

ATD Harmonization Meeting - ATD Brand Consolidation Task Group Phase-in Discussions, HIII Children, FMH, Customer Meetings

Oct 4th, 2011

6:00am- 9:00am EST

Humanetics Headquarters in Plymouth, Michigan

Attachments: Complete Voting Record

15 members attended in person and via *WebEx*.

In Person:

Jack Jensen (General Motors)
Brian Grenke (Chrysler)
Jerome Ng (Ford)
Paul Depinet (Humanetics)
Michael Beebe (Humanetics)
Joe Bastian (Humanetics)
Mark Brown (Humanetics)

Via WebEx:

Marvin Hatchett (IIHS)
Yuji Okuda (Humanetics Japan)
Akihiko Akiyama (Honda)
Akito Sakai (Nissan)
Hiroyuki Asada (Mitsubishi)
Mitsutoshi Masuda (Toyota) (JAMA)
Leo Ferdinand (Porsche) (ACEA)
Joe McFadden (VRTC)

**Voting members or their designees must attend the meetings in order to cast a vote on that day's topics.*

**One single member of JAMA and ACEA represents all four voting members of each group.*

Introductions

Introductions of members in person and via WebEx were conducted.

This Meeting's Agenda

- Ford Rib & Head Skin Testing Update
- STAPP Customer Meeting
- Metal Coating Update
- Phase-in Discussion Update
- HIII 3YO Child
- HIII 6YO Child
- CRABI 12 Month
- 50th FMH
- Small Female Chest Jacket

Ford Rib and Head Skin Test Update

Ford is in the process of impact testing two HIII 50th rib sets manufactured with the new damping material and also performing a round of curtain and frontal airbag tests on the Denton, FTSS, and the harmonized versions of the 5th female head skins. The goal is to compare new damping material with older rib sets and to compare frictional characteristics between head skins.

Jerome Ng from Ford reported that testing on the ribs sets has been completed but the data is still being analyzed. Steve Rouhana, who is absent from this meeting, will have to provide an update on the head skin testing at a later meeting.

STAPP Meeting Proposal

Mike B. reported that an introductory Harmonization meeting for North American customers has been organized for Tuesday, November 8th at the STAPP conference in Dearborn, Michigan during lunch. The invitations will go out soon. Invited customers do not have to be registered for STAPP to participate in the meeting. Tentative presentations will be given by Jack Jensen, NHTSA, and Humanetics. Internal meetings will be held to go over the presentations before November 8th.

Metal Coating Update

As stated during the September harmonization meeting, Humanetics has discovered that the surface thickness and finish of the black nickel coating process can be a challenge to control. The method used to produce the black shade of nickel creates a buildup of coating that can be in excess of acceptable tolerances, especially in threaded holes. The thicker coating creates extra production and quality related steps to ensure that the black nickel parts are functional. These extra processes add unnecessary cost and can create longer lead times.

Mike presented some detailed slides comparing the three steel coatings used on dummies; black oxide, black nickel, and bright nickel. The black oxide provides the least corrosion protection, while the bright color nickel coating seems to provide the best protection. Per last meeting's discussion, Humanetics will begin harmonizing to the bright nickel coating for all steel parts, regardless of brand. A technical bulletin will be issued in the near future. No objections to this plan were voiced.

Overall Phase-in Timeline Discussions

Mike Beebe began by presenting a matrix of the overall timeline phase-in of the HIII 50th dummy. The plan begins with the skeletal system and rubber components followed by the harmonized vinyl phase-in. Mike noted that technical bulletins have been created for the skeletal, rubber, casted surfaces and rib material.

The rib material is being phased-in now and the skeletal phase-in should be complete by December. The internal processes for vinyl phase-in are currently being worked on and mold usage and planning is being reviewed. For the 50th, there are already two existing head skin and knee molds, but Humanetics will have to duplicate the chest jacket and pelvis molds and should have those in service by the end of February.

Mike stated that in order to increase lab testing efficiency at the Huron plant, transitional brand and harmonized parts will be tested using both brands of test fixtures and lab software, regardless of the brand of part being tested. This means customers may see two different sets of formatting for test data printouts with their new parts, but the testing parameters are identical for both.

Jack asked if comparisons have been done between the FTSS and Denton certification software.

Mike responded that comparisons between both the software packages and the test fixtures themselves have produced comparable results and there is no concern with testing either brand of part on any test fixture.

HIII 3YO Child

Mr. Masuda provided the final voting results for the HIII 3YO child from JAMA. *Please review the Voting Record attachment.*

The Harmonization Task Group recommended HIII 3YO Child:

<i>DN = Denton Brand FTSS = FT Brand</i>	Head	Neck	Upper Torso	Lower Torso	Legs & Feet	Arms & Hand	Comments
HIII 3YO Child	DN	FTSS	DN	-	FTSS	FTSS	<i>FTSS clavicle stop. DN brand Urethane</i>
<i>*Harmonized Vinyl for all HYIII Family</i>							

HIII 6YO Child

Mike provided a comparison of FTSS and Denton brand 6YO and CRABI 12 spare part sales from the last 10 years. The task group asked that information for major components be reviewed to determine if the population favors one brand over the other after the initial dummies were purchased. The sales charts seem to indicate a mixed bag of spare part populations, with neither brand overwhelmingly outselling the other.

Jack stated that this may counter the argument to choose a brand based on the complete dummy population.

