



Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on General Safety Provisions****121st session**

Geneva, 12-16 April 2021

Item 8 (b) of the provisional agenda

Amendments to gas-fuelled vehicle regulations**UN Regulation No. 110 (CNG and LNG vehicles)****Proposal for the 05 series of amendments to
Regulation No. 110 (CNG and LNG Vehicles)****Submitted by the expert from the Netherlands ***

The text reproduced below was prepared by the expert from the Netherlands, aiming to update the existing requirements on identification of LPG-fuelled buses and to introduce similar identification requirements for trucks. The modifications to the current text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

* 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 (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

I. Proposal

Paragraph 7.2., amend to read:

"7.2. An approval number shall be assigned to each type of component or multifunctional component **approved in accordance with Schedule 4 of the Agreement (E/ECE/TRANS/505/Rev.3)**. ~~Its first two digits (at present 02 corresponding to the 02 series of amendments shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party shall not assign the same alphanumeric code to another type of component"~~

Paragraph 17.2., amend to read:

"17.2. An approval number shall be assigned to each type of vehicle **approved in accordance with Schedule 4 of the Agreement (E/ECE/TRANS/505/Rev.3)**. ~~Its first two digits shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval."~~

Paragraphs 18.1.8. to 18.1.8.3., amend to read:

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

18.1.8.1. Vehicles of categories M₂/N₂ and M₃/N₃ equipped with a CNG system shall be labelled as specified in Annex 6.

18.1.8.2. Vehicles of categories M₂/N₃ and M₃/N₃ equipped with a LNG system shall be labelled as specified in Annex 7.

18.1.8.3. **These labels shall be placed on the front of the vehicle and on the left side as well as on the right side of the vehicle; for the side if available in vicinity of a front door. If there is no front door available, the label has to be placed on the first third of the vehicle length. In addition, for vehicles of category M₂ and M₃, a label shall be fixed to the rear of the vehicle."**

These labels shall be placed on the front of the vehicle and on the left side as well as on the right side of the vehicle; for the side if available in vicinity of a front door. If there is no front door available, the label has to be placed on the first third of the vehicle length.

In addition, for vehicles of category M₂ and M₃, a label shall be fixed to the rear of the vehicle."

~~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)."~~

Insert new paragraphs 24.26. to 24.30., to read:

"24.26. As from the official date of entry into force of the 05 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 05 series of amendments.

24.27. As from [1 September 2023], Contracting Parties applying this Regulation shall not be obliged to accept type approvals to the preceding series of amendments, first issued after [1 September 2023].

24.28. Until [1 September 2025], Contracting Parties applying this Regulation shall accept type approvals to the preceding series of amendments, first issued before [1 September 2023].

- 24.29. As from [1 September 2025], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series of amendments to this Regulation
- 24.30. Notwithstanding paragraph 22.29. above, Contracting Parties applying the UN Regulation shall continue to accept UN type-approvals issued according to the preceding series of amendments to the UN Regulation, for the vehicles / vehicle systems / vehicle components which are not affected by the changes introduced by the 05 series of amendments"

Annex 6 amend to read:

"Annex 6

Provisions on CNG identification marks for vehicles of categories M₂/N₂ and M₃/N₃.

(Paragraph 18.1.8. of this Regulation)



The label shall be weather resistant.

The centre zone indicates the first energy source

The upper zone indicates the second energy source

The left zone indicates the gas behaviour due to density

The right zone indicates the state of aggregation of stored gaseous fuel

Layout and symbols shall be in accordance with ISO 17840-4:2018

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

Colours:

Background:	Green, RGB code 0, 176, 80
Border:	white reflecting
Letters and symbols:	white reflecting

Dimensions:

Sticker width:	≥ 110 mm
Sticker height:	≥ 80 mm "

Annex 7 amend to read:

"Annex 7

Provisions on LNG identification marks for vehicles of categories M₂/N₂ and M₃/N₃.

(Paragraph 18.1.8. of this Regulation)



The label shall be weather resistant.

The centre zone indicates the first energy source

The upper zone indicates the second energy source

The left zone indicates the gas behaviour due to density

The right zone indicates the state of aggregation of stored gaseous fuel

Layout and symbols shall be in accordance with ISO 17840-4:2018

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

Colours:

Background:	white
Border:	Green reflecting, RGB code 0, 176, 80
Letters and symbols:	Green reflecting, RGB code 0, 176, 80

Dimensions:

Sticker width:	≥ 110 mm
Sticker height:	≥ 80 mm "

II. Justification

1. Provisions for identification of Gaseous and Liquified fuels have been laid down in UN Regulations for LPG-fuelled M₂ and M₃ vehicles only (UN Regulation No. 67, par.17.1.8., including Annex 16 for details), CNG/LNG-fuelled M₂ and M₃ vehicles only

(UN Regulation No. 110, par.18.1.8., including Annex 6 and 7 for details) and Hydrogen vehicles (UN Regulation No. 134, par. 7.1.7. including Annex 6 for details)

2. The background for the updated labelling is to help emergency services to determine the approach of these vehicles in case of a fire. (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. Extension of the scope to N₂/N₃ vehicles is necessary due to the wide variety of these vehicles nowadays, whereas in the past, they were usually equipped with a diesel powered driveline.
 4. For the installation of labels this proposal seeks consistency with UN Regulation No. 134.
 5. CTIF recommends to use symbols which are in line with International Standard ISO 17840-4, Part 4 Propulsion energy identification. (CTIF, historic French abbreviation for "Comité Technique International de prevention et d'extinction de Feu").
 6. For the appearance of the label, this proposal seeks consistency with the above mentioned ISO standard.
 7. Location of stickers based upon recommendations from CTIF.
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