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EAST AFRICAN STANDARD

Speedometer equipment for motor vehicles — Specification

EAST AFRICAN COMMUNITY

Draft for comments only — Not to be cited as East African Standard

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that "Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose".

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

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Speedometer equipment for motor vehicles — Specification

1 Scope

This standard covers requirements for speedometer equipment on a category M or N motor vehicle, with or without bodywork, with a maximum design speed exceeding 25 km/h and intended for use on a public road.

2 Definitions

For the purposes of this standard, the following definitions apply:

2.1

category M vehicle

motor vehicle that has at least four wheels, or that has at least three wheels when the maximum mass exceeds 1 t, and that is used for the conveyance of passengers

2.2

category N vehicle

motor vehicle that has at least four wheels, or that has at least three wheels when the maximum mass exceeds 1 t, and that is used for the conveyance of goods

2.3

normal running pressure

cold inflation pressure for tyres, specified by the vehicle manufacturer increased by 20 kPa

2.4

speedometer display

part of the speedometer equipment that indicates to the driver the speed of his vehicle at any given moment

2.5

tyres normally fitted

type or types of tyre provided by the manufacturer on the vehicle type in question

NOTE Snow tyres should not be regarded as tyres normally fitted.

2.6

unladen vehicle

motor vehicle including a chassis with cab if the manufacturer does not fit the bodywork, in running order, including coolant, oils, fuel, spare wheel, tools and driver

NOTE Mass of driver is taken as 75 kg.

3 Requirements

NOTE The requirements of this standard should not apply to those vehicles fitted with a tachograph or speed-recording equipment that has a visual speed-indicator incorporated that complies with 3.5.

3.1 Vehicles that are submitted for testing in accordance with clause 4 shall not differ with regards to

- a) tyres normally fitted,
- b) overall transmission ratio including reduction drive, if fitted (number of revolutions at the speedometer input per revolution of the axle driving the speedometer equipment when vehicle is travelling in a straight line), or
- c) type of speedometer equipment defined by the tolerance of the measuring mechanism of the speedometer, the instrument constant and the range of indicated speeds.

3.2 The speedometer display shall be situated in the driver's direct field of vision and shall be clearly legible both by day and by night. The range of speeds indicated shall include the maximum speed given by the manufacturer for the type of vehicle.

3.3 Where the speedometer has a scale, as distinct from a digital display, it shall be clearly legible.

3.4 The graduations shall be of 1 km/h, 2 km/h, 5 km/h or 10 km/h. The values of the speed, as multiples of 20 km/h, shall be indicated on a dial.

3.5 The speed indicated shall never be less than the true speed. At the speeds specified for the test in 4.7, and between these speeds, there shall be the following relationship between the speed indicated on the dial of the speedometer (V_1) and the true speed (V_2):

$$0 \leq V_1 - V_2 \leq \frac{V_2}{10} + 4 \text{ km/h.}$$

4 Method of test

4.1 Use a test track of which the surface, when used, is flat and dry, and which provides sufficient adhesion.

4.2 Set the reference temperature at the speedometer to $23 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$.

4.3 Equip the vehicle to be tested with one of the types of tyre normally fitted.

4.4 Adjust the pressure of the tyres during each test so that is equal to the normal running pressure (see 2.3).

NOTE The pressure should be verified immediately upon cessation of each test.

4.5 Use test instrumentation that is accurate to $\pm 1.0 \%$ for measuring the true vehicle speed.

4.6 The load on the axle driving the speedometer equipment shall correspond to that load resulting when the vehicle is at its unladen vehicle mass.

4.7 Test the speedometer of the vehicle against the accurate test instrumentation at 40 km/h, 80 km/h and 120 km/h, or 80 % of the maximum speed specified by the manufacturer, if this is less than 150 km/h.

4.8 Repeat the test for each of the types of speedometer specified by the manufacturer.

4.9 Check for compliance with 3.5.

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