

PNG
Civil Aviation Rules
Part 26

Additional Airworthiness Requirements

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Schedule of Rules

Subpart A — General	3
26.1 Applicability.....	3
Subpart B — Additional Airworthiness Requirements	3
26.51 Airworthiness design standards	3
26.53 Application of additional requirements	3
Appendix A — All Aircraft	4
A.1 Marking of doors and emergency exits.....	4
Appendix B — Aeroplanes with a Type Certificated Seating Capacity of More Than 9 Passengers	5
B.1 Doors and exits.....	5
B.2 Evacuation and egress provisions.....	5
B.3 Systems and equipment	6
Appendix C — Aeroplanes with a Type Certificated Seating Capacity Of More Than 19 Passengers	7
C.1 Doors and exits.....	7
C.2 Evacuation and egress provisions.....	7
C.3 Lavatory fire protection	11
C.4 Materials for compartment interiors.....	11
C.5 Cargo and baggage compartments	12
Appendix D — Helicopters	13
D.1 Doors and exits.....	13
D.2 Evacuation and egress provisions.....	13
Appendix E — Agricultural Aircraft	14
E.1 Crew protection requirements.....	14

Subpart A — General

26.1 Applicability

This Part prescribes rules governing the application of airworthiness requirements to Papua New Guinea registered aircraft, additional to those airworthiness requirements prescribed in any other Part.

Subpart B — Additional Airworthiness Requirements

26.51 Airworthiness design standards

Airworthiness design standards additional to those specified in Part 21 are specified in—

- (1) Appendix A for all aircraft; and
- (2) Appendices A and B for aeroplanes with a type certificated seating capacity of more than 9 passenger seats; and
- (3) Appendices A, B and C for aeroplanes with a type certificated seating capacity of more than 19 passenger seats; and
- (4) Appendices A and D for helicopters; and
- (5) Appendices A and E for agricultural aircraft.

26.53 Application of additional requirements

The additional airworthiness design requirements shall be—

- (1) applicable only to the stated class, category, or type of aircraft or aircraft component; and
- (2) complied with by—
 - (i) an applicant for an airworthiness certificate; or
 - (ii) an applicant for the approval of technical data under 21.95; and
 - (iii) the holder of a certificate of registration.

Appendix A — All Aircraft

Additional airworthiness requirements for the certification of an aircraft include the following:

A.1 Marking of doors and emergency exits

- (a) Each normal and emergency exit shall be clearly and conspicuously marked with the means of opening the exit and as EXIT or EMERGENCY EXIT as applicable—
 - (1) on both the inside and outside of the exit; or
 - (2) on both the inside and outside of the aircraft on a surface adjacent to the exit.
- (b) All instructions for operation of the exits required by paragraph (a) shall be—
 - (1) concise; and
 - (2) in easily readable letters on a contrasting background.

Appendix B — Aeroplanes with a Type Certificated Seating Capacity of More Than 9 Passengers

Additional airworthiness requirements for the certification of an aeroplane with a type certificated seating capacity of more than 9 passengers, in addition to Appendix A, include the following:

B.1 Doors and exits

Each external door and exit shall—

- (1) be operable from the inside and, except for sliding window exits in the flight crew compartment, the outside; and
- (2) be unobstructed by seats, seat backs, or other equipment; and
- (3) have a means—
 - (i) of locking that prevents inadvertent opening in flight by persons or as a result of mechanical failure; and
 - (ii) when the door's initial opening movement is outwards, for the crew members to directly view the locking mechanism to determine that the door is fully closed and locked; and
 - (iii) when the door is normally used to load and unload the aeroplane, of visually indicating to the crew members that the door is not fully closed and locked.

B.2 Evacuation and egress provisions

B.2.1 Additional emergency exits

- (a) The passenger entrance door must qualify as a floor level emergency exit. If an integral stair is installed at such a passenger entrance door, it must be designed so that when subject to the inertia forces specified in the airworthiness design standard for the aeroplane and following the collapse of one or more legs of the landing gear, it will not interfere to an extent that will reduce the effectiveness of emergency egress through the passenger entry door.
- (b) Each aeroplane shall be equipped with emergency exits additional to the passenger entrance door including—
 - (1) for an aeroplane with a type certificated seating capacity of less than 16 passengers, an exit on each side of the fuselage meeting the requirements of paragraph (c); or
 - (2) for an aeroplane with a type certificated seating capacity of between 16 and 23 passengers—
 - (i) one exit on the same side as the passenger entrance door; and
 - (ii) two exits on the side opposite the passenger entrance door—
meeting the requirements of paragraph (c).

