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EAST AFRICAN STANDARD

Wheel flaps fitted to motor vehicles — Specification

EAST AFRICAN COMMUNITY

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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Contents

1 Scope 1

2 Definitions..... 1

3 Requirements..... 1

3.1 Requirements for wheel flaps mounted on a wheel guard 1

3.2 Requirements for wheel flaps mounted behind rear wheels when wheel guards are not fitted 2

Annex A (informative) General comments on the effects of aerodynamic vehicle styling 5

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Wheel flaps fitted to motor vehicles — Specification

1 Scope

1.1 This specification covers the requirements for wheel flaps fitted to motor vehicles and to articulated tractor units of gross vehicle mass or gross combination mass, respectively, exceeding 7.5 t, and to trailers of gross vehicle mass exceeding 3.5 t, for the purpose of providing other road users with some protection against stones, mud or other debris thrown up by the vehicle tyres.

1.2 The specification covers

- a) wheel flaps attached to conventional types of wheel guards; and
- b) wheel flaps for rear wheels on single or multiple axles of motor vehicles and trailers when conventional wheel guards are not fitted and the wheels are covered by the floor of the vehicle body.

NOTE General comments relating to the effects of aerodynamic styling on the reduction of spray generation are given in Annex A.

1.3 The specification does not apply to

- a) the rearmost axles of an end-tipping semi-trailer of the scissors type, that pivot about the centre point of the axle or the axle unit; and
- b) the rear axle(s) of a truck tractor first registered before this standard came into force, where the semi-trailer is equipped with wheel flaps to guard the rear axle(s) of the truck tractor (see 3.1.3(a)).

2 Definitions

For the purposes of this specification the following definitions shall apply:

tread breadth

breadth of that part of the tyre which, under conditions of normal use, is in contact with the road, and that is measured at right angles to the peripheral line of the tread. In the case of a double wheel, the breadth is measured across both tyres and includes the space between them.

wheel flap (mud flap)

A device attached to the vehicle or to the wheel guard in a lateral vertical plane of the vehicle or at a small angle to it and extending towards the road surface behind the wheel.

wheel guard (mudguard)

A device attached to the vehicle and extending over and around a wheel in the horizontal to vertical planes.

NOTE A wheel guard may be part of the body structure of the vehicle.

3 Requirements

3.1 Requirements for wheel flaps mounted on a wheel guard

3.1.1 Wheel flap dimensions

- a) A wheel flap shall be of width at least equal to the total tyre breadth b or t (see Figure 1), as applicable, taking into account the maximum size of tyre/wheel combination permitted by the vehicle manufacturer.
- b) In the case of a wheel flap between the tyres of a multiple axle where the wheel flap is contained completely within the wheel guard, the flap shall be of width at least equal to the tread breadth.

3.1.2 The distance between the bottom edge of a wheel flap and the surface of the road shall not exceed 200 mm.

3.1.3 Wheel flap distances

- a) The distance between a wheel flap and the rearmost part of the tyre shall not exceed 300 mm (see Figure 2). This requirement does not apply to the rear axles of a truck tractor first registered before this standard came into force, when the semi-trailer is equipped with wheel flaps to guard the rear axle(s) of the truck tractor.
- b) Where the distance between the tyres of adjacent axles of a multiple axle equals or exceeds 350 mm (see Figure 3), a wheel flap shall be fitted behind each wheel.

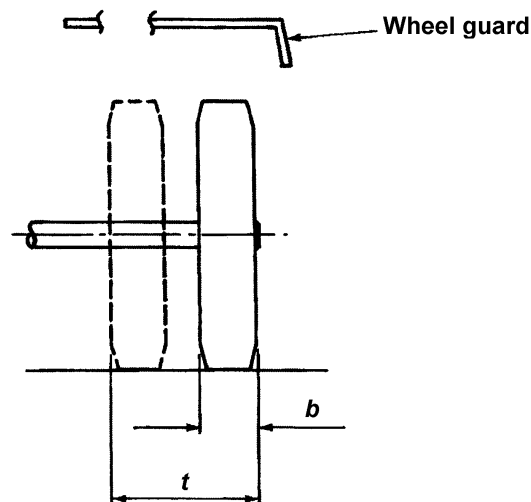
3.1.4 When a wheel flap is subjected to a force that is equal to 3 N for each 100 mm of flap width and that is distributed evenly across the width at a height of 50 mm above the bottom edge of the wheel flap, the rearward deflection of the wheel flap shall not exceed 100 mm.

