





Use of Restraint Systems on Aircraft by Individuals with Disabilities Resource Guide

Developed by

Federal Aviation Administration







I. **Table of Contents** II. III. FAA Regulations4 Pertinent Part of Title 14 of the Code of Federal Regulations (14 CFR) Regarding the Use of Child Restraint on Aircraft (Air Carrier and Commercial Operator)4 1. 2. 3. 4. В. C. D. Α. В. C. D. E. Α. В. Petition Template for a Non-Approved CRS41 C. D. E. Petition Template for an Extension to a Previously Issued AND Unexpired Exemption46 Petition Template for Firefly GoTo Seat by Leckey......48 F. VIII. FAA Information Regarding the Use of CRS on Aircraft.......51 FAA Website......51 A. В.

C.

D.	Information for Operators (InFO)	52
	Civil Aerospace Medical Institute (CAMI) Technical Reports	
F.	Technical Standard Order (TSO)	53

II. Introduction

Greetings! The Federal Aviation Administration (FAA) prescribes regulations and minimum safety standards and requires air carriers to provide service with the highest possible degree of safety in the public interest. The FAA is also committed to increasing accessibility to air transportation for individuals with disabilities. This resource guide was developed to support both commitments.

This resource guide addresses the use of child restraint systems (CRS) and other types of restraints on aircraft by individuals with disabilities. It contains some general information regarding the use of approved CRS. It also contains detailed information about the different options available when an individual with disabilities needs to use a unique type of restraint on an aircraft that may not be approved or needs to exceed certification limitations for certain FAA approved CRS, including weight and height of the user.

This resource guide covers information about FAA regulations, guidance, and processes regarding the use of CRS on aircraft. It also has information about non-government entities and products. The FAA does not endorse or recommend any of the non-government entities or products listed within this resource guide. This information is provided to users of this resource guide for practical information as needed from these sources and to raise awareness of the existence of such products.

III. FAA Regulations

The goal of FAA regulations is to enhance aviation safety. FAA regulations apply to many types of "regulated entities" such as air carriers, crewmembers, maintenance providers, manufacturers, and passengers (including passengers who want to use CRS and other restraint systems on aircraft).

A. Pertinent Part of Title 14 of the Code of Federal Regulations (14 CFR) Regarding the Use of Child Restraint on Aircraft (Air Carrier and Commercial Operator)

§ 121.311 Seats, safety belts, and shoulder harnesses.¹

- (a) No person may operate an airplane unless there are available during the takeoff, en route flight, and landing—
 - (1) An approved seat or berth for each person on board the airplane who has reached his second birthday; and
- (2) An approved safety belt for separate use by each person on board the airplane who has reached his second birthday, except that two persons occupying a berth may share one approved safety belt and two persons occupying a multiple lounge or divan seat may share one approved safety belt during en route flight only.
- (b) Except as provided in this paragraph, each person on board an airplane operated under this part shall occupy an approved seat or berth with a separate safety belt properly secured about him or her during movement on the surface,

¹ Bold emphases throughout this section are provided by FAA and are not found in the actual regulation.

takeoff, and landing. A safety belt provided for the occupant of a seat may not be used by more than one person who has reached his or her second birthday. **Notwithstanding the preceding requirements, a child may**:

- (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) Notwithstanding any other requirement of this chapter, occupy an approved child restraint system furnished by the certificate holder or one of the persons described in paragraph (b)(2)(i) of this section, provided:
- (i) The child is 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;
- (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:
- (A) Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear the label: "This child restraint system conforms to all applicable Federal motor vehicle safety standards."
 - (B) Seats manufactured to U.S. standards on or after February 26, 1985, must bear two labels:
- ${\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)} \mbox{ ``This child restraint system conforms to all applicable Federal motor vehicle} \\ {\it (I)}$

(2) "THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND

AIRCRAFT" in red lettering;

- (C) Seats that do not qualify under paragraphs (B)(2)(ii)(A) and (b)(2)(ii)(B) of this section must bear a label or markings showing:
 - (1) That the seat was approved by a foreign government;
 - (2) That the seat was manufactured under the standards of the United Nations;
- (3) That the seat or child restraint device furnished by the certificate holder was approved by the FAA through Type Certificate or Supplemental Type Certificate; or
- (4) That the seat or child restraint device furnished by the certificate holder, or one of the persons described in paragraph (b)(2)(i) of this section, was approved by the FAA in accordance with §21.8(d) of this chapter or Technical Standard Order C-100b, or a later version. The child restraint device manufactured by AmSafe, Inc. (CARES, Part No. 4082) and approved by the FAA in accordance with §21.305(d) (2010 ed.) of this chapter may continue to bear a label or markings showing FAA approval in accordance with §21.305(d) (2010 ed.) of this chapter.
- (D) Except as provided in §121.311(b)(2)(ii)(C)(3) and §121.311(b)(2)(ii)(C)(4), 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
 - (iii) The certificate holder complies with the following requirements:
 - (A) The restraint system must be properly secured to an approved forward facing seat or berth;
- (B) The child must be properly secured in the restraint system and must not exceed the specified weight limit for the restraint system; and

(C) The restraint system must bear the appropriate label(s).

- (c) Except as provided in paragraph (c)(3) of this section, the following prohibitions apply to certificate holders:
- (1) Except as provided in §121.311(b)(2)(ii)(C)(3) and §121.311(b)(2)(ii)(C)(4), no certificate holder may permit a child, in an aircraft, to occupy a booster-type child restraint system, a vest-type child restraint system, a harness-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.

* * * * *

B. General Exemption Information

Generally, if you are affected by a regulation in 14 CFR, then you (the "petitioner") may petition (or ask) for an exemption (may also be referred to as "regulatory relief") from any rule issued by FAA under its statutory authority. The FAA may grant an exemption ("regulatory relief") from a specific regulation (or several regulations) if the petitioner can show two causes:

- 1. why the exemption is in the public interest; and
- 2. why the exemption from certain requirements provides an equivalent level of safety to that of the affected regulation(s).

Section V.B. of this resource guide provides detailed information regarding how public interest and equivalent level of safety are essential parts of any petition for exemption regarding the use of CRS and other restraints by individuals with disabilities on aircraft.

IV. Child Restraint Systems (CRS) and Other Restraints

A. Approved

1. Aft-Facing and Forward-Facing CRS

Title 14 CFR section 121.311(b) states, in pertinent part, that each person aboard a commercial aircraft must occupy an approved seat with a separate safety belt secured about him or her during movement on the surface ("taxi"), take off, and landing. The regulations also allow a child, who by definition is any individual under 18 years of age, to occupy an approved CRS when certain conditions exist (see IV.A.4. below regarding use of CRS by an adult). In addition, the regulations require air carriers to ensure that the restraint system is properly secured to a forward-facing seat, that the child is properly secured in the restraint system, and that the child does not exceed the specified weight limits for the restraint system. FAA and the National Highway Traffic Safety Administration (NHTSA) use a single government performance standard that satisfies both aviation and highway safety requirements for CRS. NHTSA is the sole agency responsible for administering the Federal Motor Vehicle Safety Standard (FMVSS) No. 213, which is applicable to CRS designed for use in motor vehicles and CRS designed for use in aircraft. If a CRS meets FMVSS No. 213, the manufacturer labels or marks it as such, to indicate to parents, caregivers, flight attendants, and air carriers that the CRS can be occupied during taxi, takeoff, and landing.



Figure 1. Typical Aft-Facing CRS



Figure 2. Typical Forward-Facing CRS

Note: As required by § 121.311 (k), air carriers must make available on their websites the width of the narrowest and widest passenger seats in each class of service for each airplane make, model and series operated by that air carrier. This provides greater information to assist a caregiver to determine whether a particular CRS will fit in an airplane seat.

a. Labeling for Typical Approved Aft-Facing and Forward-Facing CRS

Typical aft-facing and forward-facing CRS must bear two labels to be approved for use on aircraft. The labeling must include the text "This child restraint system conforms to all applicable Federal Motor Vehicle Safety Standards" and "This Restraint is Certified for Use in Motor Vehicles and Aircraft" in red lettering. It is acceptable if the text for these two required labels is merged onto one label.

b. Examples of Labeling (Typical approved Aft-Facing and Forward-Facing CRS)

The following images are examples of labeling that indicate a CRS is approved for use on aircraft:



OR



2. Child Aviation Restraint System (CARES)

The Child Aviation Restraint System (CARES) Aviation Child Safety Device (ACSD), manufactured by AmSafe Aviation, Inc. (AmSafe), is currently the only FAA approved harness-type restraint. CARES is approved for use by children who weigh between 22 and 44 pounds and who are less than 40 inches tall. CARES works with the existing aircraft seat belt to provide its user with protection and safety during airplane travel.





If a child with a disability is over 44 pounds or 40 inches tall, and the child's medical advisor thinks CARES is an appropriate restraint for use on aircraft, you can petition the FAA for an exemption from current regulations so a larger child is able to use CARES. In this case, if granted, an exemption would allow a child with a disability who is over the weight or height certification limitations of 44 pounds or 40 inches to use CARES during all phases of flight.

