| Model: | Date of Manufacture: |
| Owner: | Serial No. |
| Owner's Plant No. | Date of Inspection: |

I hereby certify that the described elevating work platform has been inspected by me and found to be in a safe and serviceable condition, and in conformance with the relevant requirements of the *Guidelines for the Safe Use of Elevating Work Platforms in the Horticultural Industry*.

| | |
|---|---|
| Company: | |
| Address: | |
| Name:<br>Signature: | Position: |
| Record No: | Date: |

*Note: As an alternative to this certificate, an entry may be made in the Log Book as detailed in Section 9.4(e).*

(d) Any parts replacement or modifications recommended by the manufacturer for safety reasons must be actioned.

This check must be recorded in the log book of the HEWP and be signed off by the independent and qualified person.

### 9.6 Machines Involved in Accidents

Where a machine has been involved in an accident of any kind, it must be inspected as detailed in Section 9.5 before being returned to service.

# Appendix 1: Quick Compliance Check List for Owners

| | Yes | No |
|---|---|---|
| Are the appropriate documents being held? (See Section 4.1.c- e) | ☐ | ☐ |
| Have operators been instructed to check the machines daily before use? (Section 9.2) | ☐ | ☐ |
| Has a person other than the operator been delegated to carry out the monthly check? (Section 9.3) | ☐ | ☐ |
| In the event of punctures, have instructions been given that any water-filled tyres are to be refilled before the machine is used? (Section 4.2.g 5.9.e) | ☐ | ☐ |
| Have instructions been given as to where the machines are to be used and by whom? (Section 4) | ☐ | ☐ |
| Has a map of any sloping areas been made available to operators and contractors, and have hazards been drawn to their attention? (Section 4.4.d) | ☐ | ☐ |
| Are the drive systems of the machines you own appropriate for the terrain? (Section 5.3) | ☐ | ☐ |
| Are safety harnesses available for the operators of machines with lift heights in excess of 5.0 metres? (Section 8.3) | ☐ | ☐ |

# Appendix 2: Stability Test Certificate

**MACHINE DETAILS**

Model Type ..... Serial No ..... Model No .....
Tyre Size: Front ..... Rear .....

Ballast: Water-filled tyres Front (Total weight each ..... kg)
Rear (Total weight each ..... kg)
Chassis ballast weights: ..... (Total weight each ..... kg)

Max. lift to cage floor ..... Max SWL ..... kg in cage

**TEST PROCEDURE (Ref part 5.9.b)**

***1. Static sideways stability test***
Minimum Standard 1.00 Max. SWL with a 70 kg side load while the boom is fully elevated on a 5-degree slope.

| Cage height elevation (metres) | Max. side inclination (degrees) |
|---|---|
| ..... | ..... |
| ..... | ..... |
| ..... | ..... |
| ..... | ..... |

If the ratings vary with height, this must be placarded on the machine.

***2. Static fore/aft stability test***
1.50 SWL on a 5-degree forward slope, boom level.

***3. Dynamic fore/aft stability test***
1.25 SWL on a 5-degree forward slope — a full operational cycle, with an emergency stop while lowering the boom at full speed.

***4. Braking test***
On flat ground, the machine must stop within 2 metres from full speed at full elevation and load, in both forward and reverse.

I certify I have observed the above test on this machine and found the machine has a returning moment restoring stability.

Name ..... Designation .....

Signature ..... Date .....