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CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Parts 1112 and 1227

Docket No. CPSC-2013-0019

Safety Standard for Carriages and Strollers

AGENCY: Consumer Product Safety Commission.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: The Danny Keysar Child Product Safety Notification Act, Section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA), requires the United States Consumer Product Safety Commission (Commission or CPSC) to promulgate consumer product safety standards for durable infant or toddler products. These standards are to be "substantially the same as" applicable voluntary standards or more stringent than the voluntary standard if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the product. The Commission is proposing a safety standard for carriages and strollers in response to the direction under Section 104(b) of the CPSIA.

DATES: Submit comments by [INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]**.

ADDRESSES: Comments related to the Paperwork Reduction Act aspects of the marking, labeling, and instructional literature of the proposed rule should be directed to the Office of Information and Regulatory Affairs, OMB, Attn: CPSC Desk Officer, FAX: 202-395-6974, or e-mailed to oira_submission@omb.eop.gov.

Other comments, identified by Docket No. CPSC-2013-0019, may be submitted electronically or in writing:

Electronic Submissions: Submit electronic comments to the Federal eRulemaking Portal at: http://www.regulations.gov. Follow the instructions for submitting comments. The Commission does not accept comments submitted by electronic mail (e-mail), except through www.regulations.gov. The Commission encourages you to submit electronic comments by using the Federal eRulemaking Portal, as described above.

Written Submissions: Submit written submissions in the following way: Mail/Hand delivery/Courier (for paper, disk, or CD-ROM submissions), preferably in five copies, to: Office of the Secretary, Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814; telephone (301) 504-7923.

Instructions: All submissions received must include the agency name and docket number for this proposed rulemaking. All comments received may be posted without change, including any personal identifiers, contact information, or other personal information provided, to: http://www.regulations.gov. Do not submit confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. If furnished at all, such information should be submitted in writing.

Docket: For access to the docket to read background documents or comments received, go to: http://www.regulations.gov, and insert the docket number, CPSC-2013-0019, into the "Search" box, and follow the prompts.

FOR FURTHER INFORMATION CONTACT: Rana Balci-Sinha, Project Manager, Division of Human Factors, Directorate for Engineering Sciences, Consumer Product Safety Commission, 5 Research Place, Rockville, MD 20850; telephone: 301-987-2584; e-mail: rbalcisinha@cpsc.gov.

SUPPLEMENTARY INFORMATION:

I. Background and Statutory Authority

The Consumer Product Safety Improvement Act of 2008 (CPSIA, Pub Law 110-314) was enacted on August 14, 2008. Section 104(b) of the CPSIA, part of the Danny Keysar Child Product Safety Notification Act, requires the Commission to: (1) examine and assess the effectiveness of voluntary consumer product safety standards for durable infant or toddler products, in consultation with representatives of consumer groups, juvenile product manufacturers, and independent child product engineers and experts; and (2) promulgate consumer product safety standards for durable infant and toddler products. These standards are to be "substantially the same as" applicable voluntary standards or more stringent than the voluntary standard if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the product. The term "durable infant or toddler product" is defined in section 104(f)(1) of the CPSIA as "a durable product intended for use, or that may be reasonably expected to be used, by children under the age of 5 years."

In this document, the Commission is proposing a safety standard for carriages and strollers. "Strollers" are specifically identified in section 104(f)(2)(I) of the CPSIA as a durable infant or toddler product. Pursuant to Section 104(b)(1)(A), the Commission consulted with manufacturers, retailers, trade organizations, laboratories, consumer advocacy groups, consultants, and members of the public in the development of this proposed standard, largely through the ASTM process. The proposed rule is based on the voluntary standard developed by ASTM International (formerly the American Society for Testing and Materials), ASTM F833-13, "Standard Consumer Safety Specification for Carriages and Strollers" (ASTM F833-13), with a proposed additional requirement and test method to address scissoring, pinching, or shearing hazards at the hinge link of 2D fold strollers. ASTM F833-13 includes carriages as well

as strollers, as well as convertible carriages/strollers. Accordingly, the proposed rule would cover all of these product types. The ASTM standard is copyrighted, but it can be viewed as a read-only document during the comment period on this proposal only, at: http://www.astm.org/cpsc.htm, by permission of ASTM.

II. Product Description

A. Definition of Carriage and Stroller

ASTM F833-13 "Standard Consumer Safety Performance Specification for Carriages and Strollers" defines a "stroller" as a wheeled vehicle to transport children usually from infancy to 36 months of age. Children are transported generally in a sitting-up or semi-reclined position. The motive power is supplied by a person moving at a walking rate while pushing on a handle attached to the stroller. Carriages, on the other hand, are wheeled vehicles to transport an infant usually in a lying down position. Thus, the principal difference between strollers and carriages is the position of the occupant. Both carriages and strollers may be capable of being folded for storage. Umbrella strollers are lightweight, compact when folded, and may lack certain accessories such as baskets underneath the seat or cup holders for the caregiver. Strollers that fold in two dimensions, the height and length are called "2D" strollers. Strollers that collapse in all three dimensions – height, length, and width–resulting in a smaller folded package than 2D strollers are called "3D" strollers. Other types of strollers include travel systems that accommodate an infant car seat on a stroller. If a stroller is intended to be used at a jogging rate, then it is called a jogging stroller. Some products can be used as both strollers and carriages (convertible carriages/strollers). Convertible carriages or strollers are intended to be converted by the owner to be used as a carriage or a stroller. Some strollers incorporate automatic or assisted folding and unfolding mechanisms.

B. Market Description

The majority of carriages/strollers are produced and/or marketed by juvenile product manufacturers and distributors. CPSC staff believes that there are currently at least 86 suppliers of carriages/strollers to the U.S. market. Thirty-four are domestic manufacturers, 33 are domestic importers, and the supply sources of seven domestic firms are unknown. In addition, 12 foreign firms supply strollers to the U.S. market—six foreign manufacturers, two firms that import products from foreign companies and distribute them from outside of the United States, two foreign retailers that ship directly to the United States, and two firms with unknown supply sources.

According to a 2005 survey conducted by the American Baby Group (*2006 Baby Products Tracking Study*), nearly all new mothers (99 percent) own at least one stroller. Based on data from the survey, nearly 4.1 million strollers are owned by new mothers, and there would be an estimated 9.1−11.2 million households with strollers available for use annually (4.1 million x .99 x 2.25 to 4.1 million x .99 x 2.75). Approximately 26 percent of strollers were handed down or purchased secondhand. Thus, about 74 percent of strollers were acquired new, and approximately 3 million strollers are sold to households annually (.99 x .74 x 4.1 million births per year). Strollers can cost anywhere between $20 to $1,200, depending upon the type and brand. On average, umbrella strollers tend to be the least expensive (around $25−$50 for the least costly versions); and most other strollers cost around $150−$300, with many carriages, travel systems, and jogging strollers costs running in the $500−700 range. Strollers generally are used during a child's first two years, with some caregivers continuing to use strollers into the third year. Although CPSC staff does not know the proportion of consumers who continue to

use strollers into the third year, CPSC staff believes that approximately 25−75 percent may do so.

