INTODUCTION TO THE WORKSHOP

SARPs and ICAO Documents related to:

-Flight Planning and Fuel Management

-Performance-Based Communication and Surveillance

-Aircraft Performance

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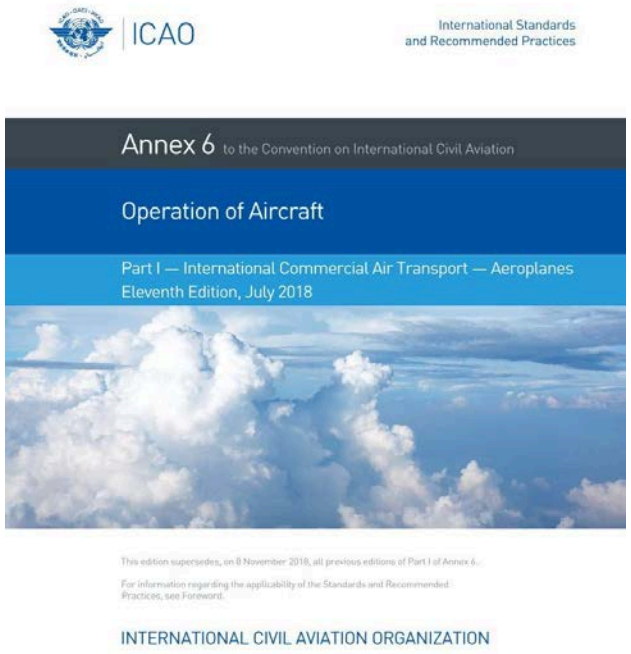
ICAO ESAF OPS Workshop

19-20 October 2021

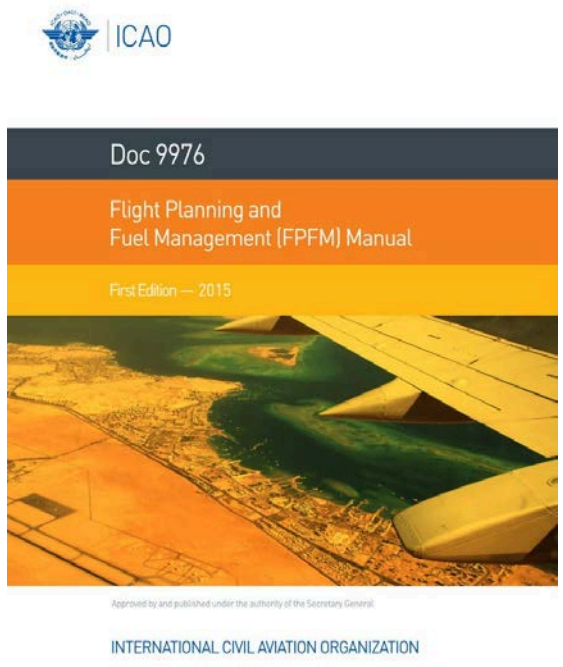
Annex 6



- **Flight Planning and Fuel Management** *(Part I-Amendment 36, applicable 15 November 2012)*
- **Performance-Based Communication and Surveillance** *(Part I-Amendment 40-A, applicable 10 November 2016; Part II-Amendment 34-A, applicable 10 November2016 ; Part III-Amendment 20-A, applicable 10 November 2016)*
- **Aircraft Performance** *(Part I-Amendment 40-C, applicable 4 November 2021, after having been delayed for one year)*

