§ 23.939 Powerplant operating characteristics.

(a) Turbine engine powerplant operating characteristics must be investigated in flight to determine that no adverse characteristics (such as stall, surge, or flameout) are present, to a hazardous degree, during normal and emergency operation within the range of operating limitations of the airplane and of the engine.

(b) Turbocharged reciprocating engine operating characteristics must be investigated in flight to assure that no adverse characteristics, as a result of an inadvertent overboost, surge, flooding, or vapor lock, are present during normal or emergency operation of the engine(s) throughout the range of operating limitations of both airplane and engine.

(c) For turbine engines, the air inlet system must not, as a result of airflow distortion during normal operation, cause vibration harmful to the engine.

[Amdt. 23–7, 34 FR 13093, Aug. 13, 1969, as amended by Amdt. 23–43, 58 FR 18971, Apr. 9, 1993]

§ 23.943 Negative acceleration.

No hazardous malfunction of an engine, an auxiliary power unit approved for use in flight, or any component or system associated with the powerplant or auxiliary power unit may occur when the airplane is operated at the negative accelerations within the flight envelopes prescribed in §23.333. This must be shown for the greatest value and duration of the acceleration expected in service.

[Amdt. 23–18, 42 FR 15041, Mar. 17, 1977, as amended by Amdt. 23–43, 58 FR 18971, Apr. 9, 1993]