



UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
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Memorandum

May 3, 2013

TO : The Commission
Todd A. Stevenson, Secretary

THROUGH: Stephanie Tsacoumis, General Counsel
Kenneth R. Hinson, Executive Director
Robert J. Howell, Deputy Executive Director for Safety Operations

FROM : DeWane Ray, Assistant Executive Director, Office of Hazard Identification and Reduction

SUBJECT : Questions for the Record: Notice of Proposed Rulemaking for a Safety Standard for Carriages and Strollers

This memorandum provides the responses of U.S. Consumer Product Safety Commission (CPSC, Commission) staff to questions for the record from Commissioner Nancy A. Nord. The questions, sent in a memorandum dated April 24, 2013, to the CPSC Executive Director and the CPSC General Counsel, concern staff's draft proposed rule for carriages and strollers and staff's briefing to the Commission on April 24, 2013.

A copy of the staff's briefing package is available on the CPSC website and can be accessed at: <http://www.cpsc.gov/Global/Newsroom/FOIA/CommissionBriefingPackages/2013/NPRStrollersCarriages.pdf>.

Question 1: Testing Requirements

a) *Please describe the required testing order included in ASTM F833-13.*

CPSC Staff Response

ASTM F833-13 requires the tests for strollers and travel systems to be performed in the following order:

Test Order for Strollers only

Step 1: Perform the following tests (in any order)

- 7.3 Static Load Test Method
- 7.4 Stability Test Method

- 7.5 Restraining System Integrity and Occupant Retention Test Methods
- 7.6 Test Method for Parking Brake Requirements
- 7.7 Occupant Retention Test Method
- 7.8 Permanency of Labels and Warnings
- 7.9 Removal of Protective Components
- 7.12 Passive Containment/Foot Opening Test Method
- 7.13 Wheel and Swivel Assemblies Detachment Testing
- 7.14 Wheel Detachment from a Removable Wheel Fork Assembly Testing
- 7.15 Cord and Strap
- 7.16 Scissoring, Shearing, and Pinching Test Method

Step 2: Perform the following test:

- 7.11 Impact Test Method

Step 3: Perform the following test:

- 7.2 Latching Mechanisms for Prevention of Unintentional Folding

Test Order for Combination Units on a Stroller or a Convertible Carriage/Stroller (also known as Travel Systems)

Step 1: Perform the following tests (in any order)

- 7.3.2 Static Load Test Method
- 7.4.1 Stability Test Method
- 7.6 Test Method for Parking Brake Requirements
- 7.10 Tip-Over Test for Combination Units
- 7.17 Head Entrapment with Car Seat on a Stroller or Convertible Carriage/Stroller Test Method

Step 2: Perform the following test:

- 7.11 Impact Test Method

Question 1: Testing Requirements (continued)

- b) *How many sample units are likely to be required to satisfy the requirement that testing be performed on a representative sample?*

CPSC Staff Response

Section 4.5 of ASTM F833-13 states: *All testing required by this specification shall be conducted on the same unit with the exception of 7.2, where a new unit can be used if the unit frame permanently deforms.* Therefore, a minimum of one and a maximum of two samples are needed to conduct the required tests per the voluntary standard.

The determination of the number of units in a *representative* sample required for periodic testing is ultimately a decision based on the certifier's knowledge of the product, its manufacture, and the certifier's confidence (or business risk determination) in the product's compliance with the

standard¹. Because this determination varies by product and certifier, it is not possible to estimate the number of units in a representative sample needed for periodic testing. The Consumer Product Safety Improvement Act of 2008 (CPSIA) mandates periodic testing; therefore, at least one sample is required for third party periodic testing.

For initial certification of the product, a “sufficient number” of samples are required to determine the product’s compliance with a high degree of assurance. Similar to the discussion on periodic testing, the totality of information known about the product, including the quality of the components and materials used, and the manufacturing and final product quality inspection processes may be used by the certifier in deciding “how certain” she/he wants to be regarding the product’s compliance. This information, in addition to the third party certification test results, may be combined to provide the certifier a high degree of assurance of compliance.

Question 1. Testing Requirements (continued)

c) During the briefing there was discussion of differing test methods in various international standards. Specific reference was made to the fatigue test required by the European standard. Would testing a product to one or more elements of the international standards that staff described - Canada’s SOR/85-379, Europe’s EN 1888:2012, or Australia and New Zealand’s 2088:2009—where those elements address the same hazard as the ASTM standard—demonstrate that the product achieved the same level of safety as a product that was tested to one or more elements of ASTM F833-13? If staff does not readily know the answer to the question, would a question in the NPR be a device for eliciting the answer?

