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PurePower®

PW1000G Engine News

This Changes Everything.™

First Engines to Test are Coming Together

Engines for the Mitsubishi Regional Jet (MRJ) and Bombardier CSeries aircraft will kick off certification testing in just a few short months

Republic Airways
orders 40 + 40
Bombardier CSeries
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Airbus & Boeing
consider new engines
for A320 and 737
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The reality of the PurePower PW1000G engine is becoming clearer every day. Pratt & Whitney is making excellent progress toward First Engine to Test (FETT). Assembly has already begun, and additional parts are arriving daily.

FETT signals the official start of the engine certification program. In less than six months, the first certification compliant CSeries engine—PW1524G—will begin testing. Soon afterward, the first certification compliant MRJ engines—PW1217G—will follow. Both PW1000G engine certification programs will employ several engines, which will undergo rigorous performance and operational testing, to meet all engine certification requirements. During the next 24 months, these engines will accumulate thousands of hours and cycles to ensure the highest levels of reliability at entry into service.

Pratt & Whitney, partners and suppliers from around the world are working around the clock to prepare for engine flight testing and production readiness. For example, Pratt & Whitney began construction on a more than 300,000 square-foot engine assembly and flight test facility in Mirabel, Canada, which will be home to the PW1524G engine. The facility is expected to be operational by spring 2011.

PW1000G engine certification programs signal the next exciting phase for Geared Turbofan™ (GTF) engines. The flight-proven geared architecture is the result of significant investment over 20 years, to ensure robust technology readiness and high reliability, well ahead of product development, certification and entry into service.

PurePower PW1000G Engine Demonstrator Displayed for First Time in Asia-Pacific Region

After a year-long trip around the world in 2009, the PurePower PW1000G engine demonstrator arrived in the Asia-Pacific region for the first time, at the 2010 Singapore Air Show. As usual, the display generated a considerable amount of interest and traffic, as it provided a unique opportunity for operators in the region to see the engine in person. It also allowed employees from Eagle Services Asia (ESA) to see the engine, which will be serviced in Singapore. Pratt & Whitney previously announced ESA as one of the PW1524G engine overhaul centers.



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Pratt & Whitney to Provide PurePower® PW1000G Engine on Bombardier CSeries Aircraft Order from Republic Airways



Pratt & Whitney will provide exclusive power for 40 firm and up to 40 options for new Bombardier CSeries aircraft ordered by Republic Airways in February. This agreement represents 80 firm PW1000G engines for the CSeries aircraft with six spare engines. In addition, Republic has signed an exclusive 15-year maintenance contract with Pratt & Whitney for these engines.

"The competitive advantages of the Bombardier CSeries include the efficiency and performance of the Pure-

Power PW1000G engines," said Gary R. Scott, President, Bombardier Commercial Aircraft. "These advanced technology engines will help deliver double digit reductions in fuel and cash operating costs."

"Having a major operator like Republic Airways select our technology expands the reach and scope of the PurePower engine program," said Todd Kallman, President, Pratt & Whitney Commercial Engines & Global Services. "We now have more than 400 PW1000G engines on order, if

options are exercised, representing operators based in Europe, Asia and North America."

Republic Airways Holdings, based in Indianapolis, Indiana, is an airline holding company that owns Chautauqua Airlines, Frontier Airlines, Lynx Aviation, Midwest Airlines, Republic Airlines and Shuttle America.

This order is the fourth for the PW1000G engine, which now is slated to power up to 205 aircraft.

Airbus and Boeing Consider New Engines for A320 and 737 Families

Airbus and Boeing have announced that they are studying potential re-engining for the A320 and 737 aircraft families, respectively.

According to Flight International, at the Singapore Air Show in February, Airbus Chief Operating Officer John Leahy said that Airbus is seeing a "surprising amount of interest from customers" about new engines for the A320 family. According to Leahy, "These engines would be available by the end of 2015, and the target would be 15% lower fuel burn per seat." Airbus has stated that they will likely make a decision on the re-engining of

the A320 aircraft by the Farnborough Air Show in July.

Meanwhile, Boeing is undertaking evaluations of its own. According to Bloomberg, a new engine for the 737 family "would be 12 percent to 15 percent more efficient." Boeing has stated that it will likely make a decision this year, but "not necessarily" before the Farnborough Air Show.

As always, Pratt & Whitney remains in discussion with airframers regarding the benefits of Geared Turbofan™ (GTF) engines, which deliver double-digit improvements in fuel burn, noise, emissions and engine operating cost.

The geared architecture will enter revenue service as the PW1000G engine, far sooner than any other next-generation single-aisle powerplant will be ready. Because of the common, scalable design of both the geared low spool and the advanced high spool (the PurePower engine core), this means that only Pratt & Whitney will be able to deliver in-service levels of maturity to aircraft arriving in the 2015 timeframe.



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