



ICAO

International Standards
and Recommended Practices

Annex 8 to the Convention on International Civil Aviation

Airworthiness of Aircraft

Thirteenth Edition, July 2022



This edition supersedes, on 3 November 2022, all previous editions of Annex 8.

For information regarding the applicability of the Standards and Recommended Practices, see the Foreword.

INTERNATIONAL CIVIL AVIATION ORGANIZATION **Documents**
AVA Document Sharing Hub



Annex 3 to the Convention on International Civil Aviation

Airworthiness of Aircraft

Thirteenth Edition, July 2022

This edition is superseded, on 3 November 2022, all previous editions of Annex 8, and superseded, on 23 November 2006, all previous editions of Annex 10, Volume 1.

For information regarding the applicability of the Standards and Recommended Practices (SARPs), see Foreword.

Published in separate English, Arabic, Chinese, French, Russian and Spanish editions by the
INTERNATIONAL CIVIL AVIATION ORGANIZATION
999 Robert-Bourassa Boulevard, Montréal, Quebec, Canada H3C 5H7

For ordering information and for a complete listing of sales agents
and booksellers, please go to the ICAO website at www.icao.int

First Edition, 1949
Twelfth Edition, 2018
Thirteenth Edition, 2022

Annex 8, *Airworthiness of Aircraft*

Order Number: AN 8

ISBN 978-92-9265-731-4 (print version)

ISBN 978-92-9265-856-4 (electronic version)

© ICAO 2022

All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system or transmitted in any form or by any means, without prior
permission in writing from the International Civil Aviation Organization.

AMENDMENTS

Amendments are announced in the supplements to the *Products and Services Catalogue*; the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

[illegible][illegible]

CONTENTS

	<i>Page</i>
FOREWORD.....	(xxi)
PART I. DEFINITIONS.....	I-1
PART II. PROCEDURES FOR CERTIFICATION AND CONTINUING AIRWORTHINESS.....	II-1-1
CHAPTER 1. Type certification.....	II-1-1
1.1 Applicability.....	II-1-1
1.2 Design aspects of the appropriate airworthiness requirements.....	II-1-2
1.3 Proof of compliance with the appropriate airworthiness requirements	II-1-3
1.4 Issuance of Type Certificate.....	II-1-5
1.5 Suspension of Type Certificate	II-1-5
1.6 Revocation of Type Certificate	II-1-6
1.7 Transfer of Type Certificate	II-1-6
CHAPTER 2. Production.....	II-2-1
2.1 Applicability.....	II-2-1
2.2 Aircraft, engine and propeller production	II-2-1
2.3 Aircraft parts production	II-2-1
2.4 Production approval	II-2-1
CHAPTER 3. Certificate of Airworthiness.....	II-3-1
3.1 Applicability.....	II-3-1
3.2 Eligibility, issuance and continued validity of a Certificate of Airworthiness	II-3-1
3.3 Standard form of Certificate of Airworthiness.....	II-3-2
3.4 Aircraft limitations and information.....	II-3-2
3.5 Temporary loss of airworthiness	II-3-2
3.6 Damage to aircraft.....	II-3-3
CHAPTER 4. Continuing airworthiness.....	II-4-1
4.1 Applicability.....	II-4-1
4.2 Responsibilities of Contracting States in respect of continuing airworthiness.....	II-4-1
CHAPTER 5. Safety management.....	II-5-1
CHAPTER 6. Maintenance organization approval	II-6-1
6.1 Applicability.....	II-6-1
6.2 Maintenance organization approval.....	II-6-1
6.3 Maintenance organization's procedures manual.....	II-6-2
6.4 Maintenance procedures and quality assurance system.....	II-6-3
6.5 Facilities.....	II-6-3
6.6 Personnel.....	II-6-3
6.7 Records.....	II-6-4
6.8 Maintenance release.....	II-6-4

	<i>Page</i>
PART III. LARGE AEROPLANES	IIIA-1-1
PART IIIA. Aeroplanes over 5 700 kg for which application for certification was submitted on or after 13 June 1960, but before 2 March 2004	IIIA-1-1
CHAPTER 1. General.....	IIIA-1-1
1.1 Applicability.....	IIIA-1-1
1.2 Number of engines	IIIA-1-1
1.3 Operating limitations.....	IIIA-1-2
1.4 Unsafe features and characteristics	IIIA-1-2
1.5 Proof of compliance	IIIA-1-2
CHAPTER 2. Flight.....	IIIA-2-1
2.1 General	IIIA-2-1
2.2 Performance	IIIA-2-1
2.3 Flying qualities.....	IIIA-2-3
CHAPTER 3. Structure.....	IIIA-3-1
3.1 General	IIIA-3-1
3.2 Airspeeds.....	IIIA-3-1
3.3 Flight loads.....	IIIA-3-2
3.4 Ground and water loads.....	IIIA-3-2
3.5 Miscellaneous loads	IIIA-3-3
3.6 Flutter, divergence and vibration.....	IIIA-3-3
3.7 Fatigue strength.....	IIIA-3-3
CHAPTER 4. Design and construction.....	IIIA-4-1
4.1 General	IIIA-4-1
CHAPTER 5. Engines	IIIA-5-1
5.1 Scope	IIIA-5-1
5.2 Design, construction and functioning.....	IIIA-5-1
5.3 Declared ratings, conditions and limitations	IIIA-5-1
5.4 Tests	IIIA-5-1
CHAPTER 6. Propellers.....	IIIA-6-1
6.1 Scope	IIIA-6-1
6.2 Design, construction and functioning.....	IIIA-6-1
6.3 Declared ratings, conditions and limitations	IIIA-6-1
6.4 Tests	IIIA-6-1
CHAPTER 7. Powerplant installation	IIIA-7-1
7.1 General	IIIA-7-1
7.2 Arrangement and functioning.....	IIIA-7-1
CHAPTER 8. Instruments and equipment.....	IIIA-8-1
8.1 Required instruments and equipment	IIIA-8-1
8.2 Installation.....	IIIA-8-1
8.3 Safety and survival equipment	IIIA-8-1
8.4 Navigation lights and anti-collision lights.....	IIIA-8-1

	<i>Page</i>
CHAPTER 9. Operating limitations and information	IIIA-9-1
9.1 General	IIIA-9-1
9.2 Operating limitations	IIIA-9-1
9.3 Operating information and procedures	IIIA-9-2
9.4 Performance information	IIIA-9-3
9.5 Aeroplane flight manual	IIIA-9-3
9.6 Markings and placards	IIIA-9-3
CHAPTER 10. Continuing airworthiness — maintenance information	IIIA-10-1
10.1 General	IIIA-10-1
10.2 Maintenance information	IIIA-10-1
10.3 Maintenance programme information	IIIA-10-1
10.4 Maintenance information resulting from the type design approval	IIIA-10-1
CHAPTER 11. Security	IIIA-11-1
11.1 Aeroplanes used for domestic commercial operations	IIIA-11-1
11.2 Least-risk bomb location	IIIA-11-1
11.3 Protection of the flight crew compartment	IIIA-11-1
11.4 Interior design	IIIA-11-1
PART IIIB. Aeroplanes over 5 700 kg for which application for certification was submitted on or after 2 March 2004	IIIB-1-1
CHAPTER 1. General	IIIB-1-1
1.1 Applicability	IIIB-1-1
1.2 Number of engines	IIIB-1-1
1.3 Operating limitations	IIIB-1-1
1.4 Unsafe features and characteristics	IIIB-1-2
1.5 Proof of compliance	IIIB-1-2
CHAPTER 2. Flight	IIIB-2-1
2.1 General	IIIB-2-1
2.2 Performance	IIIB-2-1
2.3 Flying qualities	IIIB-2-4
2.4 Stability and control	IIIB-2-5
CHAPTER 3. Structure	IIIB-3-1
3.1 General	IIIB-3-1
3.2 Mass and mass distribution	IIIB-3-1
3.3 Limit loads	IIIB-3-1
3.4 Strength and deformation	IIIB-3-1
3.5 Airspeeds	IIIB-3-1
3.6 Strength	IIIB-3-2
3.7 Survivability	IIIB-3-2
3.8 Structural durability	IIIB-3-3
3.9 Special factors	IIIB-3-4
CHAPTER 4. Design and construction	IIIB-4-1
4.1 General	IIIB-4-1
4.2 Systems design features	IIIB-4-2

	<i>Page</i>
4.3 Aeroelasticity	IIIB-4-4
4.4 Occupants accommodation features	IIIB-4-4
4.5 Electrical bonding and protection against lightning and static electricity	IIIB-4-4
4.6 Emergency landing provisions	IIIB-4-5
4.7 Ground handling.....	IIIB-4-5
CHAPTER 5. Powerplant.....	IIIB-5-1
5.1 Engines.....	IIIB-5-1
5.2 Propellers.....	IIIB-5-1
5.3 Powerplant installation	IIIB-5-1
CHAPTER 6. Systems and equipment	IIIB-6-1
6.1 General.....	IIIB-6-1
6.2 Installation.....	IIIB-6-2
6.3 Safety and survival equipment	IIIB-6-2
6.4 Navigation lights and anti-collision lights.....	IIIB-6-2
6.5 Electromagnetic interference protection.....	IIIB-6-2
6.6 Ice protection.....	IIIB-6-2
CHAPTER 7. Operating limitations and information.....	IIIB-7-1
7.1 General	IIIB-7-1
7.2 Operating limitations.....	IIIB-7-1
7.3 Operating information and procedures.....	IIIB-7-2
7.4 Performance information.....	IIIB-7-3
7.5 Flight manual.....	IIIB-7-3
7.6 Markings and placards.....	IIIB-7-3
7.7 Continuing airworthiness — maintenance information.....	IIIB-7-3
CHAPTER 8. Crashworthiness and cabin safety	IIIB-8-1
8.1 General.....	IIIB-8-1
8.2 Design emergency landing loads.....	IIIB-8-1
8.3 Cabin fire protection.....	IIIB-8-1
8.4 Evacuation.....	IIIB-8-2
8.5 Lighting and marking	IIIB-8-2
8.6 Survival equipment	IIIB-8-2
CHAPTER 9. Operating environment and human factors.....	IIIB-9-1
9.1 General	IIIB-9-1
9.2 Flight crew	IIIB-9-1
9.3 Ergonomics	IIIB-9-1
9.4 Operating environmental factors	IIIB-9-2
CHAPTER 10. Security.....	IIIB-10-1
10.1 Aeroplanes used for domestic commercial operations.....	IIIB-10-1
10.2 Least-risk bomb location.....	IIIB-10-1
10.3 Protection of the flight crew compartment	IIIB-10-1
10.4 Interior design	IIIB-10-1