3.1.5 There shall be no gaps between the top of the wheel flap and the lower rear edge of the wheel guard.

3.2 Requirements for wheel flaps mounted behind rear wheels when wheel guards are not fitted

3.2.1 Wheel flaps shall extend downwards from the underside of the vehicle body and shall comply with the relevant requirements of 3.1.1 — 3.1.4. (See also Figure 4.)

3.2.2 There shall be no gaps between the top of the wheel flap and the underside of the vehicle body.



NOTE Dimensions *b* and *t* are measured at hub height.

Figure 1 — Total breadth of tyres

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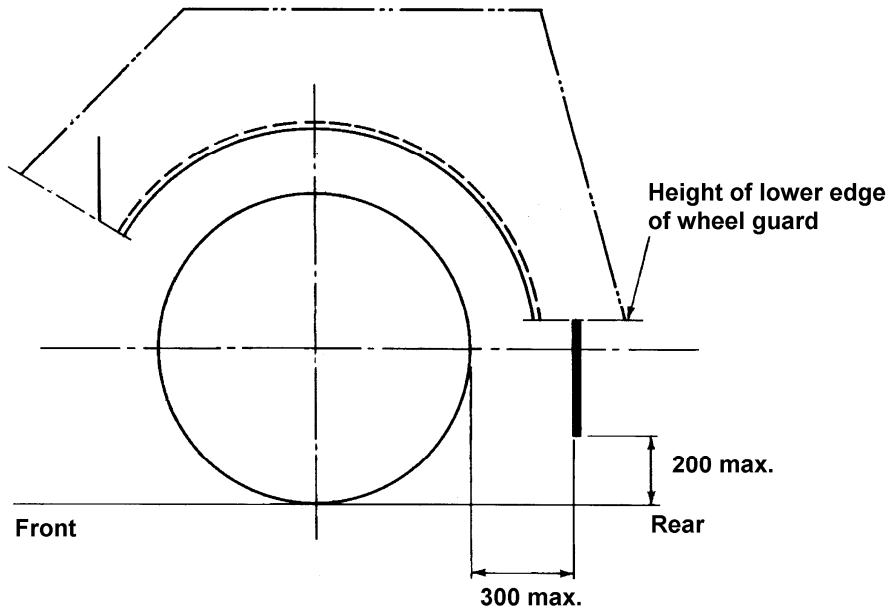


Figure 2 — Wheel flaps on wheel guards for single axles (and for multiple axles where distance between tyres exceeds 300 mm)

