



April 25, 2023

TRANSMITTED VIA EMAIL

Mr. Harvey Voris
Chairman Subcommittee F08.30 Fitness Products
HCV Consulting LLC
Huntington Beach, CA 92646

Dear Mr. Voris:

On December 21, 2023, CPSC staff¹ sent a letter to ASTM requesting the F08.30 Treadmill Task Group develop a compressible finger probe in lieu of the rigid finger probe in the current draft performance requirements addressing the hazard of entrapment underneath treadmills. Staff expressed concern that the rigid finger probe may not effectively simulate finger entrapment because the probe will not compress into the gap between the moving tread and guard. Staff evaluated a compressible probe as a surrogate finger and based on preliminary testing believes that a compressible probe will measure finger entrapment more precisely thereby providing a higher and more appropriate margin of safety against the pull-in hazard than one measured with a rigid probe.

The attached presentation provides additional detail on the preliminary testing staff conducted demonstrating the difference between a rigid and a concept compressible finger probe. The testing showed that a guard with a gap (between the rear roller and guard) that prevents pull-in of a rigid probe does not prevent pull-in of a compressible probe, which staff considers is a more realistic representation of a human finger interaction. Therefore, staff assesses that the current draft performance requirements specifying the use of a rigid finger probe to evaluate the effectiveness of a guard does not adequately address the risk of finger pull-in and entrapment.

Staff requests that the task group develop requirements for a compressible finger probe in place of the rigid finger probe. Staff appreciates the task group's efforts and looks forward to continued collaboration on addressing staff's concerns. If you have any questions, please feel free to contact me.

Sincerely,

Frederick deGrano
Mechanical Engineer
Directorate for Engineering Sciences

cc: Jacqueline Campbell, CPSC Voluntary Standard Coordinator
Joe Koury, ASTM F08 Staff Manager

¹ This letter was prepared by CPSC staff. It has not been reviewed or approved by, and may not represent the views of, the Commission.