	<i>Page</i>
PART IV. HELICOPTERS	IVA1-1
PART IVA. Helicopters for which application for certification was submitted on or after 22 March 1991 but before 13 December 2007	IVA-1-1
CHAPTER 1. General.....	IVA-1-1
1.1 Applicability.....	IVA-1-1
1.2 Limitations	IVA-1-1
1.3 Unsafe features and characteristics	IVA-1-2
1.4 Proof of compliance	IVA-1-2
CHAPTER 2. Flight.....	IVA-2-1
2.1 General	IVA-2-1
2.2 Performance	IVA-2-1
2.3 Flying qualities.....	IVA-2-3
CHAPTER 3. Structure.....	IVA-3-1
3.1 General	IVA-3-1
3.2 Airspeeds.....	IVA-3-1
3.3 Main rotor(s) rotational speed limits	IVA-3-2
3.4 Flight loads.....	IVA-3-2
3.5 Ground and water loads.....	IVA-3-2
3.6 Miscellaneous loads	IVA-3-2
3.7 Flutter, divergence and vibration.....	IVA-3-3
3.8 Fatigue strength.....	IVA-3-3
CHAPTER 4. Design and construction.....	IVA-4-1
4.1 General	IVA-4-1
CHAPTER 5. Engines	IVA-5-1
5.1 Scope	IVA-5-1
5.2 Design, construction and functioning	IVA-5-1
5.3 Declared ratings, conditions and limitations	IVA-5-1
5.4 Tests	IVA-5-1
CHAPTER 6. Rotor and power transmission systems and powerplant installation.....	IVA-6-1
6.1 General	IVA-6-1
6.2 Design, construction and functioning	IVA-6-1
6.3 Declared ratings, conditions and limitations	IVA-6-1
6.4 Tests	IVA-6-1
6.5 Compliance with engine and rotor and power transmission systems limitations	IVA-6-2
6.6 Control of engine rotation	IVA-6-2
6.7 Engine restarting	IVA-6-2
6.8 Arrangement and functioning.....	IVA-6-2
CHAPTER 7. Instruments and equipment.....	IVA-7-1
7.1 Required instruments and equipment	IVA-7-1
7.2 Installation.....	IVA-7-1
7.3 Safety and survival equipment	IVA-7-1
7.4 Navigation lights and anti-collision lights.....	IVA-7-1

	<i>Page</i>
CHAPTER 8. Electrical systems	IVA-8-1
CHAPTER 9. Operating limitations and information	IVA-9-1
9.1 General	IVA-9-1
9.2 Operating limitations	IVA-9-1
9.3 Operating information and procedures	IVA-9-2
9.4 Performance information	IVA-9-3
9.5 Helicopter flight manual	IVA-9-3
9.6 Markings and placards	IVA-9-3
PART IVB. Helicopters for which application for certification was submitted on or after 13 December 2007	IVB-1-1
CHAPTER 1. General	IVB-1-1
1.1 Applicability	IVB-1-1
1.2 Operating limitations	IVB-1-1
1.3 Unsafe features and characteristics	IVB-1-2
1.4 Proof of compliance	IVB-1-2
CHAPTER 2. Flight	IVB-2-1
2.1 General	IVB-2-1
2.2 Performance	IVB-2-1
2.3 Flying qualities	IVB-2-3
2.4 Stability and control	IVB-2-4
CHAPTER 3. Structure	IVB-3-1
3.1 General	IVB-3-1
3.2 Mass and mass distribution	IVB-3-1
3.3 Limit loads	IVB-3-1
3.4 Strength and deformation	IVB-3-1
3.5 Airspeeds	IVB-3-1
3.6 Main rotor(s) rotational speed limits	IVB-3-2
3.7 Loads	IVB-3-2
3.8 Ground and water loads	IVB-3-2
3.9 Miscellaneous loads	IVB-3-3
3.10 Fatigue strength	IVB-3-3
3.11 Special factors	IVB-3-3
CHAPTER 4. Design and construction	IVB-4-1
4.1 General	IVB-4-1
4.2 Systems design features	IVB-4-2
4.3 Flutter	IVB-4-2
4.4 Occupant accommodation features	IVB-4-2
4.5 Electrical bonding and protection against lightning and static electricity	IVB-4-3
4.6 Emergency landing provisions	IVB-4-3
4.7 Ground handling	IVB-4-3
CHAPTER 5. Rotors and powerplant	IVB-5-1
5.1 Engines	IVB-5-1
5.2 Rotors and powerplant installation	IVB-5-1

	<i>Page</i>
CHAPTER 6. Systems and equipment	IVB-6-1
6.1 General	IVB-6-1
6.2 Installation	IVB-6-2
6.3 Safety and survival equipment	IVB-6-2
6.4 Navigation lights and anti-collision lights	IVB-6-2
6.5 Electromagnetic interference protection	IVB-6-2
6.6 Ice protection	IVB-6-2
CHAPTER 7. Operating limitations and information	IVB-7-1
7.1 General	IVB-7-1
7.2 Operating limitations	IVB-7-1
7.3 Operating information and procedures	IVB-7-2
7.4 Performance information	IVB-7-3
7.5 Flight manual	IVB-7-3
7.6 Markings and placards	IVB-7-3
7.7 Continuing airworthiness — maintenance information	IVB-7-3
CHAPTER 8. Crashworthiness and cabin safety	IVB-8-1
8.1 General	IVB-8-1
8.2 Design emergency landing loads	IVB-8-1
8.3 Cabin fire protection	IVB-8-1
8.4 Evacuation	IVB-8-1
8.5 Lighting and marking	IVB-8-2
CHAPTER 9. Operating environment and human factors	IVB-9-1
9.1 General	IVB-9-1
9.2 Flight crew	IVB-9-1
9.3 Ergonomics	IVB-9-1
9.4 Operating environmental factors	IVB-9-2
PART V. SMALL AEROPLANES	VA-1-1
PART VA — AEROPLANES OVER 750 KG BUT NOT EXCEEDING 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 13 DECEMBER 2007 BUT BEFORE 7 MARCH 2021	VA-1-1
CHAPTER 1. General	VA-1-1
1.1 Applicability	VA-1-1
1.2 Operating limitations	VA-1-1
1.3 Unsafe features and characteristics	VA-1-2
1.4 Proof of compliance	VA-1-2
CHAPTER 2. Flight	VA-2-1
2.1 General	VA-2-1
2.2 Performance	VA-2-1
2.3 Flying qualities	VA-2-3
2.4 Stability and control	VA-2-4
CHAPTER 3. Structure	VA-3-1
3.1 General	VA-3-1
3.2 Mass and mass distribution	VA-3-1

	<i>Page</i>
3.3 Limit loads	VA-3-1
3.4 Strength and deformation	VA-3-1
3.5 Airspeeds	VA-3-1
3.6 Strength	VA-3-2
3.7 Survivability	VA-3-2
3.8 Structural durability	VA-3-2
3.9 Special factors	VA-3-3
CHAPTER 4. Design and construction	VA-4-1
4.1 General	VA-4-1
4.2 Systems design features	VA-4-2
4.3 Aeroelasticity	VA-4-3
4.4 Occupant accommodation features	VA-4-3
4.5 Electrical bonding and protection against lightning and static electricity	VA-4-3
4.6 Emergency landing provisions	VA-4-3
4.7 Ground handling	VA-4-4
CHAPTER 5. Powerplant	VA-5-1
5.1 Engines	VA-5-1
5.2 Propellers	VA-5-1
5.3 Powerplant installation	VA-5-1
CHAPTER 6. Systems and equipment	VA-6-1
6.1 General	VA-6-1
6.2 Installation	VA-6-2
6.3 Safety and survival equipment	VA-6-2
6.4 Navigation lights and anti-collision lights	VA-6-2
6.5 Electromagnetic interference protection	VA-6-2
6.6 Ice protection	VA-6-2
CHAPTER 7. Operating limitations and information	VA-7-1
7.1 General	VA-7-1
7.2 Operating limitations	VA-7-1
7.3 Operating information and procedures	VA-7-2
7.4 Performance information	VA-7-2
7.5 Flight manual	VA-7-3
7.6 Markings and placards	VA-7-3
7.7 Continuing airworthiness — maintenance information	VA-7-3
CHAPTER 8. Crashworthiness and cabin safety	VA-8-1
8.1 General	VA-8-1
8.2 Design emergency landing loads	VA-8-1
8.3 Cabin fire protection	VA-8-1
8.4 Evacuation	VA-8-2
8.5 Lighting and marking	VA-8-2
CHAPTER 9. Operating environment and human factors	VA-9-1
9.1 General	VA-9-1
9.2 Flight crew	VA-9-1
9.3 Ergonomics	VA-9-1
9.4 Operating environmental factors	VA-9-2

PART VB — AEROPLANES NOT EXCEEDING 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 7 MARCH 2021	VB-1-1
CHAPTER 1. General.....	VB-1-1
1.1 Applicability.....	VB-1-1
1.2 Operating limitations.....	VB-1-1
1.3 Unsafe features and characteristics	VB-1-2
1.4 Proof of compliance	VB-1-2
CHAPTER 2. Flight.....	VB-2-1
2.1 General	VB-2-1
2.2 Performance	VB-2-1
2.3 Flying qualities.....	VB-2-3
2.4 Stability and control	VB-2-4
CHAPTER 3. Structure.....	VB-3-1
3.1 General	VB-3-1
3.2 Mass and mass distribution	VB-3-1
3.3 Limit loads	VB-3-1
3.4 Strength and deformation	VB-3-1
3.5 Airspeeds.....	VB-3-1
3.6 Strength	VB-3-2
3.7 Survivability	VB-3-2
3.8 Structural durability.....	VB-3-2
3.9 Special factors	VB-3-3
CHAPTER 4. Design and construction.....	VB-4-1
4.1 General	VB-4-1
4.2 Systems design features.....	VB-4-2
4.3 Aeroelasticity	VB-4-3
4.4 Occupant accommodation features.....	VB-4-3
4.5 Electrical bonding and protection against lightning and static electricity	VB-4-3
4.6 Emergency landing provisions	VB-4-3
4.7 Ground handling.....	VB-4-4
CHAPTER 5. Powerplant.....	VB-5-1
5.1 Engines.....	VB-5-1
5.2 Propellers.....	VB-5-1
5.3 Powerplant installation	VB-5-1
CHAPTER 6. Systems and equipment	VB-6-1
6.1 General	VB-6-1
6.2 Installation.....	VB-6-2
6.3 Safety and survival equipment	VB-6-2
6.4 Navigation lights and anti-collision lights.....	VB-6-2
6.5 Electromagnetic interference protection.....	VB-6-2
6.6 Ice protection.....	VB-6-2

