

# Use of Child Restraint Systems on Aircraft

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Federal Aviation  
Administration



# Use of Child Restraint Systems (CRS)

- FAA and NTSB agree that a child under two is safer in an approved CRS or Aviation Child Safety Device, rather than being lap-held
- FAA continues to amend regulations, develop guidance documents and conduct continuing education and outreach to encourage parents and guardians of young children to use CRS appropriate to that child's size and weight when traveling on aircraft
- FAA has not required the use of CRS for children under two



# Diversion

- Requiring the use of CRS for children under two would significantly increase the price of family air travel for a small, targeted population
- Price affects consumer decisions
- Would cause some families to divert to the highways, a much higher risk mode of transportation.
- For every child under two saved by a regulation (1 every ten years), a minimum of 60 lives would be lost on the highways.
- Diversion to highways would cause an increase in transportation deaths.



# Diversion Analysis

- 1995 FAA Analysis in Report to Congress
  - Net increase of 82 fatalities over 10 years
- 1999 DOT Analysis (Independent of FAA)
  - Net increase of 19 fatalities over 10 years
- 2003 Archives of Pediatrics and Adolescent Medicine
  - If just 5% of targeted travelers diverted to the highways--net effect is increase in fatalities



# Diversion Analysis

- 2003 National Highway Traffic Safety Administration (NHTSA) Analysis (Independent of DOT and FAA)
  - Any family travel diverted to highways would lead to an increase in the total number of transportation deaths
- 2005 Joint FAA/NHTSA Response to 2004 NTSB Analysis of Diversion-Updated FAA Analysis
  - If just 1% of those who travel with children under two diverted to highways--net effect is increase in fatalities



# Safety

- Aviation is much safer than traveling on the highways
  - Data from 2005-2009 shows an average of 39,740 highway fatalities and 22 aviation fatalities per year
- Aviation is a highly regulated industry operating in a very controlled environment
  - FAA protects children by ensuring the safety of all passengers
  - The risk of a fatality in U.S. commercial aviation has been reduced by 83% in the past 10 years
- Aviation accidents are rare
  - Accident reports from 1979 through October 2010 (32 years) show that a CRS requirement would have prevented 3 infant deaths (Denver-1987, Sioux City-1989 and Charlotte-1994)
  - Long-term fatality rates have decreased by more than 90 percent since 1994
- Diversion to highways would increase transportation deaths



# FAA Rulemaking

- When the regulations regarding restraint on aircraft were originally developed, there was no effective restraint for infants and small children
- 1992- Final Rule-Required operators to allow the voluntary use of approved CRS that meet the Federal Motor Vehicle Safety Standards (FMVSS-213)
  - Allowed the use of CRS approved by a foreign government or the United Nations
- 1996 –Final Rule-Withdrew approval for use of booster seats and vest/harness-type restraints (based on the 1994 FAA Civil Aeromedical Institute Study)
  - Regardless of labeling or foreign government approval
  - Emphasized the prohibition of belly belts and lap held devices



# FAA Rulemaking

- 1998- ANPRM-Sought public comment on requiring the use of CRS on aircraft but did not propose any specific regulatory changes
- 2005- Withdrew ANPRM and published a Final Rule- Allow operators to provide new innovative types of FAA Approved CRS
- 2006-Final Rule-Allows passengers to use new innovative types of FAA Approved CRS on aircraft





# CRS Options - General Aviation and Commercial Aviation

- **Typical Approved Fwd/Aft Facing CRS**
  - Meets FMVSS-213 standard



- **Innovative Restraints- Aviation Child Safety Devices**

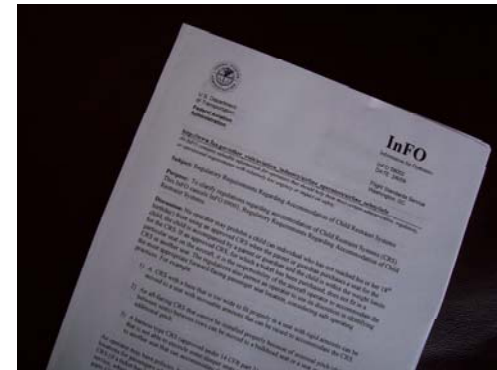
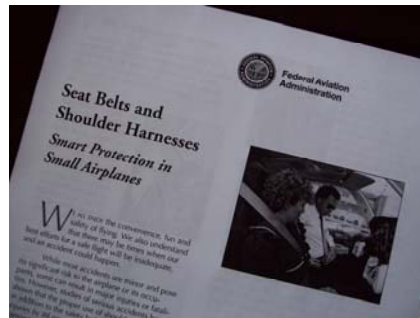
- FAA Approved under Supplemental Type Certificate, Technical Standard Order, or 21.305(d)

# FAA Guidance and Publications

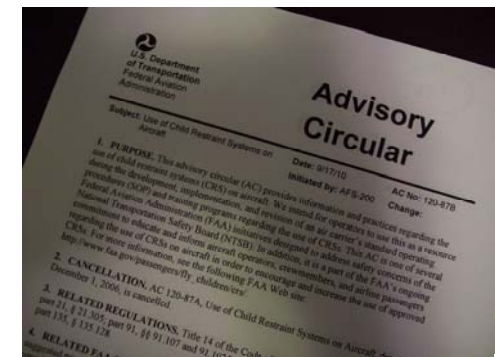
- General Aviation and Commercial Aviation/Air Carriers
  - FAA Publication 92-01, Seat Belts and Shoulder Harnesses, Smart Protection in Small Airplanes
  - Advisory Circular 91-62, Use of Child Seats in Aircraft
  - Advisory Circular 120-87B, Use of Child Restraint Systems on Aircraft, amended 9/17/10
- Commercial Aviation/Air Carriers
  - InFO 07012, Accommodating Approved Harness-Type Child Restraint Systems, effective 6/6/2007
  - InFO 09002, Regulatory Requirements Regarding Accommodation of Child Restraint Systems, effective 2/6/09



