

5.2.4. The activated system shall be able to bring the vehicle to a complete stop behind a stationary vehicle, a road user or a blocked lane of travel. This shall be ensured up to the maximum operational speed of the system.

5.2.5. The activated system shall detect the risk of an imminent collision e.g. with another road user ahead or beside the vehicle, due to a harsh decelerating lead vehicle, a suddenly cutting in vehicle or a suddenly appearing obstacle and shall automatically perform an appropriate emergency manoeuvre as specified in paragraph 5.3.

**5.2.5.1. The activated system shall avoid a collision with a leading vehicle which decelerates up to its full braking performance provided that there was no undercut of the minimum following distance the ALKS vehicle would adjust to a leading vehicle at the present speed due to a cut in manoeuvre of this lead vehicle.**

**5.2.5.2. The activated system shall detect the risk of an imminent collision with a suddenly cutting in vehicle and avoid a collision,**

- provided the cutting in vehicle maintains its longitudinal speed and
- when the distance between the vehicle's front and the cutting in road user's rear corresponds to a time-to-collision calculated by the following equation,:

**Parameters defining a manoeuvre that shall be avoided have to be reviewed.**

$$[TTC_{LaneIntrusion} > v_{rel} / (2 \cdot 6 \text{ m/s}^2) + [0.35 \text{ s}]]$$

Where:

$v_{rel}$  = relative velocity between both vehicles, positive for vehicle being faster than the cutting in vehicle

$TTC_{LaneIntrusion}$  = The time-to-collision value when foremost point of the intruding vehicle has fully crossed the lane marking.]

**5.2.5.3. The activated system shall detect the risk of an imminent collision with an unobstructed crossing adult pedestrian in front of the vehicle and avoid a collision. This shall be tested according to the test procedure in UN Regulation No. 152.**

5.2.5.3. It is recognised that the fulfilment of the requirement in paragraph 5.2.5. may not be fully achieved in other conditions than those described above. However, the system shall not deactivate or unreasonably switch the control strategy in these other conditions. This shall be demonstrated in accordance with Annex Y [CEL] of this Regulation

To be inserted into the Emergency Manoeuvre section

**5.3.x Any longitudinal deceleration demand of more than 5.0 m/s<sup>2</sup> of the system shall be considered to be an emergency manoeuvre.**