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**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations****Working Party on General Safety Provisions****104<sup>th</sup> session**

Geneva, 15–19 April 2013

Items 7 and 8 of the provisional agenda

**Regulation No. 67 (Equipment for liquefied petroleum gases (LPG)) and  
Regulation No. 110 (Specific equipment for CNG)****Proposal for amendments to Regulations Nos. 67 and 110****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) to introduce into Regulations Nos. 67 and 110 type approval provisions of fuel selection systems. The modifications to the existing text of the Regulation are marked in bold characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, 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.

## I. Proposal for amendments to Regulation No. 110

*Paragraph 17.10.2., amend to read:*

"17.10.2. Vehicles with more than one fuel system shall have a fuel selection system **which shall prevent both a flow of gaseous fuel into the petrol or diesel tank and a flow of petrol or diesel into the gaseous fuel tank also in case of a fault of the fuel selection system.**"

*Insert a new paragraph 17.10.3., to read:*

"**17.10.3. The measures shall be demonstrated during the type approval.**"

*Paragraph 17.10.3. (former), renumber as paragraph 17.10.4.*

## II. Justification for amendments to Regulation No. 110

1. Mixed fuel operation can provide advantages for bi-fuel vehicles. Furthermore, running in a mixed fuel operation mode is not a safety risk. However, for safety reasons, it shall be ensured that fuel of one tank will not flow into the other tank. This proposal thereby replaces the restriction for mixed fuel operation by prohibiting the flow of gaseous fuel into the petrol or diesel tank and prohibiting the flow of petrol or diesel into the gaseous fuel tank. This shall be avoided under all temperature and pressure conditions and also in case of a single fault.

2. Regulation No. 110 regulates only safety issues. The mandatory emission requirements are part of Regulation No. 83 (e.g. with regard to mixed fuel operation).

## III. Proposal for amendments to Regulation No. 67

*Paragraphs 17.11.5. and 17.11.6., amend to read:*

"17.11.5. Vehicles with more than one fuel system shall have a fuel selection system **which shall prevent both:**

(a) **any flow of gaseous fuel into the petrol or diesel tank; and**

(b) **a flow of petrol or diesel into the LPG fuel tank which could lead to an overfilling of the LPG tank (i.e. above 80 per cent of its capacity).**

17.11.6. **The provisions of paragraph 17.11.5. shall be considered under all operating temperature and pressure conditions and also in the case of a fault of the fuel selection system, e.g. by use of redundant components, activation of limp home mode or of a malfunction indication to the driver.**"

*Insert a new paragraph 17.11.7., to read:*

"**17.11.7. The measures shall be demonstrated during the type approval.**"

## IV. Justification for amendments to Regulation No. 67

3. Mixed fuel operation can provide advantages for bi-fuel vehicles. Furthermore, running in a mixed fuel operation mode is not a safety risk. However, for safety reasons, it shall be ensured that fuel of one tank will not flow into the other tank. This proposal

thereby replaces the restriction for mixed fuel operation by prohibiting the flow of gaseous fuel into the petrol or diesel tank and prohibiting a flow of petrol or diesel into the gaseous fuel tank which could determine the overfilling of the LPG tank above the maximum degree of 80 per cent of its capacity (even by the accumulation of small flows over a longer time period). This shall be avoided under all temperature and pressure conditions and also in case of a single fault. Regulation No. 67 regulates only safety issues. The mandatory emission requirements are part of Regulation No. 83.

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