

Amendment proposal for Annex 5 to the Consolidated Resolution on the Construction of Vehicles (R.E.3)

-Introduction of Remote Controlled Parking System-

The modifications to the existing text are marked in red and bold for new characters.

Paragraph 2, amend to read:

2. Scope

ADAS can be classified into three categories: information provision, warning, and control. Guidelines for limiting driver distraction from in-vehicle information systems have already been established and are used on a self-commitment basis. Regarding warnings, the ITS Informal Group submitted the "Guidelines on establishing requirements for high-priority warning signals", which was adopted at the 154th session of WP.29 in June 2011.

This document discusses control systems that support and assist the driver's driving operations. Systems covered include those that involve a certain interaction (transfer of control) between the driver and the system, but exclude those that control the driving operations independently. Therefore, this document does not discuss existing ABS (Anti-lock Braking Systems) and ESC (Electronic Stability Control), nor does it cover information provision systems such as navigation devices.

In this document, we discuss systems that are used during normal driving, such as ACC (Advanced Cruise Control system) and LKS (Lane Keeping-assistance System), **systems that are used during parking operations, such as RCP (Remote Controlled Parking)**, as well as systems used in critical situations, such as AEBS (Advanced Emergency Braking Systems), to avoid accidents and mitigate crash severity. AEBS are currently being regulated, but we include them in our discussion because they involve the transfer of control between the driver and the system.

The present principles are applicable mainly to passenger cars (M₁), but the basic philosophy is applicable to other categories of vehicles. Therefore, it is desirable that they are also applied to vehicle categories such as M₂, M₃, N₁, N₂, and N₃. The principles are expected to apply to both original equipment and aftermarket devices. It should be noted, however, that there may be some difficulties coordinating aftermarket devices with the control systems fitted by vehicle manufacturers.

Insert new line to the table of paragraph 3, to read:

3. Existing regulations

There are existing regulations which are most relevant to the principles in this document.

/ UN Regulation No. 131	Advanced Emergency Braking Systems (AEBS)
/ UN Regulation No. 79	Steering equipment

Insert new paragraph 4.5., to read:

4.5. Specific elements for certain ADAS

a) **The elements described in paragraph 4.5 only refer to the ADAS mentioned in the respective subparagraph.**

b) **RCP**

The drivers close proximity to the vehicle and a continuous activation of a remote control device by the driver during the parking maneuver has to be ensured by technical means. If the activation-button is released, the vehicle shall stop safely and immediately.

System design shall prevent the activation and operation of the RCP system or interventions into the RCP system by unauthorized remote control devices.

***Explanation:* The driver has to push the activation-button of the remote control device continuously in order to ensure that he is attentive and the parking maneuver can be aborted immediately in case of unforeseen circumstances without undue delay. It is necessary to ensure that the driver is always in close proximity to the vehicle, so that he is able to monitor the parking maneuver and the vehicle`s surroundings by his own immediate perception.**

Justification:

Regulation No. 79 allows Automatically Commanded Steering Functions, which are limited to a vehicle speed up to 10 km/h. Current UN Regulations do not set up specific requirements for RCP. Nevertheless, since numerous associated aspects are already covered by existing regulations (e.g. R-79, R-13H) it seems not necessary to establish a particular regulation for RCP systems. Due to the proceeding development of RCP systems, it is necessary to define minimum requirements in order to ensure safe operation of such systems in road traffic. As R.E.3 sets up design principles for control systems of ADAS, minimum requirements for RCP should be installed there.