

## Draft Report

# Informal working group on Advanced Emergency Braking System for Heavy Duty Vehicles

November 30 and December 1, 2021  
MS-TEAMS meeting

### Venue and Time:

- November 30 and December 1: [Here](#)

### 1. Welcome and Introduction

the chair confirmed that the goal of the meeting is to assemble a consolidated text as a package for making a “shiny” amendment to the UN R131, ready for GRVA-12 (January 2022)

### 2. Approval of the agenda

Document: AEBS-HDV-08-01 (Chair)  
The agenda was adopted with no change

### 3. Adoption of report of the last meeting

Document: AEBS-HDV-07-12 (Secretary)  
To be reviewed on 1 December  
Note: the group did not review the report.

### 4. Discussion about possibility of AEBS for city buses (TfL)

Document: AEBS-HDV-07-08  
AEBS-HDV-08-07

The chair questioned the group whether they have a position on the addition of city buses (if fitted) into the scope of the regulation. The chair proposed to make the text “compatible” to city busses. CLEPA-OICA thanked TfL for the valuable study. However, they were not ready to accept the proposal since the technology for this category does not exist on the market.

TfL presented the proposal as a decrease of the required performances for city buses, in case a manufacturer would like to approve a vehicle to the regulation. The idea is to remove the barrier of too high requirements from the regulation, to permit an approval for those who need it.

ETSC supported making the regulation compatible for city buses.

OICA challenged the way to amend the text: the purpose of that paragraph is perverted by the proposal. In addition, the proposed value of 40km/h speed reduction might not be feasible and needs to be confirmed. Need to put the correct value in the regulation to avoid concerns afterward.

CLEPA found this proposal too early. Industry is unable to assess whether the value is relevant.

The chair proposed that the item be postponed to a next stage. In the meantime, the bodies interested in this technology can come back in the relevant forum.

### Conclusion:

- Postpone the proposal
- No sufficient knowledge about such application.
- Proposal to be re-discussed at a later stage

- Interested parties to provide input as relevant

## 5. Discussion about specifications (Para. 5.2.1.1, 5.2.1.2, 5.2.1.4, 5.2.2.1, 5.2.2.2 and 5.2.2.4)

Document: AEBS-HDV-07-13 (chairs – Secretary) – draft skeleton  
AEBS-HDV-08-05 (CLEPA – OICA) Comments to draft skeleton  
AEBS-HDV-08-06 (D) proposal for paragraph 5.2.1.4.

The group agreed to take the CLEPA-OICA document AEBS-HDV-08-05 as the reference working document.

Paragraph 5.2.1.4.

Most contracting parties favoured ALT 2.

Removal of “chapter 6”. OICA proposal to remove since this is a section dedicated to the performance requirements.

JRC: can support ALT 2 and 3

OICA: ALT3 clarifies what is the meaning of “other conditions”.

The group reviewed AEBS-HDV-08-06 (D) together with the proposal from CLEPA/OICA on the structure of the list of conditions in paragraph 5.2.1.4.:

JRC: can support the D proposal. Concern this deviates from R152.

J: similar to JRC, wants to avoid divergence from R152. Yet the content is similar, can follow majority. Concern about “e.g.” and “in particular” since any other condition can then be added. Keen to remove the “e.g.”s to accept the new proposal.

The chair suggested to align R152 after the text amending UN R131 is adopted.

OICA:

- OK to align on R152. Proposal was developed in collaboration with Passenger car manufacturers
- About “e.g.”: the “in particular” makes the text more demanding. Only item “b)” has an “e.g.” because lots of other conditions can be technically understood as influencing (e.g. the dampers).

J: concerned about English wording: “in particular” means “examples”. Questioned UK about real meaning.

UK: “in particular” means “these are necessary”, but suggests there exist other conditions not indicated. About UK position: the new structure helps understanding.

JRC: supported J. This should be an exhaustive list. (at least a), c) and d))

Debate as to whether a c and d can be considered as exhaustive.

The contracting parties considered a c and d as exhaustive. There was a fear from the contracting parties that the wording could add holes that would open the door for additional conditions when the vehicle does not have to fulfil the requirements. The chair proposed that either:

- Industry convince the contracting parties that they will not make additional conditions, or
- Make the list exhaustive.

UK: “such that” means it is exhaustive.

Debate on the addition of weather conditions. the Chair challenged the idea that there was no perfect consensus on the interpretation of the wording in the IWG on AEBS-M1N1

The group evaluated different possibilities to express an exhaustive list: “vehicle external influences allow for the required deceleration, such that / exhaustively if / assuming that / to the extent that”

Conclusion:

- a, c and d adopted subject to a wording indicating the lists are exhaustive
- b to be further improved

Paragraph 5.2.2.4.: solution of paragraph 5.2.1.4. to be translated by the chair and secretary into paragraph 5.2.2.4.

Paragraph 5.2.1.1.

D presented their proposal per document AEBS-HDV-08-06.

