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World Forum for Harmonization of Vehicle Regulations**Working Party on General Safety Provisions****114th session**

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Item 6(a) of the provisional agenda

Amendments to gas-fuelled vehicle**regulations – UN Regulation No. 67 (LPG vehicles)****Proposal for Supplement 16 to the 01 series of amendments to UN Regulation No. 67 (LPG vehicles)****Submitted by the expert from the International Organization of Motor Vehicle Manufacturers ***

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA) to amend the ageing test of UN Regulation No. 67 on Liquefied Petroleum Gas (LPG) vehicles as a counter proposal to document ECE/TRANS/WP.29/GRSG/2017/16 from Germany. It is based on informal document GRSG-113-18, presented at the 113th session of the Working Party on General Safety Provisions (GRSG) (see report ECE/TRANS/WP.29/GRSG/92, para. 29). The modifications to the current text of UN Regulation No. 67 are marked in bold characters.

* In accordance with the programme of work of the Inland Transport Committee for 2014–2018 (ECE/TRANS/240, para. 105 and ECE/TRANS/2014/26, cluster 02.4), the World Forum will develop, harmonize and update UN regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



I. Proposal

Paragraph 17.1.6., insert new paragraph 17.1.6.1., to read:

- "17.1.6. The LPG system shall be installed so that it has the best possible protection against damage, such as damage due to moving vehicle components, collision, grit or due to the loading or unloading of the vehicle or the shifting of those loads.
- 17.1.6.1. Notwithstanding the provisions of paragraph 17.1.6., sufficient access to the LPG-container and its accessories, when located outside the vehicle, shall be ensured for visual (periodical) inspection, without the necessity to disassemble any component or part of the protective housing."**

Insert new paragraphs 22.6. to 22.12., to read:

- "22.6. As from the official date of entry into force of the 02 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept UN type-approvals under this Regulation as amended by the 02 series of amendments.**
- 22.7. As from 1 September 2019, Contracting Parties applying this Regulation shall not be obliged to accept UN type-approvals to the preceding series of amendments, first issued after 1 September [2019].**
- 22.8. Until 1 September 2020, Contracting Parties applying this Regulation shall accept UN type-approvals to the preceding series of amendments, first issued before 1 September [2019].**
- 22.9. As from 1 September 2020, Contracting Parties applying this Regulation shall not be obliged to accept type-approvals issued to the preceding series of amendments to this Regulation.**
- 22.10. Notwithstanding paragraph 22.9., Contracting Parties applying the Regulation shall continue to accept UN type-approvals of the equipment/parts issued according to the preceding series of amendments to the UN Regulation.**
- 22.11. Notwithstanding paragraph 22.9., Contracting Parties applying the UN Regulation shall continue to accept UN type-approvals issued according to the preceding series of amendments to the UN Regulation, for the vehicles/vehicle systems which are not affected by the changes introduced by the 02 series of amendments.**
- 22.12. Contracting Parties applying this Regulation shall not refuse to grant UN type-approvals according to any preceding series of amendments to this Regulation or extensions thereof."**

Annex 15, paragraphs 11.1. and 11.2., amend to read:

- "11.1. A synthetic ... loss of weight.
Resistance to n-pentane according to ISO 1817 with the following conditions:
- (a) medium: n-pentane
 - (b) temperature: [23] °C (tolerance acc. to ISO 1817)
 - (c) immersion period: [350] hours
- 11.2. Requirements:
Maximum change in volume [20] per cent
After storage in air with a temperature of [40] °C for a period of [48] hours the mass compared to the original value may not decrease more than [5] per cent."

II. Justification

1. Ad paragraph 17.1.6.1.: The constraint of having visual access 'without the necessity to disassemble any component or part of protective housing' is not justified in the case where the container is located inside the vehicle, out of reach of most typical aggressions that cause corrosion. This implantation case did not result in any field issues, so it should be encouraged and not bear additional constraints.
2. Ad paragraphs 22.6. to 22.12.: As the proposal introduces new requirements, transitional provisions are needed. The proposed transitional provisions will allow the time to demonstrate reliability for the current production. A technology ban could need a full redesign, and so longer transitional provisions, associated with a reduced volume of available LPG-equipped vehicle production and, thus, a reduced range and attractiveness for LPG powered products.
3. Ad Annex 15, paragraph 11.: At the 112th session of GRSG, Germany raised a concern about the possible impact of the ageing of material in contact with LPG (see GRSG-112-31). It has been understood that the testing procedure that existed since at least Revision 2 of UN Regulation No. 67 (2006) was no longer considered as sufficient as a rubber hose complying with the Regulation was at the origin of the problem.
4. In order to keep the UN Regulation in line with the performance oriented guidelines of the World Forum WP.29 and to improve the situation as soon as possible, the experts from International Organization of Motor Vehicle Manufacturers (OICA) and the European Association of Automotive Suppliers (CLEPA) propose a review of this testing procedure rather than a complete ban that includes technologies which were not involved in the incident. Some current production vehicles may already use good quality non-metallic material, allowing an optimized tank capacity that cannot be achieved with a metallic hose, and they have no field concern.