

Proposal for amendments to GRRF-83-08 and GRRF-83-28

The modifications to the GRRF-83-08 and GRRF-83-28 are marked in strikethrough for deleted characters and underline for new characters with green

Paragraph 5.1.6.1.2.2., amend to read:

- 5.1.6.1.2.2. In the case of two or more consecutive interventions within a rolling interval of 180 seconds and in the absence of a steering input by the driver during the intervention, an acoustic warning **signal** shall be provided by the system during the second and any further intervention within a rolling interval of 180 seconds. Starting with the third intervention (and subsequent interventions) the acoustic **warning** signal shall continue for at least 10 seconds longer than the previous warning signal.

Justification: It is needed to insert “signal” like an acoustic warning signal previously

Paragraph 5.6.1.1.5., amend to read:

- 5.6.1.1.5. Whenever the system becomes operational, this shall be indicated to the driver. Any termination of control shall produce a short but distinctive driver warning by ~~a visual~~ **an optical warning** signal and either an acoustic **warning** signal or by imposing a ~~tactile haptic~~ **warning** signal ~~on the steering control~~ **(except for the signal on the steering control in parking manoeuvring)**.

For RCP, the requirements for driver warning shown above shall be fulfilled by the provision of ~~a visual~~ **an optical warning** signal at least at the remote control device.

Justification: It is needed to insert “warning” like an optical warning signal previously.

Paragraph 5.6.2.2.5., amend to read:

- 5.6.2.2.5. When the system is active ~~(i.e. ready to intervene or intervening)~~ and in the speed range between 10 km/h or V_{min} , whichever is higher, and V_{max} , it shall provide a means of detecting that the driver is holding the steering control **as declared by Vehicle manufacturer**

Justification: The aim of ROK’s proposal is to clarify how the driver should hold the steering control. ROK already received a question about this wording (“holding the steering control”) from Vehicle manufacturer in Korea. They asked interpretation to ROK about “what do “holding the steering control” mean ?” and “what is how to hold the steering control to be complied with this requirement”. Typically, a driver holds the steering control with two hands. However, sometimes any driver hold the steering control with one hand, even with fingers or slightly hold the steering control because recently a vehicle have good straight line performance. It is important to define what hand-off is and the system can calculate the timing required to initiate a warning only after defined definitely what hand-off is. Also there may many means(e.g. contact sensor, one or two pressure sensor, etc.) to detect whether the driver is holding the steering control or not, by the developing concept of Vehicle manufacturer, so I proposed this wording to avoid technical constraints and for more clarification without any interpretation.

If, after a period of no longer than 15 seconds the driver is not holding the steering control, an optical warning **signal** shall be provided. **This signal may be the same as the signal specified below in this paragraph.**

The optical warning signal shall indicate to the driver to place their hands on the steering control. It shall consist of pictorial information showing hands and the steering control and may be accompanied by additional explanatory text or warning symbols. See examples proposed in GRRF-83-28 (UK proposal)*

Foot note : The outline of hands and the steering control shown is not intended to be restrictive, but is the recommended outline. Alternative other outlines of hands and the steering control may be used in order to better represent the outline

Justification: ROK think that the pictorial example United Kingdom proposed will be helpful to understand this requirement. However, it may be misunderstood that optical warning signal with outline of the steering control and hands shall be made of the exactly same pictogram as the example U.K proposed and even if not, the design concept of warning signal outline defined by vehicle manufacturer shall be not restrictive, too. We can find the case from the footnote 17 of Table 1 of UN Regulation. 121 (Identification of controls, tell-tales and indicators). So, ROK proposed the foot note above to avoid a misunderstanding or restriction.

If, after a period of no longer than 30 seconds the driver is not holding the steering control, an acoustical warning shall be provided in addition to the signal mentioned above **at least the hands or steering control in the pictorial information provided as optical warning signal shall be shown in red and an acoustic warning signal shall be provided.**

The warnings **signals** shall be active until the driver is holding the steering control, or until the system is deactivated, either manually or automatically.

~~If the acoustic warning continues for more than 30 seconds, the system shall be automatically deactivated. In this case~~ **The system shall be automatically deactivated at the latest 30 s after the acoustic warning signal has started. After deactivation** the system shall clearly inform the driver about the system status by an **acoustic** emergency signal which is different from the **previous acoustic** warning signal, for at least five seconds or until the driver holds the steering control again.

The above requirements shall be tested in accordance with the relevant vehicle test(s) specified in Annex 8 of this Regulation.

"Annex 8

Test requirements for corrective and automatically commanded steering functions

Paragraph 3.2.4.2., amend to read:

3.2.4.2. The test requirements are fulfilled if:

The optical warning **signal** was given at the latest 15 s after the steering control has been released and ~~the optical warning signal~~ remains until ACSF is deactivated.

The acoustic warning **signal** was given at the latest 30 s after the steering control has been released and ~~the acoustic warning signal~~ remains until ACSF is deactivated.

The ACSF is deactivated at the latest 30 s after the acoustic **warning** signal has started, with an **acoustic** emergency signal of at least 5 s, which is different from the **previous acoustic** warning signal."

Justification: "The acoustic warning signal" shall be deleted like same as above(the optical warning signal was striked out) and because the subject was duplicated.