

## DRAFT AGENDA

### **9<sup>th</sup> meeting of the Informal Working Group (IWG) on Advanced Emergency Braking Systems (AEBS) for light vehicles**

3-4 July 2019,  
in Brussels, Belgium

**Time:** Start at 10:00 am on 3 July  
Finish at 4:00 pm on 4 July

**Venue:** On 3 July:  
European Commission  
BREYDEL2 Building, Room BRE2 05/428 (ground floor)  
Avenue d'Auderghem 19  
1049 Brussels/Belgium

On 4 July (as before):  
European Commission  
BREYDEL Building, Room BREY 5 B (ground floor)  
Avenue d'Auderghem 45  
1049 Brussels/Belgium

**Registration:** <https://ec.europa.eu/eusurvey/runner/54f9db81-0f9c-6e08-09a8-fee51aa0031c>  
(Before 28 June 2019)

**Chairman:** Mr. Antony Lagrange (EC) and Mr. Toshiya Hirose (Japan)  
**Secretariat:** Mr. Yukihiro Shiomi (Japan) and Mr. Olivier Fontaine (OICA)

**1. Welcome and Introduction**

**2. Approval of the agenda**

Document: AEBS-09-01 (Chair)

**3. Adoption of the notes of the 8<sup>th</sup> meeting of the Informal Working Group**

Document: AEBS-08-06

**4. Discussion for proposal of AEBS based on the result of 8<sup>th</sup> session of AEBS**

Document: GRVA-02-39-c1 (GRVA Secretariat)

**4.1. Amendment of 00 series regulation**

Document: AEBS-08-07 (Chair and Secretariat)

Paragraph 5.1.1.: debate, proposal from OICA, from the Chair to make it more simple.

Conclusion: park for tomorrow

Paragraph 5.2.1.4.: lengthy debate on the list of conditions

- Relative impact speed
- Direct blinding sunlight
- Dynamic performance of the vehicle
- 0°C
- Harsh cornering

Possible discrimination between the conditions related to the good functioning of the system and those affecting the dynamic of the vehicle.

N1 with Alpha > 1.3: computing the Alpha might be challenging.

Conclusion:

- Wording adopted
- Item to be raised to GRVA

**Germany: Tunnels are in dark conditions (<1000 lux) therefore tunnel should not be mentioned.**

**OICA: Agreed on tunnels.**

**UK: Has some concerns on the table.**

**EC: Background of the table - it is not expected that systems have the same performance in extreme weather conditions e.g. in a storm. We had a very long discussion in the last meeting.**

**Germany: Because of market surveillance the requirements have to be very clear – the table is important.**

**France: The text “In conditions not affecting the dynamic performances of the vehicle” could maybe help.**

**EC: Decided to take the -5° C (after e.g. no storm) out.**

**Solution: The temperatures have been defined in the test sections.**

Paragraphs 5.3.1. and 5.4.1.5.: the group agreed to turn the provision to a “shall”, and to delete the proposed paragraph 5.4.1.5. the EC supported this conclusion, as well as Japan and Germany.

Paragraph 6.2.1.: fuel level above 50%: adopted

Editorial items

Concern from France about robot behaviour WRT the accelerator.

Germany presented their study on the AEBS robustness, showing evidence that the TAA cannot expect 100% success in the test runs.

The Chair raised the possible inconsistency between accurately defining the functioning conditions, then permitting fails in very strict and ideal conditions.

Debate on the reasons why some system might not have 100% robustness: due to the system or to the test method?

F was reluctant to accept the possibility of failures in the TYPE APPROVAL tests. The UK had the same concern.

OICA then presented AEBS-09-03: the proposal shows that there is no need of conducting 3 tests for each scenario to reach confidence of a proper discrimination between the good and the bad systems.

J questioned why the vehicle could fail in the prescribed conditions. The proposal shows a new approach in the type approval system. A target of e.g. 99% of success in real world means a success in e.g. 90 cases when performing 20 test runs.

The group acknowledged that

- A system can never be guaranteed as 100% robust
- Raising the performance requirements would lead to unacceptable false activations.

There was a debate as to whether the distribution of the pass results are of a statistical normal distribution shape.

**EC: Repeatability of test runs**

**NL: Are the formulas still applicable?**

**EC: What is the level of compliance behind?**

**OICA: You can prove systems also with small number of tests. The probability is given. The object for type approval is to proof whether it is a good or a bad system.**

**EC: The goal is 99 %. How can we explain this to GRVA.**

**OICA: The graph will show this. We have to keep the numbers of tests as low as possible. Because otherwise the test cases would increase dramatically.**

**EC: OICA has to provide a good justification (for the 10%) for GRVA.**

**Germany: We can accept 2 out of 3.**

It was also pointed out that the other requirements do not have so many tests to conduct, hence do not face the statistical distribution problem.

The group subsequently re-discussed the item.

NL had concern of applying to low numbers a statistical formula designed for high numbers.

