

Proposal for amendments to

ECE/TRANS/WP.29/2020/81

The text reproduced below was prepared by the experts from the EC. The proposal is aimed at modifying the text of document ECE/TRANS/WP.29/2020/81 (Regulation 157 on ALKS) as amended by ECE/TRANS/WP.29/GRVA/2020/32 and ECE/TRANS/WP.29/GRVA/2020/33. Modifications to the original text of ECE/TRANS/WP.29/2020/81 (Regulation 157 on ALKS) are given in **red**. Deletions are indicated by ~~strikethrough~~ text.

Annex 4 - Appendix 2

Information document form for automated **driving lane keeping** systems to be provided by the manufacturer for the approval

Introduction	
1. Automated Driving System Description Automated Lane Keeping System	
1.1. Operational Design Domain (Speed, road type, country, Environment, Road conditions, etc)/ Boundary conditions/ Main conditions for Minimum risk manoeuvres and transition demands.....	
1.2. Basic Performance (e.g. Object and Event Detection and Response (OEDR) ...)	
1.3. The Means to Activate, Override or Deactivate the System.	
2. Description of the ADS functions of "The System" including control strategies	
2.1. Main automated Driving Functions (functional architecture, environmental perception).....	
2.1.1. Vehicle-internal Functions	
2.1.2 Vehicle-external Functions (e.g. backend)	
2.3. Control Strategies	
3. Overview major components (units) of the ADS "The System"	
3.1. Control Units	
3.2. Sensors	
3.3. Actuators Maps/Positioning	
3.4. Other Hardware	
4. ADS System Layout and Schematics	
4.1. Schematic System Layout including sensors for the environmental perception (e.g. block diagram).....	
4.2. List and Schematic Overview of Interconnections (e.g. block diagram).....	
5. Specifications	
5.1. Specifications in Normal Conditions Means to check the correct operational status of the system.....	
5.2. Specifications in Emergency Conditions Means implemented to protect against simple unauthorized activation/operation and interventions into the system.....	

- 5.3. Acceptance Criteria.....
- 5.4. Demonstration of Compliance.....
- 6. Safety Concept Implementation**
- 6.1. Safe Operation— Vehicle Manufacturer Safety Statement
- 6.2. Outline Software Architecture (e.g. block diagram)
- 6.3. Means by Which the Realization of the System Logic is Determined
- 6.4. General explanation of the Main Design Provisions for Safe Operations built into "The System" so as to generate safe operation and interaction with other road users under fault conditions, under operational disturbances and the occurrence of planned/unplanned conditions that would exceed the ODD.
- 6.5. Transition Demand General description of failure handling main principles, fall-back level strategy including risk mitigation strategy (minimum risk manoeuvre).....
- 6.6. Human-Machine Interface Driver, vehicle occupants and other road users interaction including warning signals and transition demands to be given to driver.
- 6.7. Protection against Simple Unauthorized Activation/Operation and Interventions.....
- 6.8. Verification and Validation by the Manufacturer for the performance requirements specified elsewhere in the regulation including the OEDR, the HMI, the respect of traffic rules and the conclusion that that the system is designed in such a way that it is free from unreasonable risks for the driver, vehicle occupants and other road users.
- ~~7. Verification and test by the authorities~~
- ~~7.1. Verification of the basic function of "The System".....~~
- ~~7.2. Examples for checking the system reaction under the influence of a failure or an operational disturbance, emergency conditions and boundary conditions.....~~
- 8. Data Storage System**
- 8.1. Type of Data Stored
- 8.2. Storage Location
- 8.3. Recorded Occurrences and Data Elements
- 8.4. Means to Ensure Data Security and Data Protection.....
- 8.5. Means to Access the Data.....
- 9. Cyber security (cross reference to the cyber regulation is possible)**
- 9.1. General Description of the Cyber Security and Software Update Management Scheme
- 9.2. General Description of the Different Risks and Measures Put in Place to Mitigate these Risks.....
- 9.3. General Description of the Update Procedure.....
- 10. Information Provisions to Users**
- 10.1. Model of the Information Provided to Users (including expected driver's tasks within the ODD and when going out of the ODD).
- 10.2. Extract of the Relevant Part of the Owner`s Manual.....

ANNEX I. Applicable Regulations, Codes and Standards

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