



# Economic and Social Council

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## Economic Commission for Europe

### Inland Transport Committee

#### World Forum for Harmonization of Vehicle Regulations

#### Working Party on Pollution and Energy

#### Eighty-sixth session

Geneva, 30 May–2 June 2022

Item 3(a) of the provisional agenda

**Light vehicles: UN Regulations Nos. 68 (Measurement of the maximum speed, including electric vehicles), 83 (Emissions of M<sub>1</sub> and N<sub>1</sub> vehicles), 101 (CO<sub>2</sub> emissions/fuel consumption) 103 (Replacement pollution control devices) and 154 (Worldwide harmonized Light vehicles Test Procedures (WLTP))**

### **Proposal for a new Supplement to the 05, 06 and 07 series of amendments to UN Regulation No. 83 (Emissions of M<sub>1</sub> and N<sub>1</sub> vehicles)**

#### **Submitted by the expert from the International Organization of Motor Vehicle Manufacturers\***

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA). This document aims to correct the recursive formula of the 05, 06 and 07 series of amendments to UN Regulation No. 83 in the procedure for verifying the conformity of production. Additionally, this document aligns the approval certificate in 06 and 07 series of amendments to UN Regulation No. 83 with recent changes to regulation UN Regulation No. 24. The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2022 as outlined in proposed programme budget for 2022 (A/76/6 (Sect.20), para 20.76), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



## I. Proposal

*In the 05, 06 and 07 series of amendments*

Paragraph 6. of Appendix 2, amend to read:

"6. Remarks

The following recursive formulae are useful for computing successive values of the test statistic:

$$\begin{aligned} \bar{d}_n &= \left(1 - \frac{1}{n}\right) \bar{d}_{n-1} + \frac{1}{n} d_n \\ V_n^2 &= \left(1 - \frac{1}{n}\right) V_{n-1}^2 + \frac{\left[\bar{d}_n - d_n\right]^2}{n-1} \\ V_n^2 &= \left(1 - \frac{1}{n}\right) V_{n-1}^2 + \frac{(\bar{d}_n - d_n)^2}{n-1} \\ &(n = 2, 3, \dots; \bar{d}_1 = d_1; V_1 = 0) \end{aligned}$$

..."

*In the 07 series of amendments*

Paragraph 2.4. of Annex 2, amend to read:

"2.4. Smoke opacity test results<sup>1,6</sup>

2.4.1. At steady speeds: See technical service test report number **(if any)**: .....

2.4.2. Free acceleration tests

2.4.2.1. Measured value of the absorption coefficient **(if any)**: ..... m<sup>-1</sup>

2.4.2.2. Corrected value of the absorption coefficient: ..... m<sup>-1</sup>

2.4.2.3. Location of the absorption coefficient symbol on the vehicle:.....

<sup>6</sup> Smoke opacity ~~values measurements to be carried out~~ according to provisions laid out in Regulation No. 24."

*In the 06 series of amendments*

Paragraph 2.4. of Annex 2, amend to read:

"2.4. Smoke opacity test results<sup>e,2</sup>

2.4.1. At steady speeds: See technical service test report number **(if any)**: .....

2.4.2. Free acceleration tests

2.4.2.1. Measured value of the absorption coefficient **(if any)**: ..... m<sup>-1</sup>

2.4.2.2. Corrected value of the absorption coefficient: ..... m<sup>-1</sup>

2.4.2.3. Location of the absorption coefficient symbol on the vehicle:.....

<sup>e</sup> Smoke opacity ~~values measurements to be carried out~~ according to provisions laid out in Regulation No. 24."

## II. Justification

1. This proposal addresses the correction of the recursive formula for  $V_n$  of paragraph 6. in Appendix 2 of the 05, 06 and 07 series of amendments of UN Regulation No. 83.

2. This proposal aligns the approval certificates of the 06 and 07 series of amendments to UN Regulation No. 83 with the latest changes to UN Regulation No. 24.

Note: the footnote designations appear to vary with the Series of Amendments and language. Only the wording of this footnote should be amended.

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