



Designation: F3174/F3174M – 18

Standard Specification for Establishing Operating Limitations and Information for Aeroplanes¹

This standard is issued under the fixed designation F3174/F3174M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers airworthiness requirements for establishing general limitations and information to be contained in the aeroplane flight manual. This specification specifies what information shall be provided and does not state how such information shall be presented unless this is necessary for the clarity of the purpose of the specification. Refer to Specification F3117 for means and methods of presentation. The material was developed through open consensus of international experts in general aviation. This information was created by focusing on Level 1, 2, 3, and 4 Normal Category aeroplanes. The content may be more broadly applicable; it is the responsibility of the applicant to substantiate broader applicability as a specific means of compliance. The topics covered within this specification are: Limitations for Airspeed, Weight and Center of Gravity, Auxiliary Power Units, Minimum Flight Crew, Maximum Passenger Seating Configuration, Kinds of Operation, and Maximum Operating Altitude.

1.2 An applicant intending to propose this information as Means of Compliance for a design approval must seek guidance from their respective oversight authority (for example, published guidance from applicable CAAs) concerning the acceptable use and application thereof. For information on which oversight authorities have accepted this specification (in whole or in part) as an acceptable Means of Compliance to their regulatory requirements (hereinafter “the Rules”), refer to the ASTM Committee F44 web page (www.astm.org/COMMITTEE/F44.htm).

1.3 *Units*—This specification may present information in either SI units, English Engineering units, or both; the values stated in each system may not be exact equivalents. Each system shall be used independently of the other; combining values from the two systems may result in nonconformance with the standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the*

responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

F3060 Terminology for Aircraft

F3082 Specification for Weights and Centers of Gravity of Aircraft

F3114 Specification for Structures

F3116/F3116M Specification for Design Loads and Conditions

F3117 Specification for Crew Interface in Aircraft

F3173/F3173M Specification for Aircraft Handling Characteristics

3. Terminology

3.1 See Terminology F3060 for definitions and abbreviations.

4. Establishing Operating Limitations and Information

4.1 *General*—Each applicable operating limitation specified in 4.2 – 4.8 and other limitations and information necessary for safe operation shall be established.

4.1.1 The operating limitations and other information necessary for safe operation shall be made available to the crewmembers as prescribed in Specification F3117.

4.2 *Airspeed Limitations:*

4.2.1 The never-exceed speed, V_{NE} , shall be established as an operating limitation and shall be so that it is:

¹ This specification is under the jurisdiction of ASTM Committee F44 on General Aviation Aircraft and is the direct responsibility of Subcommittee F44.20 on Flight.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.