



# Economic and Social Council

Distr.: General  
23 March 2020

Original: English

---

## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### Working Party on Pollution and Energy

##### Eighty-first session

Geneva, 9-12 June 2020

Item 5 of the provisional agenda

**UN Regulations Nos. 24 (Visible pollutants, measurement of power of C.I. engines (Diesel smoke)), 85 (Measurement of the net power), 115 (LPG and CNG retrofit systems), 133 (Recyclability of motor vehicles) and 143 (Heavy Duty Dual-Fuel Engine Retrofit Systems (HDDF-ERS))**

## **Proposal for a new Supplement to UN Regulation No. 115 (Uniform provisions concerning the approval of LPG and CNG retrofit systems)**

### **Submitted by the expert from Liquid Gas Europe\***

The text reproduced below was prepared by the expert from Liquid Gas Europe. This document proposes to address the need to clarify in UN Regulation No.115 the provisions for Hybrid Electric vehicles.

---

\* In accordance with the programme of work of the Inland Transport Committee for 2020 as outlined in proposed programme budget for 2020 (A/74/6 (part V sect. 20) para 20.37), 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

*Add new paragraph 2.5.1.6.:*

**“2.5.1.6. The family relation shall be considered valid for Hybrid Electric Vehicles (HEVs), as defined in paragraph 2.21.2. of UN Regulation No. 83, with the following conditions:**

- (a) **If at least one Off-vehicle charging (OVC) vehicles is tested as parent vehicle according to this regulation, the family relation can be considered valid for all OVC-HEV vehicles complying with para. 2.5.1.1. to para. 2.5.1.5. above.**
- (b) **If at least one Not-off-vehicle charging (NOVC) vehicles is tested as parent vehicle according to this Regulation, the family relation can be considered valid for all NOVC-HEV vehicles complying with para. 2.5.1.1. to para. 2.5.1.5. above.”**

*Add new paragraph 6.1.2.4.1.6.3.:*

**“6.1.2.4.1.6.3.Special provisions for Hybrid Electric Vehicles (HEVs)**

**In case of Hybrid Electric Vehicles, as defined in paragraph 2.21.2. of UN Regulation No. 83, the procedure described in UN Regulation No. 83 Annex 14 shall be applied during type I test.”**

*Paragraph 6.1.2.4.3.1., amend to read:*

**“6.1.2.4.3.1. The emissions of CO<sub>2</sub> are calculated according to UN Regulation No. 101 or to UN GTR No. 15 as applicable, for each parent vehicle, if applicable.**

**In case of HEVs, special provisions of Annex 8 to UN Regulation No. 101 or calculation of Annex 8 to UN GTR No. 15, as applicable, shall be applied.**

The mean of CO<sub>2</sub> emissions shall be calculated as follows:

....”

## II. Justification

Provisions for Hybrid Electric Vehicles (HEVs) are implicitly included in UN Regulation No. 115. Indeed type I test refers to UN Regulation No. 83 which in turns defines special provisions for HEVs. This amendment clarifies that, for HEVs, the correct procedure for type I test shall take into account Annex 14 to UN Regulation No. 83.

In addition, regarding CO<sub>2</sub> measurement, Regulation No. 115 already refers to UN Regulation No. 101 or to UN GTR No. 15, as applicable. This amendment clarifies that for HEVs, the correct procedure shall take into account Annex 8 to UN Regulation No. 101 or Annex XX to UN GTR No. 15, as applicable.