

Hungarian proposals for the discussion of draft new REC regulation (Version REC 10-02)

Proposal 1: concerning reduction level – reduction efficiency

Use of the term reduction level is not needed since the relevant serie number of the REC regulation clearly indicate the reduction efficiency level: REC regulation 00 allows only the minimum reduction level (efficiency) 50% as it is in Table 8.5. and REC regulation 01 allows the minimum 90% for PM and 70% for NO_x.

Reduction level indication is needed only if the regulation contains more than one stringency level.

Examples for amendments according proposal 1:

3. Definitions

3.21. “Reduction efficiency” means the ratio between the emissions downstream of the REC system (EREC) and the engine baseline emissions (EBase) and both measured in accordance with the procedures defined in this Regulation and calculated as defined in paragraph 8.3.4;

~~3.22. “Reduction level” means a reduction efficiency in percent to be met by the retrofit emission control device (REC) in order to be certified as meeting~~

8.3. Reduction levels ~~efficiency~~

~~8.3.1 The reduction level of a REC system is characterised by means of its reduction efficiency as specified in Table 8.5:~~

The REC system approved under this Regulation shall have a minimum reduction efficiency as specified in Table 8.5:

Table 8.5:

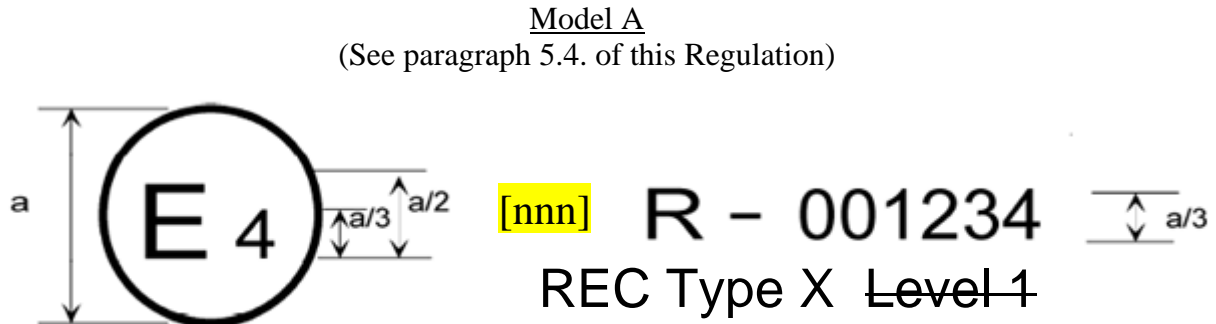
~~Reduction levels~~

| | Minimum reduction efficiency (%) | |
|----------------------|----------------------------------|-----------------|
| | PM mass | NO _x |
| Reduction level ± | 50 | [50] |
| | | |

| Minimum reduction efficiency (%) | |
|----------------------------------|-----------------|
| PM mass | NO _x |
| 50 | [50] |

Annex 3.

Arrangement of the REC type approval mark



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. 001234. 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. The approval mark shall also show the Type of REC (I, II, III or IV) ~~and its Reduction Level~~

Proposal 2: concerning paragraph 8. Performance requirements

REC matrices and their usage in the context of the REC regulation needs further development and consideration.

The role and the significance of the matrices has to be clarified.

Examples for justification to proposal 2:

for road vehicles: B1 and B2 emission levels have the same emission limit for PM
B2 and C emission levels have the same emission limit for NO_x

non road vehicles and mobile machinery: E, F, G, D – L, M, N – Q, R emission levels have limit values for NO_x and PM
H, I, J, K – (P) emission levels have limit values for HC+NO_x and PM
L and Q, M, N and R emission levels have the same PM emission limits

Have to be developed a closer relationship between the emission levels indicated in the REC matrices and the other parts of the REC regulation (Annex 2 and Annex 3).

Proposal 3. concerning paragraph 9. durability requirements

It has to be clarified the difference between the field test and the engine test bed (4000hours does not equivalent with 1000hours).

Proposal 4. concerning paragraph 10. application range

According the current text of the REC regulation paragraph 10. „*The application range is defined by the engine family to which the test engine as defined in paragraph 12 belongs*”. The definition of the engine family or engine family concept in the context of the REC approval procedure needs much more detailed development (list of parameters etc.). Possible solution is to refer to existing UN regulations.

Proposal 5. concerning Information and Communication documents

It is recommended to complete these annexes to be align with other UN and EU documents (e.g.: 2007/46/EC).

Annex 2 – Communication has to contain the application range and the test results.

Proposal 6. concerning equivalent approvals

It should be discussed the possibility that the application range may be extended to engines approved by Regulation No. 96 if the test engine approved by Regulation 49 according to Annex...

Similar to the new proposal amending the NRMM Directive as below:

*„ANNEX XII
RECOGNITION OF ALTERNATIVE TYPE-APPROVALS.*

...

- 2.3. *Type-approvals to UNECE Regulation No 49.03 series of amendments;*
- 2.4. *UNECE Regulation No 96 stages D, E, F and G approvals according to paragraph 5.2.1 of the 01 series of amendments of Regulation No 96.*
3. *For engines categories H, I, J and K (stage IIIA) as defined in Article 9(3b) and Article 9(3c), the following type-approvals and, where applicable, the pertaining approval marks are recognised as being equivalent to an approval to this Directive:*
 - 3.1. *Type-approvals to Directive 2005/55/EC, as amended by Directives 2005/78/EC and 2006/51/EC, which are in compliance with stages B1, B2 or C provided for in Article 2 of this Directive and section 6.2.1. of Annex I of this Directive;*
 - 3.2. *Type-approvals to UNECE Regulation No 49.05 series of amendments, which are in compliance with stages B1, B2 and C provided for in paragraph 5.2 of that regulation;*
 - 3.3. *UNECE Regulation No 96 stages H, I, J and K approvals according to paragraph 5.2.1 of the 02 series of amendments of Regulation No 96.*

4. *For engines categories L, M, N and P (stage IIIB) as defined in Article 9(3d), the following type-approvals and, where applicable, the pertaining approval marks are recognised as being equivalent to an approval to this Directive:*
 - 4.1. *Type-approvals to Directive 2005/55/EC, as amended by Directives 2005/78/EC and 2006/51/EC, which are in compliance with stages B2 or C provided for in Article 2 of this Directive and section 6.2.1. of Annex I of this Directive;*
 - 4.2. *Type-approvals to UNECE Regulation No 49.05 series of amendments, which are in compliance with stages B2 or C provided for in paragraph 5.2 of that regulation;*
 - 4.3. *UNECE Regulation No 96 stages L, M, N and P approvals according to paragraph 5.2.1 of the 03 series of amendments of Regulation No 96.*
5. *For engines categories Q and R (stage IV) as defined in Article 9(3e), the following type-approvals and, where applicable, the pertaining approval marks are recognised as being equivalent to an approval to this Directive:*
 - 5.1. *Type-approvals to Regulation (EC) No 595/2009 and its implementing measures, if it is confirmed by a technical service that the engine meets the requirements of Annex I section 8.5 of this Directive;*
 - 5.2. *Type-approvals to UNECE Regulation No 49.06 series of amendments, if it is confirmed by a technical service that the engine meets the requirements of Annex I section 8.5 of this Directive."*