

Explanatory Statement

Civil Aviation Act 1988

Civil Aviation Order 82.0 Amendment Order (No. 3) 2007

Purpose

The purpose of Civil Aviation Order 82.0 Amendment Order (No. 3) 2007 (the **CAO Amendment**) is to facilitate the international harmonisation of Australian and New Zealand standards for operators conducting extended diversion time operations (**EDTO**).

EDTO is analogous to the former concept of extended range operations (**ETOPS**). It means any flight by a turbine-engined aeroplane where, if 1 engine fails, the flight time from any point on the route to an aerodrome where the aeroplane can safely land, is greater than the 'threshold time' for the aeroplane's weight and type, for example 90 minutes or 180 minutes.

The threshold time is usually taken as a safety limit in the form of a radial distance from an aerodrome which, without the presence of safety factors, should not be exceeded in order to enable an aeroplane with engine failure to safely reach an aerodrome.

There are circumstances in which CASA may safely allow the threshold to be exceeded and these were known as ETOPS operations and will in future be known as EDTO.

Background

For some years, the international aviation community, including input from Australia, has been reviewing ICAO's Annex 6, Part 1, containing standards and recommended practices and guidance for ETOPS with a view to revising the Part and extending its application to aeroplanes with more than 2 turbine engines.

With this in mind, CASA has been involved in discussions and negotiations with its counterpart in New Zealand, with some input from the ICAO Operations Panel, to establish an internationally harmonised rule set in air transport operations for certain multi-engine turbine aeroplanes.

The object of the exercise was to simplify and modernise the requirements for the conduct of EDTO and reflect technological advances in aviation and safety management systems that can make EDTO safer. Operational economies may also arise from the more direct aeroplane routing which EDTO makes available for long haul operations.

In developing the rules, CASA was also concerned to ensure that they would maintain, and where possible improve, the safety of passenger operations without imposing unreasonable costs on businesses, thereby realising positive safety benefits for the travelling public.

Legislative background

The legislative basis for the new EDTO requirements is as follows.

Under section 27 of the *Civil Aviation Act 1988* (the **Act**), CASA may issue Air Operators' Certificates (**AOCs**) with respect to aircraft, for the purpose of safety regulation. Under section 28 of the Act, CASA must issue the AOC if satisfied that the applicant can comply with the requirements of Australian civil aviation safety legislation.

Under paragraph 28BA (1) (b) of the Act, an AOC has effect subject to any conditions specified in the regulations or Civil Aviation Orders (the **CAOs**).

Part 82 of the CAOs specifies conditions on AOCs for various kinds of operations. CAO 82.0 contains general conditions on all AOCs and also some related definitions. Formerly, subsection 3B of CAO 82.0 set out the conditions for ETOPS.

The CAO Amendment repeals subsection 3B for ETOPS and substitutes alternative provisions which impose conditions on all affected AOC holders for EDTO. These alternative provisions are described below.

Details of the CAO Amendment

The following references to subsections and paragraphs are to subsections and paragraphs inserted into CAO 82.0 by the CAO Amendment.

3 or 4 engine aeroplanes

New subsection 3B replaces the former paragraphs 3B (2) and 3B (3) in almost identical terms. It provides that charter or regular public transport (**RPT**) operations in certain 3 or 4 engine aeroplanes must not be more than 90 minutes flight time, at normal cruising speed, away from an appropriate aerodrome unless compliance with certain flight path obstacle clearance rules can be shown assuming 2 engines failed at the most critical point along the route that is in excess of 90 minutes flight time from such an aerodrome.

Certain piston-engined aeroplanes

Under new subsection 3BA, charter or RPT operations in certain piston-engined aeroplanes must not be more than 60 minutes flight time, at the 1 engine inoperative cruise speed in international standard atmosphere (**ISA**) and still air conditions, away from an appropriate aerodrome.