CPSC Staff Response

Staff believes that harmonizing individual tests without quantifying their role in the cumulative test regime required by each international standard could compromise stroller safety. The result of each individual test is dependent on preceding test(s); therefore, simply comparing a subset of the performance requirements may yield a deceptive safety evaluation. Staff believes that a comprehensive examination would be required to correlate the relative safety level achieved across the four international stroller and carriage standards studied for the development of the notice of proposed rulemaking (NPR); this would be done by evaluating multiple product designs

¹ Representative samples are collected and tested for periodic testing purposes. Periodic testing is required to assess the compliance of continuing production. The samples are required to be “like” the untested units of production in that their test results can be used to infer the compliance of the untested units. The certifier is required to record a basis for that inference (in other words, the certifier needs to be able to say “Because of reasons A, B, and C, passing test results from my required third party periodic tests imply that the untested units are also compliant.” Reason A could be first party evidence of compliance before the periodic test was conducted). To assess continuing compliance, the certifier (domestic manufacturer or importer) may use the totality of information available about the product in that determination. This information can include first party test data, other quality assurance/quality control techniques (e.g., incoming inspection, control charts, failure modes and effects analyses, process controls, calibrations), and other techniques. Thus, certifiers with extensive information about the compliance of their product may require fewer samples for periodic testing, while a certifier with little knowledge about the product (e.g., an importer with a loose relationship to a foreign supplier) may require more samples tested to adequately assess continued compliance.

from major stroller categories (e.g., 2D, 3D) per each standard. The results and conclusions of this effort would then be reviewed, with the goal of creating and maintaining a list on a per-rule, per-test basis by which a product's compliance could be established. This type of analysis would be required to be repeated if any of the standards, foreign or U.S., were to undergo a revision.

A formal CPSC consideration of foreign safety standards (or portions of), as providing an equal or higher level of safety compared to the U.S. safety standard (or portions of), would add significant complexity to the requirements for product certification, third party testing, and CPSC-acceptance of third party testing laboratories. One challenge is that the laboratory conducting the testing should be accredited to ISO/IEC 17025:2005 by a signatory to the ILAC-MRA, and their accreditation should be accepted by the CPSC for the scope of their testing. For example, CPSC Form 223 may have to be modified to indicate to which tests (foreign standard or CPSC rule) a laboratory is accredited. Because the foreign standard would not be equivalent to the CPSC-administered rule, the savings to certifiers are likely to be limited to the cost of avoiding a few redundant tests. Laboratories are likely to incur marginally additional costs to meet CPSC requirements in order to have their accreditation accepted.

If the Commission deems it to be appropriate, staff could include a question in the NPR on whether international performance requirement(s) is (are) equivalent to a related requirement in the ASTM standard, based on a quantitative analysis.

Question 2: Scope of Incidents

In the briefing memo, CPSC staff explained that in identifying incidents in the In-Depth Investigation file, the Injury or Potential Injury Incident file, and the Death Certificate file, “[a]ll incidents where a hazardous environment in and around the stroller/baby carriage resulted in fatalities, injuries, or near-injuries were considered to be in scope.”² At the briefing, staff suggested that this referred [to] instances where an incident occurred as a child outside the stroller was climbing into it. Please confirm if this is the case, and expand on that explanation, if appropriate.

CPSC Staff Response

There were a few instances where a hazardous environment was created, which perhaps in conjunction with some product-related issues, led to serious consequences. One example was cited by staff at the briefing. This was the case of an unsupervised child who attempted to climb into an open but unlocked stroller and died as a result of the stroller collapsing on him. In two incidents, strollers were blown into a lake. In these cases, the presence of water close by and strong winds created a hazardous environment. Due to the lack of details in the information available, staff is unclear whether the weight of the strollers played a significant role in these incidents.

² Tab A, p.28, n.1.

Question 3: Travel Systems

With respect to travel systems, do any of the requirements in this NPR either duplicate or conflict with any requirements imposed by NHTSA? For example, how do the restraint system requirements in the proposed stroller NPR relate to those imposed by NHTSA?

CPSC Staff Response

Staff is not aware of any duplicative or conflicting requirements in the proposed rule for carriages or strollers with NHTSA regulations. NHTSA regulations govern car seats, and all car seats must comply with requirements for child restraint systems at 49 C.F.R. § 571.213 (FMVSS-213), whether or not the car seat is also a handheld carrier or is part of a travel system used with a carriage, stroller, or convertible carriage/stroller.

ASTM F 833-13 requirements for car seats on a stroller include compliance to the federal standards for lead, sharp points, small parts, use/abuse of toys; parking brake, static load, stability, and instructional literature as indicated in section 6.6³ of the standard. There are two additional requirements that specifically apply to car seats: *6.7.1 Impact Test* and *6.10 Head Entrapment with Car Seat on a Stroller or Convertible Carriage/Stroller*. These requirements encompass the extent to which combination units of a car seat on a stroller are tested (please see the answer to Question 1a for the testing order). Restraining system requirements do not apply to car seats, only to the stroller seats.

Currently, there is a CPSC notice of proposed rulemaking for a safety standard for handheld carriers, which may or may not also serve as car seats. In the proposed rule for handheld carriers (77 Fed. Reg. 73354, Dec. 10, 2012⁴), the Commission proposed: (1) to add a requirement to address handle breakage and handle lock failures, and (2) a change to the warning label; these are not conflicting or duplicative with the requirements in FMVSS-213.

³ *6.6 Combination Unit of a Car Seat on a Stroller*—The combined unit shall conform to the requirements of 2.2, 6.1 in accordance with 7.6, 6.2.4 in accordance with 7.3.2, 6.3 in accordance with 7.4.1, 7.10, and 9.1 when the car seat is installed in all manufacturers' recommended use positions. When testing the combination unit according to 7.10 (16 CFR 1500.52 (b) (4) (iii)), the unit shall neither have any broken parts nor allow the car seat to completely separate from the stroller.

⁴ <http://www.gpo.gov/fdsys/pkg/FR-2012-12-10/html/2012-29584.htm>