

## DRAFT AGENDA

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

October 26 - 28, 2021  
MS-TEAMS meeting

### Venue and Time:

- 26 – 28 October: [Here](#)  
Start at 09:00 am CEST (4:00 pm JST – 8:00 am BST)  
Finish at 12:00 am CEST (7:00 pm JST – 11:00 BST)

### 1. Welcome and Introduction

### 2. Approval of the agenda

Document: AEBS-HDV-07-01-r1 (Chair)  
Aim is to table an adoptable document at the GRVA of January (12<sup>th</sup> session)  
Note: Introduction of the regulation will be part of the discussions on the transitional provisions.  
The agenda rev.1 was adopted with no change and that Industry and JRC should hold bilateral discussions on this item.

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

Document: AEBS-HDV-06-16 (Secretary)  
Comments from ETSC

ETSC presented their comments to the report.  
About deactivation. Was a meeting between JRC and D, that resulted in a proposal. The group agreed to review this proposal during the revision of the text of the regulation.  
Agreed to take over the clarifications on the  
Agreed to adopt the changes proposed by UK  
Conclusion: rev1 of the report to be edited.

### 4. Brief discussion about the guidance from GRVA & Finalization of specifications (sec 5)

Document: AEBS-HDV-07-02  
AEBS-HDV-07-03  
AEBS-HDV-07-04  
AEBS-HDV-07-05  
AEBS-HDV-07-06  
AEBS-HDV-07-07

- Deactivation: GRVA recommended alignment on UN R152. Item to be further discussed within the informal group.
- “it is recognized” paragraph: GRVA gave no clear answer. The European Commission made a comment that the paragraph might need to be modified. Item to be reviewed within the informal group.
  - o Proposal from the chair to c/p the paragraph from R152, and to further discuss the specificity of the HDVs at GRVA
  - o D: support
  - o N: concept to be further discussed at a later stage, in a possible broader group.
  - o J: J support what Chair's proposal, which we discuss basically on the base of UNR152.

- Ind: OK to take the principles of UN R152 and adapt to the HDVs. industry is ok to take the principles of R152 in the HDV IWV, and that HDV IWG jointly works with MIN1 to review it afterwards
- JRC: OK with the proposal, let's keep our minds open, even if it might delay the delivery.

## 5. Discussion about test method (section 6) & False reaction scenario (Annex 3 - Appendix 2)

Document: AEBS-HDV-07-02  
 AEBS-HDV-07-03  
 AEBS-HDV-07-04  
 AEBS-HDV-07-05  
 AEBS-HDV-07-06  
 AEBS-HDV-07-07

Industry presented the document AEBS-AEBS-HDV-07-06

- Need to review the understanding of the offset. Need clarification before defining the values. The majority of the informal group supported the understanding per the Figure 1 (slide 6) the chair wondered how the text could be understood per Figures 2 and 3. Conclusion:
  - Figure 1 adopted as the proper interpretation.
  - Industry to check the proper value of the offset. Proposal is a value of 0,5 in both the specifications and the test sections. However the higher the offset value, the more difficult is the success.
- Offset in the pedestrian scenario:
  - Comes from R152: at 6<sup>th</sup> meeting, turned from 0,5 to 0,1 since the pedestrian is not very wide.
  - Chair proposal: offset of 0,2m for pedestrian scenario, i.e. 2x0,1m since the HDVs are wider than the passenger cars. The group agreed with the understanding that the text in paragraph 5.2.1.4. (d) together with paragraph 6.4. (offset) means that the test vehicle can alternate around the centreline up to a distance of 0,2m, i.e. the test is considered valid even if the test vehicle never reaches the limit value of 0,2m aside of the centreline.
  - Conclusion: Industry to check whether 0,2m is acceptable.
  - Conclusion 27 October: 0,2 adopted
- AEBS deactivation: presentation of Slide7 by Industry
  - UK: can support, seems fairly sensible. Permits the driver to turn off the AEBS, while this is not permanent
  - ETSC: made a proposal for 50km/h. hence can somehow follow the idea of Industry, yet with another wording
  - N: OK with 50 or 60 km/h.
  - J: have same concern with Chair with regards to 70kph. Only time is enough. Industry had concern that the AEBS may be re-instated in a dangerous situation.
  - Most contracting parties favoured a value of 60km/h
  - ETSC supports the UK concerns that the AEBS should not be off for the whole trip. But we disagree with the possibility to deactivate AEB on motorway as it is not safe to deactivate AEB in such conditions. finds unsafe that a deactivation can happen at any speed.
  - Conclusion: Industry to check a value of 60km/h
  - Subsequent debates
    - Proposal from ETSC – subject to discussion
    - Interference of the “snow-plough” issue. However was not solved per deactivation, rather per national exemptions.
    - Chair proposal: temporarily accept the Industry compromise: “V3 (Industry draft – agreed)
      - 5.4.1.4. It shall not be possible to manually deactivate the AEBS at a speed above ~~{10} km/h~~. Once manually deactivated, the AEBS shall be automatically reinstated after a cumulated time of 10 minutes above [60km/h].
  - Conclusion 27 Oct: review on 28 Oct
  - 28 Oct:
    - New proposal and presentation AEBS-HDV-07-11 by Industry