# FAA Guidance Provides Information to Operators and Parents



- Development of policies and procedures
- Information to address specialized issues
- Use of CRS for children with disabilities
- New types of approved CRS
- CRS fit/placement issues
- Evacuation procedures



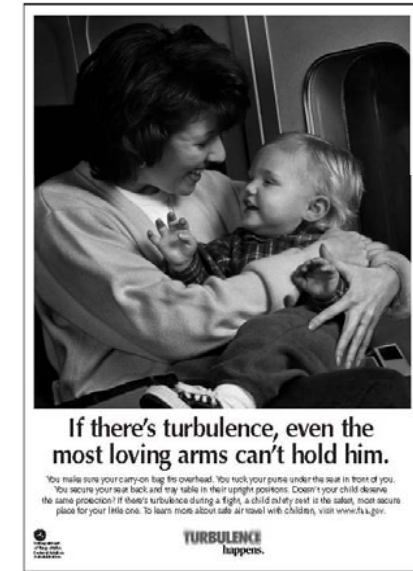
# CRS Education and Outreach

- Turbulence Happens (1996) media information and public education program
- National media event
- Partnership development
- Child safety brochure

**TURBULENCE**  
happens.



U.S. Department of Transportation  
**Federal Aviation Administration**



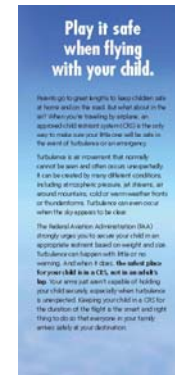
- Print, television and radio Public Service Announcements
- Air Transport Association, Association of Flight Attendants, National SAFE KIDS Campaign, National Safety Belt Coalition, Babies' R Us and Midas supported the campaign



# CRS Education and Outreach

## Updated Turbulence Happens Campaign(2004)

- Designed and developed a new FAA website dedicated to informing passengers about seatbelt use and child safety
- New brochure on CRS use
- Partnership with Babies "R" Us



There are new parents every year, so the education and outreach continues

# Continuing Education and Outreach

- The FAA helps parents make an informed decision about their child's safety when they fly
- Outreach to:
  - Family/child magazine websites
  - Child safety advocates and retailers
  - Travel experts and magazine websites
  - Travel booking websites
  - Travel planning sites
  - Web resources



# Conclusion

FAA continues to encourage parents and guardians of young children to use CRS appropriate to that child's size and weight when traveling on aircraft.

- Enable the use of different types of CRS via regulations
- Educate operators about the effective use of CRS
- Educate parents so they can make informed choices about their child's safety
- Reach out to many other stakeholders to help us spread the word
- Provide CRS options by encouraging innovation, research and new designs for aviation CRS

A rule that required CRS on aircraft would result in some diversion to highways, a less safe mode of travel. This would not be good transportation safety policy.



# Resources

- FAA Publication 92-01 Seat belts and Shoulder Harnesses, Smart Protection in Small Airplanes  
([http://www.faa.gov/pilots/safety/pilotsafetybrochures/media/seatbelt\\_web2.pdf](http://www.faa.gov/pilots/safety/pilotsafetybrochures/media/seatbelt_web2.pdf))
- Advisory Circular 91-62, Use of Child Seats in Aircraft, as amended  
([http://www.faa.gov/regulations\\_policies/advisory\\_circulars/](http://www.faa.gov/regulations_policies/advisory_circulars/))
- Advisory Circular 120-87B, Use of Child Restraint Systems on Aircraft, as amended  
([http://www.faa.gov/regulations\\_policies/advisory\\_circulars/](http://www.faa.gov/regulations_policies/advisory_circulars/))
- InFO 07012, Accommodating Approved Harness-Type Child Restraint Systems, effective 6/6/2007  
([http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/info/all\\_infos/](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/))





# Resources

- InFO 09002, Regulatory Requirements Regarding Accommodation of Child Restraint Systems, effective 2/6/09  
([http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/info/all\\_infos/](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/))
- 1992- Final Rule-Required operators to allow the use of approved CRS that meets the NHTSA standards (57 FR 42662)
- 1994- “The Performance of Child Restraint Devices in Transport Airplane Passenger Seats (CAMI Study)  
(<http://www.faa.gov/library/reports/medical/oamtechreports/1990s/media/AM94-19.pdf>)
- 1996 –Final Rule-Withdrew approval for use of booster seats and vest/harness-type (61 FR 28416)



# Resources

- 1998- ANPRM-Sought public comment on requiring the use of CRS on aircraft but did not propose any specific regulatory changes (63 FR 8324)
- 2005- Withdrew ANPRM, Final Rule-Allow operators to provide new innovative types of FAA Approved CRS (70 FR 50226)
- 2006-Final Rule-Allow passengers to use new innovative types of FAA Approved CRS on aircraft (71 FR 40003)

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