

GTR7-03-04

**3rd Meeting of the IWG GTR No. 7
Draft Status Report of the
BioRID TEG**

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Chairman**

Geneva, 17th May 2010

Meetings

- 22nd January 2010: last official Global BioRID User (WebEX) Meeting (GBUM) chaired by Mike Beebe (Denton)
- 3rd February: joint with IWG GTR No. 7 - Tokyo
- 15th of March: WebEX meeting (hosted by Denton)
- 28th April: WebEX Meeting (hosted by FTSS)
- Next WebEX meeting 22nd June

Issues under Discussion / Research

- Neck forces Fx (GM, Denton)
- Harmonized Drawings (Denton and FTSS)
- Improved certification procedure and corridors (Denton and FTSS)
- Spine set-up for different seat back angles (Japan, PBD)
- Repeatability and Reproducibility (Ford, PDB et al.)

Progress reached so far (1)

Neck Forces Fx (issue raised by GM)

- An issue was raised with regard to rising neck forces Fx during a test series. Investigations of Denton came to the conclusion that wrongly a HIII skull cap was mounted (interference with the cable wiring).
- > Denton will come up with a solution how to avoid the mounting of a wrong skull cap on the BioRID (technical bulletin).

Progress reached so far (2)

Harmonization of Drawings (Denton/FTSS)

- Most parts have been analyzed/discussed and agreement was reached on tolerances etc.
- It is expected that Denton and FTSS will finish the common work on harmonized drawings by end of June (?).

Progress reached so far (3)

Improved certification procedure and corridors (Denton, FTSS et al.)

Background: the (old) standard certification procedure does not sufficiently differentiate between dummies and has no surrogate for a head restraint as limitation for the head rotation motion during certification impact. For the generation of the pulse a foam was used what could cause some problems (R&R, due to different batches etc.)

- New certification sled(s) designed, built and tested
- Foam replaced by spring-damper-system
- Artificial head restraint added
- First ideas of certification corridors proposed by Denton on the basis of tested different BioRIDs
- Further testing/improvement in progress

Progress reached so far (4)

Spine set-up for different seat back angles (Japan, PBD)

Background: at present the BioRID is designed/used for dynamic tests at torso angles/seat back angles around 25 degree. For some cars (e.g. Vans) the torso/seat design angle lays around 20 degree or even steeper. For regulatory purposes dynamic testing at design angle is appropriate.

- New spine adjustment tool provided by Denton
- Tests performed by PDB and Japan
- At steeper torso angle interaction of the jacket
- Further work is needed

Progress reached so far (5)

Repeatability and Reproducibility (Denton, Ford, PDB et al.)

Several issues identified which seems to influence R & R

- Issues: jacket (e.g. stiffness), cable exit at head, friction of steel ropes, lower spine?
- Differences might be identified by new certification procedure(s) for components
- General issue if results are presented/compared: are we talking about the same dummy status/built level/up-grade?

General remarks / Outlook

- Attendance at the WebEx meetings is good
- Fruitful discussions and in general good support by the attending organisations
- Testing/research/further investigations in progress
- Group seems to be able to propose a schedule/time line to make the BioRID ready for regulation by Autumn this year

Thank you for your attention!

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