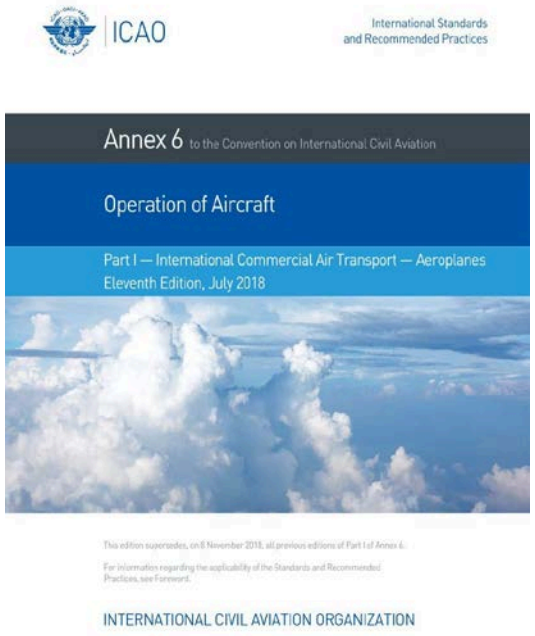
Flight Planning and Fuel Management (ICAO Doc 9976)

First Edition — 2015



- **Chapter 1. Introduction and Overview of the Manual**
- **Chapter 2. Safety, Operational Efficiency and Emission Reduction**
- **Chapter 3. Prescriptive and Performance-Based Compliance with Regulation**
- **Chapter 4. Understanding Prescriptive Compliance**
- **Chapter 5. Performance-based Compliance**
- **Chapter 6. In-flight Fuel Management**

Flight Planning and Fuel Management



CHAPTER 4. FLIGHT OPERATIONS

4.3 FLIGHT PREPARATION

- 4.3.4 Alternate aerodromes
- 4.3.5 Meteorological conditions
- 4.3.6 Fuel requirements
- 4.3.7 In-flight fuel management

Flight Planning and Fuel Management (ICAO Doc 9976)

- Addresses the specific safety risks associated with alternate aerodrome selection, fuel planning and in-flight fuel management

- Assist States, civil aviation authorities, and the operators in the development and/or implementation of prescriptive regulations and performance-based variations to such regulations

Flight Planning and Fuel Management (ICAO Doc 9976)

- Safety and Efficiency
- Safety management
- Performance-based compliance: *A safety-risk-based approach to regulatory compliance that involves the setting or application of target levels of safety performance of a system or process, which in turn facilitates the implementation of variable regulations or operational variations from existing prescriptive regulations*
- Performance-based regulatory oversight
- Industry practices and sharing of experience

Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869) – *2nd Edition, 2017*

- **Chapter 1. Performance-based communication and surveillance (PBCS) concept**
- **Chapter 2. Developing an RCP/RSP specification**
- **Chapter 3. Applying an RCP/RSP specification**
- **Chapter 4. Complying with an RCP/RSP specification**

Performance-based Communication and Surveillance

CHAPTER 7. AEROPLANE COMMUNICATION, NAVIGATION AND SURVEILLANCE EQUIPMENT

7.1 COMMUNICATION EQUIPMENT

- Suitable communication equipment
- RCP specification capabilities listed in the flight manual or other aeroplane documentation approved by the State of Design or State of Registry
- RCP specification capabilities included in the MEL

- normal and abnormal procedures, including contingency procedures;
- flight crew qualification and proficiency requirements
- training programme
- appropriate maintenance procedures
- monitoring programmes
- immediate corrective action for individual aircraft, aircraft types or operators

Performance-based Communication and Surveillance

CHAPTER 7. AEROPLANE COMMUNICATION, NAVIGATION AND SURVEILLANCE EQUIPMENT

7.3 SURVEILLANCE EQUIPMENT

- Suitable surveillance equipment
- RSP specification capabilities listed in the flight manual or other aeroplane documentation approved by the State of Design or State of Registry
- RSP specification capabilities included in the MEL

- normal and abnormal procedures, including contingency procedures;
- flight crew qualification and proficiency requirements
- training programme
- appropriate maintenance procedures
- monitoring programmes
- immediate corrective action

Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869)

