

**Economic and Social Council**Distr.: General  
11 July 2024

Original: English

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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****Twentieth session**

Geneva, 23-27 September 2024

Item 6(b) of the provisional agenda

**Advanced Driver Assistance System and UN Regulation No. 79:****UN Regulation No. 79 (Steering equipment)****Proposal for supplement to the 03 and 04 series of amendments to UN Regulation No. 79 (Steering equipment)****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.

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\* 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 5.6.4.2.1., amend to read:

“5.6.4.2.1. The default status of the system shall be off at the initiation of **the powertrain<sup>[x]</sup>** ~~each new engine start/run cycle. This requirement does not apply when a~~ **A new engine start/run cycle (or run cycle) which is performed automatically, e.g. the operation of a stop/start system, is not considered an initiation of the powertrain.**”

Insert new *footnote*, to read:

“<sup>[x]</sup> **As defined in Mutual Resolution 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.**”

*Footnote number to be entered as appropriate for the series of amendments and subsequent footnotes renumbered accordingly.*

Paragraph 5.6.4.8.3., amend to read:

“5.6.4.8.3. After each **initiation of the powertrain** ~~vehicle new engine start /run cycle, other than when performed automatically, e.g. the operation of a stop/start systems~~, the ACSF of Category C function shall be prevented by the power-driven vehicle from performing a lane change manoeuvre until the system of the power driven vehicle or the trailer (as relevant) has detected, at least once, a moving object at a distance greater than the minimum distance  $S_{\text{rear}}$  declared by the manufacturer in paragraph 5.6.4.8.1. above.”

Annex 8, Paragraph 3.5.6.1., amend to read:

“3.5.6.1. The test vehicle shall be driven in a lane of a straight test track, which has at least two lanes in the same direction of travel, with road markings on each side of the lanes.

The vehicle speed shall be:  $V_{\text{min}} + 10\text{km/h}$ .

The ACSF of Category C shall be activated (standby mode), unless the system is already enabled according to paragraph 5.6.4.8.3., and another vehicle shall approach from the rear in order to enable the system as specified in paragraph 5.6.4.8.3. above.

The approaching vehicle shall then pass the vehicle under test entirely.

The rear sensor(s) shall be made blind, with means agreed between the vehicle manufacturer and the Technical Service, which shall be recorded in the test report. This operation may be carried out at standstill, provided no new **initiation of the powertrain** ~~engine start/run cycle~~ is performed.

The vehicle shall be driven to a speed of  $V_{\text{min}} + 10\text{km/h}$ , and a lane change procedure shall be initiated by the driver.”

Annex 8, Paragraph 3.5.7.1.1., amend to read:

“3.5.7.1.1. Following a new **initiation of the powertrain** ~~engine start / run cycle~~ performed by the driver, the test vehicle shall be driven in a lane of a straight test track, which has at least two lanes in the same direction of travel, with road markings on each side of the lanes.

The ACSF of Category C shall not be activated (off mode) and another vehicle shall approach from the rear and the approaching vehicle shall pass the vehicle entirely.

A lane change procedure and manoeuvre shall then be initiated by the driver with the appropriate deliberate action(s).”

Annex 8, Paragraph 3.5.7.2.1., amend to read:

“3.5.7.2.1. Following a new **initiation of the powertrain engine start / run cycle** performed by the driver, the test vehicle shall be driven in a lane of a straight test track, which has at least two lanes in the same direction of travel, with road markings on each side of the lanes.

The ACSF of Category C shall be manually activated (standby mode).

A lane change procedure and manoeuvre shall then be initiated by the driver with the appropriate deliberate action(s).”.

## 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.

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