

DRAFT REPORT

16th meeting of the GRRF informal group on

Advanced Emergency Braking and Lane Departure Warning Systems

Venue: Palais des Nations, UNECE, Geneva
Chairman: Mr. Johan Renders (EC) (johan.renders@ec.europa.eu)
Secretariat: Mr. Olivier Fontaine (OICA) (ofontaine@oica.net)
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1. Welcome and Introduction

The Chair welcomed the participants and recalled that this 16th meeting of the informal group was organized at the request of the GRRF Chair, after the 70th session of GRRF (May 2011), for providing the informal group an ultimate opportunity to solve the pending issues.

2. Approval of the agenda

Document: AEBS/LDWS-16-01 (Chair)

The agenda was agreed with no change.

The experts were reminded the list of documents:

- AEBS/LDWS-16-01 (Chair) Draft agenda
- AEBS/LDWS-16-02 (UK) proposal to address vehicles with rigid suspension in the Introduction of the AEBS regulation.
- AEBS/LDWS-16-03 (J) presentation about possible concerns with regard to moving target durability.

OICA requested the group to consider the following documents:

- GRRF/2011/39 about Preamble and scope
- GRRF-71-16 about the rigid suspension vehicles.

The Chair, as representative of the European Commission, drew the attention of the participant on the informal document GRRF-71-26, as a reaction to the OICA document GRRF-71-16

J announced a presentation about durability of the moving targets (document AEBS/LDWE-16-XXX)

The experts were then invited to present their contribution.

The UK presented document AEBS/LDWS-16-02 as a document to be considered together with the OICA document GRRF/2011/39, and aiming to permit the Contracting Parties who want to approve vehicles equipped with a rigid rear axle suspension to do so, without making this mandatory.

OICA presented firstly document GRRF-71-16, limited to transitional provisions and to be discussed under point 4.4., and then the document GRRF/2011/39 addressing the Preamble (Introduction). It was suggested to introduce these points during the agenda 4.3.1.(d)

The European Commission also introduced the informal document GRRF-71-23 for item 4.4.

3. Outcome of GRRF-70 and the 15th meeting of the AEBS/LDWS IG

Documents: ECE/TRANS/WP.29/GRRF/70
AEBS/LDWS-15-08 (draft minutes)

The Chair orally recalled the results of the last sessions of GRRF and the informal group:

- Concerning the exemptions, still to be considered
- The issue of the regulatory approach was solved.
- No consensus was reached about vehicles equipped with rigid rear axle suspension
- Pass/fail values were also discussed, with results for N2>8tons, at the exception of the value for the 1st warning, but there was no decision for N2≤8tons and M2. There was also a commitment from OICA for submitting to GRRF71 a proposal for these vehicles.
- Transitional provisions were also outstanding and GRRF70 considered this should be discussed at WP29 level.

The experts agreed with this summary of the situation after GRRF-70.

The Chair recalled that the mandate of the 15th meeting of the informal group was limited to addressing the outstanding issues related to the vehicles with rear axle suspension other than pneumatic and the pass/fail values for vehicles of category N2≤8tons and category M2. He pointed out that there was no real progress made at the 15th IG meeting, but nonetheless some action points were decided.

Mr. Jennison (CLEPA Spokesman) was keen to clarify the paragraph 1 in the draft minutes of the 15th IG meeting about the CLEPA position for the 2-step approach: the CLEPA position is such that the 1st step is of such a low level that the regulation could go straight to the level of step 2. CLEPA committed to provide a corrected text to the Secretary for correcting the draft minutes. The Secretary was tasked to edit a Revision 1 of the draft report of the 15th meeting.

The experts had no further comment to the draft minutes of the previous meeting.

4. Outstanding issues in the draft UNECE Regulation on AEBS

Documents: ECE/TRANS/WP.29/2011/92 + ECE/TRANS/WP.29/2011/93

4.1. Introduction

Outcome GRRF70: GRRF agreed to provide guidance to the Contracting Parties on such vehicles in a specific paragraph of the preamble of the Regulation. GRRF agreed to have a final review of the wording of this paragraph, reproduced in Annex II, at its September 2011 session.

UK presented the document AEBS/LDWS-16-02 and OICA presented the document GRRF/2011/39

The Chair expressed concern that the OICA proposal could be understood as a means to exclude some vehicles from the scope. However OICA clarified that these vehicles with nonpneumatic rear axle suspension may be approved.