III. Incident Data

The incident data was reviewed for carriages, strollers, and convertible carriages/strollers. There have been only a few incidents with no reported injuries associated with carriages, and CPSC staff has not identified any carriage-specific hazards. Accordingly, the incident data focuses on strollers. CPSC's Directorate for Epidemiology, Division of Hazard Analysis, is aware of a total of 1,207 incidents related to strollers reported from January 1, 2008 through December 31, 2012. The age range for the data extracted includes children 4 years old or younger (or unreported/unknown). Four incidents involved a fatality, and 1,203 incidents were nonfatal.

A. Fatalities

Four stroller-related fatalities were reported to CPSC from January 1, 2008 through December 31, 2012. Two of the incidents were related to insufficient clearance space between stroller components: in the first fatal incident, a 5-month old infant's head became entrapped between the seat and tray; in the second incident, a 5-month-old infant's head was wedged between the car seat of a travel system and a metal bar located under the cup holder. In the third fatal incident, the stroller collapsed onto a 4-year-old child, resulting in compressional asphyxiation. The fourth fatal incident occurred when the stroller fell off of a dock and into a bay, which resulted in the child drowning. However, that incident lacked sufficient details to determine if the fatality was product related.

B. Nonfatalities

A total of 1,203 stroller-related nonfatal incidents were reported from January 1, 2008 through December 31, 2012. Of the nonfatal incidents, 359 resulted in an injury. Seventy-two of the nonfatal injuries were related to hinges; wheel-related issues resulted in 52 reported injuries; while locking mechanism failures were associated with 42 reported injuries. A total of 70 incidents resulted in moderate and severe injuries, such as lacerations requiring stitches, tooth extractions, fractures, head injuries, and partial amputations of fingers.

C. Hazard Pattern Identification

CPSC staff considered all of the fatal and nonfatal reported incidents to identify hazard patterns associated with strollers. The hazard patterns were grouped into the following categories:

Wheel issues were the most commonly reported hazard, with a total of 429 incidents (36 percent of the 1,207 incidents). The major hazard patterns included broken wheel rim, wheel detachment, and a burst tire. A total of 52 reported injuries occurred, including two hospitalizations due to falls that resulted in a bone fracture and head concussion.

Parking brake problems related to parking brake failure or assembly resulted in 132 incidents, including eight injuries. Incidents typically occurred when the parking brakes were assumed to be functional after setting them, but the stroller rolled away and struck an object.

Lock mechanism issues resulting in unexpected collapse of the stroller accounted for 121 incidents. One fatality was reported where the partially erected, unlatched stroller collapsed onto the child when he climbed into the seat, resulting in compressional asphyxiation. A total of 42 injuries were reported in this category, including two hospitalizations, one due to a fall that resulted in a skull fracture and the second due to the collapse of the stroller, resulting in an amputated finger.

Restraint issues, such as a child unbuckling the restraint, restraint breakage or detachment, and restraints that are too loose were reported in 83 incidents, resulting in 29 injuries.

Hinge issues were reported in 75 incidents, resulting in 72 injuries. This is the highest injury rate of any stroller hazard category. Most of the hinge-related injuries occurred when a caregiver was unfolding the stroller for use and the child was climbing into the stroller. Reported injuries involved pinched, lacerated, or amputated fingers or arms, including one hospitalization for reattachment of a finger.

Structural integrity-related issues, such as failure or malfunction of various structural components (*e.g.*, frame, attachment points for the seat, footrest, and sunshades) resulted in 63 incidents. A total of 16 injuries were reported in this category, including one hospitalization due to a fall, which resulted in bleeding gums.

Stability/tip-over issues resulted in 58 incidents, including 24 reported injuries resulting mostly from falls.

Clearance issues between certain components of a stroller, such as seat and handlebar, basket, canopy, tray, or frame, between the footrest and wheel or between the car seat and handlebar resulted in 38 incidents including 19 injuries. Two fatalities were reported in this category. In the first incident, a 5-month-old victim's head was trapped between the edge of the car seat and a metal bar located right under the cup holder. In the second incident, a 5-month-old child had his head trapped in the opening between the stroller seat and tray.

Car seat attachment-related issues, including the car seat detaching, not locking, or tipping over, resulted in 35 incidents. Most of the incidents resulted in no injury, and five resulted in minor injuries, such as bumps.

Canopy-related issues were involved in 24 incidents and resulted in 18 injuries. Sixteen injuries were due to canopy folds, where the child's finger was caught. One injury required hospitalization where a child's finger was reattached. Other hazards included cords that are attached to canopies, resulting in strangulation hazards and attachments with sharp edges or small parts.

Handlebar issues were involved in 21 incidents, resulting in seven injuries. One injury required hospitalization after a child's finger was caught in a reversible handle hinge and was amputated. Eleven incidents were the result of broken handlebars.

Seat-related issues, such as seat fabric tear resulted in 19 incidents including 4 injuries.

Sharp points or edges resulted in 18 incidents with 16 injuries.

Tray-related issues, such as breakage, detachment, or malfunction resulted in 14 incidents, including 11 injuries, eight involving fingers.

Unspecified category includes stroller-related incidents lacking sufficient information to determine the cause. There were 32 reported incidents in this category, including 21 injuries and one fatality. The fatal incident involved a stroller falling off of a dock and into a bay that resulted in a victim drowning. There were two hospitalizations: the first incident involved a child falling into a lake while strapped in his stroller, and the second incident involved a child falling off of his stroller at his home.

Miscellaneous problems, including strap detachment, logo detachment, rust, lead, tearing material, and jump seat detachment were involved in 40 incidents, including 15 with reported injuries. In 15 incidents, a child was choking on a toy accessory or tag that had been removed from the product. Five of the injuries resulted in unexpected detachment of jump seats while in use.

In some cases, older children (5 years of age or older) and adults also got injured on the stroller. Strollers are not self-propelled and remain stationary until pushed by a person other than the occupant. Caregivers are also involved in setting up the stroller (*e.g.*, folding, unfolding, removing the stroller from the trunk, and pumping air into the stroller tire). Caregiver involvement requires a different set of interactions with the stroller and poses various risks. There were 78 reported stroller incidents that involved children older than 4 and adults: 20 of these injuries were moderate and severe. Out of 78 incidents, 72 involved victims between 17 and 64 years of age. Seventy-four incidents resulted in injuries, mostly to the fingers.

In addition, there were five consumer complaint reports with no incidents or injuries.

