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## LOG OF MEETING

## DIRECTORATE FOR ENGINEERING SCIENCES

**SUBJECT:** ASTM F08 Subcommittee Meetings**DATE OF MEETING:** December 8-9, 1999 **PLACE:** Hyatt, New Orleans LA**LOG ENTRY SOURCE:** Troy Whitfield, Mechanical Engineer, CPSC**DATE OF ENTRY:** December 27, 1999**ATTENDEES:** To be provided upon receipt**SUMMARY OF MEETING:**

The following F08 Subcommittee and task group meetings were attended: F08.10.01, Handlebars and Stems task group; F08.10.02, Bicycle Suspension and Forks task group; and F08.53, Headgear Subcommittee. In addition, information was received on the F08.30, Fitness Products Subcommittee meeting.

The Bicycle Suspension and Forks task group meeting came to order at 9:05am with Vice-Chair Andrew Tudor sitting in for Chairman Scott Boyer. After approving the meeting agenda and noting that comments and changes to the proposed standard would be posted on the website between meetings, Mark La Plante discussed portions of the ISO standards that apply to suspension forks. The ISO working group is developing disc brake performance requirements for forks which the ASTM task group has not yet addressed. The proposed test cyclically loads the fork in both a forward and rearward direction at a point 330mm from the dropout - simulating tire contact with the ground. This additional test procedure was brought up for the benefit of those manufacturers who distribute internationally.

Maury Hull then presented three statistical methods for an Acceptance/Rejection Criterion for the fatigue portion of the fork performance testing. Each method dealt with cyclic testing of 5 samples. Method I dealt with testing the samples to failure or 200,000 cycles, whichever came first and then specifying a level of confidence. After calculation of confidence limits on the mean and standard deviation, the number of cycles for a specified reliability is then compared to 50,000 cycles (the passing criteria for the fatigue test). Method II is similar to method I except that, rather than confidence level specifications, the mean and standard deviation are estimated (maximum likelihood) and then the reliability is specified and compared to 50,000 cycles. Method III is to simply test the samples to 50,000 cycles and all 5 must pass.

Mr Hull then presented a graph which plotted various curves of reliability based on confidence levels, sample size and the number

of defective units within the sample. There was some discussion among the group to test the samples to failure, regardless of the 50,000 cycle requirement, to develop a statistical database.

The discussion then moved to a review of the wording in the proposed document for the calibration of the test equipment in the Calibration and Standardization section of the standard and additional editorial changes throughout the document. The meeting concluded with Mr. Tudor stating that once editorial changes were incorporated and reviewed by the task group members, the standard would be ready for balloting.

The meeting of the Handlebars and Stems task group occurred in the afternoon. The group simply separated into their product areas and edited the test method and requirement sections of their respective documents.

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The meeting of the Headgear Subcommittee was called to order by Mr. Halstead of Southern Impact Research Center at 8:30am. The agenda was reviewed, adjusted as necessary, and adopted as amended. There are various helmets standards either developed or under development for numerous sporting and recreational activities. The first discussion involved Roller Hockey helmets. Two different standards are under development; one for controlled, organized usage, and a second for uncontrolled environments. There are two unresolved negatives with the controlled environment standard which deal with drop height and impact sight. The uncontrolled environments document will be submitted for comment.

Various sections of the F-1446 Base Standard (Standard Test Methods for Equipment and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear) were reviewed for comments. The general comment was for the need to standardize the labeling requirements between the various standards and the editorial 'clean-up' and organization of the standard.

There was no one present to discuss the new standard for Jaw Joint Protectors. The only comment made regarding the Mouthguard standard (F 697-1980) was that it would no longer be published as of Jan. 2001, if no action was taken. It is not a performance standard, rather a care and use standard. There was some discussion that an ADA/ANSI standard task force would rewrite and ballot. The F-910 Baseball and Softball face protector standard would be withdrawn in Dec. 2000 if no action is taken. There was some question regarding airway access requirements and the use of the helmet for stabilization of the head/neck. However, the negatives have been resolved and the standard should be resubmitted for comments in early Jan. 2000.

The new standard for Skiing and Snowboarding helmets was discussed at length with regards to the use of the word "etc." in the scope and the labeling of the products. The many changes

discussed and the negative vote were found to be editorial in nature and the group agreed that the changes would be inserted and the document would be advanced with a cover letter highlighting the changes.

Before breaking for lunch, the group agreed to form a task group to look at soccer headgear.

After lunch the group discussed F-1447, bicycling headgear. A ballot was put forward to harmonize the ASTM standard with the CPSC requirements. There was considerable discussion regarding the projections language of the CPSC requirement and whether parts of the retention system which may exceed the maximum 2mm projection into the helmet interior were included or exempt from consideration. There was also some discussion of "higher quality", more stringent testing and how to label helmets subjected to these tests. The basic response was that, while CPSC requirements may be minimum, the CPSC is the enforcement group and if your helmet is labeled to meet their requirements, it had better meet them. There was further discussion on the location of the center of gravity for the test head form. It was felt that the description should stay in F-1446 rather than be included in F-1447. It was said that the move to include it in 1447 was to track with the CPSC document. There was a short discussion on including the CPSC language with regards to projections.

The meeting on Treadmills (F08.30) ran concurrently with the F08.53 Headgear meeting and was not attended. It was learned that the task group was dealing with 10 negatives received on the two ballots for 1). Standard Specification for Motorized Treadmills and 2). Standard Test Methods for Evaluating Designs and Performance Characteristics of Motorized Treadmills.