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Extended Twin Operations (ETOPS) – Flight Operations

1. INTRODUCTION

The purpose of ETOPS is to provide very high level of safety while facilitating the use of twin jets on routes which were previously restricted to three and four engine aircraft. ETOPS operations also permit more effective use of airline's resources.

2. DEFINITION

2.1 ETOPS Operations. ETOPS operations apply to all flight conducted in a twin-engine aircraft over a route that contains a point further than 60 minutes flying time from an adequate airport at the selected one-engine-out diversion speed schedule in a still air and ISA Conditions. It is based on single-engine flying time to an adequate airport.

2.2 Adequate Airport. An airport is considered "adequate" for the operator when it satisfies the aircraft performance requirements applicable at the expected landing weight. It must be accepted and agreed by DCA.

2.3 Enroute Alternate. A "diversion" airport also called "en-route alternate" airport is an adequate airport where a diversion can be accomplished.

3. REGULATORY REQUIREMENTS.

3.1 An aeroplane with two turbine power-units shall not be operated on a route where the flight time at single-engine cruise speed to an adequate en-route alternate airport exceeds a threshold time of 60 minutes unless the operator has been specifically approved by DCA. In approving the operators, DCA shall ensure that:

- a) the Airworthiness certification of the aeroplane type;
- b) the reliability of the propulsion system; and
- c) the operator's maintenance procedures, operating practices, flight dispatch procedures and crew training programmes provide the overall level of

safety.

In making the assessment, account should be taken of the route to be flown, the anticipated operating conditions and the location of adequate en-route alternate airport. Guidance on the compliance with the requirements of this provision is contained in ICAO Annex 6 Part 1, Attachment E, the Airworthiness Technical Manual (DOC 9051) and the Continuing Airworthiness Manual (DOC 9642). If an aeroplane type with two turbine power-units which prior to 25 March 1986 was authorised and operating on a route where the flight time at single engine cruise speed to an adequate en-route alternate airport exceeded 60 minutes, the aircraft shall continue such operation on that route after that date.

3.2 A flight to be conducted in accordance with the above para 3.1 shall not be commenced unless, during the possible period of arrival, the required en-route alternate airports will be available and the available information indicates that the conditions at those aerodromes will be at or above the aerodrome operating minima approved for the operation.

3.3 The enroute alternate aerodrome required for ETOPS shall be selected and specified in the operational and Air Traffic Services (ATS) flight plans.

4. TRAINING

4.1 The operator's ETOPS training programme should instruct flight crew, maintenance personnel and dispatchers/ flight operations officer in ETOPS matter related to their tasks, so that they can effectively and safely operate and support aircraft operating under ETOPS rules. One of the most important aspect of such a training programme is to increase and maintain general ETOPS awareness within the operation. The ETOPS course should cover the following areas:

4.1.1 Flight Operations training (Initial and recurrent):

- a) ETOPS regulations/ Operational Approval.
- b) Aircraft performance/ diversion strategies.
- c) Area of operation.
- d) Fuel requirements.
- e) Dispatch considerations : MMEL, CDL, weather minima.
- f) Flight crew documentation.
- g) Flight crew procedures.

4.2 All operators are to ensure that only qualified flight crew and dispatchers who have successfully undergone Flight Operations ETOPS initial and recurrent training are used in operating and dispatching of ETOPS aircraft.

5. All operator should provide an Operations Specifications and Operations Manual amendment for approval by DCA in order to provide information and instruction with ETOPS approval. This information should include:

- a) Identification of ETOPS aircraft.
- b) references to the approved maintenance schedule for ETOPS.
- c) maximum authorised diversion time.

- d) authorised route or area of operation.
- e) adequate en-route alternate airports declares for each route, together with the associated dispatch and en-route weather minima.
- f) minimum en-route and diversion altitudes.
- g) diversion strategies.
- h) minimum crew qualification and recent experience to allow them to operate ETOPS.
- i) single engine performance for altitudes, airspeeds and distances.
- j) adequate airport documentation and weather minima.
- k) navigation and plotting charts.
- l) guidelines for diversion decision making.

6. A validation flight conducted in the ETOPS capable aircraft will be performed in order to demonstrate that the operator is competent to safely operate and support the intended ETOPS operations. Operational approval will only be given upon successful completion of the validation flight and other requirements stipulated by DCA.

7. This circular is issued for information, guidance and necessary actions.

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