

DRAFT REPORT

15th meeting of the GRRF informal group on Advanced Emergency Braking and Lane Departure Warning Systems

Venue: CCFA, Paris (France)
Chairman: Mr. Johan Renders (EC) (johan.renders@ec.europa.eu)
Secretariat: Mr. Olivier Fontaine (OICA) (ofontaine@oica.net)
Dates of the session: Monday, 26 May 2011 until 27 May 2011

1. Welcome and Introduction

The Chair welcomed the participants and recalled that the mandate of the 15th meeting of the GRRF informal group on AEBS/LDWS was limited to the one described by the Chair of GRRF at its 70th session, i.e. “Establishment of pass/fail criteria for category M2 vehicles and N2 vehicles with a GVW (Gross Vehicle Weight) equal to or less than 8 tons” and “Resolution of the issue of the restriction to vehicles with pneumatic rear axle suspension”.

CLEPA requested clarification on whether there will be, in the context of the one-regulation approach, a “01 Series of Amendments”, as it is considered by CLEPA that there is no necessity for a 2-step approach as the first step provides little benefits in comparison with the second step. In addition, the expert from CLEPA informed of the existence of some administrative errors in the text of the working documents (see item 5 below).

The Chair clarified that the informal group did not receive any mandate from GRRF about transitional provisions and recalled that the GRRF Chair committed to report to WP29.

2. Establishment of pass/fail criteria for category M2 vehicles and N2 vehicles with a GVW equal to or less than 8 tons

(Row 3 in the table1 of annex 3 to working documents GRRF/2011/25 and GRRF/2011/26 as updated by informal documents GRRF-70-05 and GRRF-70-06 respectively – see also documents AEBS/LDWS-15-01 & 02)

The Chair recalled the interpretation of the UNECE Secretariat that should the cells of Row 3 be blank, the vehicles in stake would be excluded from the performance requirements of the regulation. OICA informed that some Technical Services interpretation was that in the case of blank cells, the vehicle presented for Type Approval would have to comply with the general performance requirements of paragraph 5. The Chair concluded that in view of this different opinion that there was currently no clear interpretation of the situation.

The informal group started the revision of the document AEBS/LDWS-15-01 (00 series of amendments).

OICA presented the document AEBS/LDWS-15-05 proposing to simply delete the row 3 due to the fact that a Collision Warning System (CWS) cannot be considered by the vehicle manufacturers as an AEBS

corresponding to the definition currently existing in the text of the draft regulation. The expert from OICA recalled that the vehicle manufacturers have today no experience nor knowledge about the behaviour and consequences of the fitment of such system in wide scale on the vehicles. OICA stated that the vehicle manufacturers are ready to start the analysis of such technology in the context of a rulemaking in the frame of UNECE, if the Contracting Parties would wish to do so. Concerning AEBS itself, the vehicle manufacturers could only provide technical expertise for existing technology or technology currently under development, but would not be ready to provide advice to non-existing technology as this would not be credible. The logical consequence of such situation would then be to simply delete the proposed row 3 of the table of documents AEBS/LDWS-15-01 & 02 for the time the technology is being developed. In this context, the scope of the regulation should be limited to the proposal as in document AEBS/LDWS-15-05.

CLEPA recalled that the best they could offer was the proposed performance requirements tabled in document AEBS/LDWS-14-09, but stated that CLEPA could support the “no requirement” approach proposed by OICA OR some clear requirements.

UK had concerns about the “no requirement” route, because it would be contradictory to harmonization. The expert from the UK informed about their proposal (applying to Step 1 only):

- M2 toward stationary target (cells B3, B4, B5): blank cells
- N2<8t toward stationary target (cell B5): no requirement
- M2 toward moving target (cells E3, E4, E5): flexible willing
- N2<8t toward moving target (cell E5): to be discussed.

Japan recalled that the GSR demands requirements for the vehicles of category M2 and N2, also for those with GVW below 8 tons. J was keen that the requirements of all categories be discussed at UNECE rather than EU level, hence requested that technical requirements be discussed for all categories M2/N2/M3/N3 in the context of UNECE and that the mandatory fitment be discussed at the level of each Contracting Party. The expert from J informed about their sympathy for the UK approach. F informed being present mainly for listening the technical arguments of the different parties, hence could not provide any position nor take any decision.

The Chair recalled that the informal group in this context (five Contracting Parties present, of which two could not provide positions) could anyway not make any decision, but was requested by GGRF70 to explore and propose possible solutions for the outstanding issues.

