

**CEN**

**CWA 15995**

**WORKSHOP**

August 2009

**AGREEMENT**

---

ICS 03.220.50

English version

**Business Aircraft Operations - Code of practice for the  
management of non-commercial operations with complex motor-  
powered aircraft**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Table of Contents

Record of Amendments .....	6
1.0 Scope.....	7
1.1 General.....	7
1.2 Applicability.....	7
1.3 Registration .....	7
2.0 Introduction .....	8
2.1 Need for IS-BAO.....	8
2.2 Linkage with International Standards .....	8
2.3 Safety Management Philosophy .....	9
2.4 IS-BAO Structure .....	9
2.5 Language of the Standard.....	10
2.6 Translation into Other Languages.....	10
2.7 European Introduction.....	10
3.0 Safety Management Systems.....	11
3.1 General.....	11
3.2 Safety Management System Requirements.....	11
3.3 Compliance Monitoring .....	13
3.4 Freedom of Choice.....	13
4.0 Organization and Personnel Requirements .....	14
4.1 Organization and Personnel.....	14
4.2 Aircraft Crew Member Duties and Responsibilities.....	14
4.3 Crew Member Qualification.....	15
4.4 Maintenance Personnel Qualifications.....	16
4.5 Other Personnel .....	16
5.0 Training and Proficiency.....	17
5.1 Training Programmes.....	17
5.2 Crew Resource/Human Factors Management .....	18
5.3 Emergency and Safety Procedures Training .....	18
5.4 High Altitude Training.....	19
5.5 Proficiency Certification .....	20
5.6 Training and Qualification Records.....	20
6.0 Flight Operations .....	22
6.1 Standard Operating Procedures .....	22
6.2 Flight Planning Requirements .....	22
6.3 Operational Control .....	26
6.4 Weather Minima .....	26
6.5 Category II and III Operations.....	27
6.6 RNP, MNPS, RNAV & RVSM.....	27
6.7 Aircraft Operating Requirements.....	28
6.8 Noise Certification and Abatement.....	28
6.9 Aircraft Airworthiness .....	28
6.10 Use of Oxygen.....	28
6.11 Passenger Safety Briefing .....	29
6.12 Use of Checklists.....	30
6.13 Fatigue Countermeasures .....	30
6.14 Travel Health Issues.....	31
6.15 Seating Requirements .....	31
6.16 Cabin Baggage.....	31
6.17 Microphones.....	31
7.0 Operations in International, RVSM, MNPS, RNAV or RNP Airspace.....	33

7.1.	Sovereign and International Airspace .....	33
7.2	Compliance.....	33
7.3	International RVSM, MNPS, RNAV & RNP Airspace Operations Qualifications.....	33
7.4	Operational Approval and Aircraft System Requirements.....	34
7.5	Standard Operating Procedures .....	34
7.6	International Publications Library .....	34
8.0	Aircraft Equipment Requirements.....	35
8.1	General.....	35
8.2	Communications and Navigational Equipment .....	35
8.3	Operational Information and Documentation.....	35
8.4	Seats, Safety Belts and Shoulder Harnesses.....	36
8.5	Emergency Equipment - General.....	36
8.6	Flights over Water.....	36
8.7	Flights Over Remote Land Areas .....	37
8.8	High Altitude Flights - Oxygen Requirements.....	37
8.9	Icing Protection and Weather Detection Equipment.....	37
8.10	ELT .....	37
8.11	GPWS .....	38
8.12	ACAS II .....	38
8.13	ATC Transponder and Altitude Reporting System.....	38
8.14	Flight Data Recorders and Cockpit Voice Recorders .....	38
8.15	Minimum Equipment List .....	39
9.0	Aircraft Maintenance Requirements.....	40
9.1	Maintenance Control System .....	40
9.2	Maintenance Agreements.....	42
9.3	Person Responsible for Maintenance.....	42
9.4	Evaluation Programme.....	43
9.5	Maintenance Personnel Training and Recency.....	43
10.0	Company Operations Manual.....	45
11.0	Emergency Response Plan .....	46
12.0	Environmental Management .....	47
13.0	Occupational Health and Safety .....	48
14.0	Transportation of Dangerous Goods.....	49
14.1	Considerations for All Operators.....	49
14.2	Dangerous Goods Transportation Requirements.....	49
15.0	Security .....	51
	Appendix A - IS-BAO Supplement – Single Pilot VLJ and TAA Operations.....	52
	Appendix B - Terminology, Abbreviations and Acronyms.....	56

## **Foreword**

The IS-BAO - An International Standard for Business Aircraft Operations has been developed by the business aviation community for the benefit of the community. The purpose is to promote global standardization and to assist operators in establishing quality flight departments using best practices of business aircraft operations world-wide.

