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First edition  
2010-03-15

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# Tractors and machinery for agriculture and forestry — Test procedures for positioning and guidance systems in agriculture —

## Part 1: Dynamic testing of satellite-based positioning devices

*Tracteurs et matériels agricoles et forestiers — Modes opératoires  
d'essai des systèmes de positionnement et de guidage utilisés en  
agriculture —*

*Partie 1: Essai dynamique des dispositifs de positionnement par  
satellite*



Reference number  
ISO 12188-1:2010(E)

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Published in Switzerland

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12188-1 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 19, *Agricultural electronics*.

ISO 12188 consists of the following parts, under the general title *Tractors and machinery for agriculture and forestry — Test procedures for positioning and guidance systems in agriculture*:

— *Part 1: Dynamic testing of satellite-based positioning devices*

The following parts are under preparation:

— *Part 2: Satellite-based auto-guidance systems tested during straight and level travel*

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## Introduction

Satellite positioning devices have become more common in agricultural applications. They are not only used as position sensors for georeferencing data or site-specific application tasks, but are also part of more complex navigation systems for agricultural machines.

In the early stages of development of this part of ISO 12188, the only existing standards for satellite-based, positioning-device performance specification focused on the static accuracy of the device. There was no existing standard that adequately specified methods for testing or reporting the accuracy of the receivers while they are in motion. This part of ISO 12188 is intended to fill this void by providing a framework for testing receivers that are subject to the type of motion typically experienced by receivers used in agricultural field operations. It provides an implementable methodology for conducting the tests while still providing a means to equitably compare the performance of different satellite-based positioning devices.