D. NEISS Data

In addition to the 1,207 incident reports received by the Commission, we estimated the number of injuries treated in U.S. hospital emergency departments using the CPSC's National Electronic Injury Surveillance System (NEISS). Over a 4-year-period, a total of 46,200 stroller-related injuries were treated in U.S. hospital emergency departments from January 2008 through December 2011. Because CPSC's NEISS data for 2012 is not yet finalized, only partial estimates for 2012 are available. There was no statistically significant increase or decrease observed in the estimated injuries from one year to the next, nor was there any statistically significant trend observed over the 4-year period from 2008 to 2011.

No fatalities were reported through NEISS. Most of the injuries (94%) were treated and released. Most of the incidents were related to falls on or off the stroller. A breakdown of the characteristics among the emergency department-treated injuries associated with strollers is presented in the bullets below:

- Injured body part – head (51%), face (24%), mouth (9%), finger (5%); and

- Injury type – internal organ injury (36%), contusions/abrasions (24%), laceration (18%).

E. Product Recalls

Between January 1, 2008 and December 31, 2012, there were 29 recalls involving 6.82 million strollers and 15 different firms. The recalls related to incidents involving finger injuries, strangulation hazards, brake failures, choking hazards, and fall hazards. Additional information on these recalls can be found in staff's briefing package on the Commission's website at: www.cpsc.gov or www.saferproducts.gov.

IV. Other Standards

A. International Standards

CPSC staff reviewed the performance requirements of the current ASTM standard, ASTM F833-13, to the performance requirements of other standards, including those from Canada, the European Union (EU), and Australia/New Zealand. Strollers and carriages are regulated products in Canada that must meet the requirements published by Health Canada in April 1985, SOR/85-379, *Carriages and Strollers Regulations*. Although Canada's regulation has no requirements that address head entrapment or buckle release, the Canadian restraint system strength requirements are more severe than those in ASTM F833-13. The stroller standard in Europe, published in March 2012, is EN 1888:2012, *Child care articles – Wheeled child conveyances – Safety requirements and test methods*, also does not contain requirements that address head entrapment or buckle release. However, the EN 1888 standard requires fatigue tests in several places to evaluate the durability of attachment points and locks/latches. The standard that covers stroller safety in Australia and New Zealand, published on December 14, 2009, AS/NZS 2088:2009 *Prams and strollers—Safety requirements*, is a very thorough and stringent stroller standard. However, the standard lacks a head entrapment test and a dynamic

scissoring, shearing, and pinching test. This standard also requires fatigue tests to evaluate the durability of attachment points and locks/latches, similar to those found in EN 1888.

CPSC staff evaluated the requirements of the international standards and determined that the current ASTM F833-13 standard is the most comprehensive of the standards to address the incident hazards associated with strollers. Although some individual requirements in international standards are more stringent than ASTM F833-13, based on the current hazard patterns identified in the incident reports, CPSC is not proposing to adopt additional requirements at this time, with the exception of the proposed performance requirement and test procedure to address scissoring, shearing, and pinching hazards associated with 2D fold strollers. However, CPSC staff will continue to monitor hazard patterns and recommend future changes, if necessary.

B. Voluntary Standard – ASTM F833

1. History of ASTM F833

ASTM F833, "Standard Consumer Safety Performance Specification for Carriages and Strollers," establishes safety performance requirements, test methods, and labeling requirements to minimize the hazards to children presented by carriages and strollers. ASTM first published a consumer product safety standard for strollers in 1983. It has been revised 20 times in the past 29 years, with six revisions in the past 5 years. By the end of 2008, the majority of the general requirements were in place, including the following:

- Latching mechanisms must resist unintentional folding when a 45 lb. force is applied five times in an attempt to fold the product without releasing a latch;
- Toy accessories must meet the requirements of ASTM F963, *Standard Consumer Safety Specification for Toy Safety*; and

- Several general requirements common to ASTM standards, including: hazardous points and edges; small parts; paint and surface coatings; wood being smooth and free of splinters; holes and slots that could trap a child's finger; exposed coil springs; warning label permanency; and retention of protective components.

  In addition, eight performance requirements were included in ASTM F833-08:

- *Parking Brake* - A parking brake must be provided and the braked wheels shall not rotate more than 90° when tested on a 12° incline.
- *Static Load* - A stroller shall support a weight of 100 lbs. or 2.5 times the manufacturer-recommended maximum weight in each individual seating area. A combination unit of a car seat on a stroller must support a 50-lb. weight.
- *Stability* - The product with a 17-lbm. CAMI dummy shall not tip over when placed on a 12° incline and shall not tip forward when a 40 lb. force is applied downward where a child would likely step to climb into the stroller.
- *Restraining System* - A three-point restraint system (waist and crotch) must be present and may not detach, nor may the adjusting elements permit slippage more than 1 in. when tested as follows:
  a. Apply 45-lb. force to each anchoring point.
  b. Insert CAMI infant dummy, secure restraints, and pull a leg with 45-lbs. of force five times.
- *Occupant Retention* – A wall surrounding all sides above the floor of the occupant space shall not permit the passage of a 3-in. diameter probe.

- *Combination Unit of a Car Seat on a Stroller* – This section lists the specific requirements combination frame/car seat products must meet to eliminate omissions due to differing interpretations of the standard.
- *Impact Test* – The product shall not become damaged, and the car seat may not become completely separated from the frame, with 40 lb. (or maximum recommended weight) secured by the restraint system in each seating area, then allowed to roll 40 in. down a 20° slope into a rigid steel stop.
- *Passive Containment/Foot Opening* – Products with a tray or grab bar in front of the occupant that creates an opening that could potentially trap a child's head are not permitted. If the opening permits the passage of a 3.0 in. x 5.5 in. torso probe, it must also permit the passage of an 8.0-in. diameter head probe sphere.

Minor changes to the standard were made from 2008 through 2011. In addition to editorial alterations and clarifications, the 2009 revision (F833-09) excluded self-propelled products, including tricycles with push handles. The next revision, published in May 2010 (F833-10), added rotating seats to the stability test, and more importantly, made the impact test more stringent. In addition, the detachment of *any* car seat attachment point from a stroller frame would constitute a failure of the impact test. The 2011 version of the standard added a requirement specifying the text size for instructional literature warnings.

2. Description of the Current Voluntary Standard - ASTM F833-13

Since 2011, CPSC staff has worked with ASTM stakeholders in task groups to develop new requirements and improve certain requirements to address the hazards identified in the incident data. With the exception of a proposed performance requirement and test procedure to address scissoring, shearing, and pinching hazards associated with 2D fold strollers, CPSC finds

that ASTM F833-13 will address the hazards identified in the incident data. This section discusses how each hazard pattern described is addressed in the current voluntary standard ASTM F833-13.

