

INTERNATIONAL STANDARD

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Mechanical vibration — Laboratory method for evaluating vehicle seat vibration —

Part 1: Basic requirements

*Vibrations mécaniques — Méthode en laboratoire pour l'évaluation des
vibrations du siège de véhicule —*

Partie 1: Exigences de base



Reference number
ISO 10326-1:1992(E)

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.

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.

International Standard ISO 10326-1 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration and shock*, Sub-Committee SC 2, *Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles and structures*.

ISO 10326 consists of the following parts, under the general title *Mechanical vibration — Laboratory method for evaluating vehicle seat vibration*:

- *Part 1: Basic requirements*
- *Part 2: Application to railway vehicles*

Annex A of this part of ISO 10326 is for information only.

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Introduction

Drivers, staff and passengers of vehicles (land, air or water) and mobile off-road machinery are exposed to mechanical vibration which interferes with their comfort, working efficiency and, in some circumstances, safety and health. The following basic requirements have therefore been developed for the laboratory testing of vibration transmission through a vehicle seat to the occupant.

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Mechanical vibration — Laboratory method for evaluating vehicle seat vibration —

Part 1: Basic requirements

1 Scope

This part of ISO 10326 specifies basic requirements for the laboratory testing of vibration transmission through a vehicle seat to the occupant. These methods for measurement and analysis make it possible to compare test results from different laboratories.

It specifies the test method, the instrumentation requirements, the measuring assessment method and the way to report the test result.

This part of ISO 10326 applies to specific laboratory seat tests which evaluate vibration transmission to the occupants of any type of seat used in vehicles and mobile off-road machinery.

Application standards for specific vehicles should refer to this part of ISO 10326 when defining the test input vibration that is typical for the vibration characteristics of the type or class of vehicle or machinery in which the seat is to be fitted.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10326. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10326 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2631-1:1985, *Evaluation of human exposure to whole-body vibration — Part 1: General requirements*.

ISO 5347-0:1987, *Methods for the calibration of vibration and shock pick-ups — Part 0: Basic concepts*.

ISO 8041:1990, *Human response to vibration — Measuring instrumentation*.

3 General

The measurement and assessment methods given in this part of ISO 10326 comply with the present practice standardized in ISO 2631-1. The measuring equipment and the frequency weightings shall be in accordance with ISO 8041.

The primary test for the vibration characteristics of the seat involves measurements under conditions which simulate the range of actual uses of a vehicle or machine. For some applications, a secondary test is used to ensure that the seat responds acceptably to occasional severe shocks or transient vibration. Given the present state of knowledge, a test to evaluate the damping of the seat suspension is proposed for this purpose. The seat to be tested shall be mounted on a horizontal platform of a vibration simulator, which shall have movements in the vertical and/or one of the horizontal directions, as specified in application standards.

NOTE 1 In order to make tests in both horizontal directions, x and y , the seat may be turned 90° on the platform.