- Guidance on SARPs contained in Annex 6, Annex 11, Annex 15, PANS-ATM (Doc 4444), PANS-ABC (Doc 8400) and Regional Supplementary Procedures (Doc 7030)
- managing communication and surveillance performance in accordance with globally accepted RCP and RSP specifications
- emerging technologies for communication and surveillance supporting ATM operations-automatic dependent surveillance
- safety oversight of air navigation services
- operational approval
- development of operational procedures
- operational monitoring, analysis, and exchange of operational data

Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869)

Operational approval. An authorization which entitles an operator, owner or pilot-in-command to undertake or continue a flight operation. States may use the following methods to issue operational approvals:

- ***Approval***. *An explicit action by the State of the Operator/State of Registry to authorize an application to undertake a proposal to modify a flight operation that has been submitted by, or on behalf of, an operator or owner. The approval attests to compliance with the applicable provisions.*

- ***Specific approval***. *An approval which is required to be documented in the operations specifications for commercial air transport operations or in the list of specific approvals for international general aviation operations.*

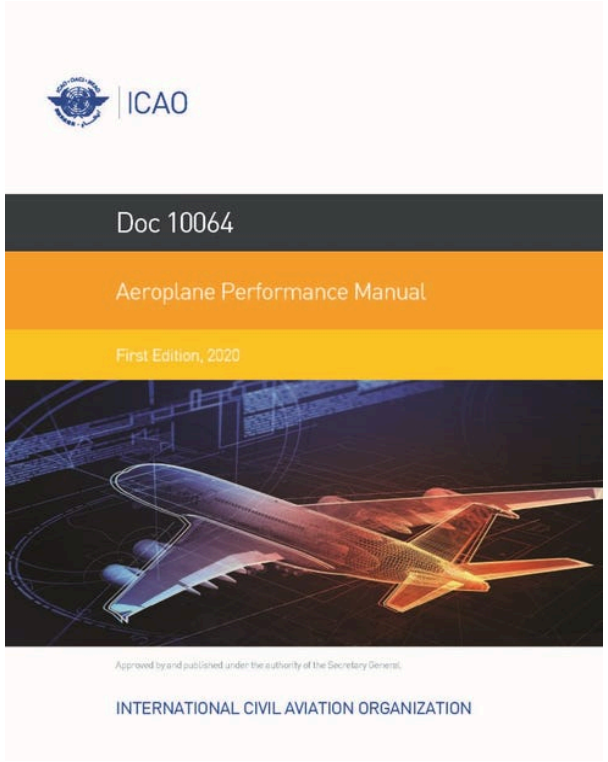
- ***Acceptance***. *A written or implicit acknowledgement of consensus by a State on a notification submitted by the operator. A State's approval is implicit if it does not issue a written response to the operator within a certain period of time following the submission of the notification.*

Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869)

- Coordination between technical areas (OPS, AIR, ATM, CNS) for operational approvals
- PBCS monitoring programmes-hazard identification, safety risk assessment and management
- Exchange of safety information
- Supports for ATM in the assessment of the risk of collision when determining separation minima within a target level of safety.

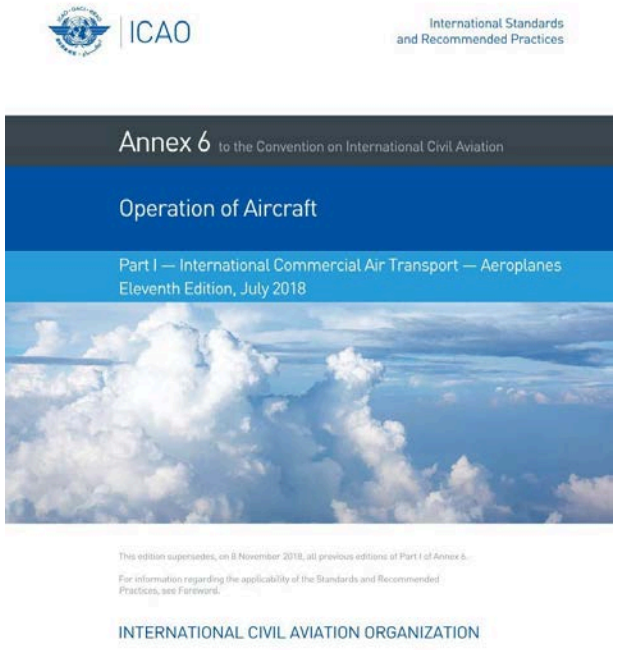
Aeroplane Performance Manual (Doc 10064)

