

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Parts 91, 121, 125, and 135****[Docket No. 28229; Amendment No. 91-250, 121-255, 125-26, 135-62]****RIN 2120-AF52****Child Restraint Systems****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule.

SUMMARY: This action withdraws FAA approval for the use of booster seats and vest- and harness-type child restraint systems in aircraft during takeoff, landing, and movement on the surface. In addition, this action emphasizes the existing prohibition in all aircraft against the use of lap held child restraint systems (including belly belts). This action is needed because the FAA has determined that, during an aircraft crash, the banned devices may put children in a potentially worse situation than the allowable alternatives.

EFFECTIVE DATE: September 3, 1996.**FOR FURTHER INFORMATION CONTACT:**

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SUPPLEMENTARY INFORMATION:**Background**

The FAA is concerned about the safety of children who use certain forms of child restraint systems aboard aircraft. In 1992, the FAA set forth in §§ 91.107(a), 121.311(b), 125.211(b), and 135.128(a) the child restraint systems acceptable for use in aircraft by imposing labeling requirements and certain use requirements. Since that time the FAA has supplemented these rules with advisory material and with a public information leaflet entitled, "Child/Infant Safety Seats Recommended for Use in Aircraft."

In September 1994, the FAA issued a report entitled, "The Performance of Child Restraint Devices in Transport Airplane Passenger Seats" (the "CAMI" study). The study found that, as a class of child restraint devices, shield-type booster seats, in combination with other factors, contributed to an abdominal pressure measurement higher than in other means of protection while not preventing a head impact. The study found that fundamental design characteristics of shield-type booster seats made their belt paths incompatible

with aircraft seat belts. In addition, the study found that vest- and harness-type devices allowed excessive forward body excursion, resulting in the test dummy sliding off the front of the seat with a high likelihood of the child's entire body impacting the seat back of the seat directly in front of it. Rebound acceleration presented further risk of injury. Also, the study found that belly belts allowed the test dummy to make severe contact with the back of the seat in the row in front of the test dummy and that a child may be crushed by the forward bending motion of the adult to whom the child is attached. The research involved dynamic impact tests with a variety of certified child restraints installed in transport airplane passenger seats at the 16g peak loads required in 14 CFR § 25.562(b)(2). Some of the tests of child restraint systems were configured to represent a typical multi-row seat installation and included testing the effects of the occupant impact against the backs of seats. The tests investigated transport airplane passenger seat compatibility with child restraints. A copy of the study is included in the rulemaking docket established for this rulemaking.

On May 19, 1995, the FAA issued Notice of Proposed Rulemaking (NPRM) No. 95-7 (60 FR 30690, June 9, 1995). The NPRM proposed to withdraw FAA approval for the use of booster seats and vest- and harness-type child restraint systems in aircraft during takeoff, landing, and movement on the surface. In addition, the NPRM emphasized the existing prohibition against the use in all aircraft of lap-held child restraint systems (including belly belts). The rule language adopted by this final rule has not been changed from the rule language that was proposed.

Also, in June 1995, the FAA issued a Report to Congress concerning Child Restraint Systems. A copy of this report is included in the rulemaking docket established for this rulemaking.

Under present regulations a child who has not reached his or her second birthday (infant) is not required to have a separate seat aboard an aircraft. This means that the person accompanying an infant may choose to hold the infant during flight. If the accompanying adult wishes to put the infant in a child restraint system on a passenger seat, the airline may require the adult to purchase a separate ticket for the infant. Whether or not the airline requires the purchase of a ticket for the infant, a separate passenger seat is required if a child restraint is to be used (14 CFR §§ 121.311(c), 125.211(c), and 135.128(b)).

The provisions of §§ 91.107, 121.311, 125.211, and 135.128 identify those child restraints that are approved for use aboard aircraft. These child restraint provisions also apply whenever a child restraint is used for a child 2 years old or older who is required to have a separate seat on the aircraft. A child 2 years old or older must either be properly secured in an approved child restraint or properly secured with a safety belt in a passenger seat.

The FAA's 1992 determination as to which child restraint systems would be approved for use aboard aircraft was based on many years of work by both the FAA and the National Highway Traffic Safety Administration (NHTSA). In the 1970's, NHTSA adopted dynamic testing requirements for child restraint systems for use in automobiles. In the mid 1980's, the FAA and NHTSA undertook an effort to develop a common approach to the approval of child restraints for aircraft use. Federal Motor Vehicle Safety Standard (FMVSS) No. 213 (49 CFR § 571.213) was amended to provide criteria for manufacturers' self-certification of child restraints that were appropriate for both aircraft and automobiles.

FMVSS No. 213, as revised, is the current U.S. standard, and has allowed hundreds of models of seats to be approved, including booster-type child restraint systems ("booster seats") and vest- and harness-type devices. The current FAA child restraint rules do not specifically refer to FMVSS No. 213. However, FMVSS No. 213 is the basis for the labels required under the FAA rules.

The current FAA rules on child restraint systems permit the use of child restraint systems only if they bear a proper label(s), meet certain use requirements, and meet adult accompaniment requirements.

Approved labels fall into three categories as follows:

1. Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear a label that states "This child restraint system conforms to all applicable Federal motor vehicles safety standards." However, vest- and harness-type child restraint systems manufactured before February 26, 1985, are not approved for use on aircraft even if they bear this label.

2. Seats manufactured to U.S. standards on or after February 26, 1985, must bear the following two labels:

(i) "This child restraint system conforms to all applicable Federal motor vehicle safety standards"; and
(ii) "THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT", in red lettering.

