

<b>Minutes of the 9<sup>th</sup> meeting of the Informal Group on Global Technical Regulation No. 9 – Phase 2 (IG GTR9-PH2)</b>	
Venue	Palais des Nations (United Nations facilities), Avenue de la Paix 8 - 14, 1211 Geneva (Switzerland), Room XV
Date	16 – 17 Dec. 2013
<u>Status:</u> <b>Draft</b>	

Item	Subject	Action item(s)
1.	Welcome	
<p>Mr. Damm welcomed all attendees at the Palais des Nations in Geneva. He noted that WebEx access was available for those people who could not attend the meeting in person. He thanked Humanetics for providing the WebEx access.</p> <p>The meeting was chaired by Mr. Damm (chair) and Dr. Konosu (vice-chair), the secretariat was provided by Mr. Kinsky.</p>		
2.	Roll call of participants	
<p>See attendance list.</p> <p>In addition, the following people attended the meeting (the whole meeting or part-time only) via WebEx and/or phone: Ms. Buckman (Ford), Messrs. Borde (Faurecia), Corvin (Shape), Marks (Sabics), McCabe (Chrysler), Stammen and Sutula (both NHTSA), Tsuburai (JASIC) and Roth (Audi).</p>		
3.	Adoption of the agenda (all) (document GTR9-9-01r1)	
<p>A revised version of the agenda was provided by the secretary (document GTR9-9-01r1). This document already contained all the documents that had been handed in for discussion.</p> <p>Mr. Dyer announced that Cellbond will have an additional presentation available for the agenda item on the drawing review. <b>(Note of the secretary: This document was later added as document GTR9-9-16.)</b></p>		
4.	Review of the draft minutes of the 8 <sup>th</sup> Meeting (all)	

	(document GTR9-8-02)	
<p>The secretary noted that some minor comments had been received from BAsT as well as TRL. These comments were reviewed and adopted. The revised minutes of the 8<sup>th</sup> meeting were published as document GTR9-8-02r1.</p>		
5.	Review of the amendments to the draft manual as well as to the drawing package	
5.1.	Review of amendments to the drawings and of the proposed title block (Chair, Humanetics, all) ( <del>Updated version of drawing package GTR9-5-31r1 expected, GTR9-9-11, GTR9-9-12, GTR9-9-16</del> )	A-7-04, A-8-01, A-8-02
<p>The chair explained the agreement he had found with the chair of the gtr No. 7 Informal Group on a common title block and disclaimer to be used for all drawings. Regarding the disclaimer he explained that the disclaimer will be removed after an adoption of the gtr amendments by the WP.29 secretariat. Preferably, a company handing in drawings should provide two versions, one with and one without disclaimer, to allow the secretariat a quick publication of the final version.</p> <p>Mr. Burleigh then explained in detail the new drawing package GTR9-9-11 (which in fact is a zip folder containing all drawings) as well as the changes applied to the drawings as noted in document GTR9-9-12.</p> <p>Mr. Nguyen wondered for some of the changes why they were made and Mr. Burleigh responded that some amendments were applied on request of attendees or since the information was not needed.</p> <p>Mr. Abad explained that Cellbond found some further issues when comparing the drawings with the hardware (GTR9-9-16). Especially differences to the impactor SN-03 were noted. Mr. Burleigh responded that SN-03 is one of the first prototypes and therefore may not have the final build level at the time of the checks. The secretary noted that Humanetics had explained in the 6<sup>th</sup> meeting that only legforms handed over to customers after 12 June 2012 or having had an update after that date represent the final build level (see also minutes of the 6<sup>th</sup> meeting, document GTR9-6-02r2).</p> <p>Also, Mr. Abad again wondered which detail of the material specification is necessary and it was clarified which information should be provided: The material as well as a coating, if any, should be contained in the drawings. Humanetics will consider this before the drawings will finally be released.</p> <p>The secretary noted that with the explanations above action items A-7-04, A-8-01 and A-8-02 were closed.</p>		

