



CD/K/020:2008
ICS 43.040.60

EAST AFRICAN STANDARD

Motor vehicle safety — Protection equipment for the front of motor vehicles

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.

© East African Community 2008 — All rights reserved*

East African Community

P O Box 1096

Arusha

Tanzania

Tel: 255 27 2504253/8

Fax: 255-27-2504481/2504255

E-Mail: eac@eachq.org

Web: www.each.int

Contents

1 ScopeError! Bookmark not defined.

2 RequirementsError! Bookmark not defined.

3 Packing and markingError! Bookmark not defined.

4 Inspection and measurementError! Bookmark not defined.

Appendix A (informative) Applicable standardsError! Bookmark not defined.

Appendix B (informative) Notes to purchasersError! Bookmark not defined.

Appendix C (informative) Quality evaluation of contact type couplings.....Error! Bookmark not defined.

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

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

Motor vehicle safety — Protection equipment for the front of motor vehicles

1 Scope

This standard specifies safety requirements for protection equipment fitted to the front of motor vehicles designed for use on public roads. The requirements are intended to minimize injury to pedestrians, cyclists and motor cyclists.

NOTE Certain issues within this standard will have to be addressed before it can be considered for mandatory application.

2 Normative references

The following referenced documents are indispensable for the application of this East African Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

UNECE R 26, *Uniform provisions concerning the approval of vehicles with regard to their external projections*

CD/K/016:2008[ISO 303:2002], *Motor vehicle safety – Lights and light-signalling devices installed on motor vehicles and trailers*

3 Definition

For the purposes of this standard, the following definition applies:

protection equipment

Equipment that is fitted to the front of a vehicle and is intended to protect the bodywork and lighting equipment against damage during minor collisions and when the vehicle is travelling through the grasslands. It does not include the conventional bumper fitted by the original vehicle manufacturer.

4 Requirements

4.1 General design

The external surface of the protection equipment shall not have any outward facing projections of such shape, dimensions, direction or hardness that they are likely to

- a) catch on pedestrians, cyclists or motor cyclists who come into contact with the surface,
- b) increase the risk or seriousness of bodily injury to a person who is hit by the external surface or who comes into contact with it in the event of a collision, and
- c) increase the risk of a minor injury being caused to a pedestrian walking past the vehicle and brushing against the protection equipment.

4.2 Specific requirements

4.2.1 Contact surfaces

The rigid outward facing surfaces of the protection equipment, including those of parts and fittings mounted on the equipment, shall have a radius of curvature of at least 5 mm, except in the following situations:

ward

- a) corners of square or rectangular tubing may have a radius of less than 5 mm but not less than 3 mm, provided that the flat surface of the tubing faces outwards;
- b) parts may have a radius of less than 5 mm but not less than 2.5 mm, provided that they are covered with a material of hardness 50 Shore A to 70 Shore A, tested in the installed condition, and that the thickness of such material is at least 10 mm at every point;
- c) parts that protrude more than 5 mm but less than 30 mm outward of the major plane of the protection equipment shall have a width and height of at least 25 mm and an outward facing surface area of at least 5 000 mm²; and
- d) no parts shall protrude 30 mm or more outward of the major plane of the protection equipment, unless they are designed to accommodate winches, tow balls or any other equipment essential to the function of the vehicle.

4.2.2 Clearance between protection equipment and bodywork

The risk of entrapment of limbs shall be minimized by ensuring that the ends of protection equipment are turned in and are not contactable by a sphere of diameter 100 mm, or are so designed as to minimize hooking and to have a radius of at least 5 mm (see Figure 1).

4.3 Influence on lighting equipment

The design of the protection equipment shall be such that, when the equipment is installed on a vehicle, the requirements of CD/K/016:2008 are still satisfied.

4.4 Traffic Regulations

The design of the protection equipment shall be such that, when the equipment is installed on a vehicle, the requirements of the Traffic Act, and Regulations are still satisfied (e.g. vehicle width).

