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Agricultural wheeled tractors — Operator's seat — Laboratory measurement of transmitted vibration

*Tracteurs agricoles à roues — Siège du conducteur — Mesurage en
laboratoire des vibrations transmises*



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

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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 5007 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 2, *Common tests*.

This second edition cancels and replaces the first edition (ISO 5007:1990), which has been technically revised.

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Introduction

The operators of agricultural tractors are often exposed to a low frequency vibration environment, partly caused by the movement of the vehicles over uneven ground and the tasks carried out. The seat constitutes the last stage of suspension before the driver. In order for it to be efficient at attenuating the vibration, the suspension seat should be chosen in accordance with the dynamic characteristics of the vehicle. The design of the seat and its suspension is a compromise between the requirements of reducing the effects of vibration and shock on the operator, and of providing stable support so that the operator can control the machine effectively.

Thus, because seat vibration attenuation is a compromise of a number of factors, the selection of seat vibration parameters needs to be taken in context with the other requirements for the seat.

The performance criteria provided in this International Standard have been set in accordance with that which is attainable using what is at present the best design practice. They do not necessarily ensure the complete protection of the operator against the effects of vibration and shock, and could be revised in the light of future developments and improvements in suspension design.

The test inputs included in this International Standard are based on a very large number of measurements taken *in situ* on agricultural tractors operating on the 100 m OECD standard track defined in ISO 5008, as well as on tractors operating under severe but typical field conditions. The test methods are based on ISO 10326-1, a general method applicable to seats for different types of vehicles.