- New text proposal for the requirements of a CAT B1 system
- The numbering is only preliminary
- To be included in Regulation 79

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5.6.5. Special Provisions for ACSF of Category B1

Any system of Category B1 ACSF shall fulfill the following requirements within the boundary conditions declared by the vehicle manufacturer in the System information data.

5.6.5.1. General

5.6.5.2.1 The activated system shall at any time ensure that the vehicle does not cross any lane marking.

5.6.5.1.2 The vehicle shall be equipped with a means for the driver to activate and deactivate the system. The deactivation shall be possible at any time.
The activated system shall assist the driver in keeping the vehicle in the chosen lane

5.6.5.1.3 The system shall be designed so that excessive intervention of steering control (e.g. an excessive steering torque) is suppressed to ensure the steering operability by the driver and to avoid unexpected vehicle behavior, during its operation.

The end of the intervention shall be such that the system reduces its directional control to zero in a progressive manner, to ensure easy and safe handling of the vehicle, as defined in paragraph 5.1.1. The directional control fade-out strategy shall be at the discretion of the vehicle manufacturer.

The steering control effort necessary to override the directional control provided by the system shall not exceed the value specified in paragraph 6.2.4.2. for an intact steering equipment.

5.6.5.2. Operation of ACSF

5.6.5.2.1 If the system is active a visual signal shall be provided to the driver.

5.6.5.2.2 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 a visual signal, except if the system is in the OFF mode, e.g. switched off.

5.6.5.2.3 A system failure shall be signaled to the driver. The visual signal mentioned in 5.6.5.2.2 may be used for this purpose.

5.6.5.2.4 When the system is active (i.e. ready to intervene or intervening), it shall provide a means of detecting that the driver is holding the steering control.
If the driver is not holding the steering control for a time span not exceeding 30s, a warning shall be immediately provided until this is no longer the case or until the system is deactivated, either manually or automatically.

This warning shall be provided by at least two means out of optical, acoustic and haptic given simultaneously or in a cascade.

If this warning continues for more than 30s the system shall be automatically deactivated. In this case the system shall clearly inform the driver about the system status by an emergency signal for at least 5s which is different from the warning signal.

5.6.5.3. System information data

5.6.5.3.1. Following data shall be provided together with the documentation package required in Annex 6 of this regulation to the Technical Service at the time of type approval

5.6.5.3.1.1. The conditions under which the system can be activated and the boundaries for operation (e.g. V_{smax} , V_{smin}, ay_{smax}),

5.6.5.3.1.2 Information about how the system detects that the driver is holding the steering control.

5.6.5.3.1.3 Documentation/information about the system software and version.

5.6.5.3.1.4 Information about how the failure warning signal status and the confirmation of the valid software version can be checked via the use of an electronic communication interface.