14.851 Low Income Housing—Homeownership Opportunities for Low Income Families

List of Subjects in 24 CFR Part 791

Grant programs—housing and community development, Indians, Intergovernmental relations, Public housing, Rent subsidies.

Accordingly, 24 CFR part 791 is amended as follows:

PART 791—REVIEW OF APPLICATIONS FOR HOUSING ASSISTANCE AND ALLOCATIONS OF HOUSING ASSISTANCE FUNDS

1. The authority citation for 24 CFR part 791 is revised to read as follows:

Authority: 42 U.S.C. 1439 and 3535(d).

2. Section 791.401 is revised to read as follows:

§ 791.401 General.

This subpart establishes the procedures for allocating budget authority under section 213(d) of the Act for the programs identified in § 791.101(a). It describes the allocation of budget authority by the appropriate Assistant Secretary to the applicable Program Office Director in the HUD State or Area Office, and by the Program Office Director to allocation areas within the HUD State or Area Office jurisdiction.

3. Section 791.403 is amended by revising paragraphs (a), (b)(1)(ii), and (b)(2), to read as follows:

§ 791.403 Allocation of housing assistance.

(a) The Assistant Secretary for Housing and the Assistant Secretary for Public and Indian Housing shall confer to determine how the available budget authority is to be allocated. The total budget authority available for any fiscal year shall be determined by adding any available, unreserved budget authority from prior fiscal years to any newly appropriated budget authority for each housing program. On a nationwide basis, at least 20 percent, but not more than 25 percent, of the total budget authority available for any fiscal year, which is allocated pursuant to paragraph (b)(2) of this section, shall be allocated for use in non-metropolitan areas.

(b) * * *

(1) * * *

(ii) Assistance which is—

(A) The subject of a line item identification in the HUD appropriations law, or in the table customarily included in the Conference Report on the appropriation for the Fiscal Year in which the funds are to be allocated;

(B) Reported in the Operating Plan submitted by HUD to the Committees on Appropriations; or

(C) Included in an authorization statute where the nature of the assistance, such as a prescribed set-aside, is, in the determination of the Secretary, incapable of geographic allocation by formula,

* * * * *

(2) Budget authority remaining after carrying out allocation steps outlined in paragraph (b)(1) of this section shall be allocated in accordance with the housing needs percentages calculated under § 791.402 (b), (c), (d), and (e). HUD may allocate assistance under this paragraph in such a manner that each State shall receive not less than one-half of one percent of the amount of funds available for each program referred to in §§ 791.101(a) in each fiscal year. If the budget authority for a particular program is insufficient to fund feasible projects, or to promote meaningful competition at the State/Area Office level, budget authority may be allocated among the ten geographic Areas of the country. The funds so allocated will be assigned by Headquarters to the State/Area Office(s) with the highest ranked applications within the ten geographic Areas.

* * * * *

4. Section 791.405 is revised to read as follows:

§ 791.405 Reallocations of budget authority.

(a) The State/Area Office shall make every reasonable effort to use the budget authority made available for each allocation area within such area. If the Program Office Director determines that not all of the budget authority allocated for a particular allocation area is likely to be used during the fiscal year, the remaining authority may be allocated to other allocation areas where it is likely to be used during that fiscal year.

(b) If the Assistant Secretary determines that not all of the budget authority allocated to a State/Area Office is likely to be used during the fiscal year, the remaining authority may be reallocated to another State/Area Office where it is likely to be used during the fiscal year.

(c) Any reallocations of budget authority among allocation areas or State/Area Offices shall be consistent with the assignment of budget authority for the specific program type and established set-asides.

(d) Notwithstanding the requirements of paragraphs (a) through (c) of this section, budget authority shall not be reallocated for use in another State unless the appropriate Program Office Director or the Assistant Secretary has determined that other allocation areas within the same State cannot use the available authority during the fiscal year.

5. Section 791.407 is amended by revising the introductory text of paragraph (a) to read as follows:

§ 791.407 Headquarters Reserve.

(a) A portion of the budget authority available for the housing programs listed in § 791.101(a), not to exceed an amount equal to five percent of the total amount of budget authority available for the fiscal year for programs under the United States Housing Act of 1937 listed in § 791.101(a), may be retained by the Assistant Secretary for subsequent allocation to specific areas and communities, and may only be used for:

* * * * *

Dated: June 27, 1995.

Henry G. Cisneros,

Secretary.

[FR Doc. 95–16489 Filed 7–5–95; 8:45 am]

BILLING CODE 4210–32–P

DEPARTMENT OF TREASURY

Fiscal Service

31 CFR Part 321

Payments by Banks and Other Financial Institutions of United States Savings Bonds and United States Savings Notes (Freedom Shares)

CFR Correction

In Title 31 of the Code of Federal Regulations, parts 200 to end, revised as of July 1, 1994, on page 190, paragraph 16 of the appendix to part 321 was incorrectly revised. Paragraphs (a) through (e) following paragraph 16 should have been removed.

BILLING CODE 1505–01–D

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. 74–09; Notice 42]

RIN 2127–AF02

Federal Motor Vehicle Safety Standards; Child Restraint Systems

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation.

ACTION: Final rule.

SUMMARY: This document amends Standard No. 213, *Child Restraint Systems,* to add a greater array of sizes and weights of test dummies to Standard 213 for use in compliance tests. This rule improves the safety of child restraint systems by providing for evaluation of their performance in a more thorough manner. Incorporating additional test dummies for use in compliance tests has been one of NHTSA's main initiatives for upgrading Standard 213. It also responds to the NHTSA Authorization Act of 1991 (sections 2500–2509 of the Intermodal Surface Transportation Efficiency Act (''ISTEA'')), which directed NHTSA to initiate rulemaking on child seat safety.

DATES: For add-on (portable) child restraint systems, this rule is effective on January 3, 1996. For built-in systems, this rule is effective on September 1, 1996.

Petitions for reconsideration of the rule must be received by August 7, 1995.

ADDRESSES: Petitions for reconsideration should refer to the docket and number of this document and be submitted to: Administrator, Room 5220, National Highway Traffic Safety Administration, 400 Seventh Street S.W., Washington, D.C., 20590.

FOR FURTHER INFORMATION CONTACT: Dr. George Mouchahoir, Office of Vehicle Safety Standards (telephone 202–366–4919), or Ms. Deirdre Fujita, Office of the Chief Counsel (202–366–2992), National Highway Traffic Safety Administration, 400 Seventh St., S.W., Washington, D.C., 20590.

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I. Background

This rule amends Federal Motor Vehicle Safety Standard No. 213, ''Child Restraint Systems'' (49 CFR 571.213), to add three test dummies for use in compliance testing under the standard and to remove one of the two dummies currently used. The effect of this amendment is to provide a better evaluation of the ability of child restraint systems to restrain the range of children recommended for those systems. The notice of proposed rulemaking (NPRM) for this rule was published March 16, 1994 (59 FR 12225).

a. Current Requirements

Standard 213 applies to any device, except Type I (lap) or Type II (lap/shoulder) seat belts, designed for use in a motor vehicle or aircraft to restrain, seat, or position children whose mass is 23 kilograms (kg) (50 pounds) or less. The standard evaluates the performance of child restraint systems in dynamic tests under conditions simulating a frontal crash of an average automobile at 48 kilometers per hour (kph) (30 miles per hour (mph)).

The dynamic tests are conducted using a test dummy. Currently, Standard 213 (S7) specifies that a dummy representing a 6-month-old child be used for testing a child restraint system that is recommended by its manufacturer for use by children in a mass range that includes children whose mass is 9 kg (weighing 20 pounds) or less. That dummy, which is uninstrumented, is specified in subpart D of 49 CFR part 572. A dummy whose mass is 15 kg (weighing 33 pounds), representing a 3-year-old child, is used for testing a child restraint system that is recommended for children whose mass is 9 kg or more (weighing 20 or more pounds). This dummy is instrumented with accelerometers for measuring accelerations in the head and chest during impacts, and is specified in 49 CFR Part 572, subpart C.

The requirements to be met by a child restraint in the dynamic testing include maintaining its structural integrity, retaining portions of the dummy within specified excursion limits (limits on how far specified portions of the body may move forward), and in the case of the 3-year-old dummy, limiting the forces exerted on the head and chest of the dummy in the crash. These requirements reduce the likelihood that the child using a child seat will be injured by the collapse or disintegration of the seat, by contact with the interior of the vehicle, or by imposition of intolerable forces by the seat.

b. Statutory and Regulatory Origins

This rulemaking addresses several goals of NHTSA. Amending Standard 213 to incorporate additional test dummies for use in compliance tests has been one of NHTSA's main initiatives for upgrading Standard 213. See, NHTSA's ''Planning Document on the Potential Standard 213 Upgrade,'' July 1991 (docket 74–09–N21). The addition of new test dummies has long been supported by manufacturers, researchers and others in the child passenger safety community. See, comments on planning document, docket 74–09–N21. Amending Standard 213 to incorporate additional test dummies for use in compliance tests also furthers the goals of the NHTSA Authorization Act of 1991 (sections 2500–2509 of the Intermodal Surface Transportation Efficiency Act (''ISTEA'')). That Act directed the agency to initiate rulemaking on child booster seat safety and other issues.

In response to ISTEA, NHTSA initiated rulemaking by publishing an advance notice of proposed rulemaking (ANPRM) on May 29, 1992 (57 FR 22682). Two rulemaking actions resulted from the ANPRM. The first, completed July 21, 1994 (59 FR 37167), facilitated the manufacture of ''belt-positioning'' child seats (booster seats designed to be used with a vehicle's lap/shoulder belt system). Facilitating the manufacture of belt-positioning seats fulfilled the goal of ISTEA because belt-positioning seats improve child seat safety. They are capable of accommodating a wider range of child sizes than currently manufactured shield-type booster seats. Also, belt-positioning seats used with vehicle lap/shoulder belts appear to perform better than shield booster seats used with vehicle lap/shoulder belts. (The performance of the shield-type booster seems to be negatively affected when the shoulder belt is routed in front of the child. However, the performance of this booster seat did not appear to be significantly affected when the shoulder portion of the belt system is routed behind the child, when compared to tests conducted with a lap-only belt.)

Today's final rule completes the second rulemaking action resulting from the ISTEA-directed 1992 ANPRM. This

rule furthers the goals of ISTEA, which were illuminated by the legislative history for the directive found in § 2503 of the Authorization Act. The directive evolved from a booster seat safety provision in S. 1012, a bill reported by the Senate Committee on Commerce, Science, and Transportation, and added verbatim to the Senate's surface transportation bill (S. 1204). (S. 1012, 102d Cong., 1st Sess. § 209 (1991).)[1] The Senate Commerce Committee report on S. 1012 expressed concern about suggestions that booster seats, ''depending on their design, can be easily misused or are otherwise harmful.'' The Committee also stated that the mandate in S. 1012 was a response to concerns expressed in a study performed for NHTSA entitled, ''Evaluation of the Performance of Child Restraint Systems.'' According to the Committee, the study showed that some booster seats ''may not restrain adequately a child in a crash, and some may put pressure on the child's abdomen during a crash.'' Senate Committee on Commerce, Science, and Transportation, S. Rep. No. 83, 102d Cong., 1st Sess. 6, 18 (1991).

c. Calspan Booster Seat Study

The booster seat study mentioned in the legislative history for H.R. 2950 was performed for NHTSA by Calspan Corporation. The study, ''Evaluation of the Performance of Child Restraint Systems,'' DOT HS 807 297, May 1988, evaluated the performance of ''shield-type'' booster seats in restraining children of the size and age for whom those seats were recommended. Shield-type boosters are designed to be secured to the vehicle seat by a lap belt that usually is placed around the shield. The shield restrains the upper torso of the child from moving forward in a frontal crash or sudden stop.

Concerns about shield-type boosters arose from the recommendations by manufacturers about the size of children which could appropriately use a particular booster. Particular designs or models of boosters were typically recommended for a broad range of children. Often, the seats were recommended for use by children whose masses are from about 9 to 32 kg (weighing from about 20 to 70 pounds). Such recommendations engendered concerns as to whether these boosters could provide adequate protection for children ranging from nine-month-old infants, whose average mass is 9 kg (20 pounds), to six-year-old and older children (an average six-year-old's mass is 22 kg (48 pounds).

The study discussed issues that are not addressed by current Standard 213. The ability of the restraint to protect children at or near the extremes of the recommended mass/weight range cannot currently be determined in Standard 213 compliance testing. As noted above, a booster's compliance with the standard is evaluated using only the three-year-old child dummy, whose mass is 15 kg (33 pounds). So tested, the restraints must meet Standard 213.

However, the Calspan program was not limited to the three-year-old dummy. Two other dummies were used, one representing a nine-month-old infant and the other, a six-year-old child. (These are the two sizes of the dummies adopted in today's rule.) The array of dummies represented children at the extremes of the weight ranges identified by the manufacturer as being suitable for the restraint.

The Calspan research program tested all 11 of the booster seats on the market during summer 1987. All 11 boosters were recommended for use by children with a minimum mass of 11 kg to a mass of 25 kg (weighing a minimum of 25 to 55 or more pounds). They were tested in a 48 kph (30 mph) sled test with the three-year-old and six-year-old dummies. Six booster seats were recommended for use by children whose masses are 11 kg or less (25 pounds or less). These seats were tested with the nine-month-old dummy, in addition to the two other dummies.

1. Calspan's Findings

Calspan found dummy head excursions exceeding the 810 millimeter (mm) (32 inch) limit specified in Standard 213. In tests with the six-year-old dummy, the head excursion limit was exceeded by 9 out of 11 booster seat models, with measurements in the range from 810 to 900 mm (32.0 to 35.4 inches). In the research tests with the three-year-old dummy, the head excursion limit was exceeded by five of the 11 models. Head excursions did not exceed the limit in tests with the nine-month-old dummy.

Calspan also tested four of the shield-type booster seats that were recommended for older children by restraining the six-year-old dummy in the seat with a three-point auto harness. Three of the models showed HIC numbers of approximately 900, the fourth had a HIC of 1238.

Calspan observed dummy ejections from the seats during the rebound phase of the dynamic test. Ejections occurred for three out of six models tested with the nine-month-old dummy, for two models tested with the three-year-old dummy, and for one model tested with the six-year-old dummy.

