Proposal for supplement 3 to the 04 series of amendments to UN Regulation No. 110 (CNG and LNG vehicles)

Submitted by the Working Party on General Safety Provisions *

The text reproduced below was adopted by the Working Party on General Safety Provisions at its 121st session, held in April 2021 (ECE/TRANS/WP.29/GRSG/100, para. 70). It is based on ECE/TRANS/WP.29/GRSG/2021/10 as amended by GRSG-121-22 and in session. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and the Administrative Committee of the 1958 Agreement (AC.1) for consideration and vote at their November 2021 sessions.

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* In accordance with the programme of work of the Inland Transport Committee for 2021 as outlined in proposed programme budget for 2021 (A/75/6 (part V sect. 20) para 20.51), 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.
Paragraph 4.21., amend to read:

"4.21. "Excess flow valve" (excess flow limiting device) means a device that automatically shuts off, or limits, the gas or liquid flow when the flow exceeds a set design value.

4.21.1. "Pressure-equalization type excess flow valve" means an excess flow valve which automatically resets when the excess flow condition is no longer present.

4.21.2. "Shut-off type excess flow valve" means an excess flow valve that stops flow when in the closed position, which has to be reset by manual operation."

Paragraph 18.5.3.1., amend to read:

"18.5.3.1. The excess flow limiting device shall be fitted in the CNG fuel container(s) on/in the neck and on each CNG accumulator valve."

Insert a new paragraph 18.5.3.2., to read:

"18.5.3.2. If the excess flow valve installed in the container is of a shut-off type per paragraph 18.5.1.1., any cover preventing access to the device to reset the excess flow valve (e.g. the manual valve) shall be removable without the use of tools or other equipment so that the device is accessible and operable."

Annex 4A

Paragraph 5.4., amend to read:

"5.4. The pressure-equalization type excess flow valve shall be designed with a bypass to allow for equalization pressures.

The shut-off type excess flow valve shall have a device to reset actuation manually. For example, the actuation of such shut-off type excess flow valve can be cancelled by operating the manual valve."

Paragraph 5.6., amend to read:

"5.6. When the pressure-equalization type excess flow valve is at cut-off position, the by-pass flow through the valve shall not exceed 0.05 normal m³/minute at a differential pressure of 10,000 kPa.

When the shut-off type excess flow valve is at cut-off position, the amount of leakage from the valve shall not exceed 2.5x10⁻⁷ normal m³/minute during operation."