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Item 3 (a) of the provisional agenda

Light vehicles:**UN Regulations Nos. 68 (Measurement of the maximum speed, including electric vehicles), 83 (Emissions of M₁ and N₁ vehicles), 101 (CO₂ emissions/fuel consumption), 103 (Replacement pollution control devices) and 154 (Worldwide harmonized Light vehicles Test Procedures (WLTP))****Proposal for a new Supplement to 01 series of amendments to UN Regulation No. 101 (CO₂ emissions/fuel consumption)****Submitted by the experts from the International Organization of Motor Vehicle Manufacturers ***

This document proposes to amend the 01 series of amendments to UN Regulation No. 101 to allow for an alternative process for electric energy consumption verification in Conformity of Production, and to amend the charger requirement and the measurement method of REESS current for a hybrid electric power train. Both changes align with proceeding and procedures already included in 02 series of amendments to UN Regulation No. 154. The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2023 as outlined in proposed programme budget for 2024 (A/78/6 (Sect. 20), table 20.5), 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

Paragraph 9.4.3.1., amend to read:

"9.4.3.1. **The vehicle shall be prepared according to the procedure in paragraph 5.2.2. of Annex 7 to this Regulation.**

During the conformity of production procedure, the break-off criterion for the Type 1 test procedure according to paragraph 5.2.3.1. to Annex 7 to this Regulation (consecutive cycle procedure) and paragraph 5.2.3.2. to Annex 7 to this Regulation (Shortened Test Procedure) shall be replaced with the following:

The break-off criterion for the conformity of production procedure shall be reached with having finished the first two NEDC test cycles according to paragraph 2. to Annex 7 to this Regulation."

Annex 8,

Delete paragraph 3.2.2.5. and paragraph 3.2.2.5.1.

Insert new paragraph 3.2.2.5. and paragraph 3.2.2.5.1., to read:

"**3.2.2.5. Application of a normal charge**

Normal charging is the transfer of electricity to an electrified vehicle with a power of less than or equal to 22 kW.

Where there are several possible methods to perform a normal AC charge (e.g. cable, induction, etc.), the charging procedure via cable shall be used.

Where there are several AC charging power levels available, the highest normal charging power shall be used. An AC charging power lower than the highest normal AC charging power may be selected if recommended by the manufacturer and by approval of the responsible authority.

3.2.2.5.1. Charging procedure

The REESS shall be charged at an ambient temperature compromised between 20°C and 30°C with the on-board charger if fitted.

In the following cases, a charger recommended by the manufacturer and using the charging pattern prescribed for normal charging shall be used if:

- (a) **No on-board charger is fitted, or**
- (b) **Charging time exceeds maximum time defined in paragraph 5.2.2.2.**

The procedures in this paragraph exclude all types of special charges that could be automatically or manually initiated, e.g. equalization charges or servicing charges.

The car manufacturer shall declare that during the test, a special charge procedure has not occurred."

Appendix 2, insert new paragraph 2., to read:

"**2. External REESS current measurement"**

Paragraph 2., renumber to 2.1.

Paragraph 2.1., renumber to 2.1.1.

Paragraphs 2.1.1. to 2.1.3., renumber to 2.1.1.1 to 2.1.1.3.

Paragraph 2.2. renumber to 2.1.2.

Paragraph 3. renumber to 2.2.

Insert new paragraph 3., to read:

- "3. Vehicle on-board REESS current data**
As an alternative to paragraph 2. of this appendix, the manufacturer may use the on-board current measurement data. The accuracy of these data shall be demonstrated to the approval authority."

II. Justification

1. The working document for 02 series of amendments to UN Regulation No. 154. has been approved in the 89th session of GRPE in May 2023, amending the preparation of vehicle in verification of CoP on electric energy consumption of PEV.
 2. This amendment allows manufacture to skip REESE discharge procedure in the CoP vehicle preparation.
 3. The current UN Regulation No. 101 text can be interpreted that REESE discharge is necessary in COP vehicle preparation, paragraph 9.4.3.1. should be amended to align with the 02 series of amendments to UN Regulation No. 154 for clarification.
 4. UN GTR No. 15 (WLTP) has introduced the same requirements for the application of a normal charge, and the measurement method of REESS current between HEV and PEV.
 5. However, Supplement 11 in UN Regulation No. 101 has introduced these requirements only for PEV in UN GTR No. 15 (WLTP).
 6. This amendment in Annex 8 introduces these requirements for HEV in the same way as for PEV.
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