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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### 184th session

Geneva, 22-24 June 2021

Item 4.8.2 of the provisional agenda

#### 1958 Agreement:

Consideration of draft amendments to existing

UN Regulations submitted by GRVA

## Proposal for a new 04 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 eighth session (ECE/TRANS/WP.29/GRVA/9, para. 83) subject to reconfirmation and potential amendments by GRVA at its May 2021 session. It is based on ECE/TRANS/WP.29/GRVA/2021/13 as amended in session (GRVA-09-43). 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 June 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.



*Insert a new paragraph 2.3.4.4., to read:*

- "2.3.4.4. "Risk Mitigation Function (RMF)" means a function which can in case of confirmed driver unavailability automatically activate the vehicle steering system for a limited duration to steer the vehicle with the purpose of bringing the vehicle to a safe stop within a target stop area."

*Insert a new paragraph 2.4.18., to read:*

- "2.4.18. "Target stop area" means an area (e.g. emergency lane, hard shoulder, beside the road, slowest lane of traffic, own lane of travel) where an RMF aims to stop the vehicle."

*Insert a new paragraph 5.1.6.3. (and subparagraphs), to read:*

- "5.1.6.3. Vehicles equipped with an RMF shall fulfil the following requirements.
- An RMF system shall be subject to the requirements of Annex 6.
- 5.1.6.3.1. Any RMF shall only start an intervention in case the driver is confirmed to be unavailable to control the vehicle e.g. through driver monitoring, failed response to a request for action or warning or if it is manually activated by the driver.
- In case the system provides a means for manual activation, this means shall be protected against unintentional operation.
- 5.1.6.3.2. Unless a request for action was already given or the system was manually activated, there shall be an optical and acoustical warning signal upfront every RMF intervention in order to stimulate the driver to take back control.
- Every RMF intervention shall be indicated to the driver at least by a clearly visible optical and an acoustic warning signal for as long as the intervention exists.
- These warning signals shall be distinct and of a great urgency.
- 5.1.6.3.3. The RMF shall aim to bring the vehicle to a safe stop within the target stop area.
- 5.1.6.3.3.1. RMF shall aim to avoid collisions or mitigate them at the least.
- 5.1.6.3.4. The signal to activate the hazard warning lights shall be generated with the start of the intervention.
- 5.1.6.3.5. It shall be possible to override the function at any time by a distinct action of the driver.
- 5.1.6.3.6. Additional provisions for systems with the purpose of bringing the vehicle to a safe stop outside its own lane of travel.
- Leaving the original lane of travel shall only be possible on roads where pedestrians and cyclists are prohibited and which, by design, are equipped with a physical separation that divides the traffic moving in opposite directions.
- Until uniform provisions and test procedures have been agreed, the manufacturer shall provide to the satisfaction of the Technical Service as part of the assessment according to Annex 6 appropriate documentation and supporting evidence including physical tests to demonstrate a safe behaviour of the function when bringing the vehicle to a stop outside its lane of travel.
- 5.1.6.3.7. System information data
- The following data shall be provided, together with the documentation package required in Annex 6 of this Regulation, to the Technical Service at the time of type approval:
- (a) Information on how the system confirms that the driver is no longer available;

- (b) Description of the means to detect the driving environment (including other road users and obstacles and the target stop area);
- (c) Information/specification on which road types (e.g. motorway, country roads, urban areas, etc.) the system is designed to intervene and how this is ensured;
- (d) Means to override the function by a distinct action.
- (e) Description of the driver warning and information concept
- (f) In case of lane changing capability, a detailed description of the design provisions implemented to ensure safety of the manoeuvre and the means by which the vehicle detects it is in a permitted driving environment.
- (g) Information/specification of the maximum speed the system operates (e.g. also in dependence of the traffic environment (highway, urban, etc.) as well as information/specification on how the speed is reduced (e.g. adapted to surrounding traffic; no harsh braking endangering other road users) in order to come to a safe stop."

*Insert a new paragraph 12.3. (and subparagraphs), to read:*

- "12.3. Transitional Provisions applicable to the 04 series of amendments:
- 12.3.1. As from the official date of entry into force of the 04 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept UN type approvals under this Regulation as amended by the 04 series of amendments.
- 12.3.2. As from 1 September [2023], Contracting Parties applying this Regulation shall not be obliged to accept UN type approvals to the preceding series of amendments, first issued after 1 September [2023].
- 12.3.3. Until 1 September [2025], Contracting Parties applying this Regulation shall continue to accept UN type approvals to the preceding series of amendments to this Regulation, first issued before 1 September [2023].
- 12.3.4. As from 1 September [2025], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series of amendments to this Regulation.
- 12.3.5. Notwithstanding paragraph 12.3.2. and 12.3.4., Contracting Parties applying this Regulation shall continue to accept UN type approvals issued according to a preceding series of amendments to this Regulation, for vehicles which are not affected by the provisions of paragraph 5.1.6.3.6. introduced with the 04 series of amendments."
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