Mike pointed out that for many customers the dominant factor for spare parts purchases over the years was simply price. FTSS began selling these dummies first, but as Denton began offering them, the Denton spare part sales climbed substantially.

Mike reviewed mold recommendations and pointed out that with the 6YO, there were no skeletal issues and no appreciable spare part difference in performance or manufacture. No members voiced any trouble with one brand over the other.

A vote was taken. The FTSS brand neck with the Denton brand body was recommended. *Please review the Voting Record attachment.*

The Harmonization Task Group recommended HIII 6YO Child:

<i>DN = Denton Brand FTSS = FT Brand</i>	Head	Neck	Upper Torso	Lower Torso	Legs & Feet	Arms & Hand	Comments
HIII 6YO Child	DN	FTSS	DN	DN	DN	DN	
<i>*Harmonized Vinyl for all HYIII Family and CAPPS brand shoes.</i>							

CRABI 12 Month

As with the 6YO, the comparison of FTSS and Denton brand spare part sales from the last 10 years seems to indicate a mixed bag of populations with neither brand overwhelmingly outselling the other.

Mold recommendations from the Humanetics molding department were reviewed from the last meeting. The Denton molds for the head skin, chest jacket, and abdomen were recommended. The FTSS molds for the skull, legs, and arms were recommended. The Denton neck/lumbar was preferred because it is a dedicated mold, whereas the FTSS part is produced using the 3YO mold with the rubber then machined to size. This post machining process may introduce more variation from part to part.

Paul Depinet reminded the group that the Denton urethane material will have to be utilized because the FTSS brand material is being phase-out by the manufacturer. The CRABI's body parts are mostly urethane, with no vinyl used.

No interchangeability issues were known by the group.

A vote was taken. The Denton brand neck and torso and combinations of the FTSS brand skull and molds using Denton material were recommended. *Please review the Voting Record attachment.*

The Harmonization Task Group recommended CRABI 12 Month Child:

<i>DN = Denton Brand FTSS = FT Brand</i>	Head	Neck	Upper Torso	Lower Torso	Legs & Feet	Arms & Hand	Comments
CRABI 12 Child	Combo	DN	DN	-	Combo	Combo	<i>Combos = Denton head skin and neck/lumbar w/ FTSS skull and FTSS molds w/ Denton urethane material</i>
<i>*Harmonized Vinyl for all HYIII Family and CAPPs brand shoes.</i>							

50th Free Motion Headform

Mike began the FMH discussion by questioning if there is any reason to go beyond the Denton brand choice recommended for the standard HIII 50th head assembly? The same issues and rationales previously discussed for the 50th may also stand for the free motion headform.

Joe Bastian stated that the FTSS mold for the FMH is not the same as the FTSS mold for the 50th, so a review of the head skin should be completed.

Jack stated he was interested in part sales history and Paul asked for a review of the condition of the FTSS mold.

Mike agreed to provide a review of head skin thicknesses, population information, and mold conditions at the next meeting.

HIII 5th Small Female Chest Jacket

Questions have arisen about the use of the harmonized small female chest jacket and this committee's recommendation if NHTSA has not yet accepted it for use in their own testing. NHTSA still asks manufacturers which brand of chest jacket they used to certify their vehicles. Since the new harmonized chest jacket is not interchangeable and is not authorized by NHTSA yet, timing and version control is very important and of concern with some members of this group.

Mike stated that SAE has not finalized the J-document on the harmonized jacket. Once finished it would be up to them to make any petitions to NHTSA to fix drawings or incorporate the jacket. The harmonization group will not make petitions on any parts.

Paul stated that SAE still needs to review some data and that a meeting should be scheduled soon. If SAE decides to recommend the harmonized jacket, then the Auto Alliance can petition NHTSA if necessary.

The group acknowledges that the choice of chest jacket can affect test results because of the differences between the FTSS and Denton brand designs. Each one is a different interpretation of the specifications. But fundamentally, the group agreed that the harmonized jacket should be the recommended component because it is the closest to the drawings.

Michael suggested we still produce all versions of the jacket until the matter can be settled with NHTSA. The group's earlier decision to use the harmonized jacket should still stand because it is the best choice; the closest to the drawing package.

The group agreed that since the automotive cycle for design and testing can span multiple years, this should factor into Humanetics' decision to continue producing multiple versions of the jacket for a while after the harmonized dummy is available.

Jack reminded the group that we can't linger on this: we've made a previous technical recommendation based on the best choice.

Mike stated that we need some resolution before we start the manufacture of the harmonized small female dummy. The group will continue to review this matter at the next meeting.

Tasks for the Next Meeting

- Gather information on the FMH head skins, molds, and populations.

October 24th Meeting Agenda

FMH review
Review 50th Phase-in Timeline
Continue 5th Female Jacket Discussion

The current harmonization schedule

January 13th – HYIII 95th Large Male
February 10th – HYIII 10YO Child
March 14th – HYIII 50th Male
April 21st /April 28th – HYIII 50th Male
May 12th – 5th Small Female/50th Male
June 21st – EuroSID-2, Phase-in Discussions
July – No Meeting
August 2nd - 3YO Child, Phase-in Discussions
September 8th - HYIII 6YO/Updates to Previous
Work/Phase-in Discussions
October 4th - HYIII 6YO/CRABI/Phase-in Discussions
October 24th - FMH/Phase-in Discussions/Misc.

Meetings are generally held the 2nd Thursday of each month barring any conflicts. Locations to be determined.

**Please comment on the previous meeting minutes during the beginning of each meeting.*

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