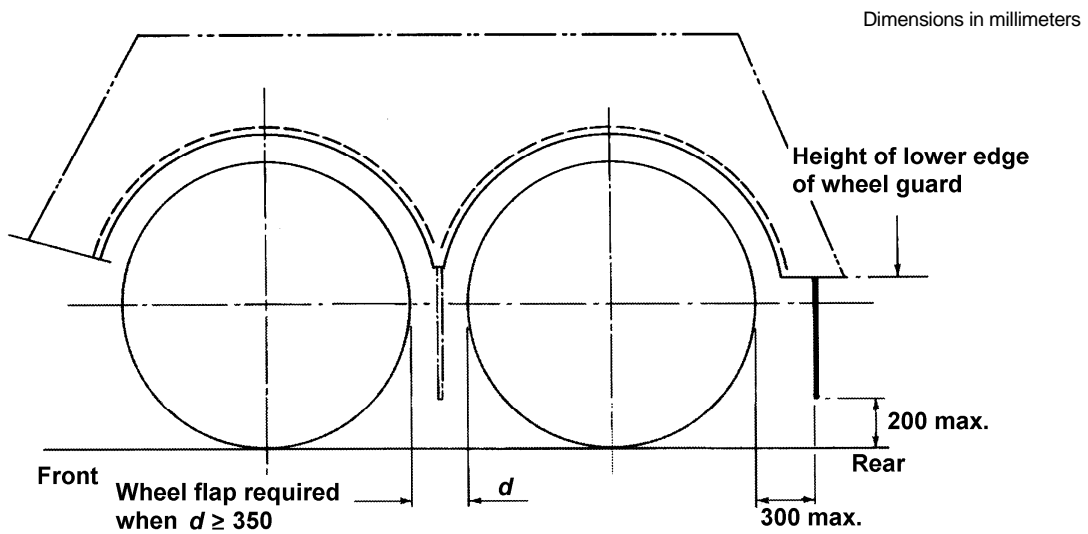
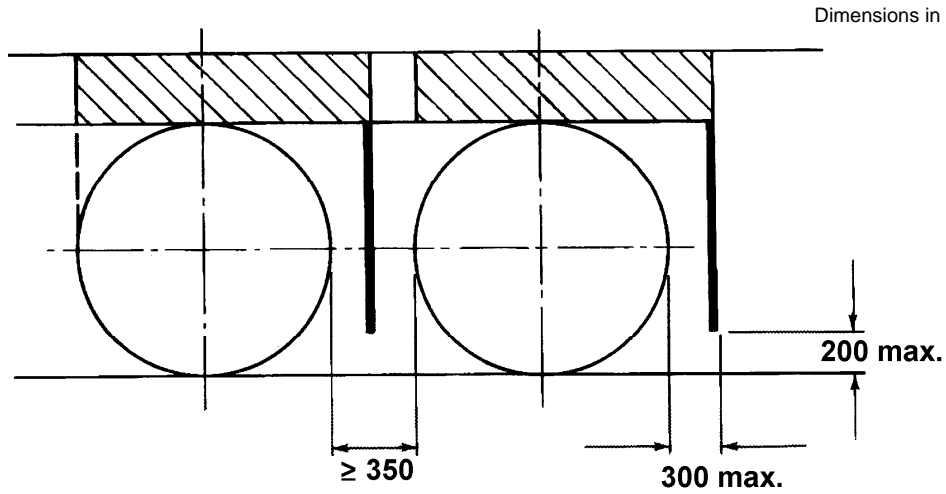
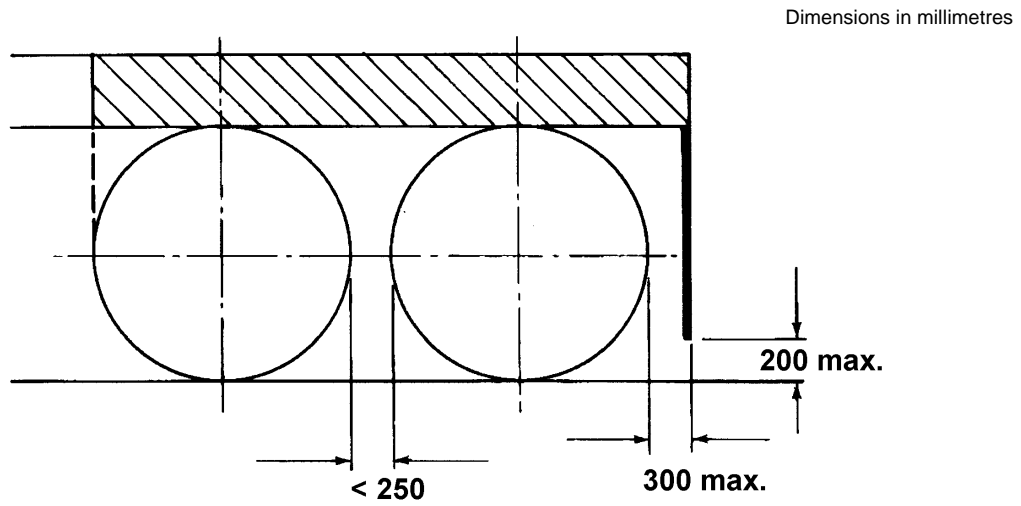


Figure 3 — Wheel flaps on wheel guards for multiple axles

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a) Multiple axles where distance between tyres equals or exceeds 350 mm



b) Multiple axles where distance between tyres is less than 250 mm

Figure 4 — Wheel flaps when wheel guards are not fitted

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Annex A
(informative)

General comments on the effects of aerodynamic vehicle styling

The following aerodynamic styling features may assist in keeping spray propagation to a minimum, thus reducing the density of spray at driver's eye level on vehicles that are following behind:

- a) cab-mounted air deflectors on articulated vehicles and box vehicles where the bodywork is higher than the cab roof;
- b) covered sideguards or sideskirts;
- c) splitter panels (vertical panels between the cab and the trailer) on articulated vehicles with box trailers; and
- d) a body-mounted or trailer-mounted air deflector on the front surface of the box or trailer body.

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