Title Operate a Bell machine in a forest or a log yard

Level 4 Credits 5

Purpose People credited with this unit standard are able to: demonstrate knowledge of Bell machines and their capabilities; conduct pre-start and maintenance checks prior to operating a Bell machine; start up a Bell machine; operate a Bell machine; and shut down a Bell machine.

Classification Forestry > Machine Operations - Forestry

Available grade Achieved

Explanatory notes

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

2 This unit standard may be used to assess the operation of three wheeled machines including the Bell Ultra Logger and the Bell Logger.

3 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.
   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 evidence requirements

Outcome 1

Demonstrate knowledge of Bell machines and their capabilities.
Evidence requirements

1.1 Factors that influence where Bell machines can be operated are explained in accordance with accepted forestry industry practice and manufacturer's recommendations.

1.2 The limitations of Bell machines are described in accordance with the manufacturer's recommendations and worksite procedures.

Range ground conditions, slope, load size.

1.3 The operation of mobile plant is explained in accordance with accepted forestry 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 a Bell machine.

Evidence requirements

2.1 PPE is worn in accordance with accepted forestry industry practice.

2.2 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, cooling system, jockey wheel security, operator protection structures, 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 Daily maintenance of the Bell machine is performed in accordance with manufacturer's instructions and worksite procedures.

Outcome 3

Start up a Bell machine.

Evidence requirements

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

Range may include – warning lights, low engine oil pressure, oil filter replacement, engine cut-out device.
3.2 The machine is started and warmed up in accordance with the manufacturer’s recommendations.

**Outcome 4**

Operate a Bell machine.

**Evidence requirements**

4.1 Hazards specific to operating Bell machines are described and ways to manage these explained, in accordance with accepted forestry industry practice.

Range slopes, ground conditions, soil moisture, obstacles on the ground, debris, travel speed, machine instability, machine suitability and state of repair, proximity of other workers, restricted visibility.

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

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

Range weather, change of landing layout, change of location.

4.4 The machine is operated within its limitations and operator capabilities in accordance with accepted forestry industry practice and worksite procedures.

Range machine manoeuvring, boom and extension movement, turning on varying terrain conditions, operating attachment, log handling, travel speeds.

4.5 Swing and position of suspended logs is controlled by movement of the boom and grapple.

**Outcome 5**

Shut down a Bell machine.

**Evidence requirements**

5.1 The machine is parked in accordance with worksite procedures and manufacturer’s instructions.

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

5.2 The machine engine is idled down in accordance with manufacturer’s recommendations.

5.3 Post-operational checks on the machine are carried out in accordance with accepted forestry industry practice and worksite procedures.
Range may include but is not limited to – wear on components, damage to components, hydraulic leaks, structural damage, tyre condition, hydraulic fluid level; evidence of six is required.

Planned review date | 31 December 2020

### Status information and last date for assessment for superseded versions

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### Consent and Moderation Requirements (CMR) reference

0173


Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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.