

Link between AEBS and EVSC

A. Proposal

Paragraph 5.1.1., amend to read (deletion of the square brackets):

“5.1.1. Any vehicle fitted with an AEBS complying with the definition of paragraph 2.1. shall meet the performance requirements contained in paragraphs 5.1. to 5.6.2. of this Regulation and shall be equipped with an anti-lock braking function in accordance with the performance requirements of Annex 13 of Regulation No.13 and a Vehicle Stability Function in accordance with the performance requirements of Annex 21 of Regulation No.13.”

B. Justification

The proposed AEBS performance requirements mandate high decelerations within a specified emergency braking phase. For some vehicle combinations (particularly semi-, full- and multi-trailer-combinations) and specific driving conditions (e.g., driving in a curve on low adhesion) these requirements can lead to the loss of vehicle stability, jack-knife or cross standing situations that may cause even more fatalities than a simple front/rear crash.

These situations can be managed by EVSC because this technology is capable to apply a counter yaw torque. They cannot be managed by ABS. Similarly, hard braking in a curve can provoke in certain situations roll-over forces which can be managed by EVSC but not by ABS.

One could argue that AEBS is designed to operate in case of driver's drowsiness/distraction, by consequence when the vehicle is expected to run straight. This however cannot be ensured because the driver could well be distracted in a curve, and because the first reaction of the driver at the time of the warning is an avoiding maneuver (see document AEBS/LDWS-05-08). In some conditions, loss of vehicle stability can even occur when the vehicle travels in a straight line, e.g. a lateral slope of the road or an unequal vehicle load (left/right).

This is OICA's last call to the GRRF informal group that, for safety reasons, only vehicles fitted with EVSC should be equipped with AEBS.

Should some body not support this safety link, it takes as a direct consequence the full responsibility for any fatality caused by the absence of this requirement in the future regulation.