19 passengers or less and MTOW exceeding 5 700 kg — CASA approval

Under subsection 3BB, charter or RPT operations in a turbine-engined aeroplane not certificated to carry more than 19 passengers, and with a maximum take-off weight (**MTOW**) exceeding 5 700 kg, may only involve EDTO if approved by CASA in accordance with Appendix 3.

More than 19 passengers or payload capacity exceeding 3 410 kg — CASA approval

Under subsection 3BC, including paragraphs 3BC.1, 3BC.2, 3BC.3 and 3BC.4, charter or RPT operations in a turbine-engined aeroplane certificated to carry more than 19 passengers or with a payload capacity exceeding 3 410 kg, may only involve EDTO if approved by CASA in accordance with Appendix 4, and the operations comply with Appendix 5.

60 to 90 minutes

Under paragraphs 3BC.5 and 3BC.6, an AOC holder may operate a twin turbine-engined aeroplane on a route containing a point more than 60 (but not more than 90) minutes at the 1 engine inoperative cruise speed in ISA and still air conditions from an adequate aerodrome only if the aeroplane meets appropriate type design requirements, has a certain kind of approved system of maintenance (**SOM**) and is configured, maintained and operated in accordance with the approved configuration maintenance and procedures (**CMP**) standards document for matters such as hardware life limits, flight crew procedures and Master Minimum Equipment List (**MMEL**) constraints.

90 to 180 minutes

Under paragraphs 3BC.5 and 3BC.7, an AOC holder may operate a twin turbine-engined aeroplane on a route containing a point more than 90 (but not more than 180) minutes at the 1 engine inoperative cruise speed in ISA and still air conditions from an adequate aerodrome only if the aeroplane meets appropriate type design requirements and is operated in accordance with a CASA approval.

Up to 75 minutes

Paragraph 3BC.8 applies if a twin turbine-engined aeroplane does not meet the appropriate type design requirements to operate more than 60 minutes as mentioned above.

The AOC holder may operate the aeroplane on a route containing a point not more than 75 minutes at the 1 engine inoperative cruise speed in ISA and still air conditions from an adequate aerodrome if the aeroplane has a certain kind of approved SOM and conforms to the requirements of FAA Federal Aviation Regulation Part 25 (Fire Protection) for fire detection and suppression for cargo baggage compartments or an equivalent standard acceptable to CASA.

This is a concessional provision intended to preserve an ‘up to 75 minutes’ category for these aeroplanes for a transitional period until the end of 30 June 2015 (see below under ‘Savings and transitions’ and ‘Concession and transition for certain twin turbine-engined aeroplanes’).

3 or 4 engine aeroplanes — more than 180 minutes

Under paragraph 3BC.9, an AOC holder may only operate an aeroplane with more than 2 turbine engines in passenger carrying operations on a route containing a point more than 180 minutes from an adequate aerodrome at the 1 engine inoperative cruise speed in ISA and still air conditions if the operation is in accordance with an EDTO approval.

Polar operations

Under subsection 3BD.1, an AOC holder for charter or RPT operations may only conduct a polar operation in accordance with Appendix 6 and a relevant CASA approval.

Adequate aerodrome

Appendix 2 sets out the physical characteristics for an adequate aerodrome, including landing distance, surface and strength of the manoeuvring area and the nature of the taxiways, apron areas and aerodrome lighting.

In addition to meeting these physical requirements, an adequate aerodrome must have meteorological forecasts and an instrument approach procedure. Aerodromes inside Australian territory must have CTAF (R) broadcasting requirements. Aerodromes outside Australian territory must have air traffic services and rescue and fire fighting services, at not more than 30 minutes notice.

Appendix 3

Appendix 3 sets out the requirements for EDTO in charter or RPT operations in a turbine-engined aeroplane not certificated to carry more than 19 passengers, and with a maximum take-off weight (*MTOW*) exceeding 5 700 kg.