CLEPA could accept the deletion of their proposal for stationary target test (see document AEBS/LDWS-14-10). The expert from CLEPA however was of the opinion that these cells should not be blank as this would open the requirements to anything wished by any Contracting Party, preventing the manufacturers from a clear vision of the requirements worldwide.

The Chair requested clarification about the OICA proposal of document AEBS/LDWS-15-05:

- 1) *OICA proposal seems to go out of the mandate of the informal group as it does not propose pass/fail criteria, rather except some vehicles from the scope of the regulation.*

OICA clarified that the vehicle manufacturers currently have some clue of the technical feasibility for heavy vehicles, and as a consequence could accept requirements applying to these vehicles. For the vehicles where there is no development today, the expert made clear that OICA cannot describe in detail the requirements for a further step. OICA informed to be ready to develop some systems, but could not define them in advance. For CWS indeed, OICA insisted on the need to collect some experience.

- 2) *What would OICA recommend as performance requirements if the regulation does only reproduce the state of the art?*

OICA informed that for the vehicles in Row 3 (N2 \leq 8 t and M2), the development would still to be started. OICA would favour to bring some vehicles on the market first, but could not commit on some figures or technical requirements for the time being.

The Chair then questioned how the informal group could meet the terms of reference and how to explain this situation to GRRF. OICA pointed out the difference between the legal system at UNECE level, demanding requirement description, which is not possible for future technology, and the legal system at EU level, not demanding requirement description.

The Chair, as representative of the European Commission, informed that the EC cannot accept a scope not including all vehicles covered by the General Safety Regulation. In this case, the European Commission could not propose the Member States to sign up such Regulation, and as a consequence would not be bound by the UNECE AEBS Regulation. This IG meeting is the last possibility for the Commission services to show flexibility, as there is not yet a draft implementing measure on AEBS under the GSR tabled. He added that the European Commission would have some sympathy for the UK proposal.

OICA clarified that, with regard to the UK proposal, they could not accept a CWS. In the case of an emergency braking system proper, the AEBS for vehicles with hydraulic braking system is not currently under development.

D recalled that the UNECE context provides possibility to promote optional requirements for vehicles where the technology is being developed.

The Chair concluded that there appeared to be no room for progress unless parties would be ready to show some willingness to change their position.

The group then started the revision of document AEBS/LDWS-15-02 (01 series of amendments) OICA presented the document AEBS/LDWS-15-05: OICA informed having currently no knowledge for those vehicles in row 3 ($N2 \leq 8$ t and M2), suggested to keep them out of the scope of the regulation during the time of their development, but was ready to change the regulation in the future for introducing some additional categories into the regulation.

D reminded that knowledge about those vehicles is lacking and suggested optional requirements.

CLEPA stated that, if there are long term phases between the two series of amendments, there is no reason for avoiding accurate requirements. The expert informed that CLEPA would accept no requirement at all for these vehicles in the early stage, but would not support undetermined requirements in the 2nd stage. If there is short term between the stages, CLEPA would support the OICA position.

Japan requested clarification about a possible conflict about the deletion of row 3 between 2013 and 2016 with the European GSR, and hence confirmed their position as in step1.

D was keen that all vehicles be included in the scope of the regulation, and solving the non-existing technology by the way of footnotes committing to further development. The expert in consequence promoted a blank row 3.

The European Commission clarified their position that if there would be no significant difference in stringency of the requirements between the 2 series of amendments, then there would be no need for a 01 series.

Conclusion:

- New 3rd option from OICA, for the 1st step, per document AEBS/LDWS-15-05,
- No clear support from the other parties for this 3rd option.

- No progress made by the informal group towards reaching consensus on this item

3. Resolving the issue of the restriction to vehicles with pneumatic rear axle suspension

(footnote [4] to table1 of annex 3 to working document GRRF/2011/25 updated by informal document GRRF-70-05 and footnote [3] to table1 of annex 3 to working document GRRF/2011/26 updated by informal document GRRF-70-06, as well as document GRRF-70-02 – see also documents AEBS/LDWS-15-01 & 02)

The Chair introduced document AEBS/LDWS-15-03 proposing that, in the 1st implementation step (00 series of amendments) vehicles of category M3, N3, and N2 > 8 tons, which are not equipped with pneumatic rear axle suspension, comply with the collision detection and warning requirements (CWS), but not with the emergency braking requirement.

