

FIRST FLIGHT JUSTIN WASTNAGE / VIENNA

Diamond breaks the ice with DA-40 diesel variant

Rising aviation gasoline prices and environmental concerns are fuelling demand



The diesel-powered Diamond Star incorporates a Thielert engine

The diesel version of the Diamond Aircraft DA-40 180 Diamond Star made its first flight last week as interest in diesel-powered aircraft in Europe is growing amid rising aviation gasoline (avgas) prices and environmental concerns.

The DA-40 TDI, powered by the Thielert TAE 135PS turbo diesel injection-engine instead of the Textron Lycoming IO-360, flew from the company's facilities at Wiener Neustadt, 50km (31 miles) south of Vienna, after completing six months of modifications to accommodate the new engine.

The Austrian light aircraft man-

ufacturer is the first company to successfully integrate the Thielert engine. Engine certification is due in January, with aircraft certification set for October 2002. Christian Dries, Diamond's director general, says that the manufacturer has re-engined its aircraft in response to customer demand.

Frank Thielert, chief executive of Thielert, says that the 100kW (135hp) TAE 135 can run on any mix of jet fuel and diesel. Although the engine has been submitted for US Federal Aviation Administration certification, Thielert is initially only marketing the TAE 135

in Europe, where avgas scarcity is driving up prices and flying clubs fear that the European Commission will outlaw leaded fuel. The average cost of pump diesel in Europe is €0.82/litre (72c), compared with around 39c/litre in the USA. Similarly, jet fuel is €1.40/litre (\$1.24) in Europe and 69c/litre in the USA.

The maximum take off weight of the DA-40 TDI has remained at 1,650kg (3,630lb) as the engine, modified from a Mercedes Benz automotive type, is 10kg lighter than the 135kW IO-360, but the 150litres (40USgal) load of fuel is 10kg heavier than avgas.

The aircraft has a higher ceiling than the avgas version at 18,000ft (5,500m) compared with 15,000ft. With a top speed of 137kt (253km/h), the fuel rate of the diesel version is 32litres/h. When travelling at 100kt, at 40% of peak performance, fuel usage is 9litres/h. Diamond claims that this represents a saving of 80% when combined with cheaper fuel prices.

Modifications include moving the propeller 50mm (2in) forward to accommodate the enlarged cowling. Fuel filler intakes will be redesigned to avoid unintentional avgas refuelling. Diamond is working on a twin-engine variant.

LAUNCH

Bombardier's Global 5000 set to launch in early 2002

Bombardier hopes to be in a position to launch the Global 5000 super-large business jet formally by the end of the first quarter of next year. This represents a delay of around three months on plans outlined when the shrunken Global Express was unveiled in late October (*Flight International*, 30 October - 5 November).

Despite the industry-wide downturn in business jet sales, Bombardier chief executive Robert Brown says the company remains on track to launch the Global 5000, which will compete head-on with the Gulfstream GIV-SP. The \$33 million aircraft is expected to enter service in late 2004.

The Canadian manufacturer says it will deliver at least 20 fewer business jets than planned in the financial year ending 30 January, 2002, or a total of fewer than 180 aircraft.

Deliveries next year could be lower. Brown does not expect orders to rebound until the economy recovers, which he does not expect before the second half of next year.

"Reduced sales of business aircraft are not tied to the events of 11 September, but to the economy," Brown says. Describing the industry's difficulties as short term, he says the "fundamentals are very strong". There is a "high level of interest" in the company's FlexJet fractional ownership programme, with orders returning to pre-11 September levels, he adds.

Despite the aerospace sector's difficulties, Bombardier expects to double its sales over the next five years to C\$32 billion (\$20 billion).

While initial growth will come from the mass transit sector, deliveries of the Continental super mid-size business jet beginning in 2003 and the Global 5000 in 2004 will also contribute, Brown says.

IN BRIEF

DELTA CHALLENGER

Delta Air Lines' subsidiary Delta AirElite Business Jets has added a fourth Bombardier Challenger 600 to its charter-management fleet.

SKYWATCH GETS OK

Goodrich has received supplemental type certification for its SkyWatch HP active surveillance traffic advisory system in the firm's Raytheon Beech King Air C90.

RECESSION

US Micco suspends production

The US recession in general aviation has claimed another victim, with Micco Aircraft suspending production of its SP20 and SP26 two-seat light aircraft while a buyer is sought for the company.

The first SP20 was handed over last year, and 16 have been delivered, with 12 more on order. Fort Pierce, Florida-based Micco has been instructed by its owners, the Seminole Native American tribe, to find a buyer for itself.

To cut costs while a buyer is

sought, the company has suspended production and laid off all but 20 of its workforce.

Micco was formed as New Meyers Aircraft in 1994 to return the Meyers 145 aerobatic trainer, certificated in 1948, to production.

The SP20 is an improved version of the 145, while the SP26 is a more powerful variant for which aerobatic certification is pending.

The company hopes to restart production in the second quarter of next year.