



CHAPTER 3.5

AEROPLANE PERFORMANCE OPERATING LIMITATIONS

3.5.1 General

Recommendation.— *For aeroplanes for which Parts IIIA and IIIB of Annex 8 are not applicable because of the exemption provided for in Article 41 of the Convention, the State of Registry should ensure that the level of performance specified in 3.5.2 should be met as far as practicable.*

3.5.2 Applicable to aeroplanes certificated in accordance with Parts IIIA and IIIB of Annex 8

3.5.2.1 The Standards contained in 3.5.2.2 to 3.5.2.9 inclusive are applicable to the aeroplanes to which Parts IIIA and IIIB of Annex 8 are applicable.

Note.— *The Standards of Annex 8 — Airworthiness of Aircraft, Parts IIIA and IIIB, apply to all aeroplanes of over 5 700 kg maximum certificated take-off mass intended for the carriage of passengers or cargo or mail in international air navigation.*

3.5.2.2 An aeroplane shall be operated in compliance with the terms of its certificate of airworthiness and within the approved operating limitations contained in its flight manual.

3.5.2.3 The State of Registry shall take such precautions as are reasonably possible to ensure that the general level of safety contemplated by these provisions is maintained under all expected operating conditions, including those not covered specifically by the provisions of this chapter.

3.5.2.4 A flight shall not be commenced unless the performance information provided in the flight manual indicates that the Standards of 3.5.2.5 to 3.5.2.9 can be complied with for the flight to be undertaken.

3.5.2.5 In applying the Standards of this chapter, account shall be taken of all factors that significantly affect the performance of the aeroplane (such as: mass, operating procedures, the pressure altitude appropriate to the elevation of the aerodrome, temperature, wind, runway gradient and condition of runway, i.e.



presence of slush, water and/or ice, for landplanes, water surface condition for seaplanes). Such factors shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which may be provided in the scheduling of performance data or in the comprehensive and detailed code of performance in accordance with which the aeroplane is being operated.

3.5.2.6 Mass limitations

- a) The mass of the aeroplane at the start of take-off shall not exceed the mass at which 3.5.2.7 is complied with, nor the mass at which 3.5.2.8 and 3.5.2.9 are complied with, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is envisaged in applying 3.5.2.8 and 3.5.2.9 and, in respect of alternate aerodromes, 3.5.2.6 c) and 3.5.2.9.
- b) In no case shall the mass at the start of take off exceed the maximum take off mass specified in the flight manual for the pressure altitude appropriate to the elevation of the aerodrome, and if used as a parameter to determine the maximum take off mass, any other local atmospheric condition.
- c) In no case shall the estimated mass for the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the maximum landing mass specified in the flight manual for the pressure altitude appropriate to the elevation of those aerodromes, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.
- d) In no case shall the mass at the start of take-off, or at the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the relevant maximum masses at which compliance has been demonstrated with the applicable noise certification Standards in Annex 16, Volume I, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the competent authority of the State in which the aerodrome is situated.

3.5.2.7 *Take-off.* The aeroplane shall be able, in the event of a critical engine failing at any point in the take-off, either to discontinue the take-off and stop within either the accelerate-stop distance available or the runway available, or to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aeroplane is in a position to comply with 3.5.2.8.

Note.— “An adequate margin” referred to in this provision is illustrated by the appropriate examples included in Attachment C to Annex 6, Part I.

3.5.2.7.1 In determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.



3.5.2.8 *En route — one engine inoperative.* The aeroplane shall be able, in the event of the critical engine becoming inoperative at any point along the route or planned diversions therefrom, to continue the flight to an aerodrome at which the Standard of 3.5.2.9 can be met, without flying below the minimum obstacle clearance altitude at any point.

3.5.2.9 *Landing.* The aeroplane shall, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.
