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agenda item 5.4.)

PROPOSAL FOR DRAFT CORRIGENDUM 1 TO DRAFT SUPPLEMENT 1 TO
REGULATION No. 115

(Specific LPG and CNG retrofit systems)

Transmitted by the expert from the European LPG Association (AEGPL)

Note: The document reproduced below has been prepared by the expert from AEGPL in order to introduce some corrections to draft Supplement 1 to Regulation No. 115 (TRANS/WP.29/2005/37). The modifications to the current requirements are marked in **bold** characters.

A. PROPOSAL

Paragraph 1.4., correct to read (footnote 1/ remains unchanged):

"1.4. This Regulation applies to retrofit systems intended to be fitted on vehicles of categories M and N, with the exception of:

- (a) **vehicles approved before the application of the requirements of Regulation No. 83, 01 series of amendments,**
- (b) vehicles type-approved pursuant to Regulation No. 83, approval A and C,
- (c) vehicles type-approved pursuant to Regulation No. 83, others than M1 and N1 categories,
- (d) vehicles type-approved pursuant to Regulation No. 83, series of amendments 01 or 02 or 03 or 04 series,
- (e) vehicles type-approved pursuant to Regulation No. 49, series of amendments 01 or 02 or 03 series.

The requirements for the different categories (M₁, N₁ or others) are defined in paragraphs 2. to 7. 1/.

The modified vehicle shall remain conform to all the provisions of the Regulation for which the type approval has been initially granted."

Paragraph 3.3., correct to read:

"3.3. **Installation manual(s) for the retrofit system installation on the parent vehicle(s)."**

Paragraph 6.1.2.4., correct to read:

"6.1.2.4. **"Pollutants"** means:

- (i) carbon monoxide
- (ii)
-"

Paragraphs 6.1.2.5.3.3. and 6.1.2.5.3.4., correct to read:

"6.1.2.5.3.3. The ratios of CO₂ emissions and fuel consumption shall be calculated as follows:

$$K_{CO_2} = CO_{2LPG} / CO_{2petrol}$$

$$K_{Cons} = Cons_{LPG} / Cons_{petrol}$$

For each vehicle of the family, the official values of CO₂ emissions are multiplied by the above ratios.

6.1.2.5.3.4. Notwithstanding the provisions of paragraphs 6.1.2.5.3.1. **and 6.1.2.5.3.2.**, for non intrusive system, as defined in paragraph 2.1.5. of this Regulation, the value of the petrol CO₂ emission **and the fuel consumption** may be the official values of the **vehicle** No. i. "

Paragraph 6.1.3.4., correct to read:

"6.1.3.4. Notwithstanding the provisions of paragraph 6.1.3.1., with regard to the way to calculate the mean of maximum power on petrol in paragraphs 6.1.3.2. and 6.1.3.3., for non intrusive system, as defined in paragraph 2.1.5. of this Regulation, the value of maximum power on petrol of the **vehicle** No. i may be the official value."

Paragraph 6.1.4.1.2., correct to read:

"6.1.4.1.2. "LPG emission-related component" means any component in the air inlet **or in the exhaust system** which supplies an input to or receives an output from the LPG controller."

Paragraph 6.2.2.4., correct to read:

"6.2.2.4. "**Pollutants**" means:

- (i) carbon monoxide
- (ii)
-"

Paragraphs 6.2.2.5.3.3. and 6.2.2.5.3.4., correct to read:

"6.2.2.5.3.3. The ratios of CO₂ emissions and fuel consumption shall be calculated as follows:

$$K_{CO_2} = CO_{2CNG} / CO_{2petrol}$$

$$K_{Cons} = Cons_{CNG} / Cons_{petrol}$$

For each vehicle of the family, the official values of CO₂ emissions and fuel consumption are multiplied by the above ratios.

6.2.2.5.3.4. Notwithstanding the provisions of paragraphs 6.2.2.5.3.1. **and 6.2.2.5.3.2.**, for non intrusive system, as defined in paragraph 2.1.5. of this Regulation, the value of the petrol CO₂ emission **and the fuel consumption** may be the official values of the **vehicle** No. i. "

Paragraph 6.2.4.1.2., correct to read:

"6.2.4.1.2. "CNG emission-related component" means any component in the air inlet **or in the exhaust system** which supplies an input to or receives an output from the CNG controller."

