

This is a preview of "ISO 14793:2011". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2011-02-15

Road vehicles — Heavy commercial vehicles and buses — Lateral transient response test methods

*Véhicules routiers — Véhicules utilitaires lourds et autobus —
Méthodes d'essai de réponse transitoire latérale*



Reference number
ISO 14793:2011(E)

© ISO 2011

This is a preview of "ISO 14793:2011". [Click here to purchase the full version from the ANSI store.](#)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 14793:2011". [Click here to purchase the full version from the ANSI store.](#)

Contents

Page

Foreword	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions	1
4 Principle	2
5 Reference system.....	2
6 Variables.....	3
7 Measuring equipment	3
7.1 Description	3
7.2 Transducer installation.....	3
7.3 Data processing.....	3
8 Test conditions	7
8.1 General	7
8.2 Test track.....	7
8.3 Weather conditions	7
8.4 Test vehicle	8
8.5 Warm-up	9
8.6 Test speed.....	9
8.7 Lateral acceleration.....	9
8.8 Average longitudinal acceleration.....	10
9 Step input	10
9.1 Test procedure.....	10
9.2 Data analysis.....	10
9.3 Data presentation	11
10 Sinusoidal input — One period (see ISO/TR 8725)	12
10.1 Test procedure.....	12
10.2 Data analysis.....	12
10.3 Data presentation	13
11 Random input (see ISO/TR 8726).....	13
11.1 Test procedure.....	13
11.2 Data analysis.....	14
11.3 Data presentation	14
12 Pulse input	15
12.1 Test procedure.....	15
12.2 Data analysis.....	15
12.3 Data presentation	15
13 Continuous sinusoidal input.....	16
13.1 Test procedure.....	16
13.2 Data analysis.....	16
13.3 Data presentation	17
Annex A (normative) Test report — General data	18
Annex B (normative) Test report — Presentation of results.....	24
Bibliography.....	29

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 14793 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 9, *Vehicle dynamics and road-holding ability*.

This second edition cancels and replaces the first edition (ISO 14793:2003), which has been technically revised.

This is a preview of "ISO 14793:2011". [Click here to purchase the full version from the ANSI store.](#)

Introduction

The main purpose of this International Standard is to provide repeatable and discriminatory test results.

The dynamic behaviour of a road vehicle is a very important aspect of active vehicle safety. Any given vehicle, together with its driver and the prevailing environment, constitutes a closed-loop system that is unique. The task of evaluating the dynamic behaviour is therefore very difficult since the significant interaction of these driver-vehicle-environment elements is each complex in itself. A complete and accurate description of the behaviour of the road vehicle must necessarily involve information obtained from a number of different tests.

Since this test method quantifies only one small part of the complete vehicle handling characteristics, the results of these tests can only be considered significant for a correspondingly small part of the overall dynamic behaviour.

Moreover, insufficient knowledge is available concerning the relationship between overall vehicle dynamic properties and accident avoidance. A substantial amount of work is necessary to acquire sufficient and reliable data on the correlation between accident avoidance and vehicle dynamic properties in general and the results of these tests in particular. Consequently, any application of this test method for regulation purposes will require proven correlation between test results and accident statistics.