Wheel Issues - A new performance requirement addresses the wheel detachment hazard pattern. This requirement verifies the strength with which wheels are attached to the stroller. A wheel detachment test is applied to non-swivel wheels and swivel wheels, as well as to the wheels that are intended to be detached from a removable wheel fork assembly. A new warning label is also required on the front wheel fork, alerting the user to a possible tip-over hazard if the wheel is not attached securely. In addition, new warning labels are required for three-wheeled strollers, if the front wheel is intended to be locked during running, jogging, or walking fast.

Parking Brakes – ASTM F833-13 includes a modified performance requirement and associated test to address weak parking brakes. The improved requirement increases both the applied force (by approximately 50%) and the number of repetitions, resulting in a more stringent parking brake system performance requirement.

Lock Mechanism - A more stringent performance requirement requires the successful completion of a test that applies a force to the handle bars in a direction likely to break and disengage the folding latch system. This updated requirement will significantly reduce the hazard associated with weak lock/latch mechanisms.

Restraint - The requirements included in the ASTM standard prior to the 2013 version addressed restraint system breakage, detachment, and poor fit failure modes. ASTM F833-13 adds a new requirement to reduce the ability of a child to escape by unbuckling the harness straps. The new requirement states that the buckle shall either have a single-action release

mechanism that does not release at a force less than 9 lbf., or a buckle that consists of a double-action release mechanism.

Hinges - The highest injury rate of any stroller hazard category arises from scissoring, pinching, or shearing at the hinge link of 2D and 3D strollers. Even though certain pinching and shearing hazards are addressed in the previous versions of the standard, this requirement applied only after the stroller was erected and secured. Incident data showed that the majority of the injuries occurred when the stroller was partially erected; therefore, a new requirement addressing the hazard during the unfolding action was necessary. ASTM F833-13 now includes a requirement to address the hinge link hazards on 3D fold strollers, but it still fails to address 2D fold strollers. The proposed rule would add a performance requirement and test method similar to the provisions for 3D fold strollers to address hinge link hazards on 2D fold strollers.

Structural Integrity - ASTM F833-13 contains performance requirements that contribute to the general evaluation of structural integrity, including latching mechanisms, parking brake requirements, static load, stability, restraining system, and impact test.

Stability/Tip Over - Performance requirements associated with stability have been strengthened in ASTM F833-13 to account for strollers that have rearward or swiveling seats that can face multiple directions. In addition, testing requirements for stability have been modified so that the test is executed to a more stringent stability performance requirement.

Clearance - In addition to the preexisting requirement associated with evaluating the gap between the seat and front tray to prevent head entrapment, ASTM F833-13 requires a new entrapment test with a car seat on a stroller or convertible carriage/stroller. This additional requirement addresses the fatality scenario in which a child was found suspended between the foot end of a car seat and a metal bar under the cup holder tray.

Car Seat Attachment - ASTM F833-13 requires combination units to meet general requirements associated with latching, parking brakes, static load, and stability and tip over.

Canopy - ASTM F833-13 includes a new performance requirement to address the scissoring, shearing, and pinching hazard caused by canopy pivots. In addition, the standard incorporates a new performance requirement to address the strangulation hazard associated with cords and straps within the "occupant space," by eliminating cords or straps that can create a hazardous loop.

Handlebar – ASTM F833-13 addresses the structural integrity of handlebar hinges and latches, the strength of metal frame, and handle grip structural integrity with an improved latch performance requirement.

Seat - The separated seam failure mode is addressed by ASTM F833-13 with the static load performance requirement. This requirement states that the seat shall support 100 lbs. or 2.5 times the manufacturer's recommended maximum weight, whichever is greater.

Sharp Points or Edges- Sharp points and edges are addressed in ASTM F833-13.

Tray - Most of the incidents associated with trays involve pinch hazards with the closing motion or gaps that entrap small fingers. Although ASTM F833-13 does not specifically address scissoring, shearing, and pinching hazards due to tray articulation, latching, and locking, it does include a general requirement for openings.

Miscellaneous - Choking hazards are addressed by ASTM F833-13 in the small parts prohibition section, labeling section, as well as the toy accessories requirement.

Older Children and Adults - The requirements added to or improved in ASTM F833-13, and the proposed new requirement and test method to address scissoring, shearing, and pinching hazards associated with 2D fold strollers, may address nearly half of the adult injury hazard

patterns that were identified by CPSC staff.

IV. Proposed Change to ASTM F833-13

Hinge issues were reported in 75 incidents, resulting in 72 injuries. This is the highest injury rate of any stroller hazard category. Most of the hinge-related injuries resulted from scissoring, pinching, or shearing at the hinge link of 2D and 3D strollers. Most of the incidents occurred when a caregiver was unfolding the stroller for use and the child was climbing into the stroller. Reported injuries involved pinched, lacerated, or amputated fingers or arms, including one hospitalization for reattachment of a finger. Incident data show that the majority of the injuries occurred when the stroller was partially erected; therefore, a new requirement addressing the hazard during the unfolding action had to be developed. Although ASTM F833-13 now includes a requirement addressing this hazard in the 3D fold strollers, it does not address 2D fold strollers. For 3D fold strollers, ASTM F833-13 requires that 3D saddle hinges must be constructed to prevent injury from scissoring, shearing, or pinching. The 3D fold test is dynamic. The stroller is partially unfolded so that the main side rail tubes are positioned 90° to one another. Saddle hinge scissoring, shearing, and pinching conditions are checked for with the two probes (0.210-in. and 0.375-in. diameter) while opening the stroller into the manufacturer's recommended open and locked position.

The proposed rule would add a performance requirement and test method similar to the provisions for 3D fold strollers to address scissoring, shearing, and pinching hazards associated with 2D fold strollers. The proposed new requirement would provide that the frame folding action of a stroller shall not create a scissoring, shearing, or pinching hazard when tested. The proposed new test is dynamic, like the saddle hinge test, and the test also determines if the hazard exists with the same two probes while the stroller is moved from a partially to the fully

erect and locked position. Scissoring, shearing, or pinching that may cause injury exists when the edges of the rigid parts admit a 0.210-in diameter probe but do not admit a 0.375-in diameter probe when tested. Based on the incident data and anthropometric dimensions of the child occupant, the proposal defines an "access zone" that is easily accessible by a child. All hinges that are within the access zone must be checked for a scissoring, shearing, or pinching hazard while the stroller is moved from a partially to a fully erect and locked position. Adding this new performance requirement and test procedure would significantly reduce the risk of injury associated with the frame folding action.

V. Effective Date

The Administrative Procedure Act (APA) generally requires that the effective date of the rule be at least 30 days after publication of the final rule. 5 U.S.C. 553(d). On April 7, 2012, CPSC staff received a letter from the Juvenile Products Manufacturers Association (JPMA), asking for an effective date of 24 months following publication of the carriage and stroller final rule. In that letter, JPMA stated that many challenges remain before implementing the new requirements, including design changes and revised product development schedules. The ASTM balloting process in February 2013 generated more recent comments regarding the effective date. Several manufacturers commented again on the need for additional time for compliance to address significant design and development redesign implementation. However, these commenters now request 18 months. The Commission is aware that significant revisions were made to the latest version of the standard requiring many modifications to carriages and strollers. Due to the complexity of stroller designs, and to allow time for manufacturers of carriage/stroller products to come into compliance, the Commission proposes that the standard become effective 18 months after publication of a final rule in the *Federal Register*. The Commission invites

comment on whether 18 months is an appropriate length of time for carriage/stroller manufacturers to come into compliance with the rule.