2. Follow Up Testing

NHTSA conducted additional research testing following the Calspan study to obtain more data about booster seat performance with different dummies.

Nine booster seats were tested with the three dummies used in the Calspan study. The seats performed well with the three-year-old dummy; the performance measures of Standard 213 were satisfied. However, the seats were generally unsuitable for the nine-month-old dummy. The dummy was ejected from seven of nine seats. Similarly, the seats generally did not provide adequate restraint for the six-year-old dummy. Seven of nine seats yielded head excursions that exceeded 810 mm (32 inches). Two of the seats also had structural failures with the six-year-old dummy. ''Evaluation of Booster Seat Suitability for Children of Different Ages and Comparison of Standard and Modified SA103C and SA106C Child Dummies,'' VRTC–89–0074, February 1990.

3. Implications of Research Findings

The implication of the Calspan and NHTSA test results was that test dummies representative of a wide range of child sizes were needed in Standard 213 to more effectively test the performance of booster seats and other child restraint systems. What seemed especially needed was an array of dummies representing children at or near the extremes of the weight ranges identified by a manufacturer as being suitable for any type of child restraint.

With the end in mind of incorporating new dummies into Standard 213 for compliance testing purposes, NHTSA completed specifications for the newborn, 9-month-old and 6-year-old child test dummies. The agency also completed rulemaking in 1991 and 1993 incorporating those specifications into Part 572, the agency's regulation on anthropomorphic test dummies. The biofidelity, reliability and repeatability of the test dummies were discussed in the documents incorporating the dummies into part 572. *See*, final rule

[1] As adopted by the Senate, the provision would have required rulemaking to be initiated within 30 days after the date of enactment of the Authorization Act and completed within 12 months after the date of the enactment. The conferees adopted the booster seat provision from the Senate bill, but amended it so that it no longer required that the booster seat rulemaking be both initiated and completed within a specified period of time. Instead, it simply required that rulemaking on that subject be initiated within a specified period of time. Conference Report to Accompany H.R. 2950, H.R. Conf. Rep. No. 404, 102d Cong., 1st Sess. (1991).

for newborn dummy (January 8, 1993, 58 FR 3229); 9-month-old dummy (August 19, 1991; 56 FR 41077); 6-year-old dummy (November 14, 1991; 56 FR 57830). Those rulemakings on part 572 standardized the test dummies and comprised a first step toward incorporating the dummies into Standard 213 compliance tests. Following that rulemaking, NHTSA issued the NPRM for today's rule.

d. Overview of NPRM

That NPRM proposed adding the newborn, 9-month-old and 6-year old child test dummies to Standard 213. It specified how NHTSA would determine the child dummy or dummies to be used in testing a particular child restraint system. It proposed detailed descriptions of the clothing, conditioning and positioning procedures for the dummies to ensure that the test conditions are carefully controlled. It proposed the use of these dummies to determine compliance with existing performance criteria (e.g., head and chest injury criteria and excursion limits) that a child restraint must meet before, during and after dynamic testing involving restraint of a dummy. The NPRM proposed to allow manufacturers 180 days leadtime to comply with the proposed requirements (i.e., proposed an effective date for the rule of 180 days after the date on which the rule is published).

In addition, the NPRM proposed miscellaneous amendments to Standard 213. The notice also sought to obtain information on child restraining devices that are designed to be attached to a vehicle's Type II belt system to improve the fit of the belts on children (and in some cases, on small adults).

e. Overview of Comments

The NPRM attracted a variety of commenters. Commenters included vehicle and child seat manufacturers (Ford, Cosco, Safeline Children's Products, Century Products); a child seat accessory manufacturer (Redlog Products Inc.); a dummy manufacturer (First Technology Safety Systems); industry groups (American Automobile Manufacturers Association, Insurance Institute for Highway Safety); and child passenger groups and consultants (Advocates for Highway and Auto Safety, CompUTence, the University of Michigan-Child Passenger Protection Program, SafetyBeltSafe U.S.A.). Commenters also included Transport Canada, the Australian Roads and Traffic Authority, United Airlines, and the University of Illinois.

Commenters were generally favorable toward the idea of adding a newborn, 9-month old and 6-year old test dummy to FMVSS 213. (A few commenters, discussed below in the next section, raised a concern about whether adding new dummies was justified.) Several commenters suggested adding newer, more advanced dummies. Many commenters suggested changes on the proposed criteria to be used in determining which dummies would be used to test a particular child restraint (i.e., the proposed weight and height ranges). There were also comments on the proposed performance criteria that a child restraint must meet when restraining the dummy used to test the restraint. Some commenters suggested a longer leadtime for any new requirement. These and other issues are discussed below.

f. Overview Comparison of NPRM and Final Rule

The main differences between the provisions of this final rule and those of the NPRM relate to the following matters. This rule clarifies the provisions used to determine which dummy is used to test a child restraint system. It also requires that each child restraint be labeled with information regarding the standing height (instead of sitting height) of children for which the restraint is designed. This rule slightly changes the provisions for testing buckle release requirements, so that only the heavier dummy of a range of dummies will be used to assess compliance with the requirement. This rule also changes how compliance with the standard's knee excursion requirement for built-in seats will be evaluated. In addition, the rule excludes child seats with a mass of less than 4 kg from an adopted requirement that the mass of the child seat not impose any load on the child occupant in a crash. In response to commenters, a longer leadtime for the rule is provided to manufacturers of built-in restraint systems.

II. Amendments for New Dummies

a. General Acceptability

Overall, commenters supported the proposal to add new test dummies to Standard 213 compliance testing. However, as discussed below, some commenters suggested adding dummies other than those proposed in the NPRM. Some commenters also recommended changes to the provisions for determining which dummy or dummies are to be used for testing child restraints.

Concerning the first issue, some commenters wanted NHTSA to adopt newer, and what they believed to be more advanced, dummies than the proposed child dummies. The American Automobile Manufacturers Association (AAMA) agreed with adopting the newborn infant dummy and retaining the 3-year-old dummy currently specified in Standard 213. However, AAMA suggested adopting a new 12-month-old dummy (referred to as the Child Restraint and Air Bag Interaction (CRABI) dummy) instead of the proposed 9-month-old dummy, and a 6-year-old child dummy based on the 50th percentile male Hybrid III dummy, instead of the proposed part 572 6-year-old dummy (referred to as the SA106C dummy). ''These new [CRABI and Hybrid III] dummies have improved anthropometric emulation and have superior instrumentation capability.'' The commenter said that while the calibration and user's manual for the dummies is not yet completed, they should be completed by the time of the effective date of today's final rule. First Technology Safety Systems, Inc., a dummy manufacturer, commented that the ''design and development'' of the CRABI 12-month-old dummy and the Hybrid III six-year-old dummy ''have been completed and are commercially available.'' In addition, First Technology, a dummy manufacturer, stated that the CRABI 12-month-old and 18-month old dummies are also commercially available.

The issue of whether NHTSA should adopt the Hybrid-III six-year-old dummy instead of the SA 106C dummy was addressed in the NPRM and in the rule adopting the six-year-old dummy specifications into part 572. NHTSA's position has been that, while the Hybrid-III dummy might have potential advantages over the SA106C dummy in the number of injury parameters the dummies can measure, rulemaking on the latter dummy should not be delayed pending assessment of the performance of the new dummy. NHTSA stated in the part 572 final rule:

> The SA106C dummy's ability to measure HIC, chest acceleration and femur loads, and its ability to replicate the motions and excursions of a child in a crash are sufficient to provide valid assessment of the injury potential of child restraint systems in a reliable manner. Since the SA106C dummy is ready now, and a final rule specifying the dummy will help improve safety, the agency believes it is appropriate to proceed with adding the dummy to part 572.

Likewise, NHTSA believes rulemaking adopting use of a six-year-old dummy in Standard 213 compliance tests should not be delayed pending evaluation of the suitability and availability of the dummy as a test device. Such evaluation will be

undertaken in the near future. The Insurance Institute for Highway Safety (IIHS) concurred with the agency's tentative decision that incorporating a six-year-old dummy into Standard 213 should not wait for the Hybrid III six-year-old dummy.

The CRABI 12-month-old dummy appears to have a number of advantages over the nine-month-old part 572 dummy. Problems instrumenting the nine-month-old dummy arose during the course of the dummy's development. Those problems, relating to the repeatability and reproducibility of the head and chest accelerometer measurements, led the agency to decide the dummy could not be instrumented at the time. By contrast, the CRABI 12-month-old dummy has accelerometers to measure head, chest and pelvic acceleration and head angular acceleration. Preliminary indications from tests performed on the dummy by members of the Infant Dummy Task Group of the Society of Automotive Engineers (SAE) show that the CRABI dummy has good potential as a Standard 213 test device.

However, the CRABI 12-month dummy is not ready for use as a Standard 213 compliance instrument. Its evaluation by industry and users has identified possible problems with the dummy. For example, the dummy systematically vibrated during dynamic testing, and its neck did not appear to have adequate rotational capability. In February 1995, the dummy was finalized by the manufacturer and evaluated by the SAE Infant Dummy Task Force. NHTSA is in the process of procuring the dummy and instrumentation for evaluation. Transport Canada believes that, until the one-year-old dummy is ready, the proposed nine-month-old is appropriate for testing.

Commenters seeking to have NHTSA adopt dummies that are more advanced than the proposed dummies did not show that the latter dummies have limitations warranting their exclusion from use in Standard 213 testing. Information on the performance of the dummies in tests conducted subsequent to their incorporation into Part 572 did not indicate any problems with their performance. Recently, these dummies were used along with the Part 572 three-year-old in a large number of sled tests that NHTSA conducted as part of its child safety research program that was described in the agency's 1991 planning document to upgrade Standard 213. These dummies appeared to perform satisfactorily. The findings of this research program were summarized in a series of reports that were published in October 1992, under project VRTC–82–0236 ''Child Restraint Testing (Rulemaking Support).'' These reports are available from the National Technical Information Service, Springfield, Virginia, 22161.

In the event NHTSA decides that it would be desirable to undertake rulemaking to adopt newer, more advanced test dummies, it would be prudent for the agency also to consider the availability of child dummies other than the CRABI dummies as possible Standard 213 test devices. For example, the Institute Voor Wegtransportmiddelen (TNO) of the Netherlands is developing the TNO P1–1/2 dummy to represent an 18-month-old child. NHTSA cannot ascertain the suitability of the Hybrid-III six-year-old and the CRABI 12-month-old dummies as Standard 213 test devices, nor their superiority over alternative test dummies, without taking appropriate steps to evaluate their relative performance.

Ford raised an issue about the suitability of the 6-year-old dummy based on a film of the 6-year old dummy in a dynamic test. The commenter said that on the film, the dummy seemed to have an unusual, unrealistic abdominal design that prevents the dummy from submarining (i.e., sliding too far forward and downward, legs first) during the test. Ford said that this feature will result in the dummy ''passing'' the knee excursion limit of FMVSS 213, when in an actual crash, a child could submarine and thus be ejected.

NHTSA does not believe the design of the dummy results in the test problems Ford identified. In the final rule that adopted the 6-year-old dummy into Part 572 (56 FR 57830; November 14, 1991), NHTSA acknowledged there is a gap at the pelvis-femur juncture of the dummy, and that it seemed plausible that it could interfere with the dummy's ability to assess the submarining potential of a restraint system. In the rule, NHTSA said an apron-like shield could be used to cover the gap, if tests with the 6-year-old dummy showed the gap to be a problem. 56 FR at 57835. NHTSA has not found any such problem. Over the last several years, the agency extensively used the 6-year-old dummy in tests of booster seats with lap or lap/shoulder belt systems. Films of the tests do not show lap belts catching in the gap at the dummy's abdomen. Accordingly, NHTSA concludes the dummy is suitable for measuring submarining potential without the need for an apron. (Examples of such testing are described in the following reports, which are available from the National Technical Information Service, Springfield, Virginia, 22161: ''Evaluation of Belt-Positioning Booster Seats and Lap/Shoulder Belt Test Procedures,'' DOT-HS–808–005, October 1992; and ''Booster Seat Evaluation, Belt Anchorage Location Effect and Performance in Rear-Facing Seats,'' DOT-HS–808–092, September 1993.)

b. Specific Issues

This section discusses provisions for determining which dummy or dummies are to be used for testing a particular child restraint, a provision that allows booster seats to be certified without meeting the seat back height requirement, injury criteria, buckle release requirements and other amendments, and leadtime. In addition, this section discusses metrication, an issue which seemed minor at the time of the NPRM, but generated a number of comments.

1. Metrication

In accordance with its plan to convert its standards to the metric system, NHTSA used metric and English units in the preamble of the NPRM to describe the criteria (child's mass/weight and height) that would determine which dummy or dummies would be used to test a child restraint. The preamble stated that English units that are in sections of Standard 213 affected by the NPRM would be converted to metric (SI, The International System of Units) units in the rule. The preamble stated, by way of example, that references to ''20 pounds'' would be replaced by ''nine kilograms.'' The proposed regulatory text of the NPRM used only metric units for most of the proposed amendments. However, the proposed regulatory text showed only English units on the restraint label that informs the consumer of the manufacturer's recommendations for the maximum mass/weight and height of children who can safely occupy the system.

Several commenters asked for clarification of the metrication of the standard. The main concern of some commenters concerned the exactness of the metric conversion. UM–CPP said that the use of SI units in the standard and all English units in the labeling will cause confusion. That commenter and AAMA suggested the labeling have SI units for the primary units with reasonable English equivalents in parentheses. Cosco suggested English units be used as the standard, with approximate kilogram conversions.

The significance of these comments relates to Standard 213's procedure for determining which test dummy is used to test a restraint. Under the standard's

procedures, NHTSA reads the child restraint label to see what masses of children are recommended for the restraint, then refers to the provisions in the standard that specify which dummies are used to test restraints with those usage particular recommendations. The commenters wanted NHTSA to make clear which system of units (the SI or English unit) it will use for selecting dummies to test a child restraint under Standard 213. Some commenters were concerned that NHTSA will read a label that makes recommendations in English units, will convert the English units to SI units, then determine which dummy to use based on the SI units (or vice versa). It was feared that in those instances in which the upper or lower limit of a restraint manufacturer's recommended range of users is very close to the dividing line in the standard between different dummies, the conversion process could broaden the range just enough to necessitate the use of a different dummy in compliance testing.

