



SUPERCHARGING the SWIFT

MODS MAKE THE SWIFT ALL IT CAN BE—
AND MORE THAN ITS DESIGNERS COULD HAVE IMAGINED

BUDD DAVISSON

Nowhere is the uniquely American urge to modify, soup up, and personalize more clearly evident than in the automotive world's long love affair with the 1932 Ford, also known as the "Deuce." It gets hot-rod-ded and customized beyond recognition as well as restored to original condition pure enough that Henry himself would have wished he could have made them that good. The exact same thing can be said of the Globe/Temco Swift. It is aviation's little Deuce coupe.

The Globe Swift was supposed to be the airplane of choice for all those fighter pilots coming back from World War II. Wartime marketing "experts" guaranteed aviation managers across the nation that all of those returning pilots would want their own airplane and the fighter pilots wouldn't want something stodgy from Piper or Cessna. They would want something that looked and handled like the fighters they had just left behind. So, in late 1945 and into 1946, Globe, like every other aviation plant in the country, started running full blast cranking out airplanes to meet the massive demand that was predicted. For a period of time the Swift production lines ran 24/7 at two separate compa-

nies, Globe Aircraft Co. at Fort Worth and Texas Engineering and Manufacturing Co. (otherwise known as Temco) at Grand Prairie. Temco would later become the "T" in LTV.

It was late 1946 before management began to notice that, although the airplanes were flowing out the door in an orderly fashion, they were still sitting on the ramp. And on taxiways. And at outlying airports. New, unsold airplanes carpeted isolated airports ocean to ocean. This was true of Swifts just as it was of Pipers and Cessnas and every aircraft being produced. In 1946, the American aviation industry built more than 38,000 aircraft. In 1948 barely 3,000 were manufactured. The balloon had definitely burst.

Unsold Swifts sat around in the Texas sunshine for so long that Temco, which had stepped in and taken over the floundering Globe Aircraft Co., actually had to take the aircraft back into the factory to install new interiors and generally spruce them up before the airplanes could be sold. It wasn't until April 1948 that the surplus inventory was reduced to the point that Temco began building new airplanes again. The last Temco Swift rolled out the door in August 1951. ▶

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As delivered, the Swift was something of an odd bird. It gained a reputation as being a hot airplane that was hard to handle—a direct result of it being much lighter on the controls and much more willing to do the pilot's bidding than any of its peers in the 1940s and '50s. It was supposed to be a mini-fighter, which it was, except for one little problem: It didn't have nearly enough power (does anything?).

The airplane was originally designed to use only 85 hp, but the 125-hp, six-cylinder O-300 Continental quickly became the standard. Even with the bigger engine, however, it is no rocket on takeoff. It gets the job done, but the takeoff and climb performance are in direct contradiction to the airplane's looks and handling. It's a little like a Deuce coupe with the original anemic flat-

head engine—and we certainly know how to fix that, because we're a nation of hot-rodders.

It took a few years, but eventually a rapidly accelerating series of hot-rod Swift modifications began to hit the market, beginning with the easy installation of a 145-hp O-300 Continental out of a 172 and the more difficult Corben 150-hp Lycoming and tip plate conversions. Today, you can purchase a dizzying number of performance-oriented supplemental-type-certificated (STC) items for the Swift, ranging from slick canopies to 210-hp engines. Field approvals abound for other mods.

This modification trend has resulted in a near polarization of the Swift community. There are those who view the Swift as the basis for a serious go-fast machine,

and those who strive for absolute originality. It's a blondes, redheads thing: to each his own.

THE STORY SWIFTLY TOLD

The Swift, more than any other specific airplane type, has given rise to a tightknit community spearheaded by Charlie Nelson of the Swift Museum Foundation Inc., which serves as a repository of information about the airplane. Much more important, the foundation has begun to manufacture and inventory hard-to-find parts. A number of companies have specialized in supporting and modifying the breed. These include the Swift Museum Foundation, which maintains some STCs and a full-time parts department; Merlyn Products in Spokane, Washington, several STCs, including engine mounts; and Alturair in



Replacing the control yokes with sticks is a popular Swift mod.



Under the close-fitting cowl is a 210-hp Continental, nearly double the airplane's original 125 hp.

CRAIG VANDERKOLK

El Cajon, California, various STCs, including cowlings.

Several individual shops around the country also specialize in restoring, modifying, and repairing the Swift. The full-time shops include Ray Brown in Weirsdale, Florida; Jim Thomason, Mountville, South Carolina; Scott Anderson, Athens, Tennessee; George Snyder, Douglas, Arizona; Don Bartholomew, Gardnerville, Nevada; and Vaughn Armstrong, Dayton, Tennessee.

Typical of those who have undertaken modifying their own aircraft, rather than farming it out, is Duane Golding of Marion, Texas. The Swift he brought to Oshkosh 2004 carried most of the more popular modifications, and he can talk with authority about those mods because he carried most of them out himself.

Golding has a long association with sport aviation, having learned to fly in Milwaukee while EAA headquarters was still in Hales Corners. He had restored a number of antiques before buying his first Swift in 1987.

"That first airplane," Golding says, "was an 85-hp version and

was very original, right down to the fabric rudder."

He flew that airplane long enough to realize that he loved the airplane but hated the engine. He would eventually rebuild a series of six Swifts, all of them being what he terms "Super Swifts," sporting most or all of the various modifications.

The airplane he had at Oshkosh is a case study in the art of hot-rodding a Swift. The airplane started out as a 125-hp, 1946 Globe.