	<i>Page</i>
CHAPTER 7. Operating limitations and information.....	VB-7-1
7.1 General.....	VB-7-1
7.2 Operating limitations.....	VB-7-1
7.3 Operating information and procedures.....	VB-7-2
7.4 Performance information.....	VB-7-2
7.5 Flight manual.....	VB-7-3
7.6 Markings and placards.....	VB-7-3
7.7 Continuing airworthiness — maintenance information.....	VB-7-3
CHAPTER 8. Crashworthiness and cabin safety.....	VB-8-1
8.1 General.....	VB-8-1
8.2 Design emergency landing loads.....	VB-8-1
8.3 Cabin fire protection.....	VB-8-1
8.4 Evacuation.....	VB-8-1
8.5 Lighting and marking.....	VB-8-2
CHAPTER 9. Operating environment and human factors.....	VB-9-1
9.1 General.....	VB-9-1
9.2 Flight crew.....	VB-9-1
9.3 Ergonomics.....	VB-9-1
9.4 Operating environmental factors.....	VB-9-2
PART VI. ENGINES.....	VI-1-1
CHAPTER 1. General.....	VI-1-1
1.1 Applicability.....	VI-1-1
1.2 Engine installation and interfaces.....	VI-1-1
1.3 Declared ratings, conditions and limitations.....	VI-1-1
1.4 Continuing airworthiness — maintenance information.....	VI-1-1
CHAPTER 2. Design and construction.....	VI-2-1
2.1 Functioning.....	VI-2-1
2.2 Failure analysis.....	VI-2-1
2.3 Materials and manufacturing methods.....	VI-2-1
2.4 Integrity.....	VI-2-1
CHAPTER 3. Tests.....	VI-3-1
PART VII. PROPELLERS.....	VII-1-1
CHAPTER 1. General.....	VII-1-1
1.1 Applicability.....	VII-1-1
1.2 Declared ratings, conditions and limitations.....	VII-1-1
1.3 Continuing airworthiness — maintenance information.....	VII-1-1
CHAPTER 2. Design and construction.....	VII-2-1
2.1 Functioning.....	VII-2-1
2.2 Failure analysis.....	VII-2-1
2.3 Materials and manufacturing methods.....	VII-2-1
2.4 Pitch control and indication.....	VII-2-1

	<i>Page</i>
CHAPTER 3. Tests and inspection.....	VII-3-1
3.1 Blade retention test.....	VII-3-1
3.2 Operational and endurance tests.....	VII-3-1
 PART VIII. REMOTELY PILOTED AEROPLANES	 VIII-1-1
CHAPTER 1. General.....	VIII-1-1
1.1 Applicability.....	VIII-1-1
1.2 Operating limitations.....	VIII-1-1
1.3 Unsafe features and characteristics	VIII-1-2
1.4 Proof of compliance	VIII-1-2
CHAPTER 2. Flight.....	VIII-2-1
2.1 General	VIII-2-1
2.2 Performance	VIII-2-1
2.3 Flying qualities.....	VIII-2-3
2.4 Stability and control	VIII-2-4
CHAPTER 3. Structure	VIII-3-1
3.1 General	VIII-3-1
3.2 Mass and mass distribution	VIII-3-1
3.3 Limit loads	VIII-3-1
3.4 Strength and deformation	VIII-3-1
3.5 Airspeeds.....	VIII-3-1
3.6 Strength	VIII-3-2
3.7 Structural durability.....	VIII-3-2
3.8 Special factors	VIII-3-2
CHAPTER 4. Design and construction	VIII-4-1
4.1 General	VIII-4-1
4.2 Systems design features.....	VIII-4-2
4.3 Aeroelasticity	VIII-4-2
4.4 Electrical bonding and protection against lightning and static electricity	VIII-4-3
4.5 Ground handling.....	VIII-4-3
CHAPTER 5. POWERPLANT	VIII-5-1
5.1 Engines.....	VIII-5-1
5.2 Propellers.....	VIII-5-1
5.3 Powerplant installation	VIII-5-1
CHAPTER 6. Systems and equipment	VIII-6-1
6.1 General	VIII-6-1
6.2 Installation.....	VIII-6-2
6.3 Navigation lights and anti-collision lights.....	VIII-6-2
6.4 Electromagnetic interference protection.....	VIII-6-2
6.5 Ice protection.....	VIII-6-2

	<i>Page</i>
CHAPTER 7. Operating limitations and information.....	VIII-7-1
7.1 General.....	VIII-7-1
7.2 Operating limitations.....	VIII-7-1
7.3 Operating information and procedures.....	VIII-7-2
7.4 Performance information.....	VIII-7-2
7.5 Remotely piloted aeroplane flight manual.....	VIII-7-3
7.6 Markings and placards.....	VIII-7-3
7.7 Continuing airworthiness – maintenance information.....	VIII-7-3
7.8 C2 Link information.....	VIII-7-4
CHAPTER 8. Reserved (to be developed).....	VIII-8-1
CHAPTER 9. Operating environment and human factors.....	VIII-9-1
9.1 General.....	VIII-9-1
9.2 Remote flight crew.....	VIII-9-1
9.3 Ergonomics.....	VIII-9-1
CHAPTER 10. Remote pilot station integration.....	VIII-10-1
10.1 General.....	VIII-10-1
10.2 Integration.....	VIII-10-1
10.3 Controls and information.....	VIII-10-1
10.4 C2 Link.....	VIII-10-2
10.5 Flight manual.....	VIII-10-2
CHAPTER 11. Remotely piloted aeroplane unique considerations.....	VIII-11-1
11.1 General.....	VIII-11-1
11.2 Transportation, storage and assembly.....	VIII-11-1
11.3 Launch methods.....	VIII-11-1
11.4 Recovery methods.....	VIII-11-1
11.5 Emergency recovery.....	VIII-11-2
11.6 Automatic taxi, take-off and landing.....	VIII-11-2
11.7 C2 Link.....	VIII-11-2
11.8 Detect and avoid, and other equipment.....	VIII-11-3
11.9 Mission equipment.....	VIII-11-3
11.10 Security.....	VIII-11-3
PART IX. REMOTELY PILOT HELICOPTERS (RPH).....	IX-1-1
CHAPTER 1. General.....	IX-1-1
1.1 Applicability.....	IX-1-1
1.2 Operating limitations.....	IX-1-1
1.3 Unsafe features and characteristics.....	IX-1-2
1.4 Proof of compliance.....	IX-1-2
CHAPTER 2. Flight.....	IX-2-1
2.1 General.....	IX-2-1
2.2 Performance.....	IX-2-1
2.3 Flying qualities.....	IX-2-3
2.4 Stability and control.....	IX-2-4

	<i>Page</i>
CHAPTER 3. Structure	IX-3-1
3.1 General	IX-3-1
3.2 Mass and mass distribution	IX-3-1
3.3 Limit loads	IX-3-1
3.4 Strength and deformation	IX-3-1
3.5 Airspeeds.....	IX-3-1
3.6 Main rotor(s) rotational speed limits	IX-3-2
3.7 Loads	IX-3-2
3.8 Ground and water loads.....	IX-3-2
3.9 Miscellaneous loads	IX-3-3
3.10 Fatigue strength	IX-3-3
3.11 Special factors	IX-3-3
CHAPTER 4. Design and construction	IX-4-1
4.1 General	IX-4-1
4.2 Systems design features.....	IX-4-2
4.3 Flutter	IX-4-2
4.4 Electrical bonding and protection against lightning and static electricity	IX-4-3
4.5 Ground handling.....	IX-4-3
CHAPTER 5. ROTORS AND POWERPLANT	IX-5-1
5.1 Engines.....	IX-5-1
5.2 Rotors and powerplant installation	IX-5-1
CHAPTER 6. Systems and equipment	IX-6-1
6.1 General	IX-6-1
6.2 Installation.....	IX-6-2
6.3 Navigation lights and anti-collision lights.....	IX-6-2
6.4 Electromagnetic interference protection.....	IX-6-2
6.5 Ice protection.....	IX-6-2
CHAPTER 7. Operating limitations and information.....	IX-7-1
7.1 General	IX-7-1
7.2 Operating limitations.....	IX-7-1
7.3 Operating information and procedures.....	IX-7-2
7.4 Performance information.....	IX-7-2
7.5 Remotely piloted helicopter flight manual	IX-7-3
7.6 Markings and placards.....	IX-7-3
7.7 Continuing airworthiness – maintenance information.....	IX-7-3
7.8 C2 Link information.....	IX-7-4
CHAPTER 8. Reserved (to be developed).....	IX-8-1
CHAPTER 9. Operating environment and human factors.....	IX-9-1
9.1 General	IX-9-1
9.2 Remote flight crew	IX-9-1
9.3 Ergonomics	IX-9-1

	<i>Page</i>
CHAPTER 10. Remote pilot station integration.....	IX-10-1
10.1 General.....	IX-10-1
10.2 Integration	IX-10-1
10.3 Controls and information.....	IX-10-1
10.4 C2 Link.....	IX-10-2
10.5 Flight manual.....	IX-10-3
CHAPTER 11. Remotely piloted helicopter unique considerations	IX-11-1
11.1 General.....	IX-11-1
11.2 Transportation, storage and assembly	IX-11-1
11.3 Launch methods	IX-11-1
11.4 Recovery methods.....	IX-11-1
11.5 Emergency recovery.....	IX-11-2
11.6 Automatic taxi, take-off and landing.....	IX-11-2
11.7 C2 Link.....	IX-11-2
11.8 Detect and avoid, and other equipment	IX-11-3
11.9 Mission equipment	IX-11-3
11.10 Security	IX-11-3
PART X. REMOTE PILOT STATION (RPS).....	X-1-1
CHAPTER 1. General.....	X-1-1
1.1 Applicability.....	X-1-1
1.2 RPS interfaces and integration	X-1-1
1.3 Continuing airworthiness – maintenance information.....	X-1-1
CHAPTER 2. Design and construction	X-2-1
2.1 Fire, smoke and toxic gas protection.....	X-2-1
2.2 Functioning	X-2-1
2.3 Failure analysis.....	X-2-1
2.4 Materials and manufacturing methods	X-2-1
2.5 Electrical bonding and protection against lightning and static electricity	X-2-1
2.6 Handling of the remote pilot station.....	X-2-1
CHAPTER 3. Systems and equipment	X-3-1
3.1 General.....	X-3-1
3.2 Electrical power supply	X-3-1
3.3 Electromagnetic interference protection.....	X-3-1
3.4 Development assurance of complex electronic hardware and system software	X-3-1
CHAPTER 4. Remote flight crew compartment safety	X-4-1
4.1 Fire protection	X-4-1
4.2 Evacuation.....	X-4-1
CHAPTER 5. Operating environment and human factors.....	X-5-1
5.1 General.....	X-5-1
5.2 Remote flight crew	X-5-1
5.3 Ergonomics	X-5-1
5.4 Operating environmental factors	X-5-2

	Page
CHAPTER 6. Operating limitations and information.....	X-6-1
6.1 General	X-6-1
6.2 Operating information and procedures.....	X-6-1
6.3 RPS operating manual	X-6-1
CHAPTER 7. Security	X-7-1
7.1 Remote pilot station access control	X-7-1
7.2 Systems security	X-7-1
APPENDIX. Approved maintenance organization (AMO) certificate	APP 1-1
1. Purpose and scope	APP 1-1
2. AMO template.....	APP 1-2

FOREWORD

Historical background

Standards and Recommended Practices for the Airworthiness of Aircraft were adopted by the Council on 1 March 1949 pursuant to the provisions of Article 37 of the Convention on International Civil Aviation (Chicago 1944) and designated as Annex 8 to the Convention.