Detailed information regarding Exemptions and how to submit a Petition for Exemption can be found in the "CRS Checklist" section of this Resource Guide (See section VI.)

a. Labeling for Harness-Type Restraint (CARES)

CARES labeling indicates it is FAA approved for use on aircraft. This labeling is different than the labeling on a typical approved aft-facing or forward-facing CRS because the CARES ACSD underwent an independent certification process developed by the FAA. CARES ACSD cannot meet the requirements of FMVSS No. 213, and it cannot be used in motor vehicles.

b. Examples of Labeling (CARES)

Each CARES unit label states "FAA Approved in Accordance with 14 CFR 21.8(d) Approved for Aircraft Use Only" or "FAA Approved Child Restraint System (CRS) in Accordance with 14 CFR 21.305(d) Amd 21.50 6-9-1980 ELOS to TSO-C100b Approved for Aircraft Use Only" on it.

FAA APPROVED IN
ACCORDANCE WITH
14 CFR 21.8(d)
APPROVED FOR
AIRCRAFT USE ONLY

OR

FAA APPROVED

Child Restraint System (CRS)
IN ACCORDANCE WITH
14 CFR 21.305 (d)
AMD 21.50 6-9-1980
ELOS to TSO-C100b

APPROVED FOR AIRCRAFT USE ONLY

Note: Unlike typical approved aft-facing and forward-facing CRS, the CARES ACSD is not approved for use in motor vehicles. It can only be used on an airplane. When making travel plans, be aware that an additional CRS (approved for use in a motor vehicle) would have to be available for use in a motor vehicle at the destination if one is required. Each CARES unit has the following label as a reminder that it cannot be used in any type of motor vehicle:



c. Purchasing CARES

CARES is available from many commercial vendors and websites. The FAA does not recommend one vendor over another. However, the FAA is aware of disreputable third-party retailers who sell reproduction devices that resemble CARES but which are not authentic CARES devices manufactured by AmSafe. AmSafe maintains a website, www.kidsflysafe.com, where you can purchase CARES and also provides detailed information regarding the use of CARES by individuals with disabilities. The AmSafe website also provides instructions on how to petition the FAA for an exemption if a CARES user with disabilities exceeds the limits of 44 pounds or 40 inches, established during the certification process for CARES.

Access the AmSafe website at: https://www.amsafe.com/kidsflysafe-com/.



Note: There are two sizes of CARES. Generally, if the user with disabilities is under 5 feet tall (60 inches), the standard CARES device will fit (NOTE: an exemption is required for use if the user is a person with disabilities who is over 44 pounds or 40 inches tall). If the user with disabilities is close to, or over, 5 feet tall, the Special CARES device is a better fit because the shoulder straps can extend to accommodate a person up to 6 feet tall (72 inches). *An exemption is always required to use Special CARES because the user would always be more than 40 inches tall*. The Special CARES unit has the following labeling:

IF OCCUPANT FALLS OUTSIDE THE RESTRAINT'S HEIGHT OR WEIGHT LIMITATIONS, AN FAA EXEMPTION LETTER MUST BE OBTAINED AND BE PRESENT EVERY TIME THE RESTRAINT IS USED IN FLIGHT. FOR STEPS ON HOW TO OBTAIN AN FAA EXEMPTION LETTER, PLEASE VISIT WWW.KIDSFLYSAFE.COM.

3. CRS for Use by Larger Individuals

There are many approved CRS that can accommodate a larger individual, and as long as the child meets the weight and height limitations for the device, these appropriately labeled approved CRS can be used without having to petition the FAA for an exemption. The FAA does not recommend any particular CRS, but listed below are some examples of various models of CRS that are approved for use in automobiles and aircraft that can be used by larger

individuals (some can be used by individuals who weigh as much as 150 pounds and who are five feet tall). It is the parent's/caregiver's responsibility to read the CRS instruction manual to ensure the user meets the CRS' weight and height limitations before use on an airplane and to confirm that the device can be secured appropriately on an airplane. This is important because some CRS approved for larger individuals can only be secured using a lap and shoulder (3-point) safety belt restraint system, and most commercial aircraft are not fitted with 3-point restraint systems, so the CRS cannot be appropriately secured in the aircraft seat.

a. Examples of CRS that can be Used by Larger Individuals

Many manufacturers make multiple models of approved CRS. This section highlights certain models of CRS that accommodate larger users and also includes contact information for some vendors of these CRS. Many of these CRS can be purchased from multiple vendors. Most importantly, for use by larger individuals with disabilities, you are encouraged to engage with the user's medical team to determine the most appropriate restraint system to accommodate the user's weight, height, and disabilities.

- (1) Inspired by Drive (http://www.inspiredbydrive.com/)
 - IPS Car Seat, Model #CSI-2000
 - o Accommodates users who weigh between 20 and 102 pounds and whose height is up to 60 inches
 - o Approved for use on aircraft



IPS Car Seat, Model #CSI-2000 (20 to 102 pounds)

- (2) Tumbleforms (www.especialneeds.com)
 - Carrie Seat, Elementary
 - Accommodate users who weigh between 30 and 60 pounds and whose height is between 38 and
 48 inches
 - o Approved for use on aircraft (when used without the tray and footrest)



Tumbleforms Carrie Seat, Elementary (30 to 60 pounds)

(3) Britax (www.us.britax.com)

- Convertible Car Seats (Boulevard ClickTight, Grow With You ClickTight, Marathon ClickTight)
 - Depending on model, accommodates users who weigh between 20 and 65 pounds and who are less than 49 inches tall (when used in forward-facing harness mode)
 - O Approved for use on aircraft (when used in harness mode)
- Frontier ClickTight
 - Accommodates users who weigh between 25 and 90 pounds, who are between 30 and 58 inches tall, and who are at least 2 years of age
 - O Approved for use on aircraft (when used in harness mode)



Britax Boulevard ClickTight (20 to 65 pounds)



Britax Frontier ClickTight (20 to 90 pounds)

(4) Diono (http://diono.com/us/)

- radian® 3RXT
 - Accommodates users who weigh 20 to 65 pounds and who are less than 57 inches tall (when used in harness mode)
 - Folds up to carry as a backpack or over the shoulder
 - Approved for use on aircraft (when used in harness mode)





Diono radian 3RXT (20 to 65 pounds)

- (5) Special Tomato (http://www.specialtomato.com)
 - Small Multi-Positioning Seat (MPS)
 - Accommodates users who weigh between 20 to 80 pounds and who are between 32.5 and 50 inches tall
 - o Approved for use on aircraft (when used without the tray and footrest)
 - Large MPS
 - o Accommodates users who weigh up to 130 pounds and who are between 50 and 63 inches tall
 - O Approved for use on aircraft (when used without the tray and footrest)



Special Tomato Car Seat (MPS) (20 to 130 pounds, depending on model)

- (6) Thomashilfen (https://www.thomashilfen.us)
 - Recaro Defender Reha
 - Accommodates users who weigh between 22 and 65 pounds and who are between 27 and 57 inches tall (when used in harness mode)
 - O Approved for use on aircraft (when used in harness mode and without the tray and footrest)



Recaro Defender Reha (22 to 65 pounds)

- (7) Some vendors of approved CRS for individuals with disabilities:
 - www.adaptivemall.com
 - www.especialneeds.com
 - www.rehabmart.com
 - www.tadpoleadaptive.com
 - www.flaghouse.com/Special-Needs/
 - b. Convaid Carrot 3



Convaid Carrot 3 (30-108 pounds)

One CRS (Convaid Carrot 3, shown above) is labeled as being certified for use on aircraft but includes several deceptive manufacturer's instructions. The user's manual shows that the Carrot 3 must always be used in a seat with a lap and shoulder (3-point) safety belt restraint system (such as that in a typical automobile) to secure the child restraint and the child. (https://www.convaid.com/wp-content/uploads/2017/02/carrot3UG0002-ENG-Rev_11302015.pdf). While some smaller or private aircraft may have this type of restraint configuration in their passenger seats, the FAA is not aware of any large commercial air carriers with a lap and shoulder (3-point) safety belt restraint system in the standard passenger seats on their aircraft. Therefore, when secured only by a lap and shoulder (3-point) safety belt restraint system, the Convaid Carrot 3 generally may not be used on commercial air carriers. (See https://www.convaid.com/child-restraint-systems/carrot-3/)

The user's manual shows instructions for installing the Carrot 3 forward-facing in an aircraft seat using a fixing strap purchased separately. The fixing strap tethers the restraint device to the aircraft seat. The restraint device with fixing strap can be used only after the user receives regulatory relief from the FAA, because attaching additional weight to the airplane seat causes the seat to behave differently in a rapid deceleration. Additionally, use of the restraint device with fixing strap reduces the safety to the passenger who is seated behind the seat in which this device with strap is used. Regulatory relief THROUGH AN EXEMPTION is required so that all persons on the aircraft are afforded an equivalent level of safety.

Note: As per FAA regulations (§§ 121.311(b)(2)(i), 125.211(b)(2)(i), 135.128(a)(2)(i)), no operator may prohibit a child (an individual who has not reached his or her 18th birthday) from using an approved CRS when a seat is purchased for the child, the child is accompanied by a parent or guardian, and the child is within the weight limits for the CRS. If an approved CRS, for which a ticket has been purchased, does not fit in a particular seat on the aircraft, it is the responsibility of the aircraft operator to accommodate the CRS in another seat in the same class of service.

4. CRS for Use by Individuals with Disabilities who are Older than 18

By legal definition, the FAA considers anyone who has not reached their 18th birthday to be a "child" for the purpose of its regulations regarding CRS. This means that any person could use any approved CRS that accommodates their weight and height on any U.S. airline until they turn 18. After a child turns 18, the FAA requires an exemption to use an approved CRS (even though the person is within the weight and height limitations of that CRS), because the user then would be considered an "adult."

