

DRAFT AGENDA

13th meeting of the GRRF informal group on

Advanced Emergency Braking and Lane Departure Warning Systems

Venue: ACEA, 85 Avenue des Nerviens, 1040 Brussels
Chairman: Mr. Johan Renders (EC) (johan.renders@ec.europa.eu)
Secretariat: Mr. Olivier Fontaine (OICA) (ofontaine@oica.net)
Duration of the session: Tuesday, 22 March 2011: starting at 9.30 am
until Thursday, 24 March 2011: ending at 4 pm

Note: Any comments or documents relating to this meeting should be sent to the OICA Secretariat (ofontaine@oica.net) in e-format, so that meeting documents can be made available to the UNECE secretariat for publication on the website of WP29.

1. Welcome and Introduction

2. Approval of the agenda

Document: AEBS/LDWS-13-01 (Chair)

3. Outcome of the 11th and 12th meeting of the AEBS/LDWS IG and of GRRF-69

Oral report by the Chair and approval of the draft minutes

Document: AEBS/LDWS-12-02 (draft minutes)

4. Outcome of GRRF69

Oral report by the Chair

Document: ECE/TRANS/WP.29/GRRF/69

5. Outcome of IG 11 + IG 12 and GRRF69 meetings on outstanding issues from the 10th IG meeting

5.1. Introductory text of the draft AEBS Regulation

Documents: AEBS/LDWS-10-05 + AEBS/LDWS-11-09

Conclusion IG12: Preamble to be discussed later, when decisions are made

5.2. Definition of “Emergency Braking Phase” (paragraph 2.11)

*Conclusion IG12: agreed that the 4m/s² are applicable to the 4 categories.
(see also point 5.8 below)*

5.3. Prerequisite for equipment with ABS and EVSC (paragraph 5.1.1.)

Document: AEBS/LDWS-13-03 (OICA)

Conclusion GRRF-69: GRRF agreed that it was necessary to clarify in paragraph 5.1.1 that vehicles exempted from EVSC were not directly exempted from AEBS requirements.

Outcome IG 12: "5.1.1. Any vehicle fitted with an AEBS complying with the definition of paragraph 2.1. shall meet the performance requirements contained in paragraphs 5.1. to 5.6.2. of this Regulation and shall be equipped with an anti-lock braking function in accordance with the performance requirements of Annex 13 of Regulation No.13 [and a Vehicle Stability Function in accordance with the performance requirements of Annex 21 of Regulation No.13]."

5.4. Interruption by the driver (paragraph 5.3.)

a. Means to interrupt the collision warning phase

Conclusion GRRF69: GRRF agreed that means to interrupt the collision warning phase should remain optional

*Agreement IG12: "5.3.1. The AEBS **may** provide the means for the driver to interrupt the collision warning phase. **However, when the vehicle service braking system is used to provide a haptic warning, the system shall provide the driver with a means to interrupt the warning braking.**"*

b. Overriding capabilities and actions list in the report (paragraph 5.3.3.)

*Agreement IG12: "5.3.3. In both cases above, ~~a clear movement of a driver control that indicates that the driver is aware of the impending collision may/shall result in the AEBS actions being overridden as appropriate.~~ **this** interruption may be initiated by any positive action (e.g. kick-down, operating the direction indicator control) that indicates that the driver is aware of the emergency situation. The vehicle manufacturer shall provide a list of these positive actions to the technical service at the time of type approval and it shall be annexed to the test report.*

5.5. Easy access to the AEBS-OFF control (paragraph 5.4.3.)

Conclusion IG12: Japan withdraws proposal. As a result paragraph 5.4.3. is deleted from both AEBS-M and A and unique Regulation.

5.6. Description of the test targets (paragraph 6.5.1.)

Conclusion GRRF69: GRRF agreed that, for the purpose of describing the test targets, it was sufficient to refer to M₁ saloon cars or soft targets

Agreement IG12: "6.5.1. The target used for the tests shall be a regular high volume series production passenger car of category M1 AA saloon or alternatively a "soft target" representative of such a vehicle in terms of its identification characteristics applicable to the sensor system of the AEBS under test^{1/}

^{1/} The identification characteristics of the soft target shall be agreed between the Technical Service and the vehicle manufacturer as being equivalent to a passenger car of category M1 AA saloon, ~~e.g. 2 reflectors each of less than 15 dBsm in the case of a 77 GHz radar.~~"

5.7. Performance requirements – speed reduction (paragraph 6.6.3.)

Conclusion IG10: "CLEPA and J found necessary to distinguish the vehicles of category 2 according to the braking system (pneumatic vs. hydraulic) or the weight (below 7.5 tons vs. above).

