

Nederlandse norm

NEN-ISO 15037-1

(en)

Wegvoertuigen - Beproevingprocedures voor voertuigdynamica - Deel 1: Algemene omstandigheden voor personenvoertuigen (ISO 15037-1:2019 (Cor. 2019-03),IDT)

Road vehicles - Vehicle dynamics test methods - Part 1: General conditions for passenger cars (ISO 15037-1:2019 (Cor. 2019-03),IDT)

Vervangt NEN-ISO 15037-1:2019

ICS 43.100
april 2019

Als Nederlandse norm is aanvaard:

- ISO 15037-1:2019 (Cor. 2019-03), IDT

Normcommissie 345042 'Wegvoertuigen'



THIS PUBLICATION IS COPYRIGHT/PROTECTED

DEZE PUBLICATIE IS AUTEURSRECHTELIJK BESCHERMD

Apart from exceptions provided by the law, nothing from this publication may be duplicated and/or published by means of photocopy, microfilm, storage in computer files or otherwise, which also applies to full or partial processing, without the written consent of the Royal Netherlands Standardization Institute.

The Royal Netherlands Standardization Institute shall, with the exclusion of any other beneficiary, collect payments owed by third parties for duplication and/or act in and out of law, where this authority is not transferred or falls by right to the Reproduction Rights Foundation.

Auteursrecht voorbehouden. Behoudens uitzondering door de wet gesteld mag zonder schriftelijke toestemming van het Koninklijk Nederlands Normalisatie-instituut niets uit deze uitgave worden verveelvoudigd en/of openbaar gemaakt door middel van fotokopie, microfilm, opslag in computerbestanden of anderszins, hetgeen ook van toepassing is op gehele of gedeeltelijke bewerking.

Het Koninklijk Nederlands Normalisatie-instituut is met uitsluiting van ieder ander gerechtigd de door derden verschuldigde vergoedingen voor verveelvoudiging te innen en/of daartoe in en buiten rechte op te treden, voor zover deze bevoegdheid niet is overgedragen c.q. rechtens toekomt aan de Stichting Reprorecht.

Although the utmost care has been taken with this publication, errors and omissions cannot be entirely excluded. The Royal Netherlands Standardization Institute and/or the members of the committees therefore accept no liability, not even for direct or indirect damage, occurring due to or in relation with the application of publications issued by the Royal Netherlands Standardization Institute.

Hoewel bij deze uitgave de uiterste zorg is nagestreefd, kunnen fouten en onvolledigheden niet geheel worden uitgesloten. Het Koninklijk Nederlands Normalisatie-instituut en/of de leden van de commissies aanvaarden derhalve geen enkele aansprakelijkheid, ook niet voor directe of indirecte schade, ontstaan door of verband houdend met toepassing van door het Koninklijk Nederlands Normalisatie-instituut gepubliceerde uitgaven.



©2019 Koninklijk Nederlands Normalisatie-instituut
Postbus 5059, 2600 GB Delft
Telefoon (015) 2 690 390, Fax (015) 2 690 190

Third edition
2019-01

Corrected version
2019-03

**Road vehicles — Vehicle dynamics test
methods —**

**Part 1:
General conditions for passenger cars**

*Véhicules routiers — Méthodes d'essai de la dynamique des
véhicules —*

Partie 1: Conditions générales pour voitures particulières

Preview



Reference number
ISO 15037-1:2019(E)

© ISO 2019

Copyrighted
Preview



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Variables	2
4.1 Reference system.....	2
4.2 Variables to be determined.....	2
5 Measuring equipment	3
5.1 Description.....	3
5.2 Transducer installations.....	3
5.3 Data processing.....	3
5.3.1 General.....	3
5.3.2 Analogue data processing.....	4
5.3.3 Digital data processing.....	4
6 Test conditions	5
6.1 General.....	5
6.2 Test track.....	6
6.3 Wind velocity.....	6
6.4 Test vehicle.....	6
6.4.1 General data.....	6
6.4.2 Tyres.....	6
6.4.3 Operating components.....	7
6.4.4 Loading conditions of the vehicle.....	7
6.4.5 Drive/train conditions of the vehicle.....	7
6.4.6 Active systems.....	7
7 Test method	7
7.1 Warm-up.....	7
7.2 Initial driving condition.....	7
7.2.1 General.....	7
7.2.2 Steady-state straight-ahead run.....	8
7.2.3 Steady-state circular run.....	8
Annex A (normative) Test report — General data	10
Annex B (normative) Test report — Test conditions	14
Annex C (informative) Transducers and their installations	16
Annex D (informative) Analogue filtering: Butterworth filter	20

ISO 15037-1:2019(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 33, *Vehicle dynamics and chassis components*.

This third edition cancels and replaces the second edition (ISO 15037-1:2006), which has been technically revised. The main changes compared to the previous edition are as follows:

- Recognizing regenerative braking and active control systems.

This corrected version of ISO 15037-1:2019 incorporates the following corrections:

- the date has been corrected to 2019 in the headers and footers.

A list of all parts in the ISO 15037 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document was developed to define general test conditions for vehicle dynamic tests. Any given vehicle, together with its driver and the prevailing environment, constitutes a unique closed-loop system. The task of evaluating the dynamic behaviour of the vehicle is therefore very difficult since there is significant interaction between these driver-vehicle-environment elements, and each of these elements is individually complex in itself.

The test conditions exert large influence on the test results. Only test results obtained at identical test conditions are comparable.

Downloaded from
Preview

Voorbeeld
Preview

Road vehicles — Vehicle dynamics test methods —

Part 1: General conditions for passenger cars

1 Scope

This document specifies the general conditions that apply when vehicle dynamics properties are determined according to ISO test methods.

In particular, it specifies general conditions for:

- variables;
- measuring equipment and data processing;
- environment (test track and wind velocity);
- test vehicle preparation (tuning and loading);
- initial driving; and
- test reports (general data and test conditions).

These items are of general significance, regardless of the specific vehicle dynamics test method. They apply when vehicle dynamics properties are determined, unless other conditions are required by the standard which is actually used for the test method.

This document is applicable to passenger cars as defined in ISO 3833 and light trucks.

NOTE The general conditions defined in existing vehicle dynamics standards are valid until a reference to this document is included.

This document is cited in many other standards without a dated reference. In the course of its revision, no change in the numbering of clauses, tables and figures is anticipated.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1176, *Road vehicles — Masses — Vocabulary and codes*

ISO 2416, *Passenger cars — Mass distribution*

ISO 3833, *Road vehicles — Types — Terms and definitions*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8855 apply.

ALTIJD DE ACTUELE NORM IN UW BEZIT HEBBEN?

Nooit meer zoeken in de systemen en uzelf de vraag stellen:
'Is NEN-ISO 15037-1:2019 (Cor. 2019-04) en de laatste versie?'

Via het digitale platform NEN Connect heeft u altijd toegang tot de meest actuele versie van deze norm. Vervallen versies blijven ook beschikbaar. **U en uw collega's** kunnen de norm via NEN Connect makkelijk raadplagen, online en offline.

Kies voor slimmer werken en bekijk onze mogelijkheden op www.nenconnect.nl.

Heeft u vragen?

Onze Klantenservice is bereikbaar maandag tot en met vrijdag, van 8.30 tot 17.00 uur.

Telefoon: 015 2 690 391

E-mail: klantenservice@nen.nl

