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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Passive Safety****Fifty-fourth session**

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Item 12 of the provisional agenda

Regulation No. 29 (Cabs of commercial vehicles)**Draft Supplement 2 to the 03 series of amendments****Submitted by the experts from the Russian Federation,
Sweden and the International Organization of Motor Vehicle
Manufacturers***

The text reproduced below was prepared by the experts from the Russian Federation, Sweden and the International Organization of Motor Vehicle Manufacturers (OICA) to clarify the scope of UN Regulation No. 29 and the tests to be performed on the various types of category N vehicles. The proposal supersedes ECE/TRANS/WP.29/GRSP/2013/9 and ECE/TRANS/WP.29/GRSP/2012/19 and is based on the outcome of discussions at the fifty-third session of the Working Party on Passive Safety (GRSP) (ECE/TRANS/WP.29/GRSP/53, paras 28 and 29). The modifications to the text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, 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

Paragraph 1., amend to read:

- "1. This Regulation applies to vehicles ~~with separate driver's cab~~ of category N¹ with regard to the protection of the occupants of the cab."

Insert new paragraphs 2.13. and 2.14., to read:

"2.13. "Vehicles of category N₁ derived from M₁" means those vehicles of N₁ category which, forward of the A-pillars, have the same general structure and shape as a pre-existing M₁ category vehicle."

2.14. "Separate cab" means a cab attached to the vehicle's frame by specific links and which has no common part with the cargo area."

Paragraph 5.1.2., amend to read:

- "5.1.2. Vehicles of categories N₁ and vehicles of categories N₂ with a gross vehicle mass not exceeding 7.5 t shall be subjected to the tests A and C, as described in Annex 3, paragraphs 5. and 7.

However a vehicle type which ~~has been approved according to~~ **meets the frontal impact requirements of Regulations Nos. 12 or Regulation No.33 or Regulation No. 94, and vehicles of category N₁, derived from M₁ approved to Regulation No. 94**, may be considered to have satisfied the requirements on frontal impact (test A).

Test C shall only be conducted on vehicles which have a separate cab."

Paragraph 5.1.3., amend to read:

- "5.1.3. Vehicles of categories N₃ and vehicles of categories N₂ with a gross vehicle mass exceeding 7.5 t shall be subjected to the tests A, B, and C, as described in Annex 3, paragraphs 5., 6., and 7.

Test C shall only be conducted on vehicles which have a separate cab."

Annex 3,

paragraph 7.3.3., amend to read:

- "7.3.3. The impactor and/or the cab shall be so positioned that, at the **moment** ~~time~~ of impact:"

paragraph 7.3.4., amend to read:

- "7.3.4. The impactor shall strike the upper side of the cab such that at the time of the impact the prescriptions of paragraph 7.3.3. above are satisfied. The direction of impact shall be perpendicular to the surface of the impactor and perpendicular to the median longitudinal line of the cab. Either the impactor or the cab may be moving, as long as the positioning requirements are satisfied **at the moment of impact.**"

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), **document ECE/TRANS/WP.29/78/Rev.2, para. 2.** - www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html

II. Justification

A. Paragraph 1

1. The proposed modification makes it clear that UN Regulation No. 29 concerns all vehicles of category N.

B. Paragraph 2.13.

2. A new definition is suggested for N₁ vehicles derived from M₁ vehicles, copying the definition in UN Regulation No. 127 on pedestrian protection.

C. Paragraph 2.14.

3. A new definition is suggested that clarifies the meaning of "separate cab", to clearly differentiate "one-box" type vehicles (vans), where the driver's area and the cargo area have the same, continuous roof.

D. Paragraph 5.1.2.

4. The proposed amendments take into account that N vehicles cannot officially be approved to UN Regulation No. 33 which addresses "private (passenger) cars (other than forward-control vehicles)". Consequently, the wording "meet the requirements" seems more appropriate than "approved according to".

5. It should also be taken into account that UN Regulation No. 94 (even though it can be used for vehicles over 2.5 t in theory) is not appropriate for such vehicles (offset deformable barrier test).

6. Moreover, many N₁ vehicles are in fact derived from M₁ which have already been approved to UN Regulation No. 94; the front structures of such vehicles are identical or at least very similar and this should be taken into account.

7. Finally, it is suggested that UN Regulation No. 12 should be accepted as an additional option for the N category of vehicles (UN Regulation No. 12 applies to M₁ and to N₁ not exceeding 1.5 t, but can be used for other vehicles as well).

E. Paragraphs 5.1.2 and 5.1.3., Test C

8. It should be noted that the roof Test C is not applicable to so-called "one-box" vehicles. The roof test is expected to simulate a complete 180° rollover accident and accident statistics have shown that this type of accidents is not frequent with smaller trucks which are typical in this "one-box" category. In the case of vehicles with separate cabs, as is the case today in UN Regulation No. 29, the roof Test C would continue to apply. Large trucks typically have a separate cab and would therefore be included as well; admittedly, there may be some large N₃ vehicles in the "one-box" category, but they are few in numbers and these vehicles usually are approved as small series or as special purpose vehicles and, in fact, fall outside the scope of UN Regulation No. 29.

9. In addition, one should take into account the increasing number of N vehicles equipped with Electronic Stability Control systems will make the rollover test less relevant in the future.

10. Considering all the above, it is suggested to retain the current exemption, from the roof Test C, for N vehicles of the "one-box" design.

F. Annex 3, paragraph 7.3.3.

11. To further clarify the test procedure, it must be emphasized that all the impactor positioning procedures must be respected at the moment of the impact, and not throughout the impact duration.

G. Annex 3, paragraph 7.3.4.

12. Same justification as for paragraph 7.3.3.