NHTSA has made the following decisions on the metrication issue. Since NHTSA is converting to the metric system, the agency agrees with the commenters that SI units should be stated on the child seat label. The agency also agrees with commenters that the American consumer generally is not familiar with the metric system, and that English units must therefore also be provided on the label. NHTSA does not believe having both metric and English units will be confusing to consumers; it is not uncommon for consumer goods to be labeled in both units. As to which unit will control the selection of dummies for compliance testing, since NHTSA is converting to the metric system, the agency will refer *only* to the SI value to determine which dummy will be used to test a child restraint. The English-expressed unit conversions can be approximate equivalents, used to communicate the recommended child's weight and height to the consumer. As a guide for converting SI units to English ones, the University of Illinois provided the following conversion factors, with which NHTSA agrees. The conversion factor multiplier from pound mass to kilogram is 0.45359237, and the muliplier from pound-force to newton is 4.4482216152605. Conversion values are to be rounded to an appropriate number of significant digits.

2. Dummy Selection Based On Recommended Mass and Height of Child Restraint Users

Standard 213 requires each manufacturer to label its child restraint with its recommendations for the maximum weight and height of children who can safely occupy the system. Under the test procedures of the standard, NHTSA selects the test dummies that would be used to test a child restraint by referring to the weight recommendation. The NPRM proposed to amend the procedures such that the agency would base its selection of test dummies by referring to both the mass/weight and height recommendations. (As noted in the previous section, under today's rule, the SI value, rather than the English unit, will govern the dummy selection.) As explained in section C below, NHTSA proposed to use the recommended height as a criterion in the dummy selection as a means of ensuring that the recommended mass ranges are consistent with the recommended height ranges. For instance, without the criterion, a manufacturer could create an inconsistency by recommending a height range that corresponds to children who are of greater mass than that expressly recommended by the manufacturer for that restraint.

A. Mass ranges. This rule revises the mass ranges proposed in the NPRM for determining which dummies are to be used for testing a child restraint.

- The NPRM proposed the following provisions for determining which dummy or dummies are to be used for testing child restraints.
- A child restraint that is recommended by its manufacturer for children in a specified weight range that includes any children having a mass less than 4 kg (i.e., weighing less than approximately 9 pounds) is tested with a newborn test dummy conforming to part 572 subpart K.
- A child restraint that is recommended for children in a specified weight range that includes any children having masses from 4 to not more than 9 kg (weights of 9 to 20 pounds) is tested with a newborn test dummy and a 9-month-old test dummy conforming to part 572 subpart J.
- A child restraint that is recommended for children in a specified weight range that includes any children having masses from 9 to not more than 13.5 kg (weights of 20 to 30 pounds) is tested with a 9-month-old test dummy and a 3-year-old test dummy conforming to part 572 subpart C.
- A child restraint that is recommended for children in a specified weight range that includes any children having masses equal to or greater than 13.5 kg (30 pounds and above) is tested with a 3-year-old test dummy and a 6-year-old test dummy conforming to part 572 subpart I.

For the convenience of the reader, the following table depicts these provisions:

NPRM RANGES

Recommended mass of child suitable for the restraint	Dummy(ies) used for compliance test
Birth—4 kg or less (9 lbs or less).	Newborn.
More than 4 kg—9 kg (20 lbs).	Newborn—9-month-old.
More than 9 kg—13.5 kg (30 lbs).	9-month-old—3-yr-old.
More than 13.5 kg or 30 lbs.	3-yr-old—6-yr-old.

The NPRM proposed that, if a child restraint is recommended for a weight range of children that overlaps, in whole or in part, two or more of the ranges set out above, the restraint would be tested with the dummies specified for each of those ranges. Thus, for example, if a child restraint were recommended for children from birth to 13.5 kg, the seat would be tested with the newborn, 9-month-old and 3-year-old dummies.

The public commented on both the mass/weight classes and on the size and number of the dummies that are used to test child restraints in each weight class.

With regard to the mass/weight classes, all commenting child restraint manufacturers and the University of Michigan Child Passenger Program (UM–CPP) made almost identical suggestions for the break points of the mass/weight classes. Some commenters stated that the second and third mass classes should be divided at 10 kg (22 lbs), rather than 9 kg (20 lbs), as proposed. The commenters believed the rear-facing position is safer for an infant, and the change would encourage manufacturers to recommend positioning an infant rear-facing at least until the child is one year old. The average one-year-old has a mass of 10 kg (22 lbs). Under the NPRM, an infant (rear-facing) seat recommended for children up to 10 kg (22 lbs) could be tested with a three-year-old dummy. UM–CPP believed the mass classes should be divided at 10 kg to simplify the possible future incorporation of the CRABI 12-month-old, 9.7 kg dummy into Standard 213.

Cosco stated that the proposed weight/mass classes could cause problems for convertible restraints (a restraint that is adjustable so that it can be used rear-facing by an infant or a very young child, and forward-facing by a toddler). According to Cosco:

NHTSA's fourth category covers any car seats for children more than 30 pounds. This includes both convertible seats and auto boosters, and would force manufacturers to

test convertible seats with the 6-year-old dummy, which weighs from 4 to 7 pounds more than the maximum weight recommended for these seats (40 to 43 pounds). The 6-year-old dummy is also 9″ taller than the 3-year-old dummy and would almost certainly exceed the head excursion limit. Since it is doubtful that convertible car seats could pass with the 6-year-old dummy, it is likely that manufacturers would be forced to put a maximum weight of 30 pounds on their convertible seats. The proposal as it stands would therefore regulate out of existence one of the most effective types of car seats available.

NHTSA concurs with the suggestions to revise the proposed mass/weight classes. An infant must be transported rear-facing so that in a crash, the forces are spread evenly across the infant's back and shoulders, the strongest part of the child's body. Further, the back of an infant's rear-facing head rests against the seating surface. In this way, severe neck injuries are prevented. The child passenger safety community unanimously advises that infants weighing less than 20 pounds must face rearward. Moreover, child safety experts have recommended that infants ride rear-facing even after achieving a 9 kg mass (20 pound weight), to better ensure that their skeletal and muscular structure develop to a point where they can more safely withstand crash forces in a forward-facing position. Raising the upper limit of the mass/weight range to 10 kg (from the proposed 9 kg) as commenters suggest supports manufacturers' efforts to recommend infants ride rear-facing for a longer period.

NHTSA is also revising the mass/weight categories because it agrees with Cosco's comment that convertible child restraints should not be tested with the six-year-old, 21.5 kg (47.3 lbs) dummy. Convertible restraints are typically recommended for children from newborn to 18 kg (40 lbs). The six-year-old dummy is not representative of a child for whom the restraint is recommended.

Accordingly, NHTSA adopts the following mass classes for determining which dummies are used to test a child restraint system for compliance with Standard 213.

Recommended mass of child suitable for the restraint:

- Birth—5 kg (approximately 11 lbs) or less
- More than 5 kg—10 kg (approximately 22 lbs)
- More than 10 kg—18 kg (approximately 40 lbs)
- More than 18 kg (approximately 40 lbs)

B. Number and Types of Dummies. There was no consensus on the size and number of the dummies that should be used to test restraints in each mass/weight class. Some commenters strongly supported testing child restraints with a wider array of test dummies. SafetyBeltSafe U.S.A. and Advocates for Highway and Auto Safety (Advocates) supported testing child restraints with at least two dummies, each dummy at the minimum and maximum values for weight. Safeline supported using two dummies ''for each restraint position (rear- and forward-facing) and adjustment (upright, reclined, etc.).'' The Insurance Institute for Highway Safety (IIHS) supported the proposal, stating that ''compliance testing requirements and safety objectives are best served by requiring each restraint to be tested with two dummies to represent a wide range of child sizes . . .'' CompUTence, a consulting firm, supported using multiple dummies for testing systems that span a range of proposed occupants. That commenter stated:

> With regard to dummy sizes, the requirements should reflect good engineering practice. Common practice in the industry relative to selecting dummy sizes to test system integrity is to use minimum and maximum sizes to better understand what happens under the extremes of the design intent. Typically we use the small dummy to insure containment and large dummy to verify structural integrity of the [child safety seat].

Conversely, some commenters disagreed with aspects of the proposal that would provide for an infant seat, toddler seat (a child restraint that positions a child forward-facing only and is not capable of being adjusted to face an infant rearward) and a convertible seat to be tested with more than one dummy when rear-facing, and more than one dummy when forward-facing. UM–CPP and Century Products believed NHTSA should test a child restraint using only the heaviest dummy in the overall range specified by the manufacturer. These commenters believed a rear-facing seat (either infant-only or convertible used rear-facing) should be tested with the nine-month-old dummy only, rather than both the infant and the nine-month-old dummies. They also believed a convertible restraint in the forward-facing mode should be tested with only the three-year-old dummy, rather than both the nine-month-old and the three-year-old dummies. UM–CPP stated, ''[T]here is no useful purpose in running a frontal crash test of such systems with the Newborn rear-facing or the uninstrumented 9-month forward facing. No ejection will occur, and the back angle and head excursions will certainly not be exceeded.'' Century made the following remarks, which were similar to those of UM–CPP:

> We suggest [testing with only the largest of the dummies] because testing with the 9-month imposes the greatest loads and has a greater effect on seat back rotation, which is the primary performance measurement for rear-facing seats, since the dummies are uninstrumented. The NPRM does not give specific reasons or supportive data indicating the need for testing rear-facing seats with the newborn, so there does not appear to be identifiable justification for the increased cost of testing with this additional dummy rear-facing.

Cosco, a child seat manufacturer, did not expressly object to using more than one dummy to test child restraints. However, the commenter expressed its belief there was no safety need for the rulemaking since child restraints are highly effective when used properly. The commenter stated:

> Cosco is unaware of any evidence that the seats are not performing adequately when used correctly and requests NHTSA to provide such information as a basis for the proposed changes. If there is such evidence, which type of seat is not performing adequately—infant-only, convertible or auto booster—and why adopt alterations to the standard that affect all categories in order to fix the one that allegedly doesn't? * * * With the possible exception of some of the sections affecting auto booster seats, Cosco is not convinced that this proposal will result in measurable improvement in the performance of child restraints (although it will increase their cost) * * *

NHTSA has reviewed all the comments and has made the following decisions. The agency believes that child restraints should be tested with child dummies representative of the children for whom the restraint is recommended, to the extent such testing is supported by safety considerations. UM–CPP and Century are unpersuasive on the point of safety. They believe that, where a restraint falls in a mass/weight class that specifies the use of more than one dummy, only the heaviest dummy should be used to test child restraints. NHTSA disagrees. The kinematics of a child restraint and the dummy that occupies the restraint are dependent on the mass distribution and geometry of the restraint system, and on the mass (in total and distributed) and the dimensions of the occupant (height, sitting height and leg length). It is only with an array of dummies representative of the children for whom the restraint is recommended that the seat will be fully evaluated in restraining the children likely to be occupying the seat.

CompUTence commented that ''manufacturers test with a minimum and maximum size dummy to better

understand the extremes of the design intent.'' NHTSA concurs with this commenter that the ability of a child restraint system to contain an occupant is more effectively evaluated using a smaller dummy than a larger one, and that the structural integrity of a restraint is better evaluated using a larger dummy than a smaller one. This phenomenon, and the fact that the kinematics of a child restraint and its occupant are dependent on the mass and height of a child, and the distribution of mass and height, were illustrated in NHTSA's test program following up the Calspan program, *supra*. In the NHTSA program, nine booster seats were tested with the nine-month-old, three-year-old and six-year-old dummies. The seats performed well with the three-year-old dummy; the performance measures of Standard 213 were satisfied. However, the nine-month-old dummy was ejected from seven of nine seats. The six-year-old dummy experienced excessive head excursion, i.e., exceeding 810 mm (32 inches) with seven of the nine seats. Two of the seats had structural failures with the six-year-old dummy.

NHTSA concludes that the Calspan and VRTC studies show that dummies representing children at or near the extremes of the weight ranges identified by a manufacturer as being suitable for a restraint are needed to evaluate different aspects of the performance of the restraint. The smaller dummy will evaluate the potential for ejection. The heavier dummy will evaluate the structural integrity of the restraint system.

NHTSA further notes that an array will provide for a fuller evaluation of a child restraint's ability to restrain a child when subjected to the inversion test for restraints certified for use on aircraft. In the test, the child restraint and test dummy are spun around a horizontal axis. A smaller dummy is more likely to fall out of the child restraint than a larger one.

UM–CPP, Century and Cosco believed the proposal would result in unnecessary cost increases. They argued that testing a rear-facing seat with the infant dummy, and a forward-facing restraint (other than a booster seat) with the nine-month-old dummy would serve no useful purpose since the commenters believe there is no question that the restraints will pass the Standard 213 performance criteria using the dummies. The agency disagrees that no useful purpose is served by subjecting child restraints to tests with the array of dummies. When child restraints are tested with only one dummy to represent a wide range of children, there is a risk that a restraint could be designed to perform adequately using the dummy, but could perform inadequately in restraining children at the extremes of the recommended weight ranges. Certainly this was the case for booster seats at the time of the Calspan study. At that time, booster seats, which must not be used with a child having a mass of less than 13.5 kg (weighing 30 lbs), were often recommended for children with a mass as little as 9 kg (20 pounds). As noted at the beginning of this notice, under Standard 213, the booster's performance is evaluated using only the 15 kg three-year-old (33 lb) dummy, and so tested, the restraints met the standard. The performance of the child restraints in protecting children near the extremes of the recommended weight range (e.g., 20 lbs), while suspect, could not be evaluated in a compliance test.[2]

It should be noted that this rule does not require manufacturers to test with all the specified dummies. A manufacturer may believe that testing with only the largest of a set of specified dummies represents ''worst case'' testing, and that there is no need to test its restraints with the smaller dummies. That is, a manufacturer may determine that a child restraint meeting Standard 213's performance criteria when tested under worst case conditions will likely meet those criteria when tested under less severe conditions. A manufacturer that tests its child restraint for certification purposes could limit its testing cost by deciding to test only a worst case scenario, i.e., testing under the most austere or unfavorable conditions and circumstances specified in the standard.[3] In the event that the agency found an apparent noncompliance, such as an ejection, using one of the smaller dummies, the manufacturer would have to demonstrate that it was reasonable for it to conclude that testing with the large dummy represented the worst case scenario.

