

UN Regulation No. 110 – CNG/LNG vehicles

(This document supersedes informal document GRSG-105-10)

I. Proposal

Regulation No. 110, to be amended as follows:

Replace paragraph 17.5.2. and 17.5.2.1. by:

17.5.2. Pressure relief device

17.5.2.1. The CNG gas discharge from pressure relief device (temperature triggered) shall not be directed:

- (a) towards exposed electrical terminals, exposed electrical switches or other ignition sources;**
- (b) into or towards the vehicle passenger or luggage compartments;**
- (c) towards any class 0 component;**
- (d) forward from the vehicle, or horizontally from the back or sides of the vehicle.**

17.5.2.2. In case the container(s) is (are) fitted inside the vehicle the pressure relief device (temperature triggered) shall, in addition to the provisions of paragraph 15.5.2.1., be fitted to the fuel container(s) in such a manner that it can discharge the CNG into an atmospheric outlet that vents outside the vehicle."

II. Justification

The existing provisions for buses and coaches are focusing on a rapid evacuation of the vehicle in cases of emergency. A fire accident in the Netherlands however showed that nevertheless a serious risk remains for other road users and the surroundings of the vehicle. In the accident concerned the pressure relief device produced a horizontal jet flame during several minutes which could have serious consequences for other road users and the area around the vehicle. The experts from the Netherlands considers it necessary to regulate the direction of discharging the pressure relief devices of the CNG containers. The limitation of discharging direction of CNG containers, as proposed above for paragraph 17.5.2.1., is based on existing provisions within Regulation (EU) No. 79/2009 on hydrogen vehicles.

In addition, the current text of paragraph 17.5.2.1. requires that the PRD discharges in the gas tight housing. Therefore, the experts from the Netherlands believe that the gas tight housing is not appropriate for CNG vehicles and should be amended by another provision dealing with the situation where the container is fitted inside the vehicle.

These measures should focus on new type approval of vehicles; retrofitting is regarded to belong to the national responsibility of the countries.

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