CLEPA questioned which authority could verify the meaning of the “available on the market” and “validated”. OICA clarified that this was precisely the reason why such wording had been elaborated.

J was keen to have a visibility of the future.

S supported the OICA position on this topic.

The Chair, as representative of the European Commission, considered this OICA document as being proposals for amendments to the working document GRRF submitted to WP.29. The European Commission considered that the Preamble should be just a guidance and should therefore not entail any restriction of the freedom for the Contracting Parties to mandate AEBS, and therefore should not be introducing a legal uncertainty. UK suggested replacing the proposed date by the 01 Series of amendments. Japan was keen that a Contracting Party can mandate the AEBS on these vehicles BEFORE the date of the 01 Series of amendments.

D found such additional paragraph in the preamble as proposed by OICA not necessary.

NL acknowledged the problems with the rigid suspension, and could support the UK proposal as more flexible.

F supported the addition of a new paragraph, but requested to add the reason why such further development is needed.

RUS proposed to meet the request from J with the addition of a sentence addressing the parameters that should be taken into account when approving these vehicles.

S clarified that the text in the Introduction is not such important, rather the text in paragraph 5.

OICA provided further technical clarifications about the difficulty for the vehicles with rigid rear axle suspension to comply with the text requirements and be simultaneously robust and reliable.

The Chair pointed out that the UK proposal only addresses the Introduction, and pointed out that the OICA proposal for the Preamble is linked with the proposed changes to paragraph 5.1.1.

OICA clarified for the experts that J does not face such problem of pitch angle as the vehicles are not of the same types, and hence does not need particular technology for addressing the large pitch angle problem.

The new wording for the additional paragraph in the Introduction was then developed per document GRRF-71-27.

CLEPA, UK, RUS and D could accept the proposal for compromise of the new text.

J had still concerns and had a reservation toward the new proposal. In addition they were keen to come back to this item after consideration of paragraph. 5.1.1.

S proposed to replace the wording “sensor technology” by “system”. This provoked a further debate which again improved the wording.

NL and F could support the new wording as well.

OICA also could support the compromise.

Conclusion: additional paragraph adopted in the Introduction to be proposed per document GRRF-71-27.

4.2. D proposal for “deceleration phase” (paragraph 5.2.2.)

Outcome IG15: 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.

D proposed to take on board their proposal to amend paragraph 5.2.2. because the current text of the draft regulation forces the vehicle to brake too much (i.e. $> 4\text{m/s}^2$). J however could not accept such wording as it would put in question the whole philosophy of the AEBS agreed in the past. No Contracting Party present was supporting the D proposal.
Conclusion: the informal group adopted the wording “emergency braking phase”.

4.3. Annex 3 - Warning and activation test requirements – pass/fail values

Outcome GRRF70: GRRF discussed the pass/fail values proposed by the informal group for the warning and activation test in Annex 3 of the draft Regulation (...).GRRF agreed in principle to have requirements for N2 vehicles above 8 tonnes equipped with mitigation systems (row 2 of the table in GRRF-70-05) and deleted the "blank row" option for this group of vehicles. (...) GRRF could not agree on the other text in square brackets in the table (footnotes, row 3).

4.3.1. Document ECE/TRANS/WP.29/2011/92:

a. Vehicles with pneumatic-hydraulic braking system (AoH) (footnote [1])

The group firstly discussed the Footnote 1 and its reference in row 1:

RUS proposed to delete the reference to footnote N°1

J suggested to delete row 2 and introduce the reference to N2>8t into cell A1.

NL supported to delete footnote 1

OICA, UK accepted this.

OICA presented (document GRRF/2011/39) and the reason why deleting row 3, as it is a base for discussing scope, row 3 and footnote 2: AEBS is a system braking the vehicle. However, leaving the row blank would be misleading as the AEBS would not brake. The Technical Services would not know what to do as there would be no performance requirement. The expert from OICA stressed that it would be cleaner and clearer to have a regulation with a defined scope and clear performance requirements for these vehicles within the scope. He hence considered better to delete the row than keeping it blank.

D suggested to keep the row 3, blank, and to fill it in when technology will be available.

NL found the OICA proposal the most “straight forward” as it is impossible to have in the scope vehicles with no requirement, at least for the 00 Series of amendments. Some requirement could be added for the 01 series.

