



Standard Consumer Safety Performance Specification for Shopping Carts¹

This standard is issued under the fixed designation F2372; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

This consumer safety specification is intended to address injuries to children associated with falls from shopping carts. Based on data from the U.S. Consumer Product Safety Commission (CPSC) National Electronic Injury Surveillance System (NEISS), falls are among the leading causes of head injuries to young children. The most common injury resulted when a child fell or climbed out of a shopping cart because the restraint system was not being used. Falls from shopping carts most often occur when children stand up in the child seat or the cart basket. Falls also occur when children climb on the outside of the cart and cause the cart to tip over. Falls from the child seat occur when the children are not buckled or when they wriggle out of, or unbuckle, the seat restraints. Children can also fall from or with an infant seat, infant carrier, or a car seat placed on the cart seat.

Note—This consumer safety performance specification is not intended to address incidents and injuries resulting from the interaction of other persons with children in shopping carts or incidents resulting from unforeseeable abuse or misuse.

This consumer safety performance specification is written within the current state of the art of shopping cart technology. It is intended that this specification will be updated whenever substantive information becomes available which necessitates additional requirements or justifies the revision of existing requirements.

1. Scope

1.1 This consumer safety performance specification covers performance requirements, test methods, and labeling requirements for shopping carts and restraint systems.

1.2 This specification is intended to cover children who are at least six months of age and at least 15 lb (7 kg) up to children who are not more than four years of age and who weigh no more than 35 lb (16 kg).

1.3 This specification does not include any provisions nor is intended for use of infant carriers.

1.4 No shopping cart or restraint system produced after the approval date of this consumer safety performance specification shall, either by label or other means, indicate compliance with this specification unless it conforms to all requirements herein.

1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical

conversions to SI units that are provided for information only and are not considered standard.

1.6 The following precautionary caveat pertains only to the test method portion, Section 7, of this specification. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards*:²

[D3359 Test Methods for Measuring Adhesion by Tape Test](#)

2.2 *European Standard*:³

[EN 1929-1:1998 Basket trolleys. Requirements and tests for basket trolleys with or without a child carrying facility](#)

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from European Committee for Standardization (CEN), Avenue Marnix 17, B-1000, Brussels, Belgium, <http://www.cen.eu> or British Standards Institution (BSI), 389 Chiswick High Rd., London W4 4AL, U.K., <http://www.bsigroup.com>.

¹ This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.56 on Shopping Carts.

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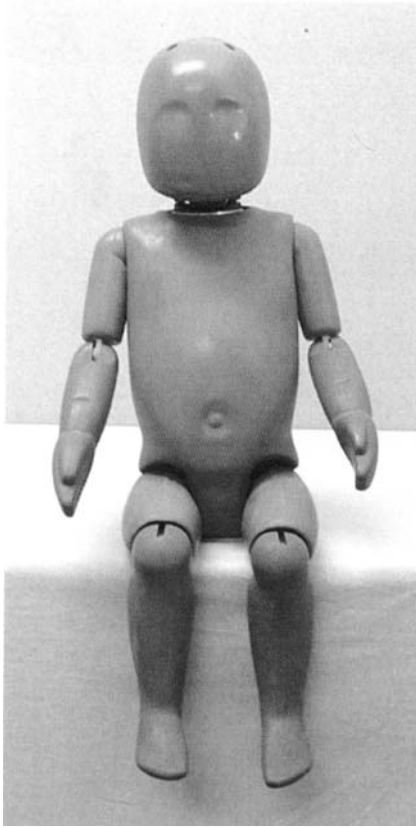


FIG. 1 CRABI 12 Dummy

2.3 Federal Standards:⁴

16 CFR 1501 Method for Identifying Toys and Other Articles Intended for Use by Children under 3 Years of Age which Present Choking, Aspiration, or Ingestion Hazards because of Small Parts

16 CFR 1700 Poison Prevention Packaging Act⁴

2.4 Other Document:

CRABI 12 Dummy 49 CFR 572, subpart R (see Fig. 1)

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *child-resistant buckles, n*—buckles, closures, or equivalent that adults can operate, yet exceed the capabilities of a high percentage of children in the occupant age range as stated in 1.2.

3.1.2 *conspicuous, n*—label that is visible, when the unit is in a manufacturer’s recommended use position, to a person standing near the unit at any one position around the unit but not necessarily visible from all positions.

