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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Brakes and Running Gear (GRRF)

(Fifty -fourth session, 6-8 October 2003,  
agenda item 4.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 111  
(Handling and stability of vehicles)

Transmitted by the Expert from the Russian Federation

Note: The text reproduced below was prepared by the expert from the Russian Federation following the recommendation of GRRF at its fifty-third session. It is based on a document distributed without a symbol (informal document No. 19) during the fifty-third session (TRANS/WP.29/GRRF/53, para. 26). The proposals contained in informal document No. 19 have been divided into two parts. The second part, referring to specifications concerning vehicle roll angle, is reproduced below.

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Note: This document is distributed to the Experts on Brakes and Running Gear only.

Insert new paragraphs 2.8. and 2.8.1., to read:

"2.8.            "Vehicle roll angle" means the difference between the inclination angle of the sprung part of a vehicle with respect to the horizontal surface and the inclination angle of the supporting surface (tilt table platform). Vehicle roll angle is determined in the cross section lying through the vehicle centre-of mass.

2.8.1.           Roll angle is represented by the symbol " $\varphi$ ".

Paragraph 5.3.1.1., amend to read:

" ..... For all tests in both tilt directions and roll angle  $\varphi$  at those conditions shall not exceed  $\varphi_c = 7^\circ$ ."

Paragraph 5.3.1.2., amend to read:

" ..... acceleration of  $4 \text{ m/s}^2$  has been reached. Roll angle  $\varphi$  at those conditions shall not exceed  $\varphi_c$ ."

Annex 4.

Add a new paragraph 7.5.5., to read:

"7.5.5.           The vehicle roll angle when tilted on the tilt table in both directions with inclination angle  $\beta_c = 23^\circ$ , calculated by using the following formula:

$$\varphi_{cc} = A_T \cdot H_g \cdot \sin(\beta_c + \varphi_c) \cdot \cos \beta_c / C_{DREST}$$

shall be less than  $\varphi_c$  ( $\varphi_{cc} \leq \varphi_c$ )."  
[Note by the secretariat: The text and the formulae are contradictory]

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