UK supported NL.

F supported OICA, i.e. deleting the row 3 for the 00 and 01 Series of amendments.

J stated that the 1st priority is the heavier vehicles. But the technical requirements for lighter vehicles would be accepted by J. J however was keen to follow the majority.

RUS was ready to support OICA from a logical standpoint for the 00 Series. But the expert was of the opinion that for the 01 series of amendments all vehicles should be included.

The Chair then asked OICA whether their proposal would indeed imply no harmonization. OICA clarified that the regulatory process in Geneva is such that harmonization exists.

The Chair then concluded that according to the OICA proposal Contracting Parties are not bound by the AEBS Regulation for the vehicles outside the scope of the Regulation and could therefore impose the requirements they would consider appropriate. Hence the European Commission would not have to take into account the discussions held at the UNECE platform about these excluded vehicles for mandating AEBS in the context of the GSR.

OICA clarified that as from the time there is no existing vehicle of these categories with AEBS, it would be premature to discuss precise requirements for the 01 series. The expert added that, of course, a regulation is always open to any amendment.

The Chair suggested then introducing the current 00 series requirements in the 01 series of amendments, assuming that AEBS technology for these vehicles would exist at the time of the application date for 01 series of amendments.

NL supported this compromise.

RUS suggested to delay the adoption of the 01 series of amendments as the situation for the 01 series is unclear (e.g. up to March 2012 WP29 session). The Chair however considered this an entirely new approach because all the proceedings so far have been based on the adoption of 00 + 01 series of amendments as a package. The Chair however committed to present this new idea to GRRF-71 as an additional option.

UK had a reservation about the proposal of having blank row 3 in the 01 series.

The European Commission recalled their position was clearly based on the objective that both 00 and 01 series should have all vehicles covered. But the European Commission could accept such compromise for the sake of safeguarding harmonisation. Simply excluding these vehicles from the scope of the 00 and 01 Series would delete any incentive to see AEBS introduced in the market for those vehicles.

OICA concern about RUS to discuss 01 later: need for Industry to keep the current visibility for the vehicles already agreed. As Dr. Zastrow, the OICA spokesman found the Chair's proposal interesting, and needed internal inquiry with OICA members about it.

CLEPA clarified that the row 3 should be deleted or filled in with the wording currently proposed (and coming from CLEPA). CLEPA also could accept e.g. blank cells with a reference to a footnote stating that relevant requirements must still be developed. The fear was that a Contracting Party decides to mandate requirements which cannot be economically viable.

The Chair tried to summarize the options on the table as follows:

1. Keeping row 3 (D) and full scope + footnote about further development for 01 Series.
2. Excluding these vehicles by deleting row 3 (original OICA proposal)
3. Exclusion for the 00 Series but inclusion in the 01 series.(UK + EC)
4. Delaying adoption of 01 series to the time when some satisfying performance requirements will be ready (RUS).
5. Keeping row 3 blank, with some commitment that GRRF would come to definition of requirements before application of 01 Series of amendments (Chair's compromise)

The Chair suggested to simply reporting back to GRRF the 5 options, assuming some clear input from OICA at GRRF-71. The group then decided to provide time to members for internal discussions.

OICA then agreed to follow the proposal from the Chair where, in the 01 series, a note would explain some commitment that performance requirements will have to be developed.

UK could not support the RUS proposal delaying adoption of 01 series to the time when some satisfying performance requirements will be ready. UK could support deletion of row 3 from 00 series, with some requirements in row 3 at the 01 series. These requirements would be the result of some discussion with Industry.

NL, F, RUS, CLEPA and S could support this approach.

F had no strong opinion about the requirements in the 01 series for these vehicles.

D could support the approach, subject to further consideration.

J wanted further consideration.

OICA then committed to develop relevant text for row 3 in the 01 series of amendments for further consideration and discussion at the 71st session of GRRF.

Conclusion: compromise approach agreed, subject to further advice from the UNECE Secretariat and discussion in GRRF71.

b. Vehicles of category M₃ with hydraulic braking system (footnote [2])

The group then discussed the Footnote 2 and its reference in row 1:

The informal group agreed to merge together rows 1 and 2, also awaiting the results of GRRF-71.

c. Vehicles with pneumatic braking system (footnote [3])

Footnote 3 and its reference in row 1 was then recognized obsolete in the new merged row. Concerning its reference in row 3, the informal group agreed to await the results of GRRF 71.

