

DIRECTION GÉNÉRALE DE L'AVIATION CIVILE

29



SERVICE  
DE LA FORMATION AERONAUTIQUE  
ET DU CONTROLE TECHNIQUE

DIVISION EXPLOITATION

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Federal Aviation Administration  
Office of Chief Counsel  
Rules Docket Office  
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BUREAU DES PERFORMANCES ET  
DES LIMITATIONS OPERATIONNELLES

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Objet: DGAC comments to docket 29547

P.J. : Comments

1999 JUN 18 PM 2:47  
OFFICE OF THE  
CHIEF COUNSEL  
RULES DOCKET

Dear Sirs,

The DGAC appreciates the opportunity of commenting on the request by the ATA and ALPA (Federal Register dated April 27, 1999) for the FAA to issue a policy for approval of 207 minutes ETOPS operations. Please find attached the DGAC comments to docket 29547.

Yours faithfully,

Le Chef du Bureau  
des Performances et des Limitations  
Opérationnelles

Copie:

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G. LACAZE-LABADIE  
Ingénieur Principal des Etudes  
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## **DGAC Comments to docket 29547**

The **DGAC** comments are presented in two parts.

### **PART 1 General comments**

#### **1- Use of policy letter**

**DGAC** is opposed to the use of Policy Letters to handle **ETOPS** operations which are particular operations that, in terms of safety, must be part of the regulation. In **JAR OPS 1**, it is clearly addressed in paragraphs **JAR OPS 1.245** and **JAR OPS 1.246**, and it was also addressed in the previous **DGAC** regulation.

2- We have to stay in line with the **JAA/FAA harmonisation** process. During the previous **JAA ETOPS** working group meetings it was agreed that any extension beyond **180** minutes would be conducted according to the Information Leaflet **n°20**.

3-We should take a close look at the **Arctic** airports retained as alternates. The terms adequate and suitable must take into account the severe winter conditions, the reliability of information concerning weather forecast and ground equipment availability.

4 - For operation in the Arctic zone an assessment of the reliability of the air bleed systems must be conducted. The **APU** bleed should be capable of providing adequate cabin and cockpit environment.

### **PART II Detailed comments**

Approval basis

#### **Paragraph 1- SATCOM**

We agree that **SATCOM** is needed for the Arctic operation. Nevertheless, a check must be made to ensure that it works properly over this Arctic area and that the arctic alternates are equipped to handle **SATCOM** communications. Other forms of communications should be considered. Furthermore the **APU** or back up generators must be capable to power **SATCOM**.

#### **Paragraph 3 Autoland**

It should be clearly mentioned that the **aeroplane** must have at dispatch single engine **autoland** capability.

## Paragraph 4 MEL

According to the significant systems contained in IL 20 the **MMEL** must be reviewed. A close look should be taken at the start capability of the **APU** and its bleed and electrical capability. Otherwise a continuous operation should be required.

## Paragraph 5 RFFS

Due to the outside temperature encountered in the Arctic area a high level standard of **RFFS** should be required

## Paragraph 7

### 7.1 Numerical Probability Analysis

This paragraph lacks details. An assessment of the significant **ETOPS** systems according to the last draft of **IL20** should be conducted to ensure their suitability for **207** minutes diversion time.

**ETOPS** significant systems are :

(1) A system for which the fail-safe redundancy characteristics are directly linked to the number of engines e.g. hydraulic system, pneumatic system, electrical system.

(2) A system that may affect the proper functioning of the engines to the extent that it could result in an **inflight** shut down or **uncommanded** loss of thrust, e.g. fuel system, thrust reverser or engine control or indicating system, engine **fire** detection system.

(3) A system which contributes significantly to the safety of flight and a diversion with one engine inoperative, such as back-up systems used in case of additional failure during the diversion. These include back up or emergency generator , **APU** or systems essential for maintaining the ability to cope with prolonged operation at single altitudes, such as anti-icing systems.

(4) A system for which certain failure conditions may reduce the safety of a diversion, e.g. navigation, communication, equipment cooling, time limited cargo fire suppression, oxygen system.

A system includes all elements of equipment necessary for the control and performance of a particular major function. It includes both the equipment specifically provided for the function in question and other basic equipment such as that necessary to supply power for the equipment operation.

### 7.3 Time cargo fire suppression

A margin greater than 15 minutes should be taken into account to address the wind effect.

### 7.7 to 7.9

It should be shown that electrical power is available to provide systems as listed below ( **IL20 8(b)(7)**) following any single engine failure or combination of failures not shown to be Extremely Improbable:

- (i) attitude information;
- (ii) adequate radio communication and intercommunication capability;
- (iii) adequate navigation capability (including weather radar);
- (iv) adequate cockpit . and instrument lighting. Emergency lighting and landing lights;
- (v) sufficient captain and first officer instruments, provided cross reading has been evaluated;
- (vi) heading, airspeed and altitude including appropriate **pitot/static** heating;
- (vii) adequate flight controls including auto-pilot;
- (viii) adequate engine controls, and restart capability with critical type fuel (from the start -point of flame out and restart capability) and with the **aeroplane** initially at the maximum relight altitude;
- (ix) adequate fuel supply system capability including such fuel boost and fuel transfer functions that may be necessary;
- (x) adequate engine instrumentations;
- (xi) such warning, cautions, and indications as are required for continued safe flight and landing;
- (xii) **fire** protection (cargo, **APU** and engines);
- (xiii) adequate ice protection including windshield de-icing);
- (xiv) adequate control of the cockpit and cabin environment including heating and **pressurisation**, and,
- (xv) **ATC** Transponder.