The Annex contained, in Part II, general airworthiness procedures applicable to all aircraft and in Part III, minimum airworthiness characteristics for aeroplanes provided, or to be provided, with certificates of airworthiness classifying them in an established ICAO category. Part I contained definitions.

At its fourth session, the Airworthiness Division collaborating with the Operations Division made recommendations concerning the use of a performance code as an alternative to the one contained in the Annex, in which the climb values had the status of Recommended Practices. Further, the Airworthiness Division made recommendations concerning certain aspects of the certification in ICAO categories. As a result of those recommendations, the Council approved the incorporation of the alternative performance code as Attachment A but stated its belief that since agreement had not yet been reached on Standards covering performance, there existed no basis for certification in ICAO Category A. It urged the Contracting States to refrain from such certification pending the becoming effective of Standards on performance or until such time as the Council decides on the basic policy on airworthiness.

The Assembly at its seventh session (June 1953) endorsed the action already taken by the Council and the Air Navigation Commission to initiate a fundamental study of ICAO policy on international airworthiness and directed the Council to complete the study as rapidly as practicable.

In pursuing such study, the Air Navigation Commission was helped by an international body of experts designated as the “Airworthiness Panel”, which contributed to the preparation of the work of the Third Air Navigation Conference.

As a result of these studies, a revised policy on international airworthiness was developed and it was approved by the Council in 1956. According to this policy, the principle of certification in an ICAO Category was abandoned. Instead, Annex 8 included broad Standards which defined, for application by the competent national authorities, the complete minimum international basis for the recognition by States of certificates of airworthiness for the purpose of the flight of aircraft of other States into or over their territories, thereby achieving, among other purposes, protection of other aircraft, third persons and property. It was considered that this met the obligation of the Organization under Article 37 of the Convention to adopt International Standards of airworthiness.

It was recognized that the ICAO Standards of airworthiness would not replace national regulations and that national codes of airworthiness containing the full scope and extent of detail considered necessary by individual States would be necessary as the basis for the certification of individual aircraft. Each State would establish its own comprehensive and detailed code of airworthiness or would select a comprehensive and detailed code established by another Contracting State. The level of airworthiness defined by this code would be indicated by the Standards, supplemented, if necessary, by Acceptable Means of Compliance.

In application of those principles, the Annex was declared as constituting the minimum standards for the purpose of Article 33. It was also recognized that the Annex might, at the time of adoption, not include technical Standards for all classes of aircraft or even for all classes of aeroplanes, if the Council felt that no technical Standards were required at that time to render Article 33 operative. Furthermore, adoption or amendment of the Annex declared to be complete for the purpose of Article 33

did not constitute the end of ICAO's work in the airworthiness field, as there was a need to continue international collaboration in airworthiness matters.

A revised text for Annex 8 consistent with the above principles was prepared on the basis of the recommendations made by the Third Air Navigation Conference (Montréal, September–October 1956). Part III of the Annex was limited to broad Standards stating the objectives rather than the methods of realizing those objectives. However, to indicate by examples the level of airworthiness intended by some of the broad Standards, specifications of a more detailed and quantitative nature were included under the title “Acceptable Means of Compliance”. These specifications were intended to assist the Contracting States in the establishment and application of comprehensive and detailed national airworthiness codes.

To adopt a code giving an appreciably lower level of airworthiness than that given in an Acceptable Means of Compliance was considered to be a violation of the Standard supplemented by that Acceptable Means of Compliance.

The revised text for Annex 8 was included in the Fourth Edition of the Annex, which superseded the First, Second and Third Editions.

Another recommendation of the Third Air Navigation Conference led to the establishment by the Council in 1957 of the Airworthiness Committee, consisting of airworthiness experts with broad experience and selected from those Contracting States and International Organizations willing to contribute.

Present policy on international airworthiness. There had been some concern about the slow progress that had been made over the years with respect to developing supplementary airworthiness specifications in the form of Acceptable Means of Compliance. It was noted that the majority of the Acceptable Means of Compliance in Annexes 6 and 8 had been developed in 1957 and were therefore applicable to only those aeroplane types operating at that time. No effort had been made to update the specifications in these Acceptable Means of Compliance nor had there been any recommendations from the Airworthiness Committee for upgrading of any of the Provisional Acceptable Means of Compliance, which had been developed as potential material for full-fledged Acceptable Means of Compliance. The Air Navigation Commission therefore requested the Airworthiness Committee to review the progress made by it since its inception with a view to determining whether or not desired results had been achieved and to recommend any changes to improve the development of detailed airworthiness specifications.

The Airworthiness Committee at its Ninth Meeting (Montréal, November/December 1970) made a detailed study of the problems and recommended that the concept of developing airworthiness specifications in the form of Acceptable Means of Compliance and Provisional Acceptable Means of Compliance be abandoned and a provision be made for an airworthiness technical manual to be prepared and published by ICAO to include guidance material intended to facilitate the development and uniformity of national airworthiness codes by Contracting States.

The Air Navigation Commission reviewed the recommendations of the Airworthiness Committee in the light of the history of the development of the airworthiness policy approved by the Council in 1956. It came to the conclusion that the basic objectives and principles on which the ICAO airworthiness policy had been based were sound and did not require any significant change. It was also concluded that the main reason for the slow progress in the development of airworthiness specifications in the form of Acceptable Means of Compliance and Provisional Acceptable Means of Compliance was the degree of mandatory status to the former implied by the following statement included in the Forewords of the Fourth and Fifth Editions of Annex 8:

“To adopt a code giving an appreciably lower level of airworthiness than that given in an Acceptable Means of Compliance would be a violation of the Standard supplemented by that Acceptable Means of Compliance.”

Several approaches were examined by the Air Navigation Commission to eliminate this difficulty. Finally, it came to the conclusion that the idea of developing airworthiness specifications in the form of Acceptable Means of Compliance and Provisional Acceptable Means of Compliance should be abandoned and ICAO should declare that the States' obligations, for the purpose of Article 33 of the Convention, shall be met by their compliance with the broad Standards in Annex 8 supplemented, as necessary, by airworthiness technical guidance material, devoid of all mandatory implications or obligations. Also, the

requirement that each Contracting State should either establish its own comprehensive and detailed code of airworthiness or select a comprehensive and detailed code established by another Contracting State should be retained.

The Council on 15 March 1972 approved the above approach to form the basis for the present policy of ICAO in the field of airworthiness. According to this policy:

- a) the objective of international airworthiness Standards is to define, for application by the competent national authorities, the minimum level of airworthiness constituting the international basis for the recognition by States, under Article 33 of the Convention, of certificates of airworthiness for the purpose of the flight of aircraft of other States into or over their territories, thereby achieving, among other things, protection of other aircraft, third parties and property;
- b) the Standards developed to meet the objective stated in a) are considered by the Council as meeting, in the necessary scope and detail, the obligations of the Organization under Article 37 of the Convention to adopt International Standards of airworthiness;
- c) international airworthiness Standards adopted by the Council are recognized as being the complete international code necessary to bring into force and effect the rights and obligations which arise under Article 33 of the Convention;
- d) the technical airworthiness Standards in Annex 8 shall be presented as broad specifications stating the objectives rather than the means of realizing these objectives; ICAO recognizes that national codes of airworthiness containing the full scope and extent of detail considered necessary by individual States are required as the basis for the certification by individual States of airworthiness of each aircraft;
- e) to assist States in applying the Standards of Annex 8 and in developing their own comprehensive national codes in a uniform manner, detailed guidance material shall be developed and published expeditiously in the working languages of the Organization.

The Council also approved the issuance of the airworthiness guidance material under the title of *Airworthiness Technical Manual*. It was understood that the guidance material will, before issuance, be examined by the Air Navigation Commission. It will, however, have no formal status and its main purpose would be to provide guidance to Contracting States in developing the appropriate airworthiness requirements mentioned in 3.2.2 of Part II of the Annex.

A text for Annex 8 consistent with the policy on international airworthiness, approved by the Council on 15 March 1972, was developed by the Air Navigation Commission.

Table A shows the origin of amendments together with a list of the principal subjects involved and the dates on which the Annex and the amendments were adopted by the Council, when they became effective and when they became applicable.

On 6 June 2000, the Air Navigation Commission reviewed the recommendation of the Continuing Airworthiness Panel and the Airworthiness Study Group, in light of the introduction of the type certification process, to introduce the Type Certificate concept. It came to the conclusion that this internationally used and known certificate was already introduced in the *Airworthiness Technical Manual* (Doc 9051) and that its introduction complements the type certification process, making the text of Annex 8 consistent with its international airworthiness use.

It was further noted that the State of Registry, which is in charge of the issuance or validation of Certificates of Airworthiness by virtue of Article 31 of the Convention, and the State of Design may be different States, with separate functions and duties, and two independent responsibilities. Accordingly, the requirements governing the issuance of Type Certificates in accordance with applicable provisions of Annex 8 are not part of “the minimum standards” which govern the issuance or validation of Certificates of Airworthiness, and lead to the recognition of their validity pursuant to Article 33 of the Convention.

On 7 October 2003, the Air Navigation Commission reviewed the recommendations of the Airworthiness Panel and in light of the observation that small aircraft of a maximum certificated take-off mass greater than 750 kg but not exceeding 5 700 kg are more engaged in international air navigation, it agreed to include in the Annex, for the first time, airworthiness Standards for small aeroplanes, making the text of Annex 8 consistent with its international use.

On 21 November 2013, the Air Navigation Commission reviewed the recommendations of the Airworthiness Panel and in light of the observation that small aircraft of a maximum certificated take-off mass below 750 kg are more engaged in international air navigation, agreed to amend, with an applicability of 7 March 2021, the Annex airworthiness Standards for small aeroplanes, removing the lower take-off mass limit of Annex 8 consistent with its international use.

Applicability

The applicability of the Standards is indicated in 1.1, 2.1, 3.1, 4.1 and 6.1 of Part II, in 1.1 of Parts IIIA, IIIB, IVA, IVB, VA, VB, VI and VII. The dates were established so as to take account of the provisions of Article 41 of the Convention. However, the Council has recommended that, as far as practicable, earlier dates be applied.