Vehicles with pneumatic rear axle suspension (footnote [4])

Outcome GRRF70: GRRF also discussed the issue as to whether the draft Regulation should include requirements for vehicles not equipped with pneumatic rear axle suspension (i.e. vehicles with rigid rear axle suspension). The expert from CLEPA presented GRRF-70-08 showing the vertical angle capability of AEBS sensors and that, for these vehicles, sensor system development was required. A number of experts were of the opinion that such vehicles should not be subject to the pass/fail values proposed in Annex 3 of the draft Regulation because the present AEBS were not able to cope with the variation of the pitch angle of these vehicles. Other experts were in favour of including such vehicles in Annex 3 of the draft Regulation to support the development of specific sensor systems for these vehicles. Other options considered by GRRF were to cover such vehicles in a further step of the Regulation or only require warning systems with no action on the brakes for these vehicles in a first step. GRRF could not reach a final decision and agreed to let WP.29 decide on this issue. GRRF requested the AEBS/LDWS informal group to study the possible options mentioned above, as well as the alternative proposal (GRRF-70-02-Rev.1) proposed by Germany. The AEBS/LDWS Chair agreed to hold a meeting of the informal group before the summer break (26-27 May 2011) on this topic.

Outcome IG15: OICA to present a consistent proposal for non-pneumatic suspension vehicles

Concerning the Footnote 4, OICA proposed to delete it according to their proposal (GRRF/2011/39).

J pointed out that some Contracting Parties want to mandate AEBS on non-pneumatic rear suspension vehicles, Hence J could accept the proposal from OICA (GRRF/2011/39 in paragraph 5.1.1.) as it provides this flexibility.

OICA confirmed the interpretation of the document GRRF/2011/39 that a Contracting Party wishing to do so can mandate AEBS on rigid suspension vehicles

The Chair however recalled document WP29/2011/48 stating that the wording proposed by OICA can provoke legal uncertainty. In this view, the European Commission was hesitant in supporting the proposed text in 1.§ 5.1.1 .

The Chair proposed to seek advice from the UNECE Secretariat about this item at GRRF-71.

J supported this proposal.

D found the OICA proposal quite clear and could support it.

NL was of the opinion that the guidance provided in the Introduction would be sufficient. In this view, the proposal from OICA to mention rear-axle suspension vehicles could be deleted as well.

UK had a reservation about whether the mention in the Introduction would be sufficient guidance to the Contracting Parties.

Conclusion: the informal group agreed to request guidance to UNECE Secretariat. At GRRF-71.

e. Reservation from Japan for light M₂/N₂ vehicles (footnote [5])

Outcome IG15: 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.*

J confirmed they withdrew their reservation.

f. timing of warning modes for moving target scenario

Outcome GRRF70: With regard to the timing of the first warning mode for a moving target for collision avoidance requirements (i.e. cells E1 and E2 of the table in GRRF-70-06), GRRF noted the preference by the expert from Germany, for 2 seconds in particular for legal reasons. However, a majority of experts favoured 1.4 second. Therefore, GRRF agreed to delete the 2 second option and to keep the value of 1.4 second in square brackets in cells E1 and E2 of the table in GRRF 70 06 (avoidance systems) as well as in cell E1 of the table in GRRF 70-05 (mitigation systems).

D confirmed their opinion that this item is important (2 seconds in the 01 series, at least). D agreed to remove the [] for the 00 Series of amendments.

g. M₂ vehicles and N₂ vehicles below 8 tonnes (row 3)

Outcome GRRF70: (...) For N₂ vehicles below 8 tonnes and M₂ vehicles (row 3), GRRF requested the AEBS/LDWS informal group to further discuss the possibility of further developing the specific requirements for these vehicles, including requiring warning systems only or covering such vehicles in a further step.

- Outcome IG15:*
- *New 3rd option from OICA, for the 1st step (deletion of row 3)*
 - *No clear support from the other parties for this 3rd option*
 - *No progress made by the informal group towards reaching consensus on this item.*

See outcomes above: OICA was tasked to provide input for row 3 in the 01 series of amendments to GRRF-71.

4.3.2. Document ECE/TRANS/WP.29/2011/93:

a. Vehicles of category M₃ with hydraulic braking system (footnote 1)

See agenda item 4.3.1.b above

OICA clarified that, in case the row 3 were included in the 01 series, then the footnote 1 would be kept.