B. Non-Approved Restraint Systems

There are many types of available approved CRS that can accommodate a variety of disabilities. However, some individuals with disabilities need to use non-approved restraints on aircraft to address unique physical needs regarding

that individual's safety, support, and security. In this situation, the individual, their parent or caregiver, or the aircraft operator (on the individual's behalf) may petition the FAA for an exemption from certain operating requirements regarding the use of the non-approved restraint on an aircraft.

Below are some examples of non-approved CRS that can be used WITH AN EXEMPTION by individuals with disabilities on aircraft:



MERU Travel Chair (Up to 77 pounds)



Spirit Car Seat by Inspired By Drive (formerly Columbia Medical Spirit APS) (25 to 130 pounds)





E-Z-On Products 503 Lay Down Vest

- Used for body casts, hip spica casts, braces, or any other configuration where the user must be transported lying down.
 - Accommodates passengers weighing between 22 and 106 pounds
 - Sized according to user's chest & waist measurements: XS 18"-24", S 23"-29", M 28"-34"



Firefly GoTo Seat by LeckeyTM (Size 1: up to 33 pounds Size 2: up to 66 pounds)

C. Upper Body Support

Certain physical conditions might prohibit a person from literal compliance with regulations regarding the use of safety belts during all phases of flight aboard an aircraft. For instance, a spinal cord injury may prevent an individual from being able to sit upright in an aircraft seat. The FAA has granted regulatory relief to individuals, who require upper body support, to use an additional strap secured around their torso during all phases of flight, when they occupy an approved seat with a seat belt properly secured around them. Specifically, the strap wraps under the user's arms and encircles the user and the seatback. This helps to ensure that the user is securely restrained in their seat during all phases of flight, preventing slumping, slouching, or falling from their seated position. The existing aircraft seat belt is the user's primary restraint device, while the additional strap provides upper body support while seated.

In this situation, the individual, their parent or caregiver, or the aircraft operator (on the individual's behalf) may petition the FAA for an exemption from certain operating requirements regarding the use of an additional strap to enhance upper body support aboard an aircraft. See section VII. D.

The additional weight of a user attached to the seatback (by their use of an additional strap that encircles the user's chest and the seatback) would cause the seatback to move forward more quickly in an accident scenario, and this might cause a higher Head Injury Criteria (HIC) load for the person seated in the seat behind the passenger using an additional strap to provide upper body support. This is because the seatback moving forward more quickly would mean that it would not be there to attenuate the energy from the impact of the person seated behind the person using an additional strap to provide upper body support. In order to achieve an equivalent level of safety as that provided by the affected regulation for all passengers when granting this exemption, the FAA established a limitation that the user only sits in a passenger

seat with no passenger seated behind them. Therefore, no unsafe condition would exist for a passenger seated behind the user.

D. Orthotic Positioning Device (OPD)

An OPD is a device or supportive brace equipped with internal restraints, designed and used to help support and position a person in an aircraft seat. A passenger with disabilities occupies the OPD, and the user and the OPD occupy an aircraft seat. The passenger's primary restraint is the aircraft seat belt, secured around both the user and the OPD. An OPD must not attach to the aircraft seat; it only provides support and not restraint to the user. There are no limitations with use of an OPD, since the OPD is not attached to an aircraft seat, and no exemption is required to use an OPD.

V. Petitioning for an Exemption from FAA Regulations

A. Petition for Exemption

When a person or an air carrier was not contemplated by the FAA at the time the regulation was written or literally can't comply with the regulation as written, the person or air carrier can petition the FAA for an exemption from part or all of a regulation in order to accommodate their unique set of circumstances. In the case of the use of CRS or restraint systems, the FAA has determined that some individuals with disabilities are unique from the general class of regulated persons subject to the provisions of § 121.311(b), which can justify relief through an exemption rather than through the general rulemaking process. For example, the FAA has issued exemptions from regulations regarding the use of restraint systems on aircraft to individuals with cerebral palsy, scoliosis, autism, chronic respiratory insufficiency, Lissencephaly, or certain neuromuscular disorders that affect body movement, muscle control, muscle coordination, muscle tone, reflex, posture, and balance.

Anyone can petition the FAA for an exemption by submitting a request to the Federal Docket Management System at: www.regulations.gov.

Detailed information regarding Exemptions and how to submit a Petition for Exemption can be found in the "CRS Checklist" section of this Resource Guide. (See section VI.)

B. Equivalent Level of Safety and Public Interest

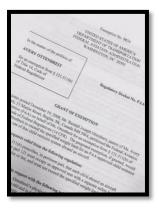
In order for the FAA to grant an exemption, the "petitioner" (person who requests the exemption, either for themselves or on behalf of another person) must demonstrate to the FAA two things: 1) that the exemption, if granted, provides an equivalent level of safety to that provided by the regulations; and 2) that it is in the public interest. The FAA analyzes the safety and public interest considerations in the petition for exemption to help determine whether to grant the exemption to allow the use of a specific CRS or restraint system during all phases of flight.

If the FAA determines that the petition addresses the safety and public interest requirements, the FAA issues a grant of exemption. For example, many grants of exemption regarding the use of non-approved CRS by people with disabilities acknowledge that the *public interest is served because without the support and security of a CRS that addresses the individual's unique needs, the person would be unable to fly commercially*. Additionally, the safety analysis performed for grants of exemption results in a determination that *the use of the CRS ensures a high level of safety for both the user and for other aircraft occupants*.

C. Grant of Exemption

A "Grant of Exemption" relieves a person from specific FAA regulations and usually includes specific conditions and limitations that ensure safety is maintained. If granted, an exemption could, for instance, allow a person with a disability to use a non-approved CRS or to exceed the weight or height limit established by the manufacturer for an approved CRS

for all phases of flight. When exercising the privileges that the grant of exemption extends, the individual using the CRS would be required to comply with all conditions and limitations contained in it.



D. Conditions and Limitations

When the FAA grants an exemption from FAA regulations, the grant of exemption contains certain conditions and limitations. For example, every grant of exemption the FAA issues regarding the use of CRS on aircraft requires the petitioner to advise the air carrier about the contents of the exemption at least 48 hours before the date of each flight. This involves a call to a reservations agent who typically can handle any special requirements or seat assignments.

Note: Parents and caregivers should also know that 14 CFR Part 382, Nondiscrimination on the Basis of Disability in Air Travel, requires every air carrier that provides service using aircraft with 19 or more passenger seats to make available a Complaints Resolution Official (CRO) to any passenger who requests to speak to them. Airlines subject to Part 382 requirements must designate one or more CROs and make the CRO available to consumers either by phone or in person, on request and at no charge to the passenger. CROs must be thoroughly familiar with Part 382 and have the authority to resolve complaints promptly. This individual can be a great resource to speak to BEFORE your travel date, to ensure travel goes smoothly when there are complex issues involved, including when exercising the privilege of a Grant of Exemption regarding CRS issued by the FAA. A tri-fold brochure titled "The ABCs of Accessible Travel" that provides more information regarding the role of the CRO at an air carrier can be accessed at:

https://www.transportation.gov/individuals/aviation-consumer-protection/disability-training-materials-and-helpful-information-0

E. Extension of Previously Issued AND Unexpired Exemption

An FAA-issued exemption to a regulation always includes a termination date. Most grants of exemption to allow someone with a disability to use an approved restraint system for which the user exceeds its height or weight limits, or which allow someone with a disability to use a non-approved restraint system, have a termination date that is five years from the date the FAA granted the exemption. Three or four months before your exemption terminates, if you wish to continue to exercise the privileges the exemption provides, you must submit a request for an extension to the FAA via the

public docket (www.regulations.gov). Your extension request must include all required information, including that the exemption, if granted, provides an equivalent level of safety to that provided by the regulations; and that it is in the public interest. To submit a request for an extension of a previously granted exemption please follow the steps outlined in section VI. D. below.	
	21

VI. CRS Checklist

CRS Checklist

This CRS Checklist contains a step-by-step approach to help determine some restraint system options for an individual with disabilities.

A. What type of restraint system will this individual use on the airplane?

- 1) Ask the parent/caregiver what kind of restraint the individual uses in a car.
 - The CRS might meet FMVSS No. 213 and be approved so it can be used on an airplane [no exemption necessary].
 - See section IV. A. of this resource guide to view examples of CRS labeling that indicate it is approved for use in aircraft.
 - If the CRS that is used in the car is not approved for use in aircraft, it is possible to petition the FAA on the individual's behalf for an exemption to use that same CRS on the airplane, but ONLY IF the CRS can be secured appropriately in an aircraft seat. For example, the design of the CRS may be medically necessary, or the individual may be more comfortable in a familiar CRS. It is also an easy way to make sure the individual's CRS is available to use in a motor vehicle at the destination.
 - See sections C and E of the **CRS Checklist** to learn how to petition the FAA for an exemption.
- 2) Consider if CARES might be appropriate to use.
 - Information regarding CARES can be found in section IV. A. 2. of this resource guide.
 - CARES is FAA approved for use by a child between 22-44 pounds and under 40 inches [no exemption necessary]
 - Use of CARES by an individual with disabilities will typically involve a discussion with a medical provider to determine if CARES provides an appropriate level of support for the individual.
 - Use of CARES for an individual over 44 pounds or 40 inches tall requires petitioning the FAA for an exemption.