D introduced document AEBS/LDWS-15-04 and pointed out that the proposal would make footnotes of the table superfluous.

OICA introduced document AEBS/LDWS-15-05 concerning paragraph 5.1.1. on rear axle suspension. OICA clarified that some development time is necessary for the vehicles equipped with non-pneumatic rear axle suspension.

The Chair introduced the document AEBS/LDWS-15-06 (DK position that vehicles without air suspension should not be excluded from the demand for AEBS).

The expert from CLEPA clarified that the warning is the critical part of the system: the driver is a better sensor than the radar, and he could be irritated by false alarms, then switch the system off. Low cost CWS would provide no safety benefits but high cost CWS would be too expensive. The expert hence found no benefits in CWS.

J was of the opinion that AEBS sensor technology can apply to all kind of suspension; hence J was keen to have the same requirements for vehicles with any type of suspension. However J was agreeing to exclude the steel suspension vehicles from the scope for the EU countries. As a consequence, J preferred the OICA proposal to the D proposal, and let the decision of including the relevant types of vehicle up to the convenience of the Contracting Parties. But the expert from J insisted that nevertheless the possibility of approving these vehicles should remain in the regulation. As a conclusion, J favoured to keep some flexibility at the UNECE platform. The expert informed that the experience of the Japanese market with vehicles of category 3 is such that there is no need for any restriction on the pitch angle, but acknowledged that however current experience in Japan is limited to rigid trucks. The expert from J concluded that to his opinion the best solution would be regulating at UNECE, but if this is impossible then J would be flexible on the presence of these vehicles in the regulation.

OICA recalled the difference between the Japanese and the European rigid suspension vehicles: Japanese N3 vehicles have long wheel base and low pitch angle. CLEPA did not share this OICA vision, but considered that J vehicles have a longer rear overhang, making the situation worse in Japan. OICA clarified that in J the vehicles equipped with AEBS and rigid rear axle suspension have long wheelbases. Concerning the technology, CLEPA recalled the document presented at the 70th GRRF providing clarification of the sensor availability (document GRRF-70-XXX). The expert was of the opinion that the technology would not be implemented without making it mandatory.

OICA clarified that when the pitch angle is small enough then OICA is ready to implement the technology.

UK found reasonable that these vehicles be included in the UNECE regulation, but did not yet consider a “may” as proposed by OICA and D. UK then had a reservation in order to study this new possibility.

The Chair found no reason to make such distinction, clarified that the document AEBS/LDWS-15-03 is a proposal from Chair of the informal group as an attempt to find an acceptable compromise on the rear axle suspension issue. In view of the lack of support, the Chair withdrew his proposal AEBS/LDWS-15-03. The European Commission believed that the wording proposed by OICA in the 2nd paragraph of 5.1.1. is contradictory to the objective of international harmonization and is not in line with the guidelines from the UNECE secretariat on how the scope of application for a UNECE Regulation should be specified .

The Chair summarised the discussions by concluding that he would report to GRRF-71 that the informal group could not meet the mandate given by GRRF to find a solution to the outstanding rear axle suspension issue.

OICA announced later during the meeting that OICA was ready to reach some performance requirements for rigid suspension vehicles by 2016 under certain conditions: if proper systems are available in 2013 then OICA can commit to AEBS performance requirements for rigid suspension vehicles starting 2016 (New Types). This of course would depend on the good cooperation with the AEBS suppliers. The target for performance requirements would be the same as for the pneumatic suspension. The expert informed that the vehicle manufacturers need two years for validating the systems provided by the suppliers and fitted on the vehicles.

CLEPA recalled that the proper sensors (fitted with integrated levelling system) are currently available, but that these need the logic signal input to control the internal levelling system, and that this input must be provided by the vehicle itself. CLEPA could not start development for such systems for one manufacturer only, but would start development programs if there is wide order from the 7 main vehicle manufacturers.

D recalled that all safety systems to date were firstly introduced by the market, and then made mandatory. The delegate however declared that the process with AEBS seems to be the inverse: firstly mandating, and then defining the system. In conclusion, D could not support the OICA proposal.

The Chair recalled the famous song of Bob Dylan: “Times They Are A-changing”.

OICA suggested to add the OICA commitment into the Preamble.

UK had a reservation.

F also had reservation.

J could support the OICA proposal but could also follow the majority.

The Chair requested OICA to put their proposal on paper well in advance before the September GRRF to permit consideration by a maximum of Contracting Parties.

