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**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations**

**Working Party on Pollution and Energy**

**Ninety-second session**

Geneva, 25-28 March 2025

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 06 and 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[[1]](#footnote-2)\*

This document proposes to amend the scope of UN Regulation No. 49 to maintain compatibility with the proposed amendment to the scope of the 06 and 07 Series of Amendments to UN Regulation No. 83. The proposed amendment to the scope of UN Regulation No. 83 is based on informal document GRPE-91-12-Rev1 from the 91st GRPE. The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

*In 07 Series of Amendments,*

*Paragraph 1.*, amend to read:

"1. Scope

1.1. This Regulation shall apply to motor vehicles of categories M1, M2, N1 and N2 with a reference mass exceeding 2,610 kg and to all motor vehicles of categories M3 and N3 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.

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 in accordance with paragraph 4.2. of this Regulation.

1.2. Equivalent approvals

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 UN Regulation No. 83 or UN Regulation No. 154 has been granted ~~as an extension~~. "

*In 06 Series of Amendments,*

*Paragraph 1.*, amend to read:

"1. Scope

1.1. This Regulation shall apply to motor vehicles of categories M1, M2, N1 and N2 with a reference mass exceeding 2,610 kg and to all motor vehicles of categories M3 and N3.1

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.

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 in accordance with Appendix 1 to Annex 12 of the 06 series of amendments to this Regulation.

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~~.

Table A

**Applicability**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Vehicle category1* | *Positive-ignition engines* | | | *Dual-fuel*  *engines* | *Compression-ignition engines* | |
| *Petrol* | *NGa* | *LPGb* | *Diesel* | *Ethanol* |
| M1 | R49 or R83c | R49 or R83c | R49 or R83c | R49d | R49 or R83c | R49 or R83c |
| M2 | R49 or R83c | R49 or R83c | R49 or R83c | R49 or R83c | R49 or R83c |
| M3 | R49 | R49 | R49 | R49 | R49 |
| N1 | R49 or R83c | R49 or R83c | R49 or R83c | R49 or R83c | R49 or R83c |
| N2 | R49 or R83c | R49 or R83c | R49 or R83c | R49 or R83c | R49 or R83c |
| N3 | R49 | R49 | R49 | R49 | R49 |
| 1 As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3), document ECE/TRANS/WP.29/78/Rev.3, para.2.  a Natural Gas.  b Liquefied Petroleum Gas.  c Regulation No. 83 applies for vehicles with a reference mass ≤ 2,610 kg and ~~by extension of an approval~~ **at the manufacturer’s request** for vehicles with a reference mass ≤ 2,840 kg.  d The provisions related to dual-fuel engines and vehicles contained into Regulation No. 49 only apply for vehicles and engines within the scope of the revision 5 of that Regulation. | | | | | | |

Table B

**Requirements**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Positive-ignition engines* | | | *Dual-fuel*  *engines c* | *Compression-ignition engines* | |
|  | *Petrol* | *NG* | *LPG* | *Diesel* | *Ethanol* |
| Gaseous pollutants | - | Yes | Yes | Yes | Yes | Yes |
| Particulates | - | Yesa | Yesa | Yes | Yes | Yes |
| Smoke | - | - | - | Yes | Yes | Yes |
| Durability | - | Yes | Yes | Yes | Yes | Yes |
| In-service-conformity | - | Yes | Yes | Yes | Yes | Yes |
| OBD | - | Yesb | Yesb | Yes | Yes | Yes |
| a Only applicable to stage C in Table 2 of paragraph 5.2.1.  b Application dates according to paragraph 5.4.2.  c According to the requirements of Annex 11. | | | | | | |

1.2.  Equivalent approvals

The following do not need to be approved according to this Regulation, if they are part of a vehicle approved according to Regulation No. 83:

* + - 1. Compression-ignition engines to be mounted in vehicles of categories N1, N2 and M21 fuelled with diesel;
      2. Positive-ignition engines fuelled with Natural Gas (NG) or Liquefied Petroleum gas (LPG) to be mounted in vehicles of category N1.1
      3. Vehicles of categories N1, N2 and M21 fitted with compression - ignition engines fuelled with diesel and vehicles of category N11 fitted with positive-ignition engines fuelled with NG or LPG.

1.2.1. Equivalent approval as set out in paragraph 1.2. shall not be granted in the case of dual-fuel engines and vehicles (see definitions in paragraph 2. below). "

**II. Justification**

This document proposes to amend the scope of UN Regulation No. 49 to maintain compatibility with the proposed amendment to the scope of the 06 and 07 Series of Amendments to UN Regulation No. 83. The proposed amendment to the scope of UN Regulation No. 83 is based on informal document GRPE-91-12-Rev.1 from the 91st GRPE.

1. \* In accordance with the programme of work of the Inland Transport Committee for 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect. 20), table 20.6), 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. [↑](#footnote-ref-2)