

§ 23.2405

certificate in accordance with a standard accepted by the FAA that contains airworthiness criteria the Administrator has found appropriate and applicable to the specific design and intended use of the engine or propeller and provides a level of safety acceptable to the FAA.

(c) The applicant must construct and arrange each powerplant installation to account for—

(1) Likely operating conditions, including foreign object threats;

(2) Sufficient clearance of moving parts to other airplane parts and their surroundings;

(3) Likely hazards in operation including hazards to ground personnel; and

(4) Vibration and fatigue.

(d) Hazardous accumulations of fluids, vapors, or gases must be isolated from the airplane and personnel compartments, and be safely contained or discharged.

(e) Powerplant components must comply with their component limitations and installation instructions or be shown not to create a hazard.

§ 23.2405 Automatic power or thrust control systems.

(a) An automatic power or thrust control system intended for in-flight use must be designed so no unsafe condition will result during normal operation of the system.

(b) Any single failure or likely combination of failures of an automatic power or thrust control system must not prevent continued safe flight and landing of the airplane.

(c) Inadvertent operation of an automatic power or thrust control system by the flightcrew must be prevented, or if not prevented, must not result in an unsafe condition.

(d) Unless the failure of an automatic power or thrust control system is extremely remote, the system must—

(1) Provide a means for the flightcrew to verify the system is in an operating condition;

(2) Provide a means for the flightcrew to override the automatic function; and

(3) Prevent inadvertent deactivation of the system.

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§ 23.2410 Powerplant installation hazard assessment.

The applicant must assess each powerplant separately and in relation to other airplane systems and installations to show that any hazard resulting from the likely failure of any powerplant system, component, or accessory will not—

(a) Prevent continued safe flight and landing or, if continued safe flight and landing cannot be ensured, the hazard has been minimized;

(b) Cause serious injury that may be avoided; and

(c) Require immediate action by any crewmember for continued operation of any remaining powerplant system.

§ 23.2415 Powerplant ice protection.

(a) The airplane design, including the induction and inlet system, must prevent foreseeable accumulation of ice or snow that adversely affects powerplant operation.

(b) The powerplant installation design must prevent any accumulation of ice or snow that adversely affects powerplant operation, in those icing conditions for which certification is requested.

§ 23.2420 Reversing systems.

Each reversing system must be designed so that—

(a) No unsafe condition will result during normal operation of the system; and

(b) The airplane is capable of continued safe flight and landing after any single failure, likely combination of failures, or malfunction of the reversing system.

§ 23.2425 Powerplant operational characteristics.

(a) The installed powerplant must operate without any hazardous characteristics during normal and emergency operation within the range of operating limitations for the airplane and the engine.

(b) The pilot must have the capability to stop the powerplant in flight and restart the powerplant within an established operational envelope.

§ 23.2430 Fuel systems.

(a) Each fuel system must—