

Diamond announces DA42 New Horizons: Austro-Engine, Lycoming powered DA42s

At Oshkosh, Diamond announced additional details on its plans to introduce two successor models for the DA42 tdi – the DA42 NG, a 170 hp per side, turbo-diesel version, and the DA42 L360, a 180 hp per side, normally aspirated, Lycoming IO360 version specifically designed for the North American market.

DA42 NG - The Next Generation Diesel Twin

Equipped with next-generation turbo-diesel, 170 hp AE300 engines by Austro Engine GmbH (AEG), the DA42 NG offers 26% more engine power, and will outperform its predecessor across the board – take-off performance, climb performance, single-engine performance and, of course, speed. At the same time, the AE 300 offers up to 15% better specific fuel consumption at economy power settings, preserving the range, endurance and economy that has made the DA42 famous.

Austro Engine GmbH was specifically established in 2007 to create a new generation of general aviation powerplants. The company is developing the AE 300 engine with key technology partners, including MB Tech (Mercedes Benz) and Bosch. Using automotive engineering and production experience, combined with Diamond's extensive aviation experience and insights from building and operating a fleet of nearly 1000 diesel-powered aircraft, AEG is well positioned to deliver the next generation power plant.

European certification of the engine is well under way: Diamond aircraft from the DA40, to the DA50 Magnum and DA42 have been flying with Austro engines since early 2008, and engine-level EASA certification is expected in fall 2008. Diamond plans to certify the engine on the DA42 under EASA by late 2008, with FAA certification expected by fall 2009.

Incorporating many improvements, the 170 hp AE 300 engine is truly a next-generation powerplant:

- Improved gearbox. With a gearbox design life of 2400 hrs and a torsional vibration damper instead of a friction clutch, the AE 300 gearbox is designed to be low on maintenance requirements and high on reliability – for the life of the engine.
- Engine mounting. The 4-point tuned engine mount system vs the predecessor's 3-point system improves already smooth engine operation.
- A cast iron crankcase vs an aluminum casting ensures durability and allows a higher power output.
- Improved turbocharger, air induction and cooling system improve high altitude performance. It's not just about horsepower, but how well you can keep that power to higher altitudes.
- Conventional proven aircraft governor, driven by a FADEC controlled servo vs integral prop regulation improves prop control and reliability.
- Integral oil / coolant heat exchanger eliminates external oil lines and oil cooler
- All core automotive components are unmodified, ensuring that the demonstrated operating experience and reliability are applicable to the AE 300.



The DA42 NG utilizes two 170 hp turbo-diesel AE 300 engines.



DA42 L360 - modern, affordable, robust light twin

Where AvGas is easily available, the Lycoming-equipped DA42-L360 offers a viable choice, especially for flight training operations. Introduced at the request of several large flight training customers, with an expected availability of Q1, 2009, the DA42L is specifically focused on the North American market, with an eye towards flight training organizations or owner /operators looking for an affordable "conventional" light twin. The well proven and robust Lycoming power-plant will guarantee years of trouble-free operations, with familiar operation and maintenance requirements, and a fuel burn of as low as 16 gph on both engines combined in flight training environment, or 20 gph at 75% power cruise. Best of all, the DA42-L360 offers an anticipated upgrade path to an Austro Engine down the road to cover all the bases, now and in future - regardless of the availability and price of fuels.



The DA42 L360 utilizes two Lycoming IO-360 180hp engines. In mid-July 2008, new cowlings were almost complete.

Whether equipped with the Austro Engine AE 300, or the Lycoming IO-360, all next generation DA42s are taking the light twin experience to the next level.

The new canopy design offers a more spacious cockpit with head room for even the tallest pilots. An updated Garmin Avionics suite will provide pilots with the latest in cockpit safety equipment - from the industry-leading GFC700 Automatic Flight Control System, to WAAS-certified GPS systems, from TAWS-B terrain warning systems, to Garmin Synthetic Vision Technology (SVT); the upgraded avionics complement the DA42's known ice system and twin-engine safety to deliver the most capable piston-engine cross-country aircraft on the market today.



For more information on Diamond Aircraft, visit www.diamondaircraft.com