Paragraphs 7.1.3.5. to 7.1.3.7., correct to read:

"7.1.3.5. The installation manual can be divided in two parts:

Part I: (i) **Part containing the description of the sample of the retrofit system**

(ii) Part containing the list of components indicated by the retrofit manufacturer as alternatives.

Part II: (i) **Part containing installation instructions for the specific vehicle.**

7.1.3.6. **Installation manual of the parent vehicle(s)** has to be submitted to the authority that grants the type approval.

7.1.3.7. **Installation manual of the vehicles belonging to the family** has to be filed by the retrofit system manufacturer for a time to be determined in accordance with the authority that grants the type approval."

Annex 1A – Addendum, item 3., correct to read:

"3. Vehicles type(s) for which the retrofit equipment type is qualified:

Fuel		Petrol (or diesel) <u>1/</u>					LPG				
Vehicle type	Engine type	Power (kW)	CO <u>3/</u> (g/km)	HC <u>3/</u> (g/km)	NOx <u>3/</u> (g/km)	CO ₂ <u>2/</u> (g/km)	Power (kW)	CO <u>3/</u> (g/km)	HC <u>3/</u> (g/km)	NOx <u>3/</u> (g/km)	CO ₂ <u>2/</u> (g/km)

1/ Strike out what does not apply.

2/ Applicable to vehicles of category M₁ and N₁ only.

3/ Applicable only to parent vehicle(s)"

Annex 1B - Addendum, item 3., correct to read:

"3. Vehicles type(s) for which the retrofit equipment type is qualified:

Fuel		Petrol (or diesel) <u>1/</u>					CNG				
Vehicle type	Engine type	Power (kW)	CO <u>3/</u> (g/km)	HC <u>3/</u> (g/km)	NOx <u>3/</u> (g/km)	CO ₂ <u>2/</u> (g/km)	Power (kW)	CO <u>3/</u> (g/km)	HC <u>3/</u> (g/km)	NOx <u>3/</u> (g/km)	CO ₂ <u>2/</u> (g/km)

1/ Strike out what does not apply.

2/ Applicable to vehicles of category M₁ and N₁ only.

3/ **Applicable only to parent vehicle(s)**"

B. JUSTIFICATION

At its session in January 2005, GRPE adopted document TRANS/WP.29/GRPE/2005/7. The document has been transmitted as draft Supplement 1 to Regulation No. 115 to WP.29, for consideration at its next session of June 2005.

Unfortunately, during the complex work of the document's preparation, some slight inaccuracies have occurred in spite of the text's careful control by the AEGPL experts. Therefore, a Corrigendum to the draft Supplement 1 to the Regulation is absolutely necessary.

Apart from some minor adjustments to the Supplement's text which do not need particular justifications, the considerations below regard the most important points of the Corrigendum. As can be seen in the new formulation of paragraph 1.4., the main objective of Supplement 1 has been the reduction of the Regulation's scope only to the vehicles complying with Regulation No. 83, 05 series of amendments, or later series of amendment. Unintentionally, the exclusion of vehicles not complying with Regulation No. 83 has disappeared from the text formally presented by AEGPL at the GRPE session of January 2005. So, this Corrigendum intends to re-integrate that exclusion.

The paragraphs regarding instructions manuals have been revised by Supplement 1 to fix more clearly the contents of parts I and II of the installation manual. This Corrigendum intends to accordingly revise also the definitions of parts I and II of the installation manual (paras. 7.1.3.5. to 7.1.3.7.). Hence, paragraph 3.2. has to refer to the whole installation manual of the parent vehicle, not only to part I, because part II is absolutely necessary for the type-approval authority to verify the correctness of the retrofit system installation on the vehicles subject to the approval.

As for paragraphs 6.1.2.5.3.4. and 6.2.5.3.4., the corrigendum extends what the draft Supplement 1 permits for CO₂ emissions in the case of "non intrusive" retrofit system. There is no reason to foresee a different procedure for CO₂ and fuel consumption, which are two strictly linked data.
