

**GUERNSEY
ADVISORY
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(GACs)**



GAC OPS-5



**Extended Diversion
Time Operation**

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First Issue

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Guernsey Advisory Circulars (GACs) are issued to provide advice, guidance and information on standards, practices and procedures necessary to facilitate the application and processing of applications for services related to the Guernsey Aircraft Register.

They are not in themselves law or a regulation but may amplify provisions of the laws and regulations, including the Guernsey Aviation requirements, or provide practical guidance. Since GAC's are non-binding, regulated persons may choose alternative means to comply with the guidance. In this case, however, they lose the presumption of compliance provided by the circular and need to demonstrate to the Office of the Director Civil Aviation (ODCA) that they do comply with the law.

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Enquiries regarding the content of this publication should be addressed to the Director of Civil Aviation, Guernsey Airport, Airport Terminal Building, La Villiaze, Forest, Guernsey, GY8 ODS.

Processing of applications will be done by the Guernsey Aircraft Registry, which operates as '2-REG'. For further information consult <http://www.2-reg.com> or send a message to info@2-reg.com.

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1 - Purpose

The purpose of this Guernsey Advisory Circular (GAC) is to present to applicants guidance for obtaining an approval for Extended Diversion Time Operations.

2 - Related laws, regulations and requirements

This GAC relates to:

1. GAR 121.275
2. ICAO Document 10085 – Extended Diversion Time Operations (EDTO) Manual
3. ICAO Annex 6, Part I, Chapter 4, 4.7 and Attachment C

No rights can be derived from this document. For exact details please refer to The Air Navigation (Bailiwick of Guernsey) Law, 2012 (Law). In case of conflict between this guidance document and the Law, 2012, the latter shall prevail.

3 - Definitions

Definitions, in the context of this GAC shall have the meanings listed in GAR Part 1 (Definitions, Abbreviations and Units of Measurement).

4 - The concept of Extended Diversion Time Operations

A commercial air transport operator must ensure that operations remain within a certain flying time from an adequate alternate en-route aerodrome. This time is called the threshold time and is normally 60 minutes for larger aeroplanes, and 120 minutes for smaller aeroplanes.

When wishing to fly farther, the operator must obtain an approval, called the Extended Diversion Time Operations (EDTO) approval. This approval will only be issued when the operator meets a number of conditions which are aimed at increasing the reliability of the operation and decreasing the operational risks in case a diversion must be undertaken.

This GAC gives guidance as to the approval process and the documents that must be submitted. This guidance is provided as part of the approval process.

5 - Application process

5.1 Introduction

- GAR 121.270 requires an operator to be specifically approved when it operates one or more aeroplanes with two or more turbine engines on routes where the diversion time to an en-route alternate aerodrome from any point on the route is beyond a distance expressed as a threshold time. The approval allows the operator to operate beyond that threshold time on the condition that it remains within an approved maximum diversion time to an en-route alternate.
- In order to be approved to conduct such operations, the air operator shall meet the requirements in GAR 121.275.
- This section describes the approval process.

5.2 Initial application

The EDTO approval application process consists of five phases. Each phase is elaborated below.

5.2.1 Pre-application phase (phase 1)

The applicant may start the EDTO approval process by providing information to 2-REG using the initial EDTO application form as reproduced in Appendix A.

This may be done at either of the following instances:

- Concurrent with the application for an AOC;
- Concurrent with an application for a variation for adding a new aircraft type to the AOC;
- Once an AOC is in use.

As an important element of the evaluation will depend on the experience that the AOC operator has gained, it is unlikely that an EDTO approval for the maximum diversion time is granted for an initial operator or an aeroplane type new for the operator. Rather, a reduced diversion time will be granted for a certain period of time during which the applicant can gain experience and demonstrate to 2-REG that it is capable of meeting the requirements for the maximum diversion time.

5.2.2 Formal application phase (phase 2)

Following receipt of a completed initial application form, 2-REG sends a list of documents that need to be submitted as part of the formal application phase. A sample list is provided in Appendix B.

2-REG, upon receipt of these documents, will verify whether the documents are complete. An estimate of the work will be made and an invoice will be sent. 2-REG will allocate an EDTO approval team consisting of, at least, a Flight Operations Inspector (FOI) and an Airworthiness Inspector (AWI) and will allocate a project manager, who may be the assigned FOI or AWI.

