

Transmitted by the expert from the
European Commission (EC)

Informal document No. GRPE-60-17
(60th GRPE, 07-11 June 2010,
agenda item 6.4)

Working Party on Pollution and Energy

Sixtieth session

Geneva, 8–11 June 2010

Regulation No. 103

(Replacement catalytic converters)

Corrigendum for proposal for draft amendments to Regulation No. 103

Submitted by the expert from the European Commission *

The text reproduced below was prepared by the expert from the European Commission (EC) to align the provisions of Regulation No. 103 with those of the 06 series of amendments to Regulation No. 83 with regard to the Euro 5 emission requirements. This document is based on the Polish comments to the working document No. ECE/TRANS/WP.29/GRPE/2010/13 at the sixtieth session of the Working Party on Pollution and Energy (GRPE). Modifications to the document ECE/TRANS/WP.29/GRPE/2010/13 are grey highlighted and marked in bold characters for new or as strikethrough for deleted text.

* In accordance with the programme of work of the Inland Transport Committee for 2006–2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

Paragraph 1., amend to read:

1. Scope

This Regulation applies to the type-approval, as separate technical units, of ~~catalytic converter~~ **pollution control device** to be fitted in one or more types of motor vehicles of categories ~~M₁ and N₁~~ **covered by the Scope of the relating version of Regulation No.83** as replacement parts.

Catalytic converters and particulate filters shall be considered to be pollution control devices for the purposes of this Regulation.

Paragraph 4.4., amend to read:

4.4. When the applicant for type-approval can demonstrate to the type-approval authority or technical service that the replacement ~~catalytic converter~~ **pollution control device** is of a type indicated in ~~item 18 of~~ Annex 2 to the 05 or later series of amendments to Regulation No. 83, the granting of a type approval certificate shall not be dependent on the requirements specified in paragraph 5. having to be verified.

Paragraph 5.2.3., amend to read:

5.2.3. Evaluation of the emission of pollutants of vehicles equipped with replacement ~~catalytic converters~~ **pollution control devices**.

The test vehicle(s) with the original ~~catalytic converter~~ **pollution control device** shall comply with the limit values according to the type approval of the vehicle(s) including – if applicable – the deterioration factors applied during the type approval of the vehicle(s).

The requirements regarding emissions of the vehicle(s) equipped with the replacement ~~catalytic converter~~ **pollution control device** shall be deemed to be fulfilled if the results meet for each regulated pollutant (CO, HC, NO_x, ~~and~~ **particulates and particles**) the following conditions:

(1) $M \leq 0.85S + 0.4G$

(2) $M \leq G$

where :

M: mean value of the emissions of one pollutant (CO, HC, NO_x, ~~and~~ **particulates and particles**) or the sum of two pollutants (HC + NO_x) obtained from the three type I tests with the replacement ~~catalytic converter~~ **pollution control device**.

S: mean value of the emissions of one pollutant (CO, HC, NO_x, ~~and~~ **particulates and particles**) or the sum of two pollutants (HC + NO_x) obtained from the three type I tests with the original ~~catalytic converter~~ **pollution control device**.

G: limit value of the emissions of one pollutant (CO, HC, NO_x, ~~and~~ **particulates and particles**) or the sum of two pollutants (HC + NO_x) according to the type approval of the vehicle(s) ~~divided by~~

i) divided by the multiplicative or

ii) minus the additive

– if applicable – ~~the~~ deterioration factors determined in accordance with paragraph 5.4. below.

Where approval is applied for different types of vehicles from the same car manufacturer, and provided that these different types of vehicles are fitted with the same type of original equipment ~~catalytic converter~~ **pollution control device**, the type I testing may be limited to at least two vehicles selected after agreement with the technical service responsible for approval.

Paragraph 5.4., amend to read:

5.4. Requirements regarding durability

The replacement ~~catalytic converter~~ **pollution control device** shall comply with the requirements of paragraph ~~5.3.5.~~ **5.3.6.** of Regulation No. 83 i.e. type V test or deterioration factors from the following table for the results of the type I tests.

Engine Category	Deterioration factors				
	CO	HC ⁽¹⁾	NO _x ⁽¹⁾	HC+NO _x	Particulars
Positive-ignition	1.2	1.2	1.2	1.2 ⁽²⁾	-
Compression ignition	1.1	-	1.0	1.0	1.2

⁽¹⁾ Applicable only to vehicles approved according to the 05 series of amendments to Regulation No. 83.

⁽²⁾ Applicable only to positive-ignition engined vehicles approved according to earlier than 05 series of amendments to Regulation No. 83.

Paragraph 5.4.1., amend to read:

5.4.1. For replacement pollution control devices intended to be fitted to vehicles type approved to the 06 series of amendments to Regulation No. 83., the durability requirements and associated deterioration factors specified in paragraph 5.3.6.2 of the 06 series of amendments to Regulation No. 83. shall be used.

Paragraph 5.5., amend to read:

5.5. Requirements regarding OBD compatibility (applicable only to replacement ~~catalytic converters~~ **pollution control devices** intended to be fitted to vehicles equipped with an OBD system)

OBD compatibility demonstration is required only when the original ~~catalyst~~ **pollution control device** was monitored in the original configuration.

Insert new paragraphs after Paragraph 5.5.5., as follows:

5.5.6. For vehicles with positive-ignition engines, if the THC and NMHC emissions measured during the demonstration test of a new original equipment catalytic converter, under paragraph 5.2.1 of this regulation are higher than the values measured during the type-approval of the vehicle, the difference shall be added to the OBD threshold limits. The OBD threshold limits are specified in point 3.3.2 of Annex 11 to UN/ECE Regulation 83.

5.5.7. The revised OBD threshold limits will apply during the tests of OBD compatibility set out in paragraphs 5.5 to 5.5.5 of this regulation. In particular, when the exceedance allowed in paragraph 1 of Appendix 1 to Annex 11 to UN/ECE Regulation 83 is applied.