The EDTO may be approved by CASA. CASA must consider the AOC holder's detailed application containing information about experience, abilities, airframe/engine combination, routes to be flown and any passenger recovery plans for specific aerodromes.

Appendix 4

Appendix 4 sets out specific requirements for certain EDTO in charter or RPT operations in a turbine-engined aeroplane certificated to carry more than 19 passengers or with a payload capacity exceeding 3 410 kg.

The EDTO may be approved by CASA if the aeroplane has an EDTO type design approval, for example, as contained in its flight manual or type certificate data sheet. CASA must consider the operator's detailed application which must contain information about airframe/engine combination, areas of operation, maximum diversion times, fuel and oil policies, alternate aerodromes and passenger recovery plans.

CASA must take into account any relevant safety compensating factors and, if approval is given, may impose conditions. CASA may also require proving flights.

Specific EDTO approval requirements, as set out in Appendix 4, apply depending on the nature of the proposed operation, for example, for EDTO on a route containing a point not more than 180 minutes from an adequate aerodrome at 1 engine inoperative cruise speed in ISA and still air conditions. Other requirements apply to applications for EDTO approvals in twin turbine-engined aeroplanes for 180 to 240 minutes, or for more than 240 minutes, or for 3 or 4 engine aeroplanes.

Appendix 5

Appendix 5 sets out the general requirements for EDTO in charter or RPT operations in a turbine-engined aeroplane certificated to carry more than 19 passengers or with a payload capacity exceeding 3 410 kg.

The general requirements include flight despatch requirements. For example, the AOC holder must ensure that an aeroplane is only dispatched on an EDTO if the communication facilities required by the AIP are available, and the required take-off, destination and alternate aerodromes, including EDTO alternate aerodromes to be used in the event of engine shutdown or aeroplane system failure, are listed in the cockpit documentation.

The AOC holder must ensure that an aerodrome is listed as an EDTO alternate only if certain weather and crosswind forecast requirements are met.

Arrangements must be in place to ensure that, en route, the pilot in command is informed of significant changes to weather forecasts, weather conditions and aerodrome availability, and that he or she ensures that the aeroplane complies with the requirements of the relevant CMP standards document for an EDTO flight.

Special fuel requirements must be met for EDTO, taking into account weather and wind forecasts and conditions, and instrument approach and holding requirements for EDTO alternate aerodromes. Allowances must be made for airframe icing and anti-icing measures. Specific alternate aerodrome planning minima for ceiling and visibility must be met, based on the nature of the runway and the nature of the approach.

A detailed set of maintenance requirements, for EDTO using twin turbine-engined aeroplanes, must be met. These requirements include having appropriate approved SOMs and related programs, checks and procedures, parts control and reliability programs, detailed procedures to prevent identical maintenance action being applied to multiple similar elements in any EDTO significant system, appropriate maintenance control manual supplements, engine and engine oil consumption monitoring, and adverse event reporting and investigation.

The AOC holder must have a flight crew training, competency, evaluation and proficiency checking program.

Finally, the AOC holder must make quarterly reports to CASA, summarising aeroplane and engine operations and utilisation, delays and cancellations for technical reasons, unscheduled changes en route, reportable defects and minimum equipment list usage.

Appendix 6

Appendix 6 sets out the required strategies and plans to be incorporated in applications for polar operations.

Savings and transitions

The CAO Amendment makes provision, through commencement, savings and transitional provisions, to phase in the operation of some of the EDTO approval requirements.

Polar operations grandfathered for 12 months

The CAO Amendment takes effect on the day after it is registered, subject to 2 adjustments.

Under subsection 3BD, an AOC holder for charter or RPT operations may only conduct a polar operation in accordance with Appendix 6 and a relevant CASA approval. The commencement of this provision is deferred until 1 July 2008.

There is currently no specific rule limiting polar operations. Operators and potential operators are given a period of 12 months to prepare for introduction of the new polar operations requirements.

