
Overview

This standard is about felling trees mechanically in forests and woodlands and includes the preparation, driving and manoeuvring of the machine

This operation may be integral with the processing of the trees using a combined harvesting and processing head. It also includes clear felling trees and thinning in a stand. You may be working on trees which are hung-up or partially/fully windblown

You must select an appropriate felling pattern so as to facilitate extraction and meet given specifications. Preparation of trees may be required as a separate operation before or after mechanical felling

Your work must conform to all current legislation and codes of practice

This standard is suitable for forest machine operators involved in the felling of trees

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Fell trees mechanically

Performance criteria

You must be able to:

- P1 meet relevant legislative, organisational and environmental requirements relevant to preparing the machine
- P2 assess the risks associated with the site and the work to be carried out
- P3 select and implement appropriate working method in accordance with the assessed risks
- P4 maintain the security of machinery and equipment on site
- P5 select, prepare and use tools and equipment that are appropriate to the work, safely and effectively
- P6 carry out routine operator maintenance, pre-start checks and setting of the machine for use
- P7 select, prepare and maintain access and egress routes in a serviceable condition
- P8 drive and manoeuvre the machine to the timber in a safe and effective way within site restraints
- P9 ensure that damage to the worksite, any remaining standing trees, tracks, roads, drains and the wider environment is kept within specified limits
- P10 utilise additional safeguards when reversing or manoeuvring and comply with safety distances adjacent to roads and tracks or where others are working
- P11 identify trees to fell and position machine to fell trees in the required direction, in both clear-fell and thinning
- P12 select a felling method which is relevant to the tree size and condition and to the given specification
- P13 fell trees safely and effectively to specification
- P14 position timber appropriately for subsequent processing
- P15 meet given specifications for stump height (and stump treatment where applicable)
- P16 maintain the health and safety of yourself and others at all times in accordance with current legislation

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Knowledge and understanding

You need to know and understand:

- K1 how to identify hazards and assess risks
- K2 how to interpret risk assessments
- K3 emergency planning and procedures relevant to the site
- K4 current guidelines on machinery operation, risk zones and safety clearances from overhead electricity conductors, working at height and what to do in the event of contact with power lines
- K5 the potential impacts of your work on the environment and how these can be minimised
- K6 how to plan, set up and use fuelling and maintenance areas
- K7 the requirements for machine and operator **protection structures**
- K8 the need for and benefits of carrying out routine operator checks and basic maintenance in line with manufacturer's recommendations
- K9 the function of all operating controls for base unit, machine boom and felling head, including fire control system
- K10 the procedure for loading and unloading the machine from a transporter
- K11 driving techniques and **site preparation** that reduce damage to the ground, any remaining standing trees or the wider environment such as drains and roads to within specified limits
- K12 the implications of terrain, ground conditions, season, weather, load and timber type/condition on planning access routes and driving the machine
- K13 the various driving characteristics and techniques for driving a machine with different wheel configurations and traction aids
- K14 how to recognise trees to be felled and select size and species to meet required specification
- K15 the implications of felling double, shattered or other malformed trees
- K16 how to deal with windblown trees with over-size, buried or inaccessible butts
- K17 the legal constraints and requirements for felling trees
- K18 how to check, maintain and sharpen felling mechanism and the procedures to ensure operator is safeguarded
- K19 your responsibilities under current environmental, health and safety legislation and codes of practice

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Range related to knowledge and understanding

Machinery used includes:

- 1 grapple harvesters
- 2 felling heads
- 3 feller-bunchers or mechanical shears
- 4 guillotine/shearing head
- 5 circular saw
- 6 chainsaw

Setting machines

- 1 adjustments to meet job
- 2 using GPS systems

Felling

- 1 conifers and broadleaves
- 2 felling cut and multiple felling cuts

Protection structure

- 1 Operator Protective Structures (OPS)
- 2 Roll Over Protective Structures (ROPS)
- 3 Falling Object Protective Structures (FOPS)

Site preparation

- 1 how to prepare for crossing water courses
- 2 the use of ramps etc

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