5.2.3 Document evaluation phase (phase 3)

Once the EDTO approval application package has been accepted, the EDTO approval team will review the documents for completeness, accuracy and consistency and as per below guidance. Whenever a document is not complete, accurate or when there are inconsistencies, the applicant will be informed in order to take corrective action. Once all documents are satisfactory, phase 3 can be completed.

5.2.3.1 Airworthiness

- (a) **Proof of Aeroplane/Engine Combination EDTO certification.** The Aeroplane/Engine Combination (AEC) certificate is issued to the Type Certificate holder and normally contained in the Type Certificate Data Sheet (TCDS). The inspector will verify that the aircraft for which EDTO approval is requested is listed on the TCDS.
- (b) **The relevant Configuration, Maintenance and Procedures (CMP) document.** This document is approved by the State of Design and contains the particular aeroplane configuration minimum requirements including any special inspection, hardware life limits, master minimum equipment list constraints and maintenance practices found necessary to establish the suitability of an aeroplane/engine combination for EDTO. This document is a source document for the operator when preparing its own documents and must be available for the inspector as a reference document when reviewing those.
- (c) **Statement of conformity of candidate aircraft to the applicable EDTO configuration listed in the CMP document.** The operator must provide evidence that the configuration of the candidate aircraft conforms to that as listed in the CMP document. The inspector will sample check the statement against the relevant CMP.
- (d) **EDTO significant systems that have been identified, including the data source.** Systems that may affect the diversion time and therefore become limiting are typically identified by the Type Certificate holder and listed in the CMP document or the AFM. The operator needs to identify these and take these into consideration when determining the maximum diversion time. The inspector will sample check the information provided by the applicant against the CMP.

- (e) **The operator's maintenance programme, or amendment to the maintenance programme specific for EDTO.** The operator must include in the relevant maintenance programme, tasks relevant for EDTO, both for scheduled and unscheduled maintenance and for the pre-departure service checks. The inspector will include these elements in the approval review of the maintenance programme for the aeroplane.
- (f) **The operator's reliability monitoring programme.** The operator must have means to both monitor the worldwide reliability performance of the AEC and the reliability of its own EDTO significant systems and to assess and where necessary take action to maintain EDTO reliability. The inspector will review the means to monitor for adequacy.
- (g) **The operator's maintenance control manual, or amendment to the programme specific for EDTO.** The MCM must include procedures specific for EDTO such as the supportive programme procedures, duties and responsibilities, EDTO dispatch requirements, means to ensure that all contracted maintenance organisations meet the applicable requirements and must describe the reliability monitoring programme, including actions following the identification of negative trends. The inspector will include these elements in the approval review of the operator's maintenance control manual.
- (h) **The operator's EDTO training requirements.** The operator must include in the Maintenance Control Manual or other documents, the training syllabi and training frequency for all maintenance personnel engaged in EDTO. EDTO training should consist of academic training, practical training and recurrent training. The inspector will review the MCM for this element.
- (i) **A sample maintenance release document.** The EDTO dispatch status must be confirmed before each EDTO flight. This is typically achieved by adapting the maintenance release document template with EDTO specific fields identifying whether or not the aeroplane is EDTO capable and if so, what the maximum diversion time capability is. The inspector will review the maintenance release document for compliance.

5.2.3.2 Flight Operations

- (a) **The selected one-engine inoperative speed,** including the calculation method and data source. The operator may select a one-engine inoperative (OEI) speed or a speed schedule, based on the conditions as specified in GAR 121.270b, and using either OEM or operator performance data. A typical OEI speed schedule will consist of an initial portion representing a drift-down profile followed by a constant section once the aeroplane has reached an altitude where level flight can be maintained to the en-route alternate. The one-engine inoperative speed or speed schedule will result in

a maximum diversion time that, for a given threshold time, will be entered on the Operations Specifications. The inspector will verify the calculation and the data source.

(b) The operator's EDTO operational procedures for flight planning and in-flight operations. The operator must include in the Operations Manual or in other documents the following:

- (1) weather minima and method of in-flight monitoring;
- (2) critical fuel calculation and in-flight monitoring method;
- (3) aerodrome limitations, including RFFS categories;
- (4) time limited system considerations and in-flight monitoring;
- (5) diversion strategies;
- (6) reporting of EDTO relevant events.

