

Car2Bicycle Step 1

5.2.3. Car to cyclist crossing scenario

5.2.3.1. Collision warning

When the AEBS has detected the possibility of a collision with a cyclist crossing the road at a constant speed of 15 km/h, a collision warning shall be provided as specified in paragraph 5.5.1. and shall be provided no later than the start of emergency braking intervention.

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

5.2.3.2. Emergency braking

When the system has detected the possibility of an imminent collision, there shall be a braking demand of at least 5.0 m/s² to the service braking system of the vehicle.

The emergency braking may be aborted if the conditions prevailing a collision are no longer present

This shall be tested in accordance with paragraph 6.8. of this Regulation.

5.2.3.3. Speed range

The system shall be active at least within the vehicle speed range between 35 km/h and 60 km/h and at all vehicle load conditions, unless deactivated as per paragraph 5.4.

5.2.3.4. Speed reduction by braking demand

The system shall be able to achieve an impact speed that is less or equal to the maximum relative impact speed as shown in the following table under the conditions according to the test specification in paragraph 6.8.

Maximum Impact Speed (km/h) for M₁*

<i>Subject vehicle speed (km/h)</i>	<i>Maximum mass</i>	<i>Mass in running order</i>
35	15	15
40	20	20
45	25	25
50	30	30
60	40	40

Maximum Impact Speed (km/h) for N₁ vehicles*

<i>Subject vehicle speed (km/h)</i>	<i>Maximum mass</i>	<i>Mass in running order</i>
35	25	20
40	30	25
45	35	30
50	40	35
60	50	45

Car2Bicycle Step 2

5.2.3. Car to cyclist crossing scenario

5.2.3.1. Collision warning

When the AEBS has detected the possibility of a collision with a cyclist crossing the road at a constant speed of 15 km/h, a collision warning shall be provided as specified in paragraph 5.5.1. and shall be provided no later than the start of emergency braking intervention.

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

5.2.3.2. Emergency braking

When the system has detected the possibility of an imminent collision, there shall be a braking demand of at least 5.0 m/s² to the service braking system of the vehicle.

The emergency braking may be aborted if the conditions prevailing a collision are no longer present

This shall be tested in accordance with paragraph 6.7. of this Regulation.

5.2.3.3. Speed range

The system shall be active at least within the vehicle speed range between 20 km/h and 60 km/h and at all vehicle load conditions, unless deactivated as per paragraph 5.4.

5.2.3.4. 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 an impact speed that is less or equal to the maximum relative impact speed as shown in the following table:

- (a) with unobstructed perpendicularly crossing cyclist with a speed between 5 and 15 km/h;
- (b) in unambiguous situations (e.g. not multiple bicycles)
- (c) on flat, horizontal and dry roads;
- (d) in maximum mass and mass in running order conditions;
- (e) in situations where the anticipated impact point of the crankshaft of the bicycle is displaced by not more than 0.2 m compared to the vehicle longitudinal centre plane;
- (f) in ambient illumination conditions of at least 2000 Lux without direct blinding sunlight.
- (g) in absence of weather conditions affecting the dynamic performance of the vehicle (e.g. no storm, not below 0°C) and
- (h) in absence of extreme driving conditions (e.g. harsh cornering).

It is recognised that the performances required in this table may not be fully achieved in other conditions than those listed 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 3 of this Regulation.

Maximum Impact Speed (km/h) for M₁ *

<i>Subject vehicle speed (km/h)</i>	<i>Maximum mass</i>	<i>Mass in running order</i>
25	0	0
30	0	0
35	10	0
40	20	20
45	25	25
50	30	30
55	35	35
60	40	40

*/ For subject vehicle speeds between the listed values (e.g. 53 km/h), the maximum impact speed (i.e. 40 km/h) assigned to the next higher subject vehicle speed (i.e. 55 km/h) shall apply.

For masses above the mass in running order, the maximum relative impact speed assigned to the maximum mass shall apply.

Maximum Impact Speed (km/h) for N₁ vehicles*

<i>Subject vehicle speed (km/h)</i>	<i>Maximum mass</i>	<i>Mass in running order</i>
25	0	0
30	10	0
35	15	15
40	20	20
45	25	25
50	30	30
60	35	35

*/ For subject vehicle speeds between the listed values (e.g. 53 km/h), the maximum impact speed (i.e. 40 km/h) assigned to the next higher subject vehicle speed (i.e. 55 km/h) shall apply.
For masses above the mass in running order, the maximum relative impact speed assigned to the maximum mass shall apply.

- 12.7. Transitional Provisions applicable to the 02 series of amendments:
- 12.7.1. As from the official date of entry into force of the 02 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 02 series of amendments.
- 12.7.2. As from [1 July 2024], Contracting Parties applying this Regulation shall not be obliged to accept type approvals to the any preceding series of amendments of this Regulation, first issued after [1 July 2024].
- 12.7.3. Until [1 July 2026], Contracting Parties applying this Regulation shall accept type approvals to the preceding series of amendments to this Regulation, first issued before [1 July 2024].
- 12.7.4. As from [1 July 2026], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the original version of this Regulation.
- 12.7.5. Notwithstanding paragraph 12.7.4., Contracting Parties applying this Regulation shall continue to accept type approvals issued according to the preceding series of amendments of this Regulation, for vehicles which are not affected by the changes introduced by the 02 Series of amendments.
- 12.7.6. Contracting Parties applying this Regulation shall not refuse to grant type approvals according to any preceding series of amendments to this Regulation or extensions thereof.
- 12.8. Transitional Provisions applicable to the 03 series of amendments:
- 12.8.1. As from the official date of entry into force of the 03 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 03 series of amendments.
- 12.8.2. As from [1 July 2026], Contracting Parties applying this Regulation shall not be obliged to accept type approvals to the any preceding series of amendments of this Regulation, first issued after [1 July 2026].
- 12.8.3. Until [1 July 2028], Contracting Parties applying this Regulation shall accept type approvals to the preceding series of amendments to this Regulation, first issued before [1 July 2026].

- 12.8.4. As from [1 July 2028], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the original version of this Regulation.
- 12.8.5 Notwithstanding paragraph 12.8.4., Contracting Parties applying this Regulation shall continue to accept type approvals issued according to the preceding series of amendments of this Regulation, for vehicles which are not affected by the changes introduced by the 03 Series of amendments.
- 12.8.6 Contracting Parties applying this Regulation shall not refuse to grant type approvals according to any preceding series of amendments to this Regulation or extensions thereof.