5.2.	Review of amendments to the manual: Impactor storage, femur certification, velocity measurement (Humanetics, all) <del>(Updated version of document GTR9-6-06 expected, GTR9-9-07r1, GTR9-9-08r1, GTR9-9-09)</del>	A-6-04, A-8-04, A-8-05, A-8-09
<p>Mr. Burleigh had provided the manual in advance, the documents GTR9-9-07r1 and GTR9-9-08r1 are the manual as well as a list of changes compared to the earlier version in a non-commercialized version. Mr. Burleigh explained the changes in detail.</p> <p>Mr. Zander wondered why the section on the zero crossing of the femur had not yet been updated. Mr. Burleigh answered that by now he had not enough data for this but that this should be done soon after this meeting. The chair added that these amendments will need to be done for the May 2014 GRSP session.</p> <p>Afterwards, Mr. Burleigh introduced document GTR9-9-09. He explained the process to define the zero crossing of the femur. Mr. Zander wondered why the results now are presented only for the zero crossing while it was agreed to use also the maxima internally used by Humanetics. Again, Mr. Burleigh apologized that he may need more data also from users to finalize this. The chair added that also this information will finally be needed later and must be available before a final decision in WP.29 can be made. He invited all labs to provide data for this to Humanetics.</p> <p>The secretary noted that with the discussion before action items A-6-04 and A-8-04 had been closed. Regarding action item A-8-05 it was agreed that Mr. Burleigh will update the section on the femur performance in the manual as soon as he has sufficient data to do so. For action item A-8-09 Mr. Burleigh apologized to not be able drafting a respective text since Humanetics does not conduct vehicle tests. OICA volunteered to work on this with Mr. Burleigh. <b><i>(Note of the secretary: Finally, action items A-8-05 and A-8-09 both had been closed before these meeting minutes were published.)</i></b></p>		
6.	Final discussion/decision on open details	
6.1.	FlexPLI thresholds/criteria, relaxation zone (all) <b>(document GTR9-9-04r1)</b>	A-4-03
<p>On behalf of OICA Mr. Schmitt presented document GTR9-9-04r1. He explained that from the early beginning all pedestrian safety legislation by now contained a relaxation zone to address feasibility issues, especially in interaction with other regulatory requirements. Also, he highlighted that the internal design targets of manufacturers, which are applied to assure compliance with legislation in all cases, are well below the thresholds that now are proposed for a relaxation zone.</p>		

On request of Ms. Versailles Mr. Schmitt confirmed that in fact the proposal of OICA was to just remove the square brackets in section 5.1.1 of the draft amendment to gtr No. 9. It was finally agreed that the concept of the relaxation zone is acceptable but that the thresholds themselves are subject to discussion later in the meeting. Therefore, the square brackets around the sentence in section 5.1.1 were removed but around the values were still maintained.

Mr. Ngyuen added that, for the time being, NHTSA had not yet finished their internal assessment. NHTSA will finalize this in due time for the June 2014 WP.29 when the gtr No. 9 amendment is to be voted. NHTSA therefore proposed to either keep the limit values as optional for contracting parties or to completely remove them and just refer to the injury risk curves. Of course, the rationale in section A could explain this in detail. Ms. Versailles added that in informal document WP.29/161/07 of the 161<sup>th</sup> WP.29 session in November 2013 a similar approach had been found for the gtr on pole side impact.

Mr. Naono mentioned that a clause like this is already covered in section 214 of the draft preamble and wondered whether this already addressed the US issues. Ms. Versailles noted that explaining the subject in the report may not be sufficient: It still will maintain the obligation of the US to start rulemaking based on the gtr. Therefore, the concerns should be part of the regulatory language. It was finally agreed that Ms. Versailles will check for the GRSP session what language could meet the needs of NHTSA.

The secretary noted that action item A-4-03 was closed with this discussion.

6.2.	Acceptable impactor flight tolerances at the time of the impact (all)	A-8-08
<p>The secretary noted that OICA had announced to conduct some research on this which unfortunately had not yet been finished. However, first results indicated that the tolerances should be kept. If needed, OICA may present further details in the May 2014 session of GRSP but this seemed unlikely at the moment.</p> <p>Action item A-8-08 therefore was closed.</p>		
6.3.	Other items, if any (all)	
None.		
7.	Detailed review of the draft gtr 9 amendment	
7.1.	Review of draft preamble, discussion on open items, if any (all) (document UNECE/TRANS/WP.29/GRSP/2013/25)	A-8-03

The secretary noted that action item A-8-03 had been finalized before the meeting and that the respective wording was already covered by the draft preamble.

