

# Advisory Circular

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## APPROVAL FOR ZERO FLIGHT TIME TRAINING

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- 1 GENERAL.** Pursuant to paragraph 88B of the Air Navigation Order, the Director-General of Civil Aviation (DGCA) may, from time to time, issue advisory circulars (ACs) on any aspect of safety in civil aviation. This AC contains information about standards, practices and procedures acceptable to CAAS. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.
- 2 PURPOSE.** This AC provides guidance for the minimum content and standard for Zero Flight Time Training (ZFTT).
- 3 APPLICABILITY.** This AC is applicable to all Aviation Training Organisations (ATO) and Air Operator Certificate (AOC) holders seeking approval for their ZFTT course for the endorsement of an aircraft rating.
- 4 CANCELLATION.** This AC is the first on this subject.
- 5 EFFECTIVE DATE.** This AC is effective from 10 December 2015.
- 6 REFERENCES.** Air Navigation Order (ANO) paragraph 20 and Singapore Air Safety Publication Part 2 – Licensing of Professional Pilots.
- 7 INTRODUCTION.**
- 7.1 Pursuant to paragraph 20(13)(a) of the ANO, any course of training or instruction must be approved by the DGCA. This AC contains information about the design, content and standard of the ZFTT course acceptable to CAAS.
- 7.2 The ZFTT programme is designed for the entire type rating training and test on specific multi-pilot aircraft type to be carried out completely in high fidelity Flight Simulation Training Devices (FSTD). As such, the initial aircraft handling is only accomplished during commercial line operations.
- 8 NECESSARY FOR ZFTT.**
- 8.1 Basically there are three essential and interacting elements to consider for the successful implementation of ZFTT. These are the:
- (a) Fidelity of the FSTD in particular the Full Flight Simulators (FFS)

- (b) Competency of the instructors and examiners conducting the ZFTT
  - (c) Entry requirements of the trainees for the course
- 8.2 Presently there are no FSTD that can replicate the aircraft's handling characteristics perfectly with motion and visual feedback that are indistinguishable from the real world. Perceptible performance, motion and visual gaps still exist between the aircraft and a Type VII qualified FFS (based on ICAO 9625 3<sup>rd</sup> Edition). If the gap is minimal ZFTT is still possible if the three elements mentioned above in Paragraph 8.1 are addressed appropriately.
- 8.3 Taking into consideration these factors and international best practices, ATO and AOC holders who are planning to conduct ZFTT are advised to meet the following requirements:

**(I) Organisational Requirements**

- (a) The ATO must have a specific arrangement with the AOC holder approved by the DGCA. It must include the obligation of the AOC holder to complete the Initial Operating Experience for all ZFTT trainees.
- (b) The AOC Holder and ATO must have held their respective approvals for the specific aircraft type for at least one year. This is to ensure that the organisations have sufficient operating and training experience in the new aircraft type before they can apply for ZFTT approval.
- (c) In order to be used for ZFTT, the FFS must be qualified to Type VII based on ICAO Document 9625 3<sup>rd</sup> Edition. FFS qualified to level D under the earlier system should be upgraded to Type VII before 2020 if intended to be used for ZFTT. During the transition phase, FFS level D or better may be used for ZFTT if approved.

**(II) Training Programme Requirements**

- (a) Prior to license endorsement, the trainee must complete an aircraft exterior familiarisation. Computer-based training on exterior checks may be used only if there are no aircraft available, and if such training has been approved by CAAS. For either case, a suitably qualified instructor must certify the trainee's satisfactory completion.
- (b) The ZFTT programme must not be less than the OEM's recommended ZFTT programme for the aircraft type. CAAS may require additional sessions or training exercises to be included as necessary to meet ICAO requirements and training standards acceptable to us.
- (c) A specific simulator session must be conducted in place of actual aircraft training. This training-to-proficiency session must be conducted by a Flying Instructor (FI) to include a minimum of 6 satisfactory take-offs and landings in varying wind, turbulence and visual conditions. The instructor must sit at one of the pilot's seat to get direct feedback of the trainee's handling performance so as to facilitate tutoring and coaching.
- (d) The first sector of the Initial Operating Experience must be conducted within 21 days of the specific simulator session followed by the first four take-offs and landings to be supervised by the FI. These take-offs and landings must be continuously completed without disruption. Any delay beyond 21 days or disruptions to the conduct of these take-offs and landings will require the trainees to restart from the specific simulator session.

**(III) Instructor and Examiner Requirements**

- (a) The FI or Authorised Flight Examiner (AFE) conducting ZFTT must have held the appointment for at least a year.
- (b) The specific simulator session must be conducted by an FI of the applicable aircraft type. The instructor must assess the trainee to be competent and to recommend him/her for the Aircraft Rating Test.
- (c) All the items in the Aircraft Rating Test must be conducted by an AFE of the applicable aircraft type in an approved FFS.
- (d) The FI is qualified under his/her instructor rating to instruct on both the FFS and the aircraft, and is deemed most qualified to understand the nuances between the FFS and aircraft. The first four take-offs and landings must therefore be supervised by the FI, and have the experience on training take-offs and landings in the specific simulator session.

**(IV) Trainee Requirements**

The TRTO must ensure the trainees meet the prerequisites before embarking on the ZFTT course:

- (a) For Captains or Pilot-in-Command: At least 1000 PIC hours
- (b) For First Officers or Co-pilots: At least 300 PIC and/or P1 U/S hours

The trainees must be current in flying a multi-pilot turbo jet of maximum certificated take-off mass of not less than 47 tonnes and their experience prerequisites from similar types must be accrued in the preceding 5 years.

**9 CONSULTATIONS WITH CAAS.**

- 9.1 Organisations seeking approval for ZFTT should arrange for preliminary discussions with CAAS's Personnel Licensing Section, Safety Policy and Licensing Division to determine their feasibility of proceeding with this training programme and next steps