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1958 Agreement:

Consideration of draft amendments

to existing UN Regulations submitted by GRPE

Proposal for Supplement 8 to 01 series of amendments to UN Regulation No. 101 (CO₂ emission/fuel consumption)

Submitted by the Working Party on Pollution and Energy*

The text reproduced below was adopted by the Working Party on Pollution and Energy (GRPE) at its seventy-sixth session (ECE/TRANS/WP.29/GRPE/77, para. 13). It is based on ECE/TRANS/WP.29/GRPE/2018/16 as amended by Annex V and ECE/TRANS/WP.29/GRPE/2018/17. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their November 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21, Cluster 3.1), 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.

Supplement 8 to 01 series of amendments to UN Regulation No. 101 (CO₂ emission/fuel consumption)

Annex 8

Paragraph 3.1., amend to read:

- "3.1. Two tests shall be performed under the following conditions:
- Condition A: Test shall be started with a fully charged electrical energy/power storage device.
- Condition B: Test shall be started with an electrical energy/power storage device in minimum state of charge (maximum discharge of capacity).
- The profile of the State of Charge (SOC) of the electrical energy/power storage device during different stages of the Type I test is given in Appendix 1 to this annex."

Paragraph 4.1., amend to read:

- "4.1. Two tests shall be performed under the following conditions:
- 4.1.1. Condition A: Test shall be started with a fully charged electrical energy/power storage device.
- 4.1.2. Condition B: Test shall be started with an electrical energy/power storage device in minimum state of charge (maximum discharge of capacity) and carried out with an operating mode keeping the vehicle in charge-sustaining operating condition, that being an operating condition in which the energy/power stored in the energy/power storage device may fluctuate but, on average, is maintained at a neutral charging balance level while the vehicle is driven.
- 4.1.3. In agreement with the type approval authority and justified by the manufacturer, the following operation modes shall not be considered for the purpose of testing:
- (a) Operating modes, such as 'charge mode', which are not limited to vehicle propulsion but which, in addition to vehicle propulsion, are charging the energy power/storage device in order to facilitate locally emission-free driving (e.g. under urban conditions);
 - (b) Operating modes for vehicle maintenance, such as 'maintenance mode';
 - (c) Operating modes for special limited purposes and not intended for daily operation, such as 'mountain mode'.
- 4.1.4. The operating mode shall be selected as described in paragraphs 4.1.4.1. to 4.1.4.2.2. inclusive.
- 4.1.4.1. Operating mode selection for Condition A
- 4.1.4.1.1. If there is a single operating mode under condition A that is always selected when the vehicle is switched on regardless of the operating mode selected when the vehicle was previously shut down, and which cannot be switched to another mode without an intentional action of the driver or be redefined, this single operating mode shall be selected.
- 4.1.4.1.2. If there is no single operating mode under condition A that is always selected when the vehicle is switched on, the most electric energy consuming mode shall be selected.

- 4.1.4.2. Operating mode selection for Condition B
- 4.1.4.2.1. If there is a single operating mode under condition B that is always selected when the vehicle is switched on regardless of the operating mode selected when the vehicle was previously shut down, and which cannot be switched to another mode without an intentional action of the driver or be redefined, this single operating mode shall be selected.
- 4.1.4.2.2. If there is no single operating mode under condition B that is always selected when the vehicle is switched on, the most fuel consuming mode shall be selected. "

Annex 10

Add a new paragraph 1.2.:

"1.2. Alternative procedure

As an alternative to the procedure set out in this Annex, the manufacturer may use the results determined by the WLTP procedure, described in Appendix 1 to Annex 6 of the UN GTR No. 15, Amendment 4.

In this case, the following additional provisions apply:

- (a) At the request of the manufacturer and with the agreement of the responsible authority, the Extra High phase may be excluded for determining the regenerative factor K_i for Class 2 and Class 3 vehicles.
- (b) Instead of the criterion described in paragraph 2.2. of this Annex the criterion shall be based on the WLTP test mass: The test mass of each vehicle in the family must be less than or equal to the test mass of the vehicle used for the K_i demonstration test plus 250 kg.
- (c) Additive or multiplicative K_i is valid and is to be applied accordingly."