The preamble was then reviewed in detail and further amendments were incorporated as agreed in the discussion.

7.2.	Review of draft phase 2 text of the regulation, discussion on open items: Impactor weight, new diagrams for compression sheets, etc. (all) (document UNECE/TRANS/WP.29/GRSP/2013/25, <b>GTR9-9-03, GTR9-9-06, GTR9-9-10, GTR9-9-13, GTR9-9-14</b> )	A-8-06, A-8-07, A-8-10
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For the discussion on the impactor weight tolerances, Mr. Schmitt presented document GTR9-9-03 of OICA. He explained that a number of existing impactors was double-checked and, as a result of this work, it should be acceptable to halve the tolerances for the weight of the FlexPLI from currently  $13.2 \pm 0.7$  kg to  $13.2 \pm 0.35$  kg. On request of Mr. Burleigh Mr. Schmitt confirmed that the impactors all have the standard equipment of sensors (except of one impactor that had two additional sensors) but that optional equipment still should be possible with the proposed impactor weight.

On the same subject, Mr. Burleigh presented results of the assessment done at Humanetics (GTR9-9-10). He finally proposed keeping the tolerances of  $\pm 5$  percent for the time being but agreed that there may be potential to decrease the tolerances in the future. However, after some further intense discussion it was agreed to foresee a weight tolerance of  $\pm 0.4$  kg for the complete impactor (with flesh and skin, ready for testing) and of  $\pm 0.3$  kg for impactor without flesh and skin. These values were put into square brackets for the time being to allow Humanetics double-checking the details. It was agreed that the square brackets can be deleted as soon as Humanetics indicates their agreement.

Mr. Sawamura presented document GTR9-9-06 and explained that issues were seen when conducting the three-point bending tests for the knee section. Due to the size of the knee block there is a risk for the knee contacting the surface of the ground plate. The Japan National Traffic Safety and Environment Laboratory (NTSEL) therefore proposed to add further spacers between the knee section and the ground to avoid the contact. This was finally agreed.

Mr. Burleigh introduced document GTR9-9-13 on the Neoprene specifications: In the 8<sup>th</sup> meeting Humanetics had shown that the Neoprene had to be changed from 5 mm thickness to 5.6 mm and with this the compression characteristics had changed. The respective diagrams in the draft gtr as well as in the draft R127 need to be adapted.

Mr. Zander wondered why the material changed since in fact the scatter in the compression increases. Mr. Burleigh explained that the change was needed together with other zippers and due to the availability of the material. Finally, it was agreed that the characteristics

should be adapted according to the proposal of Humanetics.

It was noted that Mr. Kinsky will change the respective diagrams as well as the drawing provided by NTSEL before forwarding the revised documents to the GRSP secretariat.

Then, document GTR9-9-14 was presented also by Mr. Burleigh. He explained that the overall length tolerance of the impactor should be narrowed and that the test rig for the pendulum test needs to be adapted. Dr. Konosu replied that for the impactor JARI does not see a need to change this since all data shown still are within the existing corridors. Finally, it was agreed to maintain the tolerances at ± 3 mm.

For the dimension of the test rig, Dr. Konosu noted that it may be acceptable to increase the tolerance to 3 mm. Since no further comments were received this was then finally confirmed. It was also confirmed that the dimension for the angled impact surface at the test rig should be specified in more detail. The modified figures will also be added to the draft gtr text.

In addition, the text in document GRSP/2013/25 was reviewed with regards to square brackets. In the paragraphs 3.23, 3.24 and 7.4.4 the square brackets were removed. It was also noted that figures 15b, 26 and 27 have to be updated.

Finally, the secretary noted that the action items A-8-07 and A-8-10 had been closed seeing the discussion before. Action item A-8-06 should remain open until Humanetics confirmed the tolerances agreed before. ***(Note of the secretary: Mr. Burleigh confirmed in due time after the meeting that the tolerances can be confirmed as agreed and consequently the action item had been closed before these minutes were published.)***

7.3.	Review of the corresponding amendments to UN Regulation 127 (all) (document UNECE/TRANS/WP.29/GRSP/2013/26, <b>GTR9-9-05</b> )	
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Mr. Naono presented document GTR9-9-05. He explained that Japan would prefer to also have a date for new registrations, being 6 years after the enforcement of the Phase 2.