• See sections C and E of the **CRS Checklist** to learn how to petition the FAA for an exemption.

NOTE: CARES is not approved for use in motor vehicles. It can only be used on an airplane. When making travel plans, an additional child restraint approved for use in a motor vehicle must be available at the destination if one is required.

- 3) Consider if an approved CRS for a larger individual might be appropriate [no exemption necessary].
 - See section IV.A.3. of this resource guide to view examples of CRS that are approved for use by individuals up to 130 pounds.
 - An effective practice for some disability organizations is to possess various models of approved CRS that
 will accommodate a larger individual so that individual (who fits within the range of weights provided by
 the manufacturer for that specific CRS) may use that CRS on a temporary basis for airplane travel. After a
 trip, the approved CRS can then be cleaned and reused by other individuals.
- 4) Consider if a non-approved CRS is appropriate.
 - See section IV.B. of this resource guide to view examples of non-approved CRS.
 - Use of a non-approved CRS by an individual with disabilities will typically involve a discussion with a medical provider to determine if the CRS provides an appropriate level of support for the individual.
 - Use of a non-approved CRS requires petitioning the FAA for an exemption.
 - See sections C and E of the **CRS Checklist** to learn how to petition the FAA for an exemption.
- 5) Consider if an individual has unique needs that require the individual to lie in a prone position during most of the flight and whether an E-Z-On Harness (non-approved CRS) is appropriate.
 - See section IV.B. of this resource guide to see an example of an E-Z-On Harness.
 - Use of an E-Z-On Harness by an individual with disabilities will typically involve a discussion with a
 medical provider to determine if the E-Z-On Harness provides an appropriate level of support for the
 individual.
 - Use of an E-Z-On Harness by an individual with disabilities requires petitioning the FAA for an exemption.
 - See sections C and E of the **CRS Checklist** to learn how to petition the FAA for an exemption.

- 6) Consider if an individual has unique needs that require the individual to have their seat reclined during the entire flight but is not required to lie in a completely prone position and whether using the CARES restraint is appropriate.
 - FAA regulations require seatbacks to be in the upright position for takeoff and landing (14 CFR § 121.311).
 - However, there is language in the regulation that allows air carriers to develop procedures to accommodate people who are unable to sit upright for medical reasons but only if the seat back does not obstruct any passenger's access to the aisle or to any emergency exit (§ 121.311 (e)).
 - If this situation addresses the needs of an individual with disabilities, you should contact the air carrier before purchasing a ticket to see if the air carrier has approved procedures in place to accommodate this type of seating requirement.
 - Ask to speak to a CRO at an airline. A CRO is an expert in disability issues. That disability expert will
 know if the air carrier has procedures in place to accommodate an individual's disability by allowing the
 seatback to be reclined during the entire flight. (See information regarding CROs beginning on page 20.)

B. What should I do if this individual needs an exemption to use a restraint system on an airplane?

- 1) Petition for an exemption as soon as possible.
 - Once it's determined that an individual requires an exemption from FAA regulations to use a restraint system on an airplane, start the process to petition the FAA for an exemption as soon as possible.
 - It can take 6-8 weeks to complete the process (and could take longer if the exemption request involves certain novel issues).
 - Grants of Exemption are specific to the individual but are not specific to the Part 121 U.S.-certificated air carrier on which the restraint system can be used.
 - If an exemption to use a restraint system on an airplane is granted, it typically remains effective for 5 years.

 Note: If an older individual will reach the age of 18 prior to the termination date for an exemption, the FAA will include additional relief (from other regulations) in the Grant of Exemption that will continue to allow the restraint to be used by the person, who would then be considered an adult, so the grant of exemption will continue to be "seamlessly" effective for the duration of the relief.

- Petition the FAA for an exemption as soon as possible. It is much better for an individual to be in possession of a Grant of Exemption weeks or even months before their flight than to not receive the grant because too little time was left for the FAA to properly complete the exemption process prior to travel.
- A petition for an exemption does not require specific travel information, such as the name of the airline, specific travel dates, or even departure or arrival cities. These details are not relevant to the petition for exemption.
- Once granted, an exemption can be used by that individual for travel on any date, between any city pairs, and on any Part 121 U.S.-certificated operator (air carrier) for the duration of the exemption (typically 5 years) when all conditions are met, unless conditions change.

Note: A response to a petition for exemption is provided to the petitioner via U.S. mail and email (if an email address is provided when the request is made) and is posted to the docket at www.regulations.gov.

Note: FAA regulations only apply to U.S.-certificated air carriers. However, several Civil Aviation Authorities (CAA) for other countries recognize FAA approval of CRS for use on aircraft and/or FAA exemptions that allow the use of certain restraint systems for use on the air carriers regulated by that CAA. If travel includes a foreign air carrier, contact the foreign air carrier regarding its specific policies.

2) Use the templates in section VII of this resource guide to develop the petition for exemption. When completed, you will upload the template to the FAA Shell Docket. The FAA uses this information to evaluate your petition for exemption.

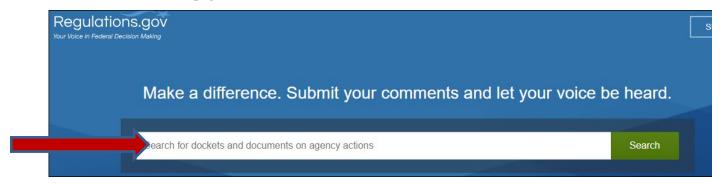
Template	Type of Restraint
Template A	CARES
Template B	E-Z-On Harness
Template C	Non-Approved CRS
Template D	Upper Body Support
Template E	Extension Request
Template F	Firefly GoTo Seat by Leckey

3) Submit the petition for exemption or extension using the instructions in sections C, D, or E of the CRS Checklist, as appropriate.

C. Detailed Submission Instructions/Petition for Exemption

Send your petition to the Federal Docket Management System (FDMS) electronically by accessing the public portal: www.regulations.gov.

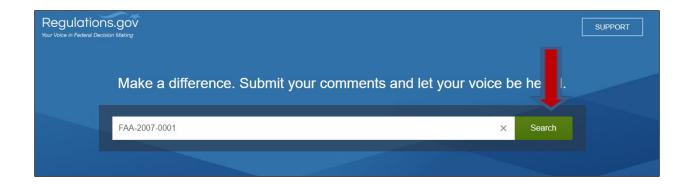
1) In the center of the homepage, locate the "Search for" field.



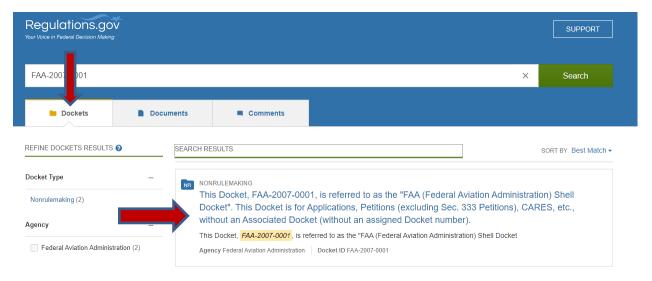
2) In the "Search for dockets and documents on agency actions" field, enter "FAA-2007-0001" (without the quotation marks).

Note: This Docket, FAA-2007-0001, is referred to as the "FAA Shell Docket". It serves as the slate that enables Agencies to collect public requests such as Applications, Petitions, etc., for which a docket does not exist. Therefore, only items without an existing docket number should be submitted to FAA-2007-0001.

Note: If you are seeking an extension to an unexpired exemption, enter your docket number instead (formatted as FAA-YEAR-XXXX), and follow the instructions in section D. of this "CRS Checklist" section.



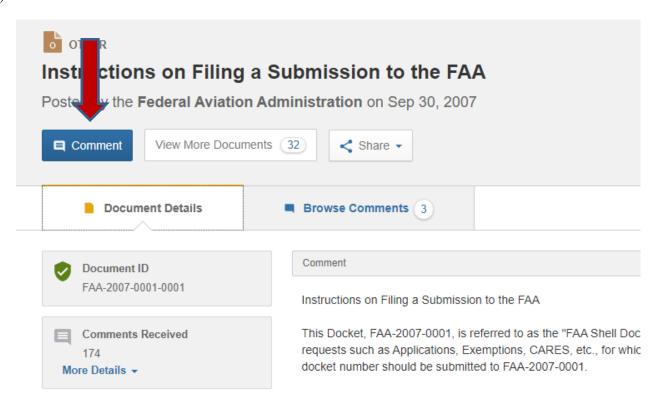
- 3) Select "Search" or click your "Enter" button. Regulations.gov will display a Search Results page.
- 4) Put cursor over the "This docket, FAA-2007-001, is referred to as the "FAA ..." result in the "Dockets" tab and click your "Enter" button.



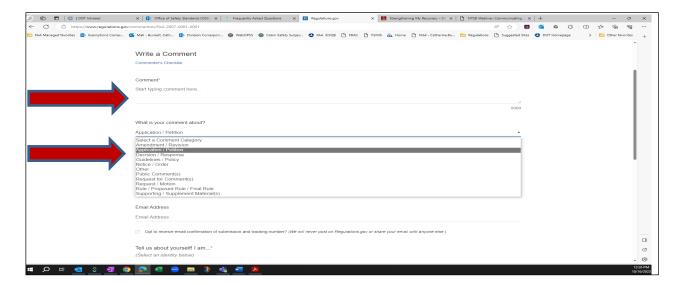
5) Select the "Instructions on Filing a Submission to the FAA" result found in the "Browse Documents" tab. Sort by "Posted (Older-Newer) to bring this result to the top.



