SHORT-WING PIPERS

The future of Piper hung on a wing and a prayer.

BY MARC E. COOK

William T. Piper Sr. must have thought his aircraft company had it all. The incredible prewar success of his simple, rugged J-3 Cub coupled with the promise of a revitalized light aircraft market after the war would seem to paint a rosy picture for the company's health in 1947. Like a colorized movie, the hue instead turned a pale gray. After a brief boom, the market fell. Piper found itself, like most other small-aircraft manufacturers, in trouble. Partially assembled Cubs were packed cheek-to-cowl inside the Lock Haven, Pennsylvania, factory. The company was heavily in debt.

Under the command of its creditor-appointed troubleshooter, Piper's assembly lines ground to a halt. William Shriver, dubbed "the kidney puncher" by the few remaining in upper management, took control to remove some of the red ink from Piper's ledgers.

One of Shriver's first orders of business was to commission the two Pipers remaining on the payroll, Tony and Howard (Pug), to design a new airplane that could be produced quickly and inexpensively. Implicit in that demand was to use as many of the Cub parts as possible. Shriver said simply that the new airplane must be "a two-seater, side-by-side. Remember, cheap."

Just a few months later emerged the PA-15 Vagabond. It followed the letter of Shriver's decree, employing shortened Cub wings, a slightly modified Cub tail, and a myriad of other existing parts. Those recycled Cub pieces mated with a new fuselage that was nearly four feet shorter than was the Cub's. Most important, the PA-15 sold new for $1,990—a genuine bargain in the days of the $3,200 Super Cruiser. It was precisely what Shriver had wanted.

Today the Vagabond's bare-bones appearance might seem crude, overly spare. The PA-15 rolled out sans flaps—which had been added to the then-new Super Cub that year—or even a fuselage stripe. The Vagabond's landing gear came without the bungee-cord shocks found on the Cub. It was up to the tires alone to cushion the ride. With its 65 horsepower, the Vagabond cruised at a modest 80 knots.

While the Vagabond undoubtedly

The last of the taildraggers, the Pacer is the most coveted of the short-wings, with little more than 1,000 built between 1950 and 1953. Many Tri-Pacers have been converted to tailwheel configuration, but the list of genuine PA-20s is short.

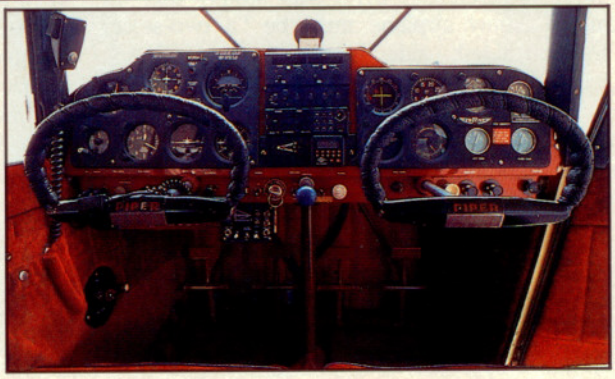
MIKE FIZER

Mark Kaufman's refurbished 1952 Pacer combines classic appeal with IFR avionics. Although it is fitted for travel, Kaufman admits, "It's still a weekend airplane."

was successful in helping Piper out of its financial difficulties, it became clear that the market would bear something less Spartan than the PA–15. Piper responded a year later with the PA–17, still with the Vagabond moniker.

In its move upmarket, the Vagabond gained shock struts from the Cub, and a Continental A–65 replaced the Lycoming under the cowling. Otherwise, the Vagabond's design remained faithful to the previous model's, retaining its dual stick controls, flapless, constant-chord wings, and single 12-gallon header tank. Though less austere than the PA–15, the new Vagabond still was about as simple as a billy club and, in terms of depleting the stockpile of Cub hardware, just as effective.

Though the Vagabonds were hardly roaring sales successes, they brought in enough money for Piper to consider building a more sophisticated, expensive airplane. In 1949 the decision was made to stretch the Vagabond by nearly two feet; the result was the PA–16 Clipper. This short-wing Piper grew up in other ways. In place of the 65-hp Continental, Piper installed an O-235 Lycoming, giving the Clipper 115 hp and a cruising speed of 100 knots.



To provide enough fuel for the larger engine, an 18-gallon tank in the left wing supplemented the header tank held over from the Vagabond, providing a total capacity of 30 gallons. Wheel fairings became optional that year, and one could also check a box on the order form and get a Clipper ready to become a floatplane.

With the extra row of seats, the Clipper gained a back door on the left side of the fuselage; the pilot still had to crawl in on the right, a tradition followed today in Piper's light singles. Curiously, control was still via twin sticks, unusual in four-place aircraft and at odds with the Cessnas and Stinsons of the day.

Sales response to the Clipper was not overwhelming, but still better than to the Vagabonds. The next year, 1950, Piper ushered in what might be considered the ultimate short-wing Piper, the PA–20 Pacer. A copyright dispute with Pan American World Airways forced Piper to drop the Clipper title; the substantial alterations made to the PA–16 warranted a new type certificate, hence the PA–20 designation.

