

<b>Title</b>	<b>Operate an excavator based tracked machine in a forestry operation</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to: demonstrate knowledge of excavator based tracked machines and their capabilities; conduct pre-start and maintenance checks prior to operating an excavator based tracked machine; start up an excavator based tracked machine; operate an excavator based tracked machine; and shut down an excavator based tracked machine.
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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 This unit standard must be assessed against on-job and the operator must meet the production requirements of the operation.
- 4 Excavator based tracked machines covered by this unit standard are: knuckle boom loaders; excavator based machines with purpose built land preparation attachments; and excavator based machines with processing and/or felling heads.
- 5 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 visibility clothing, protective clothing, gloves, face and eye protection, safety helmet, approved footwear, chaps, hearing protection, 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 excavator based tracked machines and their capabilities.

#### Performance criteria

- 1.1 Factors that influence the situations where excavator based tracked machines can be operated are explained in accordance with accepted industry practice and manufacturer's recommendations.
- 1.2 The capabilities of excavator based tracked machines are described in accordance with manufacturer's recommendations and worksite procedures.
- Range ground conditions, slope, load size, machine weight, traction.
- 1.3 The operation of excavator based tracked machines is explained in accordance with accepted industry practice.
- Range protective structures, seat belts, night work, guarding, operating on slopes, emergency exits.

### Outcome 2

Conduct pre-start and maintenance checks prior to operating an excavator based tracked machine.

#### Performance criteria

- 2.1 PPE is worn in accordance with worksite procedures.
- 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, machine guarding, safety features, inspection of components, 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.
- Range facing machine, three point contact, step and grab rail condition.
- 2.4 Means of communication with other workers is checked for service, channel selection and preparedness for use in accordance with worksite procedures.
- 2.5 Daily maintenance of the excavator based tracked machine is performed in accordance with manufacturer's recommendations and worksite procedures.

### Outcome 3

Start up an excavator based tracked 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 The machine is started and warmed up in accordance with manufacturer's recommendations.

### Outcome 4

Operate an excavator based tracked machine.

#### Performance criteria

- 4.1 The risks specific to operating an excavator based tracked machine 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 The machine is operated within its limitations and operator capabilities in accordance with accepted industry practice and worksite procedures.
- Range machine manoeuvring, boom and stick movement, slewing on varying terrain conditions, operating attachment, travel speeds.
- 4.5 Terrain is negotiated in accordance with accepted industry practice.

**Outcome 5**

Shut down an excavator based tracked machine.

**Performance criteria**

- 5.1 The 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 The machine is shut down in accordance with the manufacturer's recommendations.  
  
Range may include but is not limited to – hydraulic lock engaged, engine idled down, turbo timer used.
- 5.3 Post-operational checks on the machine are carried out in accordance with accepted industry practice and worksite procedures.  
  
Range may include but is not limited to – wear on components, damage to components, hydraulic leaks, structural damage, track condition; evidence of six is required.

<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	8 November 1996	31 December 2012
Revision	2	19 June 1998	31 December 2012
Review	3	5 December 2000	31 December 2012
Review	4	22 May 2008	31 December 2013
Revision	5	15 September 2011	31 December 2016
Review	6	19 March 2015	N/A
Review	7	26 March 2020	N/A
Rollover	8	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.