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Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations**Working Party on General Safety Provisions****124th session**

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Item 6 (b) of the provisional agenda

Amendments to Regulations on Gas-Fuelled Vehicles:**UN Regulation No. 110 (Compressed Natural Gas and Liquefied Natural Gas vehicles)****Proposal for Supplement 1 to the 05 of Amendments to UN Regulation No. 110 (Compressed Natural Gas and Liquefied Natural Gas vehicles)****Submitted by the expert from Natural and Bio Gas Vehicle Association Europe ***

The text reproduced below was prepared by the Task Force on UN Regulation No 110, aiming to introduce the minimum opening set pressure of the primary Liquid Natural Gas relief valve. This document supersedes the informal document GRSG 123-24 distributed at the 123rd session of the Working Party on General Safety (GRSG). The modifications to the current text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2022 as outlined in the proposed programme budget for 2022 (A/76/6, part V, sect. 20, para. 20.76), 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

Insert new paragraph 18.6.3.1., to read:

"18.6.3.1. The primary relief valve shall have a minimum opening set pressure of 1.5MPa. This value shall take into account all applicable tolerances declared by the manufacturer."

Annex 3B, paragraph 1., amend to read:

"1. Scope
...
Service conditions to which the tanks will be subjected are detailed in paragraph 2. below.
..."

II. Justification

1. The current text of UN Regulation No. 110 defines the working pressure for an LNG tank to be the primary relief valve setting (paragraph 4.4.), without stating a minimum value of the said relief valve. If a vehicle has an on-board tank with a primary relief valve that opens at a lower pressure than that at which the filling station is set to stop, the primary relief valve will open during refueling and this is an obvious safety risk.
 2. Therefore it is important to state this minimum set pressure for the primary LNG relief valve, taking into account the applicable tolerance on the opening pressure. A new provision is inserted as a subparagraph of paragraph 18.6.3., which currently defines the requirements of the primary relief valve for LNG systems. The proposed value is determined after inspection of existing device on the market.
 3. In addition, a small editorial error is fixed in paragraph 1 of Annex 3B. The correct reference to service conditions is to paragraph 2 of the same annex.
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