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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-third session**

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Item 5 of the provisional agenda

UN Regulations Nos. 24 (Visible pollutants, measurement of power of C.I. engines (Diesel smoke)), 85 (Measurement of the net power), 115 (LPG and CNG retrofit systems), 133 (Recyclability of motor vehicles) and 143 (Heavy Duty Dual-Fuel Engine Retrofit Systems (HDDF-ERS))**Proposal for amendments to the 03 series of amendments to UN Regulation No. 24 (Visible pollutants, measurement of power of C.I. engines (Diesel smoke))****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 proposes to amend the Scopes of the Regulation aimed to better clarify its applicability. 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 2021 as outlined in proposed programme budget for 2021 (A/75/6 (Sect.20), para 20.51), 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

Amend paragraph 1.1.4., to read:

"1.1.4. Equivalent approvals

~~An~~ approvals to the 06 **or any later and above** series of amendments to UN Regulation No. 49 **or to the 06 or any later series of amendments to UN Regulation No. 83 or to UN Regulation No. 154 shall be** is considered to demonstrate compliance to this Regulation for approval with regard to the emission of visible pollutants. C.I. engines and motor vehicles with C.I. engines type approved to **these versions of this series of amendments to UN Regulation Nos. 49, 83 and 154** have no visible pollutant emissions according to the specifications defined in in paragraph 6.

1.1.4.1. Provisions specified in paragraph 6.1; **and 24.1. of this Regulation** apply. Together with the provisions for the approval mark specified in UN Regulation Nos. 49, **83 and 154 as applicable**, the provisions for expressing an adsorption coefficient in ~~m⁻¹~~ **m⁻¹** according to paragraphs 5.4.3., 5.4.4. and 23.4.3. **of this Regulation** also apply. The applicable adsorption coefficient is according to the provisions of Annex 5, paragraph 3. to this Regulation ~~$X_M X_M + 0.5$~~ , where ~~$X_M X_M$~~ is in this case zero."

II. Justification

1. UN Regulation No. 24, to limit the visible smoke in order to avoid poor visibility situations on the road, has been successfully applied in type approval for years.
 2. However, engines certified to the versions of UN Regulations quoted in this document (corresponding to Euro VI, Euro 5 or Euro 6) have no smoke.
 3. CI-engines with DPF have smoke emissions less than 0,5 m-1 during free acceleration test and almost zero at steady state test. Note that the permitted production variability together with measurement inaccuracy is 0,5 m-1.
 4. Thus, it is useful clarify that approvals to the mentioned versions of UN Regulations do not require the certification according to UN Regulation No. 24, therefore the scopes should be adjusted accordingly.
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