- (c) Emergency exits must be moveable windows, panels, canopies, or external doors, openable from both inside and outside the aeroplane, that provide a clear and unobstructed opening large enough to admit a 19-by-26 inch ellipse. Auxiliary locking devices used to secure the aeroplane must be designed to be overridden by the normal internal opening means. In addition, each emergency exit must—
- (1) be readily accessible, requiring no exceptional agility to be used in emergencies; and
 - (2) have a method of opening that is simple and obvious; and
 - (3) be arranged and marked for easy location and operation, even in darkness; and
 - (4) have reasonable provisions against jamming by fuselage deformation.

B.2.2 Emergency exit evacuation equipment

Each emergency exit required for the type certification of the aircraft shall—

- (1) be located over the wing; or
- (2) for exits 2m or more from the ground with the aeroplane on the ground and the landing gear extended, have a means of assisting the occupants to descend to the ground.

B.2.3 Emergency exit interior marking

Each emergency exit shall be identified by a sign that —

- (1) has the word EXIT in—
 - (i) 25 mm high white letters on a 50 mm high red background; or
 - (ii) 25 mm high red letters on a 50 mm high white background; and
- (2) is self illuminating or is electrically illuminated independently from the main lighting system; and
- (3) has a minimum brightness of 160 microlamberts.

B.3 Systems and equipment

B.3.1 Landing gear aural warning.

- (a) Each aeroplane equipped with wing flaps and retractable landing gear shall have a landing gear aural warning device.
- (b) Except as provided by paragraph (c), each landing gear aural warning device shall—
 - (1) function continuously when the wing flaps are extended to a normal position for landing in preparation for landing, and the landing gear is not fully extended and locked; and
 - (2) not have a manual shut off.
- (c) Paragraph (b)(2) shall not apply to amphibious aeroplanes that provide for an adequate visual indication to the flight crew members that the aircraft is configured for a water landing.

Appendix C — Aeroplanes with a Type Certificated Seating Capacity Of More Than 19 Passengers

Additional airworthiness requirements for the certification of an aeroplane with a type certificated seating capacity of more than 19 passengers, in addition to Appendix A and Appendix B, include the following:

C.1 Doors and exits

C.1.1 *Exit types*

- (a) Exit types shall be those specified in FAR 25.807 in effect on 29 March 1993.
- (b) For an aeroplane with a type certificated seating capacity of more than 23 passengers, exits shall meet the requirements for certification of that aeroplane type.

C.1.2 *Floor level exits*

Other than exits that lead into a cargo or baggage compartment that is not accessible from the passenger cabin, each floor level exit in the side of the fuselage shall meet the requirements for floor level emergency exits if that exit is—

- (1) greater than 1090 mm high and between 490 mm and 1150 mm wide; or
- (2) a ventral exit; or
- (3) a tail cone exit.

C.2 Evacuation and egress provisions

C.2.1 *Additional emergency exits*

- (a) Emergency exits in the passenger compartments that are in excess of the number required for the type certification of the aircraft shall—
 - (1) meet all of the applicable provisions of this appendix; and
 - (2) be readily accessible.
- (b) Each ventral exit and each tailcone exit of a turbojet powered aeroplane shall be—
 - (1) designed and constructed so that it cannot be opened during flight; and
 - (2) marked with a placard that—
 - (i) states that the exit cannot be opened during flight; and
 - (ii) is readable from a distance of 750 mm; and
 - (iii) is installed at a conspicuous location near the means of opening the exit.

C.2.2 Emergency exit access

- (a) Except for additional emergency exits, access shall be provided to aeroplane emergency exits that ensure—
- (1) each passageway is unobstructed and at least 500 mm wide—
 - (i) between individual passenger areas; and
 - (ii) leading to a Type I or Type II emergency exit; and
 - (2) there is enough space next to each Type I and Type II emergency exit to allow a crew member to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below 500 mm; and
 - (3) access from the main aisle to each Type III and Type IV exit is unobstructed by seats, berths, or other protrusions that would reduce the effectiveness of the exit; and
 - (4) each door separating a passenger compartment from an emergency exit has—
 - (i) a means to latch it in the open position during each takeoff and landing and that can withstand the ultimate inertia forces, relative to the surrounding structure, as specified in the certification design standards; and
 - (ii) a placard indicating that the door must be open during each takeoff and landing.
- (b) Except for curtains that allow free entry through a passageway, each passageway between passenger compartments that leads to an emergency exit shall not be obstructed.
- (c) No door may be installed in any partition between passenger compartments.

(Note: The definitions of Types I to IV exits are contained in the relevant Advisory Circular)

C.2.3 Emergency exit operating handles

- (a) Except as provided in paragraph (b), each aeroplane shall be marked on or near each exit with—
- (1) markings readable from a distance of 750 mm; and
 - (2) the location of each passenger emergency exit operating handle; and
 - (3) the instructions for opening the exit including for each Type I and Type II emergency exit with a locking mechanism released by rotary motion of the handle—
 - (i) a red arrow with a shaft at least 20 mm wide and a head twice the width of the shaft, extending along at least 70° of arc at radius approximately equal to three-fourths of the handle length; and
 - (ii) the word OPEN in red letters 25 mm high placed horizontally near the head of the arrow.
- (b) Each aeroplane type certificated on or after 1 May 1972 shall be marked in accordance with the requirements for certification of that aeroplane type.