[2] It should be noted that Standard 213 was recently amended to prohibit manufacturers from recommending a booster seat for a child weighing less than 13.5 kg (30 lbs).

[3] Relying on worst case testing as a basis for a manufacturer's certification is commonplace among manufacturers. For example, Standard 208, ''Occupant Crash Protection,'' requires injury criteria to be met with the test vehicle traveling forward at any speed ''up to and including 30 mph'' into a fixed barrier ''that is perpendicular to the line of travel of the vehicle, or at any angle up to 30 degrees in either direction from the perpendicular'' (S5.1). Manufacturers typically test a vehicle at 30 mph into a perpendicular barrier since that is the worst case test. The manufacturers believe that if the vehicle passes that worst case test, it is reasonable to conclude it will pass less severe tests (e.g., at lower speeds into angled barriers).

Ford believes it is inappropriate to test forward-facing built-in restraints with the 9 kg nine-month-old (20 lb) dummy, because nine-month-old children should be restrained rear-facing in either infant or convertible restraints. NHTSA disagrees with the suggestion to forego use of the nine-month-old as a test instrument for forward-facing restraints. The dummy is representative of a 9 kg (20 lb) child, and is useful in determining child seat performance. The agency notes that Ford recommends its forward-facing built-in restraint systems for children whose mass is from 9 to 27 kg (weighing 20 to 60 lbs). At 9 kg (20 lbs), the nine-month-old dummy is an ideal test instrument for testing the ability of the child restraint to retain a child at the lower extreme of this recommended weight range.

NHTSA has decided that the following dummies will be used to test a child restraint if any portion of the corresponding mass ranges in the table falls within the mass range recommended by the manufacturer of that restraint:

ADOPTED PROVISIONS

Recommended mass of child suitable for the restraint	Dumm(ies) used for compliance test
Birth–5 kg or less (11 lb or less).	Newborn.
More than 5 kg–10 kg (22 lb).	Newborn. 9-month-old.
More than 10 kg–18 kg (40 lb).	9-month-old.[1] 3-yr-old.
More than 18 kg or 40 lbs.	6-yr-old.

[1] This dummy is not to be used to test booster seats.

C. Height ranges. This rule adopts the proposed provision that NHTSA will determine which dummy to use to test a particular child restraint based on the restraint manufacturer's recommendations about the height of the children for whom the restraint is intended. However, rather than basing the provision on sitting height, as proposed, this rule uses standing height. Standard 213 currently requires manufacturers to provide recommendations concerning standing height.

All but Ford and UM–CPP concurred with using height as a criterion for choosing the test dummy with which a child restraint will be tested. IIHS and Advocates believed that recommended height ranges should be considered in choosing a dummy, since that would better ensure that the test dummy

represents a child who will be using the restraint. Ford's and UM–CPP's comments, discussed further below, were based on their belief that the standard should not require the labeling of height information.

Notwithstanding general concurrence, commenters disagreed on whether to use sitting height or standing height. Advocates believed that using sitting height rather than standing height ''appears to be appropriate since it provides a more accurate measure of the height of the torso from the hips to the head.'' The commenter believed using sitting height ''should provide a closer match of the child to the child restraint system in order to protect against head excursion and head injury.'' On the other hand, Ford, AAMA, Century, Safeline and Cosco opposed the use of sitting height. Century and Cosco believed sitting height, while perhaps a relevant criterion for determining the suitability of a restraint for a child, would nonetheless be useless information because most parents do not know their child's sitting height. Cosco stated ''there is little correlation between sitting and standing height for manufacturers to give parents any guidance.'' Ford said that wording about how to measure sitting height may reduce the readability of the child seat label.

In lieu of a requirement that manufacturers provide sitting height, many commenters suggested that NHTSA specify a sitting height limit referencing what Century calls ''a readily identifiable body landmark, such as the top of the ears or top of the head.'' Century stated:

> For rear-facing seats the top of the head should not exceed the top of the seat back, and for boosters with or without a seat back, the child should no longer use the seat if the top of the ears are above either the booster seat back or the vehicle seat back.

Ford, a manufacturer of built-in child seats, said it compares anatomical landmarks on the child to physical features on the child restraint. ''It is very easy for a parent to compare shoulder height to the location of a shoulder belt slot or the top of the child's head to the top of the head restraint, and the need for such physical limits is more likely to be understood.'' Ford and UM–CPP recommended that NHTSA not require manufacturers to label child seats with the recommended height of children intended for the seats. These commenters further suggested the test dummy used for Standard 213 compliance testing should be selected solely on the recommended weight range for a particular child restraint.

Based on the comments on the proposal and other information, NHTSA reaches the following conclusions. Standard 213 currently requires manufacturers to label each child restraint with recommendations for the maximum height of children who can safely occupy the system. S5.5.2(f), S5.5.4(f). The purpose of the requirement is to help ensure the proper fit of restraint to child. The information helps consumers purchase an appropriate child restraint. Information about the suitability of a restraint for children of certain heights serves a useful purpose.

On the other hand, NHTSA is mindful that consumers may not know the sitting height of their child as well as they know standing height. The latter is routinely measured and provided to parents during the child's medical examinations. Because standing height is more familiar to parents, this rule specifies recommended standing height, rather than sitting height, to be on the label. Since requiring standing height recommendations to be labeled is a current requirement of Standard 213, this rule maintains the status quo. The agency is unconvinced of a need to change it.

This rule provides for using the manufacturer's height recommendations, in addition to the manufacturer's weight recommendation, to select the test dummies used in Standard 213's compliance test. The NPRM explained the basis for this provision. If height were not a factor,

> It might be possible for a restraint to be tested with a dummy or dummies insufficiently representative of the range of children recommended for the restraint. This could occur if a manufacturer were to recommend inconsistent mass and height ranges. A manufacturer could create an inconsistency by recommending a height range that corresponds to children who are of greater mass (weight) than the masses expressly recommended by the manufacturer for the restraint.
>
> For instance, suppose an infant restraint were recommended for children with masses not more than 4 kilograms (approximately 9 pounds) and a sitting height of up to 475 mm. Although the use of both the newborn and 9-month-old dummies would be more representative of the users of the restraint, only the newborn dummy would be used if dummy selection were based solely on the mass recommendation. However, according to a report by the University of Michigan on ''Physical Characteristics of Children as Related to Death and Injury for Consumer Product Safety Design,'' Report No. PB–242–221, of children with masses of 4 kilograms, those in the 95th percentile have a sitting height of approximately 450 mm. Since the restraint is recommended for children with heights greater than the 95th percentile child, NHTSA has tentatively determined that it would be appropriate to test the infant restraint not only with the infant dummy, but also with a test dummy representative of a taller child (i.e., with the 9-month-old dummy).

NHTSA has decided that the following dummies will be used to test a child restraint if any portion of their corresponding standing height ranges falls under the maximum height recommendation of the manufacturer of that restraint:

ADOPTED PROVISIONS

Recommended height of child suitable for the restraint	Dumm(ies) used for compliance test
Not more than 650 mm (650 mm is approximately the height of a 95th percentile newborn male child).	Newborn
More than 650 mm to 850 mm.	Newborn 9-month-old
More than 850 mm to 1100.	9-month-old[1] 3-yr-old
More than 1100 mm .	6-yr-old

[1] This dummy is not to be used to test booster seats.

Century stated:

> While we agree that it makes sense to establish height limits that correspond to weight limits to prevent a manufacturer from inaccurately representing the usage range for a particular restraint, we do not agree with combining mean values for weight with 95th percentile values for height. This conflict of information on a label could lead a consumer to the incorrect assumption that even though their child weighs more than the weight listed but is less than the height, that it is still all right to use the seat.

In response to Century, NHTSA is not requiring manufacturers to label their restraints as suitable for children in the 95th percentile for height. Rather, the rule would simply permit NHTSA to use a manufacturer's height recommendation as a basis for choosing a test dummy. Manufacturers have wide latitude in recommending the reasonable height ranges they think are appropriate for their restraints.

A number of commenters suggested it would be worthwhile to label a restraint with information using ''anatomical landmarks'' on the child (e.g., top of the ears) so parents can determine when their children have outgrown a particular child restraint. Manufacturers who want to provide such information are free to do so. However, the agency will not require such information to be labeled, for lack of need for such a requirement. See, denial of *Legath*

petition for rulemaking (56 FR 3064; January 38, 1991).

3. Performance Criteria

The effect of specifying additional test dummies in Standard 213 compliance testing is to require child restraints to meet the standard's performance criteria when restraining the new dummies. The level of performance required of a child restraint will generally be unchanged from that required presently of child seats when restraining the six-month-old and three-year-old dummies. That is, the same requirements of the standard for dynamic performance (including the head and chest injury criteria and excursion), force distribution, installation, belts and buckles and flammability will apply to all restraints, regardless of the dummy used to test the restraint system. However, there are two noteworthy exceptions.

A. *Seat back.* The first exception relates to S5.2.1.1, which requires child seats to have a seat back to restrain rearward movement of a child's head. This rule provides that the six-year-old dummy is not used to determine the applicability of or compliance with the seat back requirement. The reason for this decision was provided in the NPRM:

> The determination of whether a seat back is required on a child restraint is based on the dummy used in the compliance testing of the restraint. A child restraint need not have a seat back if a specified point on the dummy's head (approximately located at the top of the dummy's ears) is below the top of the standard seat assembly to which the restraint is attached for compliance testing. (S5.2.1.2) Booster seats are currently tested with the 3-year-old dummy, which sits low enough on the standard seat assembly that the point on the dummy's head is not above the top of the seat assembly. Since that dummy is used, booster seats need not have seat backs. If the 6-year-old dummy were to be incorporated into Standard 213 and if S5.2.1 were to remain unchanged, the impact on booster seats could be substantial. Most, if not all, booster seats (and perhaps other types of child seats) might have to be redesigned to have a seat back. This is because the sitting height of the 6-year-old dummy is higher than that of the 3-year-old. As a result, the critical point on the head of the 6-year-old dummy is likely to be above the top of the seat assembly. 59 FR at 12229.

NHTSA was concerned that the additional costs associated with redesigning booster seats to add a seat back were not justified from a safety standpoint. The agency did not know of real world crash data that indicate a problem with head or neck injuries in rear impact crashes.

Some commenters addressed this proposal. Advocates, IIHS, and SafetyBeltSafe supported it, with caveats. The following text is from Advocates' comment:

> Advocates believes that head restraint is essential in both frontal and especially rear-end collisions. Child restraint systems that do not provide head support present a safety problem and expose children to the risk of head and neck injuries. At the same time, we understand the concern that requiring backs on booster seats would significantly alter the design, cost, and utility of booster seats. A seat back requirement might reduce the affordability, convenience, and use rate of booster seats. Since it is safer, as a general proposition, to have children in properly secured restraint systems than not, Advocates is not recommending that booster seats be required to have backs.

The three commenters suggested a better approach than requiring boosters to have seat backs would be to have improved head restraints in the rear seating position of vehicles.

Transport Canada opposed the proposal. That commenter believed that six-year-old children are just as likely to sustain neck injuries as three-year-olds, so the six-year-old dummy should be used for the seat back requirement. Transport Canada believed no additional costs of redesign would be incurred if manufacturers restrict the use of boosters to children whose mass is less than that which would require testing with the six-year-old dummy (i.e., under this rule, to children with mass less than 18 kg (40 lb).

NHTSA does not agree with Transport Canada. The data base on neck injuries to small children is very limited. Data indicate that the number and severity of neck injuries to children is relatively small. Extrapolating data for 1992 from the state of Indiana to a national basis results in an estimated 2,666 neck injuries in rear impacts, and 8,933 neck injuries in all impacts for children under nine years of age. The injury was coded as a ''complaint of pain'' in 98 percent of the cases. For rear impacts, whiplash is the most common injury (AIS 1). Further, the commenter's suggestion that boosters could be restricted to children with masses less than 18 kg (40 lb) would impact greatly on the current manufacture and sale of boosters, since virtually all boosters are currently recommended for children with a mass of 18 kg or more. That impact does not appear offset by a commensurate safety benefit. Moreover, NHTSA recommends that children should be kept in convertible or toddler seats as long as they will fit, before a booster seat is used. Transport Canada's suggestion could result in manufacturers recommending their boosters for children under 18 kg (40 lbs). Another result could be for parents to choose, for their child, a vehicle belt system over a booster seat when the child reaches 18 kg. Both results would be contrary to safety.

With regard to the suggestion of Advocates, IIHS and SafetyBeltSafe to require head restraints in the rear seating positions of passenger vehicles, the adoption of such a requirement is outside the scope of this rulemaking. The agency notes that the issue was addressed in NHTSA's 1989 rule requiring head restraints in light trucks and vans. 54 FR 39183. Several manufacturers have voluntarily provided head restraints in rear seating positions of their vehicles. Also, after Standard 213 was amended to allow the manufacture and sale of belt-positioning booster seats in July 1994, some child restraint manufacturers have incorporated head restraints into child restraints (e.g., Century's Breverra belt-positioning seat).

B. *Buckle release.* The second exception to the generally unchanged performance criteria relates to S5.4.3.5(b), a requirement for post-impact buckle force release. Currently, S5.4.3.5(b) requires each child seat belt buckle to release when a force of not more than 16 pounds is applied, while tension (simulating a child restrained in the child seat) is applied to the buckle. Tension is applied because a child in the seat could impose a load on the belt buckle, which increases the difficulty of releasing it. The test procedures for this requirement (S6.2) specify that the applied tension is 20 pounds in the case of a system tested with a 6-month-old dummy and 45 pounds in the case of a system tested with a 3-year-old dummy. In both cases, the force level is based on the heaviest children who are likely to use the child restraint. NHTSA proposed to amend S6.2 so that the tension would be 50 newtons (N) when the system is tested with a newborn dummy, 90 N for tests with a 9-month-old dummy, 200 N for tests with a 3-year-old dummy, and 270 N for tests with a 6-year-old dummy. This rule adopts the force levels (50 N, 90 N, 200 N and 270 N) proposed in the NPRM. However, in response to Safeline, this rule limits the applicability of the requirement, such that for any child seat orientation (forward-, side- or rear-facing), only the largest of the dummies will be used to test conformance with the requirement. For example, if a child seat is recommended for a range of children such that it is subject to dynamic testing in the forward-facing mode with both the three-year-old and six-year-old dummies, only the latter dummy will be used for testing the

buckle force release requirement. The larger the dummy used for the test, the more difficult it is for a restraint to meet the requirement. The smaller of two (or more) dummies therefore need not be used, since no useful information will be gained.

