

Fell trees mechanically

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 involve 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 that are hung-up or partially or fully windblown.

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

When working with machinery you need to be appropriately trained, and hold current certification where required, in line with relevant legislation.

Your work must conform to all relevant legislation and codes of practice when carrying out this work.

This standard is only suitable for those who are already competent to operate a base machine with attachments.

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Performance criteria

You must be able to:

1. assess the risks associated with the site and the proposed work
2. select and implement appropriate working method in accordance with the assessed risks
3. select and use appropriate personal protective equipment (PPE) for the work
4. maintain the security of machinery and equipment on site
5. select, prepare and use the appropriate tools and equipment, safely and effectively
6. confirm all equipment has been checked and is fit for purpose
7. carry out routine operator maintenance, pre-start checks and the setting of the machine for use in felling trees
8. select, prepare and maintain access and egress routes in a serviceable condition
9. ensure that damage to the worksite, any remaining standing trees, tracks, roads, drains and the wider environment is kept within specified limits
10. identify the trees to fell and position the machine to fell trees in the required direction, for both clear-fell and thinning operations
11. select a felling method that is relevant to the tree size and condition and to the given specification
12. fell trees mechanically, safely and effectively according to the specification
13. position timber appropriately for subsequent processing
14. meet given specifications for stump height (and stump treatment, where applicable)
15. ensure the site is left in a condition which meets environmental requirements, in accordance with the specification
16. maintain the health and safety of yourself and others at all times, in accordance with relevant legislation

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Knowledge and understanding

You need to know and understand:

1. how to identify hazards and assess risks
2. how to interpret risk assessments
3. the selection, use and care of personal protective equipment (PPE)
4. site procedures including communication systems and emergency planning
5. the types of tools and equipment required and how to maintain and use these safely and effectively in line with the manufacturer's recommendations
6. the legal requirements for checking equipment
7. why it is important to maintain the safety and security of equipment and vehicles on site
8. the 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
9. the function of all operating controls for base unit, machine boom and felling head, including the fire control system
10. the capabilities and limitations of the machinery used including its slope limitations
11. how to recognise the trees to be felled mechanically and how to select the size and species to meet the required specification
12. the implications of felling double, shattered or other malformed trees
13. how to deal with windblown trees with over-size, buried or inaccessible butts
14. the legal constraints and requirements for felling trees mechanically
15. how to check, maintain and sharpen the felling mechanism and the procedures to ensure the operator is safeguarded
16. the potential impact of your work on the environment and how this can be minimised
17. your responsibilities under relevant environmental, health and safety legislation and codes of practice

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Scope/range related to knowledge and understanding How to use one of the following machinery:

- grapple harvesters
- felling heads
- feller-bunchers or mechanical shears
- guillotine/shearing head
- circular saw

Machinery settings:

- adjustments to meet the job
- basic calibration of measuring system
- obtain site and production data

Felling:

- conifers and broadleaves
- felling cut and multiple felling cuts

Site preparation:

- how to prepare for crossing water courses
- the use of ramps, etc.

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