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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Passive Safety****Seventy-sixth session**

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Item 12 of the provisional agenda

UN Regulation No. 100 (Electric Power Trained Vehicles)**Proposal for Supplement 5 to the 03 Series of Amendments
and Supplement 2 to the 04 Series of Amendments to UN
Regulation No. 100 (Electric Power Trained Vehicles)****Submitted by the Special Interest Group on Thermal Propagation***

The text reproduced below was prepared by the expert from Australia, France, Germany, Italy, Japan, Republic of Korea, the Netherlands, Spain, the United Kingdom and the European Commission, aiming for enabling the identification of vehicles approved using certain provision for thermal propagation as well as for proper treatment of intellectual properties of the manufacturers. This document is based on informal document GRSP-75-17, distributed at the seventy-fifth session of the Working Party on Passive Safety (GRSP) and incorporates further amendments that have been addressed in the special interest group. The modifications to the current text of the UN Regulation (including ECE/TRANS/WP.29/2024/41) are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2024 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

Insert new paragraph 2.56., to read:

"2.56. "Common space" means an area on which two or more information functions (e.g. symbol) may be displayed but not simultaneously."

Insert new paragraphs 3.4. to 3.5., to read:

"3.4. In cases where information is shown to be covered by intellectual property rights or to constitute specific know-how of the manufacturer or of their suppliers, the manufacturer or their suppliers shall make available sufficient information to enable the checks referred to in this Regulation to be made properly. Such information shall be treated on a confidential basis.

3.5. Documentation shall be made available in two parts:

- (a) The formal documentation package for the approval, containing the material specified in Annex 1, Appendix 1 or Appendix 2 which shall be supplied to the Approval Authority or its Technical Service at the time of submission of the type approval application. This documentation package shall be used by the Approval Authority or its Technical Service as the basic reference for the approval process. The Approval Authority or its Technical Service shall ensure that this documentation package remains available for at least 10 years counted from the time when production of the vehicle/REESS type is definitively discontinued.
- (b) Additional material relevant to the requirements of this Regulation may be retained by the manufacturer, but shall be made open for inspection at the time of type approval. The manufacturer shall ensure that any material made open for inspection at the time of type approval remains available for at least a period of 10 years counted from the time when production of the vehicle/REESS type is definitively discontinued."

Paragraph 6.4.2.3., amend to read:

"6.4.2.3. Acceptance criteria

During the test there shall be no evidence of:

- (a) Fire;
- (b) Explosion;
- (c1) Electrolyte leakage if tested according to paragraph ~~6.4.2.1.1.6.4.1.1.~~
 - (i) In case of ...
- (c2) Electrolyte leakage if tested according to **paragraph 6.4.2.1.2. or** paragraph 6.4.2.2.

For a high voltage REESS, the ..."

Paragraph 6.15.1., amend to read:

"6.15.1. The REESS or vehicle system shall provide a signal to activate the advance warning indication in the vehicle:

- (a) to allow egress; or
- (b) 5 minutes

prior to the presence of a hazardous situation inside the passenger compartment caused by thermal propagation which is triggered by an internal short circuit leading to a single cell thermal runaway such as fire, explosion or smoke. This requirement is deemed to be satisfied if the thermal propagation does not lead

to a hazardous situation for the vehicle occupants. REESS or vehicle manufacturer shall make available, at the request of the Technical Service with its necessity, the following documentation explaining safety performance of the system level or sub-system level of the vehicle:

If the manufacturer chooses to apply the condition (a) above, the manufacturer shall provide the justification for the duration required for the egress. The Communication for Type Approval granted shall contain the remarks if the condition (a) above is applied to that approval."

Annex 1 – Part 1, amend to read:

"Communication

...

18. Remarks:"

Annex 1 – Part 2, amend to read:

"Communication

...

18. Remarks:"

II. Justification

1. The 03 series of amendment to UN Regulation No.100 aims to transpose the technical requirements of UN GTR No. 20, where the below remarks are given in its Part I:

"3. Confidentiality of information

242. As described in section E above, this UN GTR includes specific requirements for manufacturer to provide technical documentations that address specific aspects, such as REESS warnings (paragraphs 5.3.2., 5.3.3., 7.2.2. and 7.2.3.), low-temperature protection (paragraphs 5.4.10. and 7.3.10.) and thermal propagation (paragraphs 5.4.12. and 7.3.12.). In order to describe the required aspects sufficiently, such documentation will include the manufacturer's confidential and proprietary information, where it is indispensable to protect the intellectual properties therein. Accordingly, 1998 Ag. Cps. implementing this regulation should take necessary measures to protect such intellectual properties by allowing confidential treatment of the documentation if requested by the manufacturer. "

However, the measures to protect such intellectual properties have yet to be clearly specified in this Regulation.

2 Similar concern exists in other regulations such as UN Regulation No.155 (Cyber Security), UN Regulation No. 156 (Software Update) and so on, where specific provisions are provided to protect the intellectual properties of the manufacturer. It is considered as appropriate to include similar provisions to this Regulation.

3. During the development of the 05 series of amendments to UN Regulation No.100, it was agreed to eliminate the ambiguity in the duration for securing the occupant in the event of thermal propagation which is caused by an internal short circuit leading to a single cell thermal runaway. However, the experts from the contracting parties in the Special Interest Group on Thermal Propagation agreed to allow exemptions for the existing approvals by applying the condition of “allow egress” from mandatory implementation of the 05 series of amendment. It then becomes necessary to identify the approvals applying such a provision.

4. In order to resolve the issue of different interpretations of "common space" in paragraph 5.2.3., a new definition of "common space" is added on the basis of the definition in UN Regulation No. 121.

5. The paragraph numbers referred to in paragraph 6.4.2.3. (mechanical integrity) are corrected where the criterion (c1) applies to the vehicle-based dynamic test (6.4.2.1.1.), while the criterion (c2) applies to the vehicle-specific component test (6.4.2.1.2.) and the component-based test (6.4.2.2.).
