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Machinery for forestry — Winches —

Part 2:
Traction aid winches

Matériels forestiers — Treuils —

Partie 2: Treuils d'aide à la traction

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 15, *Machinery for forestry,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 144, *Tractors and machinery for agriculture and forestry,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 19472 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is a type-C standard as stated in ISO 12100:2010.

This document is of relevance, in particular for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organisations, market surveillance etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e.g. for maintenance (small, medium and large enterprises).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document. When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

Traction aid winches are used with forest machines when operating in sloped terrain and on soils with limited bearing capacity or poor traction. Such winches do provide traction aid to a supported machine. The combined tractive effort provided by the machine's wheels or tracks and the traction aid winch makes it easier to access steep slopes and manage unfavourable soil conditions while maintaining productivity by avoiding excess uphill driving or driving around a gradient, especially with harvesters, fellers, forwarders and skidders. Forest floor damages are greatly reduced which leads to a lower risk of erosion after logging operations. Machine stability is also enhanced, and thus general safety of operation is improved. Traction aid winches offer a possibility for machines to work on slopes which otherwise would be difficult to negotiate. This makes it simpler to mechanize work in steep terrain which otherwise would have to be performed manually.

Forestry winches for typical logging, such as the ones used for skidding or cable yarding of stems/logs, are designed for a different application than traction aid winches. The control systems, safety features, and performance measures of forestry winches have been designed for a purpose that is incompatible with the requirements of traction aid applications. Therefore, forestry winches should not be used in traction aid applications.

The main categories of winches for tractive efforts are shown in Figure 1. Further aspects of the design and operation of traction aid winches can be found in Annex E.

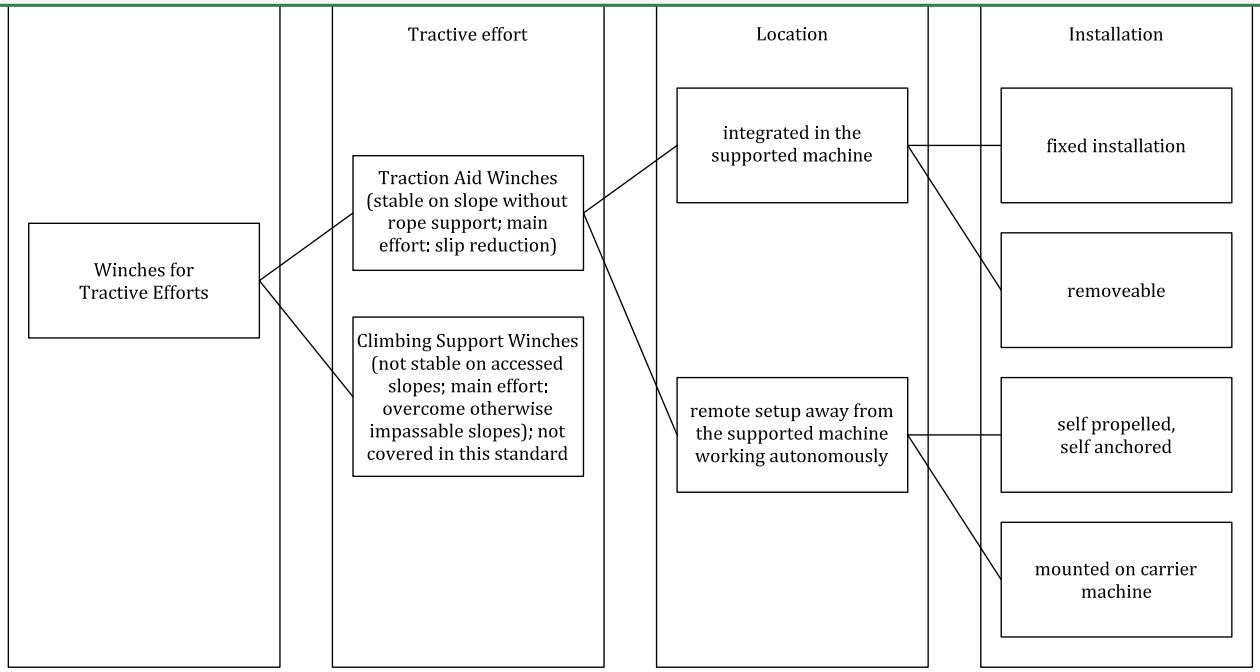

Figure 1 — Categorization of winches for tractive efforts