

Guidance Number : TGM/--/--
Subject : Use of Child Restraint Devices in Aircraft
Regulation affected : JAR-OPS 1.320, 1.630 and 1.730

Date: 30 August 2002

Preamble:

As there are no airworthiness requirements established for Child Restraint Devices (CRD) to be used for approving such devices, it is recommended that JAR OPS 1 should be revised to allow the usage of „acceptable“ Child Restraint Devices as long as the operator can also ensure installation compatibility with the aircraft seat on which the CRD rests and its securing means.

This Guidance Material has to be seen as an interim solution to give the possibility to enhance safety by using certain devices until an overall aviation performance standard for CRS has been established (by JAA) which also takes into account installation compatibility.

Note:

The term „CRD“ as used in this Guidance Material does not refer to loop belts, which are referred to in JAR-OPS 1.730 as another option to restraint infants during flights..

It is recommended that each child or infant on board an aeroplane occupies a passenger seat (or berth) of his own or a Child Restraint Device as appropriate with respect to his age (and weight) and is properly secured during taxi, takeoff, and landing, or whenever demanded by any crewmember, by the harness provided in order to achieve the same level of protection for **all** occupants to the extent possible.

Recent research has shown that inadequate installation as well as location of CRDs on different aircraft seats or in different aircraft cabin environments may reduce the efficiency of the CRD even if the CRD has been approved as such and could be used in principle. This is due to e.g. different cabin layouts, passenger seat designs, different seat belt lengths, seat belt anchor point locations and some fundamental differences between aircraft and car seats including different means to connect the CRD to the vehicle seat.

CRDs provided by the aircraft operator or by parents or attendants responsible for the child may be used during all phases of flight provided the installation is done in compliance with this document and in accordance with the following criteria:

- a. CRDs, which are obviously damaged or cannot properly be fastened on the aircraft seat may not be used but stowed in an appropriate manner.
- b. CRDs should be maintained, installed and secured in accordance with the maintenance, care and installation instructions provided with each seat. Instructions of the CRS manufacturer regarding proper handling and installation of the CRS must be attached to the CRS and shall be followed carefully.

Guidance:

Knowing that there are variations in policies concerning Child Restraint Devices for use in aircraft both between JAA Authorities and worldwide, the following Guidance Material defines what is considered to be an „acceptable“ CRD for the time being and provides information to assist cabin crewmembers in the proper use of Child Restraint Devices aboard aircraft.

Acceptable Restraint Devices:

Provided a CRD can be installed properly on the respective aircraft seat, the following CRDs are considered „acceptable“ until specific aviation approval standards for CRDs are available and adopted by JAA :

1. a) CRDs approved for use in aircraft only by any JAA authority, the FAA or Transport Canada (on the basis of a national technical standard) and marked accordingly.
 - b) CRDs approved for use in motor vehicles according to the UN standard ECE R 44, -03 or later series of Amendments; or
 - c) CRDs approved for use in motor vehicles and aircraft according to Canadian CMVSS 213/213.1; or
 - d) CRDs approved for use in motor vehicles and aircraft according to US FMVSS No 213 and are manufactured to these standards on or after February 26, 1985. US approved CRDs manufactured after this date must bear the following labels in red lettering:
 - 1.)“THIS CHILD RESTRAINT SYSTEM CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS“ and
 - 2.) „THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT“.
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2. CRDs qualified for use in aircraft according to the German „Qualification Procedure for Child Restraint Systems for Use in Aircraft“ (TÜV Doc.: TÜV/958-01/2001). These CRDs are restraint devices that conform to ECE-Regulation 44, - 03 or later series of Amendments, or equivalent aviation standards, and are moreover qualified in conjunction with specific seats/seating configurations of aeroplanes that are operated by a specific AOC holder in order to avoid installation problems and severe (head) injuries of the child occupant during turbulences and /or emergency landing conditions. These CRDs are additionally marked with a qualification sign, which shows the name of the qualifying organization and a specific identification number, which is related to the specific qualification project.

Note: The qualifying organization shall be a competent and independent organization that is acceptable to the national JAA authority.

Location

Only forward facing passenger seats shall be used for the installation of rearward facing CRDs. Forward facing CRDs may also be installed on rearward facing seats.

A CRD may **not** be installed within the radius of action of an airbag, unless it is obvious that the airbag is de-activated.

A child in a restraint device should be located as near to a floor level exit as feasible.

A child in a restraint device should be seated in accordance with JAR OPS 1.280 and IEM OPS 1.280, „Passenger seating“ so as to not hinder evacuation for any passenger.

A child in a restraint device should neither be located in the row leading to an emergency exit nor located in a row immediately forward or aft of an emergency exit. A window passenger seat is the preferred location. *An aisle passenger seat or a cross aisle passenger seat is not recommended.* Other locations may be acceptable provided *the access of neighbour passengers to the nearest aisle is not obstructed by the CRD.*

In general, only one CRD per row segment is recommended. More than one CRD per row segment is allowed if the children are from the same family or travelling group provided the children are accompanied by a responsible person sitting next to them.

Note: A Row Segment is the fraction of a row separated by two aisles or by one aisle and the aircraft fuselage.

Installation:

CRDs shall only be installed on a suitable aircraft seat with the *type of* connecting device they are approved or qualified for. E.g., CRDs to be connected by a three point harness only (most rearward facing baby CRDs currently available) shall not be attached to an aircraft seat with a lap belt only, a CRD designed to be attached to a vehicle seat by means of rigid bar lower anchorages (ISO-FIX or US equivalent) only, shall only be used on aircraft seats that are equipped with such connecting devices and shall not be attached by the aircraft seat lap belt. The method of connecting must be clearly shown in the manufacturer's instructions *to be provided with each CRD.*

All safety and installation instructions must be followed carefully.

If a forward facing CRD with a rigid backrest is to be fastened by a lap belt, the restraint device should be fastened when the backrest of the passenger seat on which it rests is in a reclined position. Thereafter, the backrest is to be positioned upright. This procedure ensures better tightening of the CRD on the aircraft seat.

The buckle of the adult safety belt must be easily accessible for both, opening and closing, and must be in line with the seat belt halves (not canted) after tightening.

Forward facing restraint devices with an integral harness must not be installed such that the adult safety belt is secured over the child.

Operation

Each CRD shall remain secured to a passenger seat during all phases of flight, unless it is properly stowed when not in use.

Where a CRD is adjustable in recline it must be in an upright position for all occasions when passenger restraint devices are required to be used.