

Meet Copperstate Dash Winner

VIRGINIA SKIBY

ARTICLE AND PHOTOS BY JACK COX

Four years ago Aircraft Spruce inaugurated its Copperstate Dash, a cross-country, all-out speed race for aircraft with engines displacing no more than 320 cubic inches. Beginning at the Apple Valley, CA airport, it ends at the Coolidge, AZ airport, having covered a straight line distance of 304 nautical miles. Intended as a fun way to attend the annual Copperstate EAA Regional Fly-In at Mesa, AZ, various classes have been established within the 0 to 320 cubic inch envelope for both certified and home-built aircraft.

Amazingly, the overall winner — the fastest aircraft in any class — has been the same pilot aircraft combination for the past three years. Thirty-seven-year-old Virginia Skiby of Bakersfield, CA has pushed her Lycoming O-320 powered Rutan VariEze, N75VE, to usually resounding victories every October and must reign as the odds-on favorite in all future Copperstate Dashes until someone finally manages to beat her.

So who is this seemingly unbeatable pilot who has soared to stardom on the racing scene in such dramatic fashion? Then Virginia Martin was born in Bakersfield in 1961 and spent the latter part of her high school and early college years helping her father, Warren, build the VariEze she races today. She helped do the wet layups and literally spent years of her spare time sanding the composite airframe. So pervasive was that task that it even figured in her dating and eventual marriage to her husband, Martin Skiby.

"I'd show up at her house for a date," Martin recalls, "but I couldn't take her out until I helped her complete some construction task on the VariEze."

N75VE was completed in five years and five months, flying for the first time in 1982. Virginia was not yet a pilot, but



Virginia Skiby

began taking flying lessons during the latter stages of construction. She soloed in a Beech Skipper, but built up a lot of the solo time for her Private ticket in the VariEze. She passed the checkride for her license in 1983.

Virginia's racing career began with her participation in a CAFE 400 in 1989. The VariEze had been powered initially with an 80 hp Continental A-80 but was quite fast even with that small engine.

"Most of the credit goes to Virginia's dad, Warren Martin," husband Martin Skiby says. "He built the airframe per plans, absolutely straight, and it has been fast from the beginning. He's about to turn 81 and is still teaching me things about fiberglass work. He's just an absolute craftsman, a true perfectionist and craftsman. He built this airplane, a Q-200 and has been involved in several other projects."

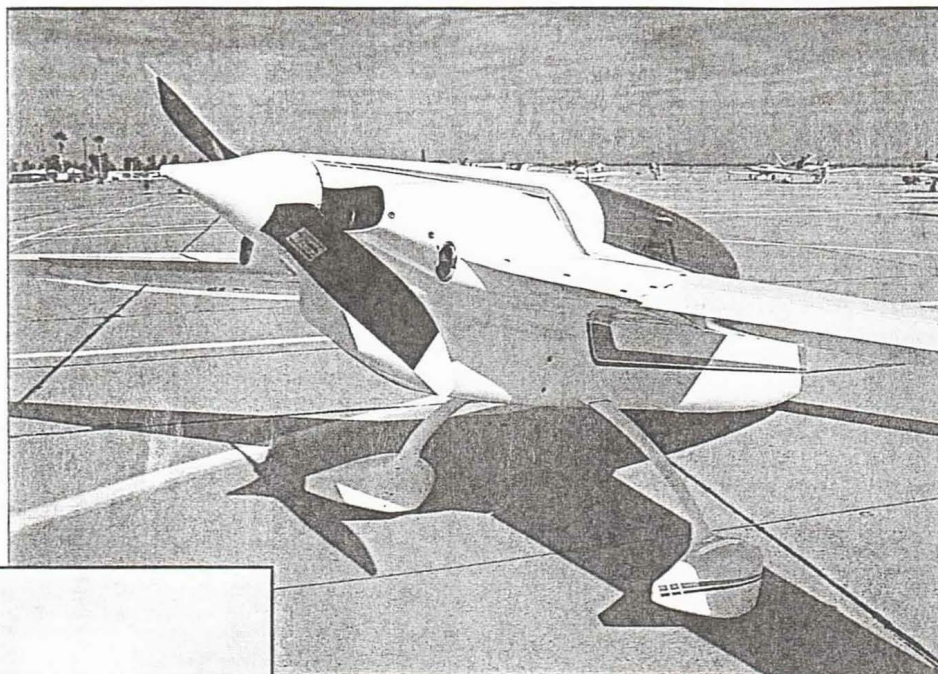
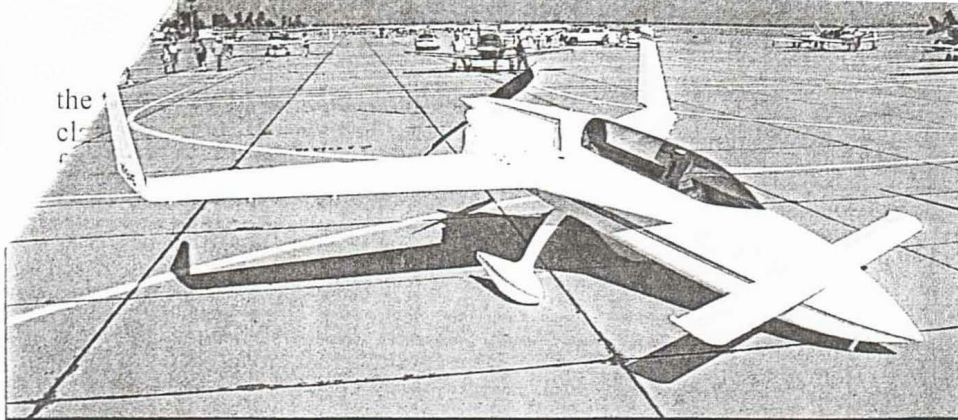
While participating in the CAFE 400s, which were efficiency races, fellow competitors kept telling Virginia that she should start running in Shirl Dickey's RACE series. By this time

