

<b>Title</b>	<b>Operate a self-levelling machine in a forestry operation</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<p>This unit standard is intended for people operating self-levelling machines in a forestry operation.</p> <p>People credited with this unit standard are able to: demonstrate knowledge of self-levelling machines for forestry operations; conduct pre-start and maintenance checks prior to operating a self-levelling machine; start up a self-levelling machine; operate a self-levelling machine for forestry operations; and shut down a self-levelling machine.</p>
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<b>Classification</b>	Forestry > Machine Operations - Forestry
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation relevant to this unit standard includes the Health and Safety at Work (HSW) Act 2015; the Resource Management (National Environmental Standards for Plantation Forestry) Amendment Regulations 2018; and any subsequent amendments.
- 2 References  
*Approved Code of Practice (ACOP) for Safety and Health in Forestry Operations*, December 2012, available from <https://worksafe.govt.nz/>.  
 New Zealand Forest Owners Association, *Forest Practice Guides* (2019), and any subsequent amendments, available from <https://www.nzfoa.org.nz>.
- 3 Demonstration of competence must take place on a slope of 20 degrees or greater.
- 4 Definitions  
*Accepted industry practice* – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.  
*PPE* – personal protective equipment as required for the task in accordance with accepted industry practice and worksite procedures. This may include but is not limited to high-viz, protective clothing, gloves, face and eye protection, safety helmet, approved footwear, chaps, hearing protection, and safety devices.  
*Worksite procedures* refer to documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, quality assurance procedures, housekeeping standards, procedures to comply with legislative and local body requirements.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of self-levelling machines for forestry operations.

#### Performance criteria

- 1.1 The advantages and disadvantages of using a self-levelling machine are explained in accordance with worksite procedures.
- 1.2 The limitations of self-levelling machines are described in accordance with manufacturer's recommendations and worksite procedures.
- Range ground surface conditions, slope, load size.
- 1.3 Control and steering of a self-levelling machine is described in accordance with manufacturer's recommendations and worksite procedures.
- Range slow speed, high speed, on varying slope classes with payload and without payload, slewing ability, awareness of track orientation relative to cab.
- 1.4 The mechanism for maintaining cab stability in the event of a failure in the self-levelling system is explained.

### Outcome 2

Conduct pre-start and maintenance checks prior to operating a self-levelling machine.

#### Performance criteria

- 2.1 PPE is worn in accordance with accepted industry practice.
- 2.2 Pre-start checks are performed in accordance with manufacturer's recommendations and worksite procedures.
- Range may include but is not limited to – fluid levels, operator protection structures, self-levelling mechanism, means of communication, machine guarding, safety features, hydraulic hose condition, fire suppression, equipment in operator cab, operator visibility, debris in engine compartment; evidence of ten is required.
- 2.3 Access and egress methods are demonstrated in accordance with accepted industry practice.
- 2.4 Daily maintenance of the self-levelling machine is performed in accordance with manufacturer's recommendations and worksite procedures.

2.5 Means of communication with other workers is checked for suitability in accordance with worksite procedures.

2.6 Fire extinguishers are checked to ensure that they meet operational requirements in accordance with worksite procedures.

Range charged, secured.

### Outcome 3

Start up a self-levelling machine.

#### Performance criteria

3.1 Machine warning indicators are explained and rectifying action described in accordance with manufacturer's recommendations.

Range may include – high oil or water temperature, low oil levels, low engine oil pressure, oil filter replacement, computer equipment, warning fault codes.

3.2 Machine is started and warmed up in accordance with manufacturer's recommendations.

### Outcome 4

Operate a self-levelling machine for forestry operations.

#### Performance criteria

4.1 The risks specific to operating a self-levelling machine for forestry operations are assessed and controlled in accordance with accepted industry practice.

4.2 The reason for on-going risk management is explained in accordance with accepted industry practice.

4.3 Factors that may alter risks or introduce new risks are described in accordance with accepted industry practice.

Range evidence of three factors is required.

4.4 Machine is operated within its limitations and operator capabilities in accordance with accepted industry practice.

Range machine manoeuvring, boom and stick movement, slewing on varying slope and terrain conditions, operating attachment, log handling, travel speeds.

4.5 Swing and movement of suspended trees or logs is minimised by controlled movement of the boom and attachment.

- 4.6 Terrain is negotiated, and unfavourable ground conditions are identified and overcome in accordance with accepted industry practice.
- 4.7 Communication is maintained with other workers using recognised forest industry signals.
- 4.8 Machine is readied to be left unattended with the engine running in accordance with manufacturer’s instructions and accepted industry practice.

**Outcome 5**

Shut down a self-levelling machine.

**Performance criteria**

5.1 The self-levelling machine is parked in accordance with worksite procedures and manufacturer’s recommendations.

Range level ground, clear of debris, attachments lowered to the ground.

5.2 Self-levelling machine is shut down in accordance with manufacturer's recommendations.

Range may include but is not limited to – brakes applied, hydraulic system disengaged, engine idled down, turbo timer used.

5.3 Post-operational checks are carried out on a self-levelling machine in accordance with accepted industry practice.

Range may include but is not limited to – wear on components, damage to components, hydraulic leaks, structural damage.

5.4 Operator and engine compartments are cleared of debris and loose equipment.

<b>Planned review date</b>	31 December 2028
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	22 May 2008	31 December 2013
Revision	2	15 September 2011	31 December 2017
Review	3	10 December 2015	N/A
Review	4	26 March 2020	N/A
Rollover	5	26 April 2024	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0173
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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### Comments on this unit standard

Please contact Muka Tangata - People, Food and Fibre Workforce Development Council [qualifications@mukatangata.nz](mailto:qualifications@mukatangata.nz) if you wish to suggest changes to the content of this unit standard.