Labelling Proposal ECE R134
Hydrogen vehicles
GRSP December 2019 session

From the Expert of the Netherlands
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
17.1.8. Identification of LPG-fuelled M₂ and M₃ category vehicles.

17.1.8.1. Vehicles of category M₂ and M₃ 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 M₂ or M₃ 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.

The sign consists of a sticker which shall be weather resistant. The colour and dimensions of the sticker shall fulfil the following requirements:

- **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**: 90 - 110 mm

The word "LPG" must be centred in the middle of the sticker.
ECE R110.04

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

- **18.1.8.1.** Vehicles of categories M₂ and M₃ equipped with a CNG system shall be labelled as specified in Annex 6.

- **18.1.8.2.** Vehicles of categories M₂ and M₃ 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 M₂ or M₃ 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.
Annex 6 – Provisions on CNG identification mark for vehicles of categories M₁ and M₂, N₁ and N₂

(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 fulfill the following requirements:

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<td>Background:</td>
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<td>4 - 6 mm</td>
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<tr>
<td>Character height:</td>
<td>≥ 25 mm</td>
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<tr>
<td>Character thickness:</td>
<td>≥ 4 mm</td>
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<tr>
<td>Sticker width:</td>
<td>110 - 160 mm</td>
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<tr>
<td>Sticker height:</td>
<td>80 - 110 mm</td>
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The word "CNG" shall be centred in the middle of the sticker.

Annex 7 – Provisions on LNG identification marks for vehicles of categories M₁ and M₂, N₁ and N₂

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

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

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<td>Sticker height:</td>
<td>80 - 110 mm</td>
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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

- 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