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**Economic Commission for Europe****Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Automated/Autonomous and Connected Vehicles****Twenty-first session**

Geneva, 20-24 January 2025

Item 7 of the provisional agenda

**Advanced Emergency Braking System****Proposal for a supplement to the original version (00 series of amendments) of UN Regulation No. 152 (Advanced Emergency Braking System)****Submitted by the expert from the United Kingdom of Great Britain and Northern Ireland \***

The text reproduced below was prepared by the expert from the United Kingdom of Great Britain and Northern Ireland, regarding modernising and improving the terminology about the status of the system following an “engine start / run cycle”. It was developed from the agreed upon approach from the twentieth session of the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) as detailed in informal document GRVA-20-42, GRVA-20-43/Rev.1, and GRVA-20-44. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect. 20), table 20.6), 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 5.4.1.1., amend to read:*

“5.4.1.1. The AEBS function shall be automatically reinstated at ~~the initiation of each new engine start (or run cycle, as relevant).~~ **initiation of the powertrain**<sup>4</sup>.

~~This requirement does not apply when a~~ **A** new engine start (or run cycle, ~~as relevant~~) **which** is performed automatically, e.g. the operation of a stop/start system, **shall not be considered an “initiation of the powertrain” wherever that term is used in this Regulation.**”

*Insert new footnote 4, to read:*

“<sup>4</sup> **As defined in Mutual Resolution No. 2 (M.R.2) of the 1958 and the 1998 Agreements containing vehicle propulsion system definitions, document ECE/TRANS/WP.29/1121.**”

*Renumber subsequent footnotes as appropriate.*

## II. Justification

1. In the twentieth session of GRVA a new formulation of wording to deal with the status of a system when the vehicle is switched off and then restarted was agreed for UN Regulation Nos. 79, 157, and 171. The agreement was to refer to the status of the ‘powertrain’ rather than the ‘engine’ or a ‘run cycle’ for the reasons given below.

2. Mutual Resolution No. 2 (M.R.2) was specifically created to establish uniform definitions for vehicle propulsion systems and created generic terms for components and aspects of propulsion systems that are independent of fuel type or technology used. It therefore gives the basis for establishing provisions that can be technology neutral. Continuing to refer to ‘engine’ or ‘run cycle’ is still implying a technology type and therefore may retain a level of ambiguity.

3. Using the definition of ‘powertrain’ from M.R.2 provides a generic term that sufficiently covers the aspect of a vehicle which needs to be referred to when considering the default state of systems following initialisation. Also using the term ‘powertrain’ simplifies the respective provisions. The M.R.2 definition of powertrain is as follows:

4. “*Powertrain*” means the total combination in a vehicle, of propulsion energy storage system(s), propulsion energy converter(s), the drivetrain(s), providing the mechanical energy at the wheels for the purpose of vehicle propulsion, plus peripheral devices.

5. Utilising this terminology further clarifies the agreed interpretation resulting from the consideration of GRVA-13-33 and is therefore considered an improvement to the proposal that originally addressed it (GRVA-14-48). As a result, GRVA also agreed that this Regulation should be brought into alignment, hence the reason for bringing forward this proposal. The modifications proposed align the text with that already agreed, which are contained within GRVA-20-42, GRVA-20-43/Rev.1, and GRVA-20-44.

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