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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****158th session**

Geneva, 13-16 November 2012

Item 4.8.7 of the provisional agenda

**1958 Agreement – Consideration of draft amendments
to existing Regulations submitted by GRSG****Proposal for the 01 series of amendments to Regulation
No. 110 (CNG equipment)****Submitted by the Working Party on General Safety Provisions***

The text reproduced below was adopted by the Working Party on General Safety Provisions (GRSG) at its 102nd session to clarify the general test provisions in the Regulation, mainly those on fuel rail. It is based on document ECE/TRANS/WP.29/GRSG/2012/9, as amended by Annex VII to the report (ECE/TRANS/WP.29/GRSG/81, Para 24). It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration.

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, programme activity 02.4), the World Forum will develop, harmonize and update regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

Paragraph 2.2., insert a new item (w) to read:

- "2.2. ...
 (v) pressure relief device (PRD) (pressure triggered),
 (w) fuel rail."

Insert a new paragraph 2.28., to read:

"2.28. "Fuel rail" means the pipe or duct that connects the fuel injection devices."

Paragraphs 6.4. to 6.11., amend the table to read:

"

Paragraph	Component	Annex
...
6.9.	Filling unit or receptacle	4F
6.10.	Gas flow adjuster and gas/air mixer, injector or fuel rail	4G
6.11.	Electronic control unit	4H

"

Insert a new paragraph 17.3.2.7., to read:

"17.3.2.7. Fuel rail."

Insert new paragraphs 23. to 23.6., to read:

- "23. Transitional Provisions
- 23.1. As from the official date of entry into force of the 01 series of amendments to this Regulation, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approval under this Regulation as amended by the 01 series of amendments.
- 23.2. As from 12 months after the date of entry into force of the 01 series of amendments to this Regulation, Contracting Parties applying this Regulation shall grant approvals only if the type of components to be approved meets the requirements of Part I of this Regulation as amended by the 01 series of amendments to this Regulation.
- 23.3. As from 18 months after the date of entry into force of the 01 series of amendments to this Regulation, Contracting Parties applying this Regulation shall grant approvals only if the vehicle type to be approved meets the requirements of Part II of this Regulation as amended by the 01 series of amendments to this Regulation.
- 23.4. Until 12 months after the date of entry into force of the 01 series of amendments to this Regulation, Contracting Parties applying this Regulation can continue to grant type-approvals for the type of components to the original version of this Regulation without taking into account the provisions of the 01 series of amendments.
- 23.5. Until 18 months after the date of entry into force of the 01 series of amendments to this Regulation, Contracting Parties applying this Regulation can continue to grant type-approvals for the vehicle type to the original version of this Regulation without taking into account the provisions of the 01 series of amendments.

23.6. Notwithstanding the provisions of paragraphs 23.4. and 23.5., Contracting Parties applying this Regulation shall not refuse to grant extensions of type-approvals for existing types of component or vehicle types which have been issued according to this Regulation without taking into account the provisions of the 01 series of amendments to this Regulation."

Annex 1A, insert new items 1.2.4.5.17. to 1.2.4.5.17.6., to read:

- "1.2.4.5.17. Fuel rail: yes/no ¹
- 1.2.4.5.17.1. Make(s):
- 1.2.4.5.17.2. Type(s):
- 1.2.4.5.17.3. Description:
- 1.2.4.5.17.4. Working pressure: ²kPa
- 1.2.4.5.17.5. Material:
- 1.2.4.5.17.6. Operating temperatures: ² °C"

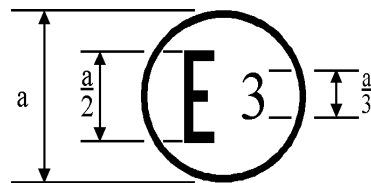
Annex 1B, insert new items 1.2.4.5.17. to 1.2.4.5.17.5., to read:

- "1.2.4.5.17. Fuel rail: yes/no ¹
- 1.2.4.5.17.1. Make(s):
- 1.2.4.5.17.2. Type(s):
- 1.2.4.5.17.3. Working pressure: ²kPa
- 1.2.4.5.17.4. Material:
- 1.2.4.5.17.5. Operating temperatures: ² °C"

Items 1.2.4.5.17. to 1.2.4.5.17.5. (former), renumber as items 1.2.4.5.18. to 1.2.4.5.18.5.

