

restraint system shall provide head restraint by means of a continuous seat back. Subsection (a) of S5.2.1.1 specifies that for child restraints recommended for use by children weighing less than 20 lb, the height of the seat back must be not less than 18 inches. If a restraint were recommended for children weighing 20 to 40 lb, the seat back height must be not less than 20 inches.

Some rear-facing infant car seat/carriers, which are designed with a handle for toting the infant outside of the vehicle, are recommended for use with infants weighing only up to 20 lb. Under current S5.2.1.1, these restraints (recommended for children up to 20 lb) must have a seat back of a height of not less than 18 inches. This final rule amends S5.2.1.1 to require these restraints to have a seat back height of not less than 20 inches.

The agency proposed to use the CRABI dummy in place of the 9-month-old dummy in all tests in which the latter dummy is used, including tests of rear-facing infant car seat/carriers. Thus, it was proposed that the CRABI (at 22 lb) would be used to test car seat/carriers. Comments were requested on the appropriateness of using the CRABI dummy to test infant car seat/carriers recommended for children up to 20 lb, when the 22-lb dummy is heavier than the children recommended for the restraints. Comments were requested on whether all infant car seat/carriers have back supports that are high enough to support the CRABI.

No commenter opposed the use of the CRABI in place of the 9-month old dummy, but some issues were raised about possible effects of using the dummy to test infant seats. Graco suggested that S5.2.1.1 could be deleted, for lack of a safety need, if Standard No. 213 were amended to specify use of the CRABI dummy to assess the ability of a rear-facing restraint to limit the rearward excursion of the dummy in Standard No. 213's dynamic test (S5.1.3.2).<sup>14</sup> Evenflo stated that several infant-only restraints do not have backs high enough to support the CRABI 12-month-old dummy. The commenter suggested that replacement of the 9-month-old dummy by the CRABI in 4 years would help minimize the financial impact to child restraint manufacturers.

In response to Graco, NHTSA agrees that S5.2.1.1 and S5.1.3.2 both provide protection to a rear-facing child in a frontal impact by limiting occupant excursion outside of the confines of the restraint system. However, the agency is unable to conclude that the two requirements serve the same safety need for rear-facing restraints. S5.2.1.1 specifies seat back height and width requirements and also limits how far rearward the test dummy's head may rotate during dynamic testing. These requirements may provide protection in dynamic conditions other than that replicated by the Standard No. 213 sled test. A child restraint might be able to meet S5.1.3.2 with a seat back that is lower or narrower than that specified by S5.2.1.1. Deleting S5.2.1.1's requirements for rear-facing restraints could reduce some of the current protections afforded by child restraints. Thus, the agency declines to delete S5.2.1.1.

At the same time, however, the agency has concluded that with the incorporation of the CRABI dummy into the standard, amendments to S5.2.1.1 are in order. Information indicates that infants should be positioned rear-facing until at least 12-months old, until such time their neck and muscular structure are developed to more adequately support their head. If rear-facing infant seats were recommended for use with an infant until the infant weighs 22 lb, there is a greater likelihood that parents will keep their infants in the rear-facing restraint until the infant reaches or is closer to reaching 12 months of age than if the restraint were only recommended for infants up to 20 lb. (The agency believes that many infants are positioned forward-facing in a toddler restraint after being transitioned out of a rear-facing car seat/carrier, and that many of these infants are not developmentally ready to be forward-facing in the vehicle.)

The agency is amending S5.2.1.1(a) to encourage the production of rear-facing infant car seat/carriers that are recommended for use by infants up to 12 months in age. The agency is amending the table in S5.2.1.1(a) such that infant car seat/carriers must have a minimum seat back height of 20 inches.<sup>15</sup> The effect of this is to require all rear-facing infant restraints to be large enough for an average 12-month-old. As a practical matter, this is not a drastic change. Seventy-five percent of the infant-only seats that have been

evaluated in the agency's ease-of-use ratings program were certified for children weighing up to 22 lb and thus already are manufactured with 20-inch seat backs.

This final rule does not require manufacturers to recommend on the labels accompanying infant restraints that the restraints are recommended for infants up to 22 lb, but provides the incentive for them to do so. Because the 22-lb CRABI will be the test instrument used in compliance tests of the infant seats, and because under S5.2.1.1(a) the infant seats must have a minimum seat back of 20 inches, the agency believes that manufacturers will certify most if not all infant restraints to 22 lb.

The agency is providing for a 2-year leadtime for this change. Evenflo stated that several models of infant-only restraints do not have backs high enough to support the CRABI 12-month-old dummy and will thus have to be redesigned. Evenflo suggested that replacement of the 9-month-old dummy by the CRABI in 4 years would help minimize the financial impact to child restraint manufacturers. JPMA suggested a 3 year leadtime. NHTSA declines to provide such long leadtimes suggested by Evenflo and JPMA because there could be safety benefits associated with keeping more infants rear-facing until they are at least 12-months old, which could result from the change to the CRABI and to S5.2.1.1 of Standard No. 213. The short deadlines of the TREAD Act also indicate Congress's interest in having the standard be upgraded as quickly as possible. The 2-year leadtime NHTSA is providing balances the safety benefits with the need for some child restraint manufacturers to modify some of their seats.

*ii. Padding Requirement.* The agency asked for comment on deleting S5.2.3, which specifies a padding requirement for child restraints used by children weighing less than 22 lb. The agency had specified the requirement (whose thickness and static compression specifications are compliance-tested statically) because there was no instrumented infant test dummy available at the time (1979) the requirement was adopted. The agency's goal was to establish dynamic test requirements for infant restraints, so that the total energy absorption capability of the padding and underlying structure could be measured. (44 FR 72131, 72135). Graco and Xportation supported deleting S5.2.3. Since today's final rule incorporates use of the instrumented CRABI 12-month-old dummy for use in testing restraints recommended for children under 22 lb, we are deleting S5.2.3, as proposed.

<sup>14</sup> Under S7.1(c) of Standard No. 213, child restraints recommended for use by children weighing 22 to 27 lb are tested with the 3-year-old (33 lb) dummy. Graco suggested that a weighted CRABI 12-month-old or an 18-month-old dummy be used instead of the 3-year-old dummy. Given the agency's resources and the safety issues before the agency, NHTSA will not be undertaking rulemaking at this time on the weighted CRABI or on an 18-month-old dummy.

<sup>15</sup> More specifically, the section is amended to specify that restraints certified for children weighing less than 40 lb must have a minimum seat back height of 20 inches.