VI. Regulatory Flexibility Act

1. Introduction

The Regulatory Flexibility Act (RFA) requires that proposed rules be reviewed for their potential economic impact on small entities, including small businesses. Section 603 of the RFA generally requires that agencies prepare an initial regulatory flexibility analysis and make it available to the public for comment when a general notice of proposed rulemaking is published. The initial regulatory flexibility analysis must describe the impact of the proposed rule on small entities and identify any alternatives that may reduce the impact. Specifically, the initial regulatory flexibility analysis must contain:

- a description of, and where feasible, an estimate of the number of small entities to which the proposed rule will apply;
- a description of the reasons why action by the agency is being considered;
- a succinct statement of the objectives of, and legal basis for, the proposed rule;
- a description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities subject to the requirements and the types of professional skills necessary for the preparation of reports or records; and
- identification, to the extent possible, of all relevant federal rules which may duplicate, overlap, or conflict with the proposed rule.

2. Reason for Agency Action and Legal Basis for the Proposed Rule

The Danny Keysar Child Product Safety Notification Act, section 104 of the CPSIA, requires the CPSC to promulgate mandatory standards that are substantially the same as, or more stringent than, the voluntary standard for a durable infant or toddler product. CPSC staff worked closely with ASTM stakeholders to develop the new requirements and test procedures that have been incorporated into ASTM F833-13, which forms the basis of the proposed rule.

3. Other Federal Rules

Section 14(a)(2) of the CPSA requires every manufacturer and private labeler of a children's product that is subject to a children's product safety rule to certify, based on third party testing conducted by a CPSC-accepted laboratory, that the product complies with all applicable children's product safety rules. Section 14(d)(2) of the CPSA requires the Commission to establish protocols and standards, by rule, for among other things, ensuring that a children's product is tested periodically and where there has been a material change in the product, and for safeguarding against the exercise of undue influence on a conformity assessment body by a manufacturer or private labeler. A final rule implementing sections 14(a)(2) and 14(d)(2) of CPSA, *Testing and Labeling Pertaining to Product Certification*, 16 CFR part 1107, became effective on February 13, 2013 (the 1107 rule).

Carriages and strollers will be subject to a mandatory children's product safety rule, so they will also be subject to the third party testing requirements of section 14 of the CPSA and the 1107 rule when the final rule and the notice of requirements become effective.

4. Impact on Small Businesses

Approximately 86 firms currently supply carriages/strollers in the U.S. market. Under U.S. Small Business Administration (SBA) guidelines, a manufacturer is small if it has 500 or fewer employees, and importers and wholesalers are considered small if they have 100 or fewer

employees. Based on these guidelines, about 51 suppliers are small firms─26 domestic manufacturers, 22 domestic importers, and three firms with unknown supply sources. There may be additional unknown small carriage/stroller suppliers operating in the U.S. market.

Small Manufacturers. The expected impact of the proposed rule on small manufacturers will differ based on whether their carriages/strollers are already compliant with ASTM F833-11. In general, firms whose carriages/strollers meet the requirements of ASTM F833-11 are likely to continue to comply with the voluntary standard as new versions are published. In addition, they are likely to meet any new standard before a final rule becomes effective. Many of these firms are active in the ASTM standard development process, and compliance with the voluntary standard is part of an established business practice.

Meeting ASTM F833-13's requirements could necessitate product redesign for at least some carriages/strollers not believed to be compliant with ASTM F833-11 (7 of 26 small domestic manufacturers). A redesign would be minor if most of the changes involve adding straps and fasteners or using different mesh or fabric, but could be more significant if changes to the frame are required. Due to the complexity of carriages/strollers, a complete redesign of these products, including engineering time, prototype development, tooling, and other incidental costs, could exceed $1 million for the most complex models. Industry sources, including JPMA, note that new tooling alone could exceed $300,000 per product model. However, costs and development time are likely to vary widely across firms. Companies with substantial experience in manufacturing carriages/strollers should be able to complete redesigns more cost effectively than firms with less experience. Additionally, firms with numerous carriage/stroller models may experience lower costs because models could be redesigned as a group.

The direct impact on manufacturers whose products are expected to meet the requirements of ASTM F833-13 (19 of 26 small domestic manufacturers) could be significant in some cases, due to the proposed 2D frame folding requirement, as well as the relatively low revenues associated with many small manufacturers. While meeting this requirement could be as simple as replacing hinges or adding covers, this may not be a realistic alternative for some firms. According to one manufacturer, it is difficult to make added parts look cohesive with the original product, a quality that consumers might prefer. Therefore, some firms may need to develop new models, rather than try to create cohesive products by retrofitting older models. The majority of small manufacturers have at least one 2D stroller model; so it is possible that at least some will opt to redesign their existing noncompliant strollers.

The direct costs of design/redesign on firms may be mitigated if the costs are treated as new product expenses that can be amortized, and the Commission is proposing an 18-month effective date to help reduce further the impact of the proposed rule. This would give firms additional time to develop new/modified products and spread costs over a longer time frame. It is possible that additional time beyond 18 months may be required, however; and CPSC requests specific comments on alternative effective dates.

In addition, once the rule becomes final and the notice of requirements is in effect, all manufacturers will be subject to the additional costs associated with the third party testing and certification requirements. This will include any physical and mechanical test requirements specified in the final rule; lead and phthalates testing is already required.

CPSC staff estimates that testing to the ASTM voluntary standard could cost about $800−$1,000 per model sample. On average, each small domestic manufacturer supplies seven different models of carriages/strollers to the U.S. market annually. Therefore, if third party

testing were conducted every year on a single sample for each model, third party testing costs for each manufacturer would be about $5,600−$7,000 annually. Based on a review of firm revenues, the impact of third party testing to ASTM F833-13 is unlikely to be significant if only one sample per model is required. However, if more than one sample would be needed to meet the testing requirements, it is possible that third party testing costs could have a significant impact on one or more of the small manufacturers.

Small Importers. Most small importers of carriages/strollers currently in compliance with F833-11 (13 of 22 small domestic importers) would likely continue to comply with the standard as it evolves. Any increase in production costs experienced by their suppliers may be passed on to them. Given the possibility that even firms with compliant products may opt to design a new carriage/stroller rather than retrofit their existing models, the costs associated with the added 2D folding frame requirement could be significant for some firms, especially those that do not follow the ASTM standard development process (as is the case with at least one small importer of compliant strollers).

