

F117-PW-100

Turbofan Engine

Exclusive Power for the C-17 Globemaster III Transport



Pratt & Whitney's F117-PW-100 engine is a member of the PW2000 family of commercial engines. Certified at 40,440 pounds of thrust, the F117 was selected by the U.S. Air Force as the exclusive powerplant for the C-17 Globemaster III, an advanced four-engine transport.

The F117 engines are equipped with a directed-flow thrust reverser capable of being deployed in flight. On the ground, the thrust reverser can back a fully loaded aircraft up a two-degree slope. It is also noteworthy that the F117-powered C-17 set 22 world records during qualification testing before initial operating capability (IOC).

Reliability

Since 2006, Pratt & Whitney's F117 engines have accumulated more than 9 million flight hours in support of military and humanitarian missions around the globe. The world's ever-changing geopolitical landscape requires military flexibility. Whether it's an airlift mission, humanitarian aid or an overnight combat airdrop in an unsecured location, the F117-powered C-17 is ready to respond.

Dependability

Four F117 engines power each C-17 Globemaster III, and with more than 13 million hours of proven military service, the F117 has consistently proven itself as a world-class, dependable engine. Pratt & Whitney's ongoing investment in product improvements has enabled the engine to continuously surpass established goals for time on-wing, in-flight shutdowns and reduced turnaround time.

System Availability

A Full-Authority Digital Electronic Control (FADEC) delivers high operational performance, low fuel burn and excellent maintenance diagnostics. The F117 engine is a solid performer and complements the reputation of the PW2000 family of engines as the world's leading midrange-thrust engines.

Today's F117 engine—the reduced temperature configuration (RTC)—uses technical and material advancements such as second-generation single-crystal turbine materials, improved cooling management and thermal barrier coatings to lower operating temperatures. These enhancements contribute to the F117's excellent reliability, durability and long time on-wing.

Product Facts

Program Milestones

1983	PW2037 FAA certification	2009	Strategic Airlift Capability (SAC) for Europe receives first C-17
1987	PW2040 FAA certification	2009	Qatar receives first C-17
1991	First F117 flight in U.S. Air Force/McDonnell Douglas C-17	2010	1,000th F117 engine delivery
1993	First C-17 for operational service delivered	2011	UAE receives first C-17
1995	C-17/F117 initial operating capability	2013	Ten million engine flight hours
2001	United Kingdom C-17 leases	2013	India receives first C-17
2002	500th F117 engine delivery	2014	Kuwait receives first C-17
2006	Australia receives first C-17	2015	C-17 and F117 production ends
2007	Canada receives first C-17	2016	Completed over 2,400 overhauls since 2001

Characteristics

Thrust	40,440 pounds (179.9 kN)	Maximum diameter	84.5 inches (2.15 m)
Weight	7,100 pounds (3,220 kg)	Bypass ratio	5.9 to 1
Length	146.8 inches (3.73 m)	Overall pressure ratio	30.8 to 1
Inlet diameter	78.5 inches (1.99 m)		

C-17 Military Applications

U.S. Air Force	Canada	Qatar
United Kingdom	India	UAE
Australia	SAC for Europe	Kuwait



Pratt & Whitney

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