

Advisory Circular

CABIN SAFETY FOR AIRBUS A380 AIRCRAFT

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GENERAL

Advisory Circulars (ACs) are issued by the Director-General of Civil Aviation (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, cabin safety requirements for the operation of the Airbus A380 aircraft.

APPLICABILITY

This AC applies to an AOC holder operating the Airbus A380 aircraft in accordance with ANR-121.

RELATED REGULATIONS

This AC relates specifically to Regulations 18, 110, 138, 139, 149, 150 and 151 of ANR-121.

RELATED ADVISORY CIRCULARS

- AC 121-8-1 Guidance on Crew Requirements for ANR-121 Operations

CANCELLATION

This AC supersedes AC-AOC-5.

EFFECTIVE DATE

This AC is effective from 1 October 2018.

OTHER REFERENCES

- JOEB Report of the A380-800 Cabin Crew Subgroup (Issue 01, 22 August 2007).

1 BACKGROUND

- 1.1 In September 2002, Airbus convened a Joint Operational Evaluation Board (JOEB) process for the evaluation of the A380 aircraft which included cabin crew type rating assessments, training and operations. This was carried out by the Cabin Crew Subgroup and a JOEB report was released to provide recommendations on cabin safety issues.
- 1.2 This AC is based on the report and provides additional cabin safety guidance relating to operating the double-decked Airbus A380 aircraft, particularly in the areas of cabin crew assignment and training.

2 CABIN CREW REQUIREMENTS

- 2.1 Cabin Crew Complement
 - 2.1.1 Regulation 138 of ANR-121 sets out the requirements for determining the minimum number of cabin crew required. For the purpose of Regulation 138(1)(c), the emergency evacuation demonstration for initial type certification of the Airbus A380 aircraft was conducted with 18 cabin crew members distributed as follows.
 - (a) Eleven (11) cabin crew members seated on the main deck. Ten (10) cabin crew members were seated at crew stations adjacent to the 10 Type A exits located at the main deck and the eleventh (11th) cabin crew member was seated adjacent to Door 1 R which is also adjacent to the bottom of the forward stairwell; and
 - (b) Seven (07) cabin crew members seated on the upper deck. Six (06) cabin crew members were seated at cabin crew stations adjacent to the 6 Type A exits located at the upper deck and the seventh (7th) cabin crew member was seated at a seat adjacent to top of the forward stairwell but is not adjacent to a Type A exit.
- 2.2 Crew-in-Charge
 - 2.2.1 Regulation 139 of ANR-121 specifies that a crew-in-charge (CIC) is to be appointed for each flight. In the case of the A380, the AOC holder should appoint a CIC in fulfilment of Regulation 139 (overall crew-in-charge, or OCIC), and should also appoint another CIC-qualified cabin crew member to assist the OCIC such that there is a CIC-qualified cabin crew member overseeing each deck.
 - 2.2.2 The OCIC is responsible for all standard operational safety-related duties such as acceptance of pre-flight equipment serviceability checks, security checks, passenger headcount, door arming checks, and cabin secure checks. Additionally, the OCIC is also responsible for all emergency safety-related duties such as co-ordination of in-flight fire-fighting, incidents involving disruptive passengers, medical emergencies, turbulence, decompression, preparation for an emergency landing and ditching. The OCIC will be the primary source of cabin-related information for the flight crew.
 - 2.2.3 If the AOC holder conducts generic CIC training applicable for multiple aircraft types, any additional duties deemed appropriate for the operation of the A380 should be incorporated into their generic training programme.

2.3 Emergency Evacuation Training

2.3.1 Further to the guidance in AC 121-9-5 regarding Safety and Emergency Procedures Training, the AOC holder should take into account the characteristics of the Airbus A380 aircraft when training the cabin crew. Some emergency exits on the Airbus A380 aircraft are integrated with deployable slides and are thus heavier. The difference in the weight of the emergency exits may affect the efforts needed to operate the exits. This would be of significance during an emergency evacuation and if there is a failure of the “power assist” system. Hence, for cabin crew training purposes, training on operations of the emergency exit on the aircraft should be performed using exits similar in weight and effort needed with those that are fitted with slides.

2.3.2 The difference between the main deck sill height and the upper deck sill height is not significant given the overall size of the Airbus A380 aircraft. Since the descent techniques and the skills required for cabin crew is identical for making descent from both the main and upper deck slides, and positive transfer of learning can be applied when descending from the upper deck slides, cabin crew need not undergo an actual practice of making a descent from an upper deck slide. However, theoretical training on the descent from an upper deck slide should be provided. The training should include information on evacuation from the upper deck of the aircraft, slide descent procedures, including the inflation sequence (internal and external view), a deployed upper slide, and the slide platforms.

2.3.3 The following should be also included in the training in regard to emergency evacuation using the A380 slide/rafts of both decks:

- (a) Theoretical training on emergency evacuation from main deck slides include:
 - (i) the emergency passenger door operation information related to Doors 1 slide extension on land (nose up attitude), and the corresponding alert if the extension fails, the manual inflation pushbutton (MIP) and Doors 3 barber pole;
 - (ii) cabin crew duties for evacuation which should cover on planned and unplanned ground evacuation with regard to the stairs area;
 - (iii) planned ditching procedures and unplanned ditching procedures including information related to Doors 3 and the MIP;
 - (iv) awareness of the portability of main deck sliderafts;
 - (v) the appropriate evacuation commands on how to make a descend down the Doors 1 and 2 slideraft during a ditching and including the precautions related to the use of slide platforms which are associated with canted slides during ground evacuation.
- (b) Theoretical training on emergency evacuation from upper deck slides include:
 - (i) the emergency passenger door operation information and the manual inflation pushbutton (MIP) and the location of the cabin pressure indicator for Doors 3;
 - (ii) cabin crew duties for evacuation which should cover on planned and unplanned ground evacuation with regard to the stairs area;

- (iii) planned ditching procedures and unplanned ditching procedures including information related to slideraft detachment and the stairs area;
 - (iv) the appropriate evacuation commands on how to make a descend down the sliderafts during a ditching and including the precautions related to the use of slide platforms which are associated with canted slides during ground evacuation.
- (c) Theoretical training for both upper deck and main deck should also include the following:
- (i) location of assist spaces and the need to check on the inflation by viewing the toe end of the evacuation slides or any other aircraft specific inflation indicators;
 - (ii) cabin crew duties and responsibility with regard to direct view areas in the cabin that are not immediately adjacent to their cabin crew stations;
 - (iii) necessary crowd control techniques and actions to not only get the passengers down the slides but also away from the aircraft after their descent. Cabin Crew should be directed on this necessity so as to mitigate the risks of passengers being hit by evacuation slides being deployed from the upper and main decks.

2.4 Crew Resource Management

- 2.4.1 Further to the guidance in AC 121-9-8 on Crew Resource Management (CRM) training, in the case of the A380, the AOC holder should ensure that cabin crew operating on the Airbus A380 aircraft receives CRM training that takes into account the operations of the aircraft, in particular the coordination of crew on both decks.

3 PASSENGER BRIEFING

- 3.1 Further to the guidance in AC 121-1-1 regarding the use of a passenger safety card for passenger briefing, in the case of the A380, the AOC holder should provide a passenger briefing, and a passenger safety card, that is common for both decks so that the passengers are aware of their deck level, and the location of the exits on both decks. If passengers switched decks during the flight, a briefing prior to landing should remind passengers, the location of the emergency exits on both decks.