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World Forum for Harmonization of Vehicle Regulations

Working Party on General Safety Provisions

106th session Geneva, 5–9 May 2014 Item 2(b) of the provisional agenda Regulation No. 107 (M₂ and M₃ vehicles) – Requirements for service doors, windows and emergency exits

Proposal for amendments to Regulation No. 107 $\left(M_2 \text{ and } M_3 \text{ vehicles}\right)$

Submitted by the expert from Hungary *

The text reproduced below was prepared by the expert from Hungary to propose amendments to the provisions on the access to escape hatches. It is based on informal document GRSG-105-05 and supersedes ECE/TRANS/WP.29/GRSG/2013/17 (see report ECE/TRANS/WP.29/GRSG/84, para. 15). The modifications to the current text of UN Regulation No. 107 are marked in bold for new or strikethrough for deleted characters.

^{*} In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate



I. Proposal

Annex 3, paragraphs 7.7.4.1. to 7.7.4.1.2., amend to read:

"7.7.4.1. Access to escape hatches, when the vehicle is lying on either side

Free motion of the passengers shall be assured along the internal wall of the vehicle to reach the roof hatches. This requirement is met if at least one of the following two requirements is fulfilled (see Figure 26 in Annex 4):

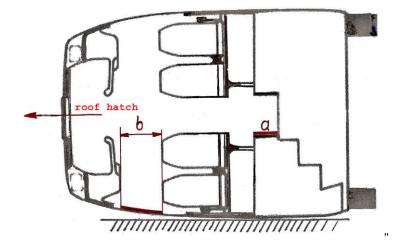
- 7.7.4.1.1. There is a sunken gangway having a minimum vertical distance "a" between the gangway surface and the floor of the seating area of [150] mm, or
- 7.7.4.1.2. There is a free height "b" of not less than [400] mm measured from the highest point of each seatback."

Annex 4, Figure 26, replace the existing figure as follows:

"Figure 26

Roof escape hatch access

(see Annex 3, paragraph 7.7.4.1.)



II. Justification

1. At the 103rd session of the Working Party on General Safety Provisions (GRSG) the experts agreed that the escape hatch cannot be used when the bus is standing on its wheels or on its roof. However, it could be useful as an emergency exit when the bus is lying on its side. In this case, the passengers shall move along the internal wall of the vehicle to reach the closest escape hatch.

2. Figure 1 below shows two almost horizontal surfaces for the passenger's motion ("a" in the gangway and "b" on the side walls)

3. The gangway cannot be used automatically if there is no horizontal surface, on which the passengers can place their feet and move. A sunken gangway is needed.

4. A better way is the horizontal "b" surface on the side wall.

5. Some photos from real accidents help to illustrate this situation, including the escape or rescue of the passengers (see Figures 2.1 to 2.4).

6. The situation could be worse if passengers using seat belt are hanging on the belt, or passengers without seat belts fell onto each other

Figure 1 **Sketch**

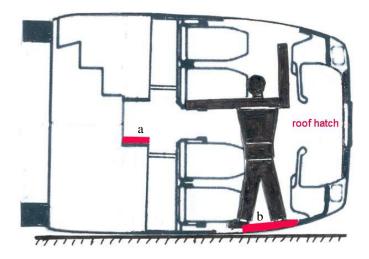


Figure 2.1 **Photos about real accidents**







Figure 2.3





Figure 2.4