

ATD Harmonization Meeting - ATD Brand Consolidation Task Group HYIII 50th Male

BRIEF SUMMARY-APRIL 21st, 2011

6:00am- 10:00am EST

Humanetics Headquarters in Plymouth, Michigan

16 members attended in person and via *WebEx*.

Meeting agenda:

- 95th lumbar
- Vinyl material
- Vinyl part sealing
- Continue 50th review
- Tasks for next meeting

The April 21st meeting was a continuation of the vinyl material review, the 95th lumbar differences, and the general Hybrid III 50th discussion begun during the March meeting.

The members of the JAMA group announced a change in membership of the Nissan representative.

JAMA presented their final votes for the HYIII 10YO:

- Head and Neck Denton, but will follow the small female
- Upper Torso – if shoulders are FT brand, would like to keep all upper torso the same FT brand
- Lower Torso, Legs, Arms – Denton brand.

The 95th lumbar discussion continued with additional data on angle and height measurements presented from the SAE group. Lumbar molds are in the process of being measured. The future of lumbar testing was briefly discussed, with JAMA describing their current test methods and expressing their interest in certifying rubber lumbar for the 50th and 95th. A final vote will be held in May.

The 95th harmonized ATD is currently defined as:

- Head assy - Denton brand
- Neck – No preference – follow 50th
- Thorax – Denton brand with FTSS brand clavicle and link castings
- Lower Torso – Denton brand
- Lumbar – Denton brand - follow 50th
- Arms – Denton brand
- Legs – Best combination of FTSS brand leg using Denton brand foot and ball knee slider
- Vinyl flesh is common for all HYIII family (European Brown color, 52 duro, acetone finishing)

The final proposal for harmonized vinyl was reviewed:

- European Brown color
- No DOP
- No MEK –acetone finishing
- 52 Durometer for everything except the head skin and feet

A final vinyl material vote will be held once Ford presents airbag friction characteristic tests comparing proposed vs. current materials.

A foam patching proposal for pour holes on molded vinyl parts was reviewed. The agreed upon recommendation is:

- Hidden foam holes on a fully assembled ATD will not be patched
- Exposed parts such as the chest jacket and pelvis will be patched
- Arms will be patched

JAMA presented their final vote on the 95th/50th head skin:

- Recommend Denton brand based on the drawing

The previous preliminary vote on the 50th neck was reviewed with no change in preference. JAMA asked to postpone a final vote until the next meeting.

The topic of clothes and shoes was presented. Members expressed interest in harmonizing the shoe manufacturer. Some differences in the current 50th shoes provided under the Denton and FT brands have been noticed, although both comply with the required weight and military specification.

- Samples of both brands of shoe will be brought to the next meeting and examined.

The HIII 50th review was continued beginning with the Thorax. The main topic was the chest jacket's slight differences in arm hole shape and the foam fill areas. A review of the drawing was conducted and member feedback was recorded. The discussion will continue during the next meeting once additional information is presented based on the following task items:

- Review original GM pattern
- Review NHTSA info
- Review information learned from the previous 5th female jacket harmonization

The HIII 50th lower torso was reviewed. The abdomen drawing was presented and the pelvis bone was discussed. The review will continue during the next meeting when the following task items are completed:

- Check bone shape
- Check abdomen shape and pattern

The HIII 50th legs and arms were reviewed. The lower leg flesh drawing and mold recommendations were presented and lower leg flesh shrinkage and bone fit were discussed. It was noted that the new vinyl proposal would help eliminate shrinkage and the commonized nickel coatings would also help with installation and removal. No preference on friction sliders was given by the group. A variety of leg flesh and foot options would still be available regardless of the final harmonized components.

Some noticeable differences in arm components were presented. These include foam fill areas around the wrist and joint interfacing at the elbow.

HYIII 50th limb action items for next meeting:

- Examine hole and bolt flesh line-ups of the lower leg flesh
- Verify NCAP foot version
- Examine elbow interface shape
- Review wrist foam area

April 28th Meeting Agenda:

- Review the HIII 50th task items and open item questions
- Start the overview of the 5th female and the EuroSID-2 in preparation for May 12th's meeting.

**The May 12th harmonization meeting will be an expanded face to face meeting as members of JAMA, Europe, and IIHS will attend in person.

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