

Corrigendum to draft Supplement 1 to the 01 series of amendments to Regulation No. 110 on CNG/LNG vehicles (ECE/TRANS/WP.29/2013/101)

Note: This informal document aims at correcting and clarifying the draft amendments to Regulation No. 110 as proposed in ECE/TRANS/WP.29/2013/101. At its November 2013 session, the World Forum WP.29 is expected to consider and adopt draft Supplement 1 to the 01 series of amendments to Regulation No. 110, inserting new provisions for motor vehicles using Liquefied Natural Gas (LNG) in their propulsion system. During its October 2013 session, GRSG agreed on the following amendments to ECE/TRANS/WP.29/2013/101:

Page 12, definitions 4.70. to 4.76., renumber as definitions 4.68. to 4.74.

Page 13, paragraph 5.3.1. (including footnote ¹⁰), amend the footnote ¹⁰ to read:

"¹⁰ [n] stands for the sample size and shall be determined by the Type Approval Authority."

Page 16, paragraph 8.13.1., amend to read:

"8.13.1. The LNG tank shall be equipped at least with the following components, which may be either separate or combined (**special care shall be taken to prevent LNG trapping**):"

Page 16, insert a new paragraph 8.13.1.3., to read:

"8.13.1.3. Automatic valve;"

Page 16, paragraph 8.13.1.3. (former), renumber as paragraph 8.13.1.4.

Page 16, paragraph 8.13.3., correct to read:

"8.13.3. The components mentioned in paragraphs 8.13.1.1. to 8.13.1.4. (above) shall be type approved pursuant to the provisions laid down in Annex 4 to this Regulation."

Page 24, insert new paragraphs 18.6.1. to 18.6.1.2., to read¹:

"18.6.1. Automatic valve

18.6.1.1. An automatic valve shall be installed in the fuel supply line, directly on every LNG tank (in a protected position).

18.6.1.2. The automatic valve shall be operated such that the fuel supply is cut off when the engine is switched off, irrespective of the position of the ignition switch, and shall remain closed while the engine is not running. A delay of 2 seconds is permitted for diagnostic."

Page 24, paragraphs 18.6.1. to 18.6.3. (former), renumber as paragraphs 18.6.2. to 18.6.4.

Page 25, paragraph 18.6.4. (former), renumber as paragraph 18.6.5. and amend to read:

"18.6.5. Manual fuel shut off valve

The manual fuel shut off valve shall be mounted directly on the LNG tank (in a protected position). It should be readily accessible. **The manual fuel shut off valve can be integrated into the automatic valve."**

Page 25, paragraphs 18.6.5. to 18.6.7. (former), renumber as paragraphs 18.6.6. to 18.6.8.

Page 26, paragraph 18.10.3., correct the reference to "Annex 4F1" to read "Annex 4F".

Page 28, insert a new paragraph 24.3., to read:

"24.3. Type approvals of components other than fuel rail, as defined in paragraph 4.74., granted according to the original version of this Regulation, shall remain valid and shall be accepted for the purpose of their installation on vehicles."

Page 28, paragraphs 24.3. to 24.5. (former), renumber as paragraphs 24.4. to 24.6.

¹ Note by the secretariat: The proposal of this text is based on ECE/TRANS/WP.29/GRSG/2013/28. The French translation of paragraph 18.6.1.1. of this document has to be aligned especially with respect to the wording "in the fuel supply".

Page 28, paragraph 24.6. (former), renumber the as paragraph 24.7. and amend the references to paragraphs 24.4. and 24.5. to read paragraphs 24.5. and 24.6.

Pages 40 and 41, Annex 1B, items 1.2.4.5.18. to 1.2.4.5.29.2., correct the footnote ¹ (former) to read footnote ² and footnote ² (former) to read footnote ¹.

Page 48, Annex 2B - Addendum, paragraphs 1.22.2., 1.23.2., 1.24.2., 1.25.2., 1.26.2., 1.27.2., 1.28.2., 1.29.2., 1.30.2. and 1.31.2., correct the wording "Working pressure(s)!" to read "**Material:**".

Page 53, Annex 3A, paragraphs 2. and 3., correct the references to "page 6" and "page 12" to read "page **2**" and "page **7**" respectively.

Page 68, Annex 3A, Table 6.7, first column, tenth row, correct the wording "Working pressure change \leq 20 per cent" to read "Working pressure change \leq 20 per cent [@]" (inserting a reference to note @).

Page 86, paragraphs A.22. to A.24., correct the references (3 times) to "Annex 3" to read "Annex **3A**".

Page 91, the numbering of the annex, correct "Annex 3 – Appendix D" to read "Annex **3A** – Appendix D".

Page 96, Annex 3A – Appendix F, the note to paragraph F.2.2., correct the figure "36 MPa" to read "**26** MPa".

Page 103, Annex 3A – Appendix H, paragraph H.6.(a), correct to read:

"(a) Pressure cycle

As defined in the test sequence, cylinder shall be hydraulically pressure cycled between not **less** than 2 MPa and not **more** than 26 MPa. The total cycle shall be

Page 109, Annex 3B, paragraph 4.1., correct to read (re-inserting paragraph numbering 4.2.):

"4.1. General

The design of tanks shall cover all relevant aspects that are necessary to ensure that every tank produced according to the design is fit for its purpose for the specified service life.

4.2. Design

This Regulation does not provide

Page 110, Annex 3B, paragraph 4.6.(b), correct the wording "the external vessel surfaces" to read "the external **tank** surfaces".

Page 112, Annex 3B, paragraph 4.15.1., correct the reference to paragraph 6.11. to read paragraph **4.11**.

Page 118, Annex 3B – Appendix C, paragraph C.5., correct the wording "to cause cylinder material damage" to read "to cause **tank** material damage".

Page 119, Annex 3B – Appendix D, item 6., correct the wording "Serial number: from to inclusive" to read "**Serial number: from to inclusive**".

Page 122, Annex 4A, paragraph 7.3., correct the reference to paragraph 2 to read paragraph **3**.

Page 142, Annex 4B, paragraph 4.3.1.3., correct the reference to paragraph 1.3.1.1. to read paragraph **4.3.1.1**.

Page 143, Annex 4B, paragraph 4.3.2.3., correct the reference to paragraph 1.3.2.1. to read paragraph **4.3.2.1**.

Page 143, Annex 4B, paragraph 4.4.1.3., correct the reference to paragraph 1.4.1.1. to read paragraph **4.4.1.1**.

Page 144, Annex 4B, paragraph 4.4.2.3., correct the reference to paragraph 1.4.2.1. to read paragraph **4.4.2.1**.

Page 151, Annex 4F, footnote ¹, correct "Road vehicles Compressed Natural Gas" to read "Road vehicles - Compressed Natural Gas".

Page 158, Annex 4J, paragraph 3.1.4.3., correct the wording "completion of the room temperature cycles" to read "completion of the **high** temperature cycles".

Page 165, Annex 4N, paragraph 6.4., correct the wording "The LNG non-return valve" to read "The LNG **manual** valve".

Page 176, Annex 5E, paragraph 2., correct the reference to "ISO CD 15500-2" to read "**ISO 15500-2**".