3. Seats that are not manufactured to approved U.S. standards must bear either a label showing approval of a foreign government or a label showing that the seats were manufactured under the standards of the United Nations. While the current rule language disallows vest- and harness-type child restraint systems manufactured before February 26, 1985, some of these systems manufactured after that date meet U.S., foreign government, or United Nations requirements.

The use requirements for child restraint systems are as follows:

1. The restraint system must be properly secured to an approved forward-facing seat or berth;
2. The child must be properly secured in the restraint system and must not exceed the specified weight limit for the restraint system; and
3. The restraint system must bear the appropriate label(s).

Because lap held child restraint systems (belly belts) are not secured to a forward-facing seat or berth, but instead are secured to the adult, they cannot be used under existing rules. Nonetheless, the FAA has decided that it is important to emphasize this prohibition and has added clarifying language to the existing rules.

The adult accompaniment provisions for child restraint systems require that the child be accompanied by a parent, guardian, or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight.

Discussion of Comments

The FAA received ten comments in response to the proposed rule. The comments were received from Little Cargo, Inc., a child restraint manufacturer; the Association of Flight Attendants (AFA); the Air Transport Association of America (ATA); United Air Lines, Inc. (UAL); two members of the Asia Pacific Cabin Safety Working Group (APCS Working Group); Cosco, Inc., a child restraint manufacturer; the United Kingdom's Civil Aviation Authority (CAA); the Joint Aviation Authorities (JAA); and an individual parent.

UAL supported the proposal, but stated that the effective date of any new regulations should be consistent with reasonable recurrent training schedules. In addition, UAL stated that changes in staff training would result in added costs to air carriers, but they did not quantify these costs.

FAA Response: The FAA has determined that the regulations should be effective in 90 days. UAL did not suggest a specific time frame in its comment, but the FAA has determined

that a 90-day effective date should afford air carriers sufficient time to get the necessary information to all affected flight crewmembers and that it is unnecessary to synchronize the dissemination of this information with recurrent training. No data were presented by UAL or other commenters on any cost issues. Compliance costs, however, are discussed in the economic analysis set out in this preamble.

AFA, while supporting the proposal, stated that it continues to actively pursue the mandatory use of child restraint devices. In addition, AFA disagreed with the FAA assertion that if parents must purchase a separate seat to use an approved child restraint device, they would drive rather than fly. They stated that the FAA assumptions on this issue are unrealistic and flawed and do not take into account the impact of low-cost airlines and their enormous appeal to the family/tourist end of the travel market. The AFA stated that a family who is predisposed to buy a ticket would go ahead and purchase a separate ticket to use with an approved and recommended child restraint device.

FAA Response: The FAA has evaluated the costs and benefits associated with child restraint devices three times since 1990. The first report was prepared in 1990, the second report in 1993, and the third report in June 1995. AFA's comment was based on information contained in the second report. The third report, submitted to Congress on June 7, 1995, analyzed alternative scenarios. The scenario analyses concluded that if any significant charge is made for infant occupancy of a seat, the expected result is diversion to automobiles and a net increase in infant and adult fatalities and injuries. The study referenced by AFA was based on information from the second report. The AFA study simply documented observed market behavior associated with the entry of low cost carriers into a market and found that average fares fall and passenger volume increases. These findings are consistent with the FAA's findings and conclusions in all three studies on this issue. In addition, the FAA agrees with the AFA that a family who is predisposed to buy a ticket would purchase a separate ticket to use with an approved and recommended child restraint device. The above studies, however, indicate that very few families seem predisposed to purchasing tickets for their infants.

ATA commented that it was concerned about enforcement issues caused by labels in a foreign language and the problem of determining whether a child is within the weight restrictions

for a restraint system. The ATA is also concerned about the overall effectiveness of child restraint systems. In addition, ATA stated that steps must be taken to address the problem of inconsistent FAA guidance and recommended that industry bodies assist the FAA in identifying possible problem areas before they arise.

FAA Response: This rulemaking prohibits the use of booster seats and vest- and harness-type devices by children, even if they bear an approved label. Therefore, enforcement issues concerning labels in foreign languages are not relevant to this final rule. Nor is the question of whether the child is within the weight limits specified on the label.

The FAA acknowledges ATA's concern that there could be compliance problems concerning child restraint devices that bear labels indicating that they are certified for use aboard aircraft when in fact they are not approved for use aboard aircraft. A companion rule issued by NHTSA, published in today's Federal Register, amends a provision in FMVSS No. 213 that permits booster seats and vest- and harness-type devices to be certified for use in aircraft. In view of the FAA's decision to withdraw approval of booster seats and vest- and harness-type devices for use on aircraft, NHTSA believes continuing to permit the certification of those restraints for aircraft use will likely be confusing to the public. Accordingly, NHTSA's rule no longer permits those restraints to be certified for aircraft use, and instead requires manufacturers to label these restraints as not certified for use in aircraft. Also, in conjunction with this rulemaking, the FAA will embark on a public education program designed to provide parents with the information necessary to make an informed decision about the use of child restraint devices on aircraft. The FAA understands that parents may be confused when trying to determine what type of child restraint device is best for their child. If clear guidance is readily available to parents concerning child restraint devices for aircraft, the FAA expects that they will choose an approved device in order to provide the safest traveling environment for their children. The FAA needs the assistance of air carriers, however, to enforce the regulations.

