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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on General Safety Provisions****110th session**

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Item 14 of the provisional agenda

Regulation No. 118 (Burning behaviour of materials)**Proposal for the 03 series of amendments to Regulation No. 118
(Burning behaviour of materials)****Submitted by the expert from Germany***

The text reproduced below was prepared by the expert from Germany to enlarge the scope and the application of UN Regulation No. 118 to include cable sleeves or cable conduits used for protecting electric cables in the vehicle. It is based on ECE/TRANS/WP.29/GRSG/2015/28 and informal document GRSG-109-09 distributed during the 109th session of the Working Party on General Safety Provisions (GRSG) (see report ECE/TRANS/WP.29/GRSG/88, para. 40). The modifications to the current text of UN Regulation No. 118 are marked in bold characters.

* In accordance with the programme of work of the Inland Transport Committee for 2014–2018 (ECE/TRANS/240, para. 105 and ECE/TRANS/2014/26, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Contents. amend to read:

- "5. Part I: Approval of a vehicle type with regard to the burning behaviour of the components used in the interior compartment, the engine compartment and any separate heating compartment and with regard to the burning behaviour of electric cables **and cable sleeves or cable conduits** used in the vehicle and/or the capability to repel fuel or lubricant of insulation materials used in the engine compartment and any separate heating compartment."

Paragraph 1.2. (Scope), amend to read:

- "1.2. Part I - Approval of a vehicle type with regard to the burning behaviour and/or the capability to repel fuel or lubricant of the components used in the interior compartment, the engine compartment and any separate heating compartment and with regard to the burning behaviour of electric cables **and cable sleeves or cable conduits** used **for protecting electric cables** in the vehicle."

Paragraph 4.2., replace the figure "02" by "03" (2 times).

Paragraphs 5.2.1. and 5.2.2., amend to read:

- "5.2.1. The materials inside and no more than 13 mm beyond the interior compartment, materials of the engine compartment, materials of any separate heating compartment and electric cables, **cable sleeves or cable conduits** used in the vehicle to be type approved shall meet the requirements of Part II of this Regulation.
- 5.2.2. The materials and/or equipment used in the interior compartment, the engine compartment and any separate heating compartment and/or in devices approved as components, electric cables **and cable sleeves or cable conduits** used in the vehicle shall be so installed as to minimize the risk of flame development and flame propagation."

Paragraph 6. Part II, paragraph 6.2.6., amend to read:

- "6.2.6. Any electric cable (e.g. single-core, multi-core, screened, unscreened, sheathed cables) exceeding a length of 100 mm used in the vehicle shall undergo the resistance to flame propagation test described in ISO 6722-1:2011, paragraph 5.22.

The result of the test shall be considered satisfactory if, taking into account the worst test result, any combustion flame of insulating material shall extinguish within 70 seconds and a minimum of 50 mm insulation at the top of the test sample shall remain unburned.

Any cable sleeves or cable conduits exceeding a length of [100] mm shall undergo the test to determine the burning rate of materials as specified in Annex 8."

Add new paragraph 12.11. to 12.14. (Transitional provisions), to read:

- "12.11. **As from the official date of entry into force of the 03 series of amendments, no Contracting Parties applying this Regulation shall refuse to grant approval under this Regulation as amended by the 03 series of amendment.**

- 12.12. As from 1 September 2019, Contracting Parties applying this Regulation shall grant approvals only if the vehicle type or component type to be approved meet the requirements of this Regulation as amended by the 03 series of amendments.**
- 12.13. As from 26 July 2020, Contracting Parties applying this Regulation may refuse first national registration (first entry into service) of a vehicle which does not meet the requirements of this Regulation as amended by the 03 series of amendments.**
- 12.14. Even after the date of entry into force of the 03 series of amendments, approvals of the components to the preceding series of amendments to the regulation shall remain valid and Contracting Parties applying the Regulation shall continue to accept them."**

Annex 5 (Arrangements of approval marks), replace the figure "02" by "03" (2 times).

II. Justification

1. Cable sleeves and cable conduits are added to paragraph 6.2.6.; as electric cables may have a significant effect on fire development and fire propagation, cable sleeves and cable conduits also may contribute to fire propagation.
 2. As short electric cables, cable sleeves and cable conduits fitted to components like, e.g., alternators, starters, control devices, have no significant effect on fire propagation, it seems justified to focus on those materials exceeding a length of, e.g., 100 mm.
 3. In this respect, paragraph 6.2.6. proposes to apply the tests for cable sleeves and cable conduits to those materials that exceed a length of, e.g., 100 mm.
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