The inspector will review the Operations Manual for compliance.

(c) A sample flight plan package for EDTO. The operator must prepare a flight plan package for EDTO. The inspector will verify whether this flight plan correctly identifies such items as EDTO entry point(s), EDTO exit point(s), Equal Time point(s), fuel calculation, and has correct data for the en-route alternates(s), including RFFS category, validity period, etc. The inspector will review the flight plan package for completeness.

(d) The operator's EDTO training requirements. The operator must include in the Operations Manual or other documents, the training syllabi and training frequency for all operations personnel engaged in EDTO. EDTO training should consist of academic training, practical training and recurrent training. The inspector will review the relevant documents for compliance.

(e) The operator's MEL, or amendment to the MEL specific for EDTO. The MEL must include elements specific to EDTO. Typically, an MMEL identifies such items with the symbol 'ER'. The MEL reviewer will check that all such items are properly reflected in the operator's MEL.

5.2.4 Demonstration and inspection phase (phase 4)

The operator must conduct at least one operational validation flight on the route or in the area of operation that the operator proposes to operate. Whilst it is not mandatory that the FOI witnesses such a flight on board, it is however required that the applicant co-ordinates this validation flight with the FOI and that any results of the flight are shared and discussed with the FOI.

5.2.5 Certification phase (phase 5)

When all phases have been passed successfully the relevant Operations Specifications will be adjusted to include the EDTO approval. The relevant threshold time and the maximum diversion time will be inserted.

5.3 Upgrading

An applicant with no prior experience in EDTO will normally not be granted with the maximum diversion time that has been certified for the AEC. Typically, the applicant will initially be granted a lower diversion time so that experience can be gained and 2-REG can determine whether the applicant is capable of meeting the more demanding EDTO requirements. A typical proving period will take 3 months of operations and must include feedback by the operator of its EDTO flights.

5.4 Continuing surveillance

Similar to the AOC itself, the EDTO approval is not time limited. However, it is subject to the 2-REG continuing surveillance programme on the AOC holder. The inspectors will, either during regular audits or an EDTO specific audit, determine whether all of the elements that have been evaluated in phases 3 and 4 are carried out in an adequate manner.

In addition, any operational event that may have an influence on the operator's continuing capability of EDTO must be reported to 2-REG and will be subject to an assessment by 2-REG. The outcome of that may affect the EDTO approval conditions.

Appendix A

EDTO approval application		
Section 1. AOC		
1. Company registered name: Trading name (if different from registered name): Address of company: Telephone: E-mail:	2. Details of AOC: ☐ AOC has been applied for ☐ Variation has been applied for ☐ AOC has been issued. AOC number: 3. Principal point of contact: Name Telephone: E-mail:	
Section 2. EDTO		
4. Aeroplane/Engine combination: Aeroplane type and variant: MSN(s): Engine type:	5. Maximum Take-off Mass 6. Maximum approved passenger seating configuration:	
7. Contemplated maximum diversion time:	8. Intended EDTO route(s) or operational area(s)	
Section 3. Start date		
9. Targeted date of start of EDTO		
Section 4. Signature		
<i>The signature and the information contained in this form denote an intent to apply for an AOC.</i>		
Signature:	Date: (day/month/year)	Name and title:

Appendix B

List of documents to be submitted as part of the EDTO formal application phase.

Airworthiness

- Proof of Aeroplane/Engine Combination EDTO certification;
- The relevant Configuration, Maintenance and Procedures (CMP) document;
- Conformity of candidate aircraft to the applicable EDTO configuration listed in the CMP document;
- EDTO significant systems that have been identified, including the data source;
- The operator's maintenance programme, or amendment to the amendment programme specific for EDTO;
- The operator's reliability monitoring programme;
- The operator's maintenance control manual, or amendment to the amendment programme specific for EDTO;
- The operator's EDTO training requirements for maintenance personnel;
- A sample maintenance release document;

Flight Operations

- The selected one-engine inoperative speed, including the calculation method and data source;
- The operator's EDTO operational procedures for flight planning and in-flight operations (including weather monitoring; critical fuel calculation and monitoring method; time limited system considerations; diversion strategies; reporting of EDTO relevant events);
- A sample flight plan package for EDTO;
- The operator's EDTO training requirements for operations personnel;

The operator's MEL, or amendment to the MEL specific for EDTO.

END