With regard to the ATA's recommendation that industry bodies assist the FAA in identifying possible problem areas before they arise, the FAA always welcomes input from industry and will continue to seek such input on this issue. In response to ATA's concern about inconsistent internal FAA guidance, the FAA notes

that information contained in Flight Standards Information Bulletins, Advisory Circulars, etc., will be reviewed to ensure that they correctly reflect the new requirements in this rulemaking, so there should not be any conflicts.

Little Cargo stated that vest- and harness-type devices should not be prohibited until the FAA gathers additional information and performance data on them. It is concerned that the FAA's decision to ban vest- and harness-type devices was based on inadequate testing and that such restraints could be modified to perform satisfactorily. Little Cargo stated that the prohibition of vest- and harness-type devices was based primarily on one uninstrumented test in contrast to the breadth of tests conducted on the other types of child restraint devices.

FAA Response: In response to Little Cargo's concern that only one type of test was performed on the vest- and harness-type device, the FAA notes that during dynamic testing, unacceptable head and body excursions and vertical displacement of the anthropomorphic test dummy was observed to the extent that the type of instrumented tests that other child restraint devices underwent was deemed not necessary for the harness. If the unsafe characteristics that all these devices share change in the future, the prohibition can be re-examined.

Little Cargo also stated that the FAA has significant performance concerns with all available forward facing child restraints, but is only prohibiting certain categories of these devices, including vest- and harness-type devices.

FAA Response: When considering which, if any, child restraint devices should be prohibited, the FAA looked at the alternatives available for children within the weight limits specified by child restraint manufacturers. The FAA has determined that most children who are within the weight specifications of booster seats (30 to 60 pounds) would be better protected in a passenger seat lap belt than in a booster seat because there would be less abdominal loading in a lap belt. For a child in the 30 to 60 pound range, a lap belt should remain across the pelvis and not directly load the abdomen. Because forward facing devices have rigid backs, unlike booster seats, the FAA has determined that children in the 30 to 40 pound range would be better protected in a forward facing device than in a booster seat because there is a decreased risk of abdominal loading in a forward facing device than in a booster seat. In addition, the FAA determined that children who are within the

manufacturer's weight specifications of vest- and harness-type devices (25 to 50 pounds) would be better protected in a passenger seat lap belt or a forward facing child restraint device than in a vest- and harness-type device. Forward facing child restraint devices are designed for children from 20 to 40 pounds. While some forward facing child restraint devices do not provide a desired level of protection in a worst case survivable aircraft crash, there are no better alternative availables at this time. Also, because forward facing devices and passenger seat lap belts prevent the extreme body excursions observed in the harness test, most children within this weight specification for vest- and harness-type devices (25 to 50 pounds) would be better protected in either forward facing devices or lap belts.

In addition, Little Cargo stated that, in Notice No. 95-7, the FAA concluded that children weighing between 25 and 50 pounds, and even children under 2 years old, would be safer in a passenger seat lap belt than in a vest restraint. Little Cargo is concerned that using lap belts as the sole restraining device places enhanced stress on a child's abdomen that could lead to injury.

FAA Response: While the FAA stated that, if a child under 2 falls in the weight use limits recommended by vest and harness manufacturers, the child would be safer in a passenger seat restrained by a lap belt than in a vest- or harness-type device if no other approved device were available, the FAA went on to state that a child falling within the weight limits of a vest- or harness-type device (25 to 40 pounds), would be better protected in a forward facing child restraint device than in a lap belt. In addition, the study noted that the lap belt remained across the pelvis of the 24-month old dummy throughout the impact and did not appear to directly load the abdomen. Thus, CAMI testing indicates that Little Cargo's concerns about abdominal loading are unfounded.

Little Cargo also questioned whether the impact of excessive submarining is not potentially safer than the excessive head excursion/head strike observed with 6 out of 8 forward facing restraints. Similarly, Cosco questioned why there is more concern for abdominal loading than the high HIC levels evidenced in the forward facing child restraint devices.

FAA Response: While forward facing child restraint devices may not presently provide a desired level of protection in a worst case survivable aircraft crash, there are no better alternatives available at this time.

Although Little Cargo and Cosco questioned if submarining is better than the head injury threat seen with forward facing devices, it is important to note that neither the booster seats nor the vest- or harness-type device tested by CAMI performed in a manner that would prevent head impact. It is not correct to say there would be little or no risk of a head injury with booster seats or vest- or harness-type devices. CAMI testing clearly shows that booster seats do not protect the head because of an unacceptable degree of head excursion in an aircraft environment. Forward facing devices, with rigid backs, reduce the risk of exposure to abdominal injury when compared to booster seats. Forward facing devices offer protection from the risk of abdominal injury and, unlike vest- and harness-type devices, prevent excessive body excursion.

Cosco questioned the proposed ban since it was based on a small sampling of booster seats and vest- and harness-type devices. Cosco believes that the problems encountered with the vest- and harness-type device tested are solvable and that all such restraints should not be banned based on the experience of just one.

FAA Response: The FAA has determined that at this time all vest- and harness-type devices have certain inherent critical design factors that preclude them from performing adequately in an aircraft seat. The testing, while only performed on a small sample of such devices, confirmed the basic problems with the design of the devices.

In regard to the FAA's request for comments on whether abdominal loading by itself is a predictor of injury, Cosco stated that rulemaking cannot be predicated on abstract numbers when the baseline for serious injury is undetermined. Cosco also stated that shield-type booster seats keep lap belts off a child's stomach whereas lap belts might become repositioned over the stomach because children often move around so much while in the lap belt.

