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speed is authorized for flight test or pilot training;

(2) If an airspeed limitation is based upon compressibility effects, a statement to this effect and information as to any symptoms, the probable behavior of the airplane, and the recommended recovery procedures; and

(3) The airspeed limits, shown in terms of V_{MO}/M_{MO} instead of V_{NO} and V_{NE}

(b) Takeoff weight limitations. The maximum takeoff weight for each airport elevation ambient temperature and available takeoff runway length within the range selected by the applicant may not exceed the weight at which—

(1) The all-engine-operating takeoff distance determined under section 5(b) or the accelerate-stop distance determined under section 5(c), whichever is greater, is equal to the available runway length;

(2) The airplane complies with the one-engine-inoperative takeoff requirements specified in section 5(e); and

(3) The airplane complies with the one-engine-inoperative takeoff and en route climb requirements specified in sections 6 (b) and (c).

(c) Landing weight limitations. The maximum landing weight for each airport elevation (standard temperature) and available landing runway length, within the range selected by the applicant. This weight may not exceed the weight at which the landing field length determined under section 7(b) is equal to the available runway length. In showing compliance with this operating limitation, it is acceptable to assume that the landing weight at the destination will be equal to the takeoff weight reduced by the normal consumption of fuel and oil en route.

20. *Performance information*. The Airplane Flight Manual must contain the performance information determined under the performance requirements of this appendix. The information must include the following:

(a) Sufficient information so that the takeoff weight limits specified in section 19(b) can be determined for all temperatures and altitudes within the operation limitations selected by the applicant.

(b) The conditions under which the performance information was obtained, including the airspeed at the 50-foot height used to determine landing distances.

(c) The performance information (determined by extrapolation and computed for the range of weights between the maximum landing and takeoff weights) for—

(1) Climb in the landing configuration; and(2) Landing distance.

(d) Procedure established under section 4 related to the limitations and information required by this section in the form of guidance material including any relevant limitations or information.

(e) An explanation of significant or unusual flight or ground handling characteristics of the airplane.

(f) Airspeeds, as indicated airspeeds, corresponding to those determined for takeoff under section 5(b).

21. Maximum operating altitudes. The maximum operating altitude to which operation is allowed, as limited by flight, structural, powerplant, functional, or equipment characteristics, must be specified in the Airplane Flight Manual.

22. Stowage provision for airplane flight manual. Provision must be made for stowing the Airplane Flight Manual in a suitable fixed container which is readily accessible to the pilot.

23. Operating procedures. Procedures for restarting turbine engines in flight (including the effects of altitude) must be set forth in the Airplane Flight Manual.

Airframe Requirements

Flight Loads

24. *Engine torque*. (a) Each turbopropeller engine mount and its supporting structure must be designed for the torque effects of:

(1) The conditions in FAR 23.361(a).

(2) The limit engine torque corresponding to takeoff power and propeller speed multiplied by a factor accounting for propeller control system malfunction, including quick feathering action, simultaneously with 1g level flight loads. In the absence of a rational analysis, a factor of 1.6 must be used.

(b) The limit torque is obtained by multiplying the mean torque by a factor of 1.25.

25. Turbine engine gyroscopic loads. Each turbopropeller engine mount and its supporting structure must be designed for the gyroscopic loads that result, with the engines at maximum continuous r.p.m., under either—

(a) The conditions in FARs 23.351 and 23.423; or

(b) All possible combinations of the following:

(1) A yaw velocity of 2.5 radians per second.(2) A pitch velocity of 1.0 radians per second.

(3) A normal load factor of 2.5.

(4) Maximum continuous thrust.

26. Unsymmetrical loads due to engine failure. (a) Turbopropeller powered airplanes must be designed for the unsymmet- rical loads resulting from the failure of the critical engine including the following conditions in combination with a single malfunction of the propeller drag limiting system, considering the probable pilot corrective action on the flight controls:

(1) At speeds between V_{mo} and V_{D} , the loads resulting from power failure because of fuel flow interruption are considered to be limit loads.