"When I bought the airplane, it was like a lot of Swifts used to be in that it hadn't flown since 1980," Golding says. "I had a local IA go completely through the airplane and get it ferriable so I could have it flown down to my place. The airplane's inactivity hadn't rendered it terminally unairworthy, but, even though it was made 'flyable,' it wasn't flying for long. Within hours of it arriving at my place, I had it well apart."

Golding knew from experience that Swifts have a number of places that can hide corrosion and are hard to inspect. "You don't know for sure what you have until you tear them

down. If they have serious corrosion, you can generally find it on a pre-buy inspection, but some of the more subtle stuff takes some disassembly," he says. "The favorite places for corrosion are where the ribs hit the skin, in the control surfaces and, once in a while, in the spar caps. Also, the belly skins are affected by engine gases that get up inside, which can also pose a danger to the pilot and passenger."

Because the airplanes are nearly 60 years old, it's not surprising that many show the signs of ground loops or belly landings. The question, Golding says, is how well the repairs were done.

WORK IN PROGRESS

Golding wanted an airplane that he could leave mostly polished, which means the skins had to be in excellent condition. Unfortunately, that wasn't the case with this particular airplane.

"If I was going to polish it, I'd have to replace the skins, which I did. Approximately 90 percent of the skins are new," he says. "I would remove one, sometimes two,

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at a time so I didn't have to worry about the alignment of the fuselage or the wings changing. I have jigs for the wings, so I could have completely uncovered them, but this is just a little easier, with not as much worry."

None of this metal work is unique to the Swift—or really any metal airplane that is going to be restored. Metal airplanes all suffer similar maladies. However, this Swift was destined to be a hot rod with dramatically enhanced performance. It made sense to check the airplane out down to its smallest pieces.

The most popular way to increase the performance of any airplane is, naturally, to install a bigger motor, and the Swift is no exception. In this case, Golding chose a 210-hp IO-360 Continental, which is one of the most common Swift mods, the 180-hp Lycoming being the other. Motor mounts for the 210 come from Merlyn Products in Spokane, Washington.

Cosmetically, the most obvious change Golding made—and one that is seen on most Super Swifts—is the sliding bubble canopy made by Jack Nagle. The STC includes the canopy, rails, and an electric trim system that mounts on the panel. The electric trim is required because the original Swift trim is a crank that mounts on the turnover structure behind and between the two pilot's heads. The Nagle STC removes that structure so there isn't any place to put the trim.

Unfortunately, Jack Nagle has passed away and that canopy isn't available right now. There is talk that a couple of different people



Golding replaced about 90 percent of the skins with new sheet metal to allow a polished finish. He also opted for the sliding canopy to add to the fighter look.



CRAIG VANDERKOLK PHOTOS

are working on new STCs; however, nothing is being shipped by anyone at the present time.

Another major mod that is relatively easy to accomplish is replacing the yokes with control sticks. Three different STC'd stick conversions exist, made by Jim Thomason, Chuck Lescher, and Don Bartholemew. Golding went with Bartholemew's because it uses ball bearings throughout.

"They all fly the same, but I liked the way this one feels," he says.

A lot of individuality is shown in the interiors from Swift to Swift because the original bench seat is so easy to remove and replace. "I mounted a set of brand new Cessna seat rails for 150 seats, but first I cut the seats apart and subtly reshaped them so

they go further back and down at the same time," Golding says. "The upholstery is all leather except for the fabric inserts."

But not all of the improvements are readily apparent. Swifts have notoriously slow gear motors, plus they are 60 years old, heat up, pop circuit breakers, and burn out. An upgrade to the gear motor was one of the first STC kits to be granted on Swifts years ago.

"Merlyn has a good retraction motor that makes the old Adel motor look really sick, which it is," Golding says. "While you're doing the gear, it's a good idea to mount 6:15 x 6.00 tires. They are actually nose wheel tires and are thinner so they don't stick out of the bottom of the wings as much. All of this helps in the speed department."

Now that everything that's legal to modify via

STCs and Form 337s has been done, what's the payoff? How much does it actually affect the performance?

"A stock 125-hp Swift is really lucky if it will do an honest 125 mph true," Golding says. "All of the Swifts with these mods are good for 160 to 170 mph true. Some are much faster. And the original rate of climb, which was in the area of 500 fpm, jumps up to a solid 700-800 fpm. That may not sound like much to the aerobic guys, but considering what we had before, it really feels great. Besides, once you're doing 160-170 mph true, you have to have a huge speed increase, up to around 200 mph, for it to make a measurable difference in a 500-mile trip. So, this kind of speed is absolutely acceptable."

That said, Golding admits that the Swift's original designers had one thing right: Speed isn't everything.

"The Swift has to be one of the best handling airplanes ever built and makes you feel as if you're flying a fighter. Plus, with all the mods—the canopy, the cowling, etc.—it is an absolutely beautiful

airplane to look at," Golding says. "Sometimes I think if I never flew the airplane and did nothing but sit and look at it, I'd still be a happy man."

Modifying a certificated airplane isn't something to be done casually because of the legalities involved. However, the Swift community is so tightly knit, with such good communication, that whether an individual wants to restore a stock Swift or go the full hot rod route, as Duane did, the community is there to help.

In any of its guises, a Swift is undeniably beautiful and flies as good as it looks. Plus, it is the basis for building an airplane that totally reflects the owner's taste. No wonder it is so popular.



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