Related Standards of Annex 6, Part I. Chapter 5 of Annex 6, Part I, dealing with aeroplane performance operating limitations, contains Standards that are complementary to the airworthiness Standards of Annex 8. Both state broad objectives. The Standards of Annex 6, Part I, Chapter 5, are supplemented by guidance material in the form of green page attachments which indicate by examples the level of performance intended by the Standards.

The Council has urged Contracting States not to impose on visiting aeroplanes operational requirements other than those established by the State of Registry, provided those requirements are not lower than the Standards of Annex 6, Part I, Chapter 5 as amended by Amendment 2, and 2.2 of Parts IIIA, IIIB, IVB, VA and VB of Annex 8.

Action by Contracting States

Notification of differences. The attention of Contracting States is drawn to the obligation imposed by Article 38 of the Convention by which Contracting States are required to notify the Organization of any differences between their national regulations and practices and the International Standards contained in this Annex and any amendments thereto. Contracting States are invited to keep the Organization currently informed of any differences which may subsequently occur or of the withdrawal of any differences previously notified. A specific request for notification of differences will be sent to Contracting States immediately after the adoption of each amendment to this Annex.

Use of the text of the Annex in national regulations. The Council, on 13 April 1948, adopted a resolution inviting the attention of Contracting States to the desirability of using in their own national regulations, as far as practicable, the precise language of those ICAO Standards which are of a regulatory character and also of indicating departures from the Standards, including any additional regulations that are important for the safety or regularity of air navigation. Wherever possible, the provisions of Part II of this Annex have been written in such a way as would facilitate incorporation, without major textual changes, into national legislation. The provisions of Parts IIIA and IIIB of this Annex, on the other hand, are applicable to aeroplanes through the medium of national codes more comprehensive and detailed than the Standards, so that the Council Resolution of 13 April 1948 does not apply to Parts IIIA and IIIB.

Information concerning the national codes establishing compliance with the Annex. States are invited to notify the Organization either of the establishment or of the selection of the comprehensive and appropriate airworthiness requirements mentioned in 3.2.2 of Part II. States that establish such codes are invited to forward a copy of each with its successive amendments, and any appropriate interpretation document concerning them. States that select codes of other Contracting States to comply with 3.2.2 of Part II are invited to indicate the codes that they intend to use.

Use of the guidance material in the Airworthiness Manual (Doc 9760). Contracting States are invited to note that the material in the *Airworthiness Manual* is intended to guide them in the development of their detailed and comprehensive national codes with a view to introducing uniformity in those national codes. The material has no mandatory status and Contracting States are quite free to differ from it either in detail or in method. States are also not required to notify any differences that may exist between their detailed national regulations and practices and the relevant material in the *Airworthiness Manual*.

Status of Annex components

An Annex is made up of the following component parts, not all of which, however, are necessarily found in every Annex; they have the status indicated.

1.— *Material comprising the Annex proper*

- a) *Standards and Recommended Practices* adopted by the Council under the provisions of the Convention. They are defined as follows:

Standard: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38.

Recommended Practice: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Convention.

- b) *Appendices* comprising material grouped separately for convenience but forming part of the Standards and Recommended Practices adopted by the Council.
- c) *Definitions* of terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.
- d) *Tables and Figures*, which add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

2.— *Material approved by the Council for publication in association with the Standards and Recommended Practices*

- a) *Forewords* comprising historical and explanatory material based on the action of the Council and including an explanation of the obligations of States with regard to the application of the Standards and Recommended Practices ensuing from the Convention and the Resolution of Adoption.
- b) *Introductions* comprising explanatory material introduced at the beginning of parts, chapters or sections of the Annex to assist in the understanding of the application of the text.
- c) *Notes* included in the text, where appropriate, to give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices.
- d) *Attachments* comprising material supplementary to the Standards and Recommended Practices or included as a guide to their application.

Selection of language

This Annex has been adopted in six languages — English, Arabic, Chinese, French, Russian and Spanish. Each Contracting State is requested to select one of those texts for the purpose of national implementation and for other effects provided for in the Convention, either through direct use or through translation into its own national language, and to notify the Organization accordingly.

Editorial practice

The following practice has been adhered to in order to indicate at a glance the status of each statement: *Standards* have been printed in light face roman; *Recommended Practices* have been printed in light face italics, the status being indicated by the prefix **Recommendation**; *Notes* have been printed in light face italics, the status being indicated by the prefix *Note*.

The following editorial practice has been followed in the writing of specifications: for Standards the operative verb “shall” is used, and for Recommended Practices the operative verb “should” is used.

The units of measurement used in this document are in accordance with the International System of Units (SI) as specified in Annex 5. Where Annex 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted, it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

In order to maintain a comprehensive edition of this Annex, the latest amendments have been consolidated in a new edition of the Annex. In so doing, provisions with particular applicability dates have been adjusted editorially, as appropriate.

Table A. Amendments to Annex 8

<i>Amendment(s)</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
1st Edition	First and Second Sessions of the Airworthiness Division (1946 and 1947)	—	1 March 1949 1 August 1949 1 September 1949
1 to 63 (2nd Edition)	Third and Fourth Sessions of the Airworthiness Division (1949 and 1951)	—	26 January 1950 1 January 1951 1 February 1951
64 to 83	Third and Fourth Sessions of the Airworthiness Division (1949 and 1951)	—	13 November 1951 15 April 1952 15 May 1952
84 (3rd Edition)	Fourth Session of the Airworthiness Division (1951)	Incorporation of an alternative performance code as an attachment.	2 December 1952 1 May 1953 1 June 1953

<i>Amendment(s)</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
85 (4th Edition)	Third Air Navigation Conference (1956)	Revised text consistent with new policy on international airworthiness approved by the Council; Part III of Annex 8 limited to broad Standards stating objectives with more detailed examples of the level of airworthiness intended being included as “Acceptable Means of Compliance”.	13 June 1957 1 October 1957 1 December 1957 or 13 June 1960 depending on date of application for certification for the aeroplane
86 (5th Edition)	Fourth Meeting of the Airworthiness Committee	Amendment of Standards for navigation lights and introduction of requirements for anti-collision lights.	13 December 1961 1 April 1962 13 December 1964
87	Proposal of the United States Committee on the Extension to the Standard Atmosphere	Redefinition of the standard atmosphere.	12 November 1963 1 April 1964 12 November 1966
88	Consequence of Amendment 2 to Annex 7	Revised definition of aircraft; revision of 2.2.3.2 b) of Part III to cater for 3-engined aeroplanes.	8 November 1967 8 March 1968 22 August 1968
89	Consequence of the adoption of Annex 16	Introduction of a reference to noise certification Standards in Annex 16 and Annex 6.	2 April 1971 2 August 1971 6 January 1972
90	Ninth Meeting of the Airworthiness Committee (1970)	Deletion of two Acceptable Means of Compliance for aeroplane performance from the 5th Edition.	10 December 1971 10 April 1972 7 December 1972
91 (6th Edition)	Council action following Ninth Airworthiness Committee	New text consistent with revised policy on airworthiness; deletion of Acceptable Means of Compliance; guidance material henceforth to appear in the <i>Airworthiness Technical Manual</i> .	16 March 1973 30 July 1973 23 May 1974
92	Tenth Meeting of the Airworthiness Committee	Introduction of provisions relating to the transmission of continuing airworthiness information; addition of a note concerning lease, charter and interchange of aircraft.	3 April 1974 3 August 1974 27 February 1975
93	Study by the Air Navigation Commission	Revision of the provisions relating to exterior lights to align with new provisions in Annexes 2 and 6.	22 March 1982 22 July 1982 22 March 1985
94 (7th Edition)	Fourteenth Meeting of the Airworthiness Committee (1981)	Introduction of a new provision relating to information on faults, malfunctions, defects and other occurrences and to include SI units in conformity with Annex 5 provisions.	6 December 1982 6 April 1983 24 November 1983
95 (8th Edition)	Proposal of States; Studies by the Council and Air Navigation Commission; Third Meeting of the HELIOPS Panel	Extension of the standard atmosphere; strengthened provisions relating to crash survival and fire protection; introduction of airworthiness provisions for helicopters.	22 March 1988 31 July 1988 22 March 1991
96	Third Meeting of the Continuing Airworthiness Panel (CAP/3)	Introduction of responsibilities of State of Design and definition thereof; revision of responsibilities of parties involved in transfer of information relating to continuing airworthiness; addition of new requirements concerning provision of maintenance information.	22 March 1994 25 July 1994 10 November 1994

<i>Amendment(s)</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
97	Secretariat study, assisted by ISAD Study Group	Changes to design features; identification of a least-risk bomb location and addition of a new Chapter 11 containing security-related provisions.	12 March 1997 21 July 1997 6 November 1997; 12 March 2000
98 (9th Edition)	Fifth Meeting of the Continuing Airworthiness Panel (CAP/5); Air Navigation Commission studies	a) New definitions of Human Factors principles, human performance, maintenance, repair, Type Certificate; b) restructuring of Part II into four chapters: Type Certificate, Production, Certificate of Airworthiness and Continuing Airworthiness; c) revision of the provisions in Part II to allow the introduction of type certificate concept and production control; d) restructuring of Part III into Part IIIA (same provisions as those contained in the current Part III of Annex 8, Eighth Edition, including Amendment 97, except for applicability clauses and cross-references) and Part IIIB (new); e) revision of provisions (old Part III) in Part IIIB pertaining to performance, stability, control, and cargo compartment fire protection, and new provisions pertaining to cabin environment, electrical bonding, emergency landing, electromagnetic interference, ice protection and systems software; f) the provision of translation into English for Certificates of Airworthiness; and g) new provisions concerning Human Factors.	2 March 2001 16 July 2001 2 March 2004
99	Air Navigation Commission studies	a) Revision of the title of Part IIIA; b) revision of applicability provisions to reflect the introduction of Recommended Practices in Annex 8 and to change the applicability of Parts IIIA and IIIB to make some provisions applicable only to large aeroplanes of a specific maximum certificated take-off mass and passenger seating capacity; c) revision of design, construction and security provisions in Annex 8, Parts IIIA and IIIB with regard to aeroplanes of a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating capacity greater than 60 and for which an application for certification was submitted on or after 12 March 2000 and 2 March 2004, respectively, and introduction of Recommended Practices for aircraft of a maximum certificated take-off mass between 5 700 kg and 45 500 kg; d) introduction of Recommended Practices regarding security provisions for application to aeroplanes engaged in domestic commercial operations; e) introduction of security provisions for all aeroplanes which are required by Annex 6 to have an approved flight crew compartment door providing additional protection to also require additional protection of the bulkheads, floors and ceilings; and f) addition of provisions in Part IIIB for operating information and procedures to require the identification of a least-risk bomb location.	20 May 2003 13 October 2003 20 May 2006