Importers of carriages/strollers would need to find an alternate source if their existing supplier does not come into compliance with the requirements of the proposed rule (currently, nine importers of strollers may not be in compliance with F833-11). Some could respond to the rule by discontinuing the import of their noncomplying products, possibly discontinuing the product line altogether. The impact of such a decision could be mitigated by replacing the noncompliant carriage/stroller with a compliant carriage/stroller or by deciding to import an alternative product in place of the carriage/stroller. However, some of these firms have few or no other products in their product line.

Because many of these firms have low sales revenues and limited product lines apart from carriages/strollers and carriage/stroller accessories, it is possible that the proposed rule could have a significant impact on one or more importers. The proposed 18-month effective date would spread the costs of compliance over a longer period of time, mitigating the impact on all importers.

As is the case with manufacturers, all importers will be subject to third party testing and certification requirements, and consequently, will experience costs similar to those for manufacturers if their supplying foreign firm(s) does not perform third party testing. The resulting costs could have a significant impact on a few small importers who must perform the testing themselves, even if only one sample per model were required.

Alternatives. Under the Danny Keysar Child Product Safety Notification Act, one alternative that would reduce the impact on small entities is to make the voluntary standard mandatory with no modifications. Doing so would eliminate the impact on the 19 small manufacturers and 13 small importers with compliant products. However, adopting the voluntary standard with no modifications may not substantially benefit firms with noncompliant products, as their carriages/strollers might still require redesign.

The proposed 18-month effective date will allow suppliers additional time to modify and/or develop compliant carriages/strollers and spread the associated costs over a longer period of time. However, the Commission could opt to set an even later effective date. Doing so could reduce further the impact on affected firms. A third alternative would be to set an earlier effective date. However, setting an earlier effective date could increase the impact of the rule on small entities.

VII. Environmental Considerations

The Commission's regulations address whether we are required to prepare an environmental assessment or an environmental impact statement. If our rule has "little or no potential for affecting the human environment," it will be categorically exempted from this requirement. 16 CFR 1021.5(c)(1). The proposed rule falls within the categorical exemption.

VIII. Paperwork Reduction Act

This proposed rule contains information collection requirements that are subject to public comment and review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. §§ 3501–3521). In this document, pursuant to 44 U.S.C. 3507(a)(1)(D), we set forth:

- a title for the collection of information;
- a summary of the collection of information;
- a brief description of the need for the information and the proposed use of the information;
- a description of the likely respondents and proposed frequency of response to the collection of information;
- an estimate of the burden that shall result from the collection of information; and
- notice that comments may be submitted to the OMB.

Title: Safety Standard for Carriages and Strollers

Description: The proposed rule would require each stroller/carriage to comply with ASTM F833-13, Standard Consumer Safety Performance Specification for Carriages and Strollers. Sections 8 and 9 of ASTM F833-13 contain requirements for marking, labeling, and instructional literature. These requirements fall within the definition of "collection of information," as defined in 44 U.S.C. § 3502(3).

Description of Respondents: Persons who manufacture or import carriages and/or strollers.

Estimated Burden: We estimate the burden of this collection of information as follows:

Table 1 – Estimated Annual Reporting Burden

16 CFR Section	Number of Respondents	Frequency of Responses	Total Annual Responses	Hours per Response	Total Burden Hours
1227	86	6	516	1	516

Our estimates are based on the following:

Section 8.1.1 of ASTM F833-13 requires that the name and the place of business (city, state, mailing address, including zip code, or telephone number) of the manufacturer, distributor, or seller be marked clearly and legibly on each product and its retail package. Section 8.1.2 of ASTM F833-13 requires a code mark or other means that identifies the date (month and year, as a minimum) of manufacture.

There are 86 known entities supplying strollers/carriages to the U.S. market. All 86 firms are assumed to use labels already on both their products and their packaging, but they might need to make some modifications to their existing labels. The estimated time required to make these modifications is about 1 hour per model. Each entity supplies an average of six different models of strollers/carriages; therefore, the estimated burden associated with labels is 1 hour per model x 86 entities x 6 models per entity = 516 hours. We estimate the hourly compensation for the time required to create and update labels is $27.12 (U.S. Bureau of Labor Statistics, "Employer Costs for Employee Compensation," December 2012, Table 9, total compensation for all sales and office workers in goods-producing private industries: http://www.bls.gov/ncs/). Therefore, the estimated annual cost to industry associated with the

labeling requirements is $13,993.92 ($27.12 per hour x 516 hours = $13,993.92). There are no operating, maintenance, or capital costs associated with the collection.

Section 9.1 of ASTM F833-13 requires instructions to be supplied with the product. Carriages/strollers are products that generally require assembly, and products sold without such information would not be able to compete successfully with products supplying this information. Under the OMB's regulations (5 CFR 1320.3(b)(2)), the time, effort, and financial resources necessary to comply with a collection of information that would be incurred by persons in the "normal course of their activities" are excluded from a burden estimate, where an agency demonstrates that the disclosure activities required to comply are "usual and customary." Therefore, because we are unaware of carriages/strollers that generally require some installation, but lack any instructions to the user about such installation, we tentatively estimate that there are no burden hours associated with section 9.1 of ASTM F833-13 because any burden associated with supplying instructions with carriages/strollers would be "usual and customary" and not within the definition of "burden" under the OMB's regulations.

Based on this analysis, the proposed standard for strollers and carriages would impose a burden to industry of 516 hours at a cost of $13,993.92 annually.

In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. § 3507(d)), we have submitted the information collection requirements of this rule to the OMB for review. Interested persons are requested to submit comments regarding information collection by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], to the Office of Information and Regulatory Affairs, OMB (see the ADDRESSES section at the beginning of this notice).

Pursuant to 44 U.S.C. § 3506(c)(2)(A), we invite comments on:

- whether the collection of information is necessary for the proper performance of the CPSC's functions, including whether the information will have practical utility;
- the accuracy of the CPSC's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- ways to enhance the quality, utility, and clarity of the information to be collected;
- ways to reduce the burden of the collection of information on respondents, including the use of automated collection techniques, when appropriate, and other forms of information technology; and the estimated burden hours associated with label modification, including any alternative estimates.

IX. Preemption

Section 26(a) of the CPSA, 15 U.S.C. 2075(a), provides that where a consumer product safety standard is in effect and applies to a product, no state or political subdivision of a state may either establish or continue in effect a requirement dealing with the same risk of injury unless the state requirement is identical to the federal standard. Section 26(c) of the CPSA also provides that states or political subdivisions of states may apply to the Commission for an exemption from this preemption under certain circumstances. Section 104(b) of the CPSIA refers to the rules to be issued under that section as "consumer product safety rules," thus implying that the preemptive effect of section 26(a) of the CPSA would apply. Therefore, a rule issued under section 104 of the CPSIA will invoke the preemptive effect of section 26(a) of the CPSA when it becomes effective.

