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World Forum for Harmonization of Vehicle Regulations

Working Party on Pollution and Energy

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Item 2(d) of the provisional agenda

**HEAVY DUTY VEHICLE ENGINES**

Alignment of Regulation No. 49 with Regulation No. 83 (Euro 5 requirements)

Proposal for draft amendments to Regulation No. 49

Submitted by the expert from the European Commission<sup>\*/</sup>

The text reproduced below was prepared by the expert from the European Commission (EC) to amend document ECE/TRANS/WP.29/2009/75. The modifications to the text of ECE/TRANS/WP.29/2009/75 are marked in bold characters or as strikethrough. This proposal is based on informal document No. WP.29-149-04 and takes into account the conclusions of an expert meeting held in Brussels with the participation of several interested parties and stakeholders (EC, Germany, Finland, France, Hungary, the Netherlands and the European Automobile Manufacturers' Association (ACEA)).

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<sup>\*/</sup> In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

PROPOSAL

Paragraph 1.1., amend to read:

"1.1. This Regulation shall apply to motor vehicles of categories M<sub>1</sub>, M<sub>2</sub>, N<sub>1</sub> and N<sub>2</sub> with a reference mass exceeding 2,610 kg and to all motor vehicles of categories M<sub>3</sub> and N<sub>3</sub>. 1/

At the request of the manufacturer, the type approval of a completed vehicle given under this Regulation shall be extended to its incomplete vehicle with a reference mass below 2,610 kg. Type approvals shall be extended if the manufacturer can demonstrate that all bodywork combinations expected to be built onto the incomplete vehicle increase the reference mass of the vehicle to above 2,610 kg.

**The following do not need to be approved according to this Regulation: engines mounted in vehicles of up to 2,840 kg reference mass to which an approval to Regulation No. 83 has been granted as an extension.**

~~At the request of the manufacturer, the type approval of a vehicle granted under this Regulation shall be extended to its variants and versions with a reference mass above 2,380 kg provided that it also meets the requirements relating to the measurement of greenhouse gas emissions and fuel consumption.~~

Table A: APPLICABILITY

Vehicle category <u>1/</u>	Positive-ignition engines			Compression-ignition engines	
	Petrol	NG <sup>(a)</sup>	LPG <sup>(b)</sup>	Diesel	Ethanol
M <sub>1</sub>	<b>R49 or R83 <sup>(c)</sup></b>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>
M <sub>2</sub>	<b>R49 or R83 <sup>(c)</sup></b>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>
M <sub>3</sub>	<b>R49</b>	R49	R49	R49	R49
N <sub>1</sub>	<b>R49 or R83 <sup>(c)</sup></b>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>
N <sub>2</sub>	<b>R49 or R83 <sup>(c)</sup></b>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>	R49 or R83 <sup>(c)</sup>
N <sub>3</sub>	<b>R49</b>	R49	R49	R49	R49

<sup>(a)</sup> Natural Gas.

<sup>(b)</sup> Liquefied Petroleum Gas.

<sup>(c)</sup> Regulation No. 83 applies ~~only~~ for vehicles with a reference mass ≤ 2,610 kg **and by extension of an approval for vehicles with a reference mass ≤ 2,840 kg given for a vehicle of categories M<sub>1</sub> or N<sub>1</sub>. 1/**

<sup>(d)</sup> ~~"R49 or R83" means that manufacturers can obtain type approval according to this Regulation or to Regulation No. 83, see paragraph 1.2.~~

1/ As defined in Annex 7 to the Consolidated Resolution on the Construction of Vehicles (R.E.3), (document TRANS/WP.29/78/Rev.1/Amend.2, as last amended by Amend.4).

Table B: REQUIREMENTS

	Positive-ignition engines			Compression-ignition engines	
	Petrol	NG	LPG	Diesel	Ethanol
Gaseous pollutants	-	Yes	Yes	Yes	Yes
Particulates	-	Yes <sup>(a)</sup>	Yes <sup>(a)</sup>	Yes	Yes
Smoke	-	-	-	Yes	Yes
Durability	-	Yes	Yes	Yes	Yes
In-service-conformity	-	Yes	Yes	Yes	Yes
OBD	-	Yes <sup>(b)</sup>	Yes <sup>(b)</sup>	Yes	Yes

<sup>(a)</sup> Only applicable to stage C in Table 2 of paragraph 5.2.1.

<sup>(b)</sup> Application dates according to paragraph 5.4.2."

Insert a new paragraph 2.1.64., to read:

**"2.1.64. "Reference mass" means the "unladen mass" of the vehicle increased by a uniform figure of 100 kg for test according to Annexes 4 and 8 of Regulation No. 83."**

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