<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

<i>Amendment(s)</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
105-A	Airworthiness Panel (AIRP); Safety and Information Protection Task Force (SIP TF); First Meeting of the Safety Management Panel (SMP/1)	Provisions to recognize organizations responsible for the type design and manufacture of engines and propellers to support the extension of SMS applicability to these organizations	2 March 2016 11 July 2016 10 November 2016
105-B	Friction Task Force (FTF) of the Aerodrome Design and Operations Panel (ADOP)	Use of a global reporting format for assessing and reporting runway surface conditions	2 March 2016 11 July 2016 5 November 2020
106 (12th Edition)	Third and fourth meetings of the Airworthiness Panel (AIRP/3 and 4); Assembly Resolution A39-13	Approval and global recognition of approved maintenance organizations; design Standards; continuing airworthiness provisions; halon replacement in cargo compartment fire suppression systems; and electronic aircraft maintenance records.	7 March 2018 16 July 2018 8 November 2018 7 March 2021
107	Eighth Meeting of the 220th Session of the ICAO Council	Postponement of the applicability date of Amendment 105-B: Amendment concerning the use of an enhanced global reporting format for assessing and reporting runway surface conditions.	19 June 2020 30 September 2020 4 November 2021
108	Eleventh meeting of the Remotely Piloted Aircraft Systems Panel (RPASP/11)	Requirements for remotely piloted aeroplanes, remotely piloted helicopters and remote pilot stations (RPS); C2 Links; and a template for the RPA certificate of airworthiness.	1 March 2021 12 July 2021 26 November 2026
109 (13 th Edition)	Sixth and seventh meetings of the Airworthiness Panel (AIRP/6 and AIRP/7); and Cross-border Transferability Task Force (XBT-TF)	a) State responsibilities in case of third-party modifications and repairs, and cargo compartment fire suppression; and b) maintenance of aircraft as it relates to the registration, deregistration and transfer of registration of aircraft process.	7 March 2022 18 July 2022 3 November 2022

INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

PART I. DEFINITIONS

When the following terms are used in the Standards for the Airworthiness of Aircraft, they have the following meanings:

Aeroplane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Note.^{††}— When the word aircraft is used, it includes the remotely piloted aircraft.

Airworthy.[†] The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

Airworthy.^{††} The status of an aircraft, remote pilot station, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

Anticipated operating conditions.[†] Those conditions which are known from experience or which can be reasonably envisaged to occur during the operational life of the aircraft taking into account the operations for which the aircraft is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, to the configuration of terrain, to the functioning of the aircraft, to the efficiency of personnel and to all the factors affecting safety in flight. Anticipated operating conditions do not include:

- a) those extremes which can be effectively avoided by means of operating procedures; and
- b) those extremes which occur so infrequently that to require the Standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical.

Anticipated operating conditions.^{††} Those conditions which are known from experience or which can be reasonably envisaged to occur during the operational life of the aircraft and remote pilot station taking into account the operations for which the aircraft or remote pilot station is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, to the configuration of terrain, to the functioning of the aircraft and remote pilot station, to the efficiency of personnel and to all the factors affecting safety in flight. Anticipated operating conditions do not include:

- a) those extremes which can be effectively avoided by means of operating procedures; and
- b) those extremes which occur so infrequently that to require the Standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical.

[†] Applicable until 25 November 2026.

^{††} Applicable as of 26 November 2026.

Appropriate airworthiness requirements.[†] The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.

Appropriate airworthiness requirements.^{††} The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, remote pilot station, engine or propeller under consideration.

Approved. Accepted by a Contracting State as suitable for a particular purpose.

C2 Link.^{††} The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

C2 Link interruption.^{††} Any temporary situation where the C2 Link is unavailable, discontinuous, introduces too much delay, or has inadequate integrity; but where the lost C2 Link decision time has not been exceeded.

C2 Link specification.^{††} The minimum performance to be achieved by the C2 Link equipment in conformity with the applicable airworthiness system design requirements.

Category A. With respect to helicopters, means a multi-engine helicopter designed with engine and system isolation features specified in Part IVB of Annex 8 and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

Category B. With respect to helicopters, means a single-engine or multi-engine helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed.

Configuration (as applied to the aeroplane). A particular combination of the positions of the moveable elements, such as wing flaps and landing gear, etc., that affect the aerodynamic characteristics of the aeroplane.

Continuing airworthiness.[†] The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

Continuing airworthiness.^{††} The set of processes by which an aircraft, remote pilot station, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

Critical engine(s). Any engine whose failure gives the most adverse effect on the aircraft characteristics relative to the case under consideration.

Note.— On some aircraft there may be more than one equally critical engine. In this case, the expression “the critical engine” means one of those critical engines.

Design landing mass. The maximum mass of the aircraft at which, for structural design purposes, it is assumed that it will be planned to land.

Design take-off mass. The maximum mass at which the aircraft, for structural design purposes, is assumed to be planned to be at the start of the take-off run.

Design taxiing mass. The maximum mass of the aircraft at which structural provision is made for load liable to occur during use of the aircraft on the ground prior to the start of take-off.

[†] Applicable until 25 November 2026.

^{††} Applicable as of 26 November 2026.

Detect and avoid.^{††} The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

Discrete source damage. Structural damage of the aeroplane that is likely to result from: impact with a bird, uncontained fan blade failure, uncontained engine failure, uncontained high-energy rotating machinery failure or similar causes.

Engine. A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable).

Factor of safety. A design factor used to provide for the possibility of loads greater than those assumed, and for uncertainties in design and fabrication.

Final approach and take-off area (FATO). A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by performance Class 1 helicopters, the defined area includes the rejected take-off area available.

Fireproof. The capability to withstand the application of heat by a flame for a period of 15 minutes.

Note.— The characteristics of an acceptable flame can be found in ISO 2685.

Fire resistant. The capability to withstand the application of heat by a flame for a period of 5 minutes.

Note.— The characteristics of an acceptable flame can be found in ISO 2685.

Handover.^{††} The act of passing piloting control from one remote pilot station to another.

Helicopter. A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

Note.— Some States use the term “rotorcraft” as an alternative to “helicopter”.

Human factors principles. Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

Human performance. Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

Landing 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 landing in a particular direction.

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.

Lost C2 Link decision time.^{††} The maximum length of time permitted before declaring a lost C2 Link state during which the C2 Link performance is not sufficient to allow the remote pilot to actively manage the flight in a safe and timely manner appropriate to the airspace and operational conditions.

[†] Applicable until 25 November 2026.

^{††} Applicable as of 26 November 2026.

Lost C2 Link state.^{††} The state of the RPAS in which the C2 Link performance has degraded, as a result of a C2 Link interruption that is longer than the lost C2 Link decision time, to a point where it is not sufficient to allow the remote pilot to actively manage the flight in a safe and timely manner.

Maintenance.[†] The performance of tasks on an aircraft, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

Maintenance.^{††} The performance of tasks on an aircraft, remote pilot station, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft, remote pilot station, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

Maintenance organization's procedures manual. A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

Maintenance records. Records that set out the details of the maintenance carried out on an aircraft, engine, propeller or associated part.

Maintenance release. A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements.

Modification. A change to the type design of an aircraft, engine or propeller.

Note.— A modification may also include the embodiment of the modification which is a maintenance task subject to a maintenance release. Further guidance on aircraft maintenance, modification and repair is contained in the Airworthiness Manual (Doc 9760).

Nominal C2 Link state.^{††} The state of the RPAS when the C2 Link performance is sufficient to allow the remote pilot to actively manage the flight of the RPA in a safe and timely manner appropriate to the airspace and operational conditions.

Organization responsible for the type design.[†] The organization that holds the type certificate, or equivalent document, for an aircraft, engine or propeller type, issued by a Contracting State.

Organization responsible for the type design.^{††} The organization that holds the type certificate, or equivalent document, for an aircraft, remote pilot station, engine or propeller type, issued by a Contracting State.

Orphan aircraft type. An aircraft which has its Type Certificate revoked by the State of Design, and no longer has a designated State of Design in accordance with Annex 8. These aircraft do not meet the Standards of Annex 8.

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.

[†] Applicable until 25 November 2026.

^{††} Applicable as of 26 November 2026.

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.

Quality of service delivered (QoSD).^{††} A statement of the QoS achieved or delivered to the RPAS operator by the C2CSP.

Quality of service required (QoSR).^{††} A statement of the QoS requirements of the RPAS operator to the C2CSP.

Note.— The QoSR may be expressed in descriptive terms (criteria) listed in the order of priority, with preferred performance value for each criterion. The C2CSP then translates these into parameters and metrics pertinent to the service.

Remote pilot station (RPS).^{††} The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

Remotely piloted aircraft (RPA).^{††} An unmanned aircraft which is piloted from a remote pilot station.

Remotely piloted aircraft system (RPAS).^{††} A remotely piloted aircraft, its associated remote pilot station(s), the required C2 Link(s) and any other components as specified in the type design.

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 aircraft, engine, propeller or associated part to an airworthy condition in accordance with the appropriate airworthiness requirements after it has been damaged or subjected to wear.

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:
 $\rho_0 = 1.225\,0 \text{ kg m}^{-3}$

[†] Applicable until 25 November 2026.

^{††} Applicable as of 26 November 2026.

- Temperature of the ice point:
 $T_i = 273.15 \text{ K}$
- Universal gas constant:
 $R^* = 8.314\,32 \text{ JK}^{-1}\text{mol}^{-1}$

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 $9.806\,65 \text{ m}^2 \text{ s}^{-2}$.

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 Design of Modification. The State having jurisdiction over the individual or organization responsible for the design of the modification or repair of an aircraft, engine or propeller.

State of Manufacture.[†] The State having jurisdiction over the organization responsible for the final assembly of the aircraft, engine or propeller.

State of Manufacture.^{††} The State having jurisdiction over the organization responsible for the final assembly of the aircraft, remote pilot station, engine or propeller.

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).

Switchover.^{††} The act of transferring the active datalink path between the RPS and the RPA from one of the links or networks that constitutes the C2 Link to another link or network that constitutes the C2 Link.

[†] Applicable until 25 November 2026.

^{††} Applicable as of 26 November 2026.

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.

Type Certificate.[†] A document issued by a Contracting State to define the design of an aircraft, engine or propeller type and to certify that this design meets the appropriate airworthiness requirements of that State.

Note.— In some Contracting States a document equivalent to a Type Certificate may be issued for an engine or propeller type.

Type Certificate.^{††} A document issued by a Contracting State to define the design of an aircraft, remote pilot station, engine or propeller type and to certify that this design meets the appropriate airworthiness requirements of that State.