C. *Head and chest forces.* This rule requires child seats to limit the accelerations to 1,000 for the Head Injury Criterion (HIC) and 60 g's for the chest. The instrumented six-year-old child dummy will be able to measure accelerations on the dummy head and chest when the dummy is used in the testing of child restraints. These limits are the same as those currently used in Standard 213 for tests with the instrumented three-year-old child dummy. AAMA and UM–CPP referred to the use of HIC in Standard 208, ''Occupant Crash Protection,'' and suggested that the agency calculate HIC in Standard 213 tests in the same manner it is calculated in Standard 208 tests. AAMA stated,

> Although the agency has adopted a 36 ms limit on the HIC calculation for Standard 208 testing, the HIC interval for Standard 213 testing is unstated. AAMA believes that use of a 15 ms limit on the HIC interval would result in a test criterion that is more representative of head injury risk for both the Subpart C [3-year-old] and Subpart I [6-year-old] dummies.

In response to this comment, the agency notes that the commenters are correct in saying that Standards 208 and 213 calculate HIC differently. Standard 208 specifies a 36 ms limit for the time interval used to calculate HIC (S6.1.2), while Standard 213 specifies that any two moments may be used for the HIC calculation S5.1.2(a)). In Standard 213 compliance tests, the HIC value can and does differ according to the time interval that is used to calculate HIC. NHTSA has used various time intervals for the Standard 213 HIC calculation, including but not limited to 36 ms.

At this time, the agency does not have sufficient information justifying limiting the time interval to any interval, including 36 ms. After receiving AAMA's comment, NHTSA evaluated Standard 213 sled test data to determine how the HIC calculation is affected by limiting the time interval. The evaluation showed that HIC values were generally lower (in few cases, equal) when the time interval was limited to 36 ms, compared to when unlimited. Limiting the time interval could therefore make it easier for a child restraint to pass the HIC requirement, resulting in a lower level of safety protection for the child occupant.

With regard to limiting the HIC calculation to a 15 ms interval, the agency rejected a 15 ms limit in Standard 208 on the basis that it would effectively allow higher head accelerations, and thus might not ensure protection for a wide range of the population. (51 FR 37031; October 17, 1986.) NHTSA rejects a 15 ms limit in Standard 213 for the same reasons given when this matter was evaluated with regard to Standard 208.

NHTSA further notes that child restraint manufacturers have been successful at designing and manufacturing effective child restraint systems without a limit on the time interval for the HIC calculation. Changing the HIC criterion without information on the consequences of such a change is unwarranted.

4. Other Amendments

This rule adopts three amendments unrelated to the addition of new sizes of dummies to Standard 213. Two of the amendments clarify the standard's excursion requirements. The excursion requirement for built-in child restraints (S5.1.3.1(b)) currently prohibits the dummy's knee pivot from passing through a plane that is a specified distance ''forward of the hinge point of the specific vehicle seat into which the system is built.'' Chrysler suggested (docket 74–09–N24–001) that NHTSA amend the reference point because the ''hinge point of the specific vehicle seat'' cannot be readily determined for most vehicle seats. This is because most vehicle seats into which a built-in child restraint is fabricated do not have hinges for their backs, or are configured so that the hinge point is not easily seen during dynamic testing.

NHTSA proposed to address this concern by referencing the H-point on the seat. That point is used as a reference point in S11 of Standard 208, ''Occupant Crash Protection,'' and in S4.3 of Standard 210, ''Seat Belt Assembly Anchorages.'' Chrysler had suggested use of the H-point reference. The H-point of a specific vehicle seating position is determined by using equipment and procedures specified in the Society of Automotive Engineers (SAE) recommended practice SAE J826 (May 1987), ''Devices for Use in Defining and Measuring Vehicle Seating Accommodation.'' The H-point is identified either during the seat's design by means of a two-dimensional drafting template, or after the vehicle is completely manufactured, by means of a three-dimensional device. The H-point is located at approximately the same location as the ''hinge point'' on a vehicle seat.

NHTSA received comments on this proposal from Transport Canada, AAMA (of which Chrysler is a member), Safeline, Century and UM-CPP. Some commenters expressed concern that using the H-point as a reference still results in ambiguity in the test procedure since the H-point varies from vehicle to vehicle, and is not easily seen during dynamic testing. All commenters suggested adopting Transport Canada's approach to measuring knee excursion for built-in restraints. That approach limits the forward knee movement to a maximum of 305 mm (12 inches) at any time during the test from the initial knee position of the dummy. Transport Canada stated, ''Our regulatory development testing has proved that this approach produces satisfactory results.''

NHTSA has reviewed the comments and agrees to base the knee excursion limit for built-in seats on the approach of Transport Canada. Maximum knee translation is limited in terms of the initial position the knee itself. NHTSA believes this is easier than measuring knee displacement vis-a-vis the ''hinge point'' or H-point of the vehicle seat. Knee excursion is currently measured using a point on the ''knee pivot'' that is easily defined on the test dummy. The knee pivot point is easily observed during the dynamic test. This rule limits the longitudinal horizontal movement of the knee pivot point, from the initial position of the knee pivot, to a maximum of 305 mm (12 inches). The 12 inch value is equivalent to the level of performance currently required by Standard 213 (i.e., 914 mm (36 inches) measured from the hinge point of the seat assembly).

The other clarifying amendment relates to the excursion requirement for rear-facing child restraints (S5.1.3.2). S5.1.3.2 currently states that ''no portion of the target point on either side of the dummy's head'' shall pass through an area on the child restraint. The quoted language is revised to remove the reference to a ''portion'' of the target point. The use of ''portion'' is incorrect since the target point is dimensionless.

The third amendment relates to the requirement in the standard that limits the force that may be imposed on a child by the vehicle belt used to anchor the child seat to the vehicle (S5.4.3.2). S5.4.3.2 currently specifies, for add-on child restraints (another provision specifies comparable requirements for built-in restraints):

> Each belt that is part of a child restraint system and that is designed to restrain a child using the system and to attach the system to the vehicle shall, when tested in accordance with [the dynamic test of] S6.1, impose no loads on the child that result from

the mass of the system, or * * * [from] the mass of the seat back of the standard seat assembly. * * *

The NPRM proposed to expand S5.4.3.2 to also apply it to each Type I and the lap portion of a Type II vehicle belt that is used to attach the child seat to the vehicle. These belts, which anchor the child seat to the vehicle, function to absorb the forces of the crash into the frame of the vehicle. NHTSA proposed that these belts not be permitted to transfer those crash forces to the occupant child.

The agency received many comments on this proposal. SafetyBeltSafe and Advocates supported it. They believed the standard should prohibit a vehicle lap belt used to secure a child restraint to the vehicle from transferring any crash forces to the child. Safeline, Ford, Century, and UM–CPP expressed concerns about the proposal. Safeline believed the proposal is ambiguous, since it does not specify how the prohibited loading would be measured. Ford, Century and UM–CPP shared concerns about the effect of the proposal on belt-positioning seats (boosters designed for use with a vehicle's lap/shoulder belt system) with seat backs. UM–CPP stated that any such booster will load the child into the lap belt, as well as into the shoulder belt. Moreover, the commenter said it does ''not think it is practical to measure the load imposed on the dummy.'' UM–CPP and Century suggested retaining the proposal but excluding from the requirement any restraint with a mass of less than 4 kg (weight of less than 8.8 lbs). These commenters indicated the 4 kg limit is consistent with requirements in Europe and the current U.S. market. Century stated, ''There is field experience with numerous designs in Europe, and testing we have done with our Breverra [which weighs less than 3 kg] indicates no increases in any measurable injury criteria resulting from belt loads.''

Based on the comments and other information, NHTSA amends S5.4.3.2 as follows. NHTSA agrees with the commenters that, as proposed, S5.4.3.2 would prohibit belt-positioning seats with a back, since the mass of those systems contributes to the loading of the vehicle seat belt on the restrained child during a crash. That effect was unintended by the agency. NHTSA further believes that totally avoiding a load on the child, as proposed, is very difficult, if not impossible to achieve with present designs of belt-positioning seats. The proposed requirement might be impracticable as long as the lap portion of a Type II vehicle belt is used to attach the system to the vehicle and restrain the child. NHTSA does not believe there is a sufficient safety problem to warrant prohibiting current designs of belt-positioning seats with backs. There are no data showing injuries caused by seat back loads imposed on a child. On the other hand, limits should be established to keep in check the potential for injury due to overloading a child occupant. Overloading could occur from a massive child seat back. For this reason, this rule limits the loads imposed on a child by prohibiting any loads except those resulting from a child seat with a mass less than 4 kg. No data have emerged from the field showing that a child seat with a mass less than 4 kg imposes harmful loads on a child. The effect of this requirement will likely keep the masses of belt-positioning seats at less than 4 kg.

In the rule that amended Standard 213 to permit the manufacture of belt-positioning seats, NHTSA decided against specifying limits on seat back loading, due to a lack of data indicating a safety problem. At the time of that decision, the agency did not consider that a lap belt portion of a Type II belt system could transfer crash forces to a child from the back of a belt-positioning booster seat. Now that the agency has considered this issue in the context of S5.4.3.2 of Standard 213, NHTSA has decided that a limit on the mass of the booster seat back is warranted.

Belt-positioning devices. The NPRM sought information about a particular type of child restraining device that appears to be proliferating. These devices are designed to be attached to a vehicle Type II belt system to improve the fit of the system on children, and in some cases, on small adults. The agency sought information on whether Standard 213 should be applied to these devices, and if so, which of the standard's requirements would be appropriate for those devices.

Six commenters responded to this issue. All believed the devices need to be subjected to safety standards to ensure that they provide occupants with proper safety protection. UM–CPP stated that the primary problem with these devices is that there are ''no formal test procedures and criteria for determining whether a given deflector is effective and/or better than nothing for certain vehicle belt/occupant combinations.'' IIHS strongly urged that these restraint devices to improve belt fit, be subject to Standard 213, as are booster seats. It said these devices are targeted to those children who have outgrown toddler seats but are too small to be appropriately restrained by adult seatbelts. Redlog, a manufacturer of belt adjustment devices, recommended that these devices be included in the definition of child restraints in FMVSS No. 213. Redlog recommended creating a sub-category within the existing definition of child restraints to accommodate these devices. It concluded by saying that dynamic crash testing and labeling for appropriate usage are essential requirements. Advocates expressed its concern with the safety of these devices and said the agency has an obligation to test them to determine if they interfere with the safety performance of the restraint system. SafetyBeltSafe said that ''standards are essential for the new category of product which purports to reconfigure the shoulder lap belt to respond to the differing seated heights of passengers and drivers in vehicles.'' It, however, said at this time, it does not recommend use of such products if the passenger is able to use a belt-positioning booster. CompUTence said that FMVSS 213 should address all child and small adult safety devices relating to occupant restraint and that, currently, these devices are sold without knowledge of whether they provide the safety claimed by their manufacturers.

While commenters supported regulating the aftermarket devices, the agency is not prepared to undertake rulemaking at this time. NHTSA needs to better assess the safety benefits of such rulemaking, and the feasibility of a test procedure and practicability of performance requirements. The agency will be continuing its efforts to learn more about the restraining devices.

5. Leadtime

This rule has one effective date for add-on child restraints and another for built-in child restraints. For add-on systems, this rule is effective in 180 days, as proposed. No comment was received on leadtime for add-on restraints.

For built-in systems, this rule is effective on September 1, 1996. Ford and AAMA commented on leadtime for built-in restraints. Ford requested a September 1, 1996 effective date. It said the proposed 180-day leadtime would not provide enough time for it to test all its built-in child seats to the adopted requirements and make any design changes that may be needed. It also said the proposed leadtime would not provide enough time to modify the labeling of its built-in restraints, or to change the vehicle ''owners guides'' of the vehicles equipped with built-in systems. Ford stated that changes to owners guides are timed to precede the beginning of new model year production, and are usually printed in

June or July. NHTSA has determined that a September 1, 1996 effective date for built-in restraints gives motor vehicle manufacturers sufficient leadtime to both evaluate their products and make any necessary changes to them, and prepare the labels and owners manuals for the new model vehicles without unnecessary burdens. For the reasons given above, there is good cause shown that the September 1996 effective date is in the public interest.

III. Rulemaking Analyses and Notices

a. Executive Order 12866 (Regulatory Planning and Review) and DOT Regulatory Policies and Procedures

This rulemaking document was not reviewed under E.O. 12866, ''Regulatory Planning and Review.'' The agency has considered the impact of this rulemaking action under the Department of Transportation's regulatory policies and procedures, and has determined that it is not ''significant'' under them. NHTSA has prepared a final regulatory evaluation for this action which discusses its potential costs, benefits and other impacts. A copy of that evaluation has been placed in the docket for this rulemaking action. Interested persons may obtain copies of the evaluation by writing to the docket section at the address provided at the beginning of this document.

To briefly summarize the evaluation, the cost per test is estimated to be $1,337. There are approximately 47 different models of child restraints on the market with an estimated total of 185 adjustment positions. Since each restraint would be subject to testing with two dummies rather than one, the incremental testing cost is one dummy per restraint position. Total cost for all manufacturers is estimated to be $247,345. Redesign costs have not been estimated.

