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Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations**Working Party on Automated/Autonomous and Connected Vehicles****Twentieth session**

Geneva, 23-27 September 2024

Item 4(d) of the provisional agenda

Automated/autonomous and connected vehicles:**UN Regulation No. 157****Proposal for a supplement to the original version (00 series of amendments) to UN Regulation No. 157 (ALKS)****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 the conditions for automatic re-instatement of system at the “initiation of each engine start / run cycle”. It is based on informal document GRVA-19-33/Rev.1. The modifications to the existing text of the Regulations 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

Paragraph 5.5.5., amend to read:

“5.5.5. Reactivation of the system after the end of any minimum risk manoeuvre shall only be possible after each **initiation of the powertrain**³ ~~new engine start/run cycle.~~”

Insert new *footnote*, to read:

“³ As defined in Mutual Resolution No. 2 (M.R.2) of the 1958 and the 1998 Agreements containing vehicle propulsion system definitions, see document ECE/TRANS/WP.29/1121.”

Renumber subsequent footnotes as appropriate.

Paragraph 6.2.2., amend to read:

“6.2.2. The default status of the system shall be the off mode at the initiation of **the powertrain** ~~each new engine start/run cycle. This requirement does not apply when a~~ A new engine start/run cycle (or run cycle, as relevant), which is performed automatically, e.g. by the operation of a stop/start system, **is not considered an initiation of the powertrain.**”

II. Justification

1. 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.
2. 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:
3. “*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.