- (c) Each operating handle and operating handle cover shall have a minimum brightness of 100 microlamberts.

C.2.4 Emergency exit evacuation equipment

- (a) Except as provided in paragraph (b), each emergency exit shall have a means of assisting the occupants to descend to the ground meeting the requirements for certification of that aeroplane type in effect on 30 April 1972.
- (b) In each aeroplane type certificated on or after 1 May 1972 each emergency exit shall have a means of assisting the occupants to descend to the ground meeting the requirements for certification of that aeroplane type.
- (c) Each means of assisting the occupants to descend to the ground that deploys automatically shall be capable of being armed during taxiing, takeoff, and landing.

C.2.5 Emergency exit escape route

- (a) Except as provided in paragraph (b), each aeroplane shall have a slip-resistant escape route meeting the requirements for certification of that aeroplane type in effect on 30 April 1972.
- (b) Each aeroplane type certificated on or after 1 May 1972 shall have a slip-resistant escape route meeting the requirements for certification of that aeroplane type.

C.2.6 Emergency lighting

- (a) Each light required for an emergency lighting system shall—
- (1) have a cockpit control device that has an ON, OFF, and ARMED position; and
 - (2) be operable manually from—
 - (i) the flight crew members normally seated position; and
 - (ii) a point in the passenger compartment that is readily accessible to a normal flight attendant seat; and
 - (3) have a means to prevent inadvertent operation of the manual controls; and
 - (4) when armed or turned on, remain lighted or become lighted upon interruption of the aeroplane's normal electric power except in the case of a transverse vertical separation of the fuselage; and
 - (5) provide the required level of illumination for at least 10 minutes at the critical ambient conditions after emergency landing.
- (b) Lights that form part of a means of assisting the occupants to descend to the ground do not have to meet the requirements in paragraph (a) if they—
- (1) serve only one means of assistance; and
 - (2) are automatically activated when the means of assistance is deployed; and
 - (3) are independent of the aeroplane's main emergency lighting systems.

C.2.7 *Emergency interior lighting*

Each aeroplane shall have an emergency lighting system that—

- (1) has a power supply independent of the main lighting system; and
- (2) provides an average illumination in the passenger compartment of at least 0.05 foot-candles when measured at seat armrest height at 1 m intervals on the centreline of the main passenger aisle; and
- (3) illuminates each exit marking and sign; and
- (4) includes floor proximity emergency escape path markings.

C.2.8 *Emergency exterior lighting*

- (a) Except as provided in paragraph (b), each aeroplane shall have emergency exterior lighting that meets the requirements for certification of that aeroplane type at 30 April 1972.
- (b) Each aeroplane type certificated on or after 1 May 1972 shall have emergency exterior lighting that meets the requirements for certification of that aeroplane type.

C.2.9 *Emergency exit interior marking*

- (a) Each emergency exit and its means of access shall be clearly and conspicuously marked—
 - (1) such that its identity and location is recognisable from a distance equal to the width of the cabin; and
 - (2) with its means of opening.
- (b) The location of each passenger emergency exit shall be indicated by signs visible to occupants approaching along the main passenger aisle—
 - (1) above the exit route near each over-the-wing passenger emergency exit; and
 - (2) next to each floor level emergency exit, except that one sign may serve two such exits if they both can be seen readily from that sign; and
 - (3) on each bulkhead or divider that prevents fore and aft vision along the passenger compartment, indicating emergency exits obscured by it.
- (c) Except as provided in paragraph (d), each aeroplane shall have emergency exit markings and signs that meet the requirements for certification of that aeroplane type in effect on 30 April 1972.
- (d) Each aeroplane type certificated on or after 1 May 1972 shall have emergency exit markings and signs that meet the requirements for certification of that aeroplane type.
- (e) Each emergency exit marking and sign shall have a minimum brightness of 250 microlamberts.

C.2.10 Emergency exit exterior markings

Each emergency exit operable from the outside shall be marked—

- (1) with a continuous 50 mm wide coloured band outlining the exit that—
 - (i) shall differ in colour from the surrounding surface such as to achieve visual contrast; and
 - (ii) may be on the edge of the exit, on the surface surrounding the exit, or partially on both; and
- (2) with the means of opening and applicable instructions in red or in bright chrome yellow; and
- (3) if the exit is not in the side of the fuselage and the means of opening is located on only one side of the fuselage, to that effect on the other side of the fuselage.