3.1.3 *label, n*—any label material (such as plastic or metal) that either will not tear without the aid of tools or tears leaving a sharply defined edge.

3.1.4 *restraint system, n*—apparatus generally used as a means of limiting movement of a child occupant.

⁴ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401.

3.1.5 *shopping cart, n*—non-motorized, wheeled vehicle generally used for the transport of items by customers while shopping in self-service stores.

3.1.6 *shopping cart stability, n*—the steadfast state of a shopping cart that it will not tip over in the normal use of transporting merchandise and occupant children when seated in a designated seating area.

4. Calibration and Standardization

4.1 The unit shall be completely assembled, unless otherwise noted, in accordance with the manufacturer’s instructions.

4.2 No testing shall be conducted within 48 h of manufacturing.

4.3 The product to be tested shall be in a room with an ambient temperature of 73 ± 9°F (23 ± 5°C) for at least 1 h before testing. Testing shall then be conducted within this temperature range.

5. General Requirements

5.1 Labeling:

5.1.1 Warning labels shall be permanent when tested in accordance with 7.5.

5.1.2 Warning statements applied directly onto the surface of the product by hot stamping, heat transfer, printing, silk screening, and so forth shall be permanent when tested in accordance with 7.5.

5.1.3 Labels shall not liberate small parts when tested in accordance with 7.5.3.

6. Performance Requirements

6.1 *Rolling Quality*—The cart shall be fitted with at least four wheels, of which at least two shall be able to swivel.

6.2 *Restraining System:*

6.2.1 All shopping carts with a child seating area must have an adjustable child restraint system. The shopping cart’s child restraint system and occupant retention capabilities shall include, but not be limited to a mid-torso strap or other adjustable restraining device designed to restrain the child, when tested in accordance with 7.2 and 7.3.

6.2.2 The shopping cart shall have a passive crotch restraint.

6.2.3 The child restraint system shall use child-resistant buckles, closures, or equivalent that adults can operate, yet exceed the capabilities of a high percentage of children in the occupant age range as stated in 1.2 when tested in accordance with 7.4.

6.2.4 The restraint system shall be permanently attached to the shopping cart in such a manner that it will not become detached through normal use. The anchorages for the restraint system shall not separate from their attachment points when tested in accordance with 7.2.

6.2.5 The restraint system and its closing means (for example, buckle) shall not break, separate, or permit removal of the CRABI 12 test dummy from the child seating compartment when tested in accordance with 7.3.

6.3 *Shopping Cart Stability*—The shopping cart shall not topple over when tested in accordance with 7.6.

7. Test Methods

7.1 If during the course of conducting the test methods in this safety specification, a test model suffers any permanent deformation or damage, an additional test model of the same model shall be used for the remainder of the test methods.

7.2 Restraint System Integrity Test:

7.2.1 Secure the shopping cart so that it cannot move vertically or horizontally. Secure sections of the folding child seat and gate as needed before testing.

7.2.2 Apply a force of 45 lbf (200 N) to a single attachment point of the restraint system in the normal use direction(s) so that stress would be applied to that attachment. Gradually apply the force within 5 s and maintain for an additional 10 s.

7.2.3 Repeat 7.2.2 for a total of five times with a maximum interval of 5 s between tests.

7.2.4 Repeat 7.2.2 and 7.2.3 for each attachment point of the restraint system.

7.3 Restraint System Occupant Retention Test:

7.3.1 Secure the shopping cart so that it cannot move vertically or horizontally. Secure sections of the folding child seat and gate as needed before testing.

7.3.2 Place a CRABI 12 Dummy (see Fig. 1) in the child seat. The Dummy is to be unclothed.

7.3.2.1 Apply and adjust the restraint system to the intended use position to properly restrain the occupant.

7.3.2.2 Adjust the waist restraint using the webbing tension pull device shown in Fig. 2 so that a force of 2 lbf (9 N) applied to the waist restraint will provide at least a 1/4-in. (6-mm) space between the waist restraint and the CRABI 12 dummy.

