as an operating limitation. $V_o$ is a selected speed that is not greater than $V_{SN}$ established in §23.335(c).

[Doc. No. 26269, 58 FR 42165, Aug. 6, 1993]

§ 23.1511 Flap extended speed.

(a) The flap extended speed $V_{FE}$ must be established so that it is—

(1) Not less than the minimum value of $V_F$ allowed in §23.345(b); and

(2) Not more than $V_F$ established under §23.345(a), (c), and (d).

(b) Additional combinations of flap setting, airspeed, and engine power may be established if the structure has been proven for the corresponding design conditions.


§ 23.1513 Minimum control speed.

The minimum control speed $V_{MC}$ determined under §23.149, must be established as an operating limitation.

§ 23.1519 Weight and center of gravity.

The weight and center of gravity limitations determined under §23.23 must be established as operating limitations.

§ 23.1521 Powerplant limitations.

(a) General. The powerplant limitations prescribed in this section must be established so that they do not exceed the corresponding limits for which the engines or propellers are type certificated. In addition, other powerplant limitations used in determining compliance with this part must be established.

(b) Takeoff operation. The powerplant takeoff operation must be limited by—

(1) The maximum rotational speed (rpm);

(2) The maximum allowable manifold pressure (for reciprocating engines);

(3) The maximum allowable gas temperature (for turbine engines);

(4) The time limit for the use of the power or thrust corresponding to the limitations established in paragraphs (b)(1) through (3) of this section; and

(5) The maximum allowable cylinder head (as applicable), liquid coolant and oil temperatures.

(c) Continuous operation. The continuous operation must be limited by—

(1) The maximum rotational speed;

(2) The maximum allowable manifold pressure (for reciprocating engines);

(3) The maximum allowable gas temperature (for turbine engines); and

(4) The maximum allowable cylinder head, oil, and liquid coolant temperatures.

(d) Fuel grade or designation. The minimum fuel grade (for reciprocating engines), or fuel designation (for turbine engines), must be established so that it is not less than that required for the operation of the engines within the limitations in paragraphs (b) and (c) of this section.

(e) Ambient temperature. For all airplanes except reciprocating engine-powered airplanes of 6,000 pounds or less maximum weight, ambient temperature limitations (including limitations for winterization installations if applicable) must be established as the maximum ambient atmospheric temperature at which compliance with the cooling provisions of §§23.1041 through 23.1047 is shown.


§ 23.1522 Auxiliary power unit limitations.

If an auxiliary power unit is installed, the limitations established for the auxiliary power must be specified in the operating limitations for the airplane.

[Doc. No. 26269, 58 FR 42166, Aug. 6, 1993]

§ 23.1523 Minimum flight crew.

The minimum flight crew must be established so that it is sufficient for safe operation considering—

(a) The workload on individual crew members and, in addition for commuter category airplanes, each crew member workload determination must consider the following:

(1) Flight path control,

(2) Collision avoidance,

(3) Navigation,

(4) Communications,

(5) Operation and monitoring of all essential airplane systems,

(6) Command decisions, and
§ 23.1524  Maximum passenger seating configuration.

The maximum passenger seating configuration must be established.

[Amendment 23–10, 36 FR 2864, Feb. 11, 1971]

§ 23.1525  Kinds of operation.

The kinds of operation authorized (e.g., VFR, IFR, day or night) and the meteorological conditions (e.g., icing) to which the operation of the airplane is limited or from which it is prohibited, must be established appropriate to the installed equipment.

[Doc. No. 26269, 58 FR 42166, Aug. 6, 1993]

§ 23.1527  Maximum operating altitude.

(a) The maximum altitude up to which operation is allowed, as limited by flight, structural, powerplant, functional or equipment characteristics, must be established.

(b) A maximum operating altitude limitation of not more than 25,000 feet must be established for pressurized airplanes unless compliance with § 23.775(e) is shown.

[Doc. No. 26269, 58 FR 42166, Aug. 6, 1993]

§ 23.1529  Instructions for Continued Airworthiness.

The applicant must prepare Instructions for Continued Airworthiness in accordance with appendix G to this part that are acceptable to the Administrator. The instructions may be incomplete at type certification if a program exists to ensure their completion prior to delivery of the first airplane or issuance of a standard certificate of airworthiness, whichever occurs later.

[Amendment 23–26, 45 FR 60171, Sept. 11, 1980]