

## Hungarian proposals for the draft new REC regulation (Version 2.2 dated 28.10.2011)

### 1. proposal on the structure of the REC regulation

*New parts marked in bold italic.*

1. Scope
2. Definitions (including: Application range)
3. Application for approval
4. Markings
5. Approval
6. REC family\*
  - Particulate reduction REC family
  - NOx reduction REC family
  - NOx and PM reduction REC family
  - Choice of the test engines and REC combination
7. General requirements\*
  - Test sequence for particulate reduction REC
  - Modifications to engine baseline emission
  - Specification concerning emission measurement
  - Requirements for Level 1 Particulate Reduction REC
  - Requirements for Level 2 Particulate reduction REC
  - Requirements for Level 1 NOx reduction REC
  - Requirements for Level 2 NOx reduction REC
  - Performance requirements
  - Durability requirements
  - Fuel
  - Operating behaviour and safety hazard
  - Noise emissions
  - Use of additives or reagents
  - Installation of a REC
8. ***Instruction manuals (if needed)***
  - Installation manuals (if needed)***
  - End user manuals (if needed)***
9. Modification and extension of approval of a REC
10. Conformity of production
11. Penalties for non-conformity of production
12. Production definitely discontinued
13. Names and addresses of technical services conducting approval tests and of Administrative departments

Annex1A	Information document <i>for PM reduction REC</i>
<b><i>Annex1B</i></b>	<b><i>Information document for NOx reduction REC (if needed)</i></b>
<b><i>Annex1C</i></b>	<b><i>Information document for PM and NOx reduction REC (if needed)</i></b>
Annex2A	Communication (including the Application range table) for PM reduction REC
<b><i>Annex2B</i></b>	<b><i>Communication for NOx reduction REC (if needed) (if needed)</i></b>
<b><i>Annex2C</i></b>	<b><i>Communication for PM and NOx reduction REC (if needed) (if needed)</i></b>
Annex3	Arrangement of the REC type approval mark
Annex4A	Test of a particulate reduction REC
Annex4B	Test of a NOx reduction REC
Annex4C	Tests of a PM and NOx reduction REC
Annex5	Measurement of secondary emissions

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\* The final structure may vary.

**Justification:** The REC regulation should follow the standard structure of the UN regulations as much as possible.

This proposal contains all parts of draft new REC regulation (Version 2.2 dated 28.10.2011), except „Purpose” which does not appear to be necessary for an approval regulation and „Transitional provisions” which contains unnecessary provisions for approval of retrofit components.

## **2. proposal: Title of the regulation**

Draft new Regulation on uniform requirements for **provisions concerning the approval of Retrofit Emission Control devices (REC) for heavy duty vehicles, agricultural tractors and non-road mobile machinery (NRMM) equipped with Compression Ignition engines.**

**Justification:** The current content of the draft new REC regulation is more an approval regulation for REC systems than a list of technical requirements. The title should reflect the content accordingly.

## **3. proposal: Purpose**

*Should be deleted and the content have to be inserted into another part of the regulation if necessary.*

**Justification:** Since the draft REC regulation turns to be an approval regulation, the purpose part is not necessary and unusal.

## **4. proposal: Scope**

This Regulation applies to retrofit emission control systems (REC) to be installed:

- 2.1. on category M<sub>2</sub>, M<sub>3</sub> and N vehicles<sup>1</sup> and their C.I. engines, **covered by the scope of Regulation No. 49**
- 2.2. **on non-road mobile machinery<sup>1</sup> and category T vehicles<sup>1</sup> and their C.I. engines having a net power higher than 18 kW but not more than 560 kW, operated under variable or constant speed, covered by the scope of Regulation No.96**  
~~on C.I. engines having a net power higher than 18 kW but not more than 560 kW installed in non-road mobile machinery<sup>+</sup>, operated under variable speed;~~
- ~~2.3. on C.I. engines having a net power higher than 18 kW but not more than 560 kW installed in non-road mobile machinery<sup>+</sup>, operated under constant speed;~~
- ~~2.4. on C.I. engines having a net power higher than 18 kW but not more than 560 kW installed in category T. vehicles.~~

**Justification:** The scope has to be referred the original type approval regulation were used for the approval of the engine/vehicle/machinery

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

**Justification:** New consolidated version exists and has been published in UN website

## **5. proposal: Definitions**

*Has to be considered that those definitions which appears in existing UN vehicle regulations should be a simple reference or should use the same existing wording.*

## **6. proposal: Application for approval**

*Paragraph 5.2. subparagraph (c) needs further linguistic clarification.*

## **7. proposal: Markings**

- 6.2. All REC shall be **accompanied by a plate identified by a label**, in which the approval number, and the technical specifications, as required in **[Annexes ...]** shall be placed. This **plate label** has to be permanently fixed to the **structure of the vehicle or non-road mobile machinery REC**, shall be indelible, and shall be clearly readable ~~after installation of the REC~~.

**Justification:** Similar to the LPG conversion regulation (R. No.115). The use of a REC does not affect the original approval of the engine/machinery. It is expected that the vehicle/machinery equipped with REC will receive different benefits within the territory of a Contracting Party, it is necessary that the existence of the REC shall be easily verifiable (e.g. during a periodic technical inspection).

## **8. proposal: Performance requirements**

*Should consider the necessity of the REC matrices.*

**Justification:** All information in the matrices are available in another part of the REC regulation / or in other UN regulations. In other word: the REC matrices do not contain any (important) additional information.

## **9. proposal: Noise emission**

*Should consider the need of further elaboration (e.g. a reference to the test method of UN Regulation No.59.)*

## 10. proposal: Transitional provisions

### 4. ~~Transitional provisions~~

- 4.1. ~~As from the official date of entry into force of this Regulation, no Contracting Party applying this Regulation shall refuse to grant ECE approval under the Regulation.~~
- 4.2. ~~As from [dd/mm/yyyy] contracting parties applying this Regulation may refuse the placing on the market of RECs which do not meet the requirements of this Regulation.~~
- 4.3. ~~As from [dd/mm/yyyy+x] contracting parties applying this Regulation may refuse the placing on the market of RECs which do not meet the Level 2 requirements of this Regulation.~~
- 4.4. ~~By derogation to the provisions stipulated in paragraph 3, Contracting Parties applying this Regulation may postpone each date mentioned in the above paragraphs for [n] years.~~

**Justification:** Any provision about „placing on the market” can be a part of an EU directive/regulation, but very unusual in an UN approval regulation. If the „Transitional provision” paragraph is necessary, it is sufficient to keep only the paragraph 4.1.

## 11. proposal: Test sequence for particulate reduction / REC Test of a particulate reduction REC

*It seems that the determination of the emission reduction category (e.g. from A baseline emission to B2) is missing from the flowchart. In case of the emission performance category based on the result of the endurance test, it has to be clearly identified.*