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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Heavy commercial vehicles -- Braking in a turn -- Open-loop
test methods**

重型商用车辆 转弯制动 开环试验方法

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafted law Amendment uses ISO 14794:2003 "heavy commercial vehicles and passenger car turning brake open-loop test side law".

This standard ISO 14794:2011 compared to the technical differences and the reasons are as follows.

--- On the normative references, this standard made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- Replace ISO 3833 (see Chapter 1) with GB/T 15089-2001 "Motor vehicles and trailer classification", ISO 3833 Type classification, GB/T 15089-2001 by vehicle type and total mass classification, easier for standard users.

Please note that this document may be patentable. The issuing agencies of this document do not bear the responsibility of identifying these patents.

This standard is proposed by the National Development and Reform Commission of the

People's Republic of China.

This standard by the National Automotive Standardization Technical Committee (SAC/TC114) centralized.

This standard drafting unit.China First Automobile Co., Ltd. Technical Center, the National Automobile Quality Supervision and Inspection Center (Changchun).

Introduction

The main purpose of this standard is to provide repeatable and differentiated test results.

The dynamic performance of road vehicles is an important aspect of vehicle active safety. Any particular vehicle with its driver and related environment Together form a specific closed-loop system. Since there is a significant interaction between the driver-vehicle-environment elements, each element alone is complicated, therefore, the task of evaluating the dynamic characteristics of a vehicle becomes very difficult. A complete and accurate description of the characteristics of the road vehicle must be available A series of information from different types of tests should be included.

Since these tests quantify only a small part of the overall handling characteristics of the vehicle, the results of these tests are only valid for the entire dynamic behavior A small part of the features makes sense.

In addition, in the absence of sufficient knowledge of the relationship between the overall dynamics of the vehicle and the avoidance of accidents, in order to obtain the usual avoidance of accidents Adequate and reliable data on the correlation with the dynamics of the vehicle, as well as the results of these tests in exceptional circumstances, and a great deal of work it needs to be done. As such, the test method used for regulatory purposes will require proof of test results and incident statistics.

Test Method of Open Brake Rotation in Heavy Commercial Vehicles

1 Scope

This standard specifies the use of service brake system, or only with retarder or engine brake for braking, heavy commercial vehicles or an open-loop test method for evaluating the path and direction-holding capability of a train.

This standard applies to GB/T 15089-2001 defined in the M3, N2, N3, O3 and O4 vehicles.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

Classification of motor vehicles and trailers ISO 8855 road vehicles vehicle dynamics and path retention vocabulary (Roadvehicle-Vehicledynamicsand road-holdingability-Vocabulary) ISO 15037-2-2002 Road vehicles - Vehicle dynamics test methods - Part 2. General conditions for heavy vehicles and passenger cars (Roadvehicle-Vehicledynamicstestmethods-Part 2: Generalconditionsforheavyvehiclesandbu-ses)

3 General rules

The main purpose of this test method is to examine the ability of heavy vehicles to maintain their path and direction during cornering braking. The initial state of the test car is in a circular path with a radius of uniform steady circular motion, and then increase the brake strength to brake, in the test Measure and record controller input and vehicle response.

General test conditions shall be in accordance with the provisions of ISO 15037-2, if any changes or additions need to be pointed out in the subsequent terms.

4 Frame of reference

All of the motion variables used in this test to describe the ability of a vehicle to maintain course and direction during cornering braking are based on the medial axis coordinate system (X, Y, Z) (see ISO 8855). The origin of coordinates used in this standard is the car's centroid position.

5 Measurement variables

5.1

The test should measure the following variables.

a) The first unit of a bicycle or car train.

--- Lateral acceleration, a_Y ;

--- longitudinal acceleration, a_X ;

--- brake trigger signal;

--- Portrait speed, v_X ;