



Backgrounder

Engine

Aerion has teamed with Pratt & Whitney to adapt the latest generation of the proven and ubiquitous JT8D engine for Aerion's supersonic business jet. A derivative of the existing JT8D-219, derated to 19,600 pounds thrust, can provide the performance necessary for sustained cruise at speeds up to Mach 1.6 without afterburners.

The JT8D-219 engine has been selected for the U.S. Air Force JSTARS program, ensuring long-term production availability.

Pratt & Whitney is assisting in engine/airframe integration, applying its considerable experience in supersonic design. The engine company is aiding in the design of inlets, nozzles and nacelles to assure optimum aerodynamics and noise reduction. More than three years of evaluation by Pratt & Whitney confirms that the JT8D will meet or exceed business jet standards for durability under regular supersonic use.

The JT8D was selected for its ideal thrust level and efficient performance characteristics at both subsonic and supersonic speeds, as well as its long service history and wide-spread use among airlines. The JT8D powers one-sixth of the world's airline aircraft and has accumulated more than half a billion reliable hours.

The -219 is a second-generation derivative of the JT8D family with a modified fan for higher thrust and efficiency, a nearly ideal bypass ratio (1.7:1) for the present application, and an exhaust mixer that reduces takeoff noise. It is anticipated that the -219 derivative will enter service on the Aerion SBJ with a 3,000-hour TBO (time between overhauls).

(over)

The engine will meet all applicable emissions standards. Aerion expects the SBJ to meet Stage 4/Chapter 4 noise requirements with margin.

Selection of a proven power plant gives Aerion designers confidence in meeting performance objectives. It also minimizes the cost of development and the risk of program delays.

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