Title | Extract stems or logs using a ground based machine
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Level | 4
Credits | 20

**Purpose**

This unit standard is intended for the operators of forestry machines used to extract stems or logs from the forest in a ground based operation.

People credited with this unit standard are able to: interpret a job prescription for ground based extraction; control risks associated with ground based extraction; plan and control ground based extraction; extract stems or logs to a landing; meet job prescription and worksite production requirements; and carry out maintenance of the extraction machine.

**Classification**

Forestry > Machine Operations - Forestry

**Available grade**

Achieved

**Prerequisites**

One of – Unit 6934, *Operate a skidder in a forestry situation*; Unit 6935, *Operate an excavator based tracked machine in a forestry situation*; Unit 6936, *Operate a tracked machine in a forestry situation*; Unit 6946, *Operate a forwarder in a forest harvesting operation*; or demonstrate equivalent knowledge and skills.

**Guidance Information**

1. This unit standard must be assessed against on job and the operator must meet the production requirements of the operation.

2. **Definitions**
   - *Accepted forestry industry practice* refers to documented codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.
   - *Job prescription* refers to any written instructions for the operation and may include maps, harvest plans or cut plans.
   - *PPE* refers to personal protective equipment and may include but is not limited to high-viz, protective clothing, gloves, face and eye protection, safety helmet, footwear, 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**

Interpret a job prescription for ground based extraction.

**Performance criteria**

1.1 The forest management, environmental, and customer requirements of the job prescription are explained.

1.2 Key locations are identified and marked on the harvest plan map.

   Range key locations may include – environmental protection areas, current landing, previous or next landing, steep areas, flat areas, hazardous areas, felling face, access roads, operational signage locations.

1.3 Implementation of the extraction plan is explained in accordance with accepted forestry industry practice.

1.4 Clean-up requirements are described in accordance with the job prescription, worksite policies and procedures, and accepted forestry industry practice.

**Outcome 2**

Control risks associated with ground based extraction.

**Performance criteria**

2.1 Hazards associated with ground based extraction are identified.

   Range terrain, slope, tracks, ground conditions, excessive speed, machine instability, machine suitability, operator working alone, other workers, other machinery.

2.2 Risks are documented and controlled in accordance with accepted forestry industry practice.

2.3 The reason for on-going hazard identification is explained in accordance with accepted forestry industry practice.

2.4 Factors that may change hazards or introduce new hazards are described in accordance with accepted forestry industry practice.

   Range weather, terrain, change in extraction path.

2.5 PPE is worn in accordance with accepted forestry industry practice and worksite policies and procedures.
Outcome 3

Plan and control ground based extraction.

Performance criteria

3.1 Types of machines suitable for ground based extraction are described in accordance with worksite procedures.

Range steep terrain, flat terrain, environmentally sensitive areas.

3.2 The extraction plan for a ground-based extraction operation is explained, and factors that may influence the performance of the operation are identified.

Range factors may include but are not limited to – terrain, suitability of extraction method, minimisation of environmental damage, haul distance; evidence of four is required.

3.3 The extraction path is managed to maximise productivity and minimise breakage in accordance with the job prescription and machine type.

3.4 Wood flow to the landing is managed in accordance with worksite procedures.

3.5 Methods of communication used during extraction operations are explained and demonstrated in accordance with the accepted forestry industry practice.

3.6 The communication responsibilities of machine operators are described in accordance with worksite procedures.

Outcome 4

Extract stems or logs to a landing.

Performance criteria

4.1 Machine movements are controlled within the safe operating limits of the machine in accordance with accepted forestry industry practice and manufacturer’s recommendations.

4.2 Communication to control the extraction operation is maintained in accordance with worksite procedures.

4.3 Machine is positioned for loading in accordance with accepted forestry industry practice.

4.4 Machine operation while loading is in accordance with accepted forestry industry practice and manufacturer’s recommendations.

4.5 Load is secured in position before travelling in accordance with accepted forestry industry practice.
4.6 Stems or logs are offloaded in safe and secure locations on the landing in accordance with worksite procedures and accepted forestry industry practice.

**Outcome 5**

Meet job prescription and worksite production requirements.

**Performance criteria**

5.1 Work is carried out methodically to maximise the extraction rate.

5.2 All merchantable timber is extracted from the cutover in accordance with the job prescription.

5.3 Extraction is managed to minimise interference with the work of other team members.

5.4 Environmental considerations are managed in accordance with the accepted forestry industry practice and the job prescription.

5.5 Damage to stems or logs is minimised in accordance with accepted forestry industry practice.

**Outcome 6**

Carry out maintenance of the extraction machine.

**Performance criteria**

6.1 Maintenance is carried out on the extraction machine and any ancillary equipment in accordance with worksite procedures and manufacturers’ recommendations.

Range ancillary equipment may include but is not limited to – winch, rope, strops, grapple.

| Planned review date | 31 December 2023 |

| **Status information and last date for assessment for superseded versions** |
|-----------------------|-------------------|
| **Process** | **Version** | **Date** | **Last Date for Assessment** |
| Registration | 1 | 15 September 2011 | 31 December 2016 |
| Review | 2 | 19 March 2015 | 31 December 2020 |
| Review | 3 | 28 June 2018 | N/A |
Consent and Moderation Requirements (CMR) reference 0173
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.