

Industry proposal to amend GRRF-82-09

The changes added to GRRF-82-09 are indicated in **purple**.

I. Proposal

Paragraph 5.6.2.2.2., amend to read:

"5.6.2.2.2. When the system is temporarily not available, for example due to inclement weather conditions, the system shall clearly inform the driver about the system status by an optical signal, except if the system is in the OFF mode, e.g. switched off.

When the system reaches its boundary conditions (e.g. the specified maximum lateral acceleration $a_{y_{\text{max}}}$) and the system detects that ~~the vehicle is going to leave the lane~~ any front tyre of the vehicle is crossing the lane marking, the system shall clearly inform the driver about this system status by ~~an optical and acoustical signal~~ an optical signal and additionally by an acoustic or haptic signal.

For vehicles of categories M2 M3 N2 and N3, this requirement is deemed to be fulfilled if the vehicle is equipped with a LDWS system fulfilling the technical requirements of UN R130."

II. Justification

Justification of the changes vs GRRF-82-09;

- The proposed new wording for the triggering condition of the warning ("any front tyre of the vehicle is crossing the lane marking") is technically more specific than the original ("the vehicle is going to leave the lane").
- The use of a haptic signal as an alternative to the acoustic signal achieves the goal pursued by Germany. This proposal is consistent with the warning strategy of AEBS specified in UN R131.
- In the case of M2 M3 N2 N3 vehicle categories, it is proposed to take as a base the requirements specified in UN R130 LDWS regulation, which achieves the goal.

If a B1-system is reaching its boundary conditions (e.g. in a highway curve) and the additional steering input of the driver is not strong enough to stay in the lane the car may cross the lane marking. In this case there would only a simple optical warning to the driver be sufficient without this proposed supplement to 5.6.2.2.2.. If the driver is looking onto the street in front during this moment as he should do to surveil the traffic, he may not see the single optical warning at the dashboard and may get surprised, when the vehicle crosses the lane marking suddenly and the system gave no clear information to the driver that it had reached its boundary conditions maybe seconds before. With an additional acoustical warning in the case of imminent danger to leave the lane the driver could be informed earlier about the system status without leaving the lane and gets a better chance to keep the vehicle in the lane in this situation.
