

Title	Operate a forest industry machine		
Level	3	Credits	10

Purpose	People credited with this unit standard are able to: prepare for operating a forest industry machine; and start up, operate, and shut down a forest industry machine.
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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 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 and harvestlines;
 evidence of one is required.
- 4 Assessment against this unit standard should be carried out while operating the machine for a basic industry task. It is not intended that the candidate be working at a full production level. Basic industry tasks may include – extraction on flat terrain, fleet, sort and stack in a cold deck situation, two stage extraction, laying out stems for processing, moving log stockpiles, carrying out land preparation on flat terrain.
- 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-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.

Outcomes and performance criteria

Outcome 1

Prepare for operating a forest industry machine.

Performance criteria

- 1.1 PPE is worn in accordance with accepted industry practice and worksite procedures.
- 1.2 Pre-start checks are performed in accordance with the 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 system, equipment in operator cab, operator visibility, debris in engine compartment, blade and log attachment equipment, tyre or track condition, cooling system, access ladders, hand rails; evidence of ten is required.
- 1.3 Defects and maintenance requirements are reported and/or rectified prior to operating machine in accordance with accepted industry practice and worksite procedures.
- 1.4 Access and egress methods are demonstrated in accordance with accepted industry practice.
 - Range facing machine, three point contact, step and grab rail condition.
- 1.5 Means of communication with other workers is checked for service and channel selection in accordance with worksite procedures.

Outcome 2

Start up a forest industry machine.

Performance criteria

- 2.1 Start-up requirements are explained in accordance with the manufacturer's recommendations and worksite procedures.

- 2.2 Machine warning indicators are explained, and rectifying action described, in accordance with the manufacturer's recommendations and worksite procedures.

Range warning indicators may include – high oil or water temperature, low oil levels, low engine oil pressure, oil filter replacement, computer equipment, diff lock engagement, air pressure, park brake status, warning fault codes; evidence of five is required.

- 2.3 Machine is started in accordance with the manufacturer's recommendations and worksite procedures.

- 2.4 Warm-up procedure is followed in accordance with the manufacturer's recommendations and worksite procedures.

Outcome 3

Operate a forest industry machine.

Performance criteria

- 3.1 The risks specific to operating the machine are assessed and controlled in accordance with accepted industry practice.

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

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

Range evidence of three factors is required.

- 3.4 Forest industry machine is operated within its capabilities and operator capabilities in accordance with accepted industry practice, manufacturer's recommendations, and worksite procedures.

Range machine operation may include but is not limited to – machine manoeuvring, blade, boom and stick movement, slewing or turning on varying terrain conditions, operating attachments and logging equipment, travel speeds, machine positioning, minimising soil disturbance, log handling; evidence of six is required.

- 3.5 Safety precautions and operating techniques that minimise the likelihood of an incident or accident are used during operation of forest industry machine.

- 3.6 Communication is maintained with other workers using recognised forest industry signals in accordance with accepted industry practice.

- 3.7 Action required in the event of unusual vibrations, noises, smells, or changes in operating pressure or temperature while operating are described in accordance with the manufacturer's recommendations.

- 3.8 Seatbelt is worn in accordance with accepted industry practice.
- 3.9 Forest industry machine is made ready and left unattended with the engine running in accordance with accepted industry practice.

Outcome 4

Shut down a forest industry machine.

Performance criteria

- 4.1 Forest industry machine is parked in accordance with the manufacturer's recommendations and worksite procedures.
- Range level ground, clear of debris, attachments lowered to the ground.
- 4.2 Forest industry machine is shut down in accordance with the manufacturer's recommendations and worksite procedures.
- Range may include but is not limited to – hydraulic lock engaged, engine idled down, turbo timer used, transmission disengaged, brakes applied.
- 4.3 Post-operational checks on the forest industry 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, tyre or track condition; evidence of six is required.

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.