Martin had learned to fly and had become a partner in a Continental O-200 powered VariEze, so they decided to attend one of the races at Jackpot, NV and let Martin try his luck with the bigger engined Eze.

"While Martin was being signed up to compete, Shirl kept razzing me to enter my Eze, just for fun. I had no intention of racing. I had just 80 hp, for heavens sake. Why would I race? Well, I did run, and I think I went about 191 mph with that little engine. The next year, I raced our partner's 100 hp VariEze and swept them clean. There were three races then, and I won them all. After that I was addicted! You start winning and, boy, that was it."

After her initial, spectacular success, the family decided to put Virginia in a real racer. N75VE was so fast with just 80 hp that they decided to put a bigger engine in it so it would **really** go. VariEzes had been designed to handle as much weight as that of a Lycoming O-235, so they decided to install an early, narrow deck 150 hp O-320, which was only marginally

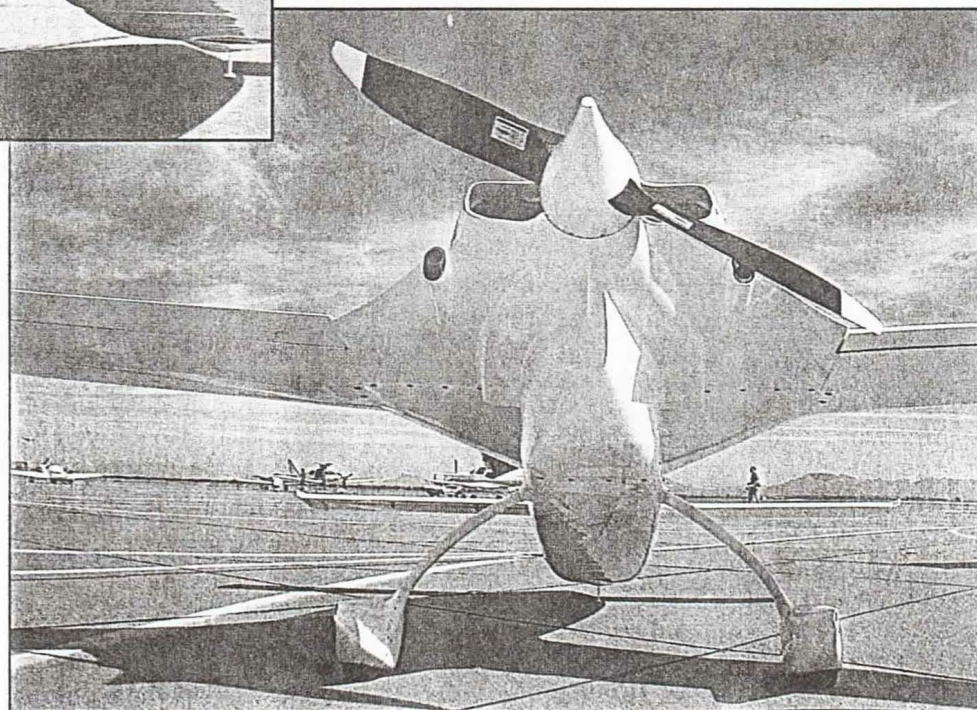
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Speed mods — internal rudder cables, vortex generators around the belly scoop, Klaus Savier prop, pressure recovery spinner and wheel pants — and very light weight.

heavier. After looking around, the engine they were finally able to acquire had quite a pedigree. It was the workhorse that had powered Burt Rutan's first homebuilt, the prototype VariViggen, and, later, after the VariViggen airframe was donated to the EAA Museum, had served as the front engine on the prototype Defiant.

