
**Machinery for forestry — Knuckleboom log
loaders — Identification terminology,
classification and component nomenclature**

*Matériel forestier — Chargeuses de grumes à bras articulé — Terminologie
d'identification, classification et nomenclature des éléments*



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Foreword

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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 17591 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 15, *Machinery for forestry*.

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Machinery for forestry — Knuckleboom log loaders — Identification terminology, classification and component nomenclature

1 Scope

This International Standard defines identifying terms, specifies a means of classification and gives a nomenclature of components for the knuckleboom log loaders used in forestry. Its aim is to establish a uniform method of describing the various configurations of this type of mobile forest machine.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, this publication do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6814, *Machinery for forestry — Mobile and self-propelled machinery — Terms, definitions and classification*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

NOTE The figures in this International Standard are intended to illustrate basic concepts rather than any existing machines or all possible boom configurations.

3.1 General terms

Machines or components defined by their mounting configuration and boom geometry.

3.1.1

knuckleboom log loader

class of log loader characterized by a swing-to-load machine with articulated booms, grapple and supporting structure designed to grab, lift, swing and place trees or parts of trees

NOTE It is classified as such in accordance with ISO 6814.

3.1.2

boom set

system of pivoting members between the main boom pivot and the grapple pivot

3.1.3

upper structure

assembly of components of the loader above the swing bearing

3.1.4

heel

solid structure used in conjunction with the grapple to provide a second point of contact with the piece being handled

3.2 Classification according to mounting configuration

Knuckleboom log loaders classified by their type of mounting or carrier (see Figure 1).

3.2.1

trailer mount

configuration in which the loader is permanently attached to a towable, non-powered frame

3.2.2

truck mount

configuration in which the loader is permanently attached to a powered chassis capable of on-road transport

NOTE The chassis includes a separate operator station for transport.

3.2.3

articulated carrier mount

configuration in which the loader is permanently attached to a powered chassis which utilizes articulated steering

NOTE The same operator station is used for both transport and loading functions.

3.2.4

crawler mount

configuration in which the loader is permanently attached to a crawler undercarriage

3.2.5

rubber-tyred carrier mount

configuration in which the loader is permanently attached to a powered chassis which utilizes automotive-type steering and rubber tires

NOTE The same operator station is used for both transport and loading functions.

3.3 Classification according to boom configuration

Knuckleboom log loaders classified by the arrangement and type of boom components (see Figure 2).

3.3.1

live heel boom

configuration in which the grapple and the heel are attached to a pivoting boom member, allowing the attitude of the grappled piece to be manipulated independently of its vertical or horizontal position

3.3.2

offset boom

fixed heel boom

configuration in which the grapple pivot end of the boom is offset to properly align the grapple and a fixed heel

3.3.3

straight boom

configuration in which the final boom member does not include an offset

3.3.4

three-piece boom

configuration in which the boom set consists of three pivoting members, not including a pivoting live heel

3.3.5

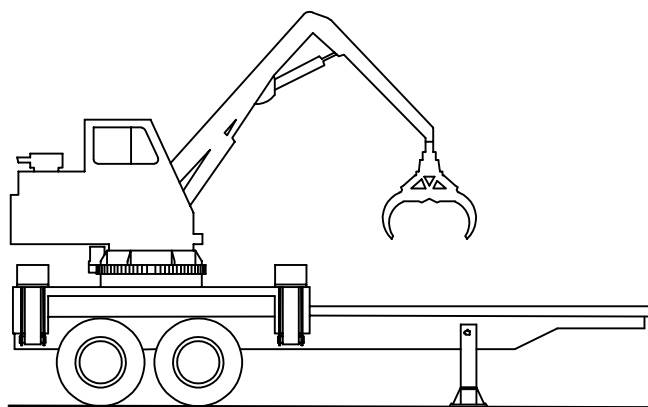
telescoping boom

configuration in which the grapple pivot is attached to a telescoping member

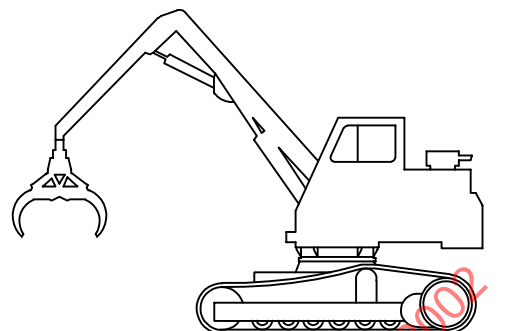
4 Component nomenclature

Figure 2 shows and gives the names of primary components unique to this type of forestry machinery.

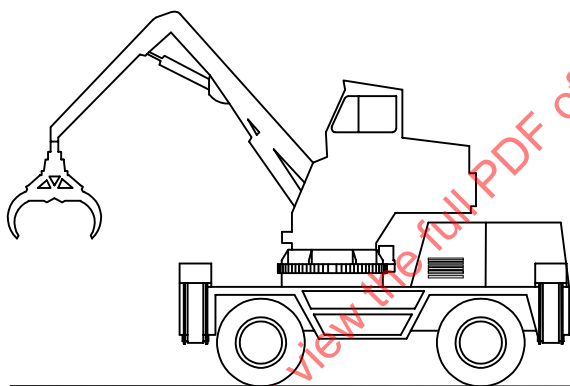
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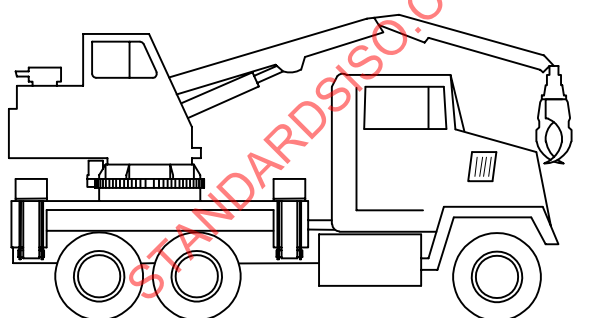
a) Trailer mount (3.2.1)