JRC can support the D proposal.

OICA: struggled to understand the D proposal. “frequently present in typical real driving conditions with significant risk of required AEB interventions” is rather vague.

D: the concern of Industry was at 7<sup>th</sup> meeting that there can be a large variety of tests. The proposal aims to limit that number. For example a tunnel is not considered a frequent situation.

OICA: the D proposal is a bit fuzzy and lacks a reference to the conditions listed in paragraphs 5.2.1.4. and 5.2.2.4. This is why the Industry proposal keeps a reference to paragraphs 6.4. and 6.5.. the principle is that we refer to harmonized procedures. And if justified, the Technical Services may test in other conditions.

The chair pointed out that the Industry proposal does not address the assessment of the change of strategy when crossing the system boundaries.

JRC: agreed to restrict the variety of possible tests and keep harmonisation of the procedure. Can have sympathy with the structure proposed by Industry (shift of the provisions in the test section).

UK supported the chair on the lack of assessment of the system strategy

OICA insisted:

- Section 5 is about the provisions, not the test.
- The proposal adds conditions beyond the speed: tests outside of the conditions
- The D text is too vague and lacks the necessary reference to the requirements.

Conclusion:

- 2 informal documents to be tabled at GRVA-12 presenting the 2 approaches.
- OICA to work on the D text to try to make it compatible with their wish
- D, UK and JRC to approach Industry to try to improve their wording

## 6. Discussion about deactivation of AEBS (Para. 5.4.1.4)

Document: AEBS-HDV-07-13  
 AEBS-HDV-08-04  
 AEBS-HDV-08-05 (CLEPA-OICA)  
 AEBS-HDV-08-08 (ETSC-DVR) Comments to draft skeleton  
 AEBS-HDV-08-09 & -r1 (TF Deactivation) AEBS\_deactivation

The chair proposed to accept the compromise proposed by Industry in slide 5 of AEBS-HDV-07-11:

*“It shall not be possible to manually deactivate the AEBS at a speed above 60 km/h.*

*The AEBS shall automatically be reinstated after a cumulated time of 10 minutes above 70km/h.”*

J was concerned having had no time to consider the proposal from Industry, in spite of having asked to get the documents earlier. J in addition cannot support to introduce the speed as a criterion. J can support a certain time, yet cannot support a speed limit. Japan was ready to expand the time above 10 minutes if group can agree.

ETSC could accept the proposal from Industry, yet with a speed of 60 km/h (in lieu of 70). In addition, in AEBS-HDV-08-08, we propose that the driver be capable of manually re-activate the AEBS.

CLEPA/OICA proposed their text per document AEBS-HDV-08-05. The expert insisted that the proposal per AEBS-HDV-07-11 is still valid, but the document AEBS-HDV-08-05 is a further attempt for a compromise. To permit the vehicle to be driven during a long time at low speed (e.g. in mountain roads) there is a need for a speed value.

J questioned why would the driver deactivate the AEBS while driving.

Industry was keen that the AEBS can be de-activated during long periods of time at low speeds for addressing slippery secondary roads and construction areas.

The group explored the different ways to solve the concern.

ETSC: “5.4.1.4. It shall not be possible to manually deactivate the AEBS at a speed above [ 50] km/h.  
 5.4.1.5. After any deactivation the AEBS function shall be reactivated as soon as possible, but – if not manually by the driver – automatically reinstated not later than a cumulated time of 10 minutes above [60] km/h.”

OICA could agree with: "Any manual deactivation at a speed above [10km/h or 15km/h] shall be terminated latest after 15km"

NL requested data about the Norwegian concern

N: informed about the situation in Norway, where drivers often de-activate the AEBS for avoiding false reactions.

NL, D and ETSC: against permanent manual deactivation

J, OICA, UK, N: support permanent manual deactivation.

Conclusion of 30 Nov: small informal meeting in the afternoon. Item to be reviewed on 1 December.

1 December:

Proposal from the task-force per AEBS-HDV-08-09

The chair requested the contracting parties about which proposal cannot be accepted, and which is favoured.

J: ready to discuss the Industry proposals once Industry can provide data or evidence backing their proposal.

NL: understand the need to be capable to switch off the AEBS. OK if AEBS is activated after any entry into a city. Hence favours the distance as a parameter. Can support J proposal. Other possibility is to provide a list of exemptions. Cannot accept the proposals 1, 3 and 4

N: need internal consultation. Favours No.2. Trucks cannot be compared to passenger cars.

D: Politically important topic in D. Safety benefits can be reached only if the system is activated. Automatic re-activation is a must. Added value compared to the current wording of R152. Concern about the values in [ ]. Need internal consultation.

JRC-European Commission: support NL and D: if obligation of deactivation, then need for auto re-activation.

Key parameter is the misuse. What happens (P2) if the driver directly de-activate the AEBS after each auto re-activation? Conclusion: supports alignment on R152 (the chair challenged this proposal since R152 does not prevent misuse).