FAA Response: The FAA acknowledges that the baseline for serious injury from abdominal loading is undetermined. However, the CAMI study found that shield-type booster seats, in combination with other factors, contributed to an abdominal pressure measurement higher than in other means of protection. In certifying aircraft seats and belts, any evidence of abdominal loading is considered grounds for disapproving a design. For many years, the FAA has not approved any design of passenger restraint that showed evidence of imposing restraint loads on the abdomen. It is accepted

practice among restraint designers that the abdomen is not a load-carrying body segment. The unique nature of airline seats, where seat back breakover will cause a child in a booster seat to be crushed between the booster seat's shield and the crash forces of the adult in the row behind, are of sufficient concern to the FAA to prohibit the use of booster seats in aircraft during takeoff, landing, and movement on the surface.

The FAA notes that Cosco, like the FAA, seems concerned about the dangers of abdominal loading. In its comment, Cosco states that "in motor vehicles, children often move around so much that the lap belt becomes repositioned over the stomach, where it can cause serious injury in even a minor crash * * *. Therefore, a shield booster, which keeps the lap belt off the child's stomach would be a significant improvement in most cases * * *". In addition, Cosco states that shield-type booster seats, which keep a lap belt off a child's stomach, would be a significant improvement in rough landings, even if its crash protection were less than a lap belt alone (since survivable crashes are so rare).

FAA Response: Performance data on the effectiveness of child restraint devices in "rough landings" are not available. However, because aircraft seat belt anchor points are located considerably forward of their location in a car, it is unlikely that an aircraft seat belt will move up into a child's abdomen.

Cosco also stated that parents would be more willing to carry a small booster seat rather than a larger forward-facing child restraint device. Cosco believes that they are then more likely to have the appropriate restraint for the child when they reach their destination and it will be the one that they are familiar with. Cosco states that by banning booster seats, parents will be less likely to have an appropriate restraint for their children when they reach their destination.

FAA Response: The FAA would like to clarify that the rule as proposed and adopted prohibits the use of booster seats only during take off, landing, and movement on the surface. It does not prohibit their use inflight. Therefore, parents can consider their booster seats as carry on baggage, use the restraints during the cruise portion of flight, and still have them readily available when they reach their destination. These devices can be stowed in overhead bins, in coat closets, or in some cases under seats. Except for storing the devices during takeoff, landing, and movement on the surface, this process is no

different that the process a parent would go through before the prohibition. While the FAA encourages parents to use devices that may be used throughout the flight, the devices banned by this rule may be used during cruise.

Cosco also believes that parents may opt to fly with children on their laps rather than carry on a forward-facing or convertible child restraint device. They also stated that an educated parent would not buy a ticket in order to use an approved child restraint device instead of a vest- and harness-type device. They stated that a harness is much more convenient to carry around than a convertible forward-facing seat and therefore the parent may fly with a child or his/her lap rather than carry a convertible forward-facing seat. Little Cargo also expressed concerns that, when considering the alternatives of lap-holding a child, using the passenger seat lap belt alone, or bringing an approved convertible child restraint system, parents will likely not choose to carry on a bulky restraint.

FAA Response: While the FAA agrees with Cosco and Little Cargo that a vest- and harness-type device is probably easier to carry than a convertible forward facing child restraint device, for most parents the cost of an airline passenger seat for the infant is probably more important to the parent than the ease of carrying a child restraint device. Since the commenters did not provide any specific information or statistics on this issue, the FAA continues to believe that parents who are predisposed to buy a ticket for a separate airplane seat for use with a booster seat or vest- and harness-type device and who have received education on the effectiveness of the allowable alternatives in advance of purchasing tickets would purchase a ticket for a separate seat in order to use an approved and recommended child restraint device.

In addition, Cosco commented that, of the four booster seats tested, head excursions for two did not exceed the limits set forth in FMVSS No. 213.

FAA Response: Although Cosco stated that of the four booster seats tested, two did not exceed the limits of FMVSS No. 213, in actuality one of the two booster seats that supposedly did not exceed the limits of FMVSS No. 213 disintegrated during the test and could not be analyzed for head excursion. The fact that of the four booster seats tested, head excursion for one did not exceed the limits set forth in FMVSS No. 213 is not relevant to the decision to ban shield-type booster seats. As discussed earlier, seat back breakover, a unique feature of aircraft seats, presents a threat of abdominal injury. Backless booster

seats, by virtue of fundamental design characteristics, do not provide protection from this threat. That one of the four booster seats tested did not exceed the head strike envelope specified in FMVSS-213 has no bearing on the threat of abdominal injury.

Cosco also stated that the primary benefit of child restraints on aircraft is to restrain children in the event of turbulence. They stated that while certain types of child restraint devices do not perform well in crash situations, this should not preclude their overall use since crashes are rare while turbulence is not.

CAA was also concerned about prohibiting devices that can prevent injury in common occurrences such as flight turbulence.

FAA Response: The FAA is not prohibiting the use of booster seats and vest- and harness-type devices in cruise portions of flight. The FAA acknowledges that booster seats and vest- and harness-type devices might prevent injuries during turbulence and therefore is not prohibiting their use during cruise portions of flight.

Cosco stated that a design-restrictive ban precludes development of future products that may prove safe and would be more convenient for parents to use.

FAA Response: The FAA has determined that, at this time, booster seats and vest- and harness-type devices put children in a potentially worse situation than the allowable alternatives. If in the future a manufacturer designs such a device that the FAA determines is a safe alternative, it will review the prohibition. The FAA must, however, prohibit booster seats and vest- and harness-type devices at this time because of safety concerns. The FAA cannot delay this rule with the thought that a manufacturer might design a safe booster seat or vest- and harness-type device in the future or that such a ban precludes a manufacturer from developing future products that may prove safe and convenient.

