

---

---

**Road vehicles — Wheels/rims for  
commercial vehicles — Test methods**

*Véhicules routiers — Roues/jantes pour véhicules utilitaires —  
Méthodes d'essai*



**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.

This document is a preview generated by EVS

© ISO 2005

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

## 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 3894 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 19, *Wheels*.

This third edition cancels and replaces the second edition (ISO 3894:1995), which has been technically revised. The 40° rotary fatigue test was deleted since it is used in limited applications.

## Introduction

This International Standard was developed in response to requests to establish uniform test methods to evaluate certain fatigue strength characteristics of wheels used on commercial road vehicles. Only laboratory test methods are given. No minimum performance levels are part of this International Standard.

The standardization of test methods allows manufacturers of vehicles and/or wheels to evaluate their products in a uniform manner. By using these methods, wheels from different parts of the world can be compared and evaluated for use.

This document is a preview generated by EVS

# Road vehicles — Wheels/rims for commercial vehicles — Test methods

## 1 Scope

This International Standard specifies three laboratory methods for testing certain essential strength characteristics of disc wheels, spoke wheels and demountable rims intended for road use on commercial vehicles, buses, trailers and multipurpose passenger vehicles, as defined in ISO 3833.

The test methods are

- a) disc wheel dynamic cornering fatigue test;
- b) disc wheels and wheels with demountable rims — dynamic radial fatigue test; and
- c) wheels with demountable rims — dynamic cornering fatigue test.

## 2 Normative references

The following referenced documents are indispensable 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 3911, *Wheels and rims for pneumatic tyres — Vocabulary, designation and marking*

## 3 General

Only fully processed new wheels/rims which are representative of wheels/rims intended for the vehicle shall be used for the tests. No wheel/rim shall be used for more than one test.

## 4 Disc wheel dynamic cornering fatigue test

### 4.1 Equipment

The test machine shall have a driven rotatable device whereby either the wheel rotates under the influence of a stationary bending moment or the wheel is stationary and is subjected to a rotating bending moment.

### 4.2 Procedure

#### 4.2.1 Preparation

Clamp the rim of the wheel securely to the test fixture in accordance with Figure 1a) or 1b). The adaptor face of the test machine shall have equivalent mounting systems to those used on the vehicle. The mating surface