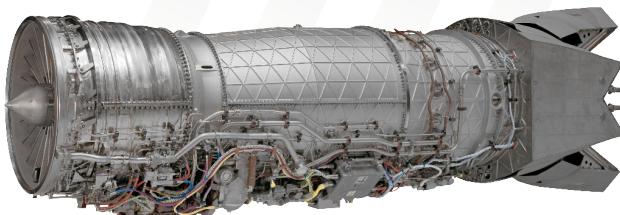




GO BEYOND

# F119



## Proven power for the F-22 Raptor

Pratt & Whitney's F119 turbofan engine is the world's first fifth-generation fighter engine. The F119 combines stealth technologies and vectored thrust performance to provide unprecedented maneuverability and survivability with a high thrust-to-weight ratio. The ability to operate supersonically without afterburner—supercruise—gives the F-22 exceptional combat performance without compromising mission range.

## ADVANCED TECHNOLOGY

The F119 is equipped with a number of advanced technologies for unmatched operational performance and reliability. Its three-stage integrally bladed fan is powered by a single-stage low-pressure turbine. The robust, yet compact, high-pressure compressor features advanced airfoil aerodynamics and integrally bladed rotor disks for ensured durability. The engine's counter-rotating core has an aerodynamically efficient six-stage compressor driven by a single-stage high-pressure turbine featuring single-crystal superalloy blades and advanced cooling technologies. The engine delivers unparalleled aircraft maneuverability with its unique two-dimensional pitch-vectoring exhaust nozzle.

## MAINTAINABILITY

Ease of assembly, maintenance and repair were designed into the F119 from its inception using a balanced team approach that included assemblers and flight line mechanics. Requirements for support equipment and labor were significantly reduced, minimizing the overall F119 logistics footprint.



## SAFETY

The F119 engine has achieved a best-in-class safety record since its introduction by outperforming legacy engine benchmarks.

## ENGINE SPECIFICATIONS

Type	Twin-spool, augmented turbofan
Thrust	35,000 pounds
Engine control	FADEC (Full-Authority Digital Engine Control)
Compression System	Dual-rotor, counter-rotating, axial flow, low aspect ratio - Three-stage fan - Six-stage high-pressure compressor
Combustor	Annular, Floatwall™ configuration
Turbines	Axial flow, counter-rotating - One-stage high-pressure turbine - One-stage low-pressure turbine
Nozzle	Nozzle Two-dimensional pitch-vectoring convergent/divergent



GO BEYOND

# F119

MILITARY ENGINES

# F110-PW-100

PROVEN POWER FOR  
THE F-22 RAPTOR

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