CAA stated that in a significant proportion of the cases where passengers carry small children on aircraft, the alternative to travel by private car will not be viable, so these passengers will continue to travel by air, notwithstanding the additional cost. CAA also states that it is reasonable to conclude that there will be an increase in the number of people who will carry their children without any form of restraint if this continues to be permitted.

FAA Response: The FAA's 1995 study on the costs and benefits associated with child restraint devices addressed CAA's comment that the alternative to

travel by private car will not be viable, so passengers will continue to travel by air notwithstanding the additional cost. While the FAA agrees that a significant number of families taking long trips will continue to do so even if a charge is imposed for passenger seats occupied by infants, the scenario analyses concluded that if any significant charge is made for infant occupancy of a passenger seat, there will be some passenger diversion to automobiles and a net increase in infant and adult fatalities and injuries. The scenario analyses also concluded that families taking longer trips are less likely to divert to alternative modes of transportation than people taking shorter trips. The FAA agrees that there are cases where parents would fly rather than not take a trip because they do not have a practical second alternative to flying. In most cases, however, parents have an alternative to flying. In the 1995 report, the FAA again found that mandating child restraint devices could cause more deaths and injuries than it would prevent. Therefore, the FAA will not mandate the use of child restraint devices for children under 2 years old. A copy of the report is included in the docket established for this rulemaking. In addition, the FAA will pursue an education program to better inform parents about child restraint devices. If clear guidance is readily available to parents, the FAA expects that they will choose an approved device, rather than lap holding their children, in order to provide the safest traveling environment for their children.

CAA and JAA state that they permit the belly belt on the grounds that it provides a measure of protection to children and/or other passengers versus lap holding a child.

FAA Response: The FAA would like to emphasize that belly belts are not permitted under current regulations. Even if belly belts do provide some measure or protection, the CAMI study found that belly belts allowed the test dummy to make severe contact with the back of the seat in the row in front of the test dummy and that a child may be crushed by the forward bending motion of the adult to whom the child is attached. Consideration of revising this current prohibition is beyond the scope of the notice.

The JAA also stated that in a crash or severe air turbulence, parents are often unable to keep a lap-held child in their arms.

FAA Response: As discussed earlier, the FAA has determined that mandating child restraint devices could cause more deaths and injuries than it would prevent. However, the FAA does not encourage lap-holding children. The

FAA expects, with its education campaign providing clear guidance on child restraint devices, parents will choose an approved device, rather than lap holding their children, in order to provide the safest traveling environment for their children. The two members of the APCS Working Group submitted identical letters that discussed the need to mandate restraints for children. In addition, they stated that the FAA's argument that the extra cost to families caused by mandating child restraint devices would force them to less safe road travel is invalid since the same cost situation arises when the child is 3 or 4 or 10 years old.

FAA Response: The APCS Working Group's argument is that the extra cost to families of mandating child restraint devices is no more of a deterrent to air travel than the price of a ticket for a child of any age. However, the FAA notes that this argument does not take into account that ordinarily there is no charge for a lap-held child, whereas certificate holders very often do charge if a seat is requested for this infant. Thus, many people would switch to less safe automobile travel as a result of mandating child restraint usage because unlike most rulemakings where the compliance costs are passed along to all travelers, mandatory use of child restraint would impose compliance costs only on families with infants.

Other commenters raised comments that are beyond the scope of this rulemaking, such as providing design/certification standards for child restraint systems that are compatible with existing aircraft seat belt systems, revising FMVSS-213, changing anchor locations of seat belts, adopting performance standards for child restraint system, establishing a child restraint friendly section of aircraft with modified seats, and clarifying what types of restraints are acceptable.

Editorial Note

The rules, as adopted, make it clear that, while the certificate holder has the authority to provide a child restraint system, such a system must be one authorized by the rule. This is to avoid any misinterpretation of this provision as an exception to the prohibitions adopted in this final rule.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980 (Pub. L. 96-511), there are no requirements for information collection associated with this final rule.

Economic Analysis

Changes to Federal regulations are required to undergo several economic analyses. First, Executive Order 12866 directs each Federal agency to propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effect of regulatory changes on international trade. With respect to this regulation, the FAA has determined that it: (1) is "a significant regulatory action" as defined in the Executive Order; (2) is significant as defined in the Department of Transportation's Regulatory Policies and Procedures; (3) will not have a significant impact on a substantial number of small entities; and (4) will not constitute a barrier to international trade. The FAA does not believe that this regulation will impose any significant costs on the public. Therefore, a full regulatory analysis, which includes the identification and evaluation of cost-reducing alternatives to this regulation, has not been prepared. Instead, the agency has prepared a more concise analysis of this regulation that is presented in the following paragraphs.

