

Proposal for amendments to the 03 and 04 series of amendments to UN Regulation No. 79 (Steering Equipment)

The text reproduced below is based on ECE/TRANS/WP.29/GRVA/2023/6, GRVA-15-30 and GRVA-15-53. It includes input received during the fifteenth session of the Working Party on Automated and Connected Vehicles (GRVA). Proposed amendments are indicated in bold for new characters, and strikethrough for deleted characters.

I. Proposal

Paragraph 5.6.4.2.3., amend to read:

“5.6.4.2.3. The system shall only be activated (standby mode) after a deliberate action by the driver.

Activation by the driver 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 and which have at least two lanes in the direction the vehicles are driving. These conditions shall be ensured by the use of at least two independent means.

In the case of a transition from a road type with a classification permitting an ACSF of Category C, to a type of road where an ACSF of Category C is not permitted, the system shall be deactivated automatically (off mode), unless a missing second lane in driving direction is the only condition not fulfilled from the above (e.g. a connector between two highways).

Notwithstanding the activation and transition criteria above and following an activation request on any type of road by a deliberate action with the same means as for ACSF of Category B1, the ACSF of Category C may switch automatically to standby mode:

- (a) **When the system has verified that the road is of a valid type as described above; and**
- (b) **In order to avoid distraction to the driver, not before the vehicle has reached a regular lane of travel.”**

Paragraph 5.6.4.5.2., amend to read:

“5.6.4.5. Human Machine Interface (HMI)

5.6.4.5.1. Unless otherwise specified, the optical signals identified in paragraph 5.6.4.5. shall be easily distinguishable from each other (e.g. different symbol, colour, blinking, text).

5.6.4.5.2. When the system is in standby mode (i.e. ready to intervene), an optical signal shall be provided to the driver.

An automatic change into the standby mode status as defined in paragraph 5.6.4.2.3 shall be indicated to the driver in a prominent and understandable way. This indication shall be different from the optical signal of the standby mode itself (e.g. an additional popup message, blinking indication) unless an off-mode indication is displayed at least after the activation.”

II. Justification

1. When the same means is used by the driver to simultaneously activate the Automatically Commanded Steering Function of Category B1 (ACSF B1) and of Category C (ACSF C), both functions switch to standby mode when the vehicle enters an ACSF C eligible road. But if the road is non-eligible to ACSF C, then only the ACSF B1 is activated.
 2. With the current text of the regulation, once the vehicle moves to an ACSF C eligible road, the driver must operate again the means to activate the ACSF C. This second deliberate action is confusing for the driver since it makes the manipulation more complex. The current wording discourages most drivers from using this assistance function.
 3. The proposed wording permits the following, logical, cascade of actions:
 - (a) The driver has done a deliberate action to activate ACSF B1 and ACSF C (on a non-eligible road); then
 - (b) He drives into an eligible road, and is clearly informed thereof; then
 - (c) He initiates a lane change procedure by activating e.g. the direction indicator.
 4. This amendment further clarifies the requirement on the indication of when the vehicle enters an eligible road. It gives some examples of the type of indication to be given to the driver, e.g. additional popup or blinking indication, without being design restrictive.
 5. A dedicated status indication of an ACSF C off-mode is by nature already different from the standby or active indication. Therefore, the driver is already sufficiently informed on a potential status change.
 6. Regarding paragraph 5.6.4.2.3.: While entering the eligible road, the driver may be distracted or annoyed by this “prominent” indication. His attention resources shall be totally available during this phase. So the system would switch automatically to standby mode when fulfilling these two conditions: reaching an eligible and regular lane of travel. This second condition may be fulfilled for example by implementing a suitable time delay or by a direct verification of the lane of travel. These criteria should be explained, agreed between the technical service and the vehicle manufacturer.
-