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Item 6(b) of the provisional agenda

Advanced Driver Assistance Systems and UN Regulation No. 79:**UN Regulation No. 79 (Steering equipment)****Proposal for amendments to the 03 series and to the 04 series
of amendments to UN Regulation No. 79 (Steering
equipment)****Submitted by the expert from International Organization of Motor
Vehicle Manufacturers ***

The text below was prepared by the expert from International Organization of Motor Vehicle Manufacturers (OICA). It is based on informal document GRVA-11-43, which was presented at the eleventh session of the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) in September 2021. It aims at correcting several errors found in the text of the regulation. The modifications of the existing Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2022 as outlined in proposed programme budget for 2022 (A/76/6 (Sect.20), para 20.76), 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 2.3.4.18. (former), renumber as paragraph 2.4.18. (content unchanged), to read:

"~~2.3.4.18.~~ "Specified maximum RCM operating range (S_{RCMmax})" means the maximum distance between the nearest point of the motor vehicle and the remote-control device up to which RCM is designed to operate."

Paragraph 2.4.18. (former), re-number as paragraph 2.4.19.

Paragraph 5.1.6.1.1., amend to read:

"5.1.6.1.1. Every CSF intervention shall immediately be indicated to the driver by an optical warning signal which is displayed for at least 1 s or as long as the intervention exists, whichever is longer.

When a flashing mode is used, a lighting phase shall be visible at the end of the intervention or later.

In the case of a CSF intervention which is controlled by an Electronic Stability Control (ESC) or a Vehicle Stability Function as specified in the relevant UN Regulation (i.e. UN Regulations Nos. 13, 13-H or 140), the ESC flashing tell-tale indicating the interventions of ESC may be used, as long as the intervention exists, as an alternative to the optical warning signal specified above."

Paragraph 5.3.3.1., amend to read:

"5.3.3.1. The system shall be designed such that the vehicle cannot be driven ~~indefinitively~~ **indefinitely** at speeds above 10 km/h where there is any fault which requires operation of the warning signal referred to in paragraph 5.4.2.1.1."

Annex 8, paragraph 3.5.4.1., amend to read:

"3.5.4.1. 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: $V_{smin} + 10\text{km/h}$.

The ACSF of Category C shall be activated (standby mode) and, unless the system is already enabled according to paragraph 5.6.4.8.3., 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.

A Lane Change Procedure shall then be initiated by the driver.

The test shall be repeated for each of the following conditions, which shall occur before the lane change manoeuvre has started:

- (a) The system is overridden by the driver;
- (b) The system is switched off by the driver;
- (c) The vehicle speed is reduced to: $V_{smin} - 10\text{ km/h}$;
- (d) The driver has removed his hands from the steering control and the hands-off warning has been initiated;
- (e) The direction indicator lamps are manually deactivated by the driver;
- (f) The lane change manoeuvre has not commenced within 5.0 seconds following the initiation of the lane change procedure. (e.g. another vehicle is driving in the adjacent lane in a critical situation as described in paragraph 5.6.4.7.) **or 7.0 seconds if initiated by a second deliberate action.**

- (g) **The second deliberate action for an appropriate system is performed later than 5.0 seconds after the initiation of the lane change procedure."**

II. Justification

A. Renumbering of paragraph 2.4.18.

1. Amendment 2 to the Revision 4 of UN Regulation No. 79, based on document ECE/TRANS/WP.29/2020/11 (Supplement 02 to the 03 Series of amendments) introduced the definition of "specified maximum RCM operating range" under an erroneous paragraph number. This error was repeated in the Supplement 03 to the 03 Series, and to the 04 Series.

B. Missing sentences in paragraph 5.1.6.1.1.

2. ECE/TRANS/WP.29/2020/67 was adopted by the Administrative Committee AC.1 based among others on document ECE/TRANS/WP.29/GRVA/2020/11, adopted at the fifth session of GRVA (February 2020). This document aimed to insert a new paragraph 5.1.6.1.2.3. (improvement of the Corrective Steering Function provisions for M₂ and M₃ vehicles equipped with Lane Departure Warning System). It was also partially reproducing paragraph 5.1.6.1.1. for information. The document did not intent to revert to a previous version of that paragraph nor to amend it, however was ambiguous since some sentences of the paragraph were missing. As a result, the text of that paragraph in Supplement 3 to the 03 series of amendments to UN Regulation No. 79 (document ECE/TRANS/WP.29/2020/67) does not reflect the preceding versions of the regulation. The present document aims at correcting that error.

C. Paragraph 5.3.3.1.

3. The word "indefinitively" should read "indefinitely". This error was introduced with the Revision 3 of the regulation.

D. Annex 8, paragraph 3.5.4.1.

4. ECE/TRANS/WP.29/2021/14 was adopted by WP.29 based on document ECE/TRANS/WP.29/GRVA/2020/23 adopted at the fourth session of GRVA (September 2019). This document aimed to clarify that enabling of the ACSF of Category C as part of the test procedure is only necessary when the system is not yet enabled. The end of the sub-paragraph (f) and the full sub-paragraph (g) in Annex 8 paragraph 3.5.4.1. were however erroneously omitted in Supplement 4 to the 03 series of amendments to UN Regulation No. 79 (document ECE/TRANS/WP.29/2021/14). The present document aims at correcting that error.