

Formulating the UN Regulation concerning Lane Keeping Assist System (LKAS) (Draft of Discussion Point)

Purpose :

Formulate a new UN Regulation of LKAS as a safety system which aims at the prevention of accidents that could be caused by the departure of the vehicle from lanes. Since the requirement concerning Lane departure warning device (LDWS) was established for the prevention of accidents caused by departure of the vehicle from lanes, LKAS regulation should formulate the technical requirements of performance oriented for the advanced vehicle system to assist to avoid the lane departure on the basis of the LDWS UN Regulation.

Definitions of System:

The system which aims at the prevention of accidents caused by departing of the vehicle from lanes shall have the functions to assist to keep the vehicle in the lanes. However, the departure like at lane change by the driver's intention shall be excluded.

Major issues:

1. Purpose and definition of system are set as above mentioned.
2. Activating condition
 - Basically the same as LDWS with regards to the vehicle speed and shape of road.
 - Vehicle speed: at least 60km/h above
 - Shape of road: a minimum radius of 250 m
3. Provision to be considered

A influence to following vehicles should be considered.

 - Activation of the system shall not result in any critical situations.
 - Activating of the system shall not cause the significant speed reduction..
(e.g.; The requirement of the vehicle speed reduction would be necessary.)
4. Initialization of the system
 - LDWS function: ON as its default.
 - LKAS steer control function: Driver can choose to set "main switch on or off" of stand-by
 - When LKAS steer control function activates, the LDWS function shall be ON.

- When LKAS steer control function is off, the system shall warn the driver.
5. Override function
- The system shall have the override function by the driver.
6. The display for the operating status
- When LKAS operates a steering, it shall provide the driver with information regarding the operating status of LKAS either by the means of optical, acoustic or haptic except when the LDWS is available.
7. Performance requirements for LKAS
- Basically the same as LDWS.
- LKAS shall start to activate at least when the outside of the tire closest to the lane markings crosses a line 0.3m beyond.