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Wheels

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Terrafugia Transition: New Twist on an Old Dream

By *JIM MOTAVALLI*

Terrafugia Transition, the latest car-plane concept, made its first flight in March. Last month, the [Terrafugia Transition](#) made its first flight at Plattsburgh International Airport in New York. The Transition didn't break any speed records — it's powered by a simple 1.3-liter 4-cylinder aircraft engine with just 100 horsepower — but what made the flight so special was what happened before and after the flight — it was driven on public roads.

With the push of a button, the wings on the Transition fold twice in 30 seconds and are stowed vertically (and somewhat awkwardly) along the body. As a car, the lightweight Transition has front-wheel drive and a continuously variable transmission. Some 27 miles per gallon is claimed on the road. It will reach highway speeds, but Terrafugia isn't talking about how long it takes to get there. As a plane, with the propeller connected, the Transition cruises at 115 miles an hour and achieves 30 miles a gallon.

"We don't expect this to be a replacement for anyone's car," Carl Dietrich, Terrafugia's chief executive, said. "In fact, it's not a [flying car](#) — it's a roadable aircraft or a street-legal airplane."

According to Terrafugia, the Transition, which runs on unleaded gasoline, gets 27 miles per gallon on the road and 30 in the sky.

Mr. Dietrich envisions selling hundreds of Transitions annually — at a cost of \$194,000 each — to sport pilots who want the convenience of driving to the airport, and the safety of being able to land safely and cruise home when they are caught in bad weather. "Get-there-itis," or the tendency of pilots to "push it" through bad weather, Mr. Dietrich says, is one of the leading causes of general aviation accidents. "The Transition gives pilots a psychologically attractive alternative to pushing it," he said.

Getting the Transition certified by the National Highway Traffic Safety Administration (for the road) and the Federal Aviation Administration (for the air) are huge hurdles, obviously. Mr. Dietrich says his car-plane will have bumpers, crumple zones and, when the company nails down a supplier, air bags. Still, hitting all the marks will be a big challenge, especially if, as intended, Terrafugia wants to be on the market by 2011.

For now, Mr. Dietrich says he's pleased that the Transition "behaved as predicted" in its

first flight — which lasted only 37 seconds. A [Daily Mail account](#) of that flight referred to the Transition as the world's first flying car, but in fact there are many precedents. And Mr. Dietrick said the first patent for a flying car was issued in 1917.

In 1946, Robert Edison Fulton, Jr., a Connecticut inventor, showed the [Airphibian](#), with detachable wings, to the press. “I figured that an airplane can't drive down the road because of the wings, so why not leave the wings behind?” Mr. Fulton said in an interview for my book “Breaking Gridlock.” Prolonged safety testing drained Mr. Fulton's finances and the company was shut down.

A company named Consolidated-Vultee made a working model of a flying car in 1947. And Moulton Taylor, a Navy pilot and missile designer, built as many as five [Aerocars](#), one of which was bought and used by the actor Bob Cummings. More recently, Paul Moller tried to get his rotary-engine [M400 Skycar](#), supposedly capable of vertical takeoff and landing, off the ground.

None of those hybrid car-planes ever took off into the clear skies of financial viability. But hope springs eternal. “We think this will be the first commercially successful roadable aircraft,” said Richard Gersh, a vice president of Terrafugia.