6) Click on the "Comment" button.



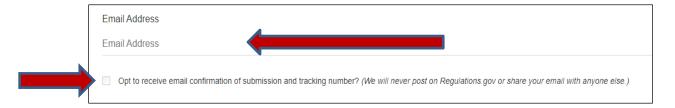
7) Enter information in the "Comment" area that indicates you are uploading a request for exemption for the use of a restraint device by a person with a disability. **This information is viewable to the public.** Additionally, select "Application/Petition" from the "Select a Comment Category" drop-down menu.



8) Upload your completed/saved template that contains the required information by either dropping the file where indicated or clicking "Browse" to upload the completed/saved template.



9) Enter your Email Address. If you want to receive email confirmation of submission and tracking number, check box next to "Opt to receive email confirmation of submission and tracking number?".



10) Select an identity (either Individual or Organization) to continue your submission process.

Note: FAA regulations require your name and address when submitting a petition for exemption. The FAA cannot address a response document to "anonymous."



11) When you've completed the required information, check the "I'm not a robot" box in the reCAPTCHA area.



12) Click on "Submit Comment".

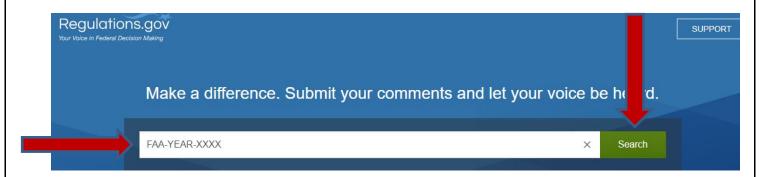


If you checked the "Opt to receive email confirmation of submission and tracking number?" box in step 9, you will receive confirmation at the email address you included. You can use this tracking number to locate your petition after submission.

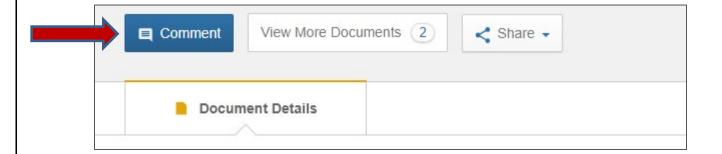
D. Detailed Submission Instructions/ Extension of Previously Issued AND Unexpired Exemption

Send your request for an extension of an unexpired exemption to the Federal Docket Management System (FDMS) electronically by accessing the public portal: www.regulations.gov.

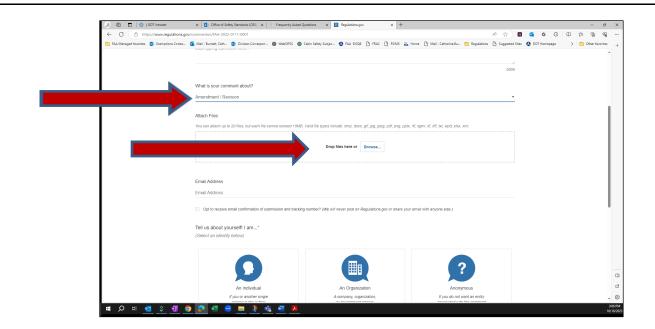
 In the center of the homepage, locate the "Search for dockets and documents on agency actions" field. In this field, enter your docket number (formatted as FAA-YEAR-XXXX) and select "Search" or click your "Enter" button. Regulations.gov will display that docket.



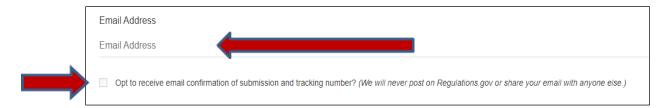
- 2. Click on the highlighted name of the initial submission.
- 3. Put cursor over the "Comments" tab and click your "Enter" button.



4. Enter information in the "Comment" area that indicates you are uploading a request for an extension to a previously issued exemption that has not expired for the use of a restraint device by a person with a disability. **This information is viewable to the public.** Additionally, select "Amendment/Revision" to indicate your comment category. Upload your completed/saved template for an extension to a previously issued AND unexpired exemption that contains the required information by either dropping the file where indicated or clicking "Browse" to upload the completed/saved template.

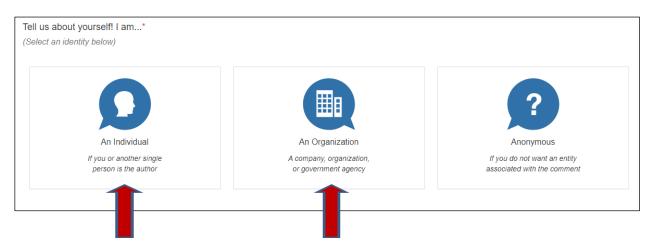


5. Enter your Email Address. If you want to receive email confirmation of submission and tracking number, check box next to "Opt to receive email confirmation of submission and tracking number?".



6. Select an identity (either Individual or Organization) to continue your submission process.

Note: FAA regulations require your name and address when submitting a petition for exemption. The FAA cannot address a response document to "anonymous."



7. When you've completed the required information, check the "I'm not a robot" box in the reCAPTCHA area.



8. Click on "Submit Comment".



If you checked the "Opt to receive email confirmation of submission and tracking number" box in step 5, you will receive confirmation at the email address you included. You can use this tracking number, or your docket number, to locate your petition extension request after submission.

E. Submission Instructions-Quick Reference Guide

- Go to: http://www.regulations.gov/
- Enter "FAA-2007-0001" in the "Search for dockets and documents on agency actions" field.
- Click "Search".
- Click the "Instructions on Filing a Submission to the FAA" result.
- Click the "Comment" button on the left side of the result.
- Fill out the information requested in the "Comment" section of the page.
- Select "Application/Petition" in the "What is your comment about?" section.
- Attach your petition file(s).
- Enter email address where indicated. Check "Opt to receive email confirmation of submission and tracking number?" box if so desired.
- Select identity (either Individual or Organization).

- Check reCAPTCHA box.
- Click "Submit Comment".
- You can enter your tracking number into the "Search" field at www.regulations.gov in approximately one week to view your petition in the docket and learn the unique docket number that has been assigned to your petition.

For any questions regarding the information in this CRS Checklist,

contact the FAA's Child Restraint Systems experts at CRS@faa.gov

VII. Templates: Petitions for Exemption or Extension

Please complete all information requested for *bold/italic* words or where there is a blank space.

A. Petition Template for CARES (when the user is over 44 pounds and/or 40 inches tall)

I am writing to request an exemption from Title 14 of the Code of Federal Regulations (14 CFR) § 121.311(b) to the extent required for *Full name* to be able to use a Federal Aviation Administration (FAA) approved child restraint system even though *she/he* exceeds the weight limits for the CRS. In addition, if my petition is granted, I request that any air carrier or commercial operator operating under part 121 while *name* is aboard its aircraft is granted an exemption from 14 CFR § 121.311(b)(2)(iii)(B) to the extent necessary to allow *name* to exceed the specified weight limit for an FAA approved child restraint system during use of that child restraint system aboard an aircraft, during all phases of flight, including ground movement, takeoff, and landing.

I believe the pertinent section from 14 CFR Part 121 from which we seek relief is § 121.311 Seats, safety belts, and shoulder harnesses.

NAME is _____ years old, weighs _____ pounds, and is _____ inches tall. **NAME's** physical condition is as follows:

(Insert a description of physical challenges).

As a result of *her/his* physical condition, *she/he* needs the support and security provided by an FAA approved child restraint system, but because of *her/his weight/height* is incapable of compliance with the regulation.

I am also submitting the following contact information:

Mr. / Mrs. / Ms. first and last names of parent/guardian

Mailing address of parent/guardian including city, state and zip code

Email address of parent/guardian

Relationship of submitter to restraint user

I understand that the regulation is written to create a high level of safety for each individual passenger by ensuring that they are securely restrained in their seats during all phases of flight. The regulation also ensures that an individual does not cause harm to other passengers on the airplane by being thrown into them during turbulent or emergency conditions.

I propose that *name* be allowed to occupy an FAA approved child restraint system (CARES, manufactured by AmSafe, Inc.), even though *she/he* exceeds the manufacturer's *weight/height* limits. This ensures a high

level of safety for *name* and a high level of safety for the other passengers and crew on the airplane. In fact, in *name's* case, safety is greatly enhanced by the extra support and security that the FAA approved child restraint system will provide during the entire flight.

Enhancing safety for *name* is in the public interest. In addition, the public interest is also served by the fact that the use of this FAA approved child restraint system allows *her/him* to use commercial air transportation. Without the support and security of the FAA approved child restraint system, *she/he* would be unable to fly commercially.

I also believe that, with certain limitations established by the FAA in a grant to this petition, there can be an equivalent level of safety to that provided by the affected regulation. The CARES child restraint system has been certified by the manufacturer for use by children 22- 44 pounds. However, the components of the CARES restraint are the same as those used in restraints for adults on aircraft and would maintain their integrity if used by someone who weighed several hundred pounds.

