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**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations**

**Working Party on Pollution and Energy**

**[Sixty-sixth]session**

Geneva, [dd/ June/ 2013]

Item [X] of the provisional agenda

**Retrofit Emission Control Devices (REC)**

**Proposal for an amendment to Regulation No.[..]**

 **Submitted by the chairman of the informal working group on Retrofit Emission Control devices (REC)**

The text reproduced below was prepared by the chairman of the informal working group on Retrofit Emission Control devices (REC)as a result of the discussion of the informal group on retrofit emission control devices (REC) regarding a proposal for a new Regulation on REC.

Text added to the current(rev.00) text of the Regulation is marked in **bold underlined** for new or ~~strikethrough~~ for deleted characters.

Draft rev.01 Version 3dated 06.12.2012

[Values],[dates], [provisions]and [parameter] not fixed yet are indicated in [square brackets], and [highlighted in yellow].

**I. Proposal**

1. *Purpose*

*Amend paragraph 2 to read:*

 The regulation provides a framework for approval of RECs for different applications **with corresponding environmental performance levels and for the identification in Type Approval of those levels**.

*6. Approval*

*Amend paragraph 6.2 to read:*

6.2. An approval number shall be assigned to each REC approved. Its first two digits (at present ~~00~~**01** according to ~~the~~**this series of amendments to the**Regulation~~in its original form~~) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same type approval number shall not be assigned to another REC.

*8. Performance requirements*

*Amend Table 8.3 to read:*

**Reduction levels**

|  |  |
| --- | --- |
|  | Minimum reduction efficiency (%) |
| PM mass | NOx |
| ~~Reduction level 00~~ | ~~50~~  | [50] [40] |
| **Reduction level 01** | **90**  | **[60]**  |

*Amend paragraph 8.4.2 to read:*

8.4.2. For a Type II REC, the NO2 incremental increase shall not be more than ~~30~~**20** percentage points greater than the level recorded when no REC is fitted (baseline). As an example, if baseline NO2 is 10% of NOx, the maximum permitted NO2 emission with the REC is ~~40%~~**30%** of NOx measured as defined in Annex 5.

*Paragraph 8.5 is replaced by*

**8.5. PM Number emissions requirements**

**8.5.1. Type I, Type II and Type IV REC approved to PM Reduction Level 01 shall provide a reduction efficiency for PM number of at least 97% from the engine baseline emissions of the test engine as defined in paragraph 12 when measured using the test procedure(s) set out in this Regulation.**

**8.5.2. Direct sampling from raw exhaust gas prior to dilution is permitted. The dilution ratios of the particle number diluters (PND1 and PND2 of the particle transfer system, as defined in Regulation 49) shall then be adapted to the measurement range of the particle number counter (PNC).**

**8.5.3. The PM number reduction efficiency is determined as the difference of 1 minus the penetration, which is the ratio between the PM number emissions downstream of the REC system and the PM number emission of the engine system before fitment of the REC. The PM number reduction efficiency is indicated as a percentage. The PM number reduction efficiency shall be determined for the appropriate test cycle as defined in paragraph 8.3.**

**8.5.4. If two PM number measurement systems are used in parallel for measurement of the PM number reduction efficiency, they shall give measurements within [5%] of each other when measuring simultaneously from the same sample point.**

*A new section 26 is added*

**26. Transitional provisions**

**26.1. As from the official date of entry into force of the 01 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approval under this Regulation as amended by the 01 series of amendments.**

**26.2. As from the date of entry into force of the 01 series of amendments, Contracting Parties applying this Regulation shall not refuse the placing on the market of RECs which meet the requirements of this Regulation.**

**26.3. As from [dd/mm/yyy + 6 months] contracting parties applying this Regulation may refuse the placing on the market of RECs which do not meet the requirements of the 01 series of amendments to this Regulation.**

**26.4. By derogation, Contracting Parties applying this Regulation may postpone the date stipulated in paragraph 26.3 for [1] year.**

*Annex 3is replaced by*

**Annex 3.
Arrangement of the REC type approval mark**

Model A
(See paragraph 5.4. of this Regulation)

**1**

Type X

[nnn]

a = 8 mm min

The above example approval mark affixed to a REC shows that the type concerned has been approved in the Netherlands (E 4), pursuant to Regulation No. [nnn] under approval No. 0~~0~~**1**1234. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. [nnn]~~in its original form~~**in the form as amended by this revision.**. The approval mark shall also show the Type of REC (I, II, III or IV)