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Working Party on Pollution and Energy

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Item 4 (a) of the provisional agenda

Heavy duty vehicles:

UN Regulations Nos. 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines) and 132 (Retrofit Emissions Control devices (REC))

Proposal for a new Supplement to the 07 series of amendments to UN Regulation No. 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines)

Submitted by the experts from the International Organization of Motor Vehicle Manufacturers*

The text reproduced below was prepared by the experts from the International Organization of Motor Vehicle Manufacturers (OICA). This document aims to clarify the measurement data. The modifications to the current text of the 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 2024 as outlined in proposed programme budget for 2024 (A/78/6 (Sect. 20), table 20.5), 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

Annex 4, Appendix 5, paragraph A.5.3., amend to read:

"A.5.3. Gaseous emissions (diesel fuel)

The measurement data of an individual point of the test cycle (data sampling rate of 1 Hz) for the calculation of the instantaneous mass emission are shown below. In this example, CO and NO_x are measured on a dry basis, HC on a wet basis. The HC concentration is given in propane equivalent (C3) and has to be multiplied by 3 to result in the C1 equivalent. The calculation procedure is identical for the other points of the cycle.

The calculation example shows the rounded intermediate results of the different steps for better illustration. It should be noted that for actual calculation, rounding of intermediate results is not permitted (see paragraph 8. of this annex). **It should also be noted that for actual calculation, setting negative instantaneous emission values to zero is not permitted.**

..."

II. Justification

1. The negative instantaneous emission values are now handled randomly. A negative value at noise level shall be equally treated as a positive noise value. This is also synchronized with EPA 2027 final rule published in the US Federal Register / Vol. 88, No. 15 / Tuesday, January 24, 2023 / Rules and Regulations. §1036.530 amends 40 CFR 1065.650(g) by stating: "Disregard the provision in 40 CFR 1065.650(g) for setting negative emission mass to zero for test intervals and subintervals."
