

TF2 meeting 5

Summary meeting in Sthlm

- Different sizes of humans do exist.
 - Regulations must be inclusive.
- Male and female anthropometry is different
 - 95th percentile female has a smaller neck circumference than the 5th percentile male population. (See Jobin Johns ppt)
 - Recommendation from Schneider et al from 1983, a four member dummy family was proposed for frontal impact testing. Small and mid-sized female and a mid-sized and large male.

Summary meeting in Sthlm, cont.

- Avoid getting stuck – it is important to proceed on what we know will improve the safety performance.
- Robustness is key to improvement
 - Look at the whole seatback instead of only the headrest.

Discussion among all on how to progress further on seat performance requirements

- The discussion resulted in questions rather than answers.
 - But conclusion that to prevent poor seat design it would be beneficial to include requirements for load-taking evenness of seatbacks in the regulations.
 - Are there “easy” ways to understand whether we have poor seat designs?

(Possible) ways forward – short term 1/2

- Clepa proposal – close the gap
- GRSP/2024/5
 - Intention to apply requirement to a wider area, to avoid optimization
 - CLEPA feedback– proposal can lead to unfavourable design with even increased whiplash risk
 - Can this proposal be improved or should it be withdrawn?

(Possible) ways forward 2/2

- Delete "optional" in dynamic test and test with BioRid in two different positions
 - With a long-term plan for including one more size in the test. (EvaRid? SET?)

Mid term

- Include the seatback i R17
 - Define requirements and a test procedure to make sure an evenly energy absorbing.

Long term

- Dynamic tests – with more than one size
- Virtual crash testing

Further discussions

- IIHS is focusing on soft tissue neck injuries in low-severity impacts.
 - Work will include a parametric generic seat model and evaluations of the BioRID and EvaRID. Completed by spring 2025.