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Working Party on the Construction of Vehicles

Working Party on General Safety Provisions (GRSG)

(Seventy-eighth session, 10-14 April 2000,
agenda items 1. and 3.)

PROPOSAL FOR ADDITIONAL AMENDMENTS TO THE
PROPOSALS FOR DRAFT AMENDMENTS TO REGULATION No. 36
(Public service vehicles)
(TRANS/WP.29/GRSG/1999/20)

AND TO REGULATION No. 107
(Double-deck large passenger vehicles)
(TRANS/WP.29/GRSG/1999/22)

Transmitted by the Expert from Belgium

Note: The text reproduced below was prepared by the expert from Belgium in order to amend the proposals of documents TRANS/WP.29/GRSG/1999/20 and TRANS/WP.29/GRSG/1999/22. The numbering of the paragraphs refers to the above-mentioned documents. This document is based on the text distributed without a symbol (informal document No. 12) during the seventy-seventh session of GRSG (TRANS/WP.29/GRSG/56, para. 8).

Note: This document is distributed to the Experts on General Safety Provisions only.

Annex 7,

Paragraphs 3.8. to 3.8.2., amend to read:

"3.8. Stability of wheelchairs

3.8.1. Wheelchair restraint system:

3.8.1.1. In a vehicle where no passenger seats are fitted with any form of occupant restraint system, the wheelchair space shall be fitted with a restraint system in order to warrant the stability of the wheelchair(s) ~~totalling a mass of 160 kg each, including the user, when the vehicle brakes from a speed of at least 30 km/h to a halt with a minimum deceleration of at least 10 m/s².~~ A static test shall be carried out in accordance with the following requirements:

- (a) a force of 1,600 N per wheelchair shall be applied on the restraining system itself;
- (b) the force shall be applied in the longitudinal plane of the vehicle and towards the front of the vehicle if the restraining system is not attached to the floor of the vehicle. If the restraining system is attached to the floor, the force shall be applied in an angle of 45° to the longitudinal plane of the vehicle and towards the front of the vehicle.
- (c) the force shall be maintained for a period of not less than 1.5 seconds

3.8.1.2. If any passenger seat on the vehicle is provided with an occupant restraint then each wheelchair space shall be provided with a restraint system capable of restraining the wheelchair and its occupant.

~~3.8.1.3.~~ The restraints system and its anchorages shall be designed to withstand forces equivalent to those which the other passenger seats and occupant restraints in the vehicle must comply with.

A static test shall be carried out in accordance with the following requirements:

- (a) the forces specified in paragraph 3.8.1.3. in forward and rearward direction shall be applied separately and on the restraining system itself
- (b) the force shall be maintained for a period of not less than 0.2 seconds

- 3.8.1.3. The forces to be applied in paragraph 3.8.1.2. are:
- 3.8.1.3.1. in forward direction in the case of a separate wheelchair and wheelchair user restraint system
- (a) 7,400 N in the longitudinal plane of the vehicle and towards the front of the vehicle on the wheelchair user restraint system in the case of a lap belt;
 - (b) 4,500 N in the longitudinal plane of the vehicle and towards the front of the vehicle on the lap portion of the belt and 4,500 N in the longitudinal plane of the vehicle and towards the front of the vehicle on the torso portion of the belt in the case of 3-point belt;
 - (c) 5,500 N (85 kg x 6.6 g) in an angle of 45° to the longitudinal plane of the vehicle and towards the front of the vehicle on the wheelchair restraint system;
 - (d) the forces shall be applied simultaneously.
- 3.8.1.3.2. in forward direction in the case of a combined wheelchair and wheelchair user restraint system
- (a) 7,400 N in an angle of 45° to the longitudinal plane of the vehicle and towards the front of the vehicle on the wheelchair user restraint system in the case of a lap belt;
 - (b) 4,500 N in an angle of 45° to the longitudinal plane of the vehicle and towards the front of the vehicle on the lap portion of the belt and 4,500 N in the longitudinal plane of the vehicle and towards the front of the vehicle on the torso portion of the belt in the case of 3-point belt;
 - (c) 5,500 N [85 kg x 6.6 g] in an angle of 45° to the longitudinal plane of the vehicle and towards the front of the vehicle on the wheelchair restraint system;
 - (d) the forces shall be applied simultaneously.
- 3.8.1.3.3. in rearward direction
- (a) 2,750 N [85 kg x 3.3 g] in an angle of 45° to the longitudinal plane of the vehicle and towards the front of the vehicle on the wheelchair restraint system.
- 3.8.2. Alternatively for ~~vehicles of Classes I and II~~ paragraph 3.8.1.1. the wheelchair space(s) shall be designed for the wheelchair user to travel in accordance with the following provisions:
- (a) the wheelchair may be unrestrained;

- (b) the longitudinal axis of the space for a wheelchair shall be parallel to the longitudinal axis of the vehicle;
 - (c) one of the sides of the space for a wheelchair shall rest against a side of the vehicle;
 - (d) the wheelchair shall travel backwards;
 - (e) a partition in the forward end of the wheelchair space, perpendicular to the longitudinal axis of the vehicle shall be provided between the space for a wheelchair and the other passenger seats or standing areas;
 - (f) the wheels of the back of the wheelchair shall rest against the partition for the backrest of the seat row in front in order to avoid the wheelchair tipping over;
 - (g) the partition, or backrest of the seat row in front, shall be able to withstand a force ~~equivalent to the unrestrained wheelchair totalling a mass of 160 kg, including the user, when the vehicle brakes from a speed of at least 50 km/h to a halt with a deceleration of 10 m/s²,~~ of 1,600 N per wheelchair. The force shall be applied in the longitudinal plane of the vehicle and towards the front of the vehicle in the middle of the partition or backrest. The force shall be maintained for a period of not less than 1.5 seconds."
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