I believe that the limit of 44 pounds was established because, with the additional weight of the child attached to the seatback, the seatback would move forward more quickly in an accident scenario, and this might cause a higher Head Injury Criteria (HIC) load for the person seated in the seat behind the passenger using the CARES child restraint system (because the seatback moving forward more quickly would mean that it would not be there to attenuate the energy from the impact of the person seated behind the person using the CARES child restraint system).

In order to achieve an equivalent level of safety as that provided by the affected regulation, I propose that the FAA establish a limitation in a grant to this petition that *name* only sits in a passenger seat with no passenger seated behind *her/him*. Therefore, no unsafe condition would exist for a passenger seated behind *name* while *she/he* is using the CARES child restraint system. I also propose that all operations under this exemption be conducted with at least one of *name's* parents or a caregiver accompanying *her/him*, as required by § 121.311(b)(2)(i). In addition, I propose that *name's* parent or caregiver must carry a copy of this exemption (either on paper or electronically) and advise the air carrier about the contents of the exemption at least 48 hours before the date of each flight.

I also request that the processing of this petition not be delayed for publication and comment in the *Federal Register*. We want to travel *beginning/ending travel dates*. If you take the time to put this in the *Federal Register*, it will delay the process, and we may not be able to travel in this timeframe.

If it is necessary to put a summary in the *Federal Register*, I submit the following:

This is a request for an exemption from 14 CFR § 121.311(b) to the extent required for a child to use an FAA approved child restraint system on an aircraft, even though the child exceeds the weight limits for the CRS, during all phases of flight, including ground movement, takeoff, and landing. Due to physical challenges, without the support and security of this FAA approved child restraint system, this child would be unable to fly. We request that this child be allowed to occupy an FAA approved child restraint system (CARES, manufactured by AmSafe, Inc.), even though *she/he* exceeds the manufacturer's weight limits of 44 pounds. In this case, the safety of this child is greatly enhanced by the extra support and security that the FAA approved child restraint system will provide for *her/him* during all phases of the flight.

B. Petition Template for E-Z-On Harness

I am writing to request an exemption from Title 14 of the Code of Federal Regulations (14 CFR) § 121.311(b) to the extent required for *name* to be able to use an E-Z-ON Modified Laydown Vest, a dynamically tested restraint system that conforms to the Federal Motor Vehicle Safety Standard No. 213, during all phases of flight, including ground movement, takeoff, and landing. In addition, if my petition is granted, I request that any air carrier or commercial operator operating under part 121 while *name* is aboard its aircraft is granted an exemption from 14 CFR § 121.311(b)(2)(iii)(B) to the extent necessary to allow *name* to use an E-Z-ON Modified Laydown Vest, a dynamically tested restraint system that conforms to the Federal Motor Vehicle Safety Standard No. 213, during use of that restraint system aboard an aircraft.

I believe the pertinent section from 14 CFR Part 121 from which we seek relief is § 121.311 Seats, safety belts, and shoulder harnesses.

NAME is _____ years old, weighs _____ pounds, has a chest measurement of _____, and is _____ inches tall. *NAME*'s physical condition is as follows:

(Insert a description of physical challenges).

As a result of *her/his* physical condition, *she/he* needs the support and security provided by an E-Z-ON Modified Laydown Vest, a dynamically tested restraint system that conforms to the Federal Motor Vehicle Safety Standard No. 213, but because of *her/his* physical needs is incapable of compliance with the regulation.

I am also submitting the following contact information:

Mr. / Mrs. / Ms. first and last names of parent/guardian

Mailing address of parent/guardian including city, state and zip code

Email address of parent/guardian

Relationship of submitter to restraint user

I understand that the regulation is written to create a high level of safety for individual passengers by ensuring that they are securely restrained in their seats during all phases of flight. The regulation also ensures that an individual does not cause harm to other passengers on the airplane by being thrown into them during turbulent or emergency conditions.

I propose that *name* be allowed to occupy an E-Z-ON Modified Laydown Vest, a dynamically tested restraint system that conforms to the Federal Motor Vehicle Safety Standard No. 213 (*Name, Model Number of*

E-Z-ON restraint device you wish to use inflight). This dynamically tested restraint system conforms to the Federal Motor Vehicle Safety Standard No. 213, and use of this restraint system ensures a high level of safety for *name* and a high level of safety for the other passengers and crew on the airplane. In fact, in *name's* case, safety is greatly enhanced by the extra support and security that the restraint system will provide during the entire flight.

Enhancing safety for *name* is in the public interest. In addition, the public interest is also served by the fact that the use of this restraint system allows *her/him* to use commercial air transportation. Without the support and security of this restraint system, *she/he* would be unable to fly commercially.

I also believe that, with certain limitations established by the Federal Aviation Administration (FAA) in a grant to this petition, there can be an equivalent level of safety to that provided by the affected regulation. The components of the restraint system are similar to those used in restraints for adults on aircraft and would maintain their integrity if used by someone who weighed several hundred pounds.

In order to achieve an equivalent level of safety as that provided by the affected regulation, I propose that the FAA establish a limitation in a grant to this petition. Specifically, I propose that all operations under this exemption be conducted with at least one of *name's* parents or a caregiver accompanying *her/him*, as required by § 121.311(b)(2)(i). I also propose *name's* parent or caregiver must carry a copy of this exemption (either on paper or electronically) and advise the air carrier about the contents of the exemption at least 48 hours before the date of each flight.

In addition, I propose that the restraint system, when used in a standard airplane seat, is used in accordance with the manufacturer's instruction manual, which requires that the restraint system is first installed on *name* and, in turn, secured to the airplane passenger seats using at least two of the aircraft seat belts. Proper use requires *name* to lie in a prone position across two airplane passenger seats during the flight, including ground movement, takeoff, and landing, when used in a standard airplane seat.

Additionally, I propose that the restraint system, when used in a lie-flat seat, such as might be offered in business- or first-class aircraft configuration, requires that the restraint system is first installed on *name* and, in turn, secured to one airplane passenger seat using one aircraft seat belt. Proper use requires *name* to lie in a prone position with the seat fully reclined during the flight, including ground movement, takeoff, and landing, when used in a lie-flat seat.

I also request that the processing of this petition not be delayed for publication and comment in the *Federal Register*. We want to travel *beginning/ending travel dates*. If you take the time to put this in the *Federal Register*, it will delay the process, and we may not be able to travel in this timeframe.

If it is necessary to put a summary in the *Federal Register*, I submit the following:

This is a request for an exemption from 14 CFR § 121.311(b) to the extent required for a child to use a dynamically tested restraint system that conforms to the Federal Motor Vehicle Safety Standard No. 213 on an aircraft during all phases of flight, including ground movement, takeoff, and landing. Due to physical challenges, this child would be unable to fly without the support and security of this restraint system. In this case, the safety of this child is greatly enhanced by the extra support and security that the restraint system will provide for *her/him* during all phases of the flight.

C. Petition Template for a Non-Approved CRS

I am writing to request an exemption from Title 14 of the Code of Federal Regulations (14 CFR) § 121.311(b) to the extent required for *Name* to be able to use *a/an Manufacturer and Name*, *Model Number of restraint system* as a restraint system during all phases of flight while aboard an aircraft, even though it does not meet regulatory standards. In addition, if my petition is granted, I request that any air carrier operating under Part 121 while *Name* is aboard its aircraft is granted an exemption from 14 CFR § 121.311(b) to the extent necessary to allow *Name* to use *a/an Manufacturer and Name*, *Model Number of restraint system* as a restraint system during all phases of flight while aboard an aircraft, even though it does not meet regulatory standards.

I believe the pertinent section from 14 CFR Part 121 from which we seek relief is § 121.311 Seats, safety belts, and shoulder harnesses.

NAME is _____ years old, weighs _____ pounds, and is _____ inches tall. **NAME**'s physical condition is as follows:

(Insert a description of physical challenges).

As a result of *her/his* physical condition, *she/he* needs the support and security provided by the *Manufacturer and Name, Model Number of restraint system*, even though it does not meet regulatory standards, and because of *her/his* disability is incapable of compliance with the regulation.

I am also submitting the following contact information:

Mr. / Mrs. / Ms. first and last name of parent/guardian

Mailing address of parent/guardian including city, state and zip code

Email address of parent/guardian

Relationship of submitter to restraint user

I understand that the regulation is written to create a high level of safety for each individual passenger by ensuring that they are securely restrained in their seats during all phases of flight. The regulation also ensures that an individual does not cause harm to other passengers on the airplane by being thrown into them during turbulent or emergency conditions.

I propose that *Name* be allowed to occupy *a/an Manufacturer and Name of restraint system*, which will be securely strapped in a passenger seat with the FAA approved aircraft seat belt. *Name* will then be secured with the *Name of restraint system's* internal restraints. The *Name of restraint system* will not block any passenger's view of the "Fasten

Seat Belt" sign, "No Smoking" sign, or any required exit sign. It will also be placed in such a manner that its location will not restrict access to, or use of, any required emergency exit, or of the aisle in the passenger compartment.

This proposal will satisfy the intended purpose of the regulations by ensuring that *Name* is securely restrained by the *Name of restraint system*'s internal restraints and the *Name of restraint system* itself is securely restrained by the FAA approved aircraft seat belt. This ensures a high level of safety for *Name* and a high level of safety for the other passengers and crew on the airplane. In fact, in *Name*'s case, safety is greatly enhanced by the extra support and security that the *Name of restraint system* will provide during the entire flight.