Annex 2A, the figure and the text below the figure, amend to read:

"



110 R—012439

a ≥ 8 mm

The above approval mark affixed to the CNG component shows that this component has been approved in Italy (E3), pursuant to Regulation No. 110 under approval number 012439. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 110 as amended by the 01 series of amendments."

Annex 2B, item 1., amend to read:

"1. CNG component considered:

....

PRD (pressure triggered) ²

Fuel rail ^{2a}

Annex 2B, Addendum, insert new items 1.20. to 1.20.2., to read:

"1.20. Fuel rail(s)

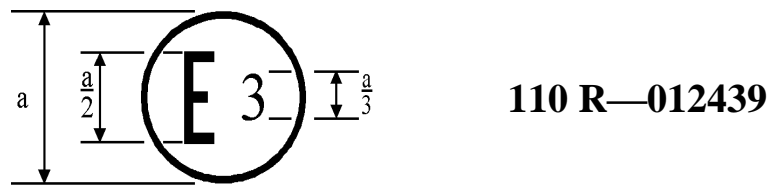
1.20.1. Working pressure(s): ²MPa

1.20.2. Material:"

Annex 2C, models A and B, the figure and the text below the figure, amend to read:

"Model A

(See paragraph 16.2. of this Regulation)

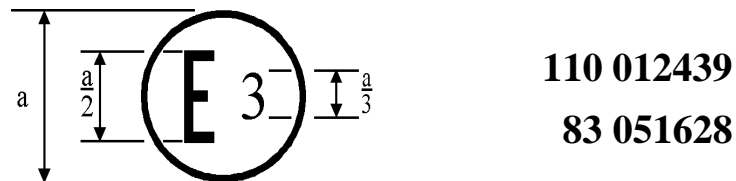


$a \geq 8 \text{ mm}$

The above approval mark affixed to a vehicle shows that the vehicle has, with regard to the installation of CNG system for the use of CNG for propulsion, been approved in Italy (E3), pursuant to Regulation No. 110 under approval number 012439. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 110 as amended by the 01 series of amendments.

Model B

(See paragraph 16.2. of this Regulation)



$a \geq 8 \text{ mm}$

The above approval mark affixed to a vehicle shows that the vehicle has, with regard to the installation of CNG system for the use of CNG for propulsion, been approved in Italy (E3), pursuant to Regulation No. 110 under approval number 012439. The first two digits of the approval number indicate that at the date the approval was granted in accordance with the requirements of Regulation No. 110 as amended by the 01 series of amendments and that Regulation No. 83 included the 05 series of amendments."

Annex 4G, amend to read:

"Provisions regarding the approval of gas flow adjuster and gas/air mixer, gas injector or fuel rail

1. The purpose of this annex is to determine the provisions regarding the approval of the gas flow adjuster and gas/air mixer, gas injector or fuel rail.
 2. Gas/air mixer, gas injector or fuel rail.
 - 2.1. The material constituting the gas/air mixer, gas injector or fuel rail which is in contact with CNG shall be compatible with the CNG. In order to verify this compatibility, the procedure specified in Annex 5D shall be used.
 - 2.2. The gas/air mixer, gas injector or fuel rail shall conform to the requirements of Class 1 or 2 components, according to their Classification.
 - 2.3. Test pressures
 - 2.3.1. The gas/air mixer, gas injector or fuel rail of Class 2 shall withstand a pressure twice the working pressure.
 - 2.3.1.1. The gas/air mixer, gas injector or fuel rail of Class 2 shall be free from leakage at a pressure twice the working pressure.
 - 2.3.2. The gas/air mixer, gas injector or fuel rail of Class 1 and Class 2 shall be so designed to operate at temperatures as specified in Annex 5O.
 - 2.4."
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