

Title	Demonstrate knowledge of forest industry machines		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to demonstrate knowledge of: forest industry machines, their capabilities and operating risks; the safety features and safe operation of forest industry machines; fuel handling for forest industry machines; and fire risks and fire prevention relating to forest industry machines. They are also able to explain the ergonomic features of forest industry machines.
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Classification	Forestry > Machine Operations - Forestry
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Available grade	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 Evidence is required for the machine typically operated by the candidate in his or her workplace.
- 4 Definitions
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.
Forest industry machines may include – knuckle boom loaders, excavator based machines with purpose built land preparation attachments, excavator based machines with processing and/or felling heads, track type machines, skidders, forwarders, bell machines, rubber tyre forked loaders, cable yarders, swing yarders.
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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of forest industry machines, their capabilities and operating risks.

Performance criteria

- 1.1 The risks specific to operating forest industry machines are identified, and methods to control them are explained in accordance with accepted industry practice.

Range evidence of ten risks and a control method for each is required.

- 1.2 Capabilities of forest industry machines are described in accordance with accepted industry practice, manufacturer's recommendations and worksite procedures.

Range capabilities include but are not limited to – ground conditions, slope, load size, machine weight, traction.

- 1.3 Control and steering of forest industry machines are described in accordance with manufacturer's recommendations.

Range may include but is not limited to – slew control, travel speed, turning speed, payload size and position, blade position, boom and stick position, size of attachment; evidence of six is required.

- 1.4 Safe working load capacities are explained in accordance with accepted industry practice, manufacturer's recommendations and worksite procedures.

Outcome 2

Demonstrate knowledge of the safety features and safe operation of forest industry machines.

Performance criteria

- 2.1 Safety features of forest industry machines are described in accordance with accepted industry practice and manufacturer's recommendations.

Range protective structures, guarding, fire suppression system, seatbelt, lockout system, braking system.

- 2.2 Action to be taken when safety features are compromised is explained in accordance with the manufacturer's recommendations and worksite procedures.

- 2.3 Rules governing the operation of forest industry machines are explained in accordance with accepted industry practice and worksite procedures.

Range may include but is not limited to rules relating to – seatbelts, doors, night work, noise levels, cabs, guarding, powerlines, moving machinery, maintaining machinery.

- 2.4 The operation and relocation of forest industry machines on public roads are explained in accordance with accepted industry practice and worksite procedures.

Outcome 3

Explain the ergonomic features of forest industry machines.

Performance criteria

- 3.1 Ergonomic features of forest industry machines are explained in accordance with accepted industry practice and manufacturer's recommendations.

Range seat, controls, noise control, climate control, lighting, cab access, vibration control.

- 3.2 Ergonomic set-up before operating machines, and benefits of correct set-up are explained in accordance with accepted industry practice, manufacturer's recommendations and worksite procedures.

Outcome 4

Demonstrate knowledge of fuel handling for forest industry machines.

Performance criteria

- 4.1 Fuel management requirements for forest industry machines are explained in accordance with accepted industry practice and worksite procedures.

Range fuel storage, fuel transportation.

- 4.2 Refuelling procedures of forest industry machines are explained in accordance with accepted industry practice, manufacturer's recommendations, and worksite procedures.

Outcome 5

Demonstrate knowledge of fire risks and fire prevention relating to forest industry machines.

Performance criteria

- 5.1 Potential fire risks related to forest industry machines are identified and explained in accordance with accepted industry practice.

Range evidence of three potential fire risks.

- 5.2 Actions taken to control fire risks identified in performance criterion 5.1 are explained in accordance with worksite procedures.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 April 2013	N/A
Review	2	26 March 2020	N/A

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

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.