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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### 185th session

Geneva, 23-25 November 2021

Item 4.10.2 of the provisional agenda

#### 1958 Agreement:

Consideration of draft amendments to existing

UN Regulations submitted by GRVA

## Proposal for Supplement 6 to the 03 series of amendments to UN Regulation No. 79 (Steering equipment)

### Submitted by the Working Party on Automated/Autonomous and Connected Vehicles \*

The text reproduced below was adopted by the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) at its tenth session in May 2021 (ECE/TRANS/WP.29/GRVA/10, para. 64). It is based on Annexes IV and V to the session report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee (AC.1) for consideration at their November 2021 sessions.

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\* In accordance with the programme of work of the Inland Transport Committee for 2021 as outlined in proposed programme budget for 2021 (A/75/6 (part V sect. 20) para 20.51), 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.



*Paragraph 2.4.8.*, amend to read:

"2.4.8. "Remote Controlled Parking (RCP)" means an ACSF of category A, actuated by the driver, providing parking or low speed manoeuvring. The actuation is made in close proximity to the vehicle."

*Paragraph 2.4.9.*, amend to read:

"2.4.9. "Specified maximum RCP operating range (SRCP<sub>max</sub>)" means the maximum distance between the nearest point of the motor vehicle and the remote control device or alternatively the driver (for systems based on detection of driver position and movement), up to which ACSF is designed to operate."

*Paragraph 5.1.6.2.3.*, amend to read:

"5.1.6.2.3. An automatic avoidance manoeuvre initiated by an ESF shall not lead the vehicle to leave the road, if applicable for the specified use case according to paragraph 5.1.6.2.10."

*Insert a new paragraph 5.1.6.2.3.2.*, to read:

"5.1.6.2.3.2. In the absence of a lane marking on one or on both side(s) of the vehicle, a single ESF intervention is permitted, provided that it does not produce a lateral offset of the vehicle greater than 0.75 m in a direction where the lane marking is absent. The lateral offset during the automatic avoidance manoeuvre shall be determined using a fixed point on the front of the vehicle at the start and at the conclusion of the ESF intervention.

The lateral offset of 0.75 m may be exceeded by a system intervention if the vehicle speed during the whole intervention is below 20 km/h and the lateral offset rate generated by the system is limited to 2 m/s, calculated as an average for a time period of 1 s."

*Paragraphs 5.6.1.2.1. and 5.6.1.2.2.* (5.6.1.2. for reference only), amend to read:

"5.6.1.2. Additional provisions for RCP

5.6.1.2.1. The parking ... A direct influence on steering angle, value of acceleration and deceleration via the remote-control device or by the movement of the driver shall not be possible.

5.6.1.2.2. Either a continuous actuation of the remote-control device by the driver or alternatively (for systems based on detection of driver position and movement) a continuous movement of the driver in the same longitudinal direction as the vehicle, is required during the parking manoeuvre."

*Paragraph 5.6.1.2.3.*, amend to read:

"5.6.1.2.3. For systems based on continuous actuation of the remote-control device, the vehicle shall stop immediately, if:

- (a) The continuous actuation is interrupted;
- (b) The distance between vehicle and remote-control device exceeds the specified maximum RCP operating range ( $S_{RCPmax}$ ); or
- (c) The signal between remote control and vehicle is lost.

For systems based on detection of driver position and movement, the vehicle shall stop immediately if:

- (a) The continuous movement of the driver is interrupted;
- (b) The distance between vehicle and remote-control device or driver exceeds the specified maximum RCP operating range ( $S_{RCPmax}$ );
- (c) The detection of the driver is lost; or
- (d) There is a rapid increase in the movement speed of the driver."

*Insert a new paragraph 5.6.1.2.9., to read:*

"5.6.1.2.9. For RCP systems based on detection of driver position and movement, the deactivation referred to in paragraph 3.6.1.1.3. shall be through a simple and obvious action that will be recognised by the system."

*Insert a new paragraph 5.6.1.3.1.4., to read:*

"5.6.1.3.1.4. For RCP systems based on detection of driver position and movement the manufacturer shall demonstrate to the technical service during type approval how a person is identified as the driver, how this person is tracked and how the driver initiates and terminates control. This shall be subject to agreement of the technical service."

#### *Annex 8*

*Paragraph 3.3.4., amend to read:*

"3.3.4. Tests for systems able to operate in the absence of lane markings. In case any system works in absence of lane markings the corresponding tests from paragraphs 3.3.1. to 3.3.3. need to be repeated on a test track without lane markings.

These test requirements are fulfilled if,

- (a) An ESF intervention is started; and
  - (b) The warnings specified in paragraph 5.1.6.2.6. of this Regulation are provided no later than the ESF intervention starts; and
  - (c) The lateral offset during the manoeuvre is 0.75 m, as specified in paragraph 5.1.6.2.3.2., at maximum or if exceeded in case of an intervention below 20 km/h, the lateral offset rate does not exceed 2 m/s; and
  - (d) The vehicle has not left the road due to the ESF intervention, if applicable for the specified use case."
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