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**Machinery for forestry — Mobile and self-propelled machinery — Terms, definitions and classification**

*Matériel forestier — Machines mobiles et automotrices — Termes, définitions et classification*

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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 6814 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 15, *Machinery for forestry*.

This second edition cancels and replaces the first edition (ISO 6814:1983), which has been technically revised.

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# Machinery for forestry — Mobile and self-propelled machinery — Terms, definitions and classification

## 1 Scope

This International Standard defines terms and gives guidance on the classification of mobile forestry machines. The terms and definitions are determined by the end use of the machines as intended by the manufacturer.

This International Standard is applicable to machines designed for use in forestry for site preparation, planting, harvesting, processing and transporting wood and wood fibre. It is not applicable to machines designed to be used exclusively in sawmills or wood yards, on-highway transport vehicles, and aerial vehicles.

## 2 Terms and definitions

Forestry machines are identified according to the terms and definitions given below. These terms and definitions do not include all possible forest operations or machines, but are given as aids for naming forestry machines.

### 2.1 Definitions of operations for site preparation, planting and maintenance

#### 2.1.1

##### ground preparation

##### bedding

preparation of the soil surface to provide a location for planting

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#### 2.1.2

##### chopping

breaking down material into shorter pieces

#### 2.1.3

##### cleaning

selective removal of unwanted shrubs and trees without use of the wood

#### 2.1.4

##### clearing

removing unwanted residues (logging waste), shrubs, trees and stumps

#### 2.1.5

##### grubbing

removing trees and stumps from an area by severing below the ground surface, lifting, and pushing into piles

#### 2.1.6

##### mulching

applying a layer of organic matter to the surface of the soil

#### 2.1.7

##### planting

putting trees or seedlings into the ground at their growing positions

**2.1.8**

**ploughing GB**

**plowing US**

shearing and turning mineral soil with a linear motion

**2.1.9**

**pruning**

removal of live or dead branches or of multiple leaders of shoots from standing trees

**2.1.10**

**raking**

moving loose material using a toothed or comb-like device

**2.1.11**

**scarifying**

preparing the ground surface for planting or regeneration by lightly cultivating the surface

**2.2 Definitions of operations for forest harvesting**

**2.2.1**

**bunching**

gathering and arranging trees or parts of trees in bunches

**2.2.2**

**cable way extraction**

**cable yarding**

transporting trees or parts of trees by means of a cable system

**2.2.3**

**chipping**

breaking down/slicing trees into small pieces of specified dimensions

**2.2.4**

**crushing**

reduction of trees or parts of trees by compression or impacting

**2.2.5**

**debarking**

removing bark from trees or parts of trees

**2.2.6**

**delimiting**

removing branches from trees or parts of trees

**2.2.7**

**felling**

cutting trees above ground level

**2.2.8**

**forwarding**

transporting trees or parts of trees by carrying them

**2.2.9**

**harvesting**

felling combined with other processing functions

**2.2.10**

**loading**

picking up trees or parts of trees from the ground, or from a vehicle, and piling them on a vehicle

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**2.2.11****stacking**

depositing trees or parts of trees in orderly piles

**2.2.12****processing**

function or combination of functions other than felling that change the form of the material

**2.2.13****skidding**

transporting trees or parts of trees by trailing or dragging

**2.2.14****slashing****bucking****cross-cutting**

cutting felled or uprooted trees or parts of trees into lengths

**2.2.15****sorting**

separating trees or parts of trees into groups based on particular attributes

**2.2.16****splitting**

dividing trees or parts of trees longitudinally into pieces

**2.2.17****thinning**

selective felling in immature stands to promote the growth of the remaining trees, with use of the wood

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**2.2.18****topping**

cutting off the top of trees at a predetermined point

**2.2.19****uprooting**

removal of trees complete with root ball by severing or breaking roots below the soil surface

**2.3 Definitions of forestry machines**

Forestry machines defined below are aids for naming and identifying current forestry machines but do not include all possible machines, nor do they represent any specific machine.

**2.3.1 Single function machines****2.3.1.1****cable yarder****cable cranes**

a machine designed to provide the power to transport trees or parts of trees by means of a cable system usually with the use of a tower which may be integral to the machine or a separate structure

**2.3.1.2****chipper**

machine designed to chip whole trees or parts of trees

**2.3.1.3****cleaner**

machine designed to selectively remove unwanted shrubs and trees

**2.3.1.4**

**crusher**

machine designed to reduce trees or parts of trees by rolling or impacting

**2.3.1.5**

**debarker**

machine designed to remove the bark from trees or parts of trees

**2.3.1.6**

**delimber**

machine designed to remove limbs from trees or parts of trees

**2.3.1.7**

**feller**

self-propelled machine designed to fell standing trees

**2.3.1.8**

**forwarder**

self-propelled machine designed to move trees or parts of trees by carrying them

**2.3.1.9**

**log loader**

machine designed to pick up and discharge trees or parts of trees for the purpose of piling (stacking) or loading

**2.3.1.10**

**regeneration equipment**

machines used in reforestation

**2.3.1.11**

**skidder**

self-propelled machine designed to transport trees or parts of trees by trailing or dragging

**2.3.1.12**

**slasher**

**bucker**

**crosscutter**

machine designed to cut felled trees into lengths

**2.3.1.13**

**site preparation equipment**

machines used to prepare forest sites for planting or seeding

**2.3.2 Multi-function machines**

**2.3.2.1**

**delimber-buncher**

machine designed to delimb trees and arrange logs in bunches

**2.3.2.2**

**feller-buncher**

self-propelled machine designed to fell standing trees and arrange them in bunches

**2.3.2.3**

**feller-forwarder**

self-propelled self-loading machine designed to fell standing trees and transport them by carrying

**2.3.2.4**

**feller-skidder**

self-propelled, self-loading machine designed to fell standing trees and transport them by skidding

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**2.3.2.5****slasher-buncher****bucker-buncher****crosscutter-buncher**

machine designed to cut logs to predetermined lengths and arrange them in bunches

**2.3.2.6****processor**

multi-function machine, which does not fell trees but performs two or more subsequent functions which change the form of the material

**2.3.2.7****harvester**

self-propelled multi-function machine, which combines felling with other processing functions

**3 Classification guidelines****3.1 Classification by general technical concepts****3.1.1 General**

The following common criteria may be used to classify forestry machines according to their general technical concepts. The examples given in this subclause do not include all possible classifications of machines.

NOTE Only those sub-classifications necessary to identify the machines in the context of use need be listed, for example, wheeled grapple skidder, tracked swing-to-load knuckleboom log loader.

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**3.1.2 Mobility method**

Classification according to the type of system for providing motion, which may or may not be self-propelled.

EXAMPLE Tracked system, wheeled system, towed system.

**3.1.3 Mode of operation**

Classification according to the basic concept used to perform the function.

EXAMPLE Grapple, single-grip, shear, swing-to-load.

**3.1.4 Harvesting system**

Classification according to the type of harvesting system for which the machine is designed.

EXAMPLE Shortwood, tree-length, whole-tree, chips.

**3.1.5 Type of steering**

Classification according to the type of system used to steer the machine.

EXAMPLE Front or rear steer axle, articulated frame, skid.