

Toyota Taking to the Air

Aviation: Auto giant aims to make a simple-to-fly plane that would become as common as the car.

By PETER PAE
TIMES STAFF WRITER

June 12 2002

A prototype of a single-engine aircraft designed and developed by Toyota Motor Corp. made its first flight last month, raising eyebrows within the aviation industry as Japan's largest auto manufacturer signaled it was making a significant move forward with its long-held but little-known plans to build light airplanes.

The short flight, which took place May 31 at Kern County's Mojave Airport, marked a major turning point for Toyota's ambitious goal of building airplanes that would be as simple to fly as driving a car, cost significantly less than the current generation of private airplanes and eventually be as ubiquitous as the automobile.

"They've had a long-term view that a general aviation airplane would be the Toyota car of the future," said Jon B. Kutler, president of the aerospace investment bank that has advised the manufacturer. "They pride themselves in looking 100 years down the line and they see general aviation as a future." But the program, the bulk of which has been spearheaded by Toyota's U.S. operations in the South Bay, has remained out of the limelight even to observers of the general aviation industry, many of whom were unaware that Toyota has been quietly developing the plane.

One reason is that Toyota executives have been unusually coy about disclosing any details of the aircraft program. Although the company acknowledged that a test flight did occur, a spokesman refused to divulge

details.

After initially refusing to talk about the program, a spokesman confirmed that 40 aerospace engineers, hired away from some of major aerospace concerns such as Boeing Co. and Raytheon Co., have been working on the aircraft for at least four years.

"The only thing we are saying is that we did indeed conduct a test flight," said Xavier Dominicis, a spokesman for Toyota Motor Sales USA, whose Aviation Business Development Office in Long Beach is overseeing the project. "We are studying the potential for a single-engine piston plane but there is not a lot we can say."

Toyota engineers in the South Bay area designed the aircraft and Scaled Composites, a Mojave company founded by legendary aircraft designer Burt Rutan, assembled the prototype and is testing it at Mojave Airport. Scaled Composites forwarded telephone calls about the aircraft to Toyota.

But Rutan made references to the aircraft at a recent university lecture, calling it "the aeronautical equivalent of the Lexus LS400."

In the early 1990s, Toyota attempted to develop an aviation version of the Lexus engine. But the project was shelved amid the downturn in the general aviation industry. It was unclear whether Toyota was still pursuing a derivative engine for the prototype aircraft.

Although Toyota officials were downplaying the program, former company Chairman Shoichiro Toyoda acknowledged last month that Toyota was seriously considering building small private airplanes.

In an interview with Business Times in Singapore, Toyoda, whose father founded the company, said that although "our main business will still be automotive-based, we are studying the opportunities" for a light aircraft.

"In the U.S., there are 200,000 propeller planes, many of them aging,"

Toyota told the newspaper, explaining that the U.S. would be the target market if Toyota was to begin making the aircraft.

Aerospace analysts said it wasn't surprising that Toyota would want to target the U.S., because it is the world's largest market for private airplanes, many of which are more than three decades old. The average age of a four-seat, single-engine piston airplane, the type that Toyota is considering, is 32 years, according to the General Aviation Manufacturers Assn. There are 150,000 single-engine aircraft in operation, most of which are owned privately and would have to be replaced in the next decade or so.

"If Toyota can bring the quality and production skills to general aviation, they are going to have a very good place in the market," said Richard Aboulafia, an analyst with Teal Group Inc., a aerospace research firm in Fairfax, Va.

But Toyota faces difficult challenges, most significantly the widely fluctuating demand.

After peaking at about 14,000 a year in 1977, sales of single-engine aircraft plunged to less than 500 by 1994, as manufacturers left the market amid a flurry of crash-related lawsuits.

With legislation that provided some liability protection, sales of the aircraft began to rise again and reached 1,810 in 2000 before falling a bit in the aftermath of the terrorist attacks. Textron Inc.'s Cessna unit, for instance, resumed building its popular 172 piston engine model in 1997 after the product's 11-year hiatus.

Some analysts believe the market eventually will return to general aviation's heyday of the 1970s, which could provide a lucrative setting for Toyota's aviation ambitions.

Regardless of market conditions, Kutler said, building a simpler and

cheaper airplane won't be Toyota's biggest challenge.

"You can make a plane that is as easy to fly as to drive a car but what breaks down is that it's a lot harder to get a flying license than a car license," Kutler said, adding that fewer people are learning to fly as the glamour of flight has dimmed since the early years of the Space Age.

In any case, Toyota envisions an airplane constructed mostly of composite materials that would cost about the same as a high-end Lexus, somewhat above \$50,000. That would be a fraction of the cost of current private airplanes, with starting price tags of about \$150,000. It also would entail less maintenance and be as reliable as one of its sedans.