7.3.3 Perform the following tests without readjusting the restraint system:

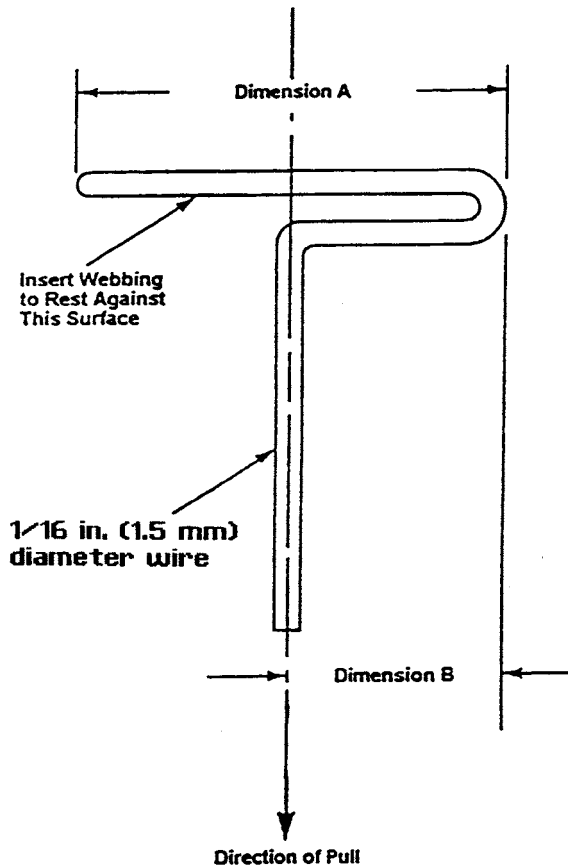
7.3.3.1 Apply a pull force of 45 lbf (200 N) horizontally on the approximate centerline of either leg of the dummy. Gradually apply the force within 5 s and maintain for an additional 10 s.

7.3.3.2 Repeat 7.3.3.1 four times with a maximum interval of 2 s between tests.

7.3.3.3 Apply a pull force of 45 lbf (200 N) vertically upwards in line with the approximate centerline of the dummy's torso. Gradually apply the force within 5 s and maintain for an additional 10 s.

7.3.3.4 Repeat 7.3.3.3 four times with a maximum interval of 2 s between tests.

7.4 *Child-Resistance Effectiveness and Adult-Use Effectiveness:*



NOTE 1—Dimension A: Width of webbing plus 1/8 in. (3 mm).

NOTE 2—Dimension B: One half of Dimension A.

FIG. 2 Webbing Tension Pull Device

7.4.1 Buckles, closures, or equivalent shall be tested in parallel with 16 CFR 1700.

7.5 *Permanency of Labels and Warnings:*

7.5.1 A label shall be considered permanent if, during an attempt to remove it without the aid of tools or solvents, it cannot be removed or such action damages the surface to which it is attached.

7.5.2 Adhesion test for warnings applied directly onto the surface of the product.

7.5.2.1 Apply the tape test defined in Test Method B—Cross-Cut Tape Test, from Test Methods D3359, eliminating parallel cuts.

7.5.2.2 Perform this test method once in each different location where warnings are applied.

7.5.2.3 The warning statements will be considered permanent if the printing in the area tested is still legible and attached after being subjected to this test.

7.5.3 A label, during an attempt to remove it without the aid of tools or solvents, shall not be removed or shall not fit entirely within the small parts cylinder defined in 16 CFR 1501 if it can be removed.

7.6 *Shopping Cart Stability*—Shopping carts shall be tested in accordance with EN 1929-1:1998, Clause 5.4 for type B Trolleys (shopping carts).

8. **Marking and Labeling**

8.1 Each shopping cart and restraint system and its retail carton, if applicable, shall be marked clearly and legibly to indicate the following:

8.1.1 Name of manufacturer, importer, distributor, or seller.

8.1.2 Model number, stock number, catalog number, item number, type, company trademark/ID, or other symbol expressed numerically, or otherwise, such that only articles of identical construction, change the model number (etc.) whenever a significant structural or design modification is made that effects its conformance with this consumer safety specification.

8.1.3 Code mark or other means that identifies the date (month and year as a minimum) manufactured.

8.2 Each shopping cart shall have warning statements. The warning statements shall be in contrasting color(s), permanent, conspicuous, and sans serif style font.

