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World Forum for Harmonization of Vehicle Regulations

Working Party on Pollution and Energy

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Item 6(a) of the provisional agenda

AMENDMENTS TO UNECE REGULATIONS

REGULATION No. 83

(Emissions of M₁ and N₁ categories of vehicles)

Proposal for Corrigendum 1 to Supplement 6 to the 05 series of amendments
to Regulation No. 83

Submitted by the expert from the European Association of Automotive Suppliers^{*/}

The text reproduced below was prepared by the expert from the European Association of Automotive Suppliers (CLEPA) in order to allow the use of an On-Board Diagnostic (OBD) system, designed for "monofuel plus" systems to also be used as a "bifuel" system, when certain conditions are met. The modifications to the current text of the Regulation are marked in **bold** characters.

^{*/} 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 performance of vehicles with respect to pollution and energy. The present document is submitted in conformity with that mandate.

A. PROPOSAL

Annex 11, paragraph 3.9.4., correct to read:

"3.9.4. Regarding the status code (as described in paragraph 3.6. of this annex), one of the following two options has to be used **if one or more of the diagnostics reporting readiness is fuel type specific:**

- (a) the status code is fuel specific, i.e. use of two status codes, one for each fuel type;
- (b) the status code shall indicate fully evaluated control systems for both fuel types (petrol and NG/LPG) when the control systems are fully evaluated for one of the fuel types. **If none of the diagnostics reporting readiness is fuel type specific, then only one the status code has to be supported."**

B. JUSTIFICATION

The OBD requirement for bi-fuelled gas vehicles was realized at a very late stage through modifications of the original legislation which only differentiated between positive and compression ignited engines. Originally, the adaptation for bi-fuelled gas vehicles described a single technical solution. Due to time constraints and the knowledge that other solutions were being developed, these solutions were incorporated by the use of "allowed deficiencies".

After several years of developing OBD systems for mono- and bi-fuelled gas vehicles according to the requirements of Regulation No. 83, the industry associations CLEPA, the European Natural Gas Vehicle Association (ENGVA), the European LPG Association (AEGPL) and the European Automobile Manufacturers' Association (ACEA) came to the conclusion that the OBD requirements for bi-fuelled gas vehicles compared to those for mono-fuelled gas vehicles require significant additional hardware, software and development efforts and associated costs without benefits for the environment, the vehicle owner and the repair industry.

Therefore, the Associations proposed an amendment to the requirements for bi-fuelled gas vehicles that fulfils all the primary goals of OBD, but removes unnecessary restrictions and leads to similar costs (hardware, software, development) as for mono-fuel gas vehicles, and thus reduces the barrier for the introduction of bi-fuel vehicles (Original Equipment Manufacturer - OEM) into the market.

This industry proposal was reviewed by a GRPE expert group established at the fiftieth GRPE session, adopted by GRPE at its fifty-first session and adopted by World Forum for Harmonization of Vehicle Regulations (WP.29) at its one-hundred-and-thirty-ninth session. It is part of Supplement 6 to the 05 series of amendments to UNECE Regulation No. 83.

When finalizing the text of the amendment, one item which had been discussed was not fully taken into account. Specifically, Annex 11 paragraph 3.9.4. requires the OBD system to supply two pieces of readiness information, one for gas and one for petrol (option a) (option b allows "overwriting" of the readiness information for one fuel type if the readiness for the other fuel type is complete). For the special case of one OBD system without any fuel type specific diagnostics which have to report readiness, the two readiness bytes will always be identical.

Nevertheless, Annex 11 paragraph 3.9.4. requires the OBD system to supply two pieces of readiness information, one for gas and one for petrol.

That was not the intention when drafting the text. The general intention was to allow the implementation of an OBD system for "bifuel" vehicles which is basically identical to that of a "monofuel plus" system (as indicated in the various rationale documents during the legislative process). For this special case only one fuel type independent readiness byte is sufficient.

We believe that this is an important amendment to allow the use of an OBD system designed for "monofuel plus" systems to also be used as a "bifuel" system (when certain conditions are met). The amendment is basically correcting the wording of Supplement 6 to follow the intention of the changes made there.

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