Cargo operations grandfathered for 12 months

The second commencement adjustment provides that each new subsection being inserted into CAO 82.0 that would otherwise apply to a certificate authorising charter or RPT operations in an aeroplane carrying only cargo, is taken not to apply to the certificate for the operations until 1 July 2008.

There is currently no rule for cargo operations as such to observe ETOPS requirements and operators and potential operators are given a period of 12 months to prepare for introduction of the new EDTO requirements.

ETOPS approvals grandfathered for 12 months

The CAO Amendment takes effect on the day after it is registered. However, if, immediately before that, an AOC holder had a current ETOPS approval, the holder may continue to operate in accordance with that ETOPS approval until the end of 30 June 2008. This saving does not continue to apply if a time-limited ETOPS approval expires within that period.

A Note in the CAO Amendment explains that an AOC holder with a current ETOPS approval, who wishes to sooner become subject to the CAO Amendment for EDTO, may request CASA to revoke his or her ETOPS approval so that the terms of the CAO Amendment would apply and, if appropriate, EDTO approval would be issued.

Concession and transition for certain twin turbine-engined aeroplanes

Paragraph 3BC.8 applies to twin turbine-engined aeroplanes that do not meet the appropriate type design requirements to operate on a route containing a point more than 60 minutes at the 1 engine inoperative cruise speed in ISA and still air conditions from an adequate aerodrome.

In certain circumstances, the AOC holder may operate the aeroplane on a route containing a point not more than 75 minutes from an adequate aerodrome.

This is a concessional provision intended to preserve an 'up to 75 minutes' category for these aeroplanes for a transitional period. The transitional period is approximately 8 years and a transitional provision stops paragraph 3BC.8 having effect beyond 30 June 2015.

3 or 4 engined aeroplanes

A transitional provision has the effect that, until 1 July 2015, only new subsections 3B and 3BA, and (from 1 July 2008) 3BD and Appendix 6, apply to 3 or 4 engined aeroplanes.

These subsections deal with EDTO limitations for 3 or 4 engined aeroplanes (charter and RPT operations for passenger carrying only, not cargo), piston-engined aeroplanes (all charter and RPT operations) and polar operations (all charter and RPT operations).

The remaining new subsections and appendices do not apply to aeroplanes with more than 2 engines until 1 July 2015. These new provisions, when they apply, will only apply to charter and RPT operations for passenger carrying, not cargo.

Legislative Instruments Act

Under subsection 98 (4A) of the Act, CAOs made for the purposes of section 28BA of the Act are declared to be disallowable instruments. Under subparagraph 6 (d) (i) of the *Legislative Instruments Act 2003* (the **LIA**), an instrument is a legislative instrument for section 5 of the LIA if it is declared to be a disallowable instrument under legislation in force before the commencement of the LIA. The CAO Amendment is, therefore, a legislative instrument and it is subject to tabling and disallowance in the Parliament under sections 38 and 42 of the LIA.

Consultation

Consultation under section 17 of the LIA has been undertaken with interested industry representatives, and with the New Zealand Civil Aviation Authority (which, as noted above, is revising its rules for EDTO). A Notice of Proposed Rule Making for the new EDTO arrangements (NPRM 0608OS) was published by CASA in September 2006. EDTO will be conducted by very few Australian operators and, therefore, only 12 respondents commented on the proposals. Most of the proposed changes were agreed to and CASA took all comments into account in finalising the CAO Amendment.

Regulation Impact Statement

The Office of Best Practice Regulation does not require preparation of a Regulation Impact Statement in this case because the CAO Amendment implements the proposed changes to ICAO International Standards and Recommended Practices in Annex 6, Part I (Operation of Aircraft, International Commercial Air Transport — Aeroplanes), as required under Australia's Chicago Convention obligations (RIS Exception ORR ID 5855).

Commencement and making

The CAO Amendment takes effect on the day after it is registered. It has been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 84A (2) of the Act.

[Civil Aviation Order 82.0 Amendment Order (No. 3) 2007]