

## **Proposal for supplement 4 to UN Regulation No. 134 (Hydrogen and Fuel Cell Vehicles)**

### **Submitted by the expert from the Netherlands**

The text reproduced below was prepared by the expert from the Netherlands, aiming to achieve an identification of hydrogen-fuelled buses which is consistent with already existing regulated identification for LPG-, CNG- and LNG-fuelled busses. The modifications to the current text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

### **I. Proposal**

*Paragraph 7.1.1.2. shall be deleted.*

*Paragraphs 7.1.1.3. and 7.1.1.4. shall be renumbered as paragraphs 7.1.1.2. and 7.1.1.3.*

*Insert a new paragraph 7.1.7. to read:*

**"7.1.7. Identification of hydrogen fuelled vehicles.**

**7.1.7.1. On vehicles of the categories M2 and M3, equipped with a compressed hydrogen system, labels shall be installed as specified in Annex 6**

**7.1.7.2. These labels shall be installed on the front and rear of the vehicle and on the outside of the doors on the right-hand side (left hand drive vehicles) and left hand side (right-hand drive vehicles).**

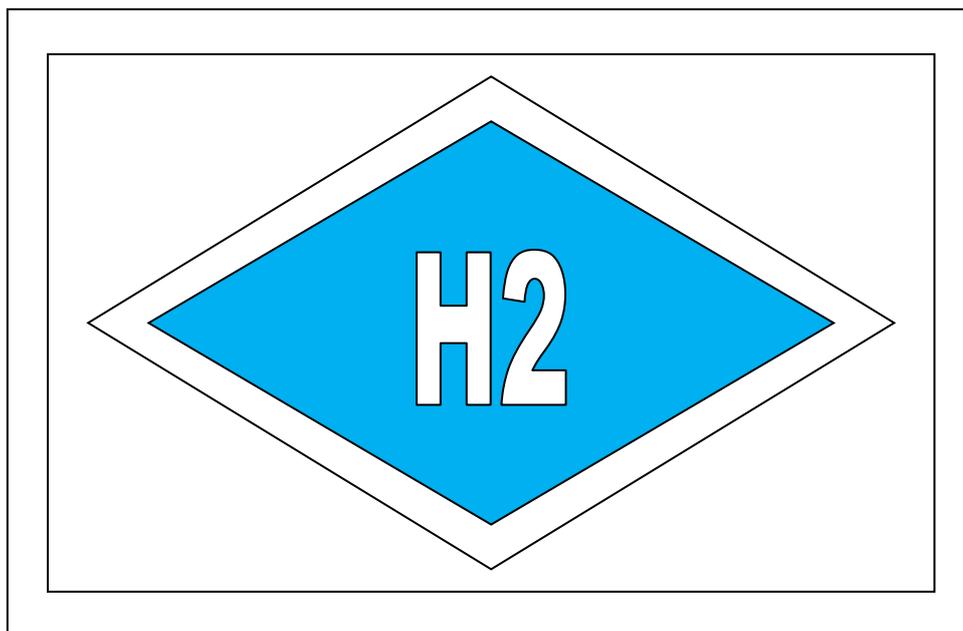
**7.1.7.3. A label shall be placed adjacent to the H2 fill receptacle; for instance inside a refilling hatch, showing the following information: fuel type (using label shape and zones, colour definitions and pictogram as designated in Annex 6, MFP, NWP, date of removal from service of containers."**

*Introduce a new Annex 6 to read:*

### **"Annex 6**

#### **Provisions for a label for compressed hydrogen vehicle of categories M<sub>2</sub> and M<sub>3</sub>.**

(Paragraph 7.1.7.1 and 7.1.7.3. of this Regulation)



The label consists of a sticker which shall be weather resistant.

The colour and dimensions of the sticker shall fulfil the following requirements:

Colours:

Background:	Light-blue
Border:	white or white reflecting
Letters:	white or white reflecting

Dimensions:

Border width:	4 - 6 mm
Character height:	≥ 25 mm
Character thickness:	≥ 4 mm
Sticker width:	110 - 150 mm
Sticker height:	80 - 110 mm

The Characters “H2” must be centred in the middle of the sticker.”

## II. Justification

1. Provisions for identification of Gaseous and Liquefied fuels have been laid down in UN Regulations for LPG-fuelled M2 and M3 vehicles (UN Reg.67, par.17.1.8., including Annex 16 for details), and CNG/LNG-fuelled M2 and M3 vehicles (UN Reg.110, par.18.1.8., including Annex 6 and 7 for details).
2. The background for the additional labelling is to help emergency services to determine the approach of these vehicles in case of a fire; in particular where busses are parked overnight in depots. [In fire conditions it may be decided to cool the tanks or cylinders to prevent the activation of the TPRD's or if the fire is progressed beyond this stage to take measures to mitigate the effects of a flare or explosion. Compressed and liquefied gases behave differently in fire conditions.].
3. For the installation of labels this proposal seeks consistency with UN Reg.67 and UN Reg.110.

4. However with regard to the appearance of the labels themselves, it has been brought to our attention by CTIF that recently an International Standard **ISO 17840-4, Part 4 Propulsion energy identification**, has been published (CTIF, historic French abbreviation for “*Comité Technique International de prevention et d'extinction de Feu*”).
  5. For the appearance of the label, this proposal seeks consistency with the above mentioned ISO standard.
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