



Standard Specification for Control, Operational Characteristics and Installation of Instruments and Sensors of Propulsion Systems¹

This standard is issued under the fixed designation F3064/F3064M; 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 minimum requirements for the control, indication, and operational characteristics of propulsion systems. It was developed based on propulsion system installed on aeroplanes, but may be applicable to other applications as well.

1.2 The applicant for a design approval must seek the individual guidance to their respective CAA body concerning the use of this standard as part of a certification plan. For information on which CAA regulatory bodies have accepted this standard (in whole or in part) as a means of compliance to their Aeroplane Airworthiness regulations (Hereinafter referred to as “the Rules”), refer to ASTM F44 webpage (www.ASTM.org/COMITTEE/F44.htm) which includes CAA website links.

1.3 *Units*—The values stated are SI units followed by imperial units in brackets. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

[F3060 Terminology for Aircraft](#)

[F3062 Specification for the Installation of Powerplant Systems](#)

[F3063 Specification for Design and Integration of Fuel/](#)

[Energy Storage and Delivery System Installations](#)
[F3066 Specification for Powerplant Systems Hazard Mitigation](#)

[F3116 Specification for Design Loads and Conditions](#)

2.2 Other Standards:³

[US 14 CFR \(Code of Federal Regulations\) Part 23 Amendment 62](#)

3. Terminology

3.1 The following are a selection of relevant terms. See Terminology [F3060](#) for more definitions and abbreviations.

3.2 Definitions:

3.2.1 *automatic power reserve (APR) system, n*—the automatic system used only during takeoff, including all devices both mechanical and electrical that sense engine failure, transmit signals, actuate fuel controls or power levers on operating engines, including power sources, to achieve the scheduled power increase and furnish cockpit information on system operation.

3.2.2 *critical time interval, n*—period starting at V_1 minus one second and ending at the intersection of the engine and APR failure flight path line with the minimum performance all engine flight path line. The engine and APR failure flight path line intersects the one-engine-inoperative flight path line at 122 m (400 ft) above the takeoff surface. The engine and APR failure flight path is based on the airplane's performance and must have a positive gradient of at least 0.5 % at 122 m (400 ft) above the takeoff surface. See [Fig. 1](#).

3.2.3 *selected takeoff power, n*—the power obtained from each initial power setting approved for takeoff.

4. Engine Controls

4.1 General Requirements:

4.1.1 Powerplant controls must be located and arranged per US 14 CFR 23.777.

4.1.2 Each flexible control must be shown to be suitable for the particular application.

¹ This specification is under the jurisdiction of ASTM Committee [F44](#) on General Aviation Aircraft and is the direct responsibility of Subcommittee [F44.40](#) on Powerplant.

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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.

³ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, <http://www.access.gpo.gov>.