Costs and Benefits

There will be some compliance costs associated with this regulation. This rule will reduce the types of child restraint systems that can be used during ground movement, takeoff, and landings by prohibiting the use of all booster seats and vest- and harness-type child restraint systems during these phases of a flight. The restrictions on the use of these devices will need to be incorporated into flight attendant training and included in flight manuals, and this will impose additional costs on air carriers. For a period of time after the rule becomes effective, there will also be some public education necessary and potential flight delays when flight attendant tell parents who brought prohibited child restraint devices on board the aircraft that the devices are banned for use during takeoff, landing, and movement on the ground. The FAA has determined that booster seats and vest- and harness-type devices put children in a potentially worse situation than the alternatives during an aircraft crash. According to the CAMI study, these child restraint systems do not securely hold a child in place in an aircraft crash, and may themselves even

cause harm to a child in the event of a crash. These types of accidents, while they rarely happen, usually occur during the takeoff or landing phases of a flight. Thus, prohibiting the use of these child restraint systems during takeoff and landing will enhance the child's safety, and the safety benefits will outweigh the slight compliance costs discussed above. Since it is impractical to expect flight attendants to monitor whether children are out of banned devices just prior to takeoff, the FAA is prohibiting the use of these devices during movement on the surface also.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily or disproportionately burdened by Federal regulations. The RFA requires a Regulatory Flexibility Analysis if a rule will have "a significant economic impact on a substantial number of small entities." FAA Order 2100.14A outlines FAA's procedures and criteria for implementing the RFA. Small entities are defined as independently owned and operated small businesses and small not-for-profit organizations.

This rule will impose some unquantified costs on air carriers. These costs include changing manuals and training flight attendants about the restrictions on the use of certain child restraint devices. Initially, there may be some public education necessary and possible flight delays when flight attendants tell parents or guardians that they may not use certain child restraint devices during ground movement, takeoff, or landing. However, the FAA believes that this rule will not have a significant economic impact on a substantial number of small entities.

International Trade Impact Assessment

This rule will not constitute a barrier to international trade, including the export of American goods and services to foreign countries and the import of foreign goods and services to the United States.

Federalism Implications

The regulations herein will not have substantial direct effects on the states, on the relationship between the national government and that of any state, or on the distribution of power and responsibilities among the various levels of government. The respondents affected by the amendments are private citizens, not state governments. Therefore, in accordance with Executive Order 12612, it is determined that this

regulation will not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

Because of the substantial interest of the public in this subject matter, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this regulation is a significant regulatory action under Executive Order 12866. For the same reason, this rule is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). In addition, it is certified that this rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. Because the economic impact of this rule is considered minimal, a formal regulatory evaluation has not been prepared.

List of Subjects

14 CFR Part 91

Aircraft, Aviation safety.

14 CFR Part 121

Air carriers, Aircraft, Aviation safety, Charter flights, Safety, Transportation.

14 CFR Part 125

Aircraft, Aviation safety.

14 CFR Part 135

Air taxis, Aircraft, Aviation safety.

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends parts 91, 121, 125, and 135 of the Federal Aviation Regulations (14 CFR parts 91, 121, 125, and 135) as follows:

PART 91—GENERAL OPERATING AND FLIGHT RULES

1. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120, 44101, 44111, 44701, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46502, 46504, 46506–46507, 47122, 47508, 47528–47531.

2. Section 91.107 is amended by removing the last sentence in paragraph (a)(3)(iii)(B)(1) immediately preceding the semicolon; by removing the final "and" in paragraph (a)(3)(iii)(B)(3); by revising paragraph (a)(3)(i); by revising the introductory text of paragraph (a)(3)(iii)(B); and by adding a new paragraph (a)(3)(iii)(B)(4) to read as follows:

§ 91.107 Use of safety belts, shoulder harnesses, and child restraint systems.

(a) * * *

(3) * * *

(i) Be held by an adult who is occupying an approved seat or berth, provided that the person being held has not reached his or her second birthday and does not occupy or use any restraining device;

* * * * *

(iii) * * *

(B) Except as provided in paragraph (a)(3)(iii)(B)(4) of this action, the approved child restraint system bears one or more labels as follows:

* * * * *

(4) Notwithstanding any other provision of this section, booster-type child restraint systems (as defined in Federal Motor Vehicle Safety Standard No. 213 (49 CFR 571.213)), vest- and harness-type child restraint systems, and lap held child restraints are not approved for use in aircraft; and

* * * * *

PART 121—OPERATING REQUIREMENTS: DOMESTIC, FLAG, AND SUPPLEMENTAL OPERATIONS

3. The authority citation for Part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

4. Section 121.311 is amended by removing the last sentence in paragraph (b)(2)(ii)(A) immediately preceding the semicolon; by removing the final "and" in paragraph (b)(2)(ii)(C); by revising paragraph (b)(1); by revising the introductory text of paragraph (b)(2)(ii); by adding a new paragraph (b)(2)(ii)(D); and by revising paragraph (c) to read as follows:

§ 121.311 Seats, safety belts, and shoulder harnesses.

* * * * *

(b) * * *

(1) Be held by an adult who is occupying an approved seat or berth, provided the child has not reached his or her second birthday and the child does not occupy or use any restraining device; or

(2) * * *

(ii) Except as provided in paragraph (b)(2)(ii)(D) of this section, the approved child restraint system bears one or more labels as follows:

* * * * *

(D) Notwithstanding any other provisions of this section, booster-type child restraint systems (as defined in Federal Motor Vehicle Standard No. 213

(49 CFR 571.213)), vest- and harness-type child restraint systems, and lap held child restraints are not approved for use in aircraft; and

* * * * *

(c) Except as provided in paragraph (c)(3) of this section, the following prohibitions apply to certificate holders:

(1) No certificate holder may permit a child, in an aircraft, to occupy a booster-type child restraint system, a vest-type child restraint system, or a lap held child restraint system during take off, landing, and movement on the surface.

