

Log of Meeting
Consumer Product Safety Commission

Directorate for Engineering Sciences

Subject: Meeting with the ASTM F8.10 Subcommittee Task Group 2

Date of Meeting: May 29, 1996 *ju* Place: Bethesda, Maryland

Log of Entry Source: Troy Whitfield, ESME, Jay DeMarco, CCA CPSC *[Signature]*

Attendees: see attached list

Summary of Meeting:

The meeting with Task Group 2 of the ASTM F8.10 Subcommittee on bicycles was held at CPSC headquarters after CCA offered the use of the Commission facility. The meeting was held to discuss issues associated with mountain bike suspension fork problems and failures and the roles of industry, ASTM, and the CPSC in addressing these issues. The task group consists of representatives who are knowledgeable about the product and can provide insight as well as industry opinion on the issues of concern to both CPSC staff and the industry itself. The main purpose of the task group is to explore the need for, and the development of, testing procedures and standards for bicycle suspension forks and making recommendations to the F8.10 Subcommittee. Mark Winter, the Task Group 2 chair from RockShox, opened the meeting at 9:00am and introductions were made. Because of product related injuries, product failures, numerous reports to CCA under Section 15 and product recalls, the CPSC staff was invited to participate in the meeting and asked to share what has been learned during investigations of product related injuries and complaints. The staff presented three recent recalls related to failures of mountain bike suspension forks to the Task Group. Staff was also asked if they were aware of any additional problems or had any other concerns that would be of interest to the group.

Mark Winter presented the group with some objectives for the meeting that he hoped could be accomplished through discussion during the day. The following outline was used to focus the groups' discussion.

- 1) Discussion of Failure Modes
- 2) Vocalize the Philosophy of the Group
- 3) Test Standards
- 4) CPSC Data Presentation
- 5) Additional Standards Issues/Categories

The group proceeded to discuss various types of failure modes and which critically loaded component was likely to be associated with such failure. The group then considered what type of test should be conducted to identify any potential problem. The group divided

CPSA 6 (b)(1) Cleared

No Mfrs/PrvtLbrs or
Products Identified

8/14/96
[Signature]

the tests into three basic categories; ultimate, fatigue, and torque. The ultimate test was defined as a test similar to the CPSC 1512 (k) test procedure which applies a load to a fork until a specified deflection is obtained. There would be a requirement for the fork to absorb a given amount of energy without permanent deflection or breakage to pass the test. The fatigue test would involve a repetitive loading of the fork in a dynamic fashion to simulate expected "real world" use conditions. The group requested any CPSC Epidemiological data to help determine the parameters of the test. James Demarco, CCA/CPSC said he would ascertain the availability of such data. The group decided to use information and data that has been developed by the ISO task group, which is also considering the development of test procedures, as a guideline for the development of a test procedure. The group also agreed to consider a torque test requirement for various components of the fork assembly. The group listed several other components which may or may not be tested under the above mentioned test procedures. It was agreed to consider whether these components represented a history of problems, if some tests should be developed to test them, could the above mentioned tests be modified to test these specific components or are they in fact being tested. Additionally, the concept of wear, corrosion, environmental conditions, and the choice of materials was brought up for consideration. The topic was discussed briefly before being tabled for further discussion at a future meeting.

The meeting adjourned with Mark Winter asking companies to provide some test criteria to be considered for the ultimate load test requirement. The group was asked to consider any additional testing which may be appropriate. The group agreed to recommend the ISO test procedure and criteria for the flexural fatigue loading test. The next meeting is scheduled to take place on Monday July 22, 1996 at ASTM Headquarters in West Conshohocken, Pennsylvania. The group recommended that CPSC stay involved in the development process and hoped that CPSC would be present at the next meeting.