The group however decided not to enter yet into discussing the details of the test requirements in terms of speed reduction values at the time of impact."

Outcome IG12: OICA proposal for unique regulation approach covers category N2 vehicles above 7,5 tons, if fitted with pneumatic braking and pneumatic rear suspension. No criteria for other category 2 vehicles discussed and agreed upon yet.

5.8. Earliest start for the emergency braking phase (paragraph 6.6.4.) and Maximum braking demand (proposed paragraph 6.6.5.)

Agreement IG12: "2.9. "Emergency braking phase" means the phase starting when the AEBS emits a braking demand for at least 4 m/s² deceleration to the service braking system of the vehicle."

"6.6.4. The emergency braking phase shall not start before a TTC equal to or less than ~~reaches down to~~ 3.0 seconds.

Compliance shall be verified by either actual measurement during the test or using documentation provided by the vehicle manufacturer, as agreed between the Technical Service and the vehicle manufacturer."

5.9. Limitation of speed reduction during warning phase (paragraph 6.6.2.3. and 6.7.2.3)

Conclusion GRRF69: GRRF also agreed that, to differentiate AEBS from Adaptive Cruise Control systems, it was necessary to require a certain value of speed reduction applied by the AEBS when the latter applies the service brake during the warning phase.

Outcome IG 12: [When the AEBS applies the service braking during the warning phase, the speed reduction demanded by the AEBS shall not exceed [7 / 10] km/h.]

5.10. False reaction test (paragraph 6.10)

Conclusion GRRF69: GRRF agreed that the alleyway test was an appropriate false reaction test.

Outcome IG 12:

"6.9. False reaction test

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

(a) with the vehicle [centre line in the centre of a lane / located at the borderline closest to the lane of travel of the subject vehicle] to the right and left of the subject vehicle lane,

(b) [so as to face in the same direction of travel as the subject vehicle,]

(c) with the rear of each vehicle aligned with the other, where all three lanes are 3.5m wide.

6.9.2. The subject vehicle shall travel for a distance of at least 60m, at a constant speed of 50 ± 2 km/h, in a straight line, in the centre of the centre lane before passing between the 2 stationary vehicles.

During the test there shall be no adjustment of any subject vehicle control other than slight steering adjustments to counteract any drifting.

6.9.3. The AEBS shall not provide a collision warning and shall not initiate the emergency braking phase."

6. Consideration of new documents submitted:

6.1. AEBS-LDWS-12-01 - (Germany and Sweden) Amendments to the draft AEBS (Based on AEBS-LDWS-11-02-Rev.1 Draft AEBS M+A after Paris 26-28/1)

6.2. AEBS-LDWS-13-02 – (CLEPA) AEBS: Braking During The Warning Phase

6.3. AEBS/LDWS-13-03 – (OICA) Link between AEBS and EVSC

7. Review and update of draft regulatory text proposals

7.1. AEBS-M and AEBS-A draft Regulations

Documents: ECE/TRANS/WP.29/GRRF/2011/21 – Rev 1 (AEBS-M)
ECE/TRANS/WP.29/GRRF/2011/20 – Rev 1 (AEBS-A)

7.2. AEBS M+A (Unique Regulation + 1st series of amendments)

Documents: AEBS/LDWS-11-02: Draft text for a consolidated regulation capturing AEBS-M and AEBS-A into one unique regulation and a 2-step implementation – Step 1 (OICA on behalf of the GRRF informal group)
AEBS/LDWS-11-03: Draft text for a consolidated regulation capturing AEBS-M and AEBS-A into one unique regulation and a 2-step implementation – Step 2 (OICA on behalf of the GRRF informal group)

8. Other business

9. List of action items:

9.1. Issues to be carried over to the 14th AEBS/LDWS IG meeting

10. Schedule for further meetings.