The agency cannot quantify the benefits of this rulemaking. However, NHTSA believes that benefits will accrue by virtue of upgraded test procedures that better ensure that child restraints adequately restrain and protect the children recommended for a restraint.

b. Regulatory Flexibility Act

NHTSA has considered the effects of this rulemaking action under the Regulatory Flexibility Act. I hereby certify that it will not have a significant economic impact on a substantial number of small entities. The agency knows of 13 manufacturers of child restraints, seven of which NHTSA considers to be small businesses (including Kolcraft, which with an estimated 500 employees, is on the borderline of being a small business). This number does not constitute a substantial number of small entities. Regardless of this number, NHTSA does not believe this rule will have a significant impact on small businesses. This rule may have an impact on the shield-type booster seat market, in that a manufacturer may have to redesign its seat if it cannot pass the standard's test with the new six-year-old dummy. However, the agency does not know of any such booster at this time. This rule increases the testing that NHTSA conducts of child restraints, which in turn increases the certification responsibilities of manufacturers. However, the agency does not believe such an increase constitutes a significant economic impact on small entities, because these businesses currently must certify their products to the dynamic test of Standard 213. That is, the products of these manufacturers already are subject to dynamic testing using child test dummies. The effect of this rule on most child seats is to subject them to testing with an additional dummy. Assuming there are shield boosters that could not be certified as meeting Standard 213 when tested with an additional dummy, small manufacturers producing those boosters would have to redesign those restraint systems to meet the standard. However, those manufacturers could decide to replace nonconforming shield boosters with belt-positioning boosters (which use a vehicle's Type II belts system), which are easier to certify to Standard 213's requirements than shield boosters. NHTSA expects that all manufacturers will enter the belt-positioning booster market. Some manufacturers might also relabel their restraints as being suitable for a smaller weight range of children, to avoid having their restraints tested with a particular test dummy that the restraint cannot restrain (e.g., the 6-year-old child dummy).

Small organizations and governmental jurisdictions might be affected by this rule if these entities procure child restraint systems for programs such as loaner programs. While the cost of child restraints could increase, the agency believes the cost increase would be minimal. Further, available information indicates that only a small percentage of loaner programs carry booster seats, the type of child restraint system most likely to be affected by this rule. Thus, loaner program procurements will not be significantly affected by today's rule.

c. Executive Order 12612 (Federalism)

This rulemaking action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and the agency has determined that this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

d. National Environmental Policy Act

NHTSA has analyzed this rulemaking action for the purposes of the National Environmental Policy Act. The agency has determined that implementation of this action will not have any significant impact on the quality of the human environment.

e. Executive Order 12778 (Civil Justice Reform)

This rule does not have any retroactive effect. Under section 49 U.S.C. 30103, whenever a Federal motor vehicle safety standard is in effect, a state may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard, except to the extent that the state requirement imposes a higher level of performance and applies only to vehicles procured for the State's use. 49 U.S.C. 30161 sets forth a procedure for judicial review of final rules establishing, amending or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles.

In consideration of the foregoing, NHTSA amends 49 CFR Part 571 as set forth below.

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for Part 571 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117 and 30166; delegation of authority at 49 CFR 1.50.

2. Section 571.213 is amended by—

a. Revising S5, the introductory paragraph of S5.1.2, S5.1.3.1(a) and (b), S5.1.3.2, the introductory paragraph of S5.2.1.2, S5.2.2.2(b), S5.2.3.1, S5.4.3.2, the introductory text of S5.4.3.3 and of S5.4.3.3(c), the introductory text of S5.4.3.5, S5.4.3.5(a) and (b), S5.5.2(f), S5.5.5(f), and S6 through S8.2.6, and

b. Adding S9, S9.1, S9.2, S9.3, S10, S10.1, S10.2, S10.2.1 and S10.2.2, to read as follows:

§ 571.213 Standard No. 213, Child Restraint Systems.

* * * * *

S5. *Requirements.* (a) Each motor vehicle with a built-in child restraint system shall meet the requirements in this section when, as specified, tested in accordance with S6.1 and this paragraph.

(b) Each child restraint system manufactured for use in motor vehicles shall meet the requirements in this section when, as specified, tested in accordance with S6.1 and this paragraph. Each add-on system shall meet the requirements at each of the restraint's seat back angle adjustment positions and restraint belt routing positions, when the restraint is oriented in the direction recommended by the manufacturer (e.g., forward, rearward or laterally) pursuant to S5.6, and tested with the test dummy specified in S7.

(c) Each child restraint system manufactured for use in aircraft shall meet the requirements in this section and the additional requirements in S8.

* * * * *

S5.1.2 *Injury criteria.* When tested in accordance with S6.1, each child restraint system that, in accordance with S5.5.2(f), is recommended for use by children whose masses are more than 10 kilograms (kg) shall—

* * * * *

S5.1.3.1 * * *

(a) In the case of an add-on child restraint system, no portion of the test dummy's head shall pass through a vertical, transverse plane that is 810 mm forward of point Z on the standard seat assembly, measured along the center SORL (as illustrated in figure 1B), and neither knee pivot point shall pass through a vertical, transverse plane that is 915 mm forward of point Z on the standard seat assembly, measured along the center SORL.

(b) In the case of a built-in child restraint system, neither knee pivot point shall, at any time during the dynamic test, pass through a vertical, transverse plane that is 305 mm forward of the initial pre-test position of the respective knee pivot point, measured along a horizontal line that passes through the knee pivot point and is parallel to the vertical plane that passes through the vehicle's longitunal centerline.

S5.1.3.2 *Rear-facing child restraint systems.* In the case of each rear-facing child restraint system, all portions of the test dummy's torso shall be retained within the system and neither of the target points on either side of the dummy's head and on the transverse axis passing through the center of mass of the dummy's head and perpendicular to the head's midsagittal plane, shall pass through the transverse orthogonal planes whose intersection contains the forward-most and top-most points on the child restraint system surfaces (illustrated in Figure 1C).

* * * * *

S5.2.1.2 The applicability of the requirements of S5.2.1.1 to a front-facing child restraint, and the conformance of any child restraint other than a car bed to those requirements is determined using the largest of the test dummies specified in S7.1 for use in testing that restraint; provided, that the 6-year-old dummy described in Subpart I of Part 572 of this title is not used to determine the applicability of or compliance with S5.2.1.1. A front-facing child restraint system is not required to comply with S5.2.1.1 if the target point on either side of the dummy's head is below a horizontal plane tangent to the top of—

* * * * *

S5.2.2.2 * * *

(b) Passing through any portion of the dummy, except for surfaces which restrain the dummy when the system is tested in accordance with S6.1.2(a)(2), so that the child restraint system shall conform to the requirements of S5.1.2 and S5.1.3.1.

* * * * *

S5.2.3.1 Each child restraint system, other than a child harness, which is recommended under S5.5.2(f) for children whose masses are less than 10 kg, shall comply with S5.2.3.2.

* * * * *

S5.4.3.2 *Direct restraint.* Except for a child restraint system whose mass is less than 4 kg, each belt that is part of a child restraint system and that is designed to restrain a child using the system and to attach the system to the vehicle, and each Type I and lap portion of a Type II vehicle belt that is used to attach the system to the vehicle shall, when tested in accordance with S6.1, impose no loads on the child that result from the mass of the system, or

(a) In the case of an add-on child restraint system, from the mass of the seat back of the standard seat assembly specified in S6.1, or

(b) In the case of a built-in child restraint system, from the mass of any part of the vehicle into which the child restraint system is built.

S5.4.3.3 *Seating systems.* Except for child restraint systems subject to S5.4.3.4, each child restraint system that is designed for use by a child in a seated position and that has belts designed to restrain the child, shall, with the test dummy specified in S7 positioned in the system in accordance with S10 provide:

* * * * *

(c) In the case of each seating system recommended for children whose masses are more than 10 kg, crotch restraint in the form of:

* * * * *

S5.4.3.5 *Buckle release.* Any buckle in a child restraint system belt assembly designed to restrain a child using the system shall:

(a) When tested in accordance with S6.2.1 prior to the dynamic test of S6.1, not release when a force of less than 40 newtons (N) is applied and shall release when a force of not more than 62 N is applied;

(b) After the dynamic test of S6.1, when tested in accordance with the appropriate sections of S6.2, release when a force of not more than 71 N is applied, provided, however, that the conformance of any child restraint to this requirement is determined using the largest of the test dummies specified in S7 for use in testing that restraint when the restraint is facing forward, rearward, and/or laterally;

* * * * *

S5.5.2 * * *

(f) One of the following statements, inserting the manufacturer's recommendations for the maximum mass and height of children who can safely occupy the system, except that booster seats shall not be recommended for children whose masses are less than 13.6 kg:

(1) This infant restraint is designed for use by children who weigh _____ pounds (mass _____ kg) or less and whose height is (*insert values in English and metric units*); or

(2) This child restraint is designed for use only by children who weigh between _____ and _____ pounds (*insert metric values*) and whose height is (*insert values in English and metric units*) and who are capable of sitting upright alone; or

(3) This child restraint is designed for use only by children who weigh between _____ and _____ pounds (*insert metric values*) and whose height is (*insert values in English and metric units*).

* * * * *

S5.5.5 * * *

(f) One of the following statements, inserting the manufacturer's recommendations for the maximum mass and height of children who can safely occupy the system, except that booster seats shall not be recommended for children whose masses are less than 13.6 kg:

(1) This infant restraint is designed for use by children who weigh _____ pounds (mass _____ kg) or less and whose height is (*insert values in English and metric units*); or

(2) This child restraint is designed for use only by children who weigh between _____ and _____ pounds (*insert metric values*) and whose height is (*insert values in English and metric units*) and who are capable of sitting upright alone; or

(3) This child restraint is designed for use only by children who weigh between _____ and _____ pounds (*insert metric values*) and whose sitting height is (*insert values in English and metric units*).

* * * * *

S6. *Test conditions and procedures.*

S6.1 *Dynamic systems test for child restraint systems.*

The test conditions described in S6.1.1 apply to the dynamic systems test. The test procedure for the dynamic systems test is specified in S6.1.2. The test dummy specified in S7 is placed in the test specimen (child restraint), clothed as described in S9 and positioned according to S10.

S6.1.1 *Test conditions.*

(a) Test devices

(1) The test device for add-on restraint systems is a standard seat assembly consisting of a simulated vehicle bench seat, with three seating positions, which is described in Drawing Package SAS–100–1000 (consisting of drawings and a bill of materials) with addendum A, Seat Base Weldment, dated July 1, 1993 (incorporated by reference; see § 571.5). The assembly is mounted on a dynamic test platform so that the center SORL of the seat is parallel to the direction of the test platform travel and so that movement between the base of the assembly and the platform is prevented.

(2) The test device for built-in child restraint systems is either the specific vehicle shell or the specific vehicle.

(i) *Specific vehicle shell.*

(A) The specific vehicle shell, if selected for testing, is mounted on a dynamic test platform so that the longitudinal center line of the shell is parallel to the direction of the test platform travel and so that movement between the base of the shell and the platform is prevented. Adjustable seats are in the adjustment position midway between the forwardmost and rearmost positions, and if separately adjustable in a vertical direction, are at the lowest position. If an adjustment position does not exist midway between the forwardmost and rearmost position, the closest adjustment position to the rear of the midpoint is used. Adjustable seat backs are in the manufacturer's nominal design riding position. If such a position is not specified, the seat back is positioned so that the longitudinal center line of the child test dummy's neck is vertical, and if an instrumented test dummy is used, the accelerometer surfaces in the dummy's head and thorax, as positioned in the vehicle, are horizontal. If the vehicle seat is equipped with adjustable head restraints, each is adjusted to its highest adjustment position.

(B) The platform is instrumented with an accelerometer and data processing system having a frequency response of 60 Hz channel class as specified in Society of Automotive Engineers Recommended Practice J211 JUN80 ''Instrumentation for Impact Tests.'' The accelerometer sensitive axis is parallel to the direction of test platform travel.

(ii) *Specific vehicle.* For built-in child restraint systems, an alternate test device is the specific vehicle into which the built-in system is fabricated. The following test conditions apply to this alternate test device.

(A) The vehicle is loaded to its unloaded vehicle weight plus its rated cargo and luggage capacity weight, secured in the luggage area, plus the appropriate child test dummy and, at the vehicle manufacturer's option, an anthropomorphic test dummy which conforms to the requirements of Subpart B or Subpart E of Part 572 of this title for a 50th percentile adult male dummy placed in the front outboard seating position. If the built-in child restraint system is installed at one of the seating positions otherwise requiring the placement of a Part 572 test dummy, then in the frontal barrier crash specified in (c), the appropriate child test dummy shall be substituted for the Part 572 adult dummy, but only at that seating position. The fuel tank is filled to any level from 90 to 95 percent of capacity.

(B) Adjustable seats are in the adjustment position midway between the forward-most and rearmost positions, and if separately adjustable in a vehicle direction, are at the lowest position. If an adjustment position does not exist midway between the forward-most and rearmost positions, the closest adjustment position to the rear of the midpoint is used.

(C) Adjustable seat backs are in the manufacturer's nominal design riding position. If a nominal position is not specified, the seat back is positioned so that the longitudinal center line of the child test dummy's neck is vertical, and if an anthropomorphic test dummy is used, the accelerometer surfaces in the test dummy's head and thorax, as positioned in the vehicle, are horizontal. If the vehicle is equipped with adjustable head restraints, each is adjusted to its highest adjustment position.

(D) Movable vehicle windows and vents are, at the manufacturer's option, placed in the fully closed position.

(E) Convertibles and open-body type vehicles have the top, if any, in place in the closed passenger compartment configuration.

(F) Doors are fully closed and latched but not locked.

(G) All instrumentation and data reduction is in conformance with SAE J211 JUN80.

(b) The tests are frontal barrier impact simulations of the test platform or frontal barrier crashes of the specific vehicles as specified in S5.1 of § 571.208 and for:

(1) Test Configuration I, are at a velocity change of 48 km/h with the acceleration of the test platform entirely within the curve shown in Figure 2, or for the specific vehicle test with the deceleration produced in a 48 km/h frontal barrier crash.

(2) Test Configuration II, are set at a velocity change of 32 km/h with the acceleration of the test platform entirely within the curve shown in Figure 3, or for the specific vehicle test, with the deceleration produced in a 32 km/h frontal barrier crash.

(c) Attached to the seat belt anchorage points provided on the standard seat assembly (illustrated in Figures 1A and 1B) are Type I seat belt assemblies in the case of add-on child restraint systems other than belt-positioning seats, or Type II seat belt assemblies in the case of belt-positioning seats. These seat belt assemblies meet the requirements of Standard No. 209 (§ 571.209) and have webbing with a width of not more than 50 mm, and are attached to the anchorage points without the use of retractors or reels of any kind.

