

§ 23.2010

(2) Level 2—for airplanes with a maximum seating configuration of 2 to 6 passengers.

(3) Level 3—for airplanes with a maximum seating configuration of 7 to 9 passengers.

(4) Level 4—for airplanes with a maximum seating configuration of 10 to 19 passengers.

(c) Airplane performance levels are:

(1) Low speed—for airplanes with a V_{NO} and $V_{MO} \leq 250$ Knots Calibrated Airspeed (KCAS) and a $M_{MO} \leq 0.6$.

(2) High speed—for airplanes with a V_{NO} or $V_{MO} > 250$ KCAS or a $M_{MO} > 0.6$.

(d) Airplanes not certified for aerobatics may be used to perform any maneuver incident to normal flying, including—

(1) Stalls (except whip stalls); and

(2) Lazy eights, chandelles, and steep turns, in which the angle of bank is not more than 60 degrees.

(e) Airplanes certified for aerobatics may be used to perform maneuvers without limitations, other than those limitations established under subpart G of this part.

§ 23.2010 Accepted means of compliance.

(a) An applicant must comply with this part using a means of compliance, which may include consensus standards, accepted by the Administrator.

(b) An applicant requesting acceptance of a means of compliance must provide the means of compliance to the FAA in a form and manner acceptable to the Administrator.

Subpart B—Flight

PERFORMANCE

§ 23.2100 Weight and center of gravity.

(a) The applicant must determine limits for weights and centers of gravity that provide for the safe operation of the airplane.

(b) The applicant must comply with each requirement of this subpart at critical combinations of weight and center of gravity within the airplane's range of loading conditions using tolerances acceptable to the Administrator.

(c) The condition of the airplane at the time of determining its empty

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weight and center of gravity must be well defined and easily repeatable.

§ 23.2105 Performance data.

(a) Unless otherwise prescribed, an airplane must meet the performance requirements of this subpart in—

(1) Still air and standard atmospheric conditions at sea level for all airplanes; and

(2) Ambient atmospheric conditions within the operating envelope for levels 1 and 2 high-speed and levels 3 and 4 airplanes.

(b) Unless otherwise prescribed, the applicant must develop the performance data required by this subpart for the following conditions:

(1) Airport altitudes from sea level to 10,000 feet (3,048 meters); and

(2) Temperatures above and below standard day temperature that are within the range of operating limitations, if those temperatures could have a negative effect on performance.

(c) The procedures used for determining takeoff and landing distances must be executable consistently by pilots of average skill in atmospheric conditions expected to be encountered in service.

(d) Performance data determined in accordance with paragraph (b) of this section must account for losses due to atmospheric conditions, cooling needs, and other demands on power sources.

§ 23.2110 Stall speed.

The applicant must determine the airplane stall speed or the minimum steady flight speed for each flight configuration used in normal operations, including takeoff, climb, cruise, descent, approach, and landing. The stall speed or minimum steady flight speed determination must account for the most adverse conditions for each flight configuration with power set at—

(a) Idle or zero thrust for propulsion systems that are used primarily for thrust; and

(b) A nominal thrust for propulsion systems that are used for thrust, flight control, and/or high-lift systems.

§ 23.2115 Takeoff performance.

(a) The applicant must determine airplane takeoff performance accounting for—