

Advisory Circular

ACCEPTABLE RESTRAINT DEVICES FOR PASSENGERS WITH RESTRICTED MOBILITY

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GENERAL

Advisory Circulars (ACs) are issued by the Director-General of the Civil Aviation Authority of Singapore (DGCA) from time to time to provide practical guidance or certainty in respect of the statutory requirements for aviation safety. ACs contain information about standards, practices and procedures acceptable to CAAS. An AC may be used, in accordance with section 3C of the Air Navigation Act (Cap. 6) (ANA), to demonstrate compliance with a statutory requirement. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.

PURPOSE

This AC provides guidance to demonstrate compliance with, and information related to, requirements regarding the use of acceptable restraint devices for passengers with restricted mobility in the aircraft passenger cabin in accordance with ANR-121.

APPLICABILITY

This AC applies to an AOC holder operating in accordance with ANR-121.

RELATED REGULATIONS

This AC relates specifically to regulations 17, 59 and 87 of ANR-121.

RELATED ADVISORY CIRCULARS

- AC121-1-1 Guidance on General Requirements in ANR-121
- AC121-2-1 Guidance on Operational Procedures for ANR-121 Operations
- AC121-6-1 Guidance on Instrument and Equipment Requirements in ANR-121
- AC121-6-3 Acceptable Child Restraint Devices

CANCELLATION

This is the first AC issued on this subject.

EFFECTIVE DATE

This AC is effective from 20 September 2019.

OTHER REFERENCES

Nil.

DEFINITIONS

For the purpose of this AC, the following definitions apply:

- **Passenger with restricted mobility**– Refers to any person whose mobility and physical abilities is reduced or incapacitated by a physical disability. This term is hereinafter referred to as “PRMs”.
- **Restraint System** – A device designed to safely restrain a PRM within his/her seat to prevent or minimise injuries resulting from inertia forces or other in-flight forces such as turbulence.
- **Assistive seating devices** – There are many forms of assistive seating devices, some examples are: specially designed body supports, upper torso restraints or molded cushions. These devices are specifically manufactured to meet the unique requirements of the individual.
- **Orthotic Positioning Devices** – An Orthotic Positioning Device (OPD) is a device or supportive brace designed to assist people, with weak or ineffective joints or muscles, to position and support themselves in such a way that the aircraft seat belt can be used as an effective and primary means of restraint.

1. INTRODUCTION

- 1.1 This AC provides guidance on the seating needs of PRMs while travelling on board aircraft. For the transport of passengers who need to be secured on a stretcher, the AOC holder will need to apply for a separate approval from CAAS for the installation of the stretcher under SAR 21.
- 1.2 The following is stated under the Air Navigation Regulation (ANR) 121:
- (a) Regulation 17 (1) specifies that the AOC holder must ensure that passenger seating is allocated appropriately so as to not hinder evacuation from the aircraft in the case of an emergency evacuation.
 - (b) Regulation 59 (1), in relation to regulation 51 of ANR-91, specifies that the AOC holder must ensure all passengers are properly secured (including those who are under the age of two years, via an approved child restraint system) in their seats by safety belts or safety harnesses during aircraft take-off and landing, and whenever the pilot considers the precaution necessary (e.g. in cases of turbulent air or any emergency occurring during flight).
 - (c) Regulation 87 specifies that the AOC holder is required to provide a seat or berth for each passenger on board the aircraft, and that each seat is equipped with a safety belt and each berth is equipped with a restraining belt.
- 1.3 For guidance on the use of child restraint devices for passengers under the age of 2, the AOC holder should also refer to AC121-6-3 Acceptable Child Restraint Devices.

2. RESTRAINT DEVICES PERMITTED FOR USE ON BOARD AIRCRAFT

- 2.1 Assistive seating devices and orthotic positioning devices are permitted to be used on board aircraft. These devices are typically designed to provide postural lifting and/or support for a PRM so as to allow the person to maintain an upright position and be appropriately and safely restrained by the aircraft seat belt.
- 2.2 Restraint systems may also be used on board an aircraft to secure PRMs to their seats so that the aircraft seat belt can be properly adjusted and fastened. Restraint systems that are approved by EASA or FAA, bearing the appropriate approval labels, are acceptable for use on board an aircraft.

3. OPERATIONAL POLICY AND PROCEDURES

- 3.1 An AOC holder should develop a policy to allow the use of restraint devices on board its aircraft to secure PRMs in their seats. The policy should include safe operating practices, and take into consideration guidance set out in this section of the AC and the guidance provided in AC121-1-1.
- 3.2 The AOC holder's policy for the use of a restraint device on board an aircraft should address the following:
- (a) **Stowage.** Removable structural extensions of a restraint device, when not in use, should be stowed in an approved stowage location that would not impede the crew in their duties, obstruct floor level emergency exits and access to

emergency equipment, hinder aircraft evacuation or pose as a tripping or falling object hazard to the crew or passengers.

- (b) **Installation.** A restraint device should be installed on an aircraft seat in accordance with the manufacturer's instructions, utilising approved or certified interlacing connector(s)/device(s), if applicable. The restraint device should not be used if the aircraft seat is not equipped with similar connector(s)/device(s) that will enable it to be installed correctly.
- (b) **Operation.** When in use, a restraint device should remain installed on an aircraft seat for all phases of flight. For restraint devices that can be reclined, they should remain in an upright position for the same circumstances where an aircraft seat is required to be upright in flight.
- (c) **Accompanying caregiver.** An accompanying parent, guardian or caregiver should be present and available to attend to the safety of the passenger who is using the restraint device.

3.3 In the case where there are emergency exit seat allocation restrictions, seat design variations or the non-availability of seats located in front of a bulkhead, accommodation policies should be developed. Such policies may include offering alternative seat options, in the same class of service or as determined by the AOC holder, where restraint devices may be installed or used without losing its functionality to ensure the safety of the user but also in complying with the instructions by manufacturers.

3.4 An AOC holder should also address other areas such as the management, acceptance and training on the use of different types of restraint devices on board an aircraft. These include but are not limited to the following:

- (a) The operational personnel including check-in staff understand regulatory requirements, policy and procedures, responsibilities and duties as well as limitations related to the use of restraint devices for PRMs while on board the aircraft.
- (b) Special briefings are provided with regard to seating location, safety precautions that have to be taken as well as any possible hazards within the cabin as identified by the AOC holder when developing their training programmes.
- (c) Safety and Emergency Procedures (SEP) include special provisions related to the evacuation of PRMs, e.g. techniques of evacuation, methods of using the evacuation slides, etc.
- (d) Information is provided on their websites, literature (if applicable) especially regarding the advance notice of such travel so as to allow a thorough assessment of the requested travel assistance; and
- (e) The use of restraint devices is monitored and any potential gaps, hazards or areas of improvement pertaining to such use are identified, as necessary.

3.5 The AOC holder should work with organisations that act in the interests of PRMs when developing policies and staff training programmes.

4. CONCLUSION

- 4.1 An AOC holder should take the content of this AC into account when developing its policies related to the use of restraint devices on board an aircraft for PRMs.