(d) Performance tests under S6.1 are conducted at any ambient temperature from 19° to 26° C and at any relative humidity from 10 percent to 70 percent.

(e) In the case of add-on child restraint systems, the restraint shall meet the requirements of S5 at each of its seat back angle adjustment positions and restraint belt routing positions, when the restraint is oriented in the direction recommended by the manufacturer (e.g., forward, rearward or laterally) pursuant to S5.6, and tested with the test dummy specified in S7.

S6.1.2 *Dynamic test procedure.*

(a) Activate the built-in child restraint or attach the add-on child restraint to the seat assembly as described below:

(1) *Test configuration I.* (i) In the case of each add-on child restraint system other than a belt-positioning seat, a child harness, a backless child restraint system with a top anchorage strap, or a restraint designed for use by physically handicapped children, install the add-on child restraint system at the center seating position of the standard seat assembly in accordance with the manufacturer's instructions provided with the system pursuant to S5.6.1, except that the add-on restraint shall be secured to the standard vehicle seat using only the standard vehicle lap belt. A child harness, a backless child restraint system with a top anchorage strap, or a restraint designed for use by physically handicapped children shall be installed at the center seating position of the standard seat assembly in accordance with the manufacturer's instructions provided with the system pursuant to S5.6.1. An add-on belt-positioning seat shall be installed at either outboard seating position of the standard seat assembly in accordance with the manufacturer's instructions provided with the system pursuant to S5.6.1, except that the belt-positioning seat shall be secured to the standard vehicle seat using only the standard vehicle lap and shoulder belt.

(ii) In the case of each built-in child restraint system, activate the restraint in the specific vehicle shell or the specific vehicle, in accordance with the manufacturer's instructions provided in accordance with S5.6.2.

(2) *Test configuration II.* (i) In the case of each add-on child restraint system which is equipped with a fixed or movable surface described in S5.2.2.2, or a backless child restraint system with a top anchorage strap, install the add-on child restraint system at the center seating position of the standard seat assembly using only the standard seat lap belt to secure the system to the standard seat.

(ii) In the case of each built-in child restraint system which is equipped with a fixed or movable surface described in S5.2.2.2, or a built-in booster seat with a top anchorage strap, activate the system in the specific vehicle shell or the specific vehicle in accordance with the manufacturer's instructions provided in accordance with S5.6.2.

(b) Tighten all belts used to restrain an add-on child restraint system to the standard seat assembly and all belts used to directly restrain the dummy to the add-on or built-in child restraint according to the following:

(1) Tighten all Type I belt systems and any provided additional anchorage belt (tether), that are used to attach an add-on child restraint to the standard seat assembly to a tension of not less than 53.5 N and not more than 67 N, as measured by a load cell used on the webbing portion of the belt.

(2) Tighten the lap portion of Type II belt systems used to attach an add-on child restrain to the standard seat assembly to a tension of not less than 53.5 N and not more than 67 N, as measured by a load cell used on the webbing portion of the belt.

(3) Tighten the shoulder portion of Type II belt system used to directly restrain the dummy in add-on and built-in child restraint systems to a tension of not less than 9 N and not more than 18 N, as measured by a load cell used on the webbing portion of the belt.

(c) Place in the child restraint any dummy specified in S7 for testing systems for use by children of the heights and weights for which the system is recommended in accordance with S5.6.2.

(d) Assemble, clothe, prepare and position the dummy as specified in S7 through S10 and Part 572 of this chapter, as appropriate.

(e) If provided, shoulder (other than the shoulder portion of a Type II vehicle belt system) and pelvic belts that directly restrain the dummy in add-on and built-in systems shall be adjusted as follows:

Tighten the belts until a 9 N force applied (as illustrated in figure 5) to the webbing at the top of each dummy shoulder and to the pelvic webbing 50 mm on either side of the torso midsagittal plane pulls the webbing 7 mm from the dummy.

(f) Accelerate the test platform to simulate frontal impact in accordance with Test Configuration I or II, as appropriate.

(g) Determine conformance with the requirements in S5.1, as appropriate.

S6.2 *Buckle release test procedure.*

The belt assembly buckles used in any child restraint system shall be tested in accordance with S6.2.1 through S6.2.4 inclusive.

S6.2.1 Before conducting the testing specified in S6.1, place the loaded buckle on a hard, flat, horizontal surface. Each belt end of the buckle shall be pre-loaded in the following manner. The anchor end of the buckle shall be loaded with a 9 N force in the direction away from the buckle. In the case of buckles designed to secure a single latch plate, the belt latch plate end of the buckle shall be pre-loaded with a 9 N force in the direction away from the buckle. In the case of buckles designed to secure two or more latch plates, the belt latch plate ends of the buckle shall be loaded equally so that the total load is 9 N, in the direction away from the buckle. For pushbutton-release buckles, the release force shall be applied by a conical surface (cone angle not exceeding 90 degrees). For pushbutton-release mechanisms with a fixed edge (referred to in Figure 7 as ''hinged button''), the release force shall be applied at the centerline of the button, 3 mm away from the movable edge directly opposite the fixed edge, and in the direction that produces maximum releasing effect. For pushbutton-release mechanisms with no fixed edge (referred to in Figure 7 as ''floating button''), the release force shall be applied at the center of the release mechanism in the direction that produces the maximum releasing effect. For all other buckle release mechanisms, the force shall be applied on the centerline of the buckle lever or finger tab in the direction that produces the maximum releasing effect. Measure the force required to release the buckle. Figure 7 illustrates the loading for the different buckles and the point where the release force should be applied, and Figure 8 illustrates the conical surface used to apply the release force to pushbutton-release buckles.

S6.2.2 After completion of the testing specified in S6.1 and before the buckle is unlatched, tie a self-adjusting sling to each wrist and ankle of the test dummy in the manner illustrated in Figure 4, without disturbing the belted dummy and the child restraint system.

S6.2.3 Pull the sling tied to the dummy restrained in the child restraint system and apply a force whose magnitude is: 50 N for a system tested with a newborn dummy; 90 N for a system tested with a 9-month-old dummy; 200 N for a system tested with a 3-year-old dummy; or 270 N for a system tested with a 6-year-old dummy. The force is applied in the manner illustrated in Figure 4 and as follows:

(a) *Add-on Child Restraints.* For an add-on child restraint other than a car bed, apply the specified force by pulling the sling horizontally and parallel to the SORL of the standard seat assembly. For a car bed, apply the force by pulling the sling vertically.

(b) *Built-in Child Restraints.* For a built-in child restraint other than a car bed, apply the force by pulling the sling parallel to the longitudinal center line of the specific vehicle shell or the specific vehicle. In the case of a car bed, apply the force by pulling the sling vertically.

S6.2.4 While applying the force specified in S6.2.3, and using the device shown in Figure 8 for pushbutton-release buckles, apply the release force in the manner and location specified in S6.2.1, for that type of buckle. Measure the force required to release the buckle.

S6.3 *Head impact protection—energy absorbing material test procedure.*

S6.3.1 Prepare and test specimens of the energy absorbing material used to comply with S5.2.3 in accordance with the applicable 25 percent compression-deflection test described in the American Society for Testing and Materials (ASTM) Standard D1056–73, ''Standard Specification for Flexible Cellular Materials—Sponge or Expanded Rubber,'' or D1564–71 ''Standard Method of Testing Flexible Cellular Materials—Slab Urethane Foam'' or D1565–76 ''Standard Specification for Flexible Cellular Materials—Vinyl Chloride Polymer and Copolymer open-cell foams.''

S7 *Test dummies.* (Subparts referenced in this section are of part 572 of this chapter.)

S7.1 Dummy selection.

(a) A child restraint that is recommended by its manufacturer in accordance with S5.5 for use either by children in a specified mass range that includes any children having a mass of not greater than 5 kg, or by children in a specified height range that includes any children whose height is not greater than 650 mm, is tested with a newborn test dummy conforming to part 572 subpart K.

(b) A child restraint that is recommended by its manufacturer in accordance with S5.5 for use either by children in a specified mass range that includes any children having a mass greater than 5 but not greater than 10 kg, or by children in a specified height range that includes any children whose height is greater than 650 mm but not greater than 850 mm, is tested with a newborn test dummy conforming to part 572 subpart K, and a 9-month-old test dummy conforming to part 572 subpart J.

(c) Except for a booster seat, a child restraint that is recommended by its manufacturer in accordance with S5.5 for use either by children in a specified mass range that includes any children having a mass greater than 10 kg but not greater than 18 kg, or by children in a specified height range that includes any children whose height is greater than 850 mm but not greater than 1100 mm, is tested with a 9-month-old test dummy conforming to part 572 subpart J, and a 3-year-old test dummy conforming to part 572 subpart C and S7.2, provided, however, that the 9-month-old dummy is not used to test a booster seat.

(d) A child restraint that is recommended by its manufacturer in accordance with S5.5 for use either by children in a specified mass range that includes any children having a mass greater than 18 kg, or by children in a specified height range that includes any children whose height is greater than 1100 mm, is tested with a 3-year-old child test dummy conforming to part 572 subpart C and S7.2, and a 6-year-old child dummy conforming to part 572 subpart I.

(e) A child restraint that meets the criteria in two or more of the preceding paragraphs in S7.1 is tested with each of the test dummies specified in those paragraphs.

S7.2 *Three-year-old dummy head.* Effective September 1, 1993, this dummy is assembled with the head assembly specified in section 572.16(a)(1) of this chapter.

S8 *Requirements, test conditions, and procedures for child restraint systems manufactured for use in aircraft.*

Each child restraint system manufactured for use in both motor vehicles and aircraft must comply with all of the applicable requirements specified in Section S5 and with the additional requirements specified in S8.1 and S8.2.

S8.1 *Installation instructions.* Each child restraint system manufactured for use in aircraft shall be accompanied by printed instructions in English that provide a step-by-step procedure, including diagrams, for installing the system in aircraft passenger seats, securing a child in the system when it is installed in aircraft, and adjusting the system to fit the child.

S8.2 *Inversion test.* When tested in accordance with S8.2.1 through S8.2.5, each child restraint system manufactured for use in aircraft shall meet the requirements of S8.2.1 through S8.2.6. The manufacturer may, at its option, use any seat which is a representative aircraft passenger seat within the meaning of S4. Each system shall meet the requirements at each of the restraint's seat back angle adjustment positions and restraint belt routing positions, when the restraint is oriented in the direction recommended by the manufacturer (e.g., facing forward, rearward or laterally) pursuant to S8.1, and tested with the test dummy specified in S7. If the manufacturer recommendations do not include instructions for orienting the restraint in aircraft when the restraint seat back angle is adjusted to any position, position the restraint on the aircraft seat by following the instructions (provided in accordance with S5.6) for orienting the restraint in motor vehicles.

S8.2.1 A standard seat assembly consisting of a representative aircraft passenger seat shall be positioned and adjusted so that its horizontal and vertical orientation and its seat back angle are the same as shown in Figure 6.

S8.2.2 The child restraint system shall be attached to the representative aircraft passenger seat using, at the manufacturer's option, any Federal Aviation Administration approved aircraft safety belt, according to the restraint manufacturer's instructions for attaching the restraint to an aircraft seat. No supplementary anchorage belts or tether straps may be attached; however, Federal Aviation Administration approved safety belt extensions may be used.

S8.2.3 In accordance with S10, place in the child restraint any dummy specified in S7 for testing systems for use by children of the heights and weights for which the system is recommended in accordance with S5.5 and S8.1.

S8.2.4 If provided, shoulder and pelvic belts that directly restrain the dummy shall be adjusted in accordance with S6.1.2.

S8.2.5 The combination of representative aircraft passenger seat, child restraint, and test dummy shall be rotated forward around a horizontal axis which is contained in the median transverse vertical plane of the seating surface portion of the aircraft seat and is located 25 mm below the bottom of the seat frame, at a speed of 35 to 45 degrees per second, to an angle of 180 degrees. The rotation shall be stopped when it reaches that angle and the seat shall be held in this position for three seconds. The child restraint shall not fall out of the aircraft safety belt nor shall the test dummy fall out of the child restraint at any time during the rotation or the three second period. The specified rate of rotation shall be attained in not less than one half second and not more than one second, and the rotating combination shall be brought to a stop in not less than one half second and not more than one second.

S8.2.6 Repeat the procedures set forth in S8.2.1 through S8.2.4. The combination of the representative aircraft passenger seat, child restraint, and test dummy shall be rotated sideways around a horizontal axis which is contained in the median longitudinal vertical plane of the seating surface portion of the aircraft seat and is located 25 mm below the bottom of the seat frame, at a speed of 35 to 45 degrees per second, to an angle of 180 degrees. The rotation shall be stopped when it reaches that angle and the seat shall be held in this position for three seconds. The child restraint shall not fall out of the aircraft safety belt nor shall the test dummy fall out of the

child restraint at any time during the rotation or the three second period. The specified rate of rotation shall be attained in not less than one half second and not more than one second, and the rotating combination shall be brought to a stop in not less than one half second and not more than one second.

S9 *Dummy clothing and preparation.*

S9.1 *Type of clothing.*

(a) *Newborn dummy.* When used in testing under this standard, the dummy is unclothed.

(b) *Nine-month-old dummy.* When used in testing under this standard, the dummy is clothed in terry cloth polyester and cotton size 1 long sleeve shirt and size 1 long pants, with a total mass of 0.136 kg.

(c) *Three-year-old and six-year-old dummies.* When used in testing under this standard, the dummy is clothed in thermal knit, waffle-weave polyester and cotton underwear or equivalent, a size 4 long-sleeved shirt (3-year-old dummy) or a size 5 long-sleeved shirt (6-year-old dummy) having a mass of 0.090 kg, a size 4 pair of long pants having a mass of 0.090 kg, and cut off just far enough above the knee to allow the knee target to be visible, and size 7M sneakers (3-year-old dummy) or size 12 ½M sneakers (6-year-old dummy) with rubber toe caps, uppers of dacron and cotton or nylon and a total mass of 0.453 kg.

S9.2 *Preparing clothing.* Clothing other than the shoes is machined-washed in 71° C to 82° C and machine-dried at 49° C to 60° C for 30 minutes.