Enhancing safety for *Name* is in the public interest. In addition, the public interest is also served by the fact that the use of this restraint system allows *her/him* to use commercial air transportation. Without the support and security of this specially designed restraint system, *she/he* would be unable to fly commercially.

I propose that all operations under the exemption be conducted with at least one of *Name's* parents or a caregiver accompanying *her/him*, as required by § 121.311(b)(2)(i). I also propose that *Name*, while seated in the *Name of restraint system*, must be secured with the restraint's internal restraint system. I further propose that the *Name of restraint system* must be secured in the airplane passenger seat by means of the FAA-approved aircraft seat belt in accordance with the instructions provided with the restraint.

In addition, I propose that *Name's* parent or caregiver be required to carry a copy of the exemption (either on paper or electronically) and advise the air carrier about the contents of the exemption at least 48 hours before the date of each flight.

I also request that the processing of this petition not be delayed for publication and comment in the *Federal Register*. We want to travel *beginning/ending travel dates*. If you take the time to put this in *Federal Register*, it will delay the process and we may not be able to travel in this timeframe.

If it is necessary to put a summary in the *Federal Register*, I submit the following:

This is a request for an exemption from 14 CFR § 121.311 (b) and (c) to the extent required for a person to use a non-approved restraint system on an aircraft, even though it does not meet regulatory standards. Due to physical challenges, without the support and security of the non-approved restraint system, this person would be unable to fly. In this case, the safety of this person is greatly enhanced by the extra support and security that the non-approved restraint system will provide for *her/him* during the flight.

D. Petition Template for Upper Body Support

I am writing to request an exemption from Title 14 of the Code of Federal Regulations (14 CFR) § 121.311(b) to the extent required for *Full Name* to be able to, while occupying an approved seat with a properly secured seat belt, use an additional strap that provides upper body support by going under *name*'s arms (encircling the user and the seatback), during all phases of flight aboard an aircraft. In addition, if my petition is granted, I request that any air carrier or commercial operator operating under Part 121 while *name* is aboard its aircraft is granted an exemption from 14 CFR § 121.311(b) to the extent necessary to allow *name*, while occupying an approved seat with a properly secured seat belt, to use an additional strap that provides upper body support by going under *name*'s arms (encircling the user and the seatback), during all phases of flight aboard an aircraft.

I believe the pertinent section from 14 CFR part 121 from which we seek relief is § 121.311 Seats, safety belts, and shoulder harnesses.

Full name is _____ years old, weighs ____ pounds, and is ____ inches tall. *Name's* physical condition is as follows:

(Insert a description of physical challenges).

As a result of *her/his* physical condition, *she/he* needs the support and security provided by an additional strap that provides upper body support by going under *name*'s arms (encircling *name* and the seatback) during all phases of flight aboard an aircraft. Therefore, because of *her/his* need for this additional support, *she/he* is incapable of literal compliance with the regulation.

I am also submitting the following contact information:

Mr. / Mrs. / Ms. first and last name of parent/guardian

Mailing address of parent/guardian including city, state and zip code

Email address of parent/guardian

Relationship of submitter to restraint user

I understand that the regulation is written to create a high level of safety for each individual passenger by ensuring that they are securely restrained in their seats during all phases of flight. The regulation also ensures that an individual does not cause harm to other passengers on the airplane.

I understand that with the additional weight of the user attached to the seatback (by the use of an additional support strap that encircles the user and the seatback), the seatback would move forward more quickly in an accident scenario, and this might cause a higher Head Injury Criteria (HIC) load for the person seated in the seat behind the passenger using an additional strap to provide upper body support. I also understand that this is because the seatback moving forward more quickly would mean that it would not be there to attenuate the energy from the impact of the person seated behind the person using an additional strap for upper body support.

In order to achieve an equivalent level of safety as that provided by the affected regulation for all passengers, I propose that the FAA establish a limitation in a grant to this petition that *name* only sits in a passenger seat with no passenger seated behind *her/him*. Therefore, no unsafe condition would exist for a passenger seated behind *name*. I also propose that all operations under this exemption be conducted with at least one caregiver accompanying *name*, as required by § 121.311(b)(2)(i). In addition, I propose that *name*'s caregiver must carry a copy of this exemption (either on paper or electronically) and advise the air carrier about its contents at least 48 hours before the date of each flight.

I propose that *name* be allowed to, while occupying an approved seat with a properly secured seat belt, use an additional strap that provides upper body support by going under the user's arms (encircling the user and the seatback), during all phases of flight aboard an aircraft. This ensures a high level of safety for *name* and a high level of safety for the other passengers and crew on the airplane. In fact, in *name*'s case, safety is greatly enhanced by the extra upper body support and security that an additional strap provides during the entire flight.

Enhancing safety and security for *name* is in the public interest. In addition, the public interest is also served by the fact that the use of this additional strap that provides upper body support allows *her/him* to use commercial air transportation. Without the support and security of an additional strap that provides upper body support, *she/he* would be unable to fly commercially.

I also request that the processing of this petition not be delayed for publication and comment in the *Federal Register*. We want to travel *beginning/ending travel dates*. If you take the time to put this in the *Federal Register*, it will delay the process, and we may not be able to travel in this timeframe.

If it is necessary to put a summary in the Federal Register, I submit the following:

This is a request for an exemption from 14 CFR § 121.311 (b) to the extent required for an individual to be able to, while occupying an approved seat with a properly secured seat belt, use an additional strap that provides upper body support by going under the user's arms (encircling the user and the seatback), during all phases of flight aboard an aircraft. In addition, this individual requests that any air carrier or commercial operator operating under part 121 while they are aboard its aircraft is granted an exemption from 14 CFR § 121.311(c) to the extent necessary to allow this individual to, while occupying an approved seat with a properly secured seat belt, use an additional strap that provides upper body support by going under the user's arms (encircling the user and the seatback), during all phases of flight aboard an aircraft. Due to physical challenges, without the support and security of this additional support strap, this individual would be unable to fly. In this case, the safety of this individual is greatly enhanced by the extra support and security that an additional support strap will provide during the flight.

E. Petition Template for an Extension to a Previously Issued AND Unexpired Exemption

I am writing to request an extension of Exemption No. found at the top of the original issued exemption, issued to Full Name from certain requirements of § 121.311(b) of Title 14, Code of Federal Regulations (14 CFR). This exemption allows Full Name to insert information from issued exemption about what the exemption allows the user to do during use of that child restraint system (CRS) aboard a United States (U.S.) aircraft. In addition, any air carrier operating under Part 121 while Full Name is aboard its aircraft is also granted an exemption from 14 CFR § 121.311(c) to the extent necessary to allow Full Name to insert information from issued exemption about what the exemption allows the user to do aboard a U.S. aircraft.

I believe the pertinent section from 14 CFR Part 121 from which we seek relief is § 121.311 Seats, safety belts, and shoulder harnesses.

Full name is _____ years old, weighs ____ pounds, and is ____ inches tall. *Full name*'s physical condition is as follows:

(Insert a description of physical challenges).

As a result of *her/his* physical condition, *she/he* needs the support and security provided by the *Manufacturer*, *Name*, *Model Number of restraint system* and because of *her/his* disability is incapable of compliance with the regulation.

I am also submitting the following contact information:

Mr. / Mrs. / Ms. first and last name of parent/guardian

Mailing address of parent/guardian including city, state and zip code

Email address of parent/guardian

Relationship of submitter to restraint user

The original exemption allowed *Full name* to *insert information from issued exemption about what the exemption allows the user to do* during use of that child restraint system (CRS) aboard a United States (U.S.) aircraft. In addition, it granted relief from 14 CFR § 121.311(b) to any air carrier operating under part 121 while *Full Name* is aboard its aircraft to allow *Full Name* to *insert information from issued exemption about what the exemption allows the user to do* aboard a U.S. aircraft. This ensured a high level of safety for *Full Name* and a high level of safety for the other passengers and crew on the airplane. In fact, in *Full Name*'s case, safety

is greatly enhanced by the extra support and security that the *Manufacturer*, *Name*, *Model Number of restraint* system provides during the entire flight.

Enhancing safety for *Full Name* is in the public interest. In addition, the public interest is also served by the fact that the use of the *Manufacturer*, *Name*, *Model Number of restraint system* allows *her/him* to use commercial air transportation. Without the support and security of the *Manufacturer*, *Name*, *Model Number of restraint system*, *she/he* would be unable to fly commercially.

[Include one of the following statements to reflect the current situation]:

Since the original exemption was issued, there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

OR

Since the original exemption was issued, the following are changes in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption:

List the changes you want the FAA to consider.

If it is necessary to put a summary in the Federal Register, I submit the following:

This is a request for an extension of an exemption from 14 CFR § 121.311 (b) to the extent required for an individual to continue to use a *Manufacturer, Name, Model Number of restraint system* on an aircraft, even though the individual *insert reason for why the individual requires this regulatory relief.* Due to physical challenges, without the continued support and security of this *Manufacturer, Name, Model Number of restraint system*, this individual would be unable to fly. We request that this individual is continued to be allowed to *insert information from issued exemption about what the exemption allows the user to do* during use of that child restraint system (CRS) aboard a United States (U.S.) aircraft. In addition, we request that any air carrier operating under Part 121 while this individual is aboard its aircraft is also granted an exemption from 14 CFR § 121.311(c) to the extent necessary to allow this individual to *insert information from issued exemption about what the exemption allows the user to do* aboard a U.S. aircraft. In this case, the safety of this individual is greatly enhanced by the extra support and security that a *Manufacturer, Name, Model Number of restraint system* will continue to provide for this individual during the flight.

