

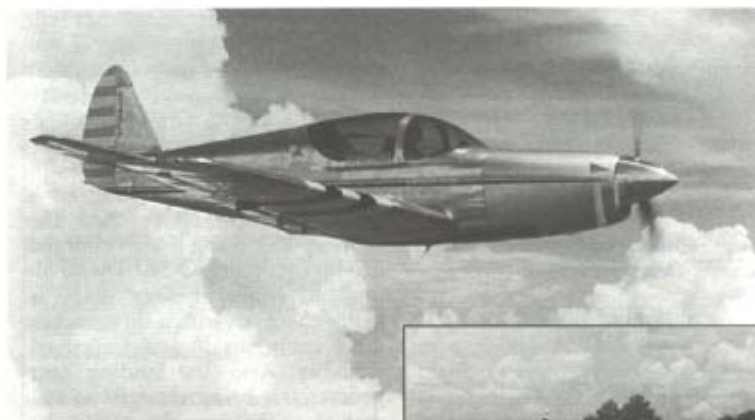
REPORT TO PILOTS

Midmonth update: News, SafeGuard and Used Aircraft Guide

Roy Lopresti, formerly of Mooney and Beech, and now allied with Piper, is charging ahead with plans to modernize the antiquated Globe/Temco Swift for possible production by Piper.

"It's going to be such a good airplane we can hardly believe it," says the ebullient Lopresti. "I'm 99.9 percent sure this will be a near-perfect airplane." The born-again Swift is currently under development at Lopresti Piper Engineering, a jointly-owned skunk works across the field from Piper in Vero Beach, Florida.

According to Lopresti, drag has already been reduced 37 percent over the stock Swift, largely by moving the wing forward four inches. Other speed-boosting changes include a new cowl, windshield and canopy, flush riveting, and gap seals on the flaps. Also, wing slots and corrugated wing skin have been eliminated. Lopresti is predicting a cruise speed of at least 200 mph with a 180-hp Lycoming. "We've



got to be faster than that. Our goal is to sink the Mooney."

Handling qualities will also be improved. The longer tail moment arm will improve pitch stability, and, along with a redesigned elevator horn, increase stick forces. According to Lopresti, the stock Swift has a stick-force-per-g of just 1.5—only half the minimum military requirement for fighter planes, and way too light to be safe. The new Swift will have a stick-force-per-g of about 3.0.

A redesigned control system and new ailerons with internal hinges will make the Swift's legendary aileron response even better by lightening forces at high speeds. Control wheels will be replaced by sticks, with a central "very sexy" T-handle throttle resembling a military grip with a bunch of switches to handle electric flaps (replacing the hydraulic ones), speed brake and landing light switch.

Under the cowl will be a special version of the O-360 Lycoming, with a front carburetor to take advantage of ram air and a collector exhaust system. First flight of the new Swift is expected in October,



With 420 shp, Lopresti Piper's prototype Allison turboprop Swift has power to burn. Note the absence of draggy exhaust pipes.

and Lopresti believes the chances of production are good. Possible price: roughly \$100,000.

Meanwhile, a turboprop version powered by an Allison 250-B17C cranking out a whopping 420 shp has already flown. This was developed, according to Lopresti, to satisfy their—"curiosity." Potential market: possibly as an airline-pilot trainer or super jock aircraft for the wealthy sports flier. After the turboprop was flown to the EAA's annual Oshkosh convention and an on-the-spot survey of potential buyers conducted, the two-place tailwheel version garnered the most votes. Lopresti figures a tricycle-gear, four-placer might be more the ticket for airline-pilot training.

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The turbine model delivers a 4,000-fpm climb at gross. And that's with only about half the drag-reducing items incorporated on the piston model. "This airplane does everything so well, so effortlessly," Lopresti cooed. Possible ballpark price: \$300,000. "We had a very good response," he added.

He's also working on a cleaned-up version of the Comanche that will "go like hell. I won't even give you any numbers because you wouldn't believe them anyway. I'll just say that it will look different, fly different, and go a lot faster."

He said they were shooting for a speed 50 mph faster than the Mooney 252, using a turbocharged 350-hp Lycoming IO-540. The cowling and entire fuselage shape is being changed, with a three-inches taller cabin inside and improved visibility. Also, the landing gear geometry is being changed to improve landing characteristics.

Lopresti seems happy to be out of the corporate world he inhabited at Beech. Lopresti Piper Engineering employs about 30 people, including his three sons. He has nothing but praise for Piper owner Stuart Millar. "I love being around people who make quick decisions. I can have an idea in the morning, walk across the field and discuss it over lunch with Millar, and start cutting metal in the afternoon." If enthusiasm makes a good airplane, then the new Swift and Comanche should be winners. Says Lopresti, "I love what I'm doing now. When I get to heaven, it'll be a lateral transfer."

For years, everyone has been trying to figure out why the general aviation industry has collapsed. In the early days of the Great Slump, the industry blamed inflation. Then inflation got whipped, but sales kept going down.

High interest rates were the supposed culprits for a while. Interest rates went down, and so did aircraft sales. Then the sluggish economy was the problem, industry big-

wigs insisted. The economy has been booming for years now, and aircraft sales keep getting worse.

The current cry among industry executives is product liability. Litigious pilots and greedy lawyers are stifling innovation and making planes so expensive that nobody will buy them, wails GAMA. Critics of the industry, on the other hand, cite the primitive technology of small aircraft and figure that people finally got fed up with paying outrageous prices for antiquated designs that perform no better than those produced decades ago.

Despite all the debate, however, the puzzling fact is this: After nearly a decade of disastrously declining sales—from 18,000 in 1978 to barely 1,000 expected this year—nobody has really figured out why.

At last fall's annual meeting of the AIAA (American Institute of Aeronautics and Astronautics), E.F. Kraus, a senior project engineer at Cessna, gave an intriguing paper called "Technical Thresholds for Revitalizing General Aviation." Using a dispassionate, scientific approach, he reached some surprising conclusions about the reasons for the Great Slump and how it could be turned around.

Kraus skewers the favorite arguments of both the industry brass and its vocal critics. The first surprise is that the evil scepter of product liability is barely mentioned. The second is Kraus's conclusion that even cut-rate prices and high-tech performance won't trigger a turnaround. What's needed, says Kraus, is vast improvements in comfort, safety and simplicity.

Pointing out that 47,000 used aircraft were sold in 1986, Kraus assumes that new planes would sell very well if they offered the same level of intrinsic value (performance and utility per dollar) as used planes, and he sets this level as a goal for new aircraft. He figures that the typical used plane offers the same performance and utility as a new one for 43 percent of the cost. Therefore, a customer would have to get enough extra performance and/or utility out of a new