

**Explanations and justification for the changes proposed
in documents AEBS/LDWS-11-05 and AEBS/LDWS-11-06**

In documents AEBS/LDWS-11-05 and AEBS/LDWS-11-06 the European Commission services are proposing changes to documents AEBS/LDWS-11-02 and AEBS/LDWS-11-03 respectively, as follows:

AEBS/LDWS-11-05:

Title page:

The word "automated" is to be replaced by "advanced" for reasons of consistency with the terminology used in definition 2.1.

1. Scope and purpose:

- a) **The scope for the basic AEBS Regulation (00 series of amendments) has to cover all four vehicle categories (M₂, N₂, M₃ and N₃) to be consistent with and compatible with the Regulation (EC) No 661/2009 of the European parliament and of the Council concerning the type-approval requirements for the general safety of motor vehicles (hereafter referred to as the "General Safety Regulation" or "GSR").**

Article 10 of the GSR provides for the mandatory installation of advanced emergency braking and lane departure warning systems (AEBS and LDWS) to vehicles of categories M₂, N₂, M₃ and N₃, subject to exemptions established in accordance with Article 14(3)(a). These systems shall meet the requirements of the GSR and its implementing measures.

The GSR specifies explicitly in its article 13, paragraphs 12 and 13, that for **vehicles of categories M₂, N₂, M₃ and N₃**, all new types have to comply with the AEBS installation requirements as from 1 November 2013 and all new vehicles within these four categories as from 1 November 2015.

This explicit reference to all four vehicle categories M₂, N₂, M₃ and N₃ leaves **no room for an interpretation that category M₂ and N₂ vehicles could be exempted from fulfilling the requirement to install these vehicles with AEBS systems as from 1 November 2013 for new vehicle types and as from 1 November 2015 for new vehicles.**

Therefore, the implementing measures to be adopted by the Commission to lay down detailed rules concerning the performance requirements and test procedures for type-approval of vehicles with regard to the AEBS installation requirements have to cover not only vehicles of categories M₃ and N₃ but also category M₂ and N₂ vehicles (subject to any exemptions that may be adopted in accordance with article 14(3)(a)) and need to be implemented at the same time in accordance with the deadlines specified in Article 13 of the GSR (i.e. as from 1/11/2013 for new types and from 1/11/2015 for new vehicle registrations).

From the above follows that **the scope of the phased implementation approach as currently considered by the UNECE GRRF informal group on AEBS and LDWS** (cf. AEBS/LDWS-11-02 and AEBS/LDWS-11-03) need to be changed before it can be considered to be compatible with the GSR, and this by **ensuring that the 1st implementation step also includes performance and test requirements for category M₂ and N₂ vehicles to be implemented in accordance with the deadlines specified by the GSR.**

- b) **The limitation of the scope to vehicles equipped with a pneumatic braking system and pneumatic rear suspension has to be deleted.**

The feasibility study on possible exemptions from the AEBS/LDWS installation requirements carried out on behalf of the European Commission has resulted into the conclusion that there are no technical, safety or cost/benefit grounds to justify that vehicles not equipped with a pneumatic braking system and pneumatic rear suspension should be exempted from the AEBS installation requirements.

Moreover it should be noted that maintaining this limitation in the scope for the draft proposal for 01 series of amendments (cf. document AEBS/LDWS-11-03) would render the application of this 01 series of amendments to category M₂ and N₂ vehicles almost void, as the majority of these vehicles are not equipped with pneumatic braking systems and pneumatic rear suspension.

5. Performance requirements

5.1.1 **For the proper functioning of AEBS it is sufficient for the vehicle to be equipped with ABS.** The arguments brought forward to claim that also EVSC would be a prerequisite are not valid for the typical situation described in the draft preamble to the Regulation (i.e. "a driver who is inattentive – has been driving for a long period of time without, e.g. actively using the brakes") in which the AEBS should be activated. This situation is an emergency situation in which a collision with the vehicle in front is impending, and the main purpose of the AEBS activation is to reduce the subject vehicle speed as much as possible to mitigate or avoid a collision. EVSC will not provide any noticeable increase in the braking performance of the vehicle in such an emergency case.

5.2 Performance requirements

5.2.1.1: The wording "**high risk**" has to be replaced by the earlier agreed wording "**possibility**"

6.5. Test targets

6.5.4 to be reinserted to be in line with GRRF/2011/15

6.7. Warning and activation test with a moving target

6.7.3 Proposed changes to ensure that the 1st implementation phase contains at least some requirements for vehicles of category M₂ and N₂. These should at least cover the moving target test scenario, with values for the speed reduction of the subject vehicle to be discussed and agreed upon by the IG.

AEBS/LDWS-11-06:

Title page:

The word "automated" is to be replaced by "advanced" for reasons of consistency with the terminology used in definition 2.1. (Same as for document AEBS/LDWS-11-05).

1. Scope and purpose:

No need to amend the scope in the 01 series of amendments since the scope of the 00 series of amendments has already to cover all four vehicle categories. See further the comments made above relating to document AEBS/LDWS-11-05 under the heading "scope and purpose".

6.7.3 The values for the subject vehicle speed reduction in § 6.7.3.2 and § 6.7.3.3 for vehicles of category M₂ and N₂ proposed in document AEBS/LDWS-11-05 for the moving target scenario, should be increased in the 2nd implementation phase. The proposed increase by 20 km/h for the subject vehicle speed reduction is based on the fact that for the 2nd implementation phase the speed of the moving target is not reduced by 20 km/h as it is proposed for vehicle categories M₃ and N₃. Hence, enhanced performance requirements for category M₂ and N₂ vehicles (compared to the 1st implementation phase) have to be translated into a higher subject vehicle speed reduction.

Note: An alternative approach could consist of applying the same reduction of the moving target speed (down to 10 km/h) and maintaining the required subject vehicle speed reduction values Y₁ and Y₂, specified in the 00 series of amendments of the AEBS draft regulation (1st implementation phase)

Transitional provisions

The proposed amendments to the transitional provisions are necessary to ensure consistency with the UNECE secretariat's proposal for guidelines on the scope, administrative provisions and alternative requirements in Regulations annexed to the 1958 Agreement (document WP29-152-06).