X. Certification and Notice of Requirements (NOR)

Section 14(a) of the CPSA imposes the requirement that products subject to a consumer product safety rule under the CPSA, or to a similar rule, ban, standard or regulation under any

other act enforced by the Commission, must be certified as complying with all applicable CPSC-enforced requirements. 15 U.S.C. 2063(a). Section 14(a)(2) of the CPSA requires that certification of children's products subject to a children's product safety rule be based on testing conducted by a CPSC-accepted third party conformity assessment body. Section 14(a)(3) of the CPSA requires the Commission to publish a notice of requirements (NOR) for the accreditation of third party conformity assessment bodies (or laboratories) to assess conformity with a children's product safety rule to which a children's product is subject. The proposed rule for 16 CFR part 1227, "Safety Standard for Carriages and Strollers," when issued as a final rule, will be a children's product safety rule that requires the issuance of an NOR.

The Commission recently published a final rule, *Requirements Pertaining to Third Party Conformity Assessment Bodies*, 78 FR 15836 (March 12, 2013), which is codified at 16 CFR part 1112 (referred to here as Part 1112). This rule will take effect June 10, 2013. Part 1112 establishes requirements for accreditation of third party conformity assessment bodies (or laboratories) to test for conformance with a children's product safety rule in accordance with Section14(a)(2) of the CPSA. The final rule also codifies all of the NORs that the CPSC had published to date. All new NORs, such as the carriages and strollers standard, require an amendment to part 1112. Accordingly, the proposed rule would amend part 1112 to include the carriages and strollers standard along with the other children's product safety rules for which the CPSC has issued NORs.

Laboratories applying for acceptance as a CPSC-accepted third party conformity assessment body to test to the new standard for carriages and strollers would be required to meet the third party conformity assessment body accreditation requirements in part 1112. When a laboratory meets the requirements as a CPSC-accepted third party conformity assessment body,

it can apply to the CPSC to have 16 CFR part 1227, *Safety Standard for Carriages and Strollers*, included in its scope of accreditation of CPSC safety rules listed for the laboratory on the CPSC website at: www.cpsc.gov/labsearch.

In connection with the part 1112 rulemaking, CPSC staff conducted an analysis of the potential impacts on small entities of the proposed rule establishing accreditation requirements, 77 FR 31086, 31123-26 (May 24, 2012), as required by the Regulatory Flexibility Act and prepared an Initial Regulatory Flexibility Analysis (IRFA). Briefly, the IRFA concluded that the requirements would not have a significant adverse impact on a substantial number of small laboratories because no requirements are imposed on laboratories that do not intend to provide third party testing services under section 14(a)(2) of the CPSA. The only laboratories that are expected to provide such services are those that anticipate receiving sufficient revenue from providing the mandated testing to justify accepting the requirements as a business decision. Laboratories that do not expect to receive sufficient revenue from these services to justify accepting these requirements would not likely pursue accreditation for this purpose. Similarly, amending the part 1112 rule to include the NOR for the carriages and strollers standard would not have a significant adverse impact on small laboratories. Moreover, based upon the number of laboratories in the United States that have applied for CPSC acceptance of the accreditation to test for conformance to other juvenile product standards, we expect that only a few laboratories will seek CPSC acceptance of their accreditation to test for conformance with the carriages and strollers standard. Most of these laboratories will have already been accredited to test for conformance to other juvenile product standards and the only costs to them would be the cost of adding the carriages and strollers standard to their scope of accreditation. As a consequence, the Commission certifies that the proposed notice requirements for the carriages and strollers

standard will not have a significant impact on a substantial number of small entities.

XI. Request for Comments

This proposed rule begins a rulemaking proceeding under section 104(b) of the CPSIA to issue a consumer product safety standard for carriages and strollers. We invite all interested persons to submit comments on any aspect of the proposed rule.

In particular, we note that there are a number of international standards applicable to carriages, strollers, or both (discussed above in IV. Other Standards, A. International Standards). Based on quantitative analysis, are there one or more international performance requirements that are substantially the same as, or are more stringent than, a related requirement or requirements in ASTM F833-13? If available, please submit any such analysis.

Comments should be submitted in accordance with the instructions in the **ADDRESSES** section at the beginning of this notice.

List of Subjects

16 CFR Part 1112

Administrative practice and procedure, Audit, Consumer protection, Reporting and recordkeeping requirements, Third party conformity assessment body.

16 CFR Part 1227

Consumer protection, Imports, Incorporation by reference, Infants and children, Labeling, Law enforcement, and Toys.

For the reasons discussed in the preamble, the Commission proposes to amend Title 16 of the Code of Federal Regulations as follows:

PART 1112—REQUIREMENTS PERTAINING TO THIRD PARTY CONFORMITY ASSESSMENT BODIES

1. The authority citation for part 1112 continues to read as follows:

Authority: Pub. L. 110-314, section 3, 122 Stat. 3016, 3017 (2008); 15 U.S.C. 2063.

2. Amend Part 1112.15 by adding paragraph (b)(37) to read as follows:

§ 1112.15 When can a third party conformity assessment body apply for CPSC acceptance for a particular CPSC rule and/or test method?

***** ***** ***** ***** *****

(b) The CPSC has published the requirements for accreditation for third party conformity assessment bodies to assess conformity for the following CPSC rules or test methods:

* * * * *

(37) 16 CFR part 1227, Safety Standard for Carriages and Strollers.

PART 1227-SAFETY STANDARD FOR CARRIAGES AND STROLLERS

3. Add a new part 1227 to read as follows:

Sec.

1227.1 Scope.

1227.2 Requirements for Carriages and Strollers.

Authority: The Consumer Product Safety Improvement Act of 2008, Pub. L. 110-314, § 104, 122 Stat. 3016 (August 14, 2008); Pub. L. 112-28, 125 Stat. 273 (August 12, 2011).

§ 1227.1 Scope.

This part establishes a consumer product safety standard for carriages and strollers.

§ 1227.2 Requirements for Carriages and Strollers.

(a) Each carriage and stroller must comply with all applicable provisions of ASTM F833-13, Standard Consumer Safety Specification for Carriages and Strollers, approved on April

1, 2013. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from ASTM International, 100 Bar Harbor Drive, P.O. Box 0700, West Conshohocken, PA 19428; http://www.astm.org/cpsc.htm. You may inspect a copy at the Office of the Secretary, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone 301-504-7923, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal regulations/ibr_locations.html.

(b) Comply with ASTM F833-13 standard with the following additions:

(1) In addition to complying with section 3.1.21 of ASTM F833-13, comply with the following:

(i) 3.1.22 *2D fold stroller, n*-a stroller that folds the handlebars and leg tubes only in the front-to-back (or back-to-front) direction.