Conclusion:

- OICA to provide official input, as committed, for GRRF-71
- Input consisting of
 - paragraph 5.1.1. as proposed in document AEBS/LDWS-15-05;
 - relevant wording for footnote 3 to document AEBS/LDWS-15-02 (“applicable only to vehicles with pneumatic rear axle suspension”);
 - proper performance requirements and application dates for the vehicles equipped with rigid rear axle suspension.
- Complete document to be prepared and tabled by OICA for GRRF-71 (September 2011)

4. D proposal for “deceleration phase” in paragraph 6.4.5.

(document AEBS/LDWS-15-04)

The expert from D informed that the proposal AEBS/LDWS-15-04 towards amendments to paragraph 6.4.5. originates the fact that it is not always possible in practice to reach the 4 m/s².

J could not support this proposal because systems complying with this new provision would still need to be developed.

CLEPA pointed out that the text does not contain any definition of “deceleration phase”.

UK supported J and CLEPA.

F continued with the general reservation.

The informal group held a debate about the performance requirements of the emergency braking phase. The Chair suggested that D comes up with a proposal for GRRF-71 of September 2011, as the informal group did not receive mandate to deal with this item, and as the D proposal did not receive support from the Contracting Parties present at the 15th meeting of the informal group.

5. CLEPA concerns about on administrative errors in the working documents

CLEPA informed about the following errors in the working documents AEBS/LDWS-15-01 & 02:

- Preamble: the expert from CLEPA found unclear the outcomes of GRRF-70 about the adopted wording for the Preamble. He questioned whether the whole text of the preamble is still pending (i.e. fully between square brackets) and whether the final text for the title was correctly reflected in document AEBS/LDWS-15-01.
- Paragraph 2.2.: the expert warned that the current wording of paragraph 2.2. still refers to AEBS-M (AEBS aiming collision mitigation)
- Document AEBS/LDWS-15-02: the expert pointed out the need to add marking requirements in 01 series of amendments in order to discriminate the vehicles complying to the 01 series from the ones complying to the “00 Series” of amendment.

6. Reservation from Japan about light M2/N2 vehicles

(document AEBS/LDWS-15-07)

J presented the document AEBS/LDWS-15-07 and explained the lack of consistency of requiring the performance of row 1 for vehicles below 8 tons equipped with pneumatic braking system, but requiring the performance of row 3 for the same vehicles equipped with hydraulic/AOH braking system. By document AEBS/LDWS-15-07, J proposed to apply the requirement of row 3 to all vehicles below 8 tons, whatever their braking system.

The Chair found premature to provide a position on this.

CLEPA pointed out that the N2 vehicles equipped with AOH and pneumatic braking system are of low production volume, and that changing their performance requirements as proposed by J would be difficult to manage on series production.

The Chair recalled that this item was not part of the mandate of the informal group from GRRF-70, and suggested that the interested parties provide a written contribution for the GRRF session of September 2011 (71st session).

J stated that they withdrew their reservation per footnotes 4 (document AEBS/LDWS-15-01) & 5 (AEBS/LDWS-15-02).

Conclusion:

- footnotes 4 & 5 (reservation from Japan toward light M2/N2 vehicles) withdrawn.

- If still interested, Japan is urged to table a relevant document to GRRF-71 in order to generate a debate about the consistency of the requirements for light vehicles

7. LDWS

At the request by OICA for clarification, the European Commission confirmed that, subject to no further modifications being proposed and introduced, they would support in WP.29 the adoption of the LDWS regulation (document GRRF/2011/29/Rev.1), with the lane markings to be added in the relevant annex.

8. Actions for GRRF-71 and general conclusions

- OICA to present a consistent proposal for non-pneumatic suspension vehicles
- No progress achieved by AEBS/LDWS-15 towards vehicles of categories M2, N2 < 8 tons
- D to decide whether presenting a proposal along the lines of document AEBS/LDWS-15-04 (“deceleration phase”)
- J to decide whether presenting a proposal along the lines of document AEBS/LDWS-15-07

9. Date and place of next meeting

The Chair recalled that this 15th meeting was the last of the informal group on AEBS/LDWS and that next discussions will take place during the 71st session of GRRF (13-15 September 2011)

The Chair shared his opinion that the GRRF session might be put forward by one day in order to provide sufficient time to GRRF to reach final decisions on AEBS/LDWS, and as a consequence suggested that the experts interested in AEBS/LDWS be prepared to be present in Geneva as from Monday 12 September.