Footnote 2: OICA would not delete it.

Footnote 3: see OICA proposal

Footnote 4: J previously left their reservation

b. Vehicles with pneumatic braking system (footnote 2)

See agenda item 4.3.1.c above

c. Vehicles with pneumatic rear axle suspension (footnote [3])

See agenda item 4.3.1.d above

d. Reservation from Japan for light M₂/N₂ vehicles (footnote 4)

See agenda item 4.3.1.e above

e. timing of warning modes for moving target scenario

See agenda item 4.3.1.f above

D was keen to keep the “2.0 second option” at least for the 01 Series of amendments of the regulation.

f. M₂ vehicles and N₂ vehicles below 8 tonnes (row 3)

See agenda item 4.3.1.g above

It was assumed that the 2 rows 1 and 2 could be merged, subject to the outcomes of the discussions at GRRF-71

At the request of India, the informal group agreed that the wording of paragraph 6.4.1. of document WP29/2011/92 was amended.

4.4. Transitional provisions:

Document: ECE/TRANS/WP.29/2011/93
GRRF-71-16 (OICA)
GRRF-71-23 (European Commission)

Outcome GRRF70: The AEBS/LDWS Chair presented the draft transitional provisions between step 1 and step 2 of the draft Regulation prepared by the informal group in GRRF-70-06 superseding

ECE/TRANS/WP.29/GRRF/2011/26, indicating that for none of these provisions consensus had been reached.. A number of experts were in favour of further simplifying these transitional provisions. However, GRRF could not reach a final decision and agreed to send the draft transitional provisions contained in GRRF-70-06, as reproduced in Annex II, for final decision by WP.29 at its November 2011 session.

OICA presented document GRRF-71-16. The background is that some Contracting Party may not sign the 01 series, hence the transitional provisions are relevant only for the Contracting Parties signing the 01 series.

The European Commission explained document GRRF-71-23:

- Paragraph 12.1.: the expert recalled there was an agreement between the Contracting Parties, earlier in the AEBS discussions within the informal group, to delete this paragraph. He added that with such text, J would not be permitted not to grant approval, even if they do not want it.
- Paragraph 12.2.: the Chair acknowledged the problem of OICA. But a Contracting Party could notify not to accept the 01 series of amendments hence not be bound by the 01 series. In addition, the European Commission is of the opinion that there is no need to wait up to 2016 for such a low level of requirements.
- Paragraph 12.3.: this text would have the consequence that some Contracting Parties would be prohibited to continue to provide approvals to the 00 series.

Some debate took place on the interpretation of the 58 Agreement.

J clarified their position, willing to accept normal 01 series vehicles. J is planning to undertake research about 01 series vehicle acceptance. According to the results, J will propose amendments to the 01 Series for granting approvals.

NL: recalled the position of J in May 2011 (GRRF-70) that they would sign the 01 series of amendments to the regulation in 2016. The expert pointed out that, in addition, the 58 Agreement requests the Contracting Party to have the capabilities to grant approval.

OICA pointed out that the Contracting Parties not signing the 01 series are not bound by the 00 Series, hence the paragraph V1 of document WP29/1044 does not apply to them.

The Chair pointed out that the standard transitional provisions V1 addresses “Contracting Parties applying the regulation”, rather than the ones applying only the 01 series of amendments. V2 would prohibit a Contracting Party to mandate the 01 series before the date indicated in the paragraph. The European Commission considers V2 not appropriate for the AEBS situation where 2 levels of the same regulation apply simultaneously. The Chair acknowledged that V2 may be contradictory to the 58 Agreement.

Conclusion: the informal group could not reach agreement about the transitional provisions.

5. Any other business

RUS assumed that the 01 series of amendments will probably be enforced later than the 00 series.

IND informed that the definition 2.3. was missing from document WP29/2011/92.

6. Actions for GRRF-71 and general conclusions.

Conclusion:

Positive progress on 3 issues

- Introduction: further clarification for CPs

- Row 3 possible compromise (01 series to cover M2 and N2 < 8 tons)
- Flexibility for table of 00 series + some text clarifications

Remaining issues:

- Scope of application
- Seeking guidance of UNECE Secretariat about rigid suspension (row 3)
- Transitional provisions.