At first, the Pacer came with the Clipper's 115-hp Lycoming, but the O-235 soon was replaced with a new engine, the O-290. An additional 10 hp came with it. Later in the production run, you could order the Pacer with a wooden propeller, a metal fixed-pitch prop, or an Aeromatic variable-pitch unit. The Aeromatic allowed the Lycoming to produce 135 hp. (Later Pacers could be had with the D2 variant of the O-290 Lycoming that developed 135 hp with a fixed-pitch prop.) The Aeromatic option bumped the price to $4,265; a bare-bones 115-hp Pacer sold for $3,295.

The performance advantages of the Aeromatic propeller were questionable. A 1950 *Air Facts* article stated that the controllable-pitch Pacer would outclimb its lesser brethren only above 3,000 feet; below that the simpler fixed prop was more efficient. In cruise the fixed-prop 125 was even a bit faster. Buyers of the

The Tri-Pacer mirrored an industry in transition—from rag wings to tricycle gear.

time apparently thought the prop questionable. The majority of Pacers were ordered with the fixed metal prop; those that weren't are likely to have been fitted with one since.

The transformation from Clipper to Pacer involved much more than a change in engine and propeller. Flaps became available on the PA–20 (except for the early 115-hp models), operated through Piper's famous Johnson Bar floor-mounted handle, and the ailerons were shortened to accommodate them. Aileron cables were moved inside the wing, allowing installation of lift-strut fairings, said to increase cruise by nearly four knots. A second fuel tank was installed in the right wing, replacing the header tank and allowing the Pacer to carry 36 gallons.

Alone in the marketplace for just one year, the Pacer evolved into the PA–22, originally a 125-hp Pacer with an important option: a nosewheel. For three years Piper sold Pacers alongside Tri-Pacers (which were blessed with their own identity in 1952), but soon the writing was on the wall for the airplane with the third wheel at the tail. By 1953 the "Flying Milkstool," as the Tri-Pacer had come to be known, outsold the Pacer by five to one. The next year the taildragger was gone. It had sold just over 1,000 units. Piper would make nearly 8,000 Tri-Pacers by the early 1960s. Max Karant said in *AOPA Pilot* in 1953 that "Bill Piper himself is now so enthusiastic about the tricycle landing gear that I doubt whether Piper will ever again design a new airplane without it."

Improvements were made to the popular PA–22 over the years. A 150-hp Lycoming O-320 came aboard in 1955, followed three years later by a 160-hp version. Cruising speed crept to 115 knots with the larger engine; the climb rate rose to 810 fpm—performance very close to that of the early Cessna 172s, the Tri-Pacer's primary competitor. Gross weight grew from the Pacer's 1,800 lb to 2,000 lb; useful load peaked at 900 lb with the 160-hp Tri-Pacer—just 70 pounds more than the lower-powered Pacer. In the mid-1950s Piper also offered the Caribbean, a 150-hp Tri-Pacer specially packaged and priced slightly lower than the 160.

History does indeed repeat itself, be-

cause with the 1961 introduction of the PA–28 Cherokee, Piper decided it needed a two-place training aircraft, one that could be assembled quickly and cheaply. This need created the Colt, which could be viewed either as a flapless, two-seat version of the Tri-Pacer—the two did share type certificates and model designation—or a modernized, tricycle-gear Clipper. It was powered by the Clipper's Lycoming O-235. It cost $4,995, just over half as much as the most recent PA–22.

In addition to deleting the Tri-Pacer's flaps, the Colt was produced sans rear windows, the second wing tank, and the

The Pacer evolved into the PA–22, originally a 125-horsepower Pacer with an important option: a nosewheel.

rear door. Though not as popular as its four-seat stablemate, the Colt nonetheless sold almost 2,000 units; unfortunately for Piper, that paled compared to the Cessna 150's sales figures.

That the Colt was the last in the line of short-wing Pipers seems only fitting. After all, it fulfilled much the same stopgap role as did the first Vagabond, and its inception followed nearly the same path, at least in terms of engineering and manufacturing. At the end of 1963, the Colt's assembly line was shut down, ending the era of short-wing Pipers. The only other tube-and-fabric Piper remaining was the Super Cub; it would be produced for another 20 years and has now been brought back by Piper.

Fortunately, there is a group that realizes the role of the short-wing Pipers. This group is, naturally, the Short-Wing Piper Club. It produces a bimonthly newsletter that is a veritable gold mine of parts and advice. More and more of these aircraft are being restored, and they continue to increase in value, Pacers in particular. The Pacers are so much in demand that kits exist to convert Tri-Pacers into taildraggers. But the short-wing Pipers are more than just good investments. They stand now to remind pilots and history buffs alike that—Cub lore notwithstanding—these were the aircraft that helped bring Piper back from the brink. □