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Item [X] of the provisional agenda
Retrofit Emission Control Devices (REC)

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

Submitted by the expert from []

The text reproduced below was prepared by the expert from [] 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.

The modifications to the current rev.00) text of the Regulation are marked in **bold underlined** for new or ~~striethrough~~ for deleted characters.

Draft rev.01 Version 2 dated 23.05.2012

[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.**

3. Definitions

~~Add paragraph~~ Amend paragraph 3.22 by deletion of the phrase “(this definition is not used in the current provisions)”

~~3.30. “PM number” means the number of particles which is defined in the relevant series of amendments to UN Regulation No.49;~~ 6. Approval

Amend paragraph 7.2 to read:

6.2. An approval number shall be assigned to each REC approved. Its first two digits (at present ~~00~~ 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 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 NO_x, the maximum permitted NO₂ emission with the REC is ~~40%~~ **[30%]** of NO_x measured as defined in Annex 5.

Amend Table 8.5 to read:

Reduction levels

	Minimum reduction efficiency (%)	
	PM mass	NO _x
Reduction level 1	50	[50]
Reduction level 2	90	[70]

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 2 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

Comment [JMY1]: PM number definition now incorporated into base document, to avoid having to renum the whole section on introduction of rev.01, so addition of definition not needed, but sentence saying it is not used must be deleted

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 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 3% 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/yyyy + 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 to the provisions stipulated in paragraph 26.2 and 26.3, Contracting Parties applying this Regulation may postpone each date mentioned in the above paragraphs for [n] years.

Comment [JMY2]: Check with GR secretariat on the minimum period acceptable.

Annex 3 is replaced by

Annex 3.

Arrangement of the REC type approval mark

Comment [JMY3]: To be modified based on proposal by Hungary for amendment of Annex 3 in rev00 version.

Model A

(See paragraph 5.4. of this Regulation)



a = 8 mm min

The above example approval mark affixed to a Retrofit Emission Control device (REC) shows that the type concerned has been approved in the Netherlands (E 4), pursuant to Regulation No. [nnn] under approval No. 011234. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. [nnn] *in the form as amended by this revision*. The approval mark shall also show the Type of REC (I, II, III or IV) and its Reduction Level (Level 2 for an REC approved to the 01 series of amendments).