- ETSC: wording is improved, yet the proposal does not cover the risk in cities. Values should be adapted. We do share JRC concerns on the safety risks in cities, yet we don't have a proposal to solve it.
- JRC: contradiction with GRVA guidance support to ETSC comment.
- J: questioned the concern about the “Norwegian” case.
- N: some trucks are 60 ton of 30 m length, driven in long trips on narrow slippery roads.
- Debate
- Conclusion: GRVA guidance in [ ] and informal group to seek a new compromise at next meeting.

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

Document: AEBS-HDV-07-02  
 AEBS-HDV-06-14  
 AEBS-HDV-07-03  
 AEBS-HDV-07-04  
 AEBS-HDV-07-05  
 AEBS-HDV-07-06  
 AEBS-HDV-07-07

- (a). The group reviewed the document 07-05:
- (b). 2.xx: 2 definitions deleted
- (c). [ ] removed around 15km/h
- (d). Scenarios of Annex 3 app. 2: chair questioned the group on the possibility to remove the scenarios. UK and the chair found that going back to the old test would be regressive. 3 possibilities:
  1. Removing the scenarios
  2. Keep them unchanged
  3. Adapt the scenarios and tests to the HDVs.

IND found the current scenarios and values not adapted to the HDVs. IND proposed that the group review the tests and scenarios to check their fitting to the ADVs, difficult to perform them with the HDVs, would need a real campaign of tests. IND have no view whether these tests are OK for trucks. J informed that the scenarios are coming from passenger car Japanese data. J have no data related to HDVs. Requested Industry to provide adapted data. J proposed to keep the scenarios as in R152 including the values) as they are only examples, and that Industry provides adapted values. IND: open to keep the drawings (adapted to the trucks), yet the values must be changed. The group tried to find a acceptable solution. The chair suggested Ind and J to hold bilateral discussions. Conclusion: Ind and J to hold bilateral discussions on Thursday at 8:00 am CEST.

- (e). Paragraph 5.2.1.1. JRC questioned the proposal to remove the last sentence (by Industry) while it was adopted at last meeting after lengthy debates. There was a debate on the influence of market surveillance on the text of the regulation. JRC was of the opinion that some system behaviours at the boundaries of the field of functioning (e.g. at night) cannot be tested per the provision of the current text of the regulation, they were keen that the strategy does not unreasonable switch beyond the boundaries. Industry challenged the influence of the market surveillance in the Type Approval regulation. Industry proposed to shift the proposal into the paragraphs 6.4./6.5. JRC, ETSC and some contracting parties supported keeping the sentence (already adopted at the 6<sup>th</sup> meeting). Conclusion: support from ETSC, NL, JRC, D to keep the sentence as agreed at last meeting. Strong reservation from Industry. Conclusion: informal group to request guidance at GRVA as it is a new entrance. Industry to give justification to remove the sentence.
- (f). Paragraph 5.2.1.4.
  - a. “unobstructed”: Industry withdrew their comment.
  - b. “vehicles of category M, N, O3/O4”: adopted
  - c. (c) Trailers:
  - d. (d)
  - e. (h) : group agreed to delete the sentence
- (g). “it is recognized” sentence: Debate. The group reviewed the proposal from JRC (supported by ETSC). Industry recalled we said we should not change R152 principle and discuss that later together with M1N1 IWG. This is GRVA guidance. JRC challenged the “it is recognized” approach. Industry wondered how JRC can challenge on behalf of the European Commission a wording already adopted in

R152. JRC pointed out that the discussion today is different to that of R152. They challenged that the sentence is too open, it could cover everything. Conclusion: 2 alternatives in [ ].

