

29 February 2024

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## **Agreement**

### **Concerning the Adoption of Harmonized Technical United Nations Regulations 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 United Nations Regulations\***

(Revision 3, including the amendments which entered into force on 14 September 2017)

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#### **Addendum 133 – UN Regulation No. 134**

##### **Revision 1 - Amendment 2**

Supplement 2 to the 01 of amendments – Date of entry into force: 5 January 2024

#### **Uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of Hydrogen-Fuelled Vehicles (HFCV)**

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2023/53.



**UNITED NATIONS**

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\* Former titles 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 (original version); 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, done at Geneva on 5 October 1995 (Revision 2).

*Annex 5,*

*Paragraphs 4.4. and 4.5., amend to read:*

- "4.4. The exhaust hydrogen concentration is continuously measured during the following steps:
- (a) The power system is shut down;
  - (b) Upon completion of the shut-down process, the power system is immediately started;
  - (c) After completion of the start-up process as defined by the manufacturer, the power system is turned off and measurement continues until the power system shut-down procedure is completed.
- 4.5. The measurement device shall:
- (a) Have a measurement response-time ( $t_0 - t_{90}$ ) of less than two seconds, where  $t_0$  is the moment of hydrogen concentration switching, and  $t_{90}$  is the time when 90 per cent of the final indication is reached.
  - (b) Have a resolution time of less than 300 milliseconds (sampling rate of >3.33 Hz)."
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