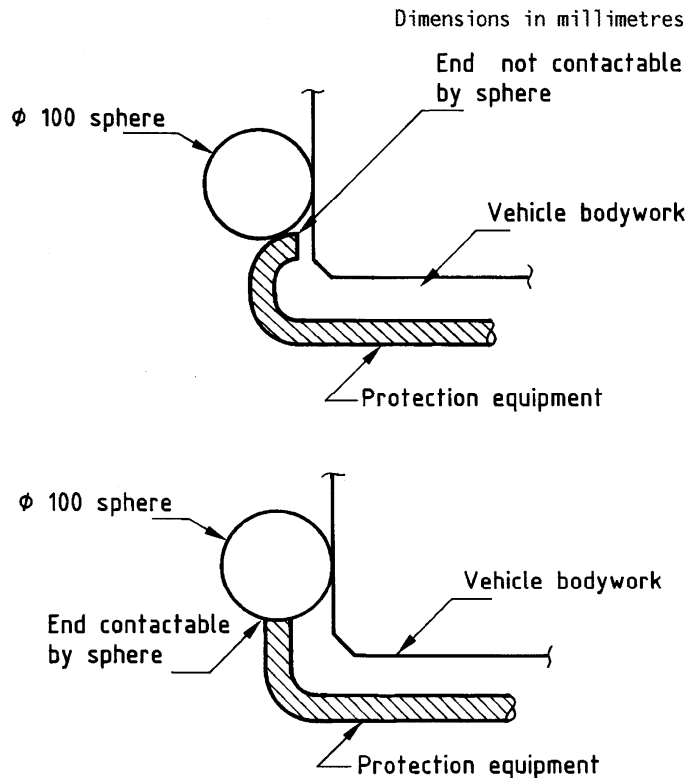


Figure 1 — Clearance between protection equipment and bodywork

Draw

5 Exclusion

5.1 Non-contactable parts

Parts of the protection equipment that are not contactable by a sphere of diameter 100 mm or that are at a height exceeding 2 m do not have to comply with the requirements of this standard.

5.2 Mounting brackets on the underside of the vehicle

Mounting brackets and bolts that are attached to the underside of the vehicle to the rear of the foremost part of the original bumper or bodywork do not have to comply with the requirements of this standard.

5.3 Equivalent designs

5.3.1 Protection equipment that, when installed on a vehicle, complies with the requirements of UNECE R 26 shall be deemed to comply with the requirements of 4.1 and 4.2.

5.3.2 Protection equipment that is installed on a vehicle by a vehicle manufacturer and that does not comply fully with the detailed requirements of 4.2 but complies with all the other requirements may be deemed to comply with the requirements of this standard.

6 Marking



6.1 Protection equipment shall be embossed or stamped with an acceptable mark of approval recognized by the Ministry of Transport as an authentic indication of compliance with the requirements of this standard.

6.2 Protection equipment sold for fitment to vehicles shall be embossed, stamped or marked by other permanent means to identify the model(s) of the vehicles, if necessary by a code or a part number, to which it is designed to be fitted and to show the serial number of the equipment.

7 Installation instructions



Protection equipment sold for fitment to vehicles shall be provided with clear installation instructions that will enable the installer to ensure that compliance with the requirements of this standard can be achieved when the equipment is installed.

Annex A
(informative)

Advisory notes

standard

A.1 Height of protection equipment

Nothing is specified concerning the overall height of protection equipment, but

- a) the top rung should not be so high as to interfere with forward vision, and
- b) to retain the vehicle front end impact profile, the highest point should be level with the projection of the bonnet, since this will also aid pedestrian energy dissipation in the event of an impact, by facilitating the movement of the pedestrian over the bonnet to the windscreen and side of the vehicle.

A.2 Gaps in the front of the protection equipment

Nothing is specified concerning gaps in the front of the protection equipment, but the gaps either should be minimal or should be large enough to reduce the possibility of limb entrapment. Much depends on the height of the installed equipment relative to the height of a pedestrian and on the proximity of the equipment to the front of the vehicle.

A.3 Influence on lighting equipment (see 4.3)

The geometric visibility requirements of CD/K/016:2008 have to be met, e.g. the light has to be visible to an observer when it is being viewed from certain angles around the vehicle.

A simple approach is to establish whether the lens of the light can be seen from the angles of observation specified in CD/K/016:2008.

A more complicated approach is also permitted that allows part of the lens to be observed provided that sufficient light is visible from that portion of the lens from the specified angles of observation. The photometric output characteristics of the light then obviously have to be known for the portion of the lens concerned.

The other requirements of CD/K/016:2008 also have to be met, especially in the case of additional lights, in respect of position, number and switching, etc.

A.4 Breakaway parts

In cases where materials are used that are likely to break or shatter during impact, the design should be such that no sharp edges or splinters likely to cause injury are exposed.

A.5 General

Manufacturers are requested to follow the requirements of this standard wherever possible in respect of tow balls and winches at the front of vehicles, and towbars and protection equipment at the rear end of vehicles, and in respect of supporting structures for roof carriers and other adaptations.

Draft for comment

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