

**COVER SHEET TO AMENDMENT 104**

**INTERNATIONAL STANDARDS  
AND RECOMMENDED PRACTICES**

# **AIRWORTHINESS OF AIRCRAFT**

**ANNEX 8  
TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION**

**ELEVENTH EDITION — JULY 2010**

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

# Checklist of Amendments to Annex 8

	<i>Effective date</i>	<i>Date of applicability</i>
Eleventh Edition (incorporates Amendments 1 to 102)	18 November 2010	24 February 2013
Amendment 103 (adopted by the Council on 13 June 2011)	30 October 2011	31 December 2014
Amendment 104 (adopted by the Council on 25 February 2013) Replacement pages (v), (xxiii) , I-3, I-4 and II-5-1	15 July 2013	14 November 2013



*Transmittal note*

## Amendment 104

to the

International Standards  
and Recommended Practices

## AIRWORTHINESS OF AIRCRAFT

(Annex 8 to the Convention on International Civil Aviation)

1. Insert the following replacement pages in Annex 8 (Eleventh Edition) to incorporate Amendment 104 which becomes applicable on 14 November 2013:
  - a) Page (v)\* — Table of Contents
  - b) Page (xxiii)\* — Foreword
  - c) Pages I-3 and I-4 — Part I
  - d) Page II-5-1 — Part II, Chapter 5
2. Delete the Attachment to Part II.
3. Record the entry of this amendment on page (iii).

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\* Please note that these pages correctly replace pages from Amendment 103 dated 31 December 2014.



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<i>Amendment(s)</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
100 (10th Edition)	First meeting of the Airworthiness Panel	a) New definitions of Category A, Category B, discrete source damage, engine, fireproof, fire resistant and satisfactory evidence, new note to critical power-unit; b) amendment to the definition of repair; c) revision of the provisions of Part II to allow the introduction of new parts in the Annex, amend Chapter 3 to clarify provisions relating to the limiting conditions under which a damaged aircraft is permitted to fly uncommercially to an aerodrome where it can be restored to an airworthy condition, and re-organize Chapter 4 to clarify States' responsibilities; d) revision of provisions in Part IIIA pertaining to applicability and operating limitations, proof of compliance; e) revision of provisions in Part IIIB pertaining to applicability, operating limitations, performance, stability, structure, design and construction, powerplant, operating limitations, crashworthiness and cabin safety, operating environment and Human Factors; f) restructuring of Part IV into Part IVA (same provisions as those contained in Part IV of Annex 8, Ninth Edition including Amendment 99, except for applicability clauses and cross-references) and Part IVB (new); g) introduction of new Part V — <i>Small Aeroplanes</i> , Part VI — <i>Engines</i> and Part VII — <i>Propellers</i> .	13 December 2004 13 April 2005 13 December 2007
101	Secretariat	Amendment concerning the development of harmonized provisions relating to safety management on the implementation and maintenance of a State's safety programme from 18 November 2010 and the requirement for organizations responsible for the type design or manufacture of aircraft to implement a safety management system from 14 November 2013.	4 March 2009 20 July 2009 18 November 2010; 14 November 2013
102 (11th Edition)	Recommendations of the twelfth meeting of the Airworthiness Panel Working Group of the Whole (AIRP/WG/WHL/12); Secretariat proposal to restructure Annex 8	a) Amendment introduces new definitions in order to harmonize the use of terminology between Annexes 6 and 8; b) restructuring of Annex 8 so the format and structure align with other Annexes; c) adopts existing industry best practice, notably, updating aircraft design in order to reflect modern practice and specifies the applicability date of each amended design Standard.	24 February 2010 12 July 2010 18 November 2010; 24 February 2013
103	Secretariat	The amendment requires the design and manufacture of aircraft's fire extinguishing and/or suppression systems for engines, auxiliary power-units (APUs) and lavatories to use alternative fire extinguishing agents to halon.	13 June 2011 30 October 2011 31 December 2014
104	Special Meeting of the Safety Management Panel (SMP/SM/1)	The transfer of safety management provisions to Annex 19.	25 February 2013 15 July 2013 14 November 2013





**Limit loads.** The maximum loads assumed to occur in the anticipated operating conditions.

**Load factor.** The ratio of a specified load to the weight of the aircraft, the former being expressed in terms of aerodynamic forces, inertia forces, or ground reactions.

**Maintenance.** The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

**Performance Class 1 helicopter.** A helicopter with performance such that, in case of engine failure, it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area.

**Performance Class 2 helicopter.** A helicopter with performance such that, in case of engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which cases a forced landing may be required.

**Performance Class 3 helicopter.** A helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.

**Powerplant.** The system consisting of all the engines, drive system components (if applicable), and propellers (if installed), their accessories, ancillary parts, and fuel and oil systems installed on an aircraft but excluding the rotors for a helicopter.

**Pressure-altitude.** An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

**Rendering (a Certificate of Airworthiness) valid.** The action taken by a Contracting State, as an alternative to issuing its own Certificate of Airworthiness, in accepting a Certificate of Airworthiness issued by any other Contracting State as the equivalent of its own Certificate of Airworthiness.

**Repair.** The restoration of an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements.

**Satisfactory evidence.** A set of documents or activities that a Contracting State accepts as sufficient to show compliance with an airworthiness requirement.

**Standard atmosphere.** An atmosphere defined as follows:

- a) the air is a perfect dry gas;
- b) the physical constants are:
  - Sea level mean molar mass:  
 $M_0 = 28.964\,420 \times 10^{-3} \text{ kg mol}^{-1}$
  - Sea level atmospheric pressure:  
 $P_0 = 1\,013.250 \text{ hPa}$
  - Sea level temperature:  
 $t_0 = 15^\circ\text{C}$   
 $T_0 = 288.15 \text{ K}$

- Sea level atmospheric density:  
 $\rho_0 = 1.225 \text{ 0 kg m}^{-3}$
- Temperature of the ice point:  
 $T_i = 273.15 \text{ K}$
- Universal gas constant:  
 $R^* = 8.314 \text{ 32 JK}^{-1}\text{mol}^{-1}$

c) the temperature gradients are:

Geopotential altitude (km)		Temperature gradient (Kelvin per standard geopotential kilometre)
From	To	
–5.0	11.0	–6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8
47.0	51.0	0.0
51.0	71.0	–2.8
71.0	80.0	–2.0

*Note 1.*— The standard geopotential metre has the value  $9.80665 \text{ m}^2 \text{ s}^{-2}$ .

*Note 2.*— See Doc 7488 for the relationship between the variables and for tables giving the corresponding values of temperature, pressure, density and geopotential.

*Note 3.*— Doc 7488 also gives the specific weight, dynamic viscosity, kinematic viscosity and speed of sound at various altitudes.

**State of Design.** The State having jurisdiction over the organization responsible for the type design.

**State of Manufacture.** The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

**State of Registry.** The State on whose register the aircraft is entered.

*Note.*— In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).

**Take-off surface.** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking off in a particular direction.

## CHAPTER 5. SAFETY MANAGEMENT

*Note.— Safety management provisions for organizations responsible for the type design or manufacture of aircraft are included in Annex 19. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).*

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