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**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations**

Working Party on General Safety Provisions

**101<sup>st</sup> session**

Geneva, 18–21 October 2011

Item 7 of the provisional agenda

**Regulation No. 67 (Equipment for liquefied petroleum gas (LPG))****Proposal for amendments to Regulation No. 67 (Equipment for liquefied petroleum gas (LPG))****Submitted by the expert from Germany\***

The text reproduced below was prepared by the expert from Germany. It supersedes informal document GRSG-100-27 distributed at the 100<sup>th</sup> session of the Working Party on General Safety Provisions (GRSG). The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted 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

*Annex 8*

*Insert a new paragraph 1.7.1., to read:*

**"1.7.1. A type-approval may be granted only for the hose assembled with the couplings (hose assembly)."**

*Paragraphs 1.7.1. (former) to 1.7.3.1., renumber as paragraphs 1.7.2. to 1.7.4.1.*

*Insert a new paragraph 2.7.1., to read:*

**"2.7.1. One single type-approval may be granted for the hose together with the couplings. Hose and couplings do not have to be assembled to the hose assembly."**

*Paragraphs 2.7.1. (former) to 2.7.3.1., renumber as paragraphs 2.7.2. to 2.7.4.1.*

*Insert a new paragraph 3.7.1., to read:*

**"3.7.1. A type-approval may be granted only for the hose assembled with the couplings (hose assembly)."**

*Paragraphs 3.7.1. (former) to 3.7.3.1., renumber as paragraphs 3.7.2. to 3.7.4.1.*

*Insert a new paragraph 4.7.1., to read:*

**"4.7.1. A type-approval may be granted only for the hose assembled with the couplings (hose assembly)."**

*Paragraphs 4.7.1. (former) to 4.7.3.1., renumber as paragraphs 4.7.2. to 4.7.4.1.*

## II. Justification

1. The new paragraphs 1.7.1., 2.7.1. and 3.7.1. refer to the valid Regulation No. 67, 01 series of amendments.
2. The current wording of Regulation No. 67 was discussed during several European Type-Approval Authorities Meeting (TAAM) on the question of what exactly constitutes a type-approval granted. There are two possibilities:
  - (a) A type-approval may only be granted for the hose assembled with couplings — that is for the hose assembly.
  - (b) A type-approval may as well be granted for the hose and the couplings belonging together but not assembled to a hose assembly.
3. It is suggested to deal with hoses of Class 2 according to paragraph 2(b) and with hoses of Class 1 according to paragraph 2(a).
4. The new paragraph 4.7.1. refers to ECE/TRANS/WP.29/GRSG/2011/14.
5. Paragraph 4.7.1. suggests dealing with high pressure synthetic hoses of Class 0 in the same way as with high pressure rubber and high pressure synthetic hoses of Class 1.
6. The modifications above aims at clarifying for what classes of hoses:

- (a) a type-approval may only be granted for a hose assembly respectively,
- (b) a type-approval may as well be granted for the hose and the couplings not assembled by the applicant.

7. It is not the goal of this proposal to regulate the procedures, checks and inspections for verifying the correct installation of hoses for instance used in retrofit systems on vehicles. The new paragraphs do not interfere with paragraph 1.3. of Supplement 4 to Regulation No. 115.

8. This proposal aims at addressing safety issues: Due to safety reasons, Regulation No. 67 describes requirements regarding gas-tightness of the linkage between hose and couplings. These requirements are stated in paragraphs 1.7.3.1., 2.7.3.1. and 3.7.2.1. of Regulation No. 67, 01 series of amendments, and in paragraph 4.7.2.1. of ECE/TRANS/WP.29/GRSG/2011/14.

9. The holder of the type-approval is responsible for the gas-tight linkage between hose and coupling.

10. Hoses of Class 2 are designed to withstand an operating pressure of 450 kPa. Due to the low pressure, the holder of a type-approval may be in the position to bear his responsibility without completing assembly himself. In this case, it is necessary that hose and couplings are covered by the same type-approval and that the process of assembly is described properly.

11. Hoses of Classes 0 and 1 are designed to withstand an operating pressure of above respectively up to 3,000 kPa. For these classes, the assembly of hose and couplings shall be carried out by the approval holder. This is deemed to be necessary to ensure compliance with the conditions described in paragraphs 1.7.3.1., 3.7.2.1. and 4.7.2.1.

12. For best convenience, the current text of the Regulation is reproduced below:

Supplement 7 to the 01 series of amendments to Regulation No. 67:

**1. HIGH PRESSURE RUBBER HOSES, CLASS 1 CLASSIFICATION, FILLING HOSE**

1.7.3. Gas-tightness

1.7.3.1. The hose assembly (hose with couplings) has to withstand during five minutes a gas pressure of 3,000 kPa without any leakage.

**2. LOW PRESSURE RUBBER HOSES, CLASS 2 CLASSIFICATION**

2.7.3. Gas-tightness

2.7.3.1. The hose assembly (hose with couplings) has to withstand during five minutes a gas pressure of 1,015 kPa without any leakage.

**3. HIGH PRESSURE SYNTHETIC HOSES, CLASS 1 CLASSIFICATION**

3.7.2. Gas-tightness

3.7.2.1. The hose assembly (hose with couplings) has to withstand, during five minutes, a gas pressure of 3,000 kPa without any leakage.

ECE/TRANS/WP.29/GRSG/2011/14 (as adopted during 100th session of GRSG) and submitted to the November 2011 session of the World Forum WP.29 on the basis of ECE/TRANS/WP.29/2011/108:

**4. High pressure synthetic hoses, Class 0 classification**

4.7.2. Gas-tightness

4.7.2.1. The hose assembly (hose with couplings) has to withstand during five minutes a gas pressure of 1.5 WP without any leakage.

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