8.2.1 In warning statements, the safety alert symbol “△” and the word “**WARNING**” shall not be less than 0.2 in. (5 mm) high. The remainder of the text shall be characters whose upper case shall be at least 0.1 in. (2.5 mm) high.

8.2.2 The shopping cart shall have the following warning statements and symbols as shown in Fig. 4 as a minimum.

8.2.3 The safety alert symbol and word “**WARNING**” and the signal word panel shall be in contrasting colors or contrast with the background color in the base material.

8.2.4 The message and symbol/pictorial panels shall be in contrasting colors or contrast with the background color in the base material.

8.3 State or local laws may require a special notice be placed on the shopping cart. This notice may appear on the warning label seat flap above or below the warning shown in Fig. 4, or as the example shown in Fig. 5, or be placed at another location on the shopping cart as may be required.

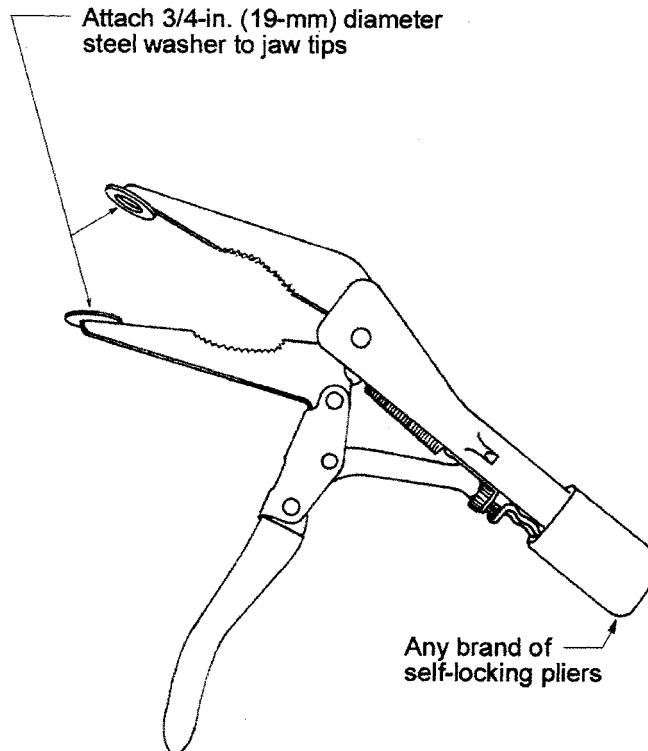
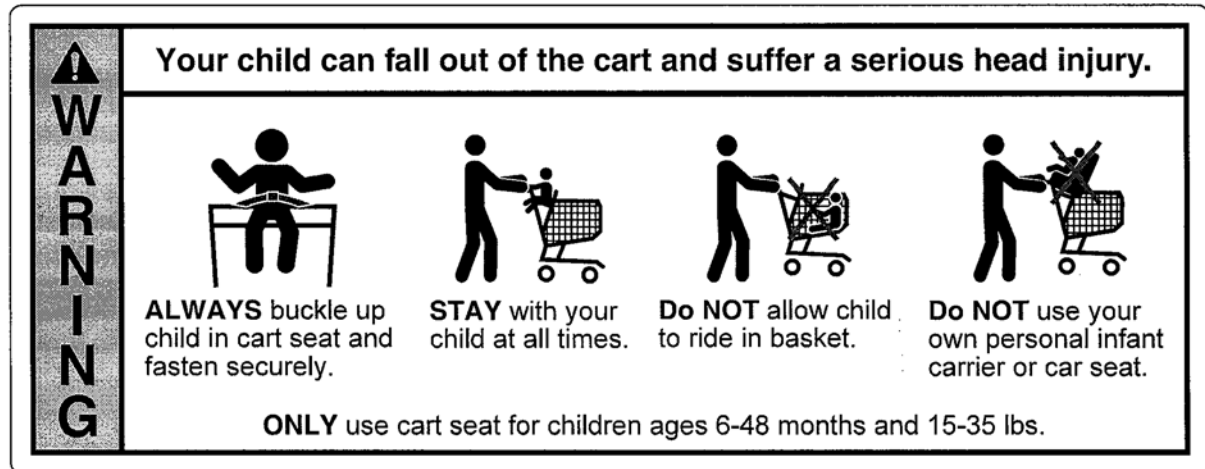