- (h). Table: to be further cross-checked
- (i). City detection. Industry proposed to options for urban areas detection (definition of a city). UK questioned the aim of the proposal. Conclusion: Industry to make a better proposal until tomorrow. Conclusion: wording adopted
- (j). Paragraph 5.4.4. OICA presented the comment. The chair proposed to keep the paragraph 5.4.4. aligned on R152. Conclusion: adopted unchanged
- (k). Paragraph 5.3.1. "Interruption by the driver".
  - a. ETSC and JRC presented their proposal (the relevant article of GSR is 9.4)
  - b. Chair keen that the provisions are compatible with those of the EU GSR.
  - c. J: cannot support a C/P of EU GSR I UN R131.
  - d. Industry proposed to C/P the wording of UN R152
    - i. J, JRC, supported this proposal
  - e. Conclusion: wording of R152 adopted.

#### Test section:

- (a). Paragraph 6.1.1. (good adhesion): OICA explained that the current wording coming from UN R152 actually does not well fit the case of the HDVs since the later usually never reach 9m/s<sup>2</sup>. J recalled the agreement reached at GRVA. Some experts insisted to align on the UN R152. Conclusion: principle agreed to c/p R152 per the document GRVA-11-40 and to check the references (to UN R13-H and ASTM).
- (b). Paragraph 6.1.5. (V2V): adopted + remove the references to V2C
- (c). Paragraph 6.2.1. (test mass): chair proposal to keep only option (b) and to ensure that the vehicle be tested only at max mass. However, NL experienced some malfunctioning of AEBS at light weight conditions. The group proposed an updated wording: "**if lower performance is expected when the sensors may miss the target (e.g. at low mass conditions):** At the etc..." Conclusion: new proposal adopted subject to revision
- (d). Paragraph 6.2.2.1.: change adopted
- (e). Paragraph 6.3.1. (saloon etc.): adopted
- (f). Paragraph 6.3.3.: V2C removed
- (g). paragraph 6.4.x (functional part): JRC keen to remove since not reflecting real world. Experienced a change in the strategy of the AEBS for one vehicle. OICA challenged the proposal to remove since the proposal does actually reflect the highway driving. The test conditions do not challenge the specifications. Wording is the current R152. The chair proposed to remove the 2<sup>nd</sup> paragraph since it is part of the specification. JRC insisted that the specifications well define the conditions in terms of lateral and longitudinal behaviour. Concern that the test conditions add artificial parameter that do not reflect real world driving. Lengthy debate. Conclusion: ALT2 adopted
- (h). paragraph 6.6.1.: discussion on proper speed. OICA tabled their document 07-05.
- (i). V2V moving target test, conclusion:
  - a. tolerance should be on the relative speed.
  - b. Tolerances should be defined separate to the test values
- (j). Pedestrian target: conclusion : addition of non-articulated pedestrian target in paragraph 6.1.6
- (k). 6.8
- (l). 6.9
- (m). 6.10: Industry to review the definition of vehicle type in order to make sure the vehicles to be tested are makes an efficient process
- (n). Transitional provisions: Industry presented the slides on transitional provisions.
  - a. D: expects 2-3 years.
  - b. J: particular for pedestrian: VRU measurements is important, hence V2P. hope introduction asap.
  - c. ETSC: some new requirements like warning with braking is important for D. the manufacturers could use the opportunity of a face-lift to introduce the new provisions.
  - d. N: pleased with AEBS installation as is today. The winter situation in N is such that the current AEBS is sufficient, no urgency in introducing the new provisions.
  - e. Conclusion: [ ] and review the transitional provisions at next meeting.
- (o). Entry of "mass in running order": Industry to adjust their proposal in view of the proposal for the definition of the vehicle

- (p). Annex 3, reference to the Type Approval Authority: conclusion: align on the ALKS regulations (deletion of Type Approval Authority).
- (q). App2 of Annex3: presentation by Industry of AEBS-HDV-07-XXX (still awaited). Conclusion: turn “will be adapted” into “may be changed + it is recognized etc.” Question about rigid vehicles should be treated differently to the articulated vehicles. Conclusion:
  - a. Scenario 1 in [ ].
  - b. Industry to review the scenarios with Japan.
- (r). Addition of a new paragraph 6.11 on false reaction test.
- (s). PBC: conclusion Industry to check the reference to the proper truck tyre in the ASTM method and make a proposal as appropriate at next meeting.

**7. Discussion about possibility of AEBS for city buses (TfL)**

Document: AEBS-HDV-07-08 (TfL)

TfL (Rachel Birrell and Iain Knight) presented the TfL AEBS-HDV-07-08.  
The participants were requested to send their questions to the author of the research at [iain@apollovehiclesafety.co.uk](mailto:iain@apollovehiclesafety.co.uk)

**8. Discussion about standardized marker to trigger AEB intervention**

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

**9. Other business**

Next meeting to review the transitional provisions and the informal document that will adjust the official document.