Note 1.^{†††}— In some Contracting States a document equivalent to a Type Certificate may be issued for an engine or propeller type.

Note 2.^{††}— A document equivalent to a Type Certificate may be issued for a remote pilot station type.

Type design.[†] The set of data and information necessary to define an aircraft, engine or propeller type for the purpose of airworthiness determination.

Type design.^{††} The set of data and information necessary to define an aircraft, remote pilot station, engine or propeller type for the purpose of airworthiness determination.

Ultimate load. The limit load multiplied by the appropriate factor of safety.

[†] Applicable until 25 November 2026.

^{††} Applicable as of 26 November 2026.

^{†††} As of 26 November 2026, this Note becomes Note 1.

PART II. PROCEDURES FOR CERTIFICATION AND CONTINUING AIRWORTHINESS

Note.— Although the Convention on International Civil Aviation allocates to the State of Registry certain functions which that State is entitled to discharge, or obligated to discharge, as the case may be, the Assembly recognized, in Resolution A23-13, that the State of Registry may be unable to fulfil its responsibilities adequately in instances where aircraft are leased, chartered or interchanged — in particular without crew — by an operator of another State and that the Convention may not adequately specify the rights and obligations of the State of the Operator in such instances until such time as Article 83 bis of the Convention enters into force. Accordingly, the Council urged that if, in the above-mentioned instances, the State of Registry finds itself unable to discharge adequately the functions allocated to it by the Convention, it delegate to the State of the Operator, subject to acceptance by the latter State, those functions of the State of Registry that can more adequately be discharged by the State of the Operator. It was understood that pending entry into force of Article 83 bis of the Convention, the foregoing action would only be a matter of practical convenience and would not affect either the provisions of the Chicago Convention prescribing the duties of the State of Registry or any third State. However, as Article 83 bis entered into force on 20 June 1997, such transfer agreements will have effect in respect of those Contracting States which have ratified the related Protocol (Doc 9318) upon fulfilment of the conditions established in Article 83 bis.

CHAPTER 1. TYPE CERTIFICATION

1.1 Applicability

The Standards of this chapter shall be applicable to all aircraft, and to engines and propellers if type certificated separately, for which the application for certification was submitted to a Contracting State on or after 13 June 1960, except that:

- a) the provisions of 1.4 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate was submitted to the State of Design on or after 2 March 2004;
- b) the provisions of 1.4 of this part shall only be applicable to an engine or propeller type for which an application for a Type Certificate was submitted to the State of Design on or after 10 November 2016;
- c) the provisions of 1.2.6 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate was submitted to the State of Design on or after 31 December 2014;
- d) the provisions of 1.2.7 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate is submitted to the State of Design on or after 28 November 2024; and
- e) the provisions of 1.4 of this part shall only be applicable to a remotely piloted aircraft and to a remote pilot station if type certificated separately, for which an application for a Type Certificate is submitted to the State of Design on or after 26 November 2026.

Note 1.— Until 25 November 2026, normally, a request for a Type Certificate is submitted by the manufacturer when the aircraft, engine or propeller is intended for serial production.

Note 1.— As of 26 November 2026, normally, a request for a Type Certificate is submitted by the manufacturer when the aircraft, remote pilot station, engine or propeller is intended for serial production.

Note 2.— For Part VB aeroplanes, guidance material concerning the appropriate airworthiness safety levels commensurate with acceptable risk levels is contained in the Airworthiness Manual (Doc 9760).

Note 3.— As of 26 November 2026, the provisions of this part support remotely piloted aircraft systems operation SARPs in Annex 6.

1.2 Design aspects of the appropriate airworthiness requirements

1.2.1 Until 25 November 2026, the design aspects of the appropriate airworthiness requirements, used by a Contracting State for type certification of an aircraft, engine or propeller or for any change to such type certification, shall be such that compliance with them will ensure compliance with the Standards of this part and, where applicable, with the Standards of Parts III, IV, V, VI or VII of this Annex.

1.2.1 As of 26 November 2026, the design aspects of the appropriate airworthiness requirements, used by a Contracting State for type certification of an aircraft, remote pilot station, engine or propeller or for any change to such type certification, shall be such that compliance with them will ensure compliance with the Standards of this part and, where applicable, with the Standards of Parts III, IV, V, VI, VII, VIII, IX or X of this Annex.

1.2.2 **Recommendation.**— *When establishing the appropriate airworthiness requirements, a risk-based proportionality approach should be applied.*

Note.— For Part VB aeroplanes, guidance material concerning the appropriate airworthiness safety levels commensurate with acceptable risk levels is contained in Doc 9760.

1.2.3 The design shall not have any features or characteristics that render it unsafe under the anticipated operating conditions.

1.2.4 Until 25 November 2026, where the design features of a particular aircraft, engine or propeller render any of the design aspects of the appropriate airworthiness requirements or the Standards in Parts III, IV, V, VI or VII inappropriate, the Contracting State shall apply appropriate requirements that will give at least an equivalent level of safety.

1.2.4 As of 26 November 2026, where the design features of a particular aircraft, remote pilot station, engine or propeller render any of the design aspects of the appropriate airworthiness requirements or the Standards in Parts III, IV, V, VI, VII, VIII, IX or X inappropriate, the Contracting State shall apply appropriate requirements that will give at least an equivalent level of safety.

1.2.5 Until 25 November 2026, where the design features of a particular aircraft, engine or propeller render any of the design aspects of the appropriate airworthiness requirements or the Standards in Parts III, IV, V, VI or VII inadequate, additional requirements that are considered by the Contracting State to give at least an equivalent level of safety shall be applied.

Note.— An Airworthiness Manual (Doc 9760) containing guidance material has been published by ICAO.

1.2.5 As of 26 November 2026, where the design features of a particular aircraft, remote pilot station, engine or propeller render any of the design aspects of the appropriate airworthiness requirements or the Standards in Parts III, IV, V, VI, VII, VIII, IX or X inadequate, additional requirements that are considered by the Contracting State to give at least an equivalent level of safety shall be applied.

Note 1¹.— An Airworthiness Manual (Doc 9760) containing guidance material has been published by ICAO.

Note 2.— As of 26 November 2026, a Manual on Remotely Piloted Aircraft Systems (RPAS) (Doc 10019) containing guidance material has been published by ICAO.

1.2.6 Until 25 November 2026, the approved design of an aircraft under Parts IIIB, IVB, VA and VB of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Eighth Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer*, Annex A, Group II, in the aircraft fire suppression or extinguishing systems in the lavatories, engines and auxiliary power unit.

Note.— Information concerning extinguishing agents is contained in the UNEP Halons Technical Options Committee Technical Note No. 1 — New Technology Halon Alternatives and FAA Report No. DOT/FAA/AR-99-63, Options to the Use of Halons for Aircraft Fire Suppression Systems.

1.2.6 As of 26 November 2026, the approved design of an aircraft under Parts IIIB, IVB, V, VIII and IX of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Eighth Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer*, Annex A, Group II, in the aircraft fire suppression or extinguishing systems in the lavatories, engines and auxiliary power unit.

Note.— Information concerning extinguishing agents is contained in the UNEP Halons Technical Options Committee Technical Note No. 1 — New Technology Halon Alternatives and FAA Report No. DOT/FAA/AR-99-63, Options to the Use of Halons for Aircraft Fire Suppression Systems.

1.2.7 The approved design of an aircraft under Part IIIB of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Tenth Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer*, Annex A, Group II, in the aircraft fire suppression or extinguishing systems for the cargo compartment.

Note.— Information concerning acceptable agents is contained in the report of the UNEP Halons Technical Options Committee Technical Note No. 1 — New Technology Halon Alternatives and FAA Report No. DOT/FAA/AR-11-31, Options to the Use of Halons for Aircraft Fire Suppression Systems.

1.3 Proof of compliance with the appropriate airworthiness requirements

1.3.1 Until 25 November 2026, there shall be an approved design consisting of such drawings, specifications, reports and documentary evidence as are necessary to define the design of the aircraft, engine or propeller and to show compliance with the design aspects of the appropriate airworthiness requirements.

Note.— The approval of the design is facilitated, in some States, by approving the design organization.

1.3.1 As of 26 November 2026, there shall be an approved design consisting of such drawings, specifications, reports and documentary evidence as are necessary to define the design of the aircraft, remote pilot station, engine or propeller and to show compliance with the design aspects of the appropriate airworthiness requirements.

Note.— The approval of the design is facilitated, in some States, by approving the design organization.

1. As of 26 November 2026, this Note becomes Note 1.

1.3.2 Recommendation.— *Contracting States should balance risks and rigor in the determination of compliance based on the acceptable level of risk determined for the product.*

Note.— *For the type certification of Part VB aeroplanes, guidance material addressing how States may balance risks and rigor in the determination of compliance is contained in Doc 9760.*

1.3.3 Until 25 November 2026, the aircraft, engine or propeller shall be subjected to such inspections and ground and flight tests as are deemed necessary by the State to show compliance with the design aspects of the appropriate airworthiness requirements.

1.3.3 As of 26 November 2026, the aircraft, remote pilot station, engine or propeller shall be subjected to such inspections and ground and flight tests as are deemed necessary by the State to show compliance with the design aspects of the appropriate airworthiness requirements.

1.3.4 Until 25 November 2026, in addition to determining compliance with the design aspects of the appropriate airworthiness requirements for an aircraft, engine or propeller, Contracting States shall take whatever other steps they deem necessary to ensure that the design approval is withheld if the aircraft, engine or propeller is known or suspected to have dangerous features not specifically guarded against by those requirements.

1.3.4 As of 26 November 2026, in addition to determining compliance with the design aspects of the appropriate airworthiness requirements for an aircraft, remote pilot station, engine or propeller, Contracting States shall take whatever other steps they deem necessary to ensure that the design approval is withheld if the aircraft, remote pilot station, engine or propeller is known or suspected to have dangerous features not specifically guarded against by those requirements.

1.3.5 Until 25 November 2026, a Contracting State issuing an approval for the design of a modification, of a repair or of a replacement part shall do so on the basis of satisfactory evidence that the aircraft, engine or propeller is in compliance with the airworthiness requirements used for the issuance of the Type Certificate, its amendments or later requirements when determined by the State.

Note 1.— *While a repair may be completed and shown to be in compliance with the set of requirements that had been selected for the original type certification of the aircraft, engine or propeller, some repairs may need to be shown to comply with the latest applicable certification requirements. In such cases, States may issue a repair design approval against the latest set of requirements for that aircraft, engine or propeller type.*

Note 2.— *The approval of the design of a modification to an aircraft, engine or propeller is signified, in some States, by the issuance of a supplemental Type Certificate or amended Type Certificate.*

1.3.5 As of 26 November 2026, a Contracting State issuing an approval for the design of a modification, of a repair or of a replacement part shall do so on the basis of satisfactory evidence that the aircraft, remote pilot station, engine or propeller is in compliance with the airworthiness requirements used for the issuance of the Type Certificate, its amendments or later requirements when determined by the State.

