



# Labelling Proposal ECE R134 Hydrogen vehicles GRSP December 2019 session

*From the Expert of the Netherlands*

*9 December 2019*

# Our aim

- To bring ECE R134 in line with ECE R67 and ECE R110 with regard to labelling requirements
- To help emergency services to determine the approach of these vehicles in case of fire

# ECE R67.02

ANNEX 17 - PROVISIONS REGARDING LPG IDENTIFICATION MARK FOR M<sub>2</sub> AND M<sub>3</sub> CATEGORY VEHICLES [R67.01s1587]



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

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

Colours:

Background : green  
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 word "LPG" must be centred in the middle of the sticker.

- 17.1.8. Identification of LPG-fuelled M<sub>2</sub> and M<sub>3</sub> category vehicles.
- 17.1.8.1. Vehicles of category M<sub>2</sub> and M<sub>3</sub> shall carry a plate as specified in Annex 17 to this Regulation.
- 17.1.8.2. The plate shall be installed on the front and rear of the M<sub>2</sub> or M<sub>3</sub> category vehicle and on the outside of the doors on the left-hand side for the right hand drive vehicles and on the right-hand side for the left hand drive vehicles.

# ECE R110.04

## 18.1.8. Identification of CNG- and/or LNG fuelled vehicles

- 18.1.8.1. Vehicles of categories M<sub>2</sub> and M<sub>3</sub> equipped with a CNG system shall be labelled as specified in Annex 6.
- 18.1.8.2. Vehicles of categories M<sub>2</sub> and M<sub>3</sub> equipped with a LNG system shall be labelled as specified in Annex 7.
- 18.1.8.3. The label shall be installed on the front and rear of the vehicle of category M<sub>2</sub> or M<sub>3</sub> and on the outside of the doors on the right-hand side (left hand drive vehicles), left-hand side (right hand drive vehicles).
- 18.1.8.4. A label shall be placed adjacent to the CNG and/or LNG fill receptacle stating the fuelling requirements with the following data:
  - (a) The marking "CNG" and/or "LNG";
  - (b) Working pressure [MPa].
- The fuelling requirements shall be as recommended by the manufacturer:

# ECE R110.04

## Annex 6 – Provisions on CNG identification mark for vehicles of categories M<sub>2</sub> and M<sub>3</sub>, N<sub>2</sub> and N<sub>3</sub>

(Paragraph 18.1.8.1. of this Regulation)

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



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

Colours:

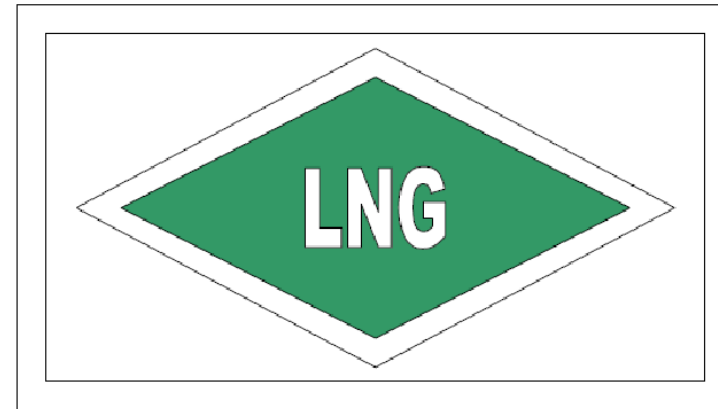
Background:	green
Border:	white or white reflecting
Letters:	white or white reflecting

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 word "CNG" shall be centred in the middle of the sticker

## Annex 7 – Provisions on LNG identification marks for vehicles of categories M<sub>2</sub> and M<sub>3</sub>, N<sub>2</sub> and N<sub>3</sub>



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

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

Colours:

Background:	green
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 word "LNG" shall be centred in the middle of the sticker.

# Conclusion

- So far, proposal to bring ECE R134 in line with ECE R67 and ECE R110 will not lead to discussions

## BUT....

- Due to evolving technology, labels have evolved as well

## AND...

- Both EuroNCAP and CTIF (*Comité Technique International de prevention et d'extinction de Feu*) promote the use of labels in line with ISO 17840.

# Proposal working document May 2020 session GRSP



Example of label for Fuel Cell Electric Vehicle container holding compressed gas which is lighter than air

- ISO 17840-4:2018 has introduced updated labels with added characteristics to indicate:
  - the first and second energy source:  
*e.g. Hydrogen and Electric High Voltage*
  - Gas behaviour due to density  
*e.g. lighter or heavier than air*
  - state of aggregation of stored gaseous fuel:  
*e.g. liquid, compressed or cryogenic*
- Proposal for next meeting, working document which refers to ISO 17840-4:2018.
- Label would also be useful for N2/N3 category vehicles
- Suggestion to update informal document GRSP-66-... by applying label requirements to M2/M3, N2/N3 vehicles

# Thank you for your attention

□ Questions or Comments ?

n.b. RDW is willing to prepare a proposal to update ECE R67 and ECE R110 under GRSG

