Military Engines

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

www.pw.utc.com

ASC-01-1257

F117-PW-100 Exclusive Power for the C-17 Globemaster III Transport

Photo Credit: U.S. Air Force Airman 1st Class Brett Clashman

S16247-H.05.17