Note 1.— *While a repair may be completed and shown to be in compliance with the set of requirements that had been selected for the original type certification of the aircraft, remote pilot station, engine or propeller, some repairs may need to be shown to comply with the latest applicable certification requirements. In such cases, States may issue a repair design approval against the latest set of requirements for that aircraft, remote pilot station, engine or propeller type.*

Note 2.— *The approval of the design of a modification to an aircraft, remote pilot station, engine or propeller is signified, in some States, by the issuance of a supplemental Type Certificate or amended Type Certificate.*

1.4 Issuance of Type Certificate

1.4.1 Until 25 November 2026, the State of Design, upon receipt of satisfactory evidence that the aircraft, engine or propeller type if certificated separately is in compliance with the design aspects of the appropriate airworthiness requirements, shall issue a Type Certificate to define the type design and to signify its approval of the design of the aircraft type.

1.4.1 As of 26 November 2026, the State of Design, upon receipt of satisfactory evidence that the aircraft, remote pilot station, engine or propeller type if certificated separately is in compliance with the design aspects of the appropriate airworthiness requirements, shall issue a Type Certificate to define the type design and to signify its approval of the design of the aircraft type.

1.4.2 Until 25 November 2026, when a Contracting State, other than the State of Design, issues a Type Certificate for an aircraft, engine or propeller type, it shall do so on the basis of satisfactory evidence that the aircraft, engine or propeller type is in compliance with the design aspects of the appropriate airworthiness requirements.

1.4.2 As of 26 November 2026, when a Contracting State, other than the State of Design, issues a Type Certificate for an aircraft, remote pilot station, engine or propeller type, it shall do so on the basis of satisfactory evidence that the aircraft, remote pilot station, engine or propeller type is in compliance with the design aspects of the appropriate airworthiness requirements.

1.4.3 As of 26 November 2026, the Type Certification of the remotely piloted aircraft shall include the remote pilot station and the C2 Link as defined in the appropriate parts.

1.5 Suspension of Type Certificate

1.5.1 When the State of Design takes action in accordance with its established procedures to suspend in whole or in part a Type Certificate for an aircraft, engine or propeller type, it shall immediately:

- a) notify Contracting States of the suspension; the time period, if known, that the suspension is in force; the cause of the suspension; and any recommended action to be undertaken if the nature of the suspension affects the airworthiness of the affected aircraft, engine or propeller type; and
- b) establish with the State of Manufacture, if other than the State of Design, any actions necessary to address their respective airworthiness responsibilities under the agreement or arrangement established in accordance with 2.4.5 of this part.

1.5.2 A Contracting State that issued a Type Certificate for an aircraft, engine or propeller type under 1.4.2 of this part, on the basis of the Type Certificate issued by the State of Design, shall immediately notify the State of Design of a suspension originated in respect of its equivalent Type Certificate.

1.5.3 During the period of suspension notified in 1.5.1 and 1.5.2, the State of Design shall continue to fulfil its assigned obligations on continuing airworthiness under Chapter 4 of this part.

1.5.4 The State of Design shall notify Contracting States and the State of Manufacture, if other than the State of Design, on a regular basis the status of the suspension and reinstatement of the suspended Type Certificate.

1.6 Revocation of Type Certificate

1.6.1 The State of Design shall establish procedures for the revocation of a Type Certificate when the organization responsible for the type design surrenders or abandons the Type Certificate, or ceases to exist, and as a result the continuing airworthiness responsibilities established under Chapter 4 of this part can no longer be fulfilled for the affected aircraft type in service. The procedures, at a minimum, shall include:

- a) notification to all Contracting States of an intent to revoke a Type Certificate and the proposed termination of the production approval under 2.4 of this part; and
- b) consultation with States of Registry for the collection, identification and establishment of supplemental airworthiness requirements considered necessary for the continued airworthiness of the candidate orphan aircraft type.

1.6.2 Except for reasons concerning the immediate safety of an aircraft type, the State of Design shall not unduly revoke a Type Certificate without providing ample notice and guidance to States of Registry that will be assuming ultimate responsibility for the continued airworthiness of orphaned aircraft on their civil register.

1.6.3 The State of Design shall notify Contracting States, including the State of Manufacture if other than the State of Design, of the revocation of a Type Certificate and the effective date on which it ceases to be the designated State of Design under Annex 8.

1.7 Transfer of Type Certificate

1.7.1 The State of Design shall establish procedures for the transfer of a Type Certificate that ensures continued compliance of the approved design of the aircraft, engine or propeller type with the appropriate airworthiness requirements

- a) for a transfer in which the State of Design remains the same; and
- b) for a transfer in which the State of Design changes to another Contracting State.

1.7.2 The State of Design shall, upon completion of the transfer, issue or reissue its Type Certificate in accordance with 1.4.1 of this part.

1.7.3 Where the State of Manufacture of an aircraft, engine or propeller is not the State of Design, there shall be an agreement or arrangement in accordance with 2.4.5 and 4.2.3 of this part.

1.7.4 The State of Design shall notify all Contracting States of the transfer and the organization responsible for the type design for purposes of the continuing airworthiness reporting requirements under Chapter 4 of this part.

Note.— Guidance material on the process for transfer of a Type Certificate is contained in Doc 9760.

CHAPTER 2. PRODUCTION

2.1 Applicability

Until 25 November 2026, the Standards of this chapter are applicable to the production of all aircraft, engines, propellers and associated parts.

As of 26 November 2026, the Standards of this chapter are applicable to the production of all aircraft, remote pilot stations, engines, propellers and associated parts.

2.2 Aircraft, engine and propeller production¹

Until 25 November 2026, the State of Manufacture shall ensure that each aircraft, engine or propeller, including associated parts manufactured by sub-contractors and/or suppliers, is airworthy at the time of release.

As of 26 November 2026, the State of Manufacture shall ensure that each aircraft, remote pilot station, engine or propeller, including associated parts manufactured by sub-contractors and/or suppliers, is airworthy at the time of release.

2.3 Aircraft parts production

The Contracting State taking responsibility for the production of aircraft parts manufactured under the design approval referred to in 1.3.5 of this part shall ensure that the aircraft parts are airworthy.

2.4 Production approval

2.4.1 Until 25 November 2026, when approving production of an aircraft, engine, propeller or associated part, the Contracting State having jurisdiction over the organization responsible for production shall:

- a) examine the supporting data and inspect the production facilities and processes so as to determine that the manufacturing organization is in compliance with the appropriate production requirements; and
- b) ensure that the manufacturing organization has established and can maintain a quality system or a production inspection system such as to guarantee that each aircraft, engine, propeller or associated part produced by the organization or by sub-contractors and/or suppliers is airworthy at the time of release.

Note 1.— Normally, the oversight of production is facilitated by approving the manufacturing organization.

Note 2.— Where the State of Manufacture is a State other than the Contracting State where the associated parts are produced, there may be an agreement or arrangement acceptable to both States to support the oversight responsibilities of the State of Manufacture over the organizations manufacturing the associated parts.

1. As of 26 November 2026, paragraph 2.2 will be titled “Aircraft, remote pilot station, engine and propeller production”.

2.4.1 As of 26 November 2026, when approving production of an aircraft, remote pilot station, engine, propeller or associated part, the Contracting State having jurisdiction over the organization responsible for production shall:

- a) examine the supporting data and inspect the production facilities and processes so as to determine that the manufacturing organization is in compliance with the appropriate production requirements; and
- b) ensure that the manufacturing organization has established and can maintain a quality system or a production inspection system such as to guarantee that each aircraft, remote pilot station, engine, propeller or associated part produced by the organization or by sub-contractors and/or suppliers is airworthy at the time of release.

Note 1.— Normally, the oversight of production is facilitated by approving the manufacturing organization.

Note 2.— Where the State of Manufacture is a State other than the Contracting State where the associated parts are produced, there may be an agreement or arrangement acceptable to both States to support the oversight responsibilities of the State of Manufacture over the organizations manufacturing the associated parts.

2.4.2 **Recommendation.**— *A Contracting State should balance risks and rigor when approving production of aircraft or aircraft parts based on the acceptable level of risk determined for the product as specified by the State of Design.*

Note.— For the production approval of Part VB aeroplanes and their parts, guidance material addressing how States may balance risks and rigor in the determination of compliance is contained in the Airworthiness Manual (Doc 9760).

2.4.3 Until 25 November 2026, the manufacturing organization shall hold, for each aircraft, engine, propeller or associated part, a design approval as referred to in 1.3 of this part, or the right of access under an agreement or arrangement to the approved design data relevant for production purposes.

2.4.3 As of 26 November 2026, the manufacturing organization shall hold, for each aircraft, remote pilot station, engine, propeller or associated part, a design approval as referred to in 1.3 of this part, or the right of access under an agreement or arrangement to the approved design data relevant for production purposes.

2.4.4 Until 25 November 2026, records shall be maintained such that the origin of each aircraft, engine, propeller and associated part, and its identification with the approved design and production data, can be established.

Note.— The origin of an aircraft, engine, propeller and associated part refers to the manufacturer, the date of manufacture, the serial number or other information that can be tracked to its production record.

2.4.4 As of 26 November 2026, records shall be maintained such that the origin of each aircraft, remote pilot station, engine, propeller and associated part, and its identification with the approved design and production data, can be established.

Note.— The origin of an aircraft, remote pilot station, engine, propeller and associated part refers to the manufacturer, the date of manufacture, the serial number or other information that can be tracked to its production record.

2.4.5 Until 25 November 2026, where the State of Manufacture is not the State of Design, there shall be an agreement or arrangement acceptable to both States to:

- a) ensure that the manufacturing organization has the right of access to the approved design data relevant for production purposes;
- b) address the responsibilities of each State with regard to design, manufacture and continuing airworthiness of the aircraft, engine or propeller during the period of the agreement or arrangement, including such period when the State of Design takes action to suspend in whole or in part the Type Certificate of the affected aircraft type; and

- c) terminate the production approval under this part when the State of Design revokes the Type Certificate corresponding to that aircraft type.

2.4.5 As of 26 November 2026, where the State of Manufacture is not the State of Design, there shall be an agreement or arrangement acceptable to both States to:

- a) ensure that the manufacturing organization has the right of access to the approved design data relevant for production purposes;
 - b) address the responsibilities of each State with regard to design, manufacture and continuing airworthiness of the aircraft, remote pilot station, engine or propeller during the period of the agreement or arrangement, including such period when the State of Design takes action to suspend in whole or in part the Type Certificate of the affected aircraft type; and
 - c) terminate the production approval under this part when the State of Design revokes the Type Certificate corresponding to that aircraft type.
-