FIG. 3 Label Permanency Test Clamp



FIG. 4 Warning Statements and Symbols



XYZ MARKET

CALIFORNIA SHOPPING CART THEFT LAW
 UNAUTHORIZED REMOVAL FROM PREMISES OR UNAUTHORIZED POSSESSION OF THIS SHOPPING CART IS A VIOLATION OF STATE LAW
 (B.&P. CODE 22435). ANY REMOVAL MUST BE BY WRITTEN PERMISSION OF STORE MANAGEMENT. FOR PICKUP CALL (800) 123-4567

FIG. 5 XYZ Caption

8.4 Promotional messages, store names, and safety prompting messages may appear on the restraint and the shopping cart in addition to 8.2.2 and in accordance with 7.5.

8.5 Shopping carts and restraint systems meeting all parts of this specification shall be labeled “Meets ASTM F2372.”

9. Operation

9.1 Manufacturer Responsibilities:

9.1.1 *Instructional Literature*—The manufacturer shall provide instructions with the product shipment in the English

language that shall be easy to read and understand. These instructions shall include where applicable, the following:

9.1.1.1 Installation and assembly.

9.1.1.2 Include the statement: The recommended child occupant age and weight requirements for shopping carts are children who are at least six months of age and at least 15 lb (7 kg) up to children who are not more than four years of age and who weigh no more than 35 lb (16 kg).

9.1.1.3 Repeat warnings in 8.2.2.

9.1.1.4 Safety inspection criteria.



BUTTON



SHELF WOBLER



FLOOR STICKER

FIG. 6 Examples of Prompts

9.1.1.5 Maintenance recommendations.

9.1.1.6 Include the statement: Remove any shopping cart from service (consumer use/any use), if it is found to be damaged or it fails one or more checks of 9.1.1.4 (safety inspection criteria) until repair or replacement can be made.

9.1.1.7 Safe use guidelines (do's and don'ts).

9.1.1.8 A phone number, E-mail address, or facsimile number to be used by retailer to ask questions, or to seek assistance in regard to shopping carts and restraint systems.

9.1.2 Restraint system manufacturers shall provide instructional literature in accordance with 9.1.1 in each retailer shipping carton containing restraint systems.

9.2 *Retailer/Owner Responsibilities:*

9.2.1 *Safety Inspection and Maintenance Program*—Each retailer/owner shall implement a program of safety inspection and maintenance based upon manufacturers' recommended safety inspection (9.1.1.4), and maintenance (9.1.1.5), providing for the duties and responsibilities necessary to care for the shopping carts and restraint systems.

9.2.2 Each retailer/owner shall read and become familiar with the contents of the manufacturers' instructional literature when received (as provided in 9.1.1).

9.2.3 The shopping cart shall be removed from service (consumer use/any use) when it is found to be damaged or fails one or more of the checks of 9.1.1.4 or 9.2.5 until repair or replacement can be made.

Buckle Up!

Someone Special

Is Riding Safely In Your Cart



Don't
Leave

Your Child Unattended



U.S. Consumer Product
Safety Commission



(insert company logo here)

FIG. 7 Examples of Information and Educational Materials

9.2.4 Shopping carts and restraint systems shall be maintained in safe operating conditions consistent with all parts of this consumer safety performance specification.

9.2.5 Warning statements and restraints shall be visually checked during the routine collection process of shopping carts. Any signs of excessive wear or damage shall be reported

7 Ways to Enhance Your Shopping Cart Safety Awareness Program



- 1** Provide shopping carts with safety straps
- 2** Regularly inspect and perform general maintenance on shopping carts, child safety straps, infant seats, etc., to ensure all are clean and in working order.
- 3** Make child safety awareness a part of each new associate's orientation training program. Ensure all associates watch for parents not using safety straps or allowing children to stand or sit in inappropriate areas of the shopping cart. Discuss how associates should approach customers whose children are perceived to be in danger.
- 4** Play a recorded message periodically on the store's public address system, such as: "Attention customers, for your convenience and child's safety, our shopping carts are equipped with safety straps. We encourage you to use these safety straps to secure infants and small children. If you cannot locate one, please report to the customer service desk and we will gladly provide you with one. Help us protect your children when they are riding in our shopping carts."
- 5** Run a special child safety awareness program in conjunction with National Safety Month in June, sponsored by the National Safety Council, (telephone 630-285-1121), or during National SAFE KIDS Week, each May, sponsored by the National SAFE KIDS Campaign (telephone 202-662-0600).
- 6** Sponsor "Child Safety Week" by having all associates wear safety awareness buttons using the camera-ready art included in this program.
- 7** List shopping cart safety as an item on your monthly Store Safety Committee Agenda, and discuss ways to heighten awareness.

