

5.2.1.4. Speed reduction by braking demand

In absence of driver's input which would lead to interruption according to paragraph 5.3.2., the AEBS shall be able to achieve a relative impact speed that is less or equal to the maximum relative impact speed as shown in the following table, **provided**:

- (a) **vehicle external influences allow for the required deceleration, e.g.**
 - On flat, horizontal and dry roads affording good adhesion;
 - In absence of weather conditions affecting the dynamic performance of the vehicle (e.g. no storm, not below 0°C);
- (b) **the vehicle state itself allows for the required deceleration, e.g.**
 - in maximum mass and mass in running order conditions
 - **tyres in an appropriate state**
 - **brakes properly operational**
 - **no uneven load distribution**
 - **deceleration not reduced by a hitched trailer**
- (c) **there are no environmental and infrastructural influences affecting the physical sensing capabilities, e.g.**
 - In ambient illumination conditions of at least 1000 Lux without blinding of the sensors (e.g. direct blinding sunlight);

However, additional conditions frequently present in typical real driving conditions with significant risk of required AEB interventions shall not lead to reduced performance.

- (d) **the situation is unambiguous, e.g.**
 - For collisions with unobstructed and constantly travelling or stationary targets;
 - In situations where the vehicle longitudinal centre planes are displaced by not more than 0.2 m;
 - When driving straight with no curve, and not turning at an intersection.

In other conditions the system shall not deactivate or unreasonably switch the control strategy. This shall be demonstrated in accordance with chapter 6 and Annex 3 of this Regulation.

5.2.1.1. Collision warning

When a collision with a preceding vehicle of category M, N or O is detected in the same lane with a relative speed above that speed up to which the subject vehicle is able to avoid the collision (within the conditions specified in paragraph 5.2.1.4), is imminent, a collision warning shall be provided as specified in paragraph 5.5.1., and shall be triggered at the latest 0.8 seconds before the start of emergency braking.

However, in case the collision cannot be anticipated in time to give a collision warning 0.8 seconds ahead of an emergency braking a collision warning as specified in paragraph 5.5.1. shall be provided no later than the start of the emergency braking.

The collision warning may be aborted if the conditions prevailing a collision are no longer present.

This shall be verified according to paragraphs 6.4. and 6.5.

[Additionally, the provisions as laid out in para 5.2.1.4 which cannot be verified by the test method as specified in paragraphs 6.4. and 6.5. may be verified with a reproduceable and repeatable appropriate alternative test setup, provided it represents conditions frequently present in typical real driving conditions with significant risk of required AEB interventions.]