Mr. Abraham responded that OICA does not see an issue with this in general since the majority of the fleet will have changed by the time when the amendment will be enforced. However, the amendment would affect especially niche vehicles which usually have quite long lifecycles. Seeing that the sales figures of these vehicles are low he proposed to skip this section for new registrations. Mr. Schmitt added that, if any, there should be a date that does not conflict with the requirements currently in use in Europe as well as in Japan.

After some further discussion on the chair proposed to finalize the discussion in the main

GRSP session. The European Commission added that a good justification should be added since he also saw the limited benefit of the change late in the vehicle model lifecycle.

***(Note of the secretary: During the GRSP session following this Informal Group meeting, Japan finally withdrew the proposal.)***

8.	Identification of further open issues, if any, next steps (Chair, all)	
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The activity list from the 4<sup>th</sup> meeting as revised in the 7<sup>th</sup> meeting (document GTR9-4-03r2) was reviewed again. It was noted that for all activity items finally a clear status exists. The document therefore was revised again and was finally closed. The latest version will be provided as document GTR9-4-03r3 by the secretary.

Besides this, the secretary noted that action items A-8-05 (updating the section on the femur performance in the manual), A-8-06 (tolerances for the impactor) as well as A-8-09 (proposing a procedure for the velocity measurement in the manual) have not yet been closed but also have a clear status. The respective work should be finalized soon.

***(Note of the secretary: As indicated above, all action items had been finalized before these minutes were published.)***

9.	Review of the draft final report (Chair, all) (document GRSP-54-xx)	
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The chair noted that a draft final report is available. However, due to the limited time available for this meeting and due to the fact that the GRSP session will have to review the report in more detail it was agreed that no detailed review will be conducted during the course of this meeting.

10.	A.O.B. <b>(documents GTR9-9-15 and GTR9-9-17)</b>	
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Mr. Hardy presented document GTR9-9-15 referring to the information shown during the 8<sup>th</sup> meeting: Since the CONFOR-45 foam for the EEVC lower and upper legform impactors had no longer been available TRL conducted some testing with the two foam types offered as replacement. Mr. Hardy noted that in fact all tests had been passed but that the performance of the new foams is slightly different. Also, TRL assessed that no changes to the current certification of the impactors is necessary. However, since all these conclusions are based on very limited data Mr. Hardy invited all users on behalf of TRL to report back any issues they may have when using the new foams.

Also, Mr. Hardy presented a first overview on the test results achieved by TRL for the work of

the Task Force Bumper Test Area (document GTR9-9-17). He explained that according to TRL's findings the corner points defining the bumper test area may need to be re-defined. Mr. Broertjes (who chairs the TF-BTA activities) explained that he is very optimistic to finalize the discussion on this subject soon. He noted that a next meeting of the TF-BTA will take place in Brussels at the Commission's in late January or early February and invited attendees of this Informal Group meeting to also attend the Task Force meeting.

***(Note of the secretary: The 5<sup>th</sup> TF-BTA meeting was finally scheduled for 30 January 2014 at the Commission's in Brussels.)***

11.	Next meeting <b>Please note:</b> It is assumed that no further meeting will be needed.	
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The chair noted that no further physical meetings of the Informal Group will be needed. If necessary, open details could be clarified in a WebEx/phone conference.

The chair thanked all attendees for their active support of the work of this Informal Group. He expressed his optimism that the amendment of gtr No. 9 can be finalized soon and that this will provide further benefits for pedestrians in the real life accident scenario. Mr. Damm finally concluded the meeting.



IG GTR9 PH2 9<sup>th</sup> Meeting

16 - 17 Dec. 2013, Palais des Nations, Geneva

## List of Attendees

Date, Place






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IG GTR9 PH2 9<sup>th</sup> Meeting

16 - 17 Dec. 2013, Palais des Nations, Geneva

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Date, Place

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