INTERNATIONAL STANDARD

ISO 11026

First edition 2010-07-01

Heavy commercial vehicles and buses — Test method for roll stability — Closing-curve test

Véhicules utilitaires lourds et autobus — Méthode d'essai de stabilité au renversement — Essai en courbe se fermant

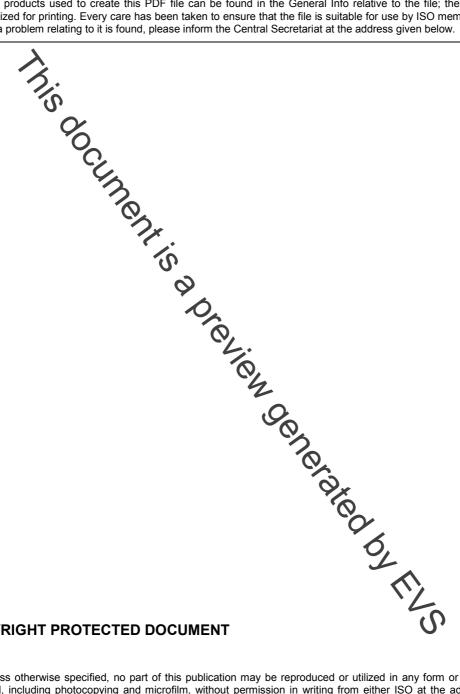


PDF disclaimer

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 2010

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

Contents	Page
----------	------

Introduction	Forewo	ordi	٧
Normative references	Introdu	oction	٧
Terms, deficitions and symbols Principle	1	Scope.	1
4 Principle 5 Measuring equipment 6 Variables 7 Test conditions 7.1 General 7.2 Test wehicle 8 Test method 8.1 Initial driving condition 8.2 Performance of the steering procedure 9 Data evaluation 9.1 General 9.2 Average jerk 9.3 Validity criteria 9.4 Characteristic values 9.5 Other values of interest Annex A (normative) Test report — General data and test conditions	2	Normative references	1
5 Measuring equipment 6 Variables 7 Test conditions 7.1 General 7.2 Test vehicle 8 Test method 8.1 Initial driving condition 8.2 Performance of the steering proodure 9 Data evaluation 9.1 General 9.2 Average jerk 9.3 Validity criteria 9.4 Characteristic values 9.5 Other values of interest Annex A (normative) Test report — General data and test conditions	3	Terms, deficitions and symbols	1
6 Variables 7 Test conditions 7.1 General 7.2 Test vehicle 8 Test method 8.1 Initial driving condition 8.2 Performance of the steering procedure 9 Data evaluation 9.1 General 9.2 Average jerk 9.3 Validity criteria 9.4 Characteristic values 9.5 Other values of interest Annex A (normative) Test report — General data and test conditions	4	Principle	1
8 Test method 8.1 Initial driving condition 8.2 Performance of the steering proodure 9 Data evaluation 9.1 General 9.2 Average jerk 9.3 Validity criteria 9.4 Characteristic values 9.5 Other values of interest Annex A (normative) Test report — General data and test conditions	5	Measuring equipment	2
8 Test method 8.1 Initial driving condition 8.2 Performance of the steering proodure 9 Data evaluation 9.1 General 9.2 Average jerk 9.3 Validity criteria 9.4 Characteristic values 9.5 Other values of interest Annex A (normative) Test report — General data and test conditions	6	Variables	2
8 Test method 8.1 Initial driving condition 8.2 Performance of the steering proodure 9 Data evaluation 9.1 General 9.2 Average jerk 9.3 Validity criteria 9.4 Characteristic values 9.5 Other values of interest Annex A (normative) Test report — General data and test conditions	7 7.1 7.2	Test conditions General Test vehicle	3
Annex A (normative) Test report — General data and test conditions	8 8.1 8.2	Test method	4 4 4
	9 9.1 9.2 9.3 9.4 9.5	Data evaluation General Average jerk Validity criteria Characteristic values Other values of interest	5 5 5 5 5
	Annex	A (normative) Test report — General data and test conditions	6
Annex C (informative) Examples of sequencing closing-curve tests			
	Annex	C (informative) Examples of sequencing closing-curve tests	9

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 Maison 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 11026 was prepared by Technical Committee ISO/TC 22, Road vehicles, Subcommittee SC 9, Vehicle dynamics and road-holding ability.

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 are each complex in themselves. 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 knowledges 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.

© ISO 2010 – All rights reserved

Inis document is a preview denetated by EUS

Heavy commercial vehicles and buses — Test method for roll stability — Closing-curve test

1 Scope

This International Standard specifies an open-loop test method for determining the roll stability of a vehicle negotiating a curve on deviating across a curve of a curve on deviating across a curve on deviating across a curve on deviating across a curve of across a curve of across a curve of a curve o

It applies to heavy vehicles, that is commercial vehicles, commercial vehicle combinations, buses and articulated buses as defined in ISO 3833 (trucks and trailers with maximum weight above 3,5 t and buses and articulated buses with maximum weight above 5 t, according to ECE and EC vehicle classification, categories M3, N2, N3, O3 and O4).

The method is intended for vehicles equipped with electronic roll stability control systems.

2 Normative references

The following referenced documents are indepensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3833, Road vehicles — Types — Terms and definitions

ISO 8855, Road vehicles — Vehicle dynamics and road-hoteling ability — Vocabulary

ISO 15037-2:2002, Road vehicles — Vehicle dynamics test methods — Part 2: General conditions for heavy vehicles and buses

3 Terms, definitions and symbols

For the purposes of this document, the terms, definitions and symbols given in ISO 15037-2, ISO 8855 and the following apply.

3.1

jerk

rate of change of lateral acceleration

3.2

steady-state rollover threshold

maximum magnitude of lateral acceleration that a vehicle can sustain during steady-state cornering on a flat and level surface without rolling over

4 Principle

The objective of this test method is to determine the effect of roll stability control on the roll stability of a vehicle travelling at constant longitudinal velocity on a path with a constantly increasing curvature, a closing curve. Also, effects on the yaw stability will be considered. The initial state for the test is driving in a straight line at constant longitudinal velocity.