

17 October 2014

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## Agreement

### **Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions\***

(Revision 2, including the amendments which entered into force on 16 October 1995)

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#### **Addendum 109 – Regulation No. 110**

#### **Revision 3 - Amendment 1**

Supplement 2 to the 01 series of amendments – Date of entry into force: 9 October 2014

#### **Uniform provisions concerning the approval of:**

- I. Specific components of motor vehicles using compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system**
- II. Vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system**



**UNITED NATIONS**

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\* Former title of the Agreement: Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

*Part I,*

*Insert a new paragraph 6.1.1., to read:*

- "6.1.1. In addition to provisions of paragraph 6.1., one of the following additional marks shall be used for automatic cylinder valve which comply with paragraph 2.2.4. of Annex 4A:
- (a) "H1"
  - (b) "H2"
  - (c) "H3" "

*Insert a new paragraph 4.77., to read:*

- "4.77. "Commanded stop phase" defines the period of time during which the combustion engine is switched off automatically for fuel saving and is allowed to start again automatically."

*Part II,*

*Paragraph 18.5.1., amend to read:*

"18.5.1. Automatic cylinder valve"

*Insert new paragraphs 18.5.1.3. and 18.5.1.4., to read:*

- "18.5.1.3. Notwithstanding the provisions of paragraph 18.5.1.2., the automatic cylinder valve may stay in an open position during commanded stop phases.
- 18.5.1.4. If the automatic cylinder valve is closed during commanded stop phases, the valve shall comply with paragraph 2.2.4. of Annex 4A."

*Insert new paragraphs 18.6.1.3. and 18.6.1.4., to read:*

- "18.6.1.3. Notwithstanding the provisions of paragraph 18.6.1.2., the automatic valve may stay in an open position during commanded stop phases.
- 18.6.1.4. If the automatic valve is closed during commanded stop phases, the valve shall comply with paragraph 2.2.4. of Annex 4A."

*Paragraph 18.11.2., amend to read:*

- "18.11.2. Vehicles with more than one fuel system shall have a fuel selection system which shall prevent both a flow of gaseous fuel into the petrol or diesel tank and a flow of petrol or diesel into the gaseous fuel tank, even in the case of a fault of the fuel selection system."

*Insert a new paragraph 18.11.3., to read:*

- "18.11.3. The measures shall be demonstrated during the type approval."

*Paragraph 18.11.3. (former), renumber as paragraph 18.11.4.*

*Annex 4A,*

*Insert new paragraph 2.2.4., to read:*

- "2.2.4. If the automatic valve is closed during commanded stop phases, the valve shall be submitted to the following numbers of operations during test according paragraph 2.2.3. above:
- (a) 200,000 cycles (mark "H1") if the engine shuts off automatically when the vehicle comes to a halt;

- (b) 500,000 cycles (mark "H2") if, in addition to (a), the engine also shuts off automatically when the vehicle drives with the electric motor only;
- (c) 1,000,000 cycles (mark "H3") if, in addition to (a) or (b), the engine also shuts off automatically when the accelerator pedal is released.

Notwithstanding the above-mentioned provisions, the valve complying with (b) shall be deemed to satisfy (a), and the valve complying with (c) shall be deemed to satisfy (a) and (b)."

*Paragraph 2.2.4. (former), renumber as paragraph 2.2.5.*

*Annex 4H,*

*Paragraph 2.1., amend to read:*

"2.1. The electronic control ... valve in case of a switch off of the engine or a broken fuel supply pipe or ..."

*Insert a new paragraph 2.1.1., to read:*

"2.1.1. Notwithstanding the provisions of paragraph 2.1., the automatic valve may stay in an open position during commanded stop phases."

*Paragraph 2.2., amend to read:*

"2.2. The switch-off delay of ..."

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