
**Earth-moving machinery — Loaders
and backhoe loaders —**

**Part 1:
Calculation of rated operating capacity and
test method for verifying calculated tipping
load**

Engins de terrassement — Chargeuses et chargeuses-pelleteuses —

*Partie 1: Calcul de la charge utile nominale et méthode d'essai pour vérifier
la charge de basculement calculée*



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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

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.

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

The main task of technical committees is to prepare International Standards. 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 part of ISO 14397 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14397-1 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 1, *Test methods relating to machine performance*.

ISO 14397 consists of the following parts, under the general title *Earth-moving machinery — Loaders and backhoe loaders*:

- *Part 1: Calculation of rated operating capacity and test method for verifying calculated tipping load*
- *Part 2: Test method for measuring breakout forces and lift capacity to maximum lift height*

Earth-moving machinery — Loaders and backhoe loaders —

Part 1: Calculation of rated operating capacity and test method for verifying calculated tipping load

1 Scope

This part of ISO 14397 specifies the means for determining the rated operating capacity of wheel and crawler loaders and of the loader portion of backhoe loaders, as these machine types are defined in ISO 6165, including standard methods for calculation and test verification of the tipping load.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 14397. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 14397 are encouraged to investigate the possibility of applying the most recent editions of the normative documents 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 6016:1998, *Earth-moving machinery — Methods of measuring the masses of whole machines, their equipment and components*

ISO 6165:2001, *Earth-moving machinery — Basic types — Vocabulary*

ISO 6746-1:1987, *Earth-moving machinery — Definitions of dimensions and symbols — Part 1: Base machine*

ISO 7546:1983, *Earth-moving machinery — Loader and front loading excavator buckets — Volumetric ratings*

ISO 9248:1992, *Earth-moving machinery — Units for dimensions, performance and capacities, and their measurement accuracies*

ISO 14397-2, *Earth-moving machinery — Loaders and backhoe loaders — Part 2: Test method for measuring breakout forces and lift capacity to maximum lift height*

3 Terms, definitions and symbols

For the purposes of this part of ISO 14397, the terms, definitions and symbols given in ISO 6165 and ISO 6746-1 and the following apply.