First Edition, 2020



- Chapter 1. Overview of the Manual
- Chapter 2. Runway Surface Condition Assessment and Reporting
- Chapter 3. Take-off Performance
- Chapter 4. En-route Performance
- Chapter 5. Landing Performance
- Chapter 6. Missed Approach

Aeroplane Performance Manual



CHAPTER 4. FLIGHT OPERATIONS

4.4 IN-FLIGHT PROCEDURES

4.4.11 Aeroplane operating procedures for landing performance

An approach to land shall not be continued below 300 m (1 000 ft) above aerodrome elevation unless the pilot-in-command is satisfied that, with the **runway surface condition information available**, the aeroplane performance information indicates that a safe landing can be made.

APPENDIX 2. ORGANIZATION AND CONTENTS OF AN OPERATIONS MANUAL

2.2 Aircraft operating information

…

2.2.5 The maximum crosswind and tailwind components for each aeroplane type operated and the reductions to be applied to these values having regard to gusts, low visibility, **runway surface conditions**, crew experience, use of autopilot, abnormal or emergency circumstances, or any other relevant operational factors.

Aeroplane Performance Manual (Doc 10064)

- It supplements the provisions of Annex 6, Part I, Chapter 5, Aeroplane performance operating limitations and Annex 8, Part IIIB
- Guidance material previously presented in Annex 6, Part I, Attachment B, Aeroplane performance operating limitations
- New guidance for aeroplane operations on contaminated runways, following the implementation of a new global reporting format for assessing and reporting runway surface conditions

PROGRAMME OF THE WORKSHOP

- Overview of SARPs and related ICAO Documents
- Perspective from regulatory authorities
  - ✓ FAA
  - ✓ Kenya Civil Aviation Authority
- Perspective from air operators
  - ✓ Ethiopian Airlines
  - ✓ Kenya Airways
- Recommendations

PROGRAMME

Time	Event	Responsible
First day, 19 October 2021		
14h00-14h15	Opening address	Deputy Regional Director
14h15-14h45	Introduction to the Workshop-related SARPs and ICAO Documents(ICAO)	ICAO-PIM
14h45-15h45	Performance-based communication and surveillance (ICAO Doc 9869)(FAA)	Mr. Thomas Mustach/Mr. Stephen Van Trees
15h45-16h45	Flight planning and fuel management (ICAO Doc 9976)(FAA)	Mr. Gordon Rother
16h45-17h00	*Break*	
17h00-18h00	Aircraft performance (ICAO Doc 10064)(FAA)	Mr. Paul Giesman
18h00	Closure for the first day	
Second day, 20 October 2021		
14h00-14h30	FPFM(Ethiopian Airlines)	Capt. Dawit Araya
14h30-15h00	PBCS(KCAA)	Capt. Beatrice
15h00-15h30	PBCS (Ethiopian Airlines)	Capt. Mikyas
15h30-16h00	Aircraft Performance(KCAA)	Capt. Beatrice
16h00-16h10	*Break*	
16h10-16h30	Aircraft Performance(Ethiopian Airlines)	Capt. Fiseha
16h30-17h00	Challenges/safety issues(Kenya Airways)	Capt. Martin
17h30-18h00	Introduction USOAP results and Risk-based surveillance(ICAO)	ICAO-PIM ICAO-ZA
18h00	Closure of the workshop	DRD

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THANK YOU