



**Economic and Social  
Council**

Distr.  
GENERAL

TRANS/WP.29/2002/5  
12 December 2001

ENGLISH  
Original: ENGLISH and  
FRENCH

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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)  
(One-hundred-and-twenty-sixth session,  
12-15 March 2002, agenda item 4.2.14.)

PROPOSAL FOR DRAFT SUPPLEMENT 3 TO THE 02 SERIES OF AMENDMENTS  
TO REGULATION No. 78

(Braking of motorcycles)

Transmitted by the Working Party on Brakes and Running Gear (GRRF)

Note: The text reproduced below was adopted by GRRF at its fiftieth session, and is transmitted for consideration to WP.29 and to AC.1. It is based on document TRANS/WP.29/GRRF/2000/25, as amended (TRANS/WP.29/GRRF/50, para. 33).

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Annex 3,

Paragraphs 1.1.1. and 1.1.2., amend to read:

"1.1.1. The performance prescribed for braking devices shall be based on the stopping distance and/or the mean fully developed deceleration. The performance of a braking device shall be determined by measuring the stopping distance in relation to the initial speed of the vehicle and/or measuring the mean fully developed deceleration during the test.

1.1.2. The stopping distance shall be the distance covered by the vehicle from the moment when the driver begins to actuate the control of the braking system until the moment when the vehicle stops; the initial vehicle speed,  $v_1$ , shall be the speed at the moment when the driver begins to actuate the control of the braking system; the initial speed shall not be less than 98 per cent of the prescribed speed for the test in question. The mean fully developed deceleration, ( $d_m$ ), shall be calculated as the deceleration averaged with respect to distance over the interval  $v_b$  to  $v_e$  according to the following formula:

$$d_m = \frac{v_b^2 - v_e^2}{25.92(s_e - s_b)} \quad \text{m/s}^2$$

Where:

$d_m$  = mean fully developed deceleration

$v_1$  = as defined above

$v_b$  = vehicle speed at 0.8  $v_1$  in km/h

$v_e$  = vehicle speed at 0.1  $v_1$  in km/h

$s_b$  = distance travelled between  $v_1$  and  $v_b$  in metres

$s_e$  = distance travelled between  $v_1$  and  $v_e$  in metres

The speed and distance shall be determined using instrumentation having an accuracy of  $\pm$  1 per cent at the prescribed speed for the test. The " $d_m$ " may be determined by other methods than the measurement of speed and distance; in this case, the accuracy of the " $d_m$ " shall be within  $\pm$  3 per cent."

Paragraph 1.4.1., amend to read:

"1.4.1. General

The limits prescribed for minimum performance are those laid down hereunder for each category of vehicle; the vehicle shall satisfy both the prescribed stopping distance and the prescribed mean fully developed deceleration for the relevant vehicle category, but it may not be necessary to measure both parameters."

Paragraph 2.1.1., amend to read (footnote \*/ not amended):

"2.1.1. Prescribed speed  $v = 40 \text{ km/h}$  \*/ for categories L<sub>1</sub> and L<sub>2</sub>,  
 $v = 60 \text{ km/h}$  \*/ for categories L<sub>3</sub> and L<sub>4</sub>."

Paragraph 2.2.1., amend to read (footnote \*/ not amended):

"2.2.1. Prescribed speed  $v = 40 \text{ km/h}$  \*/ for categories L<sub>1</sub> and L<sub>2</sub>,  
 $v = 60 \text{ km/h}$  \*/ for categories L<sub>3</sub>, L<sub>4</sub> and L<sub>5</sub>."

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