A number of other modifications were made to 75VE during the course of the engine change. Virginia's father and husband, Martin, redesigned the rudder actuation system to keep the



cables internal, designed and built a new cowling for the larger O-320, new wheel pants and a new spinner, which was essentially a scaled-down version of the Beech Starship spinners. The nose of the aircraft was extended about eight inches, a nose gear retraction door was added and work was done on the canard. They are not going to divulge all their speed secrets, of course, but will say that the canard incidence was altered to a slight degree to produce more speed. The airplane will still fly at 50 kts. (58 mph) without the canard stalling, and Virginia can trim it hands-off at over 250 mph.

Several propellers were initially tried, but the Skiby's finally settled on one of Klaus Savier's carbon-coated wood props. It produces four more knots of top speed on about 50 less rpm than anything previously tried. A little rate of climb was lost, but the airplane is so overpowered and has so much climb performance even with an all-out racing propeller that a few less feet per minute are insignificant.

Some convenience and creature comfort items were also included in the revamping of 75VE. A starter was installed on the Lycoming, and an electrically actuated lifting nose strut was installed — along with a 35 amp battery to power them. This allows Virginia to pull the airplane out of its hangar and go flying without any help. When she does, she's more comfortable than before because a new interior was also installed.

Even with the big engine and additional equipment, 75VE weighs only 810 pounds — and that includes some beefing up of the landing gear to safely handle the added weight.

Along with Klaus Savier's propeller, one of his Light Speed electronic ignitions was installed, replacing one of the mags. According to Martin, "It has been absolutely trouble-free since it was installed. I haven't changed the spark plugs in probably four years. They stay perfectly clean, and the airplane is really fuel efficient, even with the big engine. When Virginia cruises alongside our Cessna 337 at 180-185 mph, she's burning about .8 gph."

There were some initial problems with the Lycoming. After about 100 hours, an exhaust valve failed and put the Skibys down in Barstow, CA — resulting in the replacement of the top

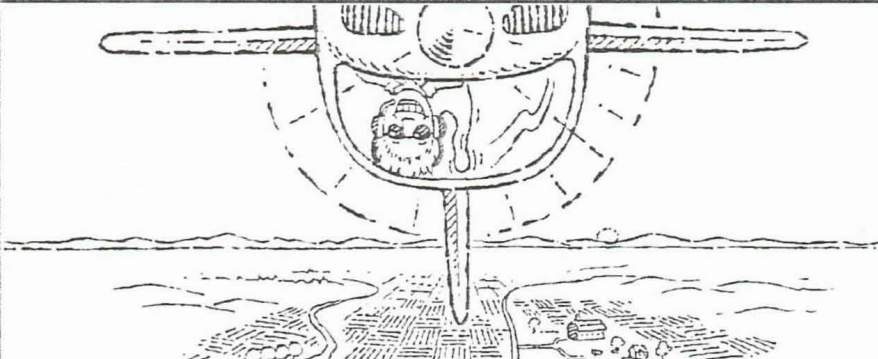
end of the engine. Then, in 1995 while preparing for the first Copperstate Dash, the crank broke. Fortunately, it was one of those breaks that kept the crankshaft keyed in place and Virginia was able to nurse the Eze some 50 miles back home to Bakersfield. Martin says her first words, upon opening the canopy, were, "There's something wrong with the engine and it sounds expensive!" After that incident LyCon completely rebuilt the engine and it has been going strong ever since.

Even as fast as she was before, Virginia was a holy terror once she returned to the racing circuit with the rebuilt O-320. She flew the Eze to Sun 'n Fun three years ago and beat everything with four cylinders except Bruce Bohannon's Formula One racer, Pushy Galore, and has been beaten just once in the RACE series, by the O-360 powered Berkut — just barely. Otherwise, she has swept her class in all events, including, as noted, each of the last three Copperstate Dashes held to date. (Klaus Savier won the inaugural event.)

Flying . . . and racing . . . are Virginia's hobbies. In the workaday world she is a licensed ultrasound technician and, more recently, the financial officer of Datacom, a communications cabling company Martin founded five years ago. She is also a mother — she and Martin have two children: Jennifer, 9, and Jason, 7. Both have grown up at the airport and take airplanes and flying as an integral part of normal life. Jason, she says, was born to fly and loves everything about aviation.

The Skibys are currently building an E-Racer, which they plan to power with a six-cylinder Continental IO-360, possibly with a turbocharger, and a constant speed propeller. With the Cessna 337 they use in their business, she and Martin are not lacking for airplanes, but her VariEze remains Virginia's favorite.


"It's my love," she says. "I've checked out in the Skymaster and have my multi-engine rating, but it doesn't compare with flying my airplane. I have about 700 hours and most of it is in the VariEze. I just love it." ♦



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