FIG. 8 Examples of Information and Educational Materials

to management for corrective action and if necessary, the shopping cart shall be removed from service (consumer use/ any use) until repair or replacement can be made.

9.3 Consumer and Child Caregiver Responsibilities:

9.3.1 There are inherent risks associated with shopping carts, as with any other moving object. Consumers and child caregivers by participation accept the risks inherent in such participation of which the ordinary prudent person is or should

Button Artwork



FIG. 9 Examples of Information and Educational Materials

be aware. Consumers and child caregivers have a duty to exercise good judgment and act in a responsible manner while using shopping carts and obey all oral or written warnings and instructions, or both, prior to or during participation, or both.

9.3.2 Consumers and child caregivers have a duty to properly use all shopping cart restraints and safety equipment provided.

9.3.3 Consumers and child caregivers should note the behavior of their children prior to and during shopping and make a decision whether to place the child in the shopping cart or not.

10. Keywords

10.1 Bascart; carts; shopping buggy; shopping carts; shopping trolley; shopping wagon

**Children are precious.
Help us keep them safe when
you shop in our store.**

When you're shopping in our store, your safety and the safety of your children are our top priority. That's why we've made safety straps available for the shopping carts in our store. When you use these straps, you're helping to prevent possible injuries to your child.

Help us protect your children, and use this list of "do's" and "don'ts" when you shop. It will help you and your children take advantage of the safe shopping environment we've created in our store.

DO:

- **Use the shopping cart safety straps. Make them a part of the routine of placing your child in the cart.** You wouldn't drive your car without your little one being buckled in. Start your shopping trip the same way!
- **Be sure the belt fits snugly around your child,** and that his or her legs are placed through the leg openings on the cart seat.
- **Use an infant seat for children too young to sit up on their own.**

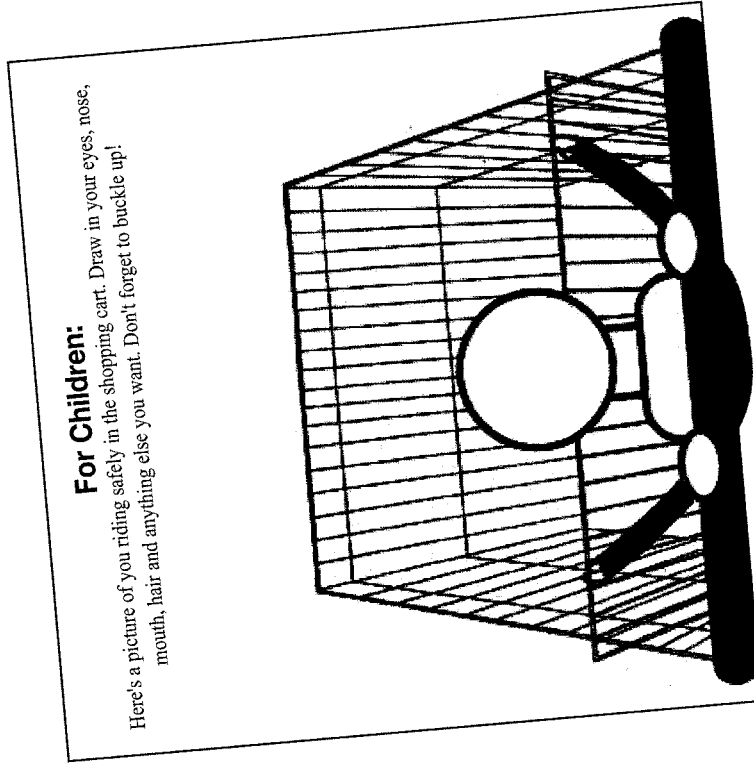


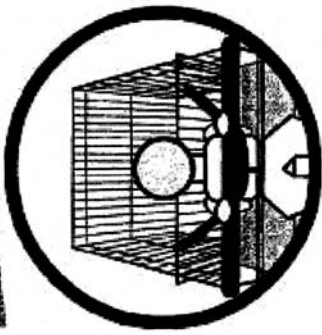
FIG. 10 Examples of Information and Educational Materials