Although the standard was developed with the purpose of self-determination, other long term benefits are possible through development of an industry based third-party registration programme similar to the ISO - 9000 series (see Chapter 2.0). The business aviation community may also wish to promote the standard to regulators and standards setters as an acceptable basis for rulemaking.

While the IS-BAO is a set of standards that reflect good operations world-wide, a management process has been designed to ensure that it remains a high quality product. The IS-BAO management process will involve all IBAC member national and regional business aviation associations and is under the direction of the IS-BAO Standards Board. It includes the submission of recommended revisions from participating operators and their national and regional associations, plus an annual review by the Standards Board.

The first draft of the IS-BAO was completed using a number of existing documents such as the NBAA Management Guide, the BAUA Generic Operations Manual and Canadian CAR 624 Standards. This first draft was then reviewed by a small group of operators who served as a focus group to confirm the benefits of the standard and provide preliminary comments on its structure and content. From these comments a second draft was developed. It was reviewed through a series of operator focus group meetings in North America and Europe and a standards integration meeting involving representatives from the focus groups. A third draft was then developed. It was presented at EBACE 2001 in Geneva and was then tested with operators in North America, Europe and South America. The feedback from the EBACE presentation and the operator tests was used to develop the final edition. It was approved by the IS-BAO Standards Board on December 10, 2001 who has since then managed it on behalf of the IBAC Governing Board. In that process feedback has been gathered from users, auditors and subject matter experts. This feedback provides the basis for the annual update of the IS-BAO and related documents.

This edition contains a number of substantive changes based on newly released ICAO standards and recommended practices contained in Annex 6, Part II, *Operation of Aircraft, International General Aviation-Aeroplanes*, including changes to Safety Management System requirements.

The IS-BAO and accompanying Generic Company Operations Manual was developed for voluntary application by business aircraft operators. The IS-BAO is a performance based standard that provides for different implementation options, depending on the specific operation.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN : AENOR, AFNOR, ASRO, BDS, BSI, CSNI, CYS, DIN, DS, ENOT, EVS, IBN, IPQ, IST, LVS, LST, MSA, MSZT, NEN, NSAI, ON, PKN, SEE, SIS, SIST, SFS, SN, SNV, SUTN and UNI

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

## **Disclaimer**

**Purchase of the IS-BAO/CEN document signifies the purchaser's agreement to indemnify IBAC and CEN and their member associations and hold them harmless from and against any and all claims, demands, losses, damages, liabilities, deficiencies, costs and expenses, including legal fees, related to the application of the CWA by the purchaser or any individual or company obtaining a copy from the purchaser.**

### **European Foreword**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which was supported by CEN following the public call for participation made in 2008.

A list of the individuals and organizations that supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN Management Centre.

The development of this CEN Workshop Agreement was supported by the following organizations:

- International Business Aviation Council (IBAC);
- European Business Aviation Association (EBAA);
- Austrian Chamber of Commerce;
- Civil Aviation Authority (CAA), UK;
- European Commission;
- European Aviation Safety Agency (EASA);
- Skytation, Luxembourg.

The formal process followed by the workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard by CEN and its members.

The final review/endorsement round for this CWA was started on 2008-11-20 and was successfully closed on 2009-04-21. The final text of this CWA was submitted to CEN for publication on 2009-05-25.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN.

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

### **Endorsement notice**

The content of this CWA is based on the IS-BAO:2009 .

## Record of Amendments

[illegible]

## 1.0 Scope

### 1.1 General

This publication represents an International Standard for Business Aircraft Operations (IS-BAO).

The primary purpose of the standard is to promote the harmonization of quality operating practices for business aircraft operations on the international level. It constitutes “base line” requirements which operators should apply in structuring and staffing their flight departments and planning and conducting their operations.

The IS-BAO has been developed with the generally accepted principles of other international standards systems in mind. It also has been designed to be compatible with operator certification under a range of quality systems. The Safety Management Systems standards set out in Chapter 3 are, in particular, consistent with the Quality System Requirements in EU OPS, and the ISO 9000 2000 Standards.