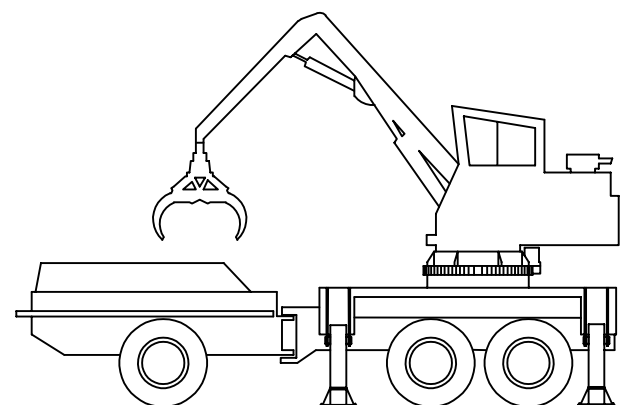
b) Crawler mount (3.2.4)



c) Rubber-tired carrier mount (3.2.5)



d) Truck mount (3.2.2)



e) Articulated carrier mount (3.2.3)

Figure 1 — Knuckleboom loader configuration

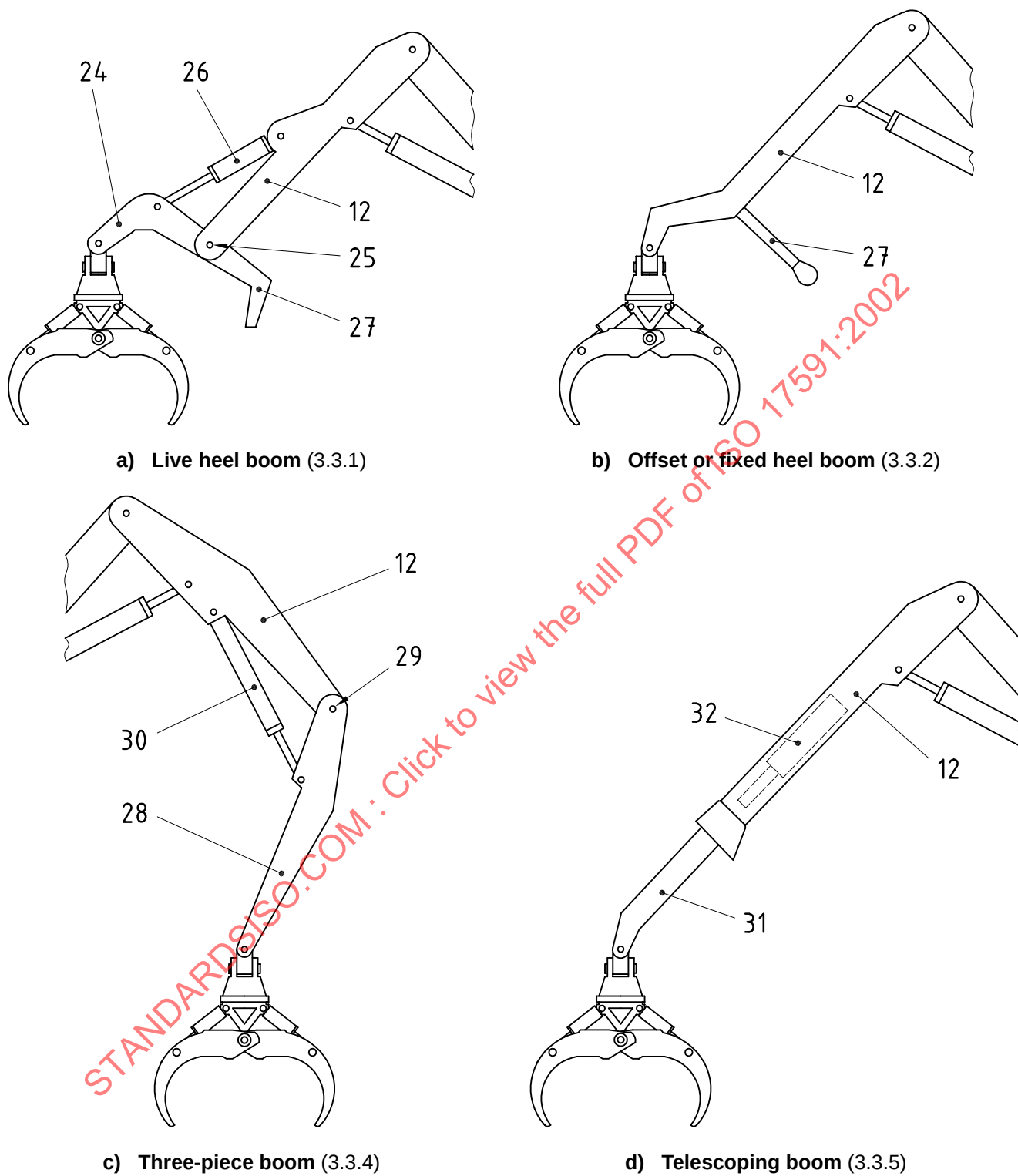


Figure 2 — Boom types and nomenclature