C.3 Lavatory fire protection

- (a) Each lavatory shall be conspicuously marked—
 - (1) on each side of the door with a sign indicating that smoking is prohibited in the lavatory; and
 - (2) on each lavatory paper receptacle door or waste disposal receptacle door with a sign indicating that cigarette disposal in the receptacle is prohibited.
- (b) Except for dedicated non-smoking aeroplanes, the entrance to each lavatory shall be provided with a self contained removable ash tray outside the lavatory on or near its entry.
- (c) Each lavatory paper receptacle or waste disposal receptacle shall have a—
 - (1) door fitted that provides a seal to contain fires within the receptacle; and
 - (2) built-in fire extinguisher designed to discharge automatically upon occurrence of a fire in the receptacle.
- (d) Each lavatory shall be equipped with a smoke detector system or equivalent that provides—
 - (1) a warning light in the cockpit; or
 - (2) a warning light or audio warning readily detectable by crew members during all phases of flight.

C.4 Materials for compartment interiors

- (a) Each aeroplane type certificated on or before 1 January 1958 shall, upon the first substantially complete replacement of the cabin interior, be equipped with materials in each compartment used by the crew members or passengers that meet the requirements of FAR Part 25 in effect on 30 April 1972.
- (b) Except as provided in paragraph (c), each aeroplane type certificated after 1 January 1958 shall—

- (1) if manufactured on or after 20 August 1988 but before 20 August 1990, be equipped with materials in each compartment used by the crew members or passengers that meet the requirements of the heat release rate tests of FAR Part 25 in effect on 29 March 1993 except that the—
 - (i) total heat release over the first 2 minutes of sample exposure shall not exceed 100 kilowatt minutes per square metre; and
 - (ii) peak heat release rate must not exceed 100 kilowatts per square metre; and
 - (2) if manufactured on or after 20 August 1990, be equipped with materials in each compartment used by the crew members or passengers that meet the requirements of the heat release rate and smoke tests of FAR Part 25 in effect on 29 March 1993; and
 - (3) upon the first substantially complete replacement of the cabin interior components, be equipped with materials in each compartment used by the crew members or passengers that meet the requirements of FAR Part 25 in effect on 29 March 1993.
- (c) Each aeroplane type certificated after 1 January 1958 shall be equipped with seat cushions, except those on flight deck seats, that meet the requirements pertaining to fire protection of seat cushions in FAR Part 25 in effect on 26 November 1984.

C.5 Cargo and baggage compartments

- (a) Each Class C compartment, as defined in FAR 25.857 in effect on 16 June 1986, that is greater than 200 cubic feet in volume must have ceiling and sidewall liner panels which are constructed of—
- (1) glass fibre reinforced resin; or
 - (2) materials that meet the test requirements of FAR Part 25 Appendix F, Part III; or
 - (3) in the case of liner installations approved prior to 20 March 1989, aluminium.
- (b) For compliance with paragraph (a), the term “liners” includes any design feature, such as a joint or fastener, which would affect the capability of the liner to safely contain a fire.
- (c) Each Class D compartment, as defined in FAR 25.857, in effect on 16 June 1986, regardless of volume, must meet the standards of FAR 25.857(c) effective 17 February 1998 and FAR 25.858 effective 17 February 1998, for a Class C compartment unless the aircraft is configured for all cargo operation in which case each Class D compartment may meet the standards in FAR 25.857(e) effective 17 February 1998 for a Class E compartment.

Appendix D — Helicopters

Additional airworthiness requirements for the certification of a helicopter, in addition to Appendix A, include the following:

D.1 Doors and exits

Each helicopter intended to be used for air operations shall be equipped with external doors and exits that—

- (1) are operable from the inside and the outside; and
- (2) are unobstructed by seats, seat backs, or other equipment; and
- (3) have a means—
 - (i) of locking that prevents inadvertent opening in flight by persons or as a result of mechanical failure; and
 - (ii) when the door is normally used to load and unload the helicopter, of visually indicating to the crew members that the door is not fully closed and locked.

D.2 Evacuation and egress provisions

D.2.1 *Emergency exit marking*

Each emergency exit and its means of access on a helicopter intended to be used for air operations transport shall be clearly and conspicuously marked—

- (1) such that its identity and location is recognisable from a distance equal to the width of the cabin; and
- (2) with its means of opening.

Appendix E — Agricultural Aircraft

Additional airworthiness requirements for the certification of an aircraft for the purposes of agricultural operations, in addition to Appendix A, include the following:

E.1 Crew protection requirements

Each aircraft to be certificated in the restricted category for the purpose of agricultural aircraft operations shall comply with the crew protection requirements prescribed in Section .35 of Appendix B of the United States of America Civil Aeronautics Manual 8 in effect on 1 February 1965.