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COMMENTS TO THE DOC.WP29/GRSP/2007/2 z 21.22.2007 „OICA PROPOSAL FOR DRAFT 03 SERIES OF AMENDMENTS TO UNECE REGULATION No.29 (Cabs of commercial vehicles)"

Submitted by the Expert from the Czech Republic

Note: The text reproduced below was prepared by the expert from the Czech Republic in order to explain his actual position: 1) to the basic document TRANS/WP.29/GRSP/2007/2 of 21 Febr.2007 transmitted by **OICA** to the 41st GRSP Meeting in Geneva. (The previous documents of **Czech Republic** were transmitted to the GRSP Meetings in Dec.2006, in Dec.2002 and in May 1998). The text is transmitted to the current Meeting of GRSP for consideration.

The modifications to the existing text of the document concerned are marked in **bold** characters.

I. General

We accept the concept of two separate test methods for vehicles of cat. N up to and exceeding 7,5t TPMM but prefer to unify the testing equipment in the most possible way.

We agree with the valid definition of scope:„This Regulation applies to vehicles of category N with regard to the protection of the occupants of the cab" supposing that the mentioned condition of the driver´s cab existence is equal to our limit on the cab as a compartment separated from delivery box or load area. Anyhow that wording must be combined with the further necessary amendments.

II. Proposal for draft amendments

Regulation:

Insert a new para. 2.5: **"driver´s cab" means a separate technical unit of bodywork which represents a closed compartment for vehicle maintenance and is separated from delivery box or loading platform.**

Insert a new para. 2.6: "**cab-over-engine vehicle**" *(or forward-control vehicle?)* **means a vehicle where the R-point of the driver´s seat is ahead to the transverse plane through the vehicle front axle** *(required for § 5.4.1.)*

Para 5.3, amend to read: For vehicles of category N1 and of category N2 with **TPMM** not exceeding 7,5t, the requirements are those of **para. 5.3.1 and 5.3.2:**

Insert a new para.5.3.1: **Front impact test (test A). The frontal impact strength test is intended to evaluate the resistance of a cab in frontal impact accident. A vehicle type in these categories which has been approved according to Regulation No.33 or to Regulation No.94 shall be considered to have satisfied the requirements on test A, for vehicles with TPMM not exceeding 3,5t also on test C2. The test A procedure is described in Annex 3 to this Regulation.**

Insert a new para.5.3.2: **Roof-loading test (test C2). The quasi-static roof-loading test is intended to evaluate the resistance of the cab roof in a roll-over accident. The test procedure is described in Annex 5 to this Regulation.**

Para. 5.5.1 amend to read: After undergoing each of the tests referred to in para. **5.3 and** 5.4 above, the cab of the vehicle shall exhibit a survival space allowing accommodation of a dummy on the seat in its

median position without contact between the dummy and non-resilient parts with a Shore-Hardness of 50 or more. **It is required to make use of an uninstrumented 50th percentile Hybrid III dummy as defined in Regulation No.94 or of a 50th percentile male body manikin as described in the Annex 3, Appendix 2** (from Regulation No. 29.02!) **providing that the distance a between knee/hip point centres of manikin is equal to the distance between the brake pedal and the clutch pedal.**

Annex 3:

Para.4, amend to read: Front impact test. **Only cabs intended for "cab-over-engine vehicles" need to be tested.**

Para.4.1.3.2, amend to read: its centre of gravity is 50 +5/-0 mm below the R point for the driver's seat **but in all cases inside limits, from the upper side given by the face centre position 1400 mm above the ground and from the other side given by its position when the lower edge of the striking face is closely over the front bumper connected directly to the vehicle frame.**

Insert a new para.4.1.3.4: **The distance *a* between the centre of percussion of the pendulum and its axis of rotation is given by the following equation:**

$$a = g.(0,5T/\pi)^2 = 0,2485.T^2$$

Where g = 9,81 m/s^2 and T = the swing period (i.e. time in seconds of one cycle of pendulum movement).

Insert a new para.4.1.3.5: **The reduced mass m_a in the centre of percussion of the pendulum is given by the following equation:**

$$m_a = m.c/a$$

where:
m = the actual total mass of the pendulum;
a = the distance between the centre of percussion and the axis of rotation;
c = the distance between the centre of gravity of the pendulum and its axis of rotation.

Insert a new para.4.1.3.6: **The position of the centre of percussion shall comply with the condition**

$$a = (0.995 \pm 0.005).d$$

relating to the position d of the geometric centre of the striking face.

Insert a new para.4.1.3.7: **With the impact velocity measured in the centre of percussion v_a, the actual impact energy of pendulum can be expressed as:**

Para.4.1.4, amend to read: **.....The impact energie shall be 30 kJ for vehicles up to 7,5t TPMM and 45 kJ for vehicles exceeding 7,5t TPMM.**

Re-engage Annex 3, Appendix 2 (figure and text) and amend "Dimensions" to read: **a Distance between hip point centres = variable from 21,6 up to 42,4 cm** (Justification: UNECE manikin is improved to the level of the US one. The adjusting range is chosen to be in compliance with the 3D-H machine).

III. Editorials

-Eliminate **„load alternately used for kg or N"** and instead of it use the more accurate exspressions **„force or mass"** (wherever)

-Eliminate **„swing-bob"** and instead of it use **„impactor"** as a part of pendulum" (wherever)

Eliminate **„GVM"** and use the more accurate expression **„TPMM"** (wherever)

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