(ii) [Reserved]

(2) Instead of complying with section 5.7 of ASTM F833-13, comply with the following:

(i) 5.7 *Scissoring, Shearing, and Pinching*

(ii) [Reserved]

(3) In addition to complying with section 5.7.3 of ASTM F833-13, comply with the following:

(i) 5.7.4 The frame folding action of a 2D fold stroller and convertible carriage/stroller (carriages are exempted from this requirement) shall be designed and constructed so as to prevent injury from scissoring, shearing, or pinching. Scissoring, shearing, or pinching that may

cause injury exists when the edges of the rigid parts admit a 0.210-in (5.33-mm) diameter probe but do not admit a 0.375-in (9.53-mm) diameter probe when tested in accordance with 7.18. Units with a removable seat that prevent the complete folding of the unit when still attached are exempt from this requirement. Note: The evaluation at any given location is performed with the understanding that the probes are allowed to enter the location from any angle/direction.

(ii) [Reserved]

(4) In addition to complying with section 7.17 of ASTM F833-13, comply with the following:

(i) 7.18 *Frame Folding Scissoring, Shearing, and Pinching*

(A) 7.18.1 2D fold stroller and convertible carriage/stroller evaluation: Place the unit's seatback in the most upright position. Identify and mark the portion of the unit's rigid frame members and hinges that have potential scissoring, shearing, or pinching action during folding of the unit and are within or penetrate the access zone shown in the Fig X anywhere within the width of the stroller. All marked portions of the frame shall be evaluated per 7.18.2 or 7.18.3 as applicable. For units that feature two or more folding operations that are able to be carried out independently of each other, each operation must be independently evaluated per the test methods in 7.18.2 or 7.18.3 as applicable. This includes all seat-facing positions as recommended by the manufacturer and each occupant position on multiple occupancy units. Tray and front grab bar movements not a result of unfolding operation are excluded from this evaluation.

(B) 7.18.2 *For units where the front and rear wheels move toward each other during folding* – measure the change in distance (distance A, see Fig Y) between the front and rear wheel axle centers when moving from the completely folded to completely erected position. The

measurement shall be taken with any swivel wheels in the locked position and in the plane where the axel centerlines are perpendicular to the fore/aft horizontal axis of the stroller. To determine the starting point for testing, start folding the unit from erect to folded/"closed" position until the distance between the wheel axel centers is 2/3 of the total travel distance (see figure Y for an example). From this point check the marked portions identified in 7.18.1 for scissoring, shearing, and pinching in accordance with 5.7.4 while moving the stroller from this partially folded position to the fully erect and locked position.

(C) 7.18.3 *For units where the front and rear wheels axle centers move away from each other or do not change distance during folding* – place the unit in partially erect position so the handle tube is rotated 90 deg. from the fully erect and locked position. From this point assess the marked portions identified in 7.18.1 for scissoring, shearing, and pinching in accordance with 5.7.4 while moving the unit from this partially folded position to the fully erect and locked position.

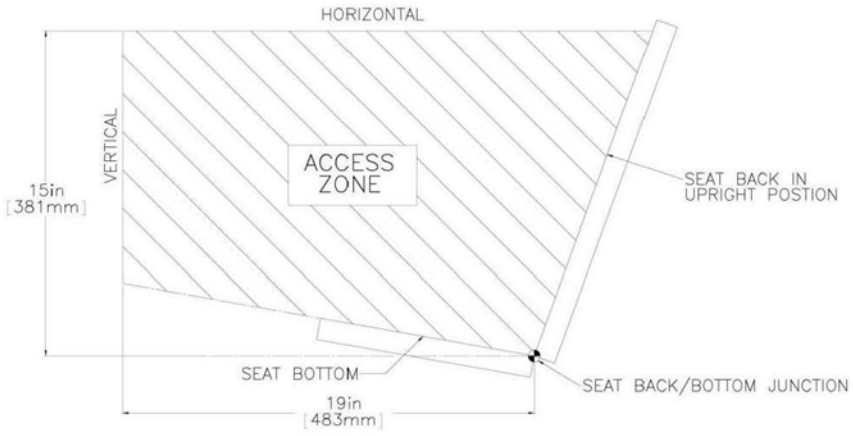

FIG. X, ACCESS ZONE

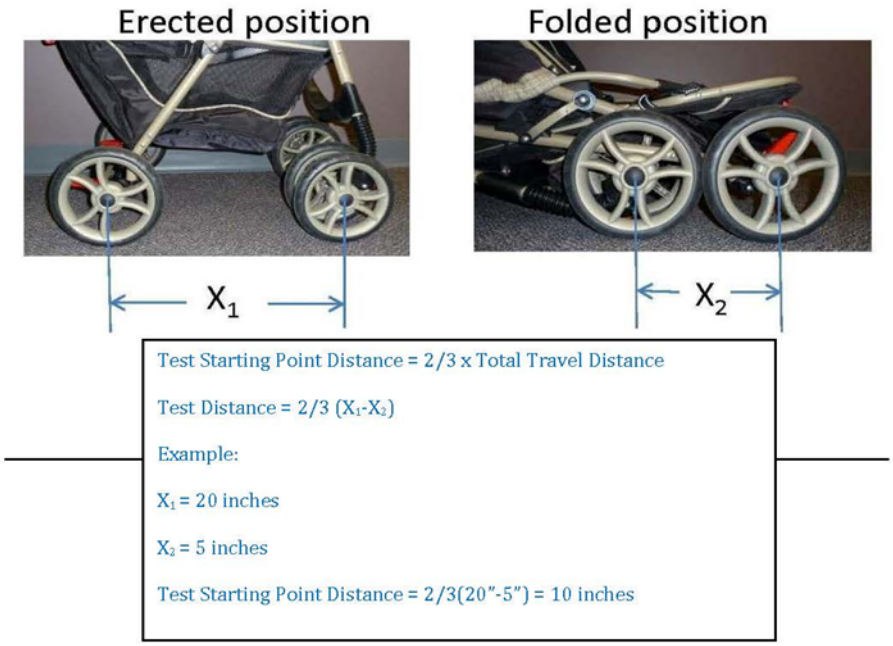

FIG. Y EXAMPLE OF TRAVEL DISTANCE CALCULATION

(ii) [Reserved]

(5) In addition to complying with the Appendix of ASTM F833-13, comply with the following:

(i) XI.18 *Rationale for 7.18*: A 3 year old child's sitting shoulder height is 15 inches and upper limb length is 19 inches based on 95th percentile 3-year old child's measurements (Pheasant, S.T. (1996). *Bodyspace: Anthropometrics, Ergonomics and the Design of Work* (2nd ed.). London, UK: Taylor & Francis). The access zone covers a child sitting in the most upright position reaching forward hence the reason for defining 19" from the seat back junction.

(ii) [Reserved]

Dated: May 10, 2013

Todd A. Stevenson,
Secretary, Consumer Product Safety Commission

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