UK: flexible with any proposal. Need to address the values in [ ].

OICA presented their new “golden” proposal (added blue text in AEBS-HDV-08-09-r1).

- Need that the driver can deactivate manually after any re-activation. Seems 15 km is acceptable
- Keeps the necessity for the driver to be capable of reactivating the AEBS
- Additional permanent deactivation for special situations like PTI and equipment at front

ETSC supported the OICA proposal since permanent deactivation is not permitted. Would like to add “easily” reactivation by the driver.

N: supported the proposal

NL: good to re-activate in a workshop. Need to work out this option.

UK: Misuse: support addition of [easily]

JRC: supported UK and NL. Need to work out the wording.

D: supported the proposal

J: need to review internally, but the expert personally supported the proposal

Conclusion:

- General support in principle for the wording proposed per the blue text in AEBS-HDV-08-09-r1
- Several parties to hold internal review
- Final text to be adopted at next meeting.

## **Review of pending items in skeleton document**

The group reviewed the skeleton document per document AEBS-HDV-08-05.

Paragraph 1 - Scope: the group agreed that “Avoid or mitigate the severity of a rear-end in lane collision with a preceding vehicle” means : “collision avoidance with vehicle ‘driving in the same direction’ or stationary”

Equivalency of approvals to R152: the group adopted the copy/paste of the wording from R13/R13H

UK further voiced their fear that vehicles not complying with Pedestrian requirements could use that wording to circumvent their obligation.

Conclusion: *“For vehicles of category M2, and for those of category M3/N2 with a maximum weight below or equal to 8t, equipped with hydraulic braking, Contracting Parties that are signatories to both Regulation No. 152 and this Regulation shall recognize approvals to Regulation No.152 as equally valid”*

Paragraph 5.1.6.: the group agreed to add a footnote for adapting the values in false reaction avoidance

Paragraph 5.1.8.: No change, text adopted. Yet wording to be improved.

1 Dec: UK can support the proposal.

Conclusion: text adopted.

Paragraph “notwithstanding” in paragraph 5.2.1.4.: new wording adopted to improve the meaning.

Paragraph 5.3.: ETSC proposal not necessary. Yet to be re-discussed on 1 December

Paragraph 5.3.1.: “override” to be removed as such new word should then be defined.

JRC: can accept

ETSC: debate about “override” and “suppress”.

Conclusion: adopted.

Paragraph 6.1.1.: adopted

Paragraph 6.2.1.: adopted. To be confirmed with the European Commission on 1 December

Paragraph 6.3.1.: alignment on R152 adopted

Paragraph 6.4.: offset: no need for +/- since this is a distance.

Paragraph 6.5.: see document → some provisions to be reviewed, some accepted.

Concern that the tolerance may lead to be “out of the specifications”.

Temporary conclusion: *“Tests shall be conducted with a subject vehicle travelling at the following relative speeds to the target, with a tolerance of +/- 2 km/h for all tests and a target travelling at 20 km/h with a tolerance of +0/- 2 km/h for both the target and the subject vehicles, but not beyond the range specified in paragraph 5.2.1.3.: ... ”*

Paragraph 6.6.1.: removal of “functional part etc.” (2<sup>nd</sup> sub-paragraph): adopted.

Tolerances: *“Tests shall be conducted with a vehicle travelling at the following speeds, with a tolerance of +/- 2 km/h for all tests but not beyond the range specified in paragraph 5.2.2.3.,:*

Paragraph 7.1.1.: addition of a “or”

Information document: Industry withdrew their proposal about the mass of the vehicle

Annex 3, App.2: Proposal from J per document AEBS-HDV-08-02 to add a footnote. OICA wondered the contradiction with the principle of mutual recognition in the 58 Agreement. The Secretary wondered whether the scenario is aligned on the Vienna Convention. The chair suggested to re-discuss this on 1 December.

Note: this was not reviewed on 1 December.

## **7. Discussion about False reaction scenario (Annex 3 - Appendix 2)**

Document: AEBS-HDV-07-13

## **8. Discussion about transitional provisions (section 12) & Introduction**

Document: AEBS-HDV-07-13

## **9. Discussion about standardized marker to trigger AEB intervention**

Quick update on the discussion about standardized marker to trigger AEB intervention would be appreciated.

NL: workshop was transformed into a document by TNO. That document could not be finalized for the 8<sup>th</sup> meeting of AEBS-HDV, hope to make it available at the next meeting.

## **10. Other business**

ETSC proposed that the JRC and ETSC comments to the draft Introduction be shown in the draft consolidation text. (AEBS-HDV-07-07 and AEBS-HDV-08-08)

**11. Next step**

Additional meeting for the transitional provisions and the additional testing + the Introduction

Chair and Secretary to produce a consolidated text.

Chair and Secretary to circulate ASAP dates and times of the next meeting. To be confirmed by email exchange with the members.