DON'T

- Don't allow your child to stand in the cart or on the seat at any time. This may cause the cart to tip over, resulting in injury.
- Don't leave your child unattended. Remain with the cart and your child at all times. You probably know from personal experience how quickly a toddler can scoot away from you! Stay with your child to be sure he or she stays seated in the cart.
- Don't allow your child to ride on the bottom or the end of the cart. When fingers are close to the wheels, they could easily be pinched.

We want you and your child to have a safe and enjoyable visit to our store, and we encourage you to follow these shopping cart safety tips. Please let us know if there's anything we can do to ensure the safety of you and your child while you're in our store.

**Buckle Up!
Someone
Special Is
Riding Safely
In Your Cart**



Shopping cart safety straps are provided for the safety of your child — use them to help prevent injuries!

Developed as a cooperative effort by:



**U.S. Consumer Product
Safety Commission**



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FIG. 11 Examples of Information and Educational Materials

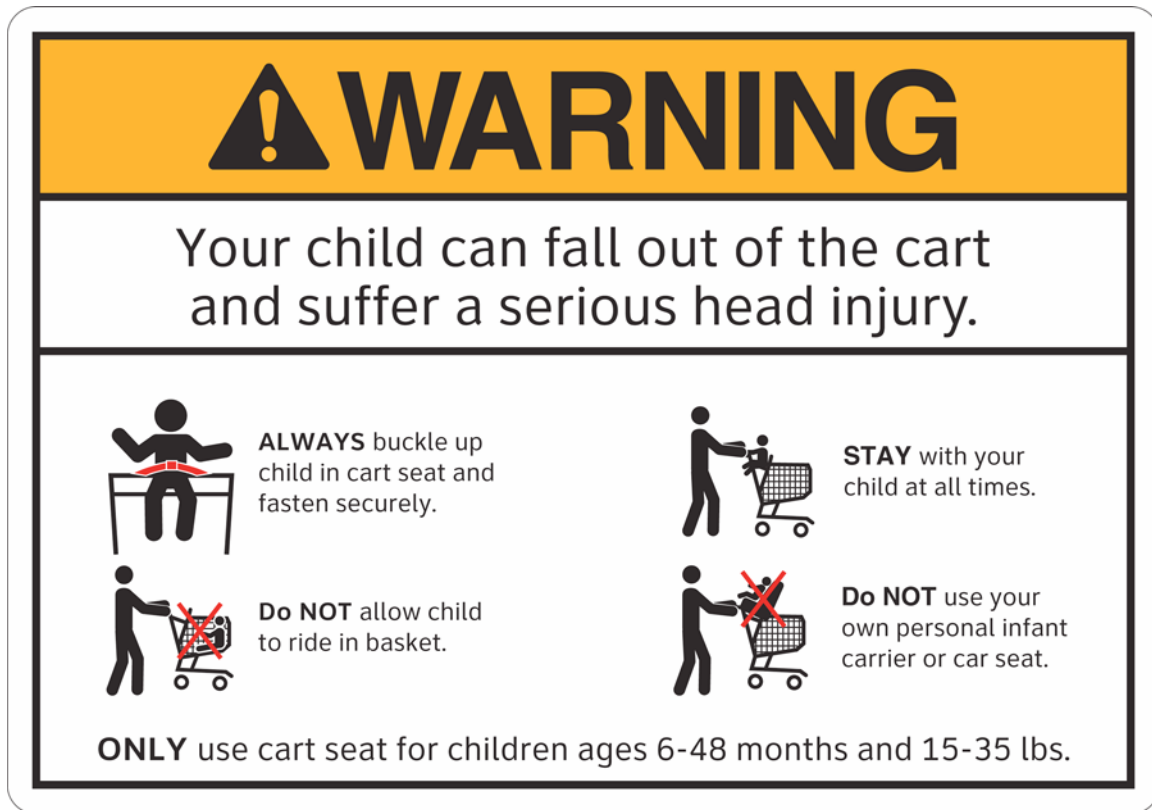


FIG. 12 Warning Poster

APPENDIX

(Nonmandatory Information)

X1. ADDITIONAL SAFETY INFORMATION FOR CONSUMERS FROM RETAILERS

X1.1 While manufacturers of shopping carts provide safety information in the form of the standard warning labels and instructions provided on and with the carts, it is recommended that retailers provide additional information.

