Proposal for Supplement 1 to the 04 series of amendments to UN Regulation No. 118 (Burning behaviour of materials)

I. Proposal

Insert a new paragraph 1.1.1., to read:

"1.1.1. At the request of the manufacturer, this Regulation may also apply to vehicles of Categories M3, Class I."

Part II, insert a new paragraph 6.1.9., to read:

"6.1.9. "Plastic glazing" is a glazing material that contains as an essential ingredient one or more organic polymeric substances of large molecular weight, is solid in its finished state and, at some stage in its manufacture of processing into finished articles, can be shaped by flow."

Part II, paragraph 6.2.7.1., amend to read:

"6.2.7.1. Parts made of metal or glass; Parts made of plastic glazing are not included in this exemption."

II. Justification

1. The justifications below are copy/pasted from those of documents GRSG-121-04 and GRSG/2021/3, adopted by GRSG at its 121st session in April 2021. The latter was amending the 02 and 03 series of amendments to UN R118, but GRSG omitted to align the 04 Series since that one was still pending to WP.29 adoption.

2. Scope: According to ECE/TRANS/WP.29/1044/Rev.3 - General Guidelines for United Nations regulatory procedures and transitional provisions in UN Regulations-the scope of a Regulation indicates to which categories of vehicles UN type approvals according to that UN Regulation can be issued;

In order to clarify the opportunity of being able to grant type-approvals for M3 class I vehicles (which are currently not listed in the scope of UN R118), the proposal is meant to introduce to the current scope M3 class I vehicles, on a voluntary basis.

This proposal will measurably improve fire safety for class I buses (used in suburban traffic) – such trend is visible in terms of other M3 regulations like the 7th series of amendments to Regulation No. 107 introducing Fire Suppression System for class I (same as class II and III). The process of Conformity of production will significantly improve fire safety at both vehicle and component level.

This principle of allowing a manufacturer to get an approval, on his request, is already existing in other bus regulations – UN R66 can be an example.

It is observed that the UN R118 type approval certificate for class I is frequently being considered as a criterion in city bus tender process, which may prove that there are already approvals issued for this vehicle class. This proposal will therefore secure that there is no different interpretations among approval authorities, and therefore no unequal treatment of the request of vehicle manufacturers, especially in case of tenders.
The proposed modification will not imply any technical change for the manufacturers not interested in the certification of class I busses.

3. **Part II:** The reason for the exemption to the parts made of metallic and glass elements is that these materials are not affected by the tests according to the Annexes 6 to 8 of UN Regulation No. 118.

   (a) Annex: 6 Test to determine the horizontal burning rate of materials

   (b) Annex: 7 Test to determine the melting behaviour of materials

   (c) Annex: 8 Test to determine the vertical burning rate of materials

This behaviour (fire resistance) is not present at plastic materials used in many parts installed inside the vehicles. Accordingly, parts made of plastic glazing should not be affected by the exemption of para. 6.2.8., and therefore, these materials should be tested.

The clarification is proposed to be included inside the UN Regulation No. 118 to avoid misinterpretations that could lead to exemptions, and therefore constitute a risk of safety.

It is also proposed to include, at Part II of UN Regulation 118, the definition of plastic glazing made at UN Regulation 43 in order to define precisely the materials not covered by para 6.2.8.