Minutes **4th meeting** **Task Force regarding Review and Update Certification Corridor (TF-RUCC) under the IG GTR9-PH2**	
Venue	**Web meeting**
Date	**18 June. 2012, 12:00 - 14:00 (CET)**
Status: Draft	

Present: Atsuhiro Konosu, JARI (Japan) Chairman
Mark Burleigh, Humanetics (UK) Secretary
Thomas Kinsky, GM Europe/Opel (Germany)
Jan-Christopher Kolb, Bertrandt (Germany)
Daniel Folcini, Bertrandt (Germany)
Oliver Zander, BASt (Germany)
Dirk-Uwe Gehring, BGS (Germany)
Iwao Imaizumi, Honda R&D (Japan)
Yukou Takahashi, Honda R&D (Japan)
Takahiro Issiki, JARI (Japan)
Kurt Bambach, Humanetics, (U.S)
Oskar Ries, Volkswagen (Germany)
Carsten Hohmann, Volkswagen (Germany)
Christian Hess, Audi (Germany)
Michelle Chaka, Ford (U.S)
Sukhi Bilkhu, Chrysler (U.S)

1. Welcome

2. Self introductions

3. Adoption of the Agenda (TF-RUCC-4-01-Draft).

Items 5 and 6 were requested to be switched around. This was done and BASt will present before Bertrandt. (TF-RUCC-4-01-Finalized)

4. Adoption of the Draft Minutes for the 3rd TF-RUCC meeting (TF-RUCC-3-02-Draft-r1)

The draft minutes were accepted with a small revision previously requested by

BASt. (TF-RUCC-3-02-Finalized)

5. BASt/BGS Presentation (TF-RUCC-4-04)

- Oliver Zander presented inverse and pendulum test results obtained at JARI, BASt and Bertrandt using 3 RR legforms, and proposed draft update corridors using the test results. The revision of all previously build impactors to meet the update corridors is strongly recommended.
- Mark Burleigh was concerned with the narrowing of the range compared to the previous corridors, particularly T4 and MCL which are 30 and 20% narrower. This is something Humanetics would not want to accept due to potential build variation and possible performance changes in service. The leg already has very tight corridors.
- Oliver Zander – We had different bone batches in the RR legs, so width of the update corridors were set with consideration of reasonable production variation; besides the corridors are made using TEG agreed method, so the width should have no concerns.

6. Bertrandt Presentation (TF-RUCC-4-03)

- Christopher Kolb presented inverse and pendulum test results from 4 production legforms which were compared to the current GTR corridors as well as BASt proposed draft update corridors. Test results were promising to meet with the update corridors. The location of the test results in the corridors is improved. Further tests to confirm the long term performance are wished for. There was also concern over root cause of scatter seen in the legforms.
- Atsuhiro Konosu – 4 other legforms are tested that meet the proposed update corridors. We do not see any issues for 7 legfroms (3 RR legforms and 4 other legforms). We/TF therefore would like to accept the update corridors.
- Thomas Kinsky - There was a question on the capability of the sensors, could they create scatter.
- Mark Burleigh - all sensors have some error but this is very small.
- Kurt Bambach - sensor sensitivities are rounded which can create a small

error. Thomas Kinsky – the testing of 4 series production legs did not show any problems with the proposed corridors, 2 legs were new, 1 was about a year old and one was some months old so represents different build levels. ACEA have not made up their mind yet but does not look bad.

- Sukhi Bikhu – After adjusting the corridors 2 results are very close to the edge of certification this should be a concern.
- Oliver Zander – 2 new and 2 older legforms were tested and all met the corridors therefore see no problem in proposing this to the I.G.
- Atsuhiro Konosu – JARI have no concern to accept BASt corridor proposal.
- Oliver Zander – concerned what will happen if further testing in U.S does not meet Europe results. However, 3 test labs (JARI, BASt and Bertrandt) have comparable test results, therefore, if other test lab data does not meet the update corridors, reason of that will be the test lab problem (test rig problem, testing error, etc.).
- Mark Burliegh – It had been agreed that U.S would test the RR legs so only fair this is done, it is very important lab variation is considered.
- Thomas Kinsky – Final decision can wait until August we do not need to decide now.
- Oliver Zander – do not want to extend the round robin.
- Thomas Kinsky – It was agreed for other parties to test. Both concerns are valid. We can discuss before the next I.G meeting on finalizing corridors.
- Atsuhiro Konosu - Task force cannot wait too long best to consider by end of July. JARI believe BASt made good update corridor, so JARI believes no serious concerns will happen. On the other hand, several TF members still have some concerns on the update corridors. TF therefore need to carefully check validity of the update corridors with some additional test data. However it does not mean that TF can change the update corridors easily. We will check other test lab data one by one very carefully, then if it is a test lab problem, TF will ask the test lab to improve their test rig and/or testing methods.

7. Humanetics Presentation (TF-RUCC-4-05)

- Mark Burleigh presented short status on their improved inverse test rig

showing initial results with SN05. The leg (SN05) is not yet updated to new spec. Results were good and met new corridors.

- Dirk-Uwe Gehring – Why did you hang the leg on rig and fit speed measurement on rig?
- Mark Burleigh – This was how it was designed and it was decided not to change this as rig was already being manufactured. We were aware of this issue and would look at these affects like video on leg hanging to check movement before impact.
- Dirk-Uwe Gehring – It is important to measure speed remotely this was a problem seen on other rigs in the past as vibration can be an issue with speed accuracy.

8. Discussions

- Atsuhiro Konosu - Need to have RR data from other test labs however do not want to change the proposed draft update corridors. TF will check other test lab data one by one carefully to see if there is a problem at the next TF meeting.
- Humanetics currently has concern with narrower corridors particularly with 2 inverse channels.
- Atsuhiro Konosu asked BASt if they could share raw data with the group.
- Oliver Zander said this would not be a problem.
- The TF were asked to review this raw data.

9. Future Action Plans

- Humanetics and Ford U.S to complete RR testing and report before next meeting.
- ACL on Engineering leg will need repair and knee will need to be recalibrated at Humanetics.
- BASt will provide 3 RR legforms raw data regarding inverse and pendulum test obtained at JARI, BASt and Bertrand for TF member's review.

10. Next meeting

30 July 2012

11. **A. O. B.** None