X1.2 Warning Posters:

X1.2.1 Retailers should provide additional information at the point of use (where customer obtains the cart). Signs (24 in. wide or greater by 18 in. high or greater) hanging or posted at or above eye level shall include the word “**WARNING**” and the safety alert symbol as described in 8.2.3 and the international “do not” symbol (X-cross out). The signs should include by word or symbol at a minimum (see Fig. 12):

ALWAYS buckle up child in cart seat and fasten securely.

STAY with your child at all times.

DO NOT allow child to ride in basket.

DO NOT USE your own personal infant carrier or car seat.

ONLY use cart seat for children ages 6 to 48 months and 15 to 35 lb.

X1.3 Prompts:

X1.3.1 Prompts are promotional materials that provide visual and auditory stimuli that elicit desired response. In the

case of shopping carts and safety, prompts are environmental cues that raise awareness and that encourage the use of restraints and encourage safe behavior.

X1.3.2 Effective verbal or visual prompts used to increase the occurrence of a desirable behavior require four criteria: (1) they are stated politely, to reduce reactance among the target audience; (2) they are easy to express and deliver; (3) the prompts must be specific to the particular behaviors; and (4) the prompts must be presented in close proximity, both time and location, to the target behavior. Prompts meeting this criteria have been used for a variety of safety initiatives, including ways to increase safety belt usage in shopping carts.

X1.3.3 Ferrari and Baldwin⁵ evaluated the use of safety belts in shopping carts and introduced a variety of prompts aimed to increase belt usage. These prompts included flyers with a drawing of a child seated and belted in the cart seat, “buckle-up your baby” buttons worn by cashiers and

⁵ Ferrari, J. R., and Baldwin, C. H., “Car to Carts—Increasing Safety Belt Usage in Shopping Carts,” *Behavior Modification*, 13, 1989a pp. 51-64; Ferrari, J. R., and Baldwin, C. H., “Promoting Safety Belt Use in Shopping Carts: Buckle Up Your Baby,” *Environment and Behavior*, 21, 1989b, pp. 603-619.

employees, “thank you” for buckling-up posters located in high traffic areas, and height posters indicating the height of a child that can sit safely in a cart seat. Also, over the loudspeakers, a 30 s public service announcement asked shoppers to use the belts for child safety, and in one study greeters at the entrance to the store noted that carts were equipped with belts. Prompts were found to dramatically increase shopping cart seat belt usage and significantly decreased unsafe behavior. **Fig. 6** shows examples of prompts.

X1.4 *Information and Education:*

X1.4.1 *Take One Brochures*—Information and educational materials may be used to help raise the awareness level of shopping cart safety among store personnel and consumers and clearly communicate safe behavior. These materials may take the form of “take one” brochures, flyers, or leaflets, which communicate the importance of safe behavior while using shopping carts. They may typically include statistics and background information relevant to shopping carts to increase awareness. Most importantly, they should provide clear instruction as to what to do and what not to do when shopping with a small child and using a shopping cart. This is a good

place to reinforce warnings, define safe behavior, and provide additional instruction on how to properly use restraints.

X1.4.2 *Promoting Safety, Creative Approaches*—Special events like National Safety Month (June), National SAFEKIDS Week (May), National Shopping Cart Safety Week (October), and other national safety events present occasions that may be used to create promotional and merchandising campaigns to highlight awareness. Coloring contests, photo contests, and special promotions for children may also be coordinated at the store and communicated through bag stuffers, advertisements, and store circulars.

X1.4.3 *Helping Parents Teach Safe Behavior*—Parents have come to depend on “rules” for children when in many public places to reinforce their safe behavior. And, for the parent who needs help in managing their child’s behavior, warnings, prompts, and educational materials can be pointed to in order to help remind and enforce their children’s safe behavior. These materials may also help remind store personnel of safe behavior regarding shopping carts and aid them in approaching and reminding parents and children of rules regarding shopping carts.

NOTE X1.1—**Figs. 7-11** show examples of information and educational materials.

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