Third edition 2000-03-01

# Earth-moving machinery — Laboratory evaluation of operator seat vibration

Engins de terrassement — Évaluation en laboratoire des vibrations transmises à l'opérateur par le siège



Reference number ISO 7096:2000(E)

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## Foreword

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

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 7096 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety requirements and human factors*.

This third edition cancels and replaces the second edition (ISO 7096:1994), which has been technically revised.

## Introduction

The operators of earth-moving machinery 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. To be efficient at attenuating the vibration, the suspension seat should be chosen according to the dynamic characteristics of the vehicle. The design of the seat and its suspension are a compromise between the requirements of reducing the effect of vibration and shock on the operator and providing him with stable support so that he can control the machine effectively.

Thus, seat vibration attenuation is a compromise of a number of factors and 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 what 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. They may 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 earth-moving machinery used under severe but typical operating conditions. The test methods are based on ISO 10326-1, which is a general method applicable to seats for different types of vehicles.