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Working Party on Brakes and Running Gear

Sixty-second session Geneva, 25-28 September 2007 Item 2(a) of the provisional agenda

MEETING OF THE GRRF WORKING GROUP ON ELECTRONIC STABILITY CONTROL

Development of the draft global technical regulation on Electronic Stability Control

Proposed amendments to draft global technical regulation on Electronic Stability Control

Submitted by the expert from the International Organization of Motor Vehicle Manufacturers (OICA)

The text reproduced below was prepared by the expert from OICA in order to avoid, in the case of type approval certification method, a multiple and unnecessary testing of different vehicles equipped with an Electronic Stability Control (ESC) system. The modifications to document ECE/TRANS/WP.29/GRRF/2007/14 are marked in **bold** characters.

A. PROPOSAL

Paragraph 5., amend to read (addition of a new subparagraph at the end):

"5. Performance Requirements. During each test performed under the test conditions of paragraph 6. and the test procedure of paragraph 7.9., the vehicle with the ESC system engaged **shall** satisfy the directional stability criteria of paragraphs 5.1. and 5.2., and it **shall** satisfy the responsiveness criterion of paragraph 5.3. during each of those tests conducted with a commanded [i.e. programmed in the robot] steering wheel angle of 5A or greater (but limited as per paragraph 7.9.4.), where A is the steering wheel angle computed in paragraph 7.6.1.

The equivalent performance to a physically tested version of the same vehicle type may be demonstrated by a computer simulation which respects the test conditions of paragraph 6. and the test procedure of paragraph 7.9."

B. JUSTIFICATION

As the individual stability performance of the different versions of one vehicle model depends on many different parameters, it will be difficult to identify a worst-case version in countries where certification follows the type approval method. In consequence, this could lead to the mandatory physical testing of all versions of a given vehicle model which may lead to several hundreds of physical tests.

A simulation could be appropriate in order to compare the performance of different versions to the related physically tested version and to keep a reasonable number of physical tests.

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