(2) Except as required in paragraph (c)(1) of this section, no certificate holder may prohibit a child, if requested by the child's parent, guardian, or designated attendant, from occupying a child restraint system furnished by the child's parent, guardian, or designated attendant provided—

(i) The child holds a ticket for an approved seat or berth or such seat or berth is otherwise made available by the certificate holder for the child's use;

(ii) The requirements of paragraph (b)(2)(i) of this section are met;

(iii) The requirements of paragraph (b)(2)(iii) of this section are met; and

(iv) The child restraint system has one or more of the labels described in paragraphs (b)(2)(ii)(A) through (b)(2)(ii)(C) of this section.

(3) This section does not prohibit the certificate holder from providing child restraint systems authorized by this section or, consistent with safe operating practices, determining the most appropriate passenger seat location for the child restraint system.

* * * * *

PART 125—CERTIFICATION AND OPERATIONS: AIRPLANES HAVING A SEATING CAPACITY OF 20 OR MORE PASSENGERS OR A MAXIMUM PAYLOAD CAPACITY OF 6,000 POUNDS OR MORE

5. The authority citation for Part 125 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701–44702, 44705, 44710–44711, 44713, 44716–44717, 44722.

6. Section 125.211 is amended by removing the last sentence in paragraph (b)(2)(ii)(A) immediately preceding the semicolon; by removing the final “and” in paragraph (b)(2)(ii)(C); by revising paragraph (b)(1); by revising the introductory text of paragraph (b)(2)(ii); by adding a new paragraph (b)(2)(ii)(D); and by revising paragraph (c) to read as follows:

§ 125.211 Seat and safety belts.

* * * * *

(b) * * *

(1) Be held by an adult who is occupying an approved seat or berth, provided the child has not reached his or her second birthday and the child does not occupy or use any restraining device; or

(2) * * *

(ii) Except as provided in paragraph (b)(2)(ii)(D) of this section, the approved child restraint system bears one or more labels as follows:

* * * * *

(D) Notwithstanding any other provisions of this section, booster-type child restraint systems (as defined in Federal Motor Vehicle Standard No. 213 (49 CFR 571.213)), vest- and harness-type child restraint systems, and lap held child restraints are not approved for use in aircraft; and

* * * * *

(c) Except as provided in paragraph (c)(3) of this section, the following prohibitions apply to certificate holders:

(1) No certificate holder may permit a child, in an aircraft, to occupy a booster-type child restraint system, a vest-type child restraint system, or a lap held child restraint system during take off, landing, and movement on the surface.

(2) Except as required in paragraph (c)(1) of this section, no certificate holder may prohibit a child, if requested by the child's parent, guardian, or designated attendant, from occupying a child restraint system furnished by the child's parent, guardian, or designated attendant provided:

(1) The child holds a ticket for an approved seat or berth or such seat or berth is otherwise made available by the certificate holder for the child's use;

(ii) The requirements of paragraph (b)(2)(i) of this section are met;

(iii) The requirements of paragraph (b)(2)(iii) of this section are met; and

(iv) The child restraint system has one or more of the labels described in paragraphs (b)(2)(ii)(A) through (b)(2)(ii)(C) of this section.

(3) This section does not prohibit the certificate holder from providing child restraint systems authorized by this section or, consistent with safe operating practices, determining the most appropriate passenger seat location for the child restraint system.

* * * * *

PART 135—OPERATING REQUIREMENTS: COMMUTER AND ON-DEMAND OPERATIONS

7. The authority citation for Part 135 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701–44702, 44705, 44709, 44711–44713, 44715–44717, 44722.

8. Section 135.128 is amended by removing the last sentence in paragraph (a)(2)(ii)(A) immediately preceding the semicolon; by removing the final “and” in paragraph (a)(2)(ii)(C); by revising paragraph (a)(1); by revising the introductory text of paragraph (a)(2)(ii); by adding a new paragraph (a)(2)(ii)(D); and by revising paragraph (b) to read as follows:

§ 135.128 Use of safety belts and child restraint systems.

(a) * * *

(1) Be held by an adult who is occupying an approved seat or berth, provided the child has not reached his or her second birthday and the child does not occupy or use any restraining device; or

(2) * * *

(ii) Except as provided in paragraph (a)(2)(ii)(D) of this section, the approved child restraint system bears one or more labels as follows:

* * * * *

(D) Notwithstanding any other provision of this section, booster-type child restraint systems (as defined in Federal Motor Vehicle Standard No. 213 (49 CFR 571.213)), vest- and harness-type child restraint systems, and lap held child restraints are not approved for use in aircraft; and

* * * * *

(b) Except as provided in paragraph (b)(3) of this section, the following prohibitions apply to certificate holders:

(1) No certificate holder may permit a child, in an aircraft, to occupy a booster-type child restraint system, a vest-type child restraint system, or a lap held child restraint system during take off, landing, or movement on the surface.

(2) Except as required in paragraph (b)(1) of this section, no certificate holder may prohibit a child, if requested by the child's parent, guardian, or designated attendant, from occupying a child restraint system furnished by the child's parent, guardian, or designated attendant provided:

(i) The child holds a ticket for an approved seat or berth or such seat or berth is otherwise made available by the certificate holder for the child's use;

(ii) The requirements of paragraph (a)(2)(i) of this section are met;

(iii) The requirements of paragraph (a)(2)(iii) of this section are met; and

(iv) The child restraint system has one or more of the labels described in paragraphs (a)(2)(ii)(A) through (a)(2)(ii)(C) of this section.

(3) This section does not prohibit the certificate holder from providing child restraint systems authorized by this or, consistent with safe operating practices, determining the most appropriate passenger seat location for the child restraint system.

Issued in Washington, D.C., on May 24, 1996.

David R. Hinson,
Administrator.

