

(#7th Informal Group dated on 15-17 September)

Japan proposal for AEBS proposal

Japan would like to propose the requirement for avoiding the driver's overreliance to AEBS Regulation.

(The proposing paragraph numbers are based on the AEBS/LDWS-TF02-03-Rev.2)

Paragraph 5.6., amend to read;

5.6. General requirement for the Emergency braking phase

5.6.1. The Emergency braking phase shall not start before TTC 3.0 seconds.

(Remarks: TTC is defined 22.4 of AEBS/LDWS-TF02-03-Rev2)

5.6.2. The deceleration by braking with the purpose of warning signal for the driver before the emergency braking phase shall be less than 4.0 m/s^2 .

5.6.3. In the case of N3 category, the deceleration by the AEBS on the emergency braking phase shall not be less than 4.0 m/s^2

5.6.4. The deceleration on emergency braking phase shall be generated sharply.

Justification

General:

Although the AEBS can avoid the collisions, some collisions can not be avoided by the system depending on the road traffic situations. Therefore, there is a possibility that the driver may have "overreliance" due to having too much expectation on the system for collision avoidance. Therefore, the requirement for avoiding the driver's overreliance is necessary in this Regulation. Moreover, braking with higher deceleration at early timing will interfere driver's maneuver. As a consequence, such system should have the consideration for the driver's overreliance and interference for driver's operation as well. In addition, definition of the "brake at the emergency situation" is necessary because the name of this system is "Advanced Emergency Braking System". Therefore, the braking at the emergency situation has to be applied in the short period due to very short TTC. As the AEBS is the sudden braking for the emergency situation and the driver figures out he/she is not in the

ordinary driving situation, he/she would feel fear and would not have the overreliance. Besides, if automatically braking after the timing of driver's ordinary avoidance maneuver, there is no interference to the driver's maneuver.

Specific:

5.6.1.

The possible limitation of the ordinary driver's avoidance maneuver under 100% overlapping ratio between the vehicle equipped with AEBS and the forward vehicle is TTC 3.0 seconds.

5.6.2.

4.0m/s^2 indicates the emergency braking deceleration. (See the requirement for ESS.) The deceleration before the emergency braking phase should be less than 4.0m/s^2 specified as the emergency braking.

5.6.3.

The braking deceleration during the emergency braking phase should be more than 4.0m/s^2 due to the imminent emergency situation, excepting M2 and M3 because the influence to the passengers should be considered. Although the requirement for N2 category is necessary, it will be better to be discussed in N2 discussion.

5.6.4.

There is a possibility that the driver may have the "overreliance" due to having too much expectation on the system. Therefore, the braking of the emergency braking phase should give the driver fear by the sharp deceleration on purpose.