

Proposal from the European Commission on behalf of the GRRF informal group on AEBS/LDWS for amendments to the document GRRF/2011/23.

The changes indicated in bold and strikethrough characters in the base document GRRF/2011/23 are assumed to be adopted, and changes to document GRRF/2011/23 are shown in bold for new or strikethrough for deleted characters.

I. Proposal

Content, accept the entry for “Introduction” (deletion of the []), to read:

0. Introduction †

Paragraph 0 (Introduction), delete the square brackets, and amend to read:

“0. Introduction

The intention of this regulation is to establish uniform provisions for advanced emergency braking systems fitted to motor vehicles of the category M2, M3, N2 and N3 ~~{primarily/especially}~~ used under highway conditions.

~~AEBS is an advanced driver assist system which should be used on condition that the driver has the duty to pay the same attention to all the traffic conditions as in the driving without AEBS.~~

The system shall automatically detect a potential forward collision, provide the driver with a warning and activate the vehicle braking system to decelerate the vehicle with the purpose of avoiding or mitigating the severity of a collision in the event that the driver does not respond to the warning.

The system shall only operate in driving situations where braking will avoid or mitigate the severity of an accident, and shall take no action in normal driving situations.

In the case of a failure in the system, the safe operation of the vehicle shall not be endangered.

~~The system may provide the possibility for the driver to switch it off. In such a case, the system shall provide the driver with an indication that it is inactive driver shall receive an indication when the system is inactive. So as to ensure the long term benefit for traffic safety, and the system shall be automatically re-activated on each new ignition on start up.~~

The system shall provide as a minimum an acoustic or haptic warning, which may also be a sharp deceleration, so that an inattentive driver is made aware of a critical situation.

During any action taken by the system (the warning and emergency braking phases), the driver can, at any time through a conscious action, e.g. by a steering action or an accelerator kick-down, take control and override the system ~~to avoid the accident.~~

The regulation cannot include all the traffic conditions and infrastructure features in the type-approval process. Actual conditions and features in the real world should not result in false warnings or false braking to the extent that they encourage the driver to switch the system off.”

Paragraph 4.1, amend to read (addition of a sub-paragraph between []):

4.1. If the vehicle type submitted for approval pursuant to this Regulation meets the requirements of paragraph 5. below, approval of that vehicle shall be granted.

[A vehicle type that has been approved pursuant to Regulation N° XX on collision avoidance emergency braking systems shall be deemed to meet the requirements of this Regulation, and the type approval document and the type approval marking pursuant to Regulation N° XX on collision avoidance emergency braking systems are recognized by the Contracting Parties as the type approval document and the type approval marking pursuant to this Regulation.]

Paragraph 5.2.2., amend to read (addition of an option):

“5.2.2. Subsequent to the warning(s) of paragraph 5.2.1.1., and subject to the provisions of paragraphs 5.3.1. to 5.3.3., there shall be an [emergency braking / **deceleration**] phase having the purpose of significantly decreasing the speed of the subject vehicle. This shall be tested in accordance with paragraphs 6.4. and 6.5.”

Paragraph 6.8.1.(b), adopt the value of 4.5 m, to read (deletion of the []):

“6.8.1. Two stationary vehicles, of category M₁ AA saloon, shall be positioned:

- (a) so as to face in the same direction of travel as the subject vehicle,
- (b) with a distance of {4.5 m} between them⁴,
- (c) with the rear of each vehicle aligned with the other.”

Annex 1, paragraph 15, 5th line, adopt the entry (deletion of the []), to read:

“15. Annexed to this communication ...:

... strategy.....

{Details which enable the targets to be specifically identified.....}

”

Annex 3, the table, replace by the table below:

“Warning and activation test requirements – pass/fail values

| A | B | C | D | E | F | G | H | | |
|---|---|---|--|---|---|--|---------------------------------------|---|--|
| | Stationary target | | | Moving target | | | | | |
| | Timing of warning modes | | Speed reduction | Timing of warning modes | | Speed reduction | Target speed | | |
| | At least 1 haptic or acoustic (ref. paragraph 6.4.2.1.) | At least 2 (ref. paragraph 6.4.2.2.) | (ref. paragraph 6.4.4.) | At least 1 haptic or acoustic (ref. paragraph 6.5.2.1.) | At least 2 (ref. paragraph 6.5.2.2.) | (ref. paragraph 6.5.3.) | (ref. paragraph 6.5.1.) | | |
| M ₃ and N ₃ 1/, [3/] | Not later than 1.4 s. before start of emergency braking phase | Not later than 0.8 s. before start of emergency braking phase | Not less than 20 km/h | Not later than [1.4 / 2.0] s. before start of emergency braking phase | Not later than 0.8 s. before start of emergency braking phase | No impact | 12 ± 2 km/h | 1 | |
| N ₂ >8 t [3/] | Not later than 1.4 s. before start of emergency braking phase | Not later than 0.8 s. before start of emergency braking phase | Not less than 20 km/h | Not later than [1.4 / 2.0] s. before start of emergency braking phase | Not later than 0.8 s. before start of emergency braking phase | No impact | 12 ± 2 km/h | 2 | |
| N ₂ ≤ 8 t and M ₂ 2/, 4/ | [No restriction regarding timing and warning modes ^a] or [Blank] 4/ | [No restriction regarding timing and warning modes ^a] or [Blank] 4/ | [0 km/h ^b] or [Blank] 4/ | [No time restriction] or [Blank] 4/ | [Not later than 1.4 s. before start of emergency braking phase ^c] or [Blank] 4/ | [0 km/h ^d] or [Blank] 4/ | [12 ± 2 km/h] or [Blank] 4/ | 3 | |

1/ Vehicles of category M3 with hydraulic braking system are subject to the requirements of row 3

2/ Vehicles with pneumatic braking system are subject to the requirements of row 1

[3/ applicable only to vehicles with pneumatic rear axle suspension]

4/ Reservation from J for light M2/N2 vehicles

^a For zero speed reduction, start of emergency braking phase is time to collision. In this case, paragraph 6.4.3. does not apply.

^b Speed reduction optional.

^c For zero speed reduction, start of emergency braking phase is time to collision.

^d In this case, paragraph 6.5.3. does not apply. Speed reduction optional.”