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Informal Document - ACSF-14-09

NL comments in green
This document is based on ACSF-14-04

2.4.14. **A 'lane change procedure' in case of Category C2 starts … etc…etc.**

Drivers will use the C1 and C2 systems in the same way and will not realize that the actual difference is that the C2-system does not have the appropriate sensors to do a proper lane change. Therefor a cat. C2 is undesirable.

5.6.5.5. **HMI**

5.6.5.5.~~5~~7. **The system shall provide a means of detecting that the driver is holding the steering control** ~~and shall warn the driver in accordance with the warning strategy set out for Category B1.~~ **at the time the lane change manoeuvre starts. If the driver is not holding the steering wheel the lane change manoeuvre shall be cancelled.**

Justification; The requirement is already mentioned par. 5.6.5.6.8. (Aborting). Since cat. C is an "hands-on" system it shall be assured that at least at the moment the manoeuvre starts the driver is holding the steering wheel. The warning strategy set out for cat. B is not suitable in this case since the lane change procedure last less than 3 + 5 seconds and the cat. B1 warning strategy makes up to 15s hands off possible.

5.6.5.6. **Lane change procedure**

5.6.5.6.5 **The system may delay initiation of the lane change manoeuvre for a period not exceeding [10] seconds after the deliberate action of the driver.**

The flashing of the direction indicators shall be suppressed until max. 3 s before the lane change manoeuvre starts.

~~to confirm the traffic condition specified in paragraph 5.6.5.2.12.4.~~ **~~This delay shall be indicated to the driver.~~** ~~In this case the system shall inform the status to the driver.~~ ~~If the manoeuvre has not begun with this [10] seconds the execution of the procedure shall be cancelled.]~~

Justification; flashing the direction indicators for more than 3 s confuses the other road users. At the time the driver initiates the lane change procedure the system is able to know if a lane change is possible in 3 s. If the lane change is not possible the flashing of the direction indicators shall be suppressed until 3 s before the manoeuvre starts.

5.6.5.7. **Critical situation**

The vehicle with ACSF Category [C1] shall abort a lane change procedure either if another vehicle is detected in the lane that the driver intends to move into, and has a time to collision of less than [3.5] seconds or if the distance to the rear to the other vehicle is less than 15m both measured at the time the lane change manoeuvre starts.

We think the distances should be based upon reaction time, braking time, a safe distance and a speed difference of up to 50 km/h. The vehicle to be detected should be the worst case on a "highway", a small motorcycle.

Insert a new paragraph 3.5 in Annex 8, to read:

[3.5. Tests for ACSF Category [C1] Systems

3.5.2. Abort of lane change procedure test ~~(similar FU2?)~~

3.5.2.1. The test vehicle shall be driven with an activated ACSF C1 (stand-by mode) within either of the lanes of a straight track that has at least two lanes with road markings on each side of the lane.

Another vehicle shall be driven in the adjacent lane, with same speed, within the critical distance defined in paragraph 5.6.5.7. of this regulation. A regular high volume series production passenger car of category M1 AA saloon shall be used.

A lane change shall then be commanded by the driver.

3.5.2.2. The requirements of the test are fulfilled if:

The lane change procedure does not start, or

The lane change procedure starts, the lane change manoeuver is not performed and the lane change procedure is cancelled no later than [10s] after the deliberate action of the driver, as specified in paragraph 5.6.5.6.5. of this Regulation. The system informs the driver that the lane change manoeuver is delayed, as specified in 5.6.5.5.4.
The flashing of the direction indicators is suppressed until 3 s before the lane change manoeuvre started.

Justification, as a consequence of the proposed paragraph 5.6.5.6.5.