F. Petition Template for Firefly GoTo Seat by Leckey

I am writing to request an exemption from Title 14 of the Code of Federal Regulations (14 CFR) § 121.311(b) to the extent required for *Full Name* to be able to, while occupying an approved seat with a properly secured seatbelt, use an appropriately sized Firefly GoTo Seat manufactured by Leckey, a postural device not certified for use as a restraint device aboard a United States (U.S.)-registered aircraft, during all phases of flight while aboard an aircraft. In addition, if my petition is granted, I request that any air carrier or commercial operator operating under part 121 while *name* is aboard its aircraft is granted an exemption from 14 CFR § 121.311(c) to the extent necessary to allow *name*, while occupying an approved seat with a properly secured seatbelt, to use an appropriately sized Firefly GoTo Seat manufactured by Leckey, a postural device not certified for use as a restraint device aboard a United States (U.S.)-registered aircraft, during all phases of flight aboard an aircraft.

I believe the pertinent section from 14 CFR Part 121 from which we seek relief is § 121.311 Seats, safety belts, and shoulder harnesses.

Full name is _____ years old, weighs ____ pounds, and is ____ inches tall. *Name's* physical condition is as follows:

(Insert a description of physical challenges)

As a result of *her/his* physical condition, *she/he* needs the support and security provided by a Firefly GoTo Seat during all phases of flight aboard an aircraft. Therefore, because of *her/his* need for this additional support, *she/he* is incapable of literal compliance with the regulation.

I am also submitting the following contact information:

Mr. / Mrs. / Ms. first and last name of parent/guardian

Mailing address of parent/guardian including city, state and zip code

Email address of parent/guardian

Relationship of submitter to restraint user

I understand that the regulation is written to create a high level of safety for each individual passenger by ensuring that they are securely restrained in their seats during all phases of flight. The regulation also ensures that an individual does not cause harm to other passengers on the airplane by being thrown into them during turbulent or emergency conditions.

I am aware that the GoTo Seat is available in 2 size options. Size 1 is intended for use by children with a maximum weight of 15 kilograms (kgs)/33 pounds (lbs), and Size 2 is intended for use by children with a maximum weight of 30 kg/60 lbs.

I understand that with the additional weight of the user attached to the seatback (when using a Size 2 Firefly GoTo Seat), the seatback would move forward more quickly in an accident scenario, and this might cause a higher Head Injury Criteria (HIC) load for the person seated in the seat behind the passenger using an additional strap to provide upper body support. I also understand that this is because the seatback moving forward more quickly would mean that it would not be there to attenuate the energy from the impact of the person seated behind the person using an additional strap for upper body support.

In order to achieve an equivalent level of safety as that provided by the affected regulation for all passengers, I propose that the FAA establish a limitation in a grant to this petition that, if *name* is authorized to occupy an approved seat with a properly secured seatbelt while using a Size 2 Firefly GoTo Seat, *she/he* only sits in a passenger seat with no passenger seated behind *her/him*. Therefore, no unsafe condition would exist for a passenger seated behind *name* while *she/he* uses a Size 2 Firefly GoTo Seat.

I also propose that all operations under this exemption be conducted with at least one caregiver accompanying *name*, as required by § 121.311(b)(2)(i). In addition, I propose that *name*'s caregiver must carry a copy of this exemption (either on paper or electronically) and advise the air carrier about its contents at least 48 hours before the date of each flight.

I propose that *name* be allowed to, while occupying an approved seat with a properly secured seatbelt, use an appropriately sized Firefly GoTo Seat manufactured by Leckey, a postural device not certified for use as a restraint device aboard a United States (U.S.)-registered aircraft, during all phases of flight while aboard an aircraft. This ensures a high level of safety for *name* and a high level of safety for the other passengers and crew on the airplane. In fact, in *name*'s case, safety is greatly enhanced by the extra upper body support and security that an appropriately sized Firefly GoTo Seat provides during the entire flight.

Enhancing safety and security for *name* is in the public interest. In addition, the public interest is also served by the fact that the use of this appropriately sized Firefly GoTo Seat that provides upper body support allows *her/him* to use commercial air transportation. Without the support and security of an appropriately sized Firefly GoTo Seat that provides upper body support, *she/he* would be unable to fly commercially.

I also request that the processing of this petition not be delayed for publication and comment in the *Federal Register*. We want to travel *beginning/ending travel dates*. If you take the time to put this in the *Federal Register*, it will delay the process, and we may not be able to travel in this timeframe.

If it is necessary to put a summary in the Federal Register, I submit the following:

This is a request for an exemption from 14 CFR § 121.311 (b) to the extent required for an individual to be able to, while occupying an approved seat with a properly secured seatbelt, use an appropriately sized Firefly GoTo Seat manufactured by Leckey, a postural device not certified for use as a restraint device aboard a United States (U.S.)-registered aircraft, during all phases of flight while aboard an aircraft. In addition, this individual requests that any air carrier or commercial operator operating under Part 121 while they are aboard its aircraft is granted an exemption from 14 CFR § 121.311(c) to the extent necessary to allow this individual to, while occupying an approved seat with a properly secured seatbelt, use an appropriately sized Firefly GoTo Seat manufactured by Leckey, a postural device not certified for use as a restraint device aboard a United States (U.S.)-registered aircraft, during all phases of flight while aboard an aircraft. Due to physical challenges, without the support and security of this Firefly GoTo Seat, this individual would be unable to fly. In this case, the safety of this individual is greatly enhanced by the extra support and security that use of an appropriately sized Firefly GoTo Seat will provide during the flight.

VIII. FAA Information Regarding the Use of CRS on Aircraft

A. FAA Website



https://www.faa.gov/travelers/fly children/

The FAA website contains information regarding:

- Child Restraint Systems (CRS)
- Installing a CRS in an airplane seat
- FAA Approved CARES Device
- Installing CARES in an airplane seat
- Tips for Parents
- Seat Fit
- Lap Children
- Children with Special Needs
- Where Can I Find More Information?

B. Regulations

• For general aviation flights: 14 CFR 91.107: Use of safety belts, shoulder harnesses, and child restraint systems.

https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-91/subpart-B/subject-group-ECFRe4c59b5f5506932#91.107

• For commercial aviation flights: 14 CFR 121.311: Seats, safety belts, and shoulder harnesses (use of seat/safety belts).

https://www.ecfr.gov/current/title-14/chapter-I/subchapter-G/part-121/subpart-K/section-121.311

- For private carriage operations: 14 CFR 125.211: Seat and safety belts.

 https://www.ecfr.gov/current/title-14/chapter-I/subchapter-G/part-125/subpart-F/section-125.211
- For commuter and on-demand operations: 14 CFR 135.128: Use of safety belts and child restraint systems. https://www.ecfr.gov/current/title-14/chapter-I/subchapter-G/part-135/subpart-B/section-135.128

C. Advisory Circulars (AC)

An AC is an informational document produced by the FAA to inform and guide external stakeholders within the aviation industry, as well as the general public. ACs are used to convey information, best practices, and means of compliance with certain regulations. They provide information about regulations and operations.

- AC 91-62A: Use of Child Seats in Aircraft.
 https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentI
 D/22430
- AC 120-87C: Use of Child Restraint Systems on Aircraft.
 https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentI
 D/1028289

D. Information for Operators (InFO)

An InFO contains valuable information for operators that should help them meet administrative requirements or certain regulatory requirements with relatively low urgency or impact on safety. InFOs contain information or a combination of information and recommended action to be taken by the respective operators identified in each individual InFO.

- InFO 07012: Accommodating Approved Harness-type CRS.
 https://www.faa.gov/sites/faa.gov/files/other_visit/aviation_industry/airline_operators/airline_safety/inFO070
 12.pdf
- InFO 15013: Regulatory Requirements Regarding Accommodation of Child Restraint Systems.
 https://www.faa.gov/sites/faa.gov/files/other_visit/aviation_industry/airline_operators/airline_safety/InFO150
 13.pdf

E. Civil Aerospace Medical Institute (CAMI) Technical Reports

The CAMI Technical Reports index is a listing of aviation research reports from 1961 to the present. The reports are available in full-text Adobe PDF format to view and download.

- FAA-AM-78-12: Child Restraint Systems for Civil Aircraft.
 https://www.faa.gov/sites/faa.gov/files/data_research/research/med_humanfacs/oamtechreports/AM78-12.pdf
- FAA-AM-94-19: Performance of Child Restraint Devices in Transport Airplane Passenger Seats.
 https://www.faa.gov/sites/faa.gov/files/data_research/research/med_humanfacs/oamtechreports/AM94-19.pdf

- FAA-AM-11-3: Aviation Child Safety Device Performance Standards Review.
 https://www.faa.gov/sites/faa.gov/files/data_research/research/med_humanfacs/oamtechreports/201103.pdf
- To access other FAA Aerospace Medicine Technical Reports
 https://www.faa.gov/data_research/research/med_humanfacs/oamtechreports//

F. Technical Standard Order (TSO)

A TSO is a minimum performance standard issued by the FAA for specified materials, parts, processes, and appliances used on aircraft. TSO-C100c contains minimum performance standards for the testing and evaluation of CRS.

TSO C100c: Aviation Child Safety Device (ACSD).
 https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/14280BE2D4385A92862579E40047815B
 ?OpenDocument