Justifications for presenting to GRVA:

- To be further elaborated
- Addition of explanatory lines in the graph of AEBS-09-03

Industry further elaborated the presentation. The group continued debating the approach. J had the feeling that this would make it more difficult to reject non complying systems. D was keen that, should the statistical approach be rejected, then some requirements on repetitions should be added such to level the type approval process throughout the Technical Services.

F stated that they can support the “statistical approach”, yet the number of acceptable failed test should be backed. D supported the statistical approach as well.

Japan: Has concerns on the probability and need 100% robustness, because of their national layers.

**Japan: Need more information on real data.**

**New OICA presentation after lunch on 6.3.4 Repeatability. With more written information that we need a new approach (2 out of 3). We found a way for identify good and bad systems. It is also important with regard to market surveillance. For each test scenario we need to pass at least 2 tests.**

**EC: Are we all convinced?**

**Japan: How can we say, that the system has a high probability.**

**OICA: Manufactures are very motivated to pass the type approval tests.**

**Japan: Has still concerns that bad systems can be identified.**

**Germany: Today we have a grey area. Therefore the OICA proposal is a chance to have a harmonized AEBS approval for ECE countries.**

Conclusion:

- Some contracting parties support the approach
- Industry to defend the approach at GRVA
- **The whole section 6.10 will be put in [ ].**

Scope: proposal to copy/paste the approach of UN R13H. J raised the concern f the reference to other regulations in the AEBS regulation.

Conclusion:

- Industry to check whether this affect other regulations.
- Proposal adopted in principle

Tolerance in App2 of A3: NL found the test not severe enough. The distance should be ca 2,5 m. during the debate, Industry suggested to follow the route of the functional requirements audit. Or some resources should be added to specify the test provisions (curve, speed, etc.). As the scenario was developed in the context of the R131 (trucks in highways, it does not fit the new R152.

Conclusion:

- Keep the proposed tolerance for the time being
- Item remains pending

## 4.2. Proposal of 01 series regulation

Document: AEBS-08-08 (Chair and Secretariat)

The group agreed to drop the Alpha exemptions in the 01 series

Also, the changes agreed in the Supplement should also be reflected into the 01 Series.

OICA presented the last 3 slides of their presentation 09-03.

D questioned the time needed to reactivate the braking after the deactivation due to the latency.

The Chair requested data rather than demonstration. However the manufacturer do not have systems designed to the current specifictions have n data.

UK questioned whether the systems passing the EuroNCAP do face any false activations. The OICA spokesperson could then not speak on behalf of all manufacturers since the data are confidential, yet informed that their company do face the problem in certain situations.

The EC then presented their presentation with data on succeeding vehicles

Database: 2016-2018 vehicles

OICA questioned the role of the group, whether this should be to raise the bar of severity. Industry was of the opinion that EuroNCAP would be the best platform to trigger technology progress.

The Chair repeated his request for data backing the Industry request for 15 km/h speed reduction

Industry explained that real world activation can have several targets, and this is challenging the system. D suggested to specify in the performance requirements that the system should meet the requirements when there is one target at a time.

D committed to prepare a proposal for amending the functioning conditions to include the one-target scenario

**EC: Can you provide data?**

**OICA: No, because we do not have such systems today.**

**UK:**

**EC: Showed a TRL presentation on the Ncap results.**

**Olivier: Reminds – that not all vehicles fulfil such high requirements.**

**OICA: Question on the repeatability.**

**Germany: Recommended to use the lower numbers.**

**OICA: Reminded that the NCap results are proofing ground results and that the real world is very different.**

**EC: Asked again whether OICA can provide data for the OICA figures.**

**Germany: The main argument of OICA is that - in real world there are multiple targets (pedestrians) and this is very different to test track scenarios. Real world is different to a test track.**

The Chair questioned J whether the Alpha exemption should remain for the C2P scenario for phase 2. J and Industry informed that the J manufacturers can accept to remove the exemption for C2P Phase 2. This needs a complete re-design of the braking system.

Transitional provisions:

**EC: The enforcement dates are not defined until now, because the GSR has to be adopted. The envisaged enforcement dates are May 2022 for NT and May 2024 for NR.**

ROK informed that the AEBS will be mandatory in ROK in 1 January 2022 for C2C for NT, and 2024 for AT. C2P mandatory as from 2024 (no clue whether “if fitted”)

**Korea: Have change their enforcements dates.**

**January 2022 for C2C for NT**

**January 2024 for C2C for NR**

**January 2024 for C2P for NT**

**January 2026 for C2P for NR**

The Chair requested views as to whether the Supplement could be skipped and put forward directly to the 01 Series.

Industry claimed that there is a real need for the manufacturers because the C2P scenario could become applicable as from the EIF. C2C could be acceptable.

Conclusion: informal group to keep the 2 changing documents separate.

## 5. Other business

The Introduction shall contain wording to indicate that the contracting parties can apply the regulation for C2C, C2P or both.

OICA: will provide an informal document on the scope of M2/N2 vehicles.

J introducing dates:

- Start of 2020
- J will decide this year whether this will be on a mandatory basis

- J to communicate the

## 6. List of action items

### *Plan for next meetings:*

- *AEBS-10: 15-16 October in Brussels*