

Consultation concerning treatment of Lane Keeping Assist System in Regulation No. 79

Note: The text reproduced below was prepared by the experts from Sweden and Japan in order to deal with the new technology necessary for Lane Keeping Assist System in the Regulation No.79.

Sweden and Japan would like to invite the members of GRRF to the ad-hoc meeting to discuss the possibilities to amend Regulation No. 79 regarding requirements on corrective steering.

If the members find it interesting, a proposal for amendment to the regulation will be presented at the ad-hoc meeting.

BACKGROUND

- In recent years, progress of the technologies concerning advanced driver assistance system(ADAS) in the automotive field is remarkable.
- Also in UN-ECE/WP29, several UN regulations concerning ADAS such as AEBS and LDWS had already been established.
- LKAS is effective from the viewpoint concerning preventions a lane departure accident. And according to an estimation in Japan, if all of lane departure accidents were prevented by ideal Lane Keeping Assist System (LKAS), 44 fatalities could be reduced per one year in addition to the reduction by LDWS.
- At the present, such kind of LKAS as surely performs to prevent lane departure without driver's appropriate steering operation when, for example, even if the driver is in the imperious condition such as disturbance of consciousness etc. is still under development. On the other hand, various kinds of LKAS for passenger cars which assist the driver's steering operation to keep the lane or assist the driver's corrective steering operation when lane departure is possible, have already been developed and sold in the market.
- Although LKAS corresponds to the definition of corrective steering in R79, there is no basic requirement, resulting in the situation where its basic functions are diverse. In this situation, devices which cannot be expected to have sufficient effectiveness of improvement of safety also be categorized as LKAS, and may become subject to type approvals.
- Therefore Sweden and Japan would like to seek the possibility to propose the amendment of R79 to introduce minimum technical requirements for LKAS.
 - Specifically we will study the possibility to add for the purpose of granting appropriate type approval of R79 to the vehicles with LKAS, some provisions, which list the minimum necessary technical requirements as LKAS .
 - Japan is ready to play a central role in the study confirming the concerns shown by the contracting parties and the industries. Therefore Japan proposes to hold the ad-hoc

meeting between now and until the 76th GRRF in February, and the document for the amendment to the current regulation based on the study in the meeting.

- Japan would like the cooperation of interested people.

INCOMPATIBILITY WITH REGULATION No.79 REQUIREMENTS

Although LKAS corresponds to the definition of corrective steering in R79, there is no concrete minimum technical requirement. Then there is a concern that some systems which cannot sufficiently assist the driver may be type approved, and also there is a concern that LKAS users may be confused because its functional conditions etc. are diverse.

To be concrete, by listing the necessary minimum technical requirements concerning LKAS, we could speed up the spread of such LKAS as contributes to the improvement of safety, and avoid disturbing the development of the future LKAS technologies. The minimum technical requirements could include the following.

- (1) The system shall notify the driver when the system stops the control because it can't detect the lane.
- (2) The system shall not disturb the override steering operation by the driver.

...etc.

The technical requirements which mentioned in GRRF-74-40 will be further considered, and they are added to the new Annex to the R79 as the technical requirements concerning LKAS.

MORE INFORMATION:

The answers to the questions in 74th GRRF are shown in the Informal document GRRF-75-XX.

POSSIBLE SCHEDULE

- Around in November 2013 ad-hoc meeting
- Collection of comments, views, etc. regarding the draft amendment (addition of the Annex to R79)
- 76th GRRF in February 2014 Submission of Proposal to amend R79 amendment from Sweden and Japan, and discussion