S9.3 *Preparing dummies.* Before being used in testing under this standard, dummies must be conditioned at any ambient temperature from 19° C to 25.5° C and at any relative humidity from 10 percent to 70 percent for at least 4 hours.

S10 *Positioning the dummy and attaching the system belts.*

S10.1 *Car beds.*

Place the test dummy in the car bed in the supine position with its midsagittal plane perpendicular to the center SORL of the standard seat assembly, in the case of an add-on car bed, or perpendicular to the longitudinal axis of the specific vehicle shell or the specific vehicle, in the case of a built-in car bed. Position the dummy within the car bed in accordance with the instructions for child positioning that the bed manufacturer provided with the bed in accordance with S5.6.

S10.2 *Restraints other than car beds.*

S10.2.1 *Newborn dummy and nine-month-old dummy.* Position the test dummy according to the instructions for child positioning that the manufacturer provided with the system under S5.6.1 or S5.6.2, while conforming to the following:

(a) Prior to placing the 9-month-old test dummy in the child restraint system, place the dummy in the supine position on a horizontal surface. While placing a hand on the center of the torso to prevent movement of the dummy torso, rotate the dummy legs upward by lifting the feet 90 degrees. Slowly release the legs but do not return them to the flat surface.

(b)(1) When testing forward-facing child restraint systems, holding the 9-month-old test dummy torso upright until it contacts the system's design seating surface, place the 9-month-old test dummy in the seated position within the system with the mid-sagittal plane of the dummy head—

(i) Coincident with the center SORL of the standard seating assembly, in the case of the add-on child restraint system, or

(ii) Vertical and parallel to the longitudinal center line of the specific vehicle shell or the specific vehicle, in the case of a built-in child restraint system.

(b)(2) When testing rear-facing child restraint systems, place the newborn or 9-month old dummy in the child restraint system so that the back of the dummy torso contacts the back support surface of the system. For a child restraint system which is equipped with a fixed or movable surface described in S5.2.2.2 which is being tested under the conditions of test configuration II, do not attach any of the child restraint belts unless they are an integral part of the fixed or movable surface. For all other child restraint systems and for a child restraint system with a fixed or movable surface which is being tested under the conditions of test configuration I, attach all appropriate child restraint belts and tighten them as specified in S6.1.2. Attach all appropriate vehicle belts and tighten them as specified in S6.1.2. Position each movable surface in accordance with the instructions that the manufacturer provided under S5.6.1 or S5.6.2. If the dummy's head does not remain in the proper position, it shall be taped against the front of the seat back surface of the system by means of a single thickness of 6 mm-wide paper masking tape placed across the center of the dummy's face.

(c)(1) When testing forward-facing child restraint systems, extend the arms of the 9-month-old test dummy as far as possible in the upward vertical direction. Extend the legs of the 9-month-old dummy as far as possible in the forward horizontal direction, with the dummy feet perpendicular to the centerline of the lower legs. Using a flat square surface with an area of 2580 square mm, apply a force of 178 N, perpendicular to:

(i) The plane of the back of the standard seat assembly, in the case of an add-on system, or

(ii) The back of the vehicle seat in the specific vehicle shell or the specific vehicle, in the case of a built-in system, first against the dummy crotch and then at the dummy thorax in the midsagittal plane of the dummy. For a child restraint system with a fixed or movable surface described in S5.2.2.2, which is being tested under the conditions of test configuration II, do not attach any of the child restraint belts unless they are an integral part of the fixed or movable surface. For all other child restraint systems and for a child restraint system with a fixed or movable surface which is being tested under the conditions of test configuration I, attach all appropriate child restraint belts and tighten them as specified in S6.1.2. Attach all appropriate vehicle belts and tighten them as specified in S6.1.2. Position each movable surface in accordance with the instructions that the manufacturer provided under S5.6.1 or S5.6.2.

(c)(2) When testing rear-facing child restraints, position the newborn and 9-month-old dummy arms and legs vertically upwards and then rotate each arm and leg downward toward the dummy's lower body until the arm contacts a surface of the child restraint system or the standard seat assembly in the case of an add-on child restraint system, or the specific vehicle shell or the specific vehicle, in the case of a built-in child restraint system. Ensure that no arm is restrained from movement in other than the downward direction, by any part of the system or the belts used to anchor the system to the standard seat assembly, the specific shell, or the specific vehicle.

S10.2.2 *Three-year-old and six-year-old test dummy.* Position the test dummy according to the instructions for child positioning that the restraint manufacturer provided with the system in accordance with S5.6.1 or S5.6.2, while conforming to the following:

(a) Holding the test dummy torso upright until it contacts the system's design seating surface, place the test dummy in the seated position within the system with the midsagittal plane of the test dummy head—

(1) Coincident with the center SORL of the standard seating assembly, in the case of the add-on child restraint system, or

(2) Vertical and parallel to the longitudinal center line of the specific vehicle, in the case of a built-in child restraint system.

(b) Extend the arms of the test dummy as far as possible in the upward vertical direction. Extend the legs of the dummy as far as possible in the forward horizontal direction, with the dummy feet perpendicular to the center line of the lower legs.

(c) Using a flat square surface with an area of 2580 square millimeters, apply a force of 178 N, perpendicular to:

(1) The plane of the back of the standard seat assembly, in the case of an add-on system, or

(2) The back of the vehicle seat in the specific vehicle shell or the specific vehicle, in the case of a built-in system, first against the dummy crotch and then at the dummy thorax in the midsagittal plane of the dummy. For a child restraint system with a fixed or movable surface described in S5.2.2.2, which is being tested under the conditions of test configuration II, do not attach any of the child restraint belts unless they are an integral part of the fixed or movable surface. For all other child restraint systems and for a child restraint system with a fixed or movable surface which is being tested under the conditions of test configuration I, attach all appropriate child restraint belts and tighten them as specified in S6.1.2. Attach all appropriate vehicle belts and tighten them as specified in S6.1.2. Position each movable surface in accordance with the instructions that the manufacturer provided under S5.6.1 or S5.6.2.

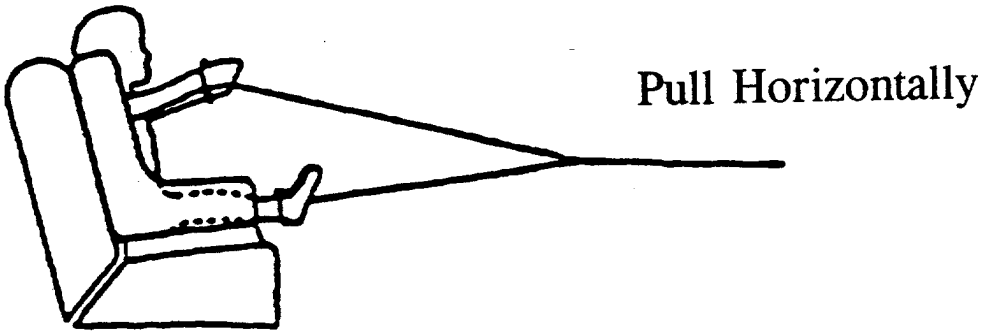
* * * * *

Figure 4 to § 571.213 [Amended]

3. Figure 4 at the end of § 571.213 is revised to read as follows:

BILLING CODE 4910–59–P

a)



b)

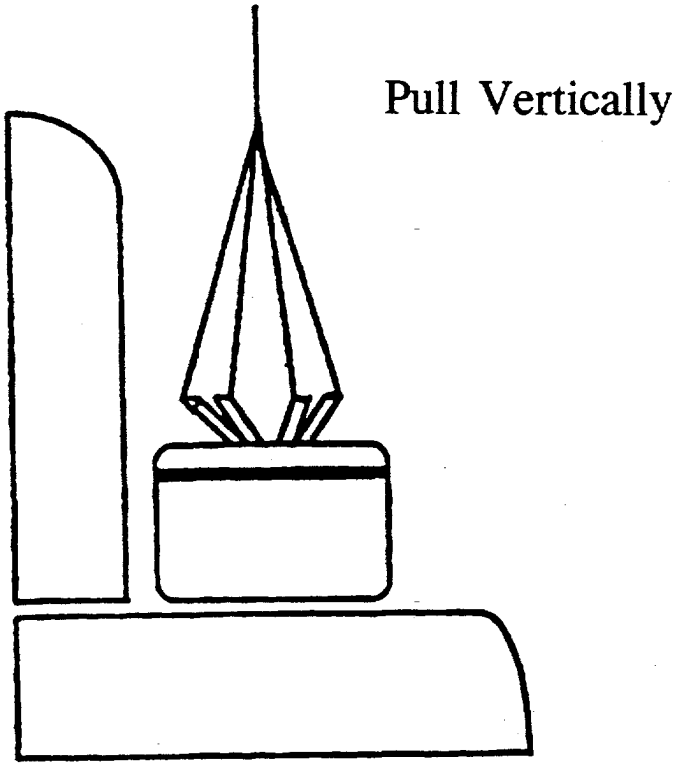


FIGURE 4 - Buckle Release Test

Issued on: June 26, 1995.

Ricardo Martinez,

Administrator.

[FR Doc. 95–16102 Filed 7–5–95; 8:45 am]

BILLING CODE 4910–59–C

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 672

[Docket No. 950509041–5041–01; I.D. 062995A]

Groundfish of the Gulf of Alaska; Northern Rockfish in the Western Regulatory Area

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Termination of a closure.

SUMMARY: NMFS is opening directed fishing for northern rockfish in the Western Regulatory Area in the Gulf of Alaska (GOA). This action is necessary to attain the total allowable catch (TAC) for northern rockfish in this area.

EFFECTIVE DATE: 12 noon, Alaska local time (A.l.t.), July 3, 1995, until 12 midnight, A.l.t., December 31, 1995.

FOR FURTHER INFORMATION CONTACT: Andrew N. Smoker, 907–586-7228.

SUPPLEMENTARY INFORMATION: The groundfish fishery in the GOA exclusive economic zone is managed by NMFS according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson Fishery Conservation and Management Act. Fishing by U.S. vessels is governed by regulations implementing the FMP at 50 CFR parts 620 and 672.

In accordance with § 672.20(c)(1)(ii)(B), the annual TAC for northern rockfish in the Western Regulatory Area was established by the final 1995 harvest specifications of groundfish (60 FR 8470, February 14, 1995) as 640 metric tons (mt). At the same time, the directed fishery for northern rockfish in the Western Regulatory Area was closed under § 672.20(c)(2)(ii) in order to reserve amounts anticipated to be needed for incidental catch in other fisheries (60 FR 8470, February 14, 1995).

The Director, Alaska Region, NMFS, has determined that the 1995 TAC for northern rockfish in the Western Regulatory Area has not been reached; as of June 10, 1995, 623 mt remain unharvested. Therefore, NMFS is terminating the closure and opening directed fishing for northern rockfish in the Western Regulatory Area.

All other closures remain in full force and effect.

Classification

This action is taken under 50 CFR 672.20 and is exempt from review under E.O. 12866.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: June 29, 1995.

Richard H. Schaefer,

Director, Office of Fisheries Conservation and Management, National Marine Fisheries Service.

[FR Doc. 95–16470 Filed 6–29–95; 4:12 pm]

BILLING CODE 3510–22–F

50 CFR Part 672

[Docket No. 950206041–5041–01; I.D. 062995C]

Groundfish of the Gulf of Alaska; Pollock in Statistical Area 61

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Closure.

SUMMARY: NMFS is closing the directed fishery for pollock in Statistical Area 61 in the Gulf of Alaska (GOA). This action is necessary to prevent exceeding the third quarterly allowance of the total allowable catch (TAC) for pollock in this area.

EFFECTIVE DATE: 12 noon, Alaska local time (A.l.t.), July 2, 1995, until 12 noon, A.l.t., October 1, 1995.

FOR FURTHER INFORMATION CONTACT: Andrew N. Smoker, 907–586-7228.

SUPPLEMENTARY INFORMATION: The groundfish fishery in the GOA exclusive economic zone is managed by NMFS according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson Fishery Conservation and Management Act. Fishing by U.S. vessels is governed by regulations implementing the FMP at 50 CFR parts 620 and 672.

The third quarterly allowance of pollock TAC in Statistical Area 61 is 7,595 metric tons (mt) (60 FR 8470, February 14, 1995), determined in accordance with § 672.20(a)(2)(iv).

The Director, Alaska Region, NMFS (Regional Director), has determined, in accordance with § 672.20(c)(2)(ii), that the 1995 third quarterly allowance of pollock TAC in Statistical Area 61 soon will be reached. Therefore, the Regional Director has established a directed fishing allowance of 6,835 mt after determining that 760 mt will be taken as incidental catch in directed fishing for other species in Statistical Area 61 in the GOA. Consequently, NMFS is prohibiting directed fishing for pollock in Statistical Area 61 in the GOA.

Directed fishing standards for applicable gear types may be found in the regulations at § 672.20(g).

Classification

This action is taken under 672.20 and is exempt from review under E.O. 12866.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: June 30, 1995.

Richard H. Schaefer,

Director, Office of Fisheries Conservation and Management, National Marine Fisheries Service.

[FR Doc. 95–16607 Filed 6–30–95; 3:15 pm]

BILLING CODE 3510–22–F

50 CFR Part 672

[Docket No. 950206041–5041–01; I.D. 062995D]

Groundfish of the Gulf of Alaska; Pollock in Statistical Area 63

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Closure.

SUMMARY: NMFS is prohibiting directed fishing for pollock in Statistical Area 63 in the Gulf of Alaska (GOA). This action is necessary to prevent exceeding the third quarterly allowance of the total allowable catch (TAC) for pollock in this area.

EFFECTIVE DATE: 12 noon, Alaska local time (A.l.t.), July 5, 1995, until 12 noon, A.l.t., October 1, 1995.

FOR FURTHER INFORMATION CONTACT: Andrew Smoker, 907–586-7228.

SUPPLEMENTARY INFORMATION: The groundfish fishery in the GOA exclusive economic zone is managed by NMFS according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson Fishery Conservation and Management Act. Fishing by U.S. vessels is governed by regulations implementing the FMP at 50 CFR parts 620 and 672.

The third quarterly allowance of pollock TAC in Statistical Area 63 is 4,078 metric tons (mt) (60 FR 8470,