Implementation of IS-BAO by operators may also serve to satisfy certain national regulatory requirements applied by States and their civil aviation authorities (CAAs). Operators remain responsible for ensuring that all applicable national requirements are met.

### 1.2 Applicability

While the standards were developed to be primarily applicable to operators who operate multi-engine, turbine-powered, pressurized aircraft they are flexible in nature and can readily be adapted to other types of aircraft. Appendix A has been developed to specifically address the application of the IS-BAO standards to very light jets and other technically advanced aircraft. This supplement is accompanied by a single pilot generic operations manual. It is available on the IS-BAO CD that is included with the full IS-BAO package that can be purchased from IBAC member associations - see <http://www.ibac.org/isbao.php>.

Operators are encouraged to implement the standard contained in this publication. It is designed as an industry standard intended to foster universal application of best practices. Adoption of IS-BAO by a company is the company's choice. However, in the interest of international harmonization, States and regional bodies considering establishing new requirements for business aircraft operations or revising existing requirements are equally encouraged to consider the standard in their rule and standards-making activities.

### 1.3 Registration

Flight departments that have purchased and adopted the IS-BAO have the option of having the company registered with the International Business Aviation Council (IBAC). To be registered the flight department must arrange for a third party audit by an accredited IS-BAO auditor. Flight departments that successfully demonstrate compliance with IS-BAO will receive a certificate of registration from IBAC. A copy of the Registration Application and further information on the registration process can be found at [http://www.ibac.org/isbao\\_audit.php](http://www.ibac.org/isbao_audit.php).

## 2.0 Introduction

### 2.1 Need for IS-BAO

It is the role of the International Civil Aviation Organization (ICAO) to promote global harmonization of aviation safety standards. It is readily accepted that it is neither in the interest of safety nor the economic well-being of operators for variations in international standards to exist. Variations in safety standards can result in confusion and safety deficiencies and have imposed unnecessary financial burdens on operators. For example, unique aircraft equipment requirements can put business aircraft operators at an economic disadvantage compared with operators in other States. This constrains the potential of the business aviation community and the operation of individual flight departments.

More importantly, the development and implementation of one common standard for business aircraft operations will serve to enhance aviation safety and will provide the opportunity to implement modern best practices. Implementation of a common standard internationally will assist flight departments in allocation of their resources to safety programmes having the most tangible benefits.

It is for these reasons - the need to ensure safe business aircraft operations and to encourage the growth and development of business aviation and of individual company flight departments - that the IS-BAO has been developed.

A list of the benefits of IS-BAO is contained on the IBAC website at:

[http://www.ibac.org/isbao\\_benefits.php](http://www.ibac.org/isbao_benefits.php). In addition, a study completed by an independent safety analyst shows that the IS-BAO 'code of practice' has a considerable potential to reduce accidents. The analyst reviewed 297 accidents over a five year period and assessed them against the provisions of the safety standard to make a judgment regarding the potential that the accident would have been prevented if the flight department had implemented the IS-BAO. To view the report see:

[http://www.ibac.org/Files/Safety/Woodhouse\\_Report\\_K11.pdf](http://www.ibac.org/Files/Safety/Woodhouse_Report_K11.pdf).

### 2.2 Linkage with International Standards

Implementation of the IS-BAO will also have secondary benefits for operators, as the IS-BAO framework is similar to other international standards systems. For example, a company that wishes to be registered as compliant with the ISO 9000 Standards must document the procedures and processes it has adopted to ensure quality in all aspects of the company operations, and must arrange to be audited by an accredited independent (third party) registrar organization. If the company's quality systems documentation and implementation are found to meet the requirements of the applicable ISO 9000 series standards, the registrar grants registration and lists the company as a company with certified quality systems. All purchasers of the company's products can accept the third party registration as evidence that the company's quality systems meet the applicable ISO 9000 series requirements.

Such third-party registration schemes provide a number of benefits. Registration demonstrates that a company has implemented an adequate quality system for the products it offers or provides. By this, better internal commitment, as well as enhanced user confidence, may be achieved.

Many aircraft manufacturing and repair organizations and some flight departments have embarked on ISO registration to satisfy internal company requirements and to facilitate marketing internationally. IS-BAO is designed to be specifically applicable to business aviation operations