

Sec. 33.77

Part 33 AIRWORTHINESS STANDARDS: AIRCRAFT ENGINES	
Subpart E--Design and Construction; Turbine Aircraft Engines	

Sec. 33.77

[Foreign object ingestion--ice.]

[(a) [Reserved]

(b) [Reserved]

(c) Ingestion of ice under the conditions of paragraph (e) of this section may not--

(1) Cause a sustained power or thrust loss; or

(2) Require the engine to be shutdown.

(d) For an engine that incorporates a protection device, compliance with this section need not be demonstrated with respect to foreign objects to be ingested under the conditions prescribed in paragraph (e) of this section if it is shown that--

(1) Such foreign objects are of a size that will not pass through the protective device;

(2) The protective device will withstand the impact of the foreign objects and

(3) The foreign object, or objects, stopped by the protective device will not obstruct the flow of induction air into the engine with a resultant sustained reduction in power or thrust greater than those values required by paragraph (c) of this section.

(e) Compliance with paragraph (c) of this section must be shown by engine test under the following ingestion conditions:

(1) Ice quantity will be the maximum accumulation on a typical inlet cowl and engine face resulting from a 2-minute delay in actuating the anti-icing system; or a slab of ice which is comparable in weight or thickness for that size engine.

(2) The ingestion velocity will simulate ice being sucked into the engine inlet.

(3) Engine operation will be Maximum Cruise power or thrust.

(4) The ingestion will simulate a continuous maximum icing encounter at 25 degrees Fahrenheit.]

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▶ Comments

▼ Document History

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