

## Proposal for amendments to UN Regulation No. 140

The text reproduced below was prepared by the expert from Organisation Internationale des Constructeurs d'Automobiles (OICA) with the aim to ensure the continuity of the ASTM Method E1337 for the measurement of the Peak Braking Coefficient (PBC) in UN Regulation No. 140, by introducing a reference to the new American Society for Testing and Materials (ASTM) Standard Reference Test Tyre F2493. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

### I. Proposal

*Paragraph 8.2.2.*, amend to read:

- “8.2.2 The road test surface has a nominal<sup>6</sup> peak braking coefficient (PBC) of 0.9, unless otherwise specified, when measured using ~~either~~ **one of following methods:**
- 8.2.2.1. The American Society for Testing and Materials (ASTM) E1136-**19** standard reference test tyre, in accordance with ASTM Method E1337-~~90~~**19**, at a speed of 40 mph; or
- 8.2.2.2. The k-test method specified in Appendix 2 to Annex 6 of Regulation No. 13-H; **or**
- 8.2.2.3 The American Society for Testing and Materials (ASTM) F2493-20 standard reference test tyre, in accordance with ASTM Method E1337-19, at a speed of 40 mph. In this case, PBC of 1.017 is equivalent to 0.9 of paragraph 8.2.2.”**

### II. Justification

1. The objective of this proposal is to ensure the continuity of the ASTM Method E1337 for the determination of the PBC in UN Regulation No. 140, by introducing a reference to the new ASTM Standard Reference Test Tyre (SRTT) F2493.
2. In 2019, ASTM standard E1337 for the measurement of the PBC was updated to introduce the new SRTT F2493, in addition to the older SRTT E1136. Furthermore, this recent version of ASTM standard E1337 provides correlation equations for converting results obtained with SRTT F2493 into SRTT E1136 and vice-versa.
3. At the seventy-first session of the Working Party on Noise and Tyres (GRBP) in January 2020, the European Tyre And Rim Technical Organization (ETRTO) reported that the production of SRTT E1136 would stop in the course of 2020 and its sales would be discontinued by the end of 2021 (GRBP-71-06). The impossibility to purchase new SRTT E1136 may hinder the use of ASTM Method E1337 in UN Regulation No. 140.
4. Therefore, to guarantee the continued availability of the ASTM Method E1137 for new and existing type-approvals to UN Regulation No. 140, it is necessary to introduce an additional reference to the new SRTT F2493 and the conversion equation defined in ASTM standard E1337, while keeping the existing PBC provisions unchanged.