[FR Doc. 96-13771 Filed 6-3-96; 8:45 am]

BILLING CODE 4910-13-M

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. 74-09; Notice 45]

RIN 2127-AF46

Federal Motor Vehicle Safety Standards; Child Restraint Systems

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

ACTION: Final rule.

SUMMARY: This rule, and a companion rule issued by the Federal Aviation Administration (FAA), address the use of child harnesses and backless child restraints in aircraft. This document amends a provision in Federal Motor Vehicle Safety Standard No. 213, "Child Restraint Systems," that permits those restraints to be certified for use in both motor vehicles and aircraft.

Under the current FAA regulations, aircraft-certified child restraints may be used on aircraft. However, because testing has raised FAA's concerns about the safety of using harnesses and backless child restraint systems on the types of seats found in aircraft, FAA is publishing a rule in today's Federal Register that prohibits the use of booster seats, and vest- and harness-type child restraint systems on aircraft during take off, landing and movement on the surface, even if these restraints are certified for aircraft use.

In view of the FAA's determination that harnesses and booster seats are unsuitable for use during significant portions of a flight, the agency believes continuing to permit the certification of those restraints for aircraft use would be inconsistent and likely confusing to the public. Accordingly, this rule no longer permits those restraints to be certified for aircraft use, and instead requires manufacturers to label these restraints as not certified for use in aircraft.

DATES: This rule is effective on September 3, 1996.

Petitions for reconsideration of the rule must be received by July 19, 1996.

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 SW., Washington, D.C., 20590.

FOR FURTHER INFORMATION CONTACT: For nonlegal issues: Dr. George Mouchahoir, Office of Vehicle Safety Standards (telephone 202-366-4919, fax 202-366-4329). For legal issues: Ms. Deirdre Fujita, Office of the Chief Counsel (telephone 202-366-2992, fax 202-366-3820). Both can be reached at the National Highway Traffic Safety Administration, 400 Seventh Street SW., Washington, D.C., 20590. For information on FAA's rule, contact Ms. Donell Pollard (AFS-203), Air Transportation Division, Flight Standards Service (telephone 202-267-3735), Federal Aviation Administration, 800 Independence Avenue SW., Washington, D.C., 20591.

SUPPLEMENTARY INFORMATION: This document amends the provision in Federal Motor Vehicle Safety Standard No. 213, "Child Restraint Systems," that permits child restraint systems to be certified for use in both motor vehicles and aircraft. This rule complements an FAA rule, published elsewhere in today's Federal Register, that withdraws approval for the use of booster seats and vest- and harness-type child restraint systems on aircraft, and prohibits airlines from permitting a child to be restrained in such a restraint during take off, landing, and movement on the surface, even if the restraint is certified for aircraft use. The notice of proposed rulemaking (NPRM) on which this NHTSA rule is based was published at 60 FR 30696 (June 9, 1995).

Harnesses and booster seats are types of child restraint systems regulated by Standard 213. A harness typically consists of a vest or a series of straps that form a vest-like garment, that attaches at the back of the harness to a vehicle seat's lap belt. Harnesses are generally intended for children who weigh from 25 to 50 pounds. Some require the use of a tether strap to supplement the lap belt. The restraint that the FAA refers to as a "booster seat" is a "backless child restraint system" under Standard 213. (See definitions of "booster seat" and "backless child restraint system" in S4 of FMVSS 213.) A "backless child restraint system" is one of two types of

booster seat.¹ A backless child restraint has a structural element (typically a shield) designed to restrain forward motion of the child's torso in a frontal crash. Backless child restraint systems are generally intended for children weighing from 30 to 60 pounds. Backless child restraint systems are also known as "backless booster seats" or "shield-type" booster seats.

Background

Standard 213 permits manufacturers to certify their restraints² for aircraft use if they are certified for use in motor vehicles and meet an additional requirement, an inversion test. The provisions permitting such certification were added to the standard in 1984 (49 FR 34357; August 30, 1984), partly in response to suggestions of the National Transportation Safety Board (NTSB) that DOT simplify its standards for the performance of child restraints on aircraft by combining all technical requirements into a single standard (NTSB Safety Recommendations A-83-1, February 24, 1983). Prior to the amendment, FAA had its own child restraint standard, Technical Standard Order C100 (TSO C100). TSO C100 and FMVSS 213 had different performance requirements, methods of certification and testing procedures.

In the 1984 rulemaking, NHTSA and FAA concluded that the DOT child restraint requirements should be consolidated in FMVSS 213 and that a TSO C100 inversion test was the only performance requirement from the FAA standard that needed to be incorporated into FMVSS 213. In the inversion test, the combination of a child restraint, test dummy and aircraft passenger seat is rotated forward at a specified speed to an inverted position and held there, and later rotated sideways at the same speed and held. During the test, the child restraint must not fall out of the aircraft safety belt and the test dummy must not fall out of the child restraint.

Prior to the 1984 rulemaking, a manufacturer wishing to designate a child restraint model as suitable for use in aircraft had to submit information to FAA to obtain its approval of the model. As a result of this pre-1984 approval process, there was a disparity between the number of child restraints available

¹ The other type of booster seat is the "belt positioning seat," which is intended for use by children weighing from 30 to 60 pounds, and designed for use with a lap/shoulder belt system.

² The "belt positioning" booster seat is not eligible for such certification. FMVSS No. 213 does not permit these restraints to be certified for aircraft use because aircraft passenger seats